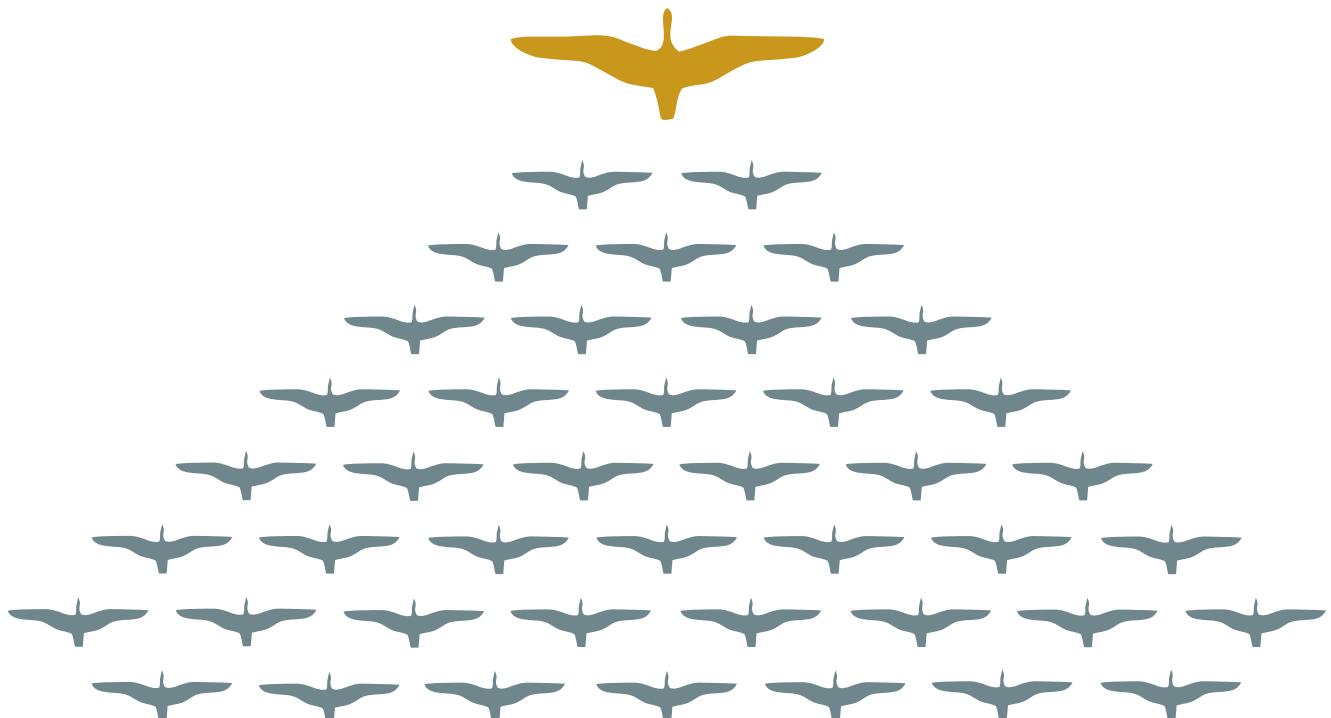




**LEADING THE WAY FOR A BETTER TOMORROW**  
**EXPERTISE | EMPATHY | RESILIENCE**



The Apollo Excellence Report 2021

# 4750+

PHARMACIES



# 8500

DOCTORS



# 120000

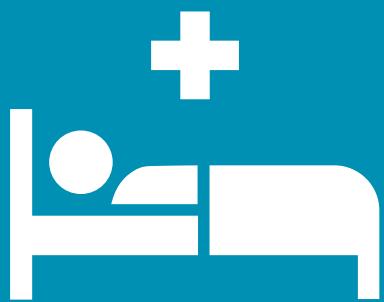
FAMILY  
MEMBERS

# 1300+

DIAGNOSTIC  
CENTER

# OVER 10000

BEDS



# 260+

CLINICS



# 75 LOCATIONS



# EXTENSIVE EXPERIENCE ACROSS SPECIALITIES

200000+  
HEART  
SURGERIES



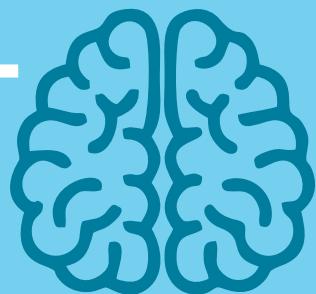
3950+  
LIVER  
TRANSPLANTS



16750+  
KIDNEY  
TRANSPLANTS



180000+  
NEURO  
SURGERIES



370000+  
ORTHO  
SURGERIES



200000+  
ONCO  
SURGERIES



300000+  
ANGIOPLASTIES

OVER 25 MILLION  
PREVENTIVE  
HEALTH CHECKS

THE APOLLO TRANSPLANT PROGRAMME HAS PERFORMED MORE THAN 1200 SOLID ORGAN TRANSPLANTS EVERY YEAR SINCE 2012, THE HIGHEST IN THE WORLD

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# The Year 2021

# The Year 2021

Apollo Hospitals continued its journey of pursuit of excellence through the year 2021, a year that was once again interspersed with challenges and adversaries due to the pandemic. However, inspite of the trying situations, Team Apollo was able to achieve newer milestones and accomplishments. In 2021, Apollo Hospitals continued with concerted efforts to enhance clinical, academic and research excellence, adopted innovative processes and technologies for achieving best outcomes for our patients and maximizing our reach to the community.

The Apollo Standards of Clinical Care (TASCC) embodies standardization of processes and outcomes for clinical excellence and patient safety, across all the Group Hospitals. TASCC scores showed a steady increase from 310 in FY (2012-13) to 445 in FY (2021- 22) for Group A hospitals, from 227 in FY (2012-13) to 433 in FY (2021-22) for Group B hospitals and from 189 in FY (2012-13) to 369 in FY (2021-22) for Group C hospitals, reflecting increasing standardisation of processes and improving outcomes.

Group average scores for Apollo Clinical Excellence Scorecard (ACE 1) showed an improvement from 72 in 2010 to 88 in 2021. Apollo Hospitals, Jubilee Hills, Hyderabad reporting Group A parameters, Apollo Hospitals, Seshadripuram reporting Group B parameters and Apollo Hospitals, Noida and Apollo Reach Hospital, Karur reporting Group C parameters were declared ACE 1 champions and were awarded the trophies along with cash prizes.

In 2021, 169 nominations were received for Apollo Innovation and Quality Awards, a platform that felicitates and rewards hospitals within the Apollo Group for their diligent efforts and innovations to

persistently improve patients care, quality and safety.

Apollo Clinical Awards provided a platform to honour and recognize Consultants who achieved path breaking clinical, academic and research related success.

Our consultants continued their pursuit of excellence by treating complicated cases and performing rare procedures, while also writing books and contributing book chapters, publishing their clinical research and cases in medical journals worldwide, lecturing nationally and internationally and receiving numerous awards from various governmental and nongovernmental organizations. Three hundred consultants contributed their achievements for publication in this report.

The National Board of Examinations (NBE) has accredited Apollo Hospitals for training and examinations in 16 broad specialities, 21 super specialties besides 8 Postdoctoral Fellowship (FNB) programs and 4 Diploma Programmes. In 2021, there were 619 DNB/FNB seats in the Apollo Hospitals Group with 920 trainees pursuing DNB/FNB programs across 18 hospitals.

In order to upskill the knowledge and expertise of doctors, under the aegis of the Apollo Continuous Medical Education Program, 660 CMEs were conducted which were attended by 13755 doctors from across the country and overseas.

Apollo Research and Innovations (ARI) has conducted over 1250 clinical studies and currently 175 studies are on-going at various Apollo Hospitals. The Adjunct Title of Professor and Associate Professor of Apollo Hospitals Educational and Research Foundation (AHERF) has

been conferred on 153 Consultants and 133 Consultants hold Adjunct Titles of Tutorship.

Eight Apollo Hospitals are accredited by Joint Commission International (JCI). The total number of National Accreditation Board for Hospitals and Healthcare Providers (NABH) accredited Apollo Hospitals is 32.

Apollo Hospitals launched the Apollo Centre of Excellence in Critical Care (ACECC). The ACECC aims to harness digital technology to create an integrated network of eICUs providing world-class critical care not just across the Apollo Hospitals network but also in partnership with non-Apollo units in India and abroad.

Apollo Simulation Centre, the first-of-its-kind medical simulation centre was launched at Apollo Specialty Hospitals, Vanagaram. This advanced simulation centre has been equipped with state-of-art computerized simulators that will provide hands-on training for post-graduate medical students as well as assist practicing doctors to refine their procedural skills.

Apollo HomeCare with its unique treatment options rendered care for 9,00,000 lakh patient episodes in 2021.

The ISO 13485: 2016 – Medical Device Audit was successfully completed for Clinical Artificial Intelligence APIs that were designed, developed, and deployed at Apollo Hospitals.

Apollo Remote Healthcare became the first multi-specialty telemedicine network in the world, to be granted ISO 13131:2021 certification by the British Standards Institution (BSI).

Under the aegis of Corporate Social Responsibility (CSR), 'Total Health' India's first integrated rural healthcare service delivery network in the private sector, cover more than 70,000 people across all age groups. Total Health Project is already a case

study in the Harvard T. H. Chan School of Public Health, USA

Apollo Hospitals Group was conferred 45 awards and accolades at various national and international fora in 2021.

Dr Prathap C Reddy, Chairman, Apollo Hospitals Group was conferred with Economic Times Lifetime Achievement Award for filling the void in India's healthcare system.

World's Best Smart Hospitals Award 2021 was conferred on Apollo Hospitals Group for using the most advanced technologies.

At the Asian Hospital Management Awards 2021, Apollo Hospitals Group won two awards. The Best Hospital Survey 2021, conducted by THE WEEK, ranked Apollo Hospitals, Chennai as the best corporate multi – speciality hospital in the country. The Times Health Survey ranked Apollo Hospitals, Chennai was ranked as the best multispecialty hospital in India. The All India Critical Care Hospital Ranking Survey 2021, conducted by the Times of India ranked Apollo Hospitals, Chennai as the best multispecialty hospital in India for the specialties of Cardiology, Gastroenterology, Nephrology, Oncology and Pediatrics. Several Apollo Hospitals were ranked as best hospitals in their region and specialities, in both THE WEEK and All India Critical Care Hospital Ranking Survey.

The Reader's Digest Trusted Brand Survey 2021 has ranked Apollo Hospitals in Chennai, Delhi, Navi Mumbai, Hyderabad, Bangalore, Kolkata, Bhubaneswar, Lucknow and Apollo Spectra Hospitals, Nehru Place as India's Most Trusted Hospitals.

We have newer hopes, dreams and aspirations for the year 2022, which we shall collectively pursue.

*If you can dream it, you can do it.*

*Walt Disney*

2021

Clinical  
Excellence

Apollo  
24|7

Apollo  
Telehealth

Apollo  
Home Care

Telemedicine

CSR

Academics

Recognition

Research

Consultants'  
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# Clinical Excellence

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# Clinical Excellence

## The Apollo Standards of Clinical Care (TASCC)

Apollo Hospitals Group aims at establishing the highest standards of clinical care and patient safety for all its hospitals irrespective of their location and size. The Apollo Standards of Clinical Care (TASCC) was implemented across Apollo Hospitals to standardize processes and outcomes for clinical excellence and patient safety. It encompasses six initiatives – Apollo Clinical Excellence dashboards (ACE 1 and ACE 2), Apollo Quality Program (AQP), Apollo Mortality

Review (AMR), Apollo Incident Reporting System (AIRS), and Apollo Critical Policies Plans and Procedures (ACPPP). TASCC was implemented in January 2012.

TASCC scores showed a steady increase from 310 in FY (2012-13) to 445 in FY (2021-22) for Group A hospitals, from 227 in FY (2012-13) to 433 in FY (2021-22) for Group B hospitals and from 189 in FY (2012-13) to 369 in FY (2021-22) for Group C hospitals, showing increasing standardisation of processes and improving outcomes.

**Group A Annual Average TASCC Scores**



**Group B Annual Average TASCC Scores**



**Group C Annual Average TASCC Scores**



## Apollo Clinical Excellence Scorecard – ACE 1

Earlier known as ACE@25, this scorecard was renamed as ACE 1 in 2015 with revisions in indicators and benchmarks. Group average scores for ACE 1 showed an improvement from 72 in 2010 to 88 in 2021.

ACE 1 is a clinical balanced scorecard incorporating 25 clinical parameters involving complication rates, mortality rates, one-year survival rates, and an average length of stay after major procedures like liver and renal transplant, CABG, TKR, THR, TURP, PTCA, and endoscopy covering all major specialities.

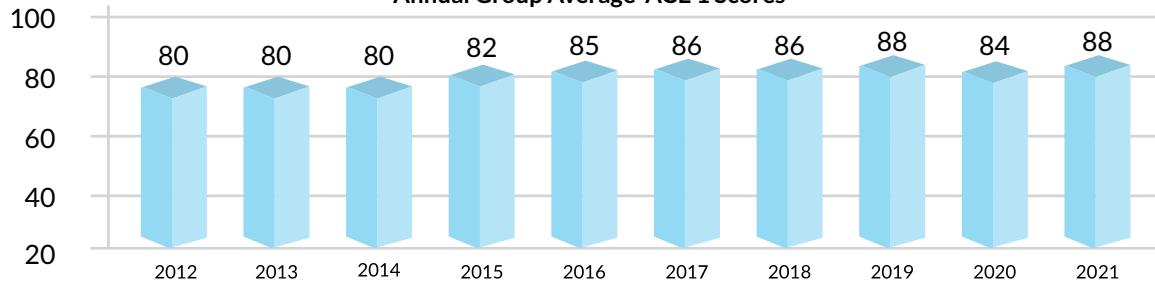
Also included are hospital-acquired infection rates and patient satisfaction with pain management. Parameters have been benchmarked against the published benchmarks of the world's best hospitals including Cleveland Clinic, Mayo Clinic, National Healthcare Safety Network, University of California, San Francisco and Agency for Healthcare Research

and Quality US. The weighted scores of outcomes are color-coded green, orange and red. The cumulative score achievable is capped at 100.

The collective data for all locations can be viewed by the Group Leadership at any point of time. There is an "ACE 1" Champion Award for the highest scorer.

In 2021, 39 hospitals reported ACE 1 data. Seven hospitals (Ahmedabad, Bangalore, Chennai, Delhi, Hyderabad, Kolkata, and Navi Mumbai) reported data for Group A parameters, 18 hospitals (Bilaspur, Madurai, Mysore, Bhubaneshwar, Karimnagar, Secunderabad, Hyderguda, Trichy, Vanagaram, Indore, ASH OMR, Nashik, Nellore, Seshadripuram, Health City Vizag, Guwahati, Lucknow, and Kochi) reported data for Group B parameters and 14 hospitals (Aragonda, Apollo First Med Hospitals, Cancer Institute Teynampet, Tondiarpet, Kakinada, Noida, Apollo Children's Hospital, DRDO, Karur, ASH Jayanagar, Karaikudi, AWH SMR, Ramnangar Vizag, and Proton Cancer Centre) reported data for Group C parameters.

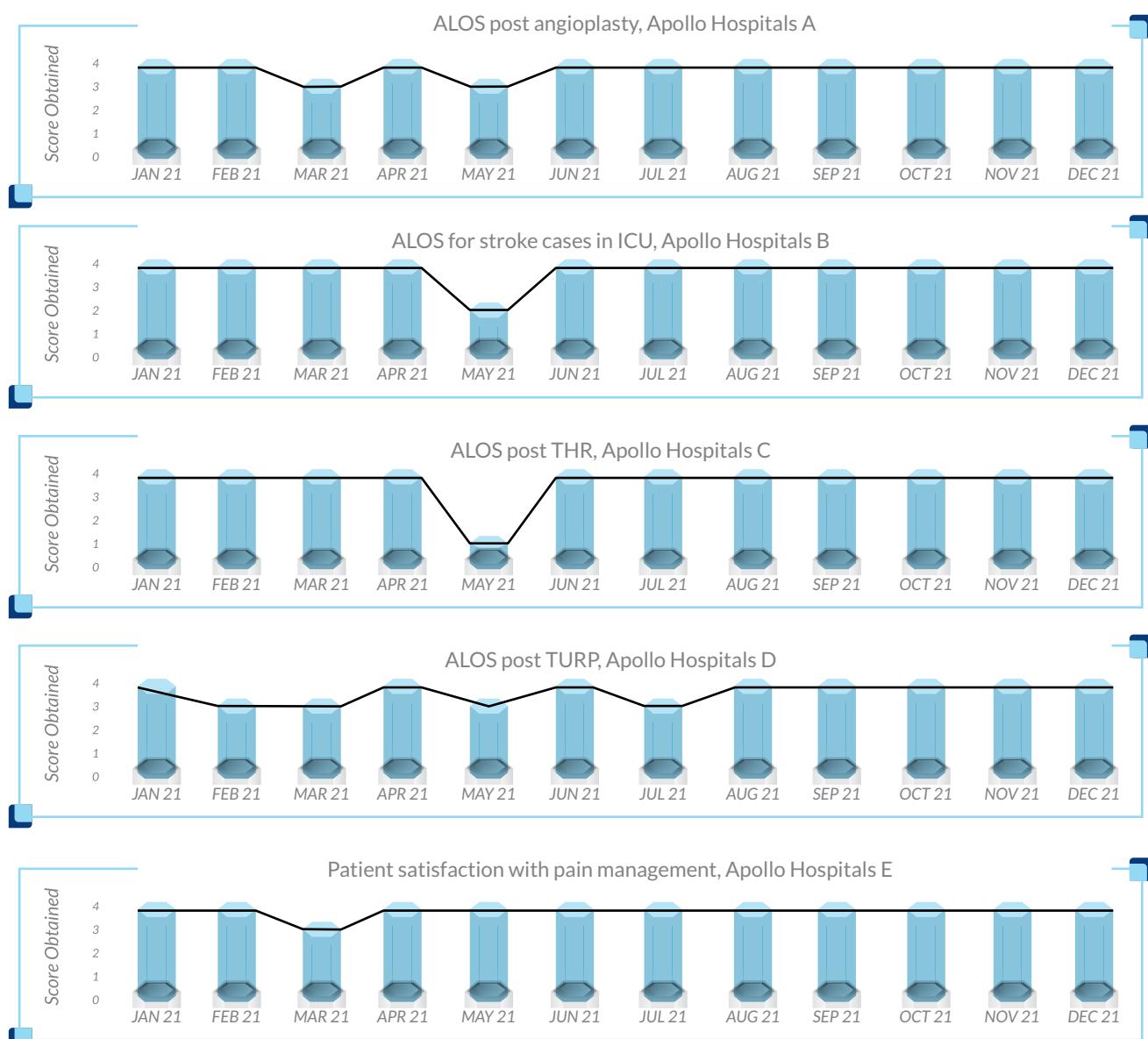
**Annual Group Average ACE 1 Scores**

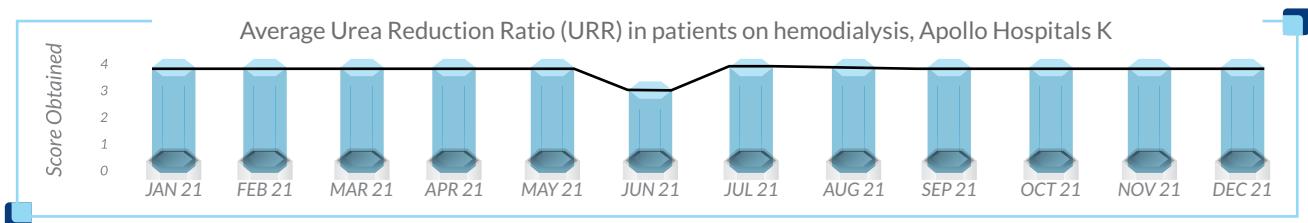
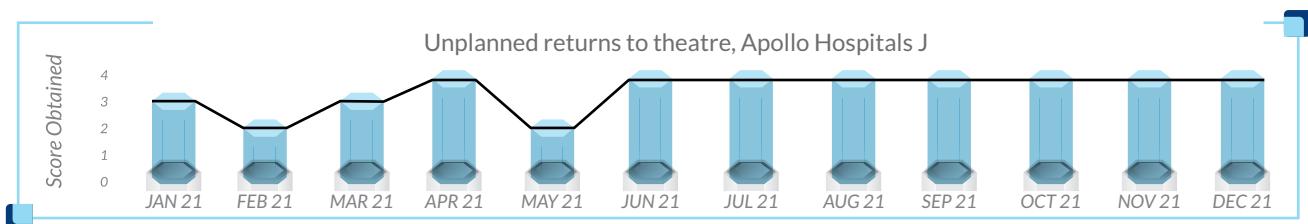
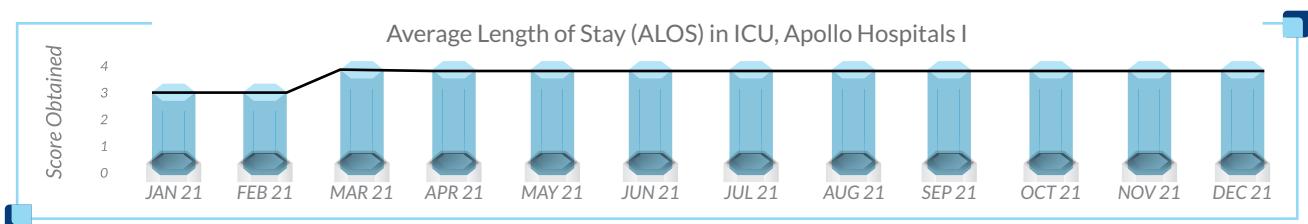
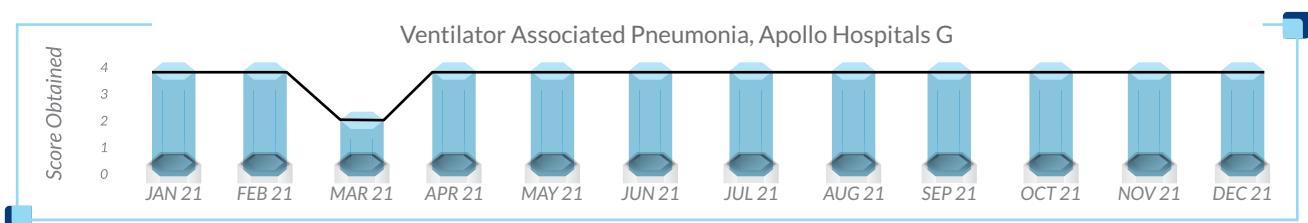
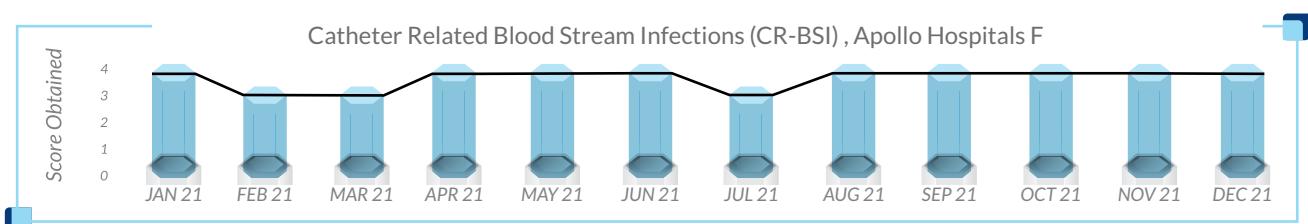


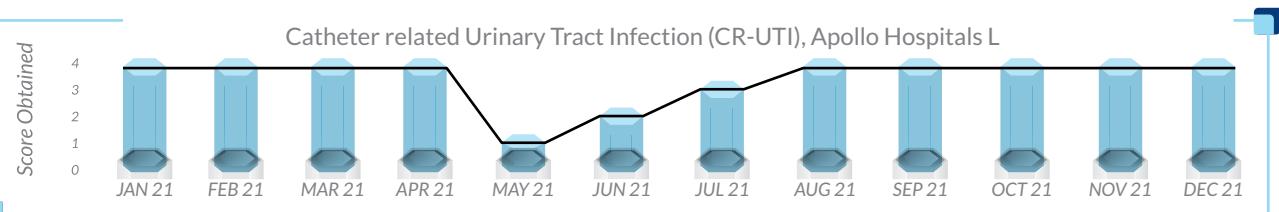
### Example of ACE 1 parameter

Indicator	Benchmark	Range	Scoring
<i>ALOS post angioplasty</i>	2.5 days	≤ 2.5	4
	US National Average	2.51-3.00	3
		3.01-3.50	2
		3.51-4.00	1
		>4.00	0

### Few examples of outcome parameters trends:







## ACE 1 Awards

ACE 1 clinical excellence scorecard data has been reported for the last 13 years. The outstanding performances in each of the hospitals reporting Group A, Group B, and Group C parameters are given recognition every year. The Average ACE 1 score for each hospital is computed. The hospital scoring the

maximum is awarded the ACE 1 Champion Award.

Apollo Hospitals, Jubilee Hills, Hyderabad reporting Group A parameters, Apollo Hospitals, Seshadripuram, reporting Group B parameters and Apollo Hospitals, Noida and Apollo Reach Hospital, Karur reporting Group C parameters were declared ACE 1 champions and were awarded the trophies along with cash prizes.



ACE 1 Champion (Group A) – Apollo Hospitals, Jubilee Hills, Hyderabad



ACE 1 Champion (Group B) – Apollo Hospitals, Seshadripuram



ACE 1 Champion (Group C) – Apollo Hospitals, Noida

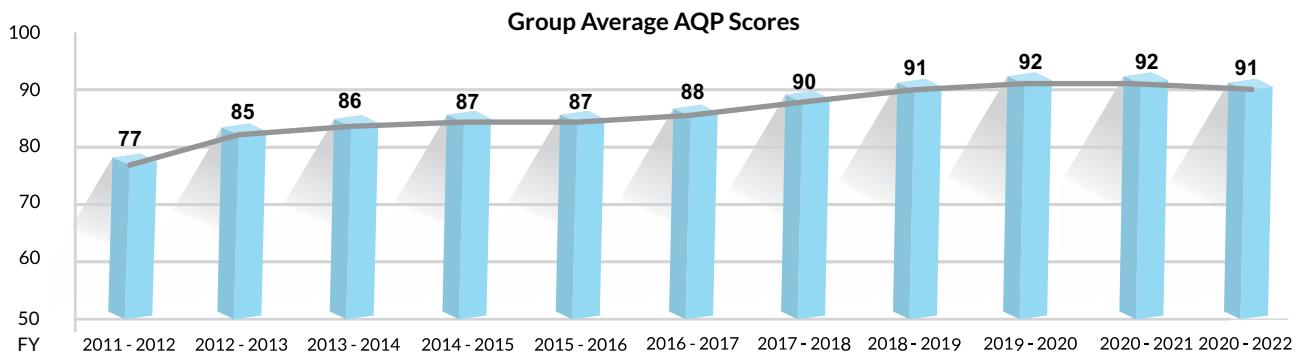


ACE 1 Champion (Group C) – Apollo Reach Hospital, Karur

## Apollo Quality Program (AQP)

The Apollo Quality Program was started in December 2010 to implement patient safety practices in all our Apollo Hospitals irrespective of the accreditation status. It covers five broad areas: Safety during Clinical Handovers, Surgical Safety, Medication Safety, the Six

International Patient Safety Goals of JCI and Standardisation of Minimum Content of Medical Records. An analysis of the parameters in 2021 has shown an increase in compliance levels for various parameters. The average AQP scores at group level have also increased from 77 in FY (2011-12) to 91 in FY (2021-22).



*Below are a few examples of improvement at different Apollo locations:*

Percentage compliance to completion of in-house transfer form before patient transfer, Apollo Hospitals A



Percentage compliance to use of nursing handover form for patient handover, Apollo Hospitals B



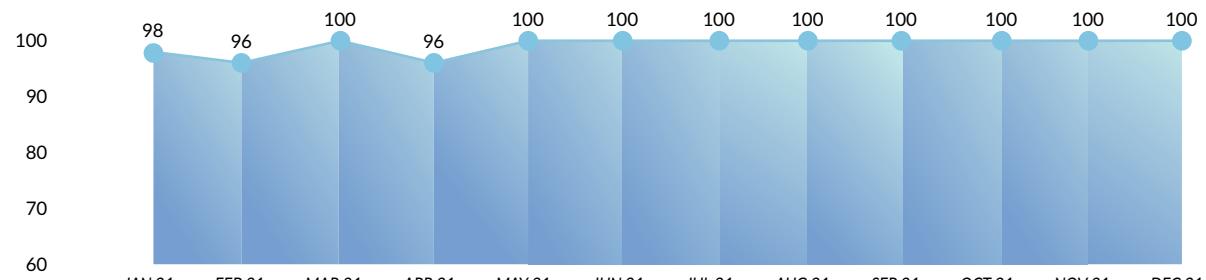
### Percentage compliance to use of physician handover form for patient handover, Apollo Hospitals C



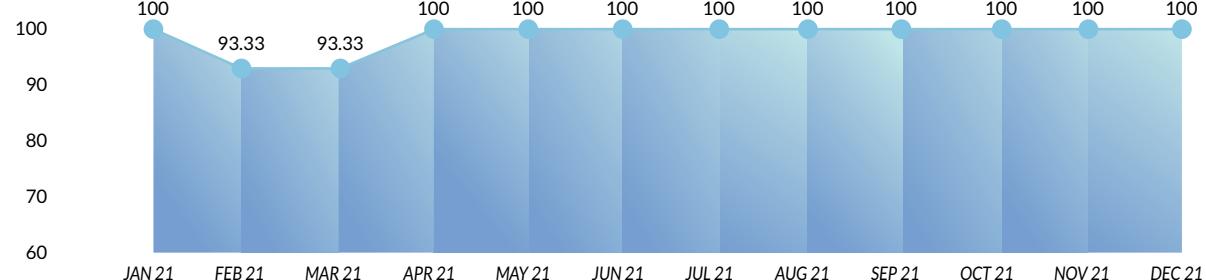
### Percentage compliance to IPSG 1 two patient identifier, Apollo Hospitals D



### Percentage compliance to IPSG 2 read back for verbal orders, Apollo Hospitals E



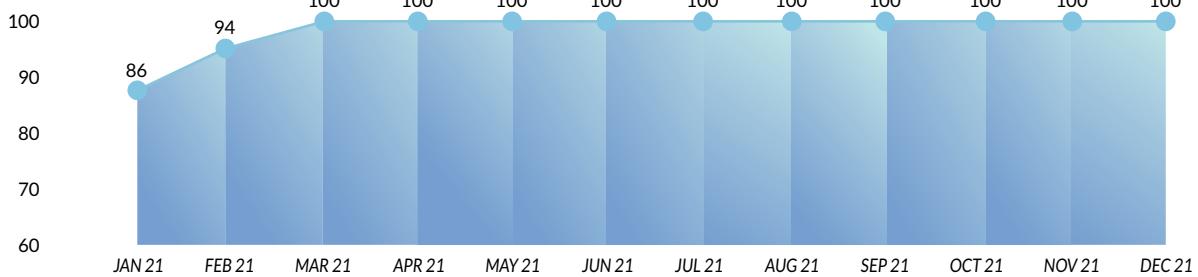
### Percentage compliance to IPSG 3 safety precautions for high alert medication, Apollo Hospitals F



Percentage compliance to IPSG 4 measures for prevention of wrong side, wrong patient, wrong procedure surgery, Apollo Hospitals G



Percentage compliance to IPSG 5 hand washing, Apollo Hospitals H



Percentage compliance to IPSG 6 falls prevention measures, Apollo Hospitals I



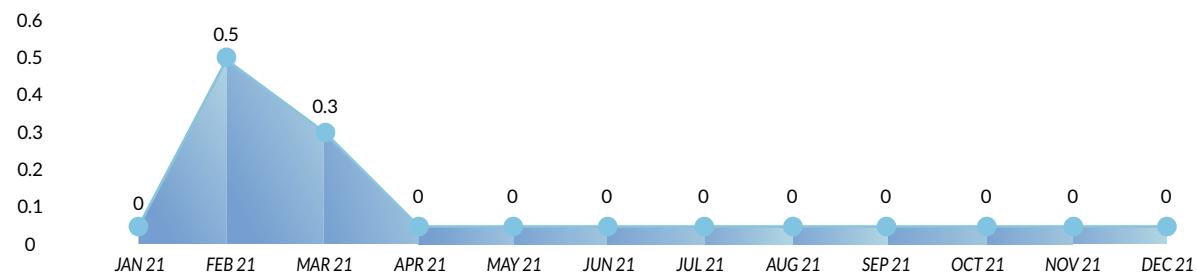
Percentage of patients receiving antimicrobial prophylaxis one hour before surgery, Apollo Hospitals J



Percentage of patients excluded from SSI calculation due to lack of follow up for the requisite time frame, Apollo Hospitals K



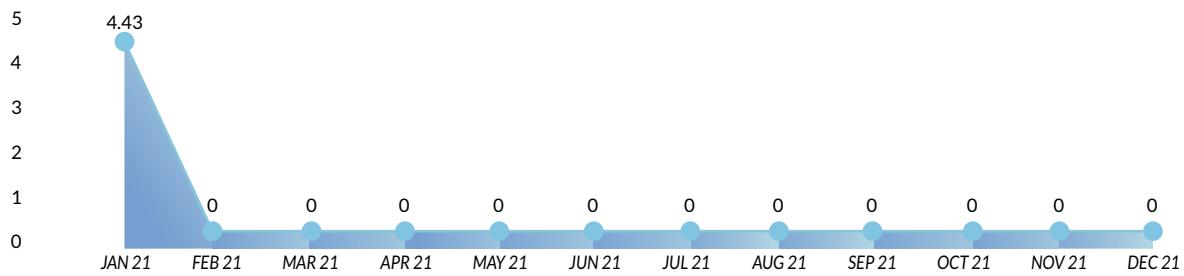
SSI, Apollo Hospitals L



Medication errors per 100 discharges, Apollo Hospitals N



Medication errors due to sound alike look alike drugs as a percentage of total error, Apollo Hospitals O



## **ACE Platform (ACEP)**

ACE Platform (ACEP) is a standardized tool formulated by Apollo Hospitals, to share the best practices for clinical excellence and quality improvement for the benefit of other healthcare providers outside the Apollo Hospitals Group. The initiative is pro-bono and is aimed at enhancement of the quality of healthcare delivered across India. The ACE platform can be used by any hospital across the country to drive quality improvement, patient safety and better clinical outcomes. ACEP comprises of important indicator sets for monitoring quality and clinical excellence along with policies which deal with the core processes in patient care. Policies and indicators set for implementation along with training material are shared with the affiliated hospitals.

Over 60 hospitals outside the Apollo Hospitals Group have so far implemented ACEP through affiliation and have consistently improved the implementation of quality in their respective hospitals.

### **Criteria for inclusion of hospitals (outside Apollo Hospitals Group) for ACE Platform**

Bed strength 15 beds or more
Laboratory services
Radiology services
Fully equipped ICU with ventilator
Operation theatre services
CSSD services
Duty Medical Officer (MBBS) at night
Registered nurses
24 hour emergency services

## **Quality Teams Activities at Apollo Hospitals**

Quality improvement in healthcare means a systematic approach that monitors, assesses and improves the standards of quality healthcare. Quality improvement is meant for enhancing safety, effectiveness and efficiency. It is an ongoing process that helps to continually find new and better ways of doing things so that patient care can be enhanced for improved satisfaction and better outcomes. The challenge is to get better each year.

Quality teams at Apollo Hospitals use best practice adoption and analytics to drive outcomes improvement.

**The following initiatives were undertaken in 2021 at Apollo Hospitals:**

- Over 7720 'Quality Toolbox Talks' and 1228 'Flash Meetings'
- Standardization of medication management
- Improved online incident reporting
- Announcement for 'Good Catch' Awards to encourage near-miss incidents reporting
- Compliance to 21st edition of Redbook for COVID-19 Protocol
- Over 14 virtual mock audits for JCI and NABH preparation
- Over 28 quality improvement and patient safety workshops, virtual trainings and webinars were conducted
- Quarterly reviews for quality activities and compliances were conducted
- More than seven 'Quality Open House, virtual meetings were organized that connected all quality team members across pan India locations of Apollo Hospitals.

### **Quality Watch activity undertaken in 2021**

Awareness activities based on the following themes were conducted across all Apollo Hospitals:

## Safety Events Reporting Awareness



## IPSG Focused Activities



## Infection Prevention and Control Activities



## Focused Fall Prevention Activities



## Medication Safety Activities



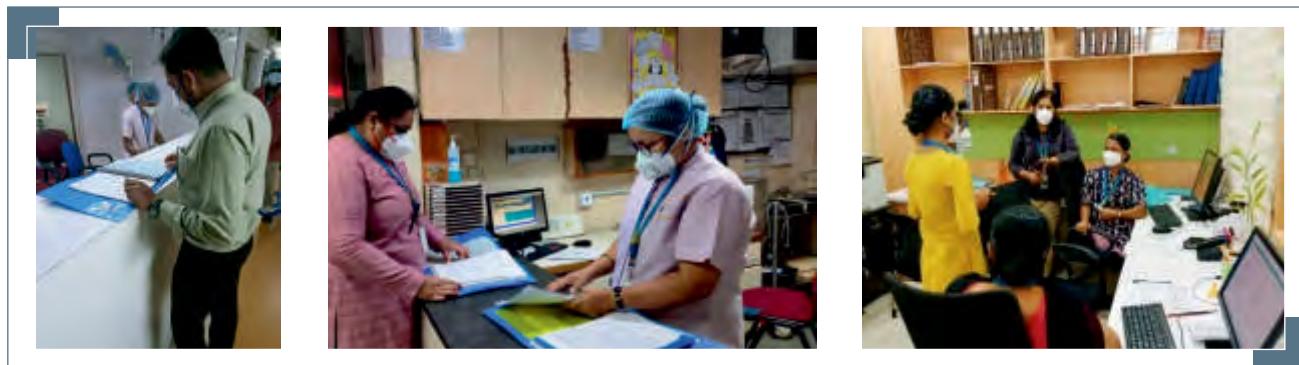
## Anesthesia and Surgical Safety



## Environmental Management and Equipment Safety



## Medical Record Review and Process Activities



- Safety Culture Survey**

The safety culture survey score improved from 72.5 in 2020 to 92 in 2021. The results, were analyzed to drill down the reasons of outcomes and plans were developed for improvement.



## Accreditations

JCI and NABH accreditation and reaccreditation cycles were successfully completed at various Apollo Hospitals

## Improvement Projects & Initiatives undertaken

Projects and initiatives	Improvement
Innovation projects on quality, process improvements, cost saving initiatives	63
Videos on Patient safety posted on various internet platforms	74
Paper publications (Quality and Patient Safety Related)	10
Quality Improvement projects on Repeat Incidents	77
Quality Improvement projects on Risk Assessment	52
World Quality Day Marathon celebrated	1,201,237 total impressions on social media
views garnered by the video released on the World Quality Day	94,083
Roll out of Patient Communication App	
Workshops on quality and patient safety topics - Medication Safety, Incident Management and Root Cause Analysis, JCI/NABH standards implementation	
Weekly virtual sessions on 'Learn a Lean Tool'	

## World Patient Safety Day Celebrated across all Units



## World Quality Day Marathon



## Apollo Health and Lifestyle Limited (AHLL)

Apollo Health and Lifestyle Limited (AHLL) is an Apollo Group initiative which takes healthcare services from the hospital settings, closer to home within neighbourhood locations, in order to serve the community better. It is a network that has various healthcare business verticals like, Apollo Clinics, Apollo Cradle, Apollo Spectra Hospitals, Apollo Diagnostics, Apollo White Dental and Apollo Dialysis.

**Apollo Clinic** was introduced with the vision of serving local communities and making world-class healthcare available for daily health needs in the neighbourhoods.

**Apollo Sugar** provides end-to-end care and management of diabetes and related complications to the community.

**Apollo Cradle** was the first to introduce the concept of an exclusive, standalone healthcare centre for women and offers pediatric care too.

**Apollo Spectra** provides world-class surgical care that is accessible and available at an affordable cost.

**Apollo Diagnostics** provides a full spectrum of high precision diagnostic services based on which Apollo's healthcare practitioners design and deliver the most appropriate treatment plan to reduce patient's mortality and morbidity levels.

**Apollo WHITE** is a first of its kind dental care brand with a fleet of seven-star dental spas, studios, clinics and express centres spread across the country, offering premium services, Avant Garde Cosmetic Dentistry and simple, affordable dental services.

**Apollo Fertility** offers several specialized investigative procedures for infertility in men and women giving couples their very best chance of a successful pregnancy. Along with the state-of-the-art technology and clinical protocols that are closely monitored, Apollo Fertility gives the expertise and technology to increase a couples' chances for child bearing.

## Achievements of Apollo Dialysis in 2021:

- Apollo Dialysis is currently operating 85 clinics across India with 26 clinics launched in 2021
- Certificate of appreciation received from Department of Health and Family Welfare, Government of Assam for service excellence during COVID-19
- Home Hemodialysis Project (HHD) was launched and has delivered more than 200 HHD sessions with full compliance on service quality.
- Adopted technology (Q4E app and Adbhutam) for tracking all clinical reports through online portals and has become completely paperless
- Winner of World Patient Safety Day contest which conducted across AHLL
- Consistently achieved targets of Q4E outcome measures of Dialysis Adequacy and Average Hemoglobin
- Increased tracking and reporting of incidents by clinics
- Full compliance to implementation of Redbook guidelines for COVID-19
- Celebrated special days like World Kidney Day, World Hand Hygiene Day, World Hepatitis Day and World Patient Safety Day across all the clinics



Certificate of Appreciation being awarded by  
Dr Himanta Biswa Sarma, Hon. Minister, Health and Family Welfare,  
Government of Assam and Shri. Samir Kr. Sirha, IAS, Principal Secretary,  
Health and Family Welfare, Government of Assam

## Walkathon and Health talks on World Kidney Day



## Achievements of Apollo Diagnostics in 2021:

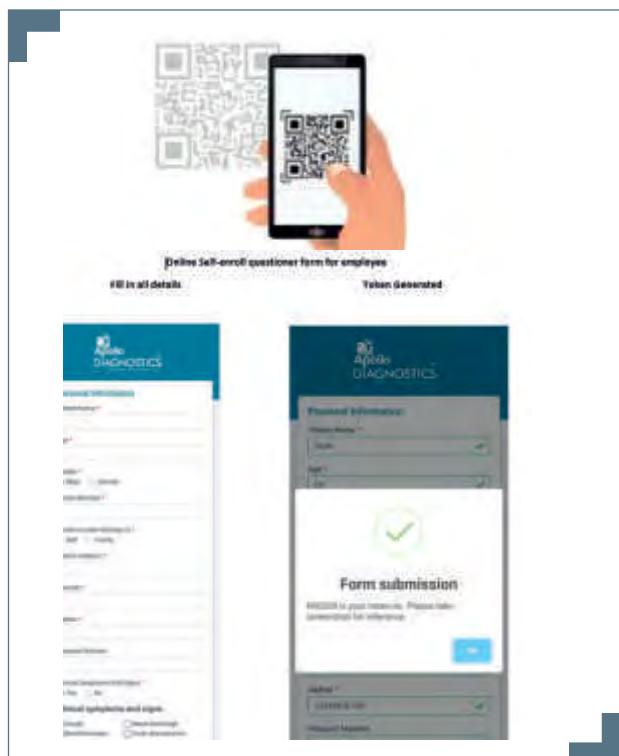
The total number of home samples collected in 2021 was 8,48,831.

### Technology Implementation

- Implemented the QR Code for corporates

This enabled easy access and a self-registration process for the employees. This facilitated error free onsite COVID Antigen testing of more than 45000 employees

## Patient's Education on World Hand Hygiene Day



## Public Awareness and Vaccination drive on World Hepatitis Day



- Launched QR code for International Departure Airports

Four RTPCR labs, enable with QR codes were launched in Ahmedabad, Jaipur, Mangalore and Hyderabad airports. These helped the passengers to access the 'Air Suvidha Portal' through QR codes and helped them to pre-book, pay and schedule the test before they land in India.

- Dynamic Roster Application



Initiated capturing patients' location longitude and latitude based on their live location so as to assign nearest available phlebotomist. This helps the phlebotomist to reach patient location without any manual guidance. Auto allocation of order is done if any phlebotomist is on emergency leave/ any incident occurred. This helped to increase the slot inventory from 6,000 to 9,000 by reducing slot length to cater

more number of patients with existing phlebotomist strength.

### Phlebotomist Training

Over 3036 man-hours of training were provided to the phlebotomists to improve their skillsets for providing best customer experience with Apollo Diagnostics. All attendees were assessed by experts and provided a qualifying certificate.



### My Safety Armor Kit (MSA)

This is a personalized, safe and hygienic sample collection kit for better customer experience, MSA Kit was introduced in all centers across India. The major objective was to give them the best experience possible thereby enabling maximum customer satisfaction.



## HR Innovation

Weekly/ fortnightly reviews were conducted to identify high-demand service areas and drop off areas/ pin codes where services could not be provided. This helped to re-deploy/ hire phlebotomists.

## Achievements of Apollo Sugar Clinics in 2021:

- Apollo Sugar Clinics obtained Drugs Controller General of India (DCGI) approval for step I clinical trials study (GI Dynamics, USA – Sponsor) for endobarrier usage in T2DM patients with high BMI
- Six abstracts from Apollo Sugar Clinics were accepted in 2021 (International Diabetes Federation (IDF), Research Society for the Study of Diabetes in India (RSSDI) and World Obesity Congress
- A two-day virtual conference, Apollo Sugar Clinical Update was conducted. There were over 27 sessions with participation from National and International faculty and 11 industry sponsors. More than 400 participants attended the programme.

- Over 20 CMEs were conducted with internal and external speakers.
- Over 12 virtual programs were conducted in association with Seniority Club, Ypsomed, Prudent, KPMG, Colgate, Aditya Birla Capital, Sumologic, Unison, Marlabs and Paytm.
- Application Programming Interface (API) was launched to detect pre-diabetes

## Quality for Excellence (Q4E) Awards 2021

The Quality for Excellence (Q4E) Programme ensures continuous quality improvement across all the AHLL platforms and centres, through its various initiatives like Q4E Outcome Measures Programme, Q4E Surveys, Peer audits and accreditation standards implementation. Q4E Awards are part of the Q4E programme wherein the best performing centre in terms of quality is given recognition. The winning centre is awarded a trophy on Founder's Day, in addition to a cash incentive for every staff member of the centre.



Best Apollo Cradle 2021 (Joint Winner) – Jubilee Hills, Hyderabad



Best Apollo Spectra Hospital 2021 (Joint Winner) – Kondapur, Hyderabad



Best Apollo Cradle 2021 (Joint Winner) – Brookefield, Bangalore



Best Apollo Clinic 2021 – Electronic City, Bangalore



Best Apollo Spectra Hospital 2021 (Joint Winner) – Nehru Enclave, Delhi



Best Apollo Diagnostic Lab 2021 – RRL, Bangalore



Best Apollo Fertility 2021 – JP Nagar, Bangalore



Best Apollo Dialysis Clinic 2021 – NMCH, Patna



Best Apollo Dental 2021 (SIS) – BG Road, Bangalore

## Apollo Continuous Medical Education Program

Continued Medical Education (CME) is an essential requirement of all practicing clinicians to keep themselves abreast of the recent advancements in the healthcare.

The CMEs are also a very powerful medium to reach out to community physicians. Various CME programs have been designed to cater to the professional development needs of the doctors with respect to their expertise level and interests. Through these programs, Apollo Hospitals was able to touch base and up-skill the knowledge and skills of the doctors practising in the community.

## Apollo Clinical Program (ACP)

For General Practitioners, ACP aims to upskill the General Physicians (GPs) and covers important practice areas like Non- Communicable Diseases (NCDs).

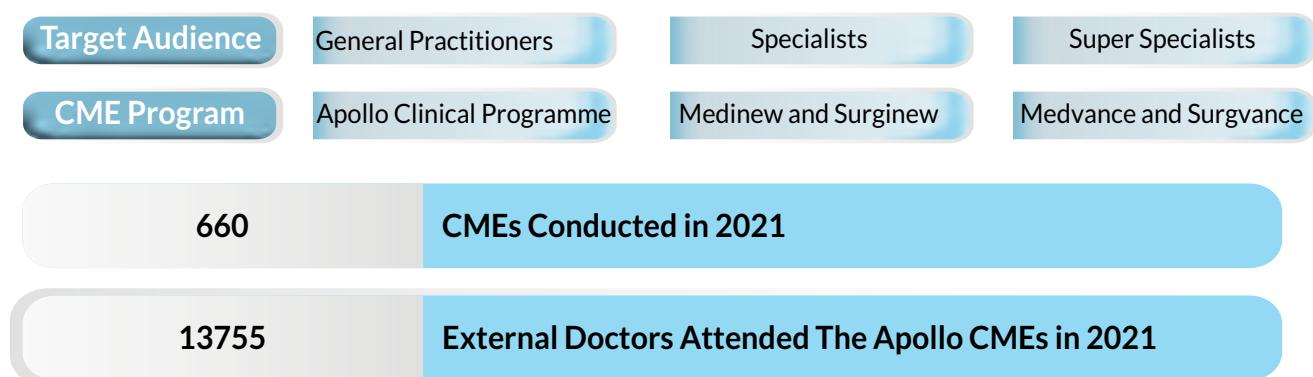
## MediNew and SurgiNew

MediNew and SurgiNew are professional development programs for specialist doctors in the field of Internal Medicine, Orthopaedics, Laparoscopic Surgery, Paediatrics, Gynaecology, ENT, Pathology and Radiology.

## MedVance and SurgVance

MedVance and SurgVance are designed to enhance the skills of super-specialists. These programs provide a platform for sharing medical advancements such as innovative technologies and techniques, newer drugs and treatment protocols. This program has been designed for super-specialist doctors in the field of Neurology, Neurosurgery, Nephrology, Transplants, Oncology, Cardiology, Cardiac Surgery, Critical Care, Endocrinology, Gastroenterology, Urology and Rheumatology.

CME Credit Points are also given by the respective State Medical Councils for these programs. Partnerships with various pharmaceutical, medical devices and biotech companies have been established for effective outreach.



## Apollo Clinical Innovation Group (ACIG)

ACIG has been formulated to introduce best practices and latest technologies to delineate clinical innovation for implementation across Apollo Hospitals Group.

In 2021 ACIG conducted two sessions with 24 meetings and engaged 186 consultants to facilitate the formulation of 39 innovation proposals.



## Innovative Procedures, Processes, Technologies and Protocols Implemented in 2021

Innovation Procedures, processes or technology	Implementation/availability at Apollo Hospitals locations
Code Fast	Delhi, Hyderabad, Chennai, Kolkata, BG Road-Bangalore, Bilaspur, Vanagaram, AFMH, Vizag, Jayanagar, Mysore, Nashik, Lucknow, Secunderabad, Indore, Guwahati, Sheshadripuram, OMR Chennai,
Deep Brain Stimulation	Kolkata, Delhi, Chennai, Hyderabad, BG Road -Bangalore, Bhubaneswar, Seshadripuram, Guwahati, Lucknow, Vanagaram, OMR Chennai, Jayanagar
HIPEC (Hyperthermic Intraperitoneal Chemotherapy)	Ahmedabad, Chennai, Delhi, Kolkata, Navi Mumbai, BG Road-Bangalore, Lucknow, Pune, Secunderabad, Seshadripuram, Kochi, Vizag
Cardiac Rhythm Disorder Centre	Hyderabad, Kolkata, Chennai, BG Road-Bangalore, Vizag, Vizag-Ramnagar, Seshadripuram, Guwahati, OMR Chennai, Lucknow
Mechanical Thrombectomy	Ahmedabad, Chennai, Delhi, Kolkata, Navi Mumbai, Vizag, Bhubaneswar, Indore, Nellore, Seshadripuram, Jayanagar, Mysore
TAVI/TAVR (Transcatheter Aortic Valve Replacement/ Implantation)	Ahmedabad, Delhi, Chennai, Hyderabad, Navi Mumbai, BG Road-Bangalore, Lucknow, Trichy, Indore
Orthopedic Robotic Spine Joint Arthroplasty	Jayanagar, Indore, Chennai
Out-Patient Arthroplasty	Indore, Hyderabad, Nellore, OMR Chennai, Bilaspur, Lucknow, Guwahati
Code STEMI	Delhi, BG Road-Bangalore, Chennai, Vizag, Indore, Nellore, Seshadripuram, Secunderabad, Guwahati, OMR Chennai, Lucknow, Mysore
3-D Printing and Implants	Delhi, Hyderabad, Chennai, Mumbai, Vanagaram, Lucknow, Vizag, Indore, OMR Chennai, Seshadripuram
Code SEPSIS	Delhi, Navi Mumbai, BG Road-Bangalore, Chennai, Indore, Vizag-Ramnagar, Jayanagar, Mysore, Lucknow,
Apollo Centre for Genomic Medicine	Delhi, Navi Mumbai, Chennai
3D - OCT (Optical Coherence Tomography)	Navi Mumbai, Chennai, Hyderabad

## Apollo Center for Genomic Medicine

### Indraprastha Apollo Hospitals, New Delhi

ACIG proposed the establishment of Apollo Genomic Platform across the Group to provide genetic/genomic services to the patients.

The Apollo Center for Genomic Medicine (ACGM) had been set up with the aim of providing comprehensive and multidisciplinary care to patients and families with suspected genetic disorders. At ACGM, Indraprastha Apollo Hospital Delhi, a team of Clinical Geneticists and Genetic Counsellors have evaluated more than 250 patients and enabled definitive diagnosis and further management of these patients.

There is a vast array of indications to see a medical geneticist at preconception, antenatal, pediatric and adult stages.

Among the wide spectrum of indications for which the families have been referred to see a medical geneticist include intellectual disability, learning problems, developmental delay, autism, neuro-degeneration, abnormal growth pattern short or tall stature, muscular disorder, suspected immunodeficiency, congenital blindness, deafness, unusual skin findings, congenital heart defects, cardiomyopathy, cancers at a young age, hypogonadism, birth defects. Couples who are married within the family, pregnant women with age more than 38 years and with anomaly detected in fetus in ultrasound, exposure to a potentially teratogenic agent during pregnancy, previous or

present stillbirth and recurrent pregnancy loss are also indicated to see a medical geneticist.

Following is a glimpse cases which have been referred from across various specialties and benefitted by genetic evaluation and genetic testing:

### Success Stories

#### Case 1

A 61-year-old male patient was admitted in neurology with complaints of weakness, slowness of movements, forgetfulness – progressive, dementia, episodes of sudden weakness with some residual weakness each time for past two years. MRI indicated bilateral diffuse demyelination. A genetic consultation was taken. The genomics team reviewed the family history which was positive as shown in the pedigree below (Fig.1)

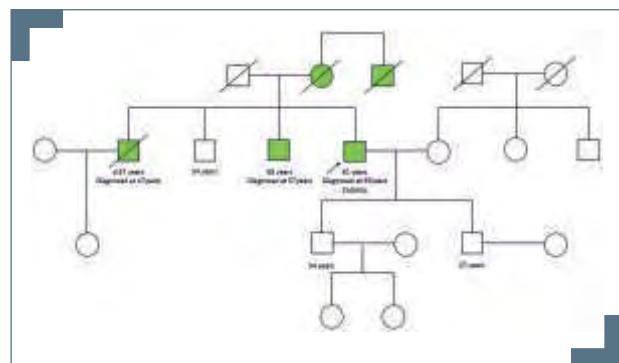


Fig 1- Case 1 family pedigree showing multiple

Clinical suspicion of cerebral arteriopathy with subcortical infarcts and leukoencephalopathy 1 (CADASIL) was confirmed by Whole Exome Sequencing. A heterozygous likely pathogenic variant was found in NOTCH3 gene- autosomal dominant; Exon 4, c.457C>T (p.Arg153Cys).

CADASIL is a rare genetic disorder affecting the small blood vessels in the brain leading to recurrent strokes, cognitive impairment, psychiatric disturbances. It is inherited in an autosomal dominant fashion with risk of transmission of 50% to offspring. There are definite guidelines about the thrombolytic therapy (intravenous thrombolysis) and oral anticoagulants for

treatment of episodes of stroke in CADASIL. The family was counselled about the risk and advantages of genetic testing of the offspring and other family members at risk.

#### Case 2

A ten-year-old female patient under evaluation in paediatric neurology and paediatric endocrinology was referred in view of mild intellectual disability, learning problems, poor scholastic performance and short stature noticed by parents since two years of age. The short stature was primordial (birth weight- 2kg), proportionate, with mild delay in bone age. On evaluation in genetics clinic, she was found to have characteristic dysmorphism of a rare genetic syndrome, Kabuki syndrome.



Fig 2. A proband with characteristic facial features- long palpebral fissures, high arched eyebrows, lateral interruption of eyebrows and fetal finger pads

The genetic testing confirmed the diagnosis of Kabuki syndrome- KMT2D- Heterozygous mutation c. 15883G>T (p. Gly5295Trp). A multidisciplinary management of children with Kabuki syndrome usually results in an improved quality of life and outcome. This includes monitoring for cardiologic and renal complications, hearing evaluation, growth hormone therapy for short stature and occupational and speech therapy.

### Robotic Arthroplasty Programme

#### Apollo Hospitals, Indore

Precision is a key factor in the success of a surgery. This is more so true in the case of knee replacements- where precise angulation of the various components of the joints is instrumental in the longevity of the prosthetic joint. This, combined with the expertise of

an experienced surgeon helps in achieving great results. Robot assisted joint replacement is a testimony for this.

### About the Procedure

After the exposure of knee joint with a much smaller incision (as compared to the traditional surgery), localizing pins are attached to the femur and tibia. The advanced computer programme of the robot relays the precise information about the joint, soft tissues and angles to the system. This information is then used for precise burring/ resurfacing of the bones through hand held instrument guided by the robot. There is also minimal disruption to the ligaments. This results in precise placement (alignment) of the implants so as to take care of the deformity correction and the soft tissue (ligament) laxity around the knee joint. This in turn ensures a near-normal knee movement in both total and partial knee replacement.

There are distinct advantages in case of Robotic Assisted Knee Replacement Surgery-

- Less invasive
- Minimal tissue dissection
- Minimal bone cutting- just the required amount
- Precise alignment of joint
- Correction of tissue laxity
- Minimal blood loss
- Less pain due to limited dissection
- Lesser hospital stays
- Near normal knee joint movements

Robotic arthroplasty programme was initiated at Apollo Hospitals, Indore in 2021.

The average length of surgery is less in robotic knee replacements as compared to traditional surgery. Further taking this to the next level, day care joint replacement surgery has been implemented.

Apollo Hospitals, Indore is the only center in India to perform both Day Care Knee and Day Care Hip Replacements. It also became the first centre to perform Day Care Bilateral Knee Replacement. The center has performed 811 joint replacements in the calendar year 2021, making it the highest volume centers in central India and one of the top centers in India.

With the addition of highly advanced second-generation CORI Robotic System, the arthroplasty programme has raised the benchmark of comfort and results to a new height.

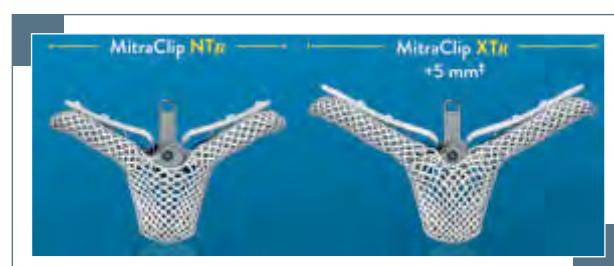


### Mitral Clip

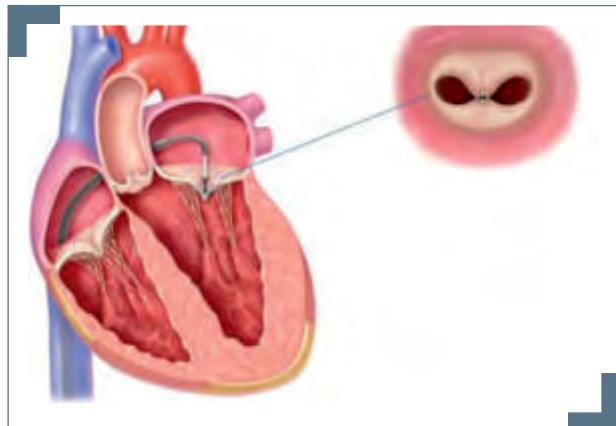
#### [Apollo Hospitals, Greams Road, Chennai](#)

The Mitral Clip procedure is a minimally invasive catheter-based therapy performed by multidisciplinary heart teams.

A Mitral Valve Clip repairs damaged mitral valve without the need for open-heart surgery. A small metal clip, about the size of a large staple, is attached to the mitral valve via a vein in the leg. The clip stays there permanently and helps the valve to function properly again.



Lifesaving Mitral Clip procedures were successfully performed at Apollo Main Hospital, Chennai even during the pandemic. The unit has performed 70% of the cases in the country and all patients are doing well including a 91-year-old patient.



## One Stop Breast Clinic

### Apollo Hospitals, Navi Mumbai

The One-Stop Breast Clinic is designed specifically for women with breast-related symptoms wherein a triple assessment is offered in a single arena or space.

One-Stop Breast Clinic at Apollo Hospitals, Navi Mumbai has the entire care process organized to take less than one hour to complete, thereby making it efficient for busy patients.

Components of a one-stop breast clinic –

- Clinical consult comprising a detailed history and examination performed by a specialist breast surgeon.
- An imaging test for the breast, mammogram/ultrasound, performed by a trained specialist breast radiologist.
- If any abnormality is detected in the above, the same is discussed with the clinician immediately, and an image guided core biopsy or fine needle aspiration cytology is carried out under local anaesthesia by the radiologist, in the same sitting.

A trained cytopathologist evaluates the FNAC and a report is issued immediately. A core biopsy takes about 2-5 working days for analysis. One Stop Breast Clinic offers the services of specialists such as breast cancer surgeons, radiologists and cytopathologists so that there is no room for error.

Advantages of a One Stop Breast Clinic:

- Time efficient
- It allows quick diagnosis of breast related symptoms. Which helps in rapid alleviation of anxiety in female patients with benign lesions
- If the biopsy reveals any findings, the same is discussed with the patient and treatment started immediately
- This clinic allows any female patient to self-refer for screening



Success so far at Apollo Hospital Navi Mumbai

- Total 66 cases have been screened and 18 patients further recommended for surgery through this clinic since the launch.
- Enhanced patient service by providing single day diagnosis and recommending further treatment plan.

One-Stop Breast Clinic model is easily replicable, “When you combine the right people, process, and

technology, you can deliver excellent clinical, operational, and financial outcomes with increased value.

## Apollo Innovation and Quality Awards 2021

Apollo Innovation and Quality Awards is a platform that felicitates and rewards hospitals within the Apollo Group for their diligent efforts and innovations to persistently improve patients care, quality, and safety.

Nominations for Apollo Innovations and Quality Awards 2021 were invited from all locations in seven categories:

- Excellence in Clinical Services
- Excellence in Community Services
- Excellence in Environmental Conservation
- Excellence in Finance
- Excellence in HR Practices
- Excellence in Operations
- Excellence in Quality Management and Patient Safety

One hundred sixty-nine nominations were received from 35 units.

The nominations were judged by an esteemed jury members:

### Excellence in HR practices

Dr Yash Pal Bhatia

Mr SV Kiran

### Excellence in Finance

Mr Krishna Kumar

Mr Manian KBS

### Excellence in Clinical Service

Dr Arun Kumar Agrawal

Dr Rana Mehta

### Excellence in Environmental conservation

Mr Nanda Kumar

Mr Ravichandran

### Excellence in Community Services

Dr Dilip Mathai

Mr Gerald Jaideep

### Excellence in Operations

Dr Srinivas

Mr Vikram Thaploo

### Excellence in Quality Management and Patient Safety

Dr Ravi Mahajan

Dr JK Das

The winners in each category were:

Clinical Services	
Winner	Projects
Apollo Hospital, Indore	Bilateral total knee arthroplasty as daycare procedure
Apollo Tele Health Services	Telemedicine services program in Himachal Pradesh

<b>Special Recognitions</b>	
Apollo Main Hospitals, Chennai	Guidelines cannot tell everything: Think wise to avert crisis during the war against the invisible enemy
Apollo Homecare	Apollo stay I at home
Apollo Hospitals, Jubilee Hills, Hyderabad	Exercise based cardiac rehabilitation programme in patients admitted with myocardial infarction (Heart Attack)
Apollo Cancer Institute, Teynampet	A rapid assay to detect carcinoma cells in serous effusions by flow cytometry
Apollo Hospitals, Jayanagar	Transgressing conventional recommendations in a new disease: A study demonstrating value addition and safety of bronchoscopy in mechanically ventilated COVID19 ARDS
Apollo Hospitals, Trichy	Hybrid CABG -First time in Trichy district
Apollo Main Hospitals, Bangalore	Setting up RTPCR lab for COVID testing during the COVID pandemic
Apollo Hospitals, Jubilee Hills, Hyderabad	Day-care robotic hysterectomy at Apollo Hospitals, Hyderabad
Apollo Hospitals, Jubilee Hills, Hyderabad	Variation in an operating procedure, done for the first time in India
Apollo Specialty Hospitals, Vanagaram	Pioneer of the modified ventricular restoration procedure – EVPP (Endo Ventricular Patch Plasty)
<b>Quality Management and Patient Safety</b>	
<i>Winner</i>	<i>Projects</i>
Indraprastha Apollo Hospitals, Delhi	Holistic approach to efficient point of care testing (POCT) management
<b>Special Recognitions</b>	
Indraprastha Apollo Hospitals, Delhi	CALL-A-CAB-66 (Heart to brain drive)
Apollo Health and Lifestyle	Apollo Q4E App: Achieving excellence in quality through technology
Apollo Proton Cancer Center	VAT - Tough Cookie: Patient safety in cancer patients receiving chemotherapy through Long Term Venous Access (LTVA) by documentation of care in vascular access passport to achieve high-quality care
Apollo Main Hospitals, Ahmedabad	Fight antimicrobial resistance -Antimicrobial Stewardship Program

Apollo Main Hospitals, Chennai	Fighting CLABSI - Battle against CLABSI rate during COVID pandemic
<b>Operations</b>	
<b>Winner</b>	<b>Projects</b>
Apollo Speciality Hospitals, Madurai	Oxygen crisis - Breathe easy
<b>Special Recognitions</b>	
Apollo Main Hospitals, Chennai	Project FAM - Fight against malnutrition
Indraprastha Apollo Hospitals, Delhi	Reducing discharge delays - Digitization of information
Apollo Corporate	Silverlining in dark clouds - Pandemic driven acceleration of patient & family communication
<b>Financial Management</b>	
<b>Winner</b>	<b>Projects</b>
Apollo Medics Hospital, Lucknow	Margin improvement plan
<b>Special Recognitions</b>	
Indraprastha Apollo Hospitals, Delhi	Re-architecting hospital pharmacy inventory management system - A novel approach
<b>Environmental Conservation</b>	
<b>Winner</b>	<b>Projects</b>
Apollo Cancer Institute, Teynampet	Recycling heat energy waste heat recovery - An initiative to reuse heat energy from steam boiler flue gas
<b>Special Recognitions</b>	
Apollo Hospitals, Seshadripuram, Bangalore	Installation of a heat pump instead of the utilization of coal
<b>HR Practices</b>	
<b>Winner</b>	<b>Projects</b>
Apollo Diagnostics	Mission "Phlebo -200"
<b>Special Recognitions</b>	
Apollo Tele Health Services	E-Cube (Enable, Engage and Empower)
<b>Community Service</b>	
<b>Winner</b>	<b>Projects</b>
Apollo Proton Cancer Center	LITE - Cancer survivorship follow up care in the community
<b>Special Recognitions</b>	
Apollo Hospitals, Jubilee Hills, Hyderabad	"SAHAYAK PROGRAM – Going beyond our duties"



Award for Excellence in Clinical Services conferred to  
Apollo Tele Health Services



Award for Excellence in Clinical Services conferred to  
Dr. Sunil Rajan, Apollo Hospitals, Indore



Award for Excellence in Community Services conferred to  
Apollo Proton Cancer Centre



Award for Excellence in Environmental Conservation conferred to  
Apollo Hospitals, Teynampet



Award for Excellence in Finance conferred to Apolomedics Hospital, Lucknow



Award for Excellence in HR Practices conferred to Apollo Diagnostics



Award for Excellence in Operations conferred to  
Apollo Hospital, Madurai



Award for Excellence in Quality Management and Patient Safety  
conferred to Indraprastha Apollo Hospital, Delhi

## Apollo Clinical Awards 2021

Apollo Clinical Awards is a platform that honours and recognizes Consultants who have achieved path-breaking clinical, academic, and research related success.

Nominations for Apollo Clinical Awards 2021 were invited from all locations in six categories:

- Distinguished Clinician

The winners in each category were:

### Distinguished Clinician

Dr Vijay Dikshit, Senior Consultant, Cardiac Surgery, Hyderabad

Dr T Raja, Senior Consultant, Medical Oncology, ACC Teynampet

Dr Alok Ranjan, Senior Consultant, Neurosurgery, Hyderabad

Dr Tanweer Shahid, Senior Consultant, Radiation Oncology, Kolkata

### Distinguished Academician

Dr Murlidhar Rajagopalan, Senior Consultant, Dermatology, Chennai

Dr Nisith Kumar Mohanty, Senior Consultant, Nephrology, Bhubaneswar

Dr Anita Kaul, Senior Consultant, Fetal Medicine, Delhi

### Distinguished Researcher

Dr Shiv Kumar, Senior Consultant, Cardiology, Secunderabad

Dr C Venkataram, Senior Consultant, Internist and Hypertension, Hyderabad

Dr Ram Gopalakrishnan, Senior Consultant, Infectious Diseases, Chennai

### Young Clinician

Dr Nikhil Modi, Consultant, Intensivist and Pulmonology, Delhi

Dr Ashwin. K. Mani, Consultant, Intensivist and Pulmonology, AFMH, Chennai

Dr Anoop P, Senior Consultant, Pediatric Hemato Oncology, BG road, Bangalore

### Young Academician

Dr Rahul Gupta, Consultant, Cardiology, Navi Mumbai

Dr Manoj Singh, Senior Consultant, Intensivist and Pulmonology, Ahmedabad

Dr K Subba Reddy, Senior Consultant, Intensivist, Hyderabad

### Young Researcher

Dr. Nandini Sethuraman, Consultant, Microbiology, Chennai

Dr Saurabh Chipde, Consultant, Urology, Indore

- Distinguished Academician
- Distinguished Researcher
- Young Clinician Achiever
- Young Academic Achiever
- Young Researcher

The nominations were judged by an esteemed panel of jury.



Dr Vijay Dikshit  
Apollo Hospitals, Hyderabad



Dr Alok Ranjan  
Apollo Hospitals, Hyderabad



Dr T Raja  
Apollo Cancer Center, Teynemepet



Dr Tanveer Shahid  
Apollo Hospitals, Kolkata



Dr Murlidhar Rajagopalan  
Apollo Hospitals, Chennai



Dr Anita Kaul  
Apollo Hospitals, Delhi



Dr Nishit Kumar Mohanty  
Apollo Hospitals, Bhubaneshwar



Dr Manoj Singh  
Apollo Hospitals, Ahmedabad



Dr K Subba Reddy  
Apollo Hospitals, Hyderabad



Dr Rahul Gupta  
Apollo Hospitals, Navi Mumbai



Dr Anoop P  
Apollo Hospitals, Bangalore



Dr Ashwin K Mani  
Apollo First Med Hospitals, Chennai



Dr Nikhil Modi  
Apollo Hospitals, Delhi



Dr Saurabh Chipde  
Apollo Hospitals, Indore



Dr Nandani Sethuraman  
Apollo Hospitals, Chennai

### Recipients of Apollo Clinical Awards 2021

## Apollo Antimicrobial Stewardship (AAMSP) Awards 2021

The Apollo Antimicrobial Stewardship Programme (AAMSP) involves auditing and monitoring of antibiotics use across all Apollo Hospitals. The daily audits are conducted by the AMS team of each hospital. The awards have been instituted to motivate and recognise the efforts of the AMS teams for the implementation of the Antimicrobial Stewardship Programme.

### Winner:

Apollo Hospitals, Healthcity, Vizag

### Special Recognition:

Apollo Hospitals, Lucknow

Apollo Hospitals, Nashik

Apollo Hospitals, Kochi

Apollo Hospitals, Bhubaneshwar

Apollo Hospitals, Indore

Apollo Hospitals, Bilaspur

### Share Your Story

It is important to share the best practices and innovations amongst the hospitals for continuous improvement. The "Share Your Story" initiative was conceptualized with a view to sharing best practices amongst all the units on one chosen topic, every quarter. The topics in 2021 and respective winners were:

Minimising lab report delays during the COVID surge

**Winner: Apollo Hospitals, Greams Road, Chennai**

Minimizing medication errors due to sound-alike look-alike drugs

**Winner: Indraprastha Apollo Hospitals, Delhi**

## Join Commission International (JCI) Accredited Apollo Hospitals

The following Eight Apollo Hospitals are JCI Accredited:

S. No.	Hospital
1.	Indraprastha Apollo Hospitals, New Delhi
2.	Apollo Hospitals, Hyderabad
3.	Apollo Hospitals, Chennai
4.	Apollo Hospitals, Bangalore
5.	Apollo Hospitals, Kolkata
6.	Apollo Hospitals, Ahmedabad
7.	Apollo Hospitals, Navi Mumbai
8.	Apollo Proton Cancer Centre

## National Accreditation Board for Hospitals and Healthcare Providers (NABH) Accredited Apollo Hospitals

The following 32 Apollo Hospitals are NABH Accredited:

S. No.	Hospital
1.	Apollo Hospitals, Bilaspur
2.	Apollo Speciality Hospitals, Madurai
3.	Apollo BGS Hospitals, Mysore
4.	Apollo Jehangir Hospital, Pune
5.	Apollo Hospitals, Bhubaneswar
6.	Apollo Hospitals, Secunderabad
7.	Apollo Hospital, Hyderguda
8.	Apollo Specialty Hospitals, Vanagaram
9.	Apollo Hospitals, Kakinada
10.	Apollo Hospitals Noida
11.	Apollo Specialty Cancer Hospital, Teynampet
12.	Apollo Hospitals, Trichy
13.	Apollo Hospitals, Indore
14.	Apollo Hospitals, Nashik

15.	Apollo Hospitals, Seshadripuram
16.	Apollo KH Hospitals, Ranipet
17.	Apollo Speciality Hospitals, OMR
18.	Apollo Children's Hospital, Chennai
19.	Apollo Hospitals, Vizag
20.	Apollo Hospitals, Jayanagar
21.	Apollo Hospitals, Guwahati
22.	Apollo Hospitals, Karaikudi
23.	Apollo Speciality Hospitals, Nellore
24.	Apollomedics Super Speciality Hospitals, Lucknow
25.	Apollo Women's Hospitals, Chennai
26.	Apollo Hospitals, Karimnagar
27.	Apollo Hospitals, DRDO
28.	Apollo CVHF Heart Institute Ahmedabad
29.	Apollo Speciality Hospital, Bangalore
30.	Apollo Hospitals, Tondiarpet
31.	Apollo Adlux Hospitals, Kochi
32.	Apollo Institute of Medical Sciences and Research Hospital, Hyderabad

## Apollo ProHealth

Apollo ProHealth is India's first personalized predictive preventive health management program with a Personal Health Risk Assessment (pHRA) that evaluates health status and guides individuals on personalized path to wellness.

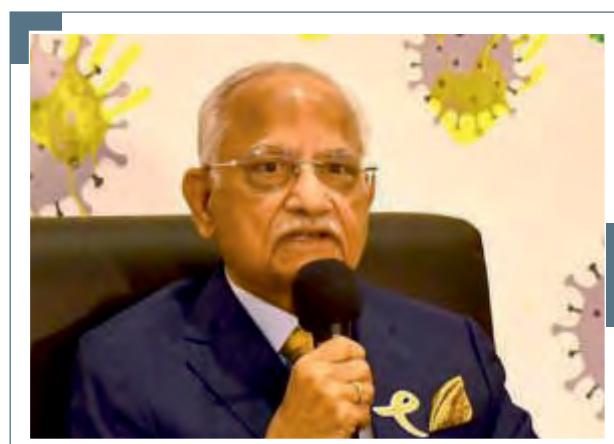
Apollo ProHealth brings together predictive risk analysis, cutting-edge diagnostics with physician evaluation, and a personalized path to wellness, designed to make positive shifts. The program has been created based on 22 million health checks, building on Apollo's pioneering efforts in preventive care for over 37 years, empowered by Artificial Intelligence and Predictive Algorithms, and led by medical experts. This unique personalized proactive health management program is specially designed to help PREDICT risk, PREVENT premature health events and OVERCOME chronic lifestyle diseases where possible.



## New Launches

### Apollo Hospitals launched Centre of Excellence in Critical Care in Hyderabad

Apollo Hospitals launched the Centre of Excellence in Critical Care (ACECC). Apollo Hospitals is currently the largest critical care provider in India with over 25% of its in-patient bed capacity designated for critical care. Critical care, also referred to as Intensive care, deals with critically-ill patients who require intensive care for various medical conditions that are life-threatening but reversible. The ACECC will harness digital technology to create an integrated network of eICUs providing world-class critical care not just across the Apollo Hospitals network but also in partnership with non-Apollo units in India and abroad. The ACECC will enable wider and timely access to critical care and will help in implementing a standardised scope of management and treatment in emergencies and critical medical situations.



Chairman, Apollo Hospitals, Dr Prathap C Reddy  
at the launch of ACECC

## Launch of TRUEBEAM STx with Velocity at Apollo Hospitals, Hyderabad

Apollo Hospitals, launched Varian's True Beam radiotherapy system with Velocity, an intelligent software solution, for interventional oncology at its cancer institute. The versatile True Beam is capable of treating a wide range of cancers with high accuracy, allowing oncologists to treat many complex cases. Patients also benefit due to the comfort, accuracy, and speed permitted by the True Beam system. The addition of the specialized software, Velocity, organises patient data and makes it available at one place to help clinicians make more informed treatment decisions.



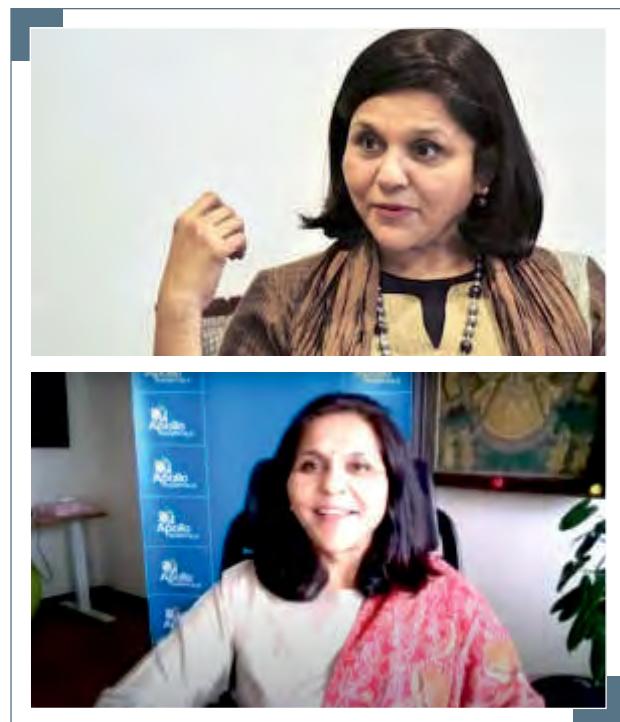
Dr. (Smt.) Tamilisai Soundararajan, Hon'ble Governor of Telangana and Ms. Shobana Kamineni, Executive Vice Chairperson Apollo Hospitals Group, at the launch of TrueBeam Radiotherapy Systems

## Apollo Hospitals launch AI Tool to predict Cardiovascular Disease Risk

Apollo Hospitals in India announced the national launch of an AI (artificial intelligence) tool to predict the risk of cardiovascular disease. The Apollo AI-powered cardiovascular disease (CVD) Risk tool will help healthcare providers to predict the risk of cardiac disease in their patients and initiate intervention early

enough to make a real difference.

The tool has also been validated internationally using federated learning through the Microsoft Azure Platform. Doctors across the Apollo network have been leveraging this AI-powered tool for three years to predict the risk of cardiovascular disease and drive preventive cardiac care across the country. The launch of the AI tool to predict the risk of heart disease, will help to achieve the World Health Organization's goal of reducing the risk of premature mortality from non-communicable diseases.



Ms Sangita Reddy, Joint Managing Director, Apollo Hospitals at the launch activities for the 'Apollo AI-powered Cardiovascular Disease Risk Tool'

## Apollo Medical Simulation Centre, launched at Apollo Specialty Hospitals, Vanagaram

Apollo Simulation Centre (ASC) is the first-of-its-kind postgraduate simulation center set up in India. This advanced simulation Centre has been equipped with state-of-art, hi-tech, high-fidelity computerized Simulators that will provide hands-on training to post-graduate medical students as well as assist practicing doctors to refine their procedural skills. This is an

absolute necessity, as it allows students to gain procedural skills and handle critical emergencies in a safe and controlled environment.



Thiru. MA Subramanian, Minister for Health and Family and Welfare, Tamil Nadu, Thiru A Krishnasami, MLA-Poonamallee, Thiru. K. Ganapathi, MLA-Madhuravoyal, Dr. Sudha Seshayyan, Vice Chancellor, The Tamilnadu Dr. MGR Medical University and Ms Preetha Reddy, Vice Chairperson, Apollo Hospitals Group at the inauguration of Apollo Simulation Center (ASC)

## Apollo Hospitals Chennai, launched 'The Institute of Hernia Surgery and Abdominal Wall Reconstruction

The Institute is a specialized Hernia care centre that brings new technology and advanced treatment techniques including laparoscopic and Robotic Surgery that aims at a bright looking future for patients suffering from all types of hernia.



Minister for Health and Family Welfare, Thiru. MA. Subramaniam and Ms Suneeta Reddy, Managing Director, Apollo Hospitals Group at the inauguration of Institute of Hernia Surgery and Abdominal Wall Reconstruction

## Apollo Specialty Hospitals, Vanagaram Launched a Level Four Epilepsy Care Center

Apollo Specialty Hospitals, Vanagaram has launched a Quaternary Care, Level FOUR Epilepsy Care Center to help people living with epilepsy. This level FOUR Epilepsy Care Centre has been launched by Apollo Speciality Hospitals Vanagaram to localize (finding the lesion location in the brain), classify (Type of seizure), accelerate therapies to control seizures, further evaluate and offer higher level of care including Epilepsy Surgeries.



The advanced epilepsy care centre was launched by Honourable Minister Thiru. S M Nasar, Milk and Dairy Development Department, Tamil Nadu Government and Dr Alby John Varghese, IAS District Collector and District Magistrate Tiruvallur

## New in Medicine

'New in Medicine' is compiled under the following five heads after studying leading medical journals, major medical news sites and numerous websites:

- Drugs
- Clinical Research

- Devices
- Treatment Guidelines
- Healthcare Administration

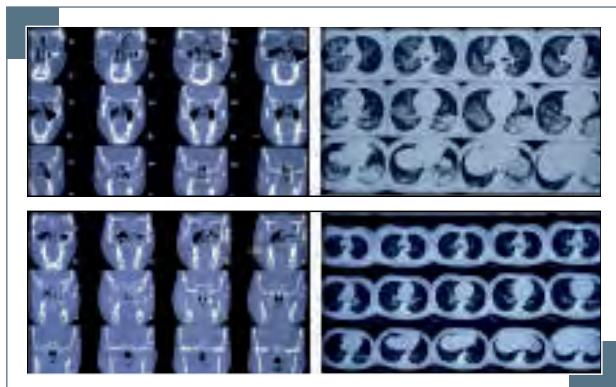
New in Medicine is published monthly and circulated to all Apollo Hospitals consultants.

One hundred and sixteen issues have been published till December 2021. It is also sent to the Community Physicians.

## New and Rare Treatment/ Interesting Cases

### Apollo Hospital, Ahmedabad

- A middle-aged diabetic male patient with post-COVID-19 status was successfully managed for amphotericin toxicity and mucormycosis.



- A 32-year-old male patient successfully underwent a complicated surgery to remove a rare cardiac tumour. The patient had presented with features of mitral stenosis. The fibrocalcific tumour measuring 7x8 cm was resected along with the posterior wall of the left atrium which was reconstructed using bovine pericardium.
- Successful management of a 59-yr-old post-renal transplant (15 years) patient with diabetes and on maintenance hemodialysis. The patient had presented to the hospital with sudden onset of

breathlessness, frothing from the mouth and loss of consciousness.

- A 43-year-old female patient, an unusual case of pre-eclamptic toxemia who delivered vaginally in flight with retained placenta, was successfully managed. The emergency landing was done at Ahmedabad airport and thereafter patient was shifted to the hospital.



*Pre-eclamptic toxemia with retained placenta was successfully managed*

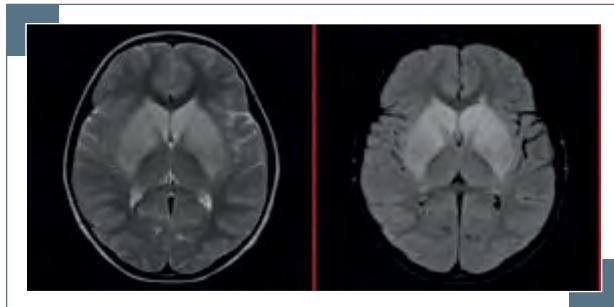
- Successful repair and reconstruction of penile curvature and closure of fistula in a 25-year-old post-blast injury patient.
- Anorexia Nervosa was successfully diagnosed and managed in a 15-year-old boy with no significant birth history or delay in milestone. The patient presented with complaints of anorexia, postprandial abdominal pain, constipation, insomnia and weight loss since two years. The patient was admitted to the hospital and treated by a multi-disciplinary team consisting of gastroenterologists, psychiatrists, psychotherapists, dieticians and endocrinologists. The patient recovered well and resumed normal activities.



*On admission October 2020  
(weight 20kgs)*

*On follow up  
February 2021 (weight 35kgs)*

- Autoimmune encephalitis due to NMDAR antibodies was successfully diagnosed and managed in a 4-year-old child. The child had presented with a florid paroxysmal movement disorder and with basal ganglia changes.



*Image 1: MRI brain - T2 and FLAIR Sequences show increased Signal in Entire Basal Ganglia*

- A 3-year-old child was successfully operated on for treating Wilms' Tumor. The tumour mass weighed 3.1 kg and is reported to be the world's largest. This was a rare case because the patient possessed a horseshoe kidney.



*Removing of Wilms' Tumor was successfully performed*

- A 38-year-old female patient was successfully diagnosed and operated to manage a large parathyroid adenoma. The tumor mass weighed around 110 gms and is reported to be India's largest. The patient was wrongly diagnosed as having Advanced Stage Lung Cancer.



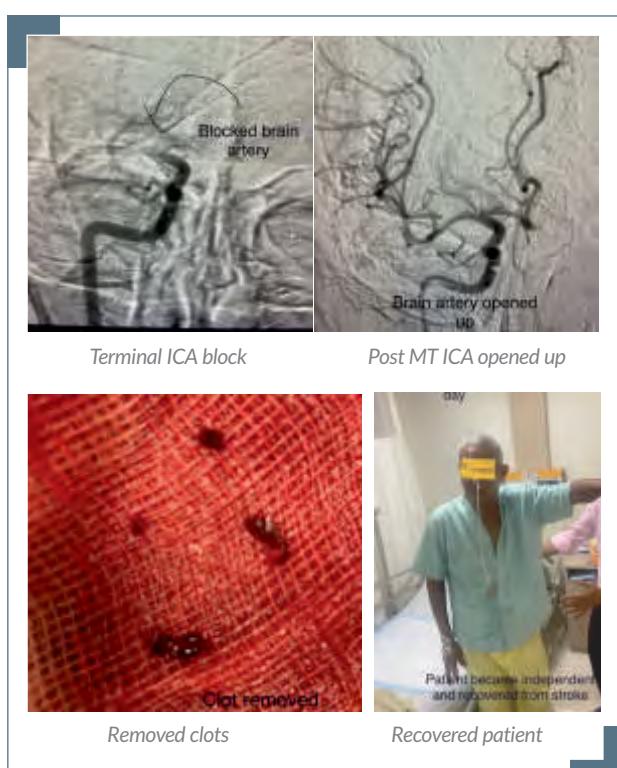
- Successful management of prosthetic mitral valve thrombosis in a 36-year-old female patient at 37-weeks of pregnancy. The patient was a known case of rheumatic heart disease.



*F.1: Caesarean Section - Delivery of baby*

*F. 2: Caesarean Section - Baby delivered as vertex*

- Mechanical thrombectomy was successfully performed in an 85-year-old male patient with acute terminal internal carotid artery occlusion stroke



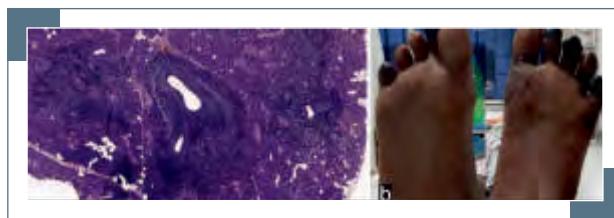
*Surgery for large parathyroid adenoma was successfully performed*

## Apollo CVHF Heart Institute, Ahmedabad

- Mitral valve leakage in a 92-year-old male patient was successfully repaired through the minimally invasive Percutaneous Mitral Valve Repair (PMVR) technique.

## Apollo Children's Hospital, Chennai

- Secondary Antiphospholipid Syndrome was successfully diagnosed and managed in a 15-year-old girl with Sjogren's Syndrome



*Antiphospholipid Syndrome was successfully managed*

- A 8-hour long procedure was successfully performed to replace the femur of a 12-year-old Bangladeshi boy, who was diagnosed with osteosarcoma. The young boy was discharged and able to walk with support, barely five days after surgery.



*Replacement of the femur was successfully performed.*

Ms Suneeta Reddy, Managing Director, Apollo Hospitals, with the patient

- A 4-day old new-born baby, weighing 1.6 kg, successfully underwent TAPVC (Total Anomalous Pulmonary Venous Connection) repair
- Repair surgery to correct severe mitral and tricuspid regurgitation was successfully performed

in a young female patient. The patient had already undergone open-heart surgery for SVC ASD 10-years ago at an outside hospital. Her case was extremely challenging due to the anatomical "twist" of the heart and the accessibility of the valves. Replacement would have been easier but the patient would have had to be on lifelong anticoagulation, hence repair procedure was undertaken.

## Apollo Proton Cancer Centre

- India's first megaprosthesis fixation for the femur and laparoscopic radical nephrectomy were successfully performed as single-stage surgery through a multimodal approach, on a 54-year-old female patient diagnosed with metastatic left renal cell carcinoma. She had sustained a fracture on her left thigh bone. The cancerous tumor kidney was removed with minimally-invasive surgery. The fractured thigh bone was also fixed with megapr. The specialists performed two procedures on the patient simultaneously. The knee joint containing the tumor was removed and replaced with a megaprosthesis. The patient was able to walk the next day

- A female patient with stage 4 breast cancer was successfully managed. She had presented with an extensive spread, severely affected lungs and inability to speak due to breathlessness. Since her lungs were completely affected, she was not suitable for general anaesthesia hence the mastectomy was performed under epidural and mild sedation which was gradually withdrawn during surgery. During the surgery, as the patient gained consciousness, she started speaking normally to the surgeons and even sang songs during the surgery. The patient was a classical singer. Her recovery was uneventful with no postoperative pain or other complaints.



Mastectomy was successfully performed

## Apollo Hospitals, Bangalore

- A premature baby of gestational age 26 weeks, birth weight 600gms, Apgar 4 and 7, was successfully managed. The baby had developed meningitis with culture positive Klebsiella which was treated with antibiotics. Thereafter, the baby became hemodynamically stable and weighed 1.8 kg.
- A 37-year-old COVID-positive female patient not only survived 36 days on life support (ECMO) but also gave birth to a healthy boy while on a ventilator. She was treated for septic shock and stayed in the hospital for 55 days before she finally recovered.
- To salvage limbs from amputation in a patient with the complex arterial occlusive disease, a unique adaptation of ultrasound-guided percutaneous tibial and pedal artery access and retrograde angioplasty was successfully performed.
- Tumour excision and wrist arthrodesis were successfully managed in a patient through ulna translocation and osteosynthesis.



## Apollo Hospitals, Bhubaneshwar

- A giant tumor weighing more than 10kg was successfully removed from the abdomen of a seventy-year-old male patient. He was suffering from pain abdomen and weight loss.



Giant tumor surgery was successfully performed

- Hyperthermic Intraperitoneal Chemotherapy (HIPEC) was successfully performed in a 52-year old female patient to treat advanced ovarian cancer. The patient underwent radical surgery before being administered HIPEC. This procedure was performed for the first time in the state of Orissa.



Hyperthermic Intraperitoneal Chemotherapy was successfully performed

- Valve in Valve procedure along with stent insertion in both major arteries was successfully performed for a 70-year-old male patient. The patient already had an aortic valve replaced with a bypass surgery done approximately 10 years back. He was considered a 'very high risk' case for a redo surgery.
- Apollo Hospitals, Bhubaneswar became the first hospital in Odisha to begin monoclonal antibody cocktail therapy for COVID-19 patients. 82-year-old male patient from the city with heart disease and old brain stroke was successfully managed with the therapy.
- An adult patient with RSOV (Ruptured Sinus of Valsalva) underwent successful closure of the defect percutaneously.

## Apollo Hospitals, Bilaspur

- Successful salvage of lower limb of a 56-year old male patient with post COVID status and diagnosed with left popliteal artery occlusion and bluish discolouration. He was advised of amputation at another hospital.
- Robotic anterior resection and natural orifice specimen extraction (NOSE) successfully performed for a 75-year-old female patient with recto-sigmoid cancer
- MICS (Minimally invasive cardiac surgery) programme initiated at Apollo Hospitals, Bilaspur. The first mitral valve replacement without sternotomy was successfully performed for a patient.
- Mitral valve replacement through minimally invasive technique was successfully performed.
- Minimally invasive direct coronary artery bypass grafting (MIDCAB) was successfully performed for a 66-year-old male patient with anterior wall MI, LVEF 40%, CAG done, POBA to LAD done, left circumflex and RCA. The patient was discharged on the 5th post-operative day.

## Apollo Main Hospitals, Chennai

- Fast Track Total Knee Replacement surgery was successfully performed for a 66-year-old female patient diagnosed with severe grade 4 osteoarthritis of the knee joint with associated deformity. The patient was mobilized within 3 hours of surgery. This fast-track TKR was performed for the first time in the state of Tamil Nadu.
- Four MitraClip procedures were completed in one single day. The MitraClip is the only percutaneous technology effective in both functional and degenerative mitral regurgitation.

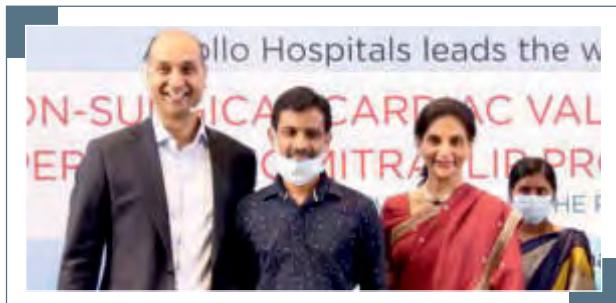


*Fast Track Total Knee Replacement surgery was successfully performed. Chairman Dr Prathap C Reddy; Vice Chairperson, Ms Preetha Reddy; Managing Director, Ms Suneeta Reddy; Apollo Hospitals, with the patients*

- The first-ever day-care robotic thyroidectomy was successfully performed for a 22-year old female patient.
- A critically ill 24-year-old youth, was shifted from AIIMS-Bhubaneswar to Airport in a special ambulance through a 'green corridor' in a record 11 minutes. He was then airlifted to Apollo Hospitals in Chennai. The patient's lungs were affected due to COVID-19. He was also suffering from pneumonia, septicaemia and major fungal infection.
- Percutaneous paravalvular leak closure for severe AR one-year post-TAVR was successfully performed. Aortic regurgitation completely

disappeared and the patient was discharged in a normal condition. This was the first such case in India.

- Cyberknife Radiosurgery was successfully performed as a non-invasive and daycare procedure for a refractory epilepsy patient from New Zealand. The patient became seizure-free with preserved memory function. This was the first Cyberknife Radiosurgery in south India.
- Mitraclip procedure was successfully performed to treat a 41-year-old male patient with refractory heart failure and heart function 15 percent. The patient was on the heart transplant list for over three months.



Mitraclip procedure was successfully performed.

Vice Chairperson, Apollo Hospitals, Ms Preetha Reddy with the patient

- A newborn, with Vein of Galen Aneurysmal malformation of Brain, was successfully treated and managed. This was the first such case in this part of the world. After antenatal detection, the baby was delivered in controlled condition. As expected, the baby developed congestive heart failure, liver failure and renal failure at 48 Hrs. Timely endovascular embolization of the brain high flow vascular malformation using Super Glue by trans umbilical artery catheterization was performed. Rapid cardiac pacing was used as an adjunct to assist precise embolization. Total of only 18 ml contrast used. Immediately baby was extubated and multiorgan failure including cardiac failure was reversed. Thereafter, the baby was discharged home in a week's time.

- India's First True Robotic Bariatric surgery using robotic staplers was successfully performed. The complex bariatric surgery was named " One Anastomotic Gastric Bypass" as the procedure was performed through just three robotic ports without the use of any additional ports. A 50-year-old female patient from Bangladesh was a high-risk obese patient, weighing 124 kg with multiple comorbidities. The patient had undergone brain tumour surgery and was undergoing treatment for epilepsy. The patient was on thyroid medications after total thyroidectomy and had undergone abdominal surgeries for gallstone and fibroid uterus.



Robotic Bariatric surgery using robotic staplers was successfully performed

- Ruptured basilar aneurysm treated successfully in a 65-year-old lady by contour device with complete obliteration of the aneurysm. This device was used for aneurysm treatment for the first time in Apollo Group.
- Post intubation acute tracheal tear – reinforced with bovine pericardium in a 25 years' male.
- Middle meningeal artery embolization without stopping Acitrom was successfully performed for a 60-year-old male patient with venous thrombosis and having developed bilateral subdural hematoma. The patient recovered well and the subdural hematoma resolved completely without conventional burr hole and tapping.

- The Advanced Movement Disorders Team successfully performed five DBS surgeries that included four patients with Parkinson's disease and one patient with dystonia. All the patients recovered well with good improvement in their symptoms.



DBS surgeries were successfully performed

- Laparotomy was successfully performed for a 90-year female patient. The patient had presented with acute large bowel obstruction from an incarcerated transverse colon within a large ventral hernial sac. Though quite unwell on admission, she made an excellent recovery and got discharged on the 6th post-op day.

## Indraprastha Apollo Hospitals, Delhi

- Hyperthermic intrathoracic chemotherapy was successfully undertaken for 25-year-old-male patient, a known case of spindle cell sarcoma of the right lung with recurrence of the tumour. The patient was operated on 2 years back and treated with chemotherapy and radiotherapy.
- A 5-month-old male baby from Yemen, diagnosed with dilated cardiomyopathy with left ventricle non-compaction with cardiogenic shock with a right hand and right foot gangrene with tachyarrhythmia was successfully managed. The baby underwent pulmonary artery banding and tracheostomy followed by orthotopic heart transplantation (ABO incompatible). He was discharged in a stable condition.

- A robot-assisted surgery was successfully performed on a 31-year-old female patient to treat a rare form of a hereditary disease - multiple endocrine neoplasia type 2A (MEN2A). The patient had developed two tumours - one in the thyroid and another in the adrenal gland. The robot-assisted surgery helped to reduce the amount of bleeding and ensure precision in a rare case like this.
- A nine-month-old female baby from Indonesia suffering from Biliary Atresia successfully underwent a lifesaving liver transplant surgery at Indraprastha Apollo Hospitals. At nine months, her weight was 6.6 kg with at least 1.5 liters of fluid in her belly.



Liver transplant was successfully performed

- A 14-year-old boy with a rare tumour (juvenile angiofibroma-JA, protruding on the external side of the nose) was successfully treated at Indraprastha Apollo Hospitals, through endoscopic surgery. This kind of tumour is extremely rare, with 1 out of 50,000 people reporting this form of a rare tumour in India.
- A 53-year-old woman from Assam, who suffered fatal injuries following an assault during a robbery attempt, was successfully treated. The woman was severely hit on her head. She suffered a brain hemorrhage and subsequent multiple organ failure in the incident and was brought to Delhi after being stabilized in a local hospital in Guwahati.
- The first phase of Radiofrequency Identification (RFID) incorporation was implemented for Blood Bank inventory management.

- The Department of Transfusion Medicine started using the SARS-CoV-2 IgG II Quant ON ARCHITECT platform for patients and donors of Covid convalescent plasma. The SARS-CoV-2 IgG II Quant assay is a chemiluminescent microparticle immunoassay (CMIA) used for the qualitative and quantitative determination of IgG antibodies to SARS-CoV-2 in humans serum and plasma on the ARCHITECT i System.
- A 6-year-old female patient from Syria with relapsed refractory B Cell acute lymphoblastic leukemia received 2 courses of BiTE (Bi Specific T Cell Engager- Blinatumomab), a targeted therapy after which she achieved remission and has been taken up for MSD BMT using the mother as a donor. She was treated according to BFM 89 protocol elsewhere and started on BFM REZ protocol but had not achieved remission. BiTE is a targeted therapy and very few pediatric patients have received it so far in India.
- An 8-year-old female child was successfully treated for Multi-System Inflammatory Syndrome (MIS-C), a serious, life-threatening post COVID complication. The child was brought to the hospital in a critical condition with low levels of blood pressure, oxygen and dipping pulse rate. Because of her very high ventilator requirements and low oxygen saturations she was immediately put on ECMO support. She improved gradually and recovered.
- Successful diagnoses and management of a 7-year-old female child having Glomus Jugulare with multiple AV malformations in the brain, neck and knees.
- Drug-resistant nonneoplastic epilepsy successfully managed in 18-year-old male patient through Hypofractionated Stereotactic Radiosurgery (SRS). The patient had presented with drug-resistant epileptic seizures with a history of 15-16 years.
- Heart surgery was successfully performed on a 2-day old newborn boy for removal of a rare congenital tumor Intrapericardial Teratoma. The tumor was detected during routine ultrasound of his mother at 20 weeks of gestation. After the detection, his condition was monitored regularly every week. At birth, the baby had trouble breathing and he was put on a ventilator. The CT Angio showed a 7 cm lobulated giant intrapericardial tumor that was pushing the heart to the left and compressing the lung. The tumor which was larger than the heart, was successfully removed.
- His-Optimized Cardiac Resynchronization Therapy (HOT CRTD) was successfully performed in a 70-year male patient. The patient had ischemic cardiomyopathy; LVEF 25%, symptomatic with recurrent symptoms of worsening dyspnea.
- Eleven children from the Philippines, who were suffering from chronic liver diseases, successfully underwent liver transplant surgery at Indraprastha Apollo Hospitals, Delhi. These children, between the age of 12 months and 15 years, were in grave health conditions and needed immediate organ transplants along with specialized medical treatment.



*Liver transplant surgery was successfully performed for eleven children from Philippines*

- CT guided Gasserian Ganglion Radiofrequency Rhizotomy was successfully performed for 2 patients to treat intractable facial pain due to very painful Trigeminal Neuralgia. Conservative treatment had failed for these patients. Both procedures went well without any complications. This technique has never been reported in India.

- Successful management of an 18-month-old male baby with pancreatitis and a large pancreatic pseudocyst. The patient presented with recurrent vomiting, pain abdomen and intermittent fever. CT revealed a large pseudocyst with a 9cm diameter. Since the baby was small, a unique procedure, cysto gastrostomy with upper GI scope was performed and the cyst was removed. A stent was placed when the patient was discharged on day 3 of the procedure and at the time of discharge, there was a complete resolution of all complaints.
- Indraprastha Apollo Hospitals, Delhi performed India's first live robot-assisted bariatric surgery for weight loss using the stapling technique. With an intent to introduce this breakthrough Robot-Assisted Surgical Tool in their own countries, top surgeons from UK, Germany, France, Spain, Italy, USA, Mexico, Turkey and Russia too joined the live workshop virtually.
- A 60-year male diagnosed with Dieulafoy's lesion, a rare cause of obscure gastrointestinal was successfully managed. The patient had presented with recurrent episodes of massive upper GI bleeding since 2 years, requiring multiple blood transfusions. Hemostatic Over-the-Scope Clip (OTSC) was applied and hemostasis was achieved. OTSC clip remains in situ for a long period and hence is useful in controlling GI bleeding.
- Partial Knee replacement was successfully performed for a 56-year-old female patient
- Implantation of AV Micra (Leadless Pacemaker) in a 57-year-old male patient was successfully done. The patient had developed symptomatic AV conduction disease and was on dual antiplatelets drugs because of the history of angioplasty with drug-eluting stents and anticoagulation. The patient was discharged from the hospital within 24 hours.

## Apollo Hospitals, Guwahati

- A total of 22 neurosurgical procedures were completed at the COVID OT complex. It is the highest number of neuro procedures in a COVID OT in the zone.
- A 22-year-old male patient successfully underwent single sitting cranial wound debridement with brain abscess tapping with titanium mesh cranioplasty with rotational flap transposition (with a split skin graft from the thigh). The patient presented with scalp infection, fungating brain with seizure, burn injury at the age of 6 days of life
- Balloon Atrial Septoplasty (BAS) was successfully performed in a 4-day old baby with transposition of great arteries without a VSD.
- Awake Craniotomy was performed for a middle-aged male patient who had presented with recurrent episodes of focal seizures with speech arrest and transient hemiparesis. Radical tumor decompression was performed successfully, the procedure was well tolerated with preservation of the functional neurological status.
- Successful treatment of a young male patient having a pelvic tumor with sacral plexus involvement and sciatic nerve compression. He was also suffering from pancreatitis and diabetes. The patient had presented with rapidly progressing left foot weakness with buttock and lower abdominal swelling. Rapid optimization of his metabolic parameters was done with the help of a multi-disciplinary team. He underwent tumor and sciatic nerve decompression. The excised tumor weighed around 650gm.
- Reconstruction of the oesophagus was successfully done for a young patient who had consumed corrosive 3 months back and sustained stricture of

the oesophagus and completely scarred stomach. The surgical team structured a new oesophagus made from a segment of the right colon (colonic conduit) and was anastomosed at the cervical part of the oesophagus at the neck. At the time of discharge, the patient was able to well tolerate the oral intake of food.

- Transcatheter aortic valve replacement (TAVR) was successfully performed for a 73-year-old female patient, diagnosed with severe calcific aortic stenosis.

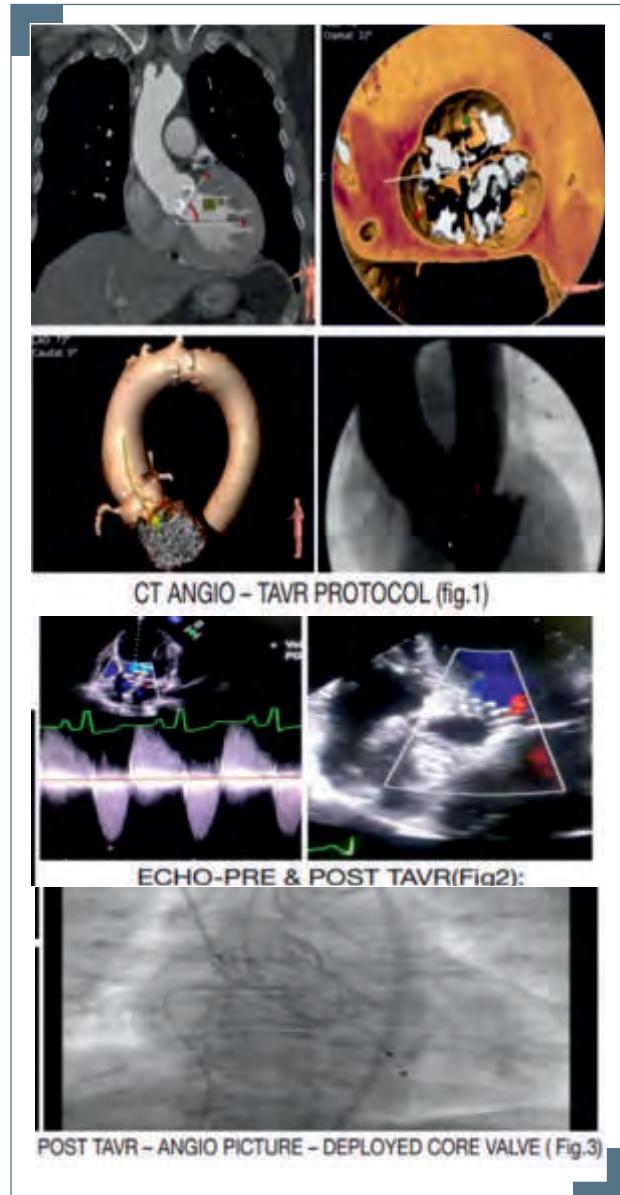


*Transcatheter aortic valve replacement was successfully performed*

- Arnold Chiari Malformation was successfully treated in a 6-day old newborn. The procedures done included Stage 1 - CSF diversion (LP VP shunt), Stage 2 - excision of the LS MMC placode followed by repair using local skin flaps. VATS-assisted excision of the pre-vertebral neurogenic tumor was also performed.
- Cisternostomy of the cisterna magna in a cerebellar ICH did was successfully done for a patient.

## Apollo Hospitals, Hyderabad

- Trans Aortic Valve Replacement (TAVR) was successfully performed for an 83-year-old post-COVID patient, diagnosed with Degenerative Severe Aortic Stenosis.



- The emerging therapy of 'Transcatheter PFO Closure' for secondary prevention of stroke was successfully performed for a 37-year-old patient with a history of a cerebrovascular accident 4 years ago.



Figure 1: A TEE with bubble-contrast showing PFO shunting from right-to-left during Valsalva



Figure 2: Fluoroscopic image of deployed PFO closure device

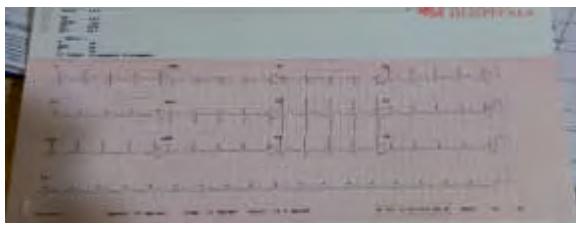


Figure : Bubble contrast TEE after PFO closure showing no right to left shunt

- Successful ablation of a rare cardiac arrhythmia in a 24-year-old male patient. The patient had presented with repeated episodes of wide complex tachycardia of LBBB morphology @ 240 BPM with symptoms of uneasiness and presyncope.



ECG during arrhythmia



ECG after ablation



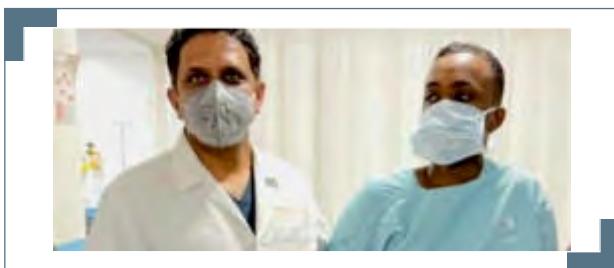
Catheter ablation of the bypass tract

- In the first, the Hyderabad Metro was used for fast, uninterrupted transport of the heart of a 45-year-old brain-dead patient for transplantation into a needy patient. An eight-member team from Apollo Hospitals transported the donor heart from Kamineni Hospital in LB Nagar to Apollo Hospitals, Jubilee Hills on an exclusive passenger-free Metro train. The train covered 21 km in less than 30 minutes. The 44-year-old recipient of this heart, suffering from dilated cardiomyopathy underwent a successful transplantation surgery and was discharged.



Apollo Hospitals team transporting the organs for transplant through Metro Station

- A daycare, minimally invasive left total hip replacement surgery was successfully performed on a 22-year-old patient from Somalia. The patient was discharged within seven hours after the surgery. The patient was able to sit, stand and walk within six hours post-surgery. This was South India's first such case.



Minimally invasive left total hip replacement surgery was successfully performed

- A rare and complex combined liver and kidney transplant surgery was successfully performed. The organs were harvested from two different living donors for a 57-year-old Tanzanian patient.



Liver and kidney transplant surgery was successfully performed

- Intravascular Lithotripsy was successfully performed to treat a 75-year-old male patient with heavily calcified carotid artery lesions. The patient had presented with recurrent CVA. He was successfully treated through transcarotid arterial revascularisation (TCAR) using Intravascular Lithotripsy (IVL). This was the first case of successful IVL in India.

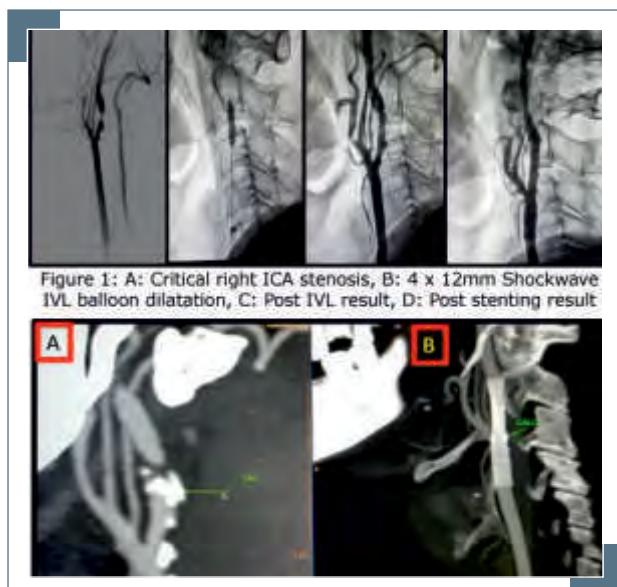


Figure 1: A: Critical right ICA stenosis, B: 4 x 12mm Shockwave IVL balloon dilatation, C: Post IVL result, D: Post stenting result

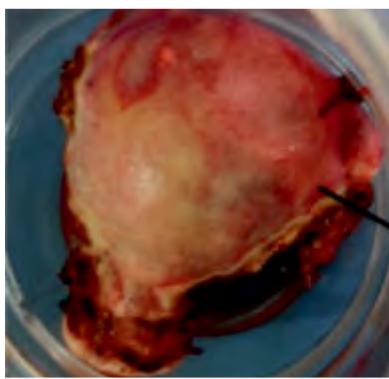
- Paediatric liver transplant was successfully performed for a 7-month-old female baby. She was suffering from galactosemia and associated liver cirrhosis. After an uneventful recovery, she was discharged on the 16th day postoperatively.
- A complex surgery to treat a 29-year-old female patient diagnosed with chondrosarcoma of left hemipelvis, was successfully carried out using a 3-D modeling technique. The patient had presented with pain and dragging sensation in the left hemi pelvic area, radiating down to the left lower limb and was operated on two years ago at an outside hospital. After 7 hours of surgery, the patient was able to walk the next day and recovered well.
- A combined heart and lung transplant was successfully performed on a 25-year-old female

patient. The recipient, who was suffering from congenital heart disease had been waiting for a suitable donor heart and lung for the past two-and-a-half years and at the time of the surgery, just weighed 30kgs.



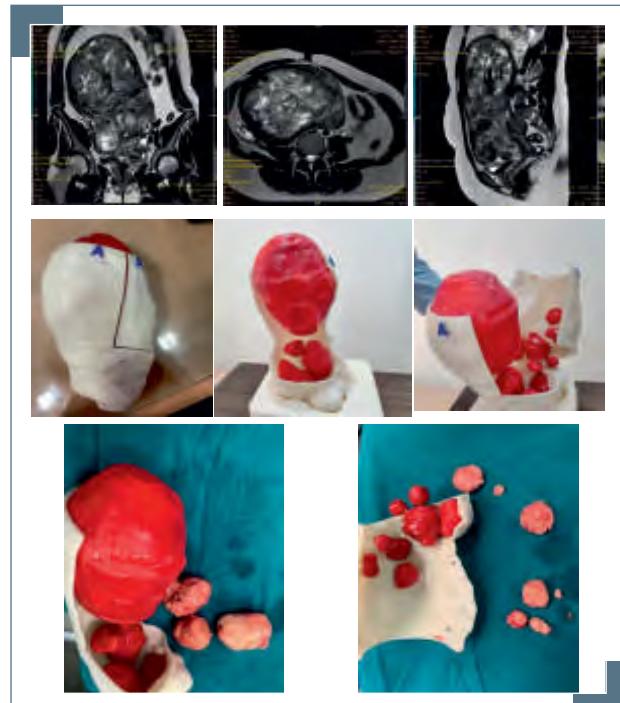
*Heart and lung transplant was successfully performed*

- Daycare robotic total hysterectomy was successfully done for a 42-year-old patient having a bulky, retroverted, fixed uterus with adenomyosis, long-standing severe menorrhagia with anemia, pelvic congestion and sciatica.



*Daycare robotic total hysterectomy was successfully performed*

- Robot-assisted laparoscopic myomectomy using the 3D modelling was successfully done for a 31-year-old female patient diagnosed with multiple fibroids. Twelve myomas of various sizes, with a total weight of 1215 gm, were removed.



*3 fibroids (5-6cm) each located in lower segment near Cervix*

*8 Intramural fibroids located in left lateral wall of uterus, identified and removed*

- Trans-oral endoscopic para-thyroidectomy was successfully performed for a 27-year-old female diagnosed with primary hyperparathyroidism with a history of renal calculi.



*Trans-oral endoscopic para-thyroidectomy was successfully performed*

- Re-Vascularization with the support of a micropump called Impella was successfully done for a 61-year-old male patient. The 'smart assist technology' is a state-of-the-art integration with the Impella heart pump. The technique maintains the cardiac output while the intervention and

stenting are accomplished. The patient was diagnosed with severe unstable angina and severe LV dysfunction with recurrent cardiac failure showed critical left main and ostial LCX with calcification and a non-dominant small RCA. There is a need for urgent revascularization and CABG was not recommended because of extremely poor distal vessels. Angioplasty was extremely dangerous because of the combination of poor LV dysfunction and RCA.



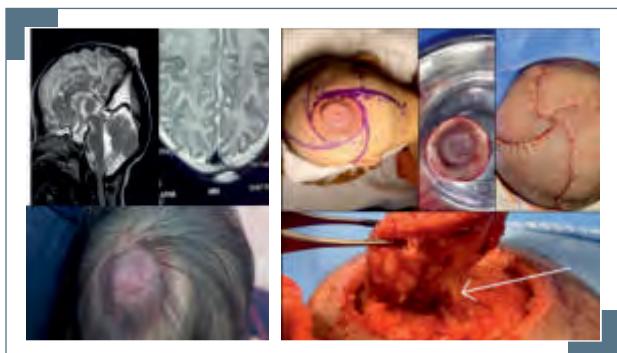
*Re-Vascularization with the support of a micropump called Impella was successfully performed*

- ABO-incompatible renal transplant was successfully done for a 48-year-old male patient
- VNOTES (Vaginal Natural Orifice Trans - Luminal Endoscopic Surgery) or Scarless Laparoscopic hysterectomy was successfully performed. The patient was discharged within 12 hours of admission. The patient was diagnosed with multiple fibroids; the weight of the uterus was 415 gm (as compared to a normal uterus weighing 80-100gm).



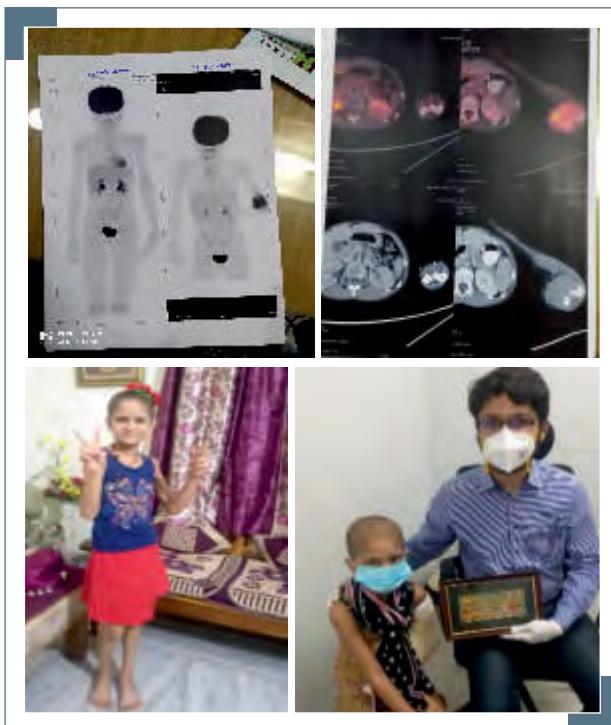
*Scarless Laparoscopic hysterectomy was successfully performed*

- A 2-month-old baby, a rare case of Atretic Parietal Encephalocele in a 2-month-old baby with Cranium Bifidum was successfully managed. The baby presented with a 3cm x 3.5cm cystic swelling over the midline scalp with abnormal skin cover. An innovative pinwheel flap was designed to get a tension-free closure of the scalp wound. This rare condition has an incidence of 1 in 10,000 live births.



*Atretic Parietal Encephalocele with Cranium Bifidum was successfully managed*

- A 7-year-old child with sarcoma involving distal humerus was successfully managed through an innovative technique<sup>1</sup> extracorporeal radiation therapy of distal humerus along with cartilage<sup>1</sup>. This technique does not use metal prostheses. This procedure was done for the first time in Indi



Extracorporeal radiation therapy was successfully performed

- Robotic bariatric surgery was successfully performed for a 41-year-old female patient from Somalia who weighed 179 kg. She was so overweight that she found it difficult to even reach the washroom and she required a BIPAP machine for most of the day and all night. Since the initial evaluation and pre- and post-operative dietary modifications, she already lost around 30 kgs and no longer required the BIPAP support. This was the first robotic bariatric surgery done in the combined states of Telangana and Andhra Pradesh. As it was completely robotic, robotic staplers were used.

## Apollo Hospitals, Indore

- Over 43 cases of Mucormycosis cases successfully underwent FESS. All of them were treated for COVID outside hospitals.
- Bio-absorbable vascular scaffolds were successfully used for the first time in central India to treat a 45-year-old male patient with angina.
- Over 100 joint replacements successfully performed

- A challenging case of retrograde CTO was successfully managed. Considered as the final frontier of complex coronary intervention, the left coronary artery was opened retrogradely from the right coronary artery via collaterals. This technique was earlier considered a niche for Japanese operators only
- Angioplasty was successfully performed as a day-care procedure



Day care Angioplasty was successfully performed

## Apollo Hospitals, Jayanagar

- A 50-year-old male patient with a status of post lobectomy for the pulmonary condition with persistently leaking broncho-pleural fistula, was successfully managed. Through flexible bronchoscopic guidance an ASD septal occluder device was implanted at the BPF successfully closing it. The patient had good recovery with resolution of empyema.
- Intracranial Chemotherapy to treat Retinoblastoma was successfully performed in a 2-year-old child.
- Endovascular embolization with high precision was successfully performed to treat eyelid arteriovenous malformation (AVM), a rare lesion, in a 37-year-old female patient. The patient had presented with significant bleeding from this long-standing swelling in her eyelid. She was refused treatment by several doctors as this was a highly vascular lesion surrounded by the delicate and

important ophthalmic artery. The surgery resulted in complete obliteration of the AVM and without any loss of vision.

## Apollo Hospitals, Karimnagar

- A 77-year old male patient with gross filariasis and comminuted intertrochanteric fracture femur in the right leg was successfully managed. The patient had a neglected fall 6-months ago and had not taken medical treatment due to fear of COVID-19. He underwent hemiarthroplasty of the hip with an uncemented modular bipolar prosthesis with the reconstruction of a greater trochanter



Hemiarthroplasty was successfully performed

- REGROW surgery has been implemented in the Reach Hospital

## Apollo Gleneagles Hospitals, Kolkata

- A middle-aged male patient with progressive deterioration and loss of power in all four limbs with loss of voluntary effort for respiration, was successfully managed. An immediate diagnostic DSA confirmed the diagnosis of dural AV fistula.

Right ICA angiogram revealed arterial feeders from recurrent ophthalmic artery and meningohypophyseal trunk of right cavernous ICA. Dilated tortuous perimedullary draining veins were seen going down into the spinal canal. Endovascular embolisation of the fistula was successfully performed.



Endovascular embolisation of the fistula was successfully performed

- Robotic surgery without any scar was successfully performed for the base of the tongue in a 56-year old male patient with complaints of foreign body sensation in the throat for 6-7 months.
- A 7-month-old baby with a head injury, post-fall from height was successfully managed through immediate neurosurgical intervention. The baby had presented with a right parietal occipital extradural hematoma with mass effect, due to the fall.



Patient on post-operative day 1

- Transoral Robotic Surgery (TORS) was successfully performed to treat a rare tumour, polymorphous adenocarcinoma (PAC) of the right tonsil in a 68-year-old patient. According to the literature review this is the first case of polymorphous adenocarcinoma of the oropharynx to be operated by robotic surgery in India and second only in the world.
- New regime of breast cancer radiation treatment for 1 week instead of 3 to 5 weeks initiated and adopted. The conventional schedule for 5 weeks has been reduced to 3 weeks based on a UK trial called the 'START' trial. Recently another large trial has been published in the UK called the 'Fast Forward' trial where they have shown that one-week radiation treatment is equally effective.
- A lifesaving procedure, interstitial laser therapy (ILT) was successfully performed in a 14-week-old fetus
- Successful management of a 21-year-old male patient diagnosed with Ewing's Sarcoma. The complex surgery lasted for 9 hours and involved the removal of 4 ribs along with the tumor that weighed 1.2 Kg without damaging the lungs, heart or the great vessels. Following the removal, an artificial rib cage was created with a combination of bone cement and prolene mesh. The patient was discharged on the 8th post-operative day.
- Recanalization of Left Brachiocephalic AVF was successfully done for a 54-year-old male patient, a known case of CKD on MHD. The patient had presented with the sudden loss of bruit and focal painful distension of draining vein in the arm, suggestive of acute thrombosis of draining vein
- EUS guided cysto-gastrostomy using flanged metallic stent was successfully performed for a patient with a large infected wall of necrosis secondary to acute pancreatitis.
- Sleeve Gastrectomy and laparoscopic sutured herniorrhaphy was successfully performed for a 33-year-old female patient.
- Balloon Kyphoplasty was successfully performed for a 61-year-old male patient with complaints of severe low back pain following the history of falls. The postoperative course was uneventful and he was discharged the next day.
- A complex procedure, redo mitral valve replacement with tricuspid valve repair and left atrial clot removal via peripheral femoral vessels cannulation was successfully performed for a patient with COVID pneumonia and severe lung pathology.
- A 45-day old baby with extruded intussusception, a rare condition at this age was successfully managed. Manual reduction of extruded bowel followed by USG guided saline enema reduction was done.
- A 65-year-old national level player, with intrathoracic generalized lymphadenopathy was diagnosed to be having tuberculosis, through EBUS guided lymph node biopsy. The patient was successfully managed and discharged in a normal condition.
- A 75-Year-old female presenting with an infected non-healing ulcer over the left dorsum of hand with exposed underlying tendons, muscles and surrounding inflammation, was successfully managed. The patient underwent wound bed preparation followed by Reconstruction with Reverse Posterior Interosseous Artery Flap (septocutaneous islanded). The patient was successfully discharged with a soft pliable full-thickness skin cover over the dorsum of the hand with excellent functional and cosmetic outcomes.

## Apollomedics Hospitals, Lucknow

- A 62-year-old female patient was successfully operated on for 2.5 Kg (24cm) intra-abdominal tumor and was discharged normally on the 4th post-operative day.

- Implantation of Dual Chamber Pacemaker and Conduction System Pacing (CSP) was successfully achieved for a 55-year-old female patient with intermittent high-grade AV block and a 76-year-old male patient with trifascicular block. These two cases of CSP are the first of its kind in any private hospital in Uttar Pradesh.
- A baby diagnosed with Congenital Complete Heart Block during the antenatal period, was successfully treated through surgery post-birth. The antenatal heart rate of the baby was 40-50bpm. After stabilizing, the baby was taken up for surgery within 24 hours of the birth. The baby recovered well with a Heart Rate of 120 bpm with no evidence of any residual congenital heart block.

### **Apollo Hospitals, Madurai**

- A 15-year-old diabetic female patient, presenting with diabetic ketoacidosis, stridor with severe respiratory failure, was successfully managed. She was diagnosed to have tracheobronchial mucormycosis. She improved dramatically after receiving Liposomal Amphotericin.
- Apollo Speciality Hospitals, Madurai, successfully performed liver transplantation in a 35-year-old patient.



*Liver transplantation was successfully performed*

- Successful treatment of a 78-year-old female patient suffering from sudden onset diplopia with visual deterioration and orbital cellulitis secondary to cavernous sinus thrombosis, septic sphenoidal focus. She underwent emergency endoscopic sphenoidal and optic decompression and drainage.

Postoperatively full vision and eye movement was restored

- Endoscopic debridement was successfully performed to treat a female patient with isolated sphenoid fungal Cladosporium growth with klebsiella. She had presented with ophthalmoplegia and cavernous sinus thrombosis.
- Glue injection and BRTO were successfully performed to manage a 62-year-old female patient who presented with acute hematemesis due to bleeding gastric varices. The patient was a known case of diabetes mellitus and lumbar spondylosis.
- Successful management of a 34-year-old female patient with a history of consumption of toilet-cleaning liquid as a suicidal attempt leading to grade 4 injuries to esophageal mucosa and laryngeal inflammation. The patient was on total jejunostomy feeds with total dysphagia for the next two months. Thereafter, she underwent surgery using the colon as an esophageal replacement organ. The patient had a smooth postoperative recovery and at her last follow-up, it was 100 days past surgery.
- Microwave ablation was successfully performed to treat early hepatocellular carcinoma in a 61 years old male, a known case of decompensated chronic parenchymal liver disease. The post-procedure patient was asymptomatic and discharged the next day.
- A 3-year old male child from Britain, diagnosed with severe Sinonasal Inflammatory Disease with Bilateral Orbital Cellulitis and Impending Cavernous Sinus Thrombosis was successfully managed. He was identified to have aggressive MRSA on culture and culture-sensitive antibiotics were started.

### **Apollo Hospitals, Mysore**

- Permacath insertion was successfully performed for a 70-year-old male patient with IHD (post PTCA), ESRD and on maintenance hemodialysis.

This procedure was for the first time done in the Mysore region.

## Apollo Hospitals, Nashik

- North Maharashtra's first day-care knee replacement surgery was successfully performed for a 50-year-old female patient with grade 3 osteoarthritis.



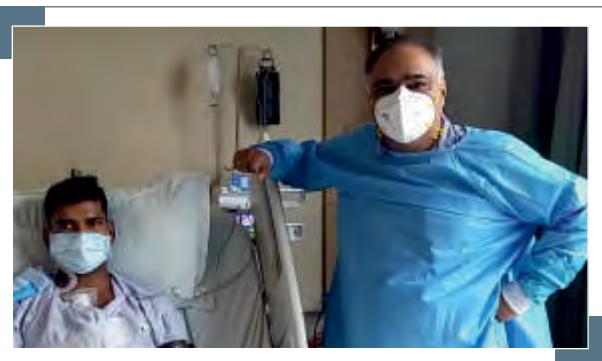
*Day-care knee replacement surgery was successfully performed*

## Apollo Hospitals, Navi Mumbai

- Apollo Hospitals, Navi Mumbai, successfully performed four liver transplantation surgeries following COVID-19 recovery. Post the liver transplant all the patients recovered well.
- Successful management of a 27-year-old male patient with a history of road traffic accidents. The patient had presented with a rib fracture, lower limb, right tibia and fibula fracture. There were multiple contusion injuries in the brain and diffuse axonal injuries in the brain. At the time of admission had a GCS score of 3/15. At the time of discharge, the patient was conscious-oriented.
- A 70-year-old COVID-positive male with COVID pneumonia, ARDS, was successfully managed. The patient was intubated as there was severe involvement of the lungs and lung protected ventilation strategy was adopted. The patient improved well and was off the ventilator.
- A rare case of neonatal severe hypoparathyroidism was successfully diagnosed and managed for a 9-months-old neonate. Since birth, the baby presented with lethargy, irritability, and poor

growth. The child underwent surgery, led by the oncology team. A special technique of auto transplantation of a small bit of parathyroid was also done to help the child become less dependent on calcium replacement as he grows. The baby made steady progression thereafter.

- Successful management of a 32-year-old female patient with 7 months' pregnancy and severe COVID pneumonia. She presented with severe dyspnea and fever and was provided intensive care treatment. Elective LSCS was done to deliver a normal baby. The patient was discharged in a normal condition with a good prognosis.
- Robot-assisted radical prostatectomy with extended pelvic lymph node dissection was successfully performed for a 64-year-old patient diagnosed with prostate adenocarcinoma. Nerve-sparing and bladder neck preservation make this case a unique case.
- A heart transplant procedure was successfully performed for a 29-year-old patient. The heart was harvested from a 48-year-old patient from Pune, who had suffered a brain hemorrhage and was declared brain dead as per clinical protocols. The donor's heart was transported through a 'green corridor', from Jehangir Hospital, Pune to Apollo Hospitals, Belapur.



*Heart transplant procedure was successfully performed*

- A complex multi-stage surgery was successfully performed to treat 'Rigid Torticollis' in a 7-year-old female child. The presence of the tumor had led to

neck tilting and rotation. In this case, the muscle had calcified, and the collar bone and skull bone were united by a bony bar that had fixed her head to the body without any movement. Such a complicated case has not been reported in any orthopedic/ medical journal/ literature and this was for the first time a multi-staged surgery for the condition was performed.



*Complex multi-stage surgery was successfully performed*

- Pre-term delivery was successfully performed for a 30-year-old COVID positive patient who was hospitalized for breathlessness and low oxygen saturation levels. Her lungs were deteriorating and she was on treatment on a non-invasive ventilator. Aggressive treatment for COVID was posing multiple challenges to her pregnancy.
- A 92-year-old male patient successfully underwent open surgery to treat a large bilateral inguinal hernia. The patient was discharged 2-days post-surgery.
- A post-renal transplant patient for 9 years, diagnosed with a rare Nocardia brain abscess was successfully managed. Right parieto-occipital craniotomy and excision of right parieto-occipital abscess was performed for the patient, the patient had excellent post-recovery. The incidence of Nocardia brain abscess is 1-2% of all brain abscesses and has a mortality rate of about 55% in immunocompromised patients.
- Successful Oesophageal Replacement Surgery in a 5-year-old male child who came with a history of accidental corrosive (acid) ingestion 1 year back.

- A 27-year-old male patient, a known case of rare and unexplained thrombocytopenia with coagulopathy and multisystem involvement was successfully managed. Craniotomy was performed and protracted intensive care treatment stabilized the patient.

- Skin sparing mastectomy with immediate breast reconstruction was successfully done in a 63-year-old female patient diagnosed with breast cancer. She underwent SPM with LD FLAP with the implant. The patient did very well postoperatively with excellent cosmetic outcome and positive impact on quality of life with immediate reconstruction.

## Apollo Hospitals, Noida

- A 6kg fibroid was successfully extracted through a TAH procedure

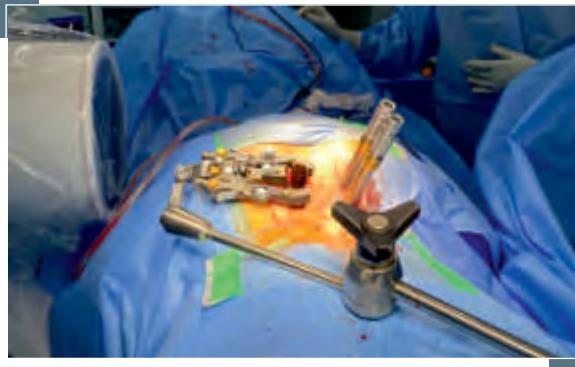
## Apollo Hospitals, OMR

- A 66-year-old female patient was discharged home within 24 hours post successful Total Knee Replacement Surgery (ERAS Protocol)



*Total Knee Replacement Surgery was successfully performed*

- MIS lumbar fusion surgery with a new specialized trial retractor system was successfully performed.



*MIS lumbar fusion surgery with a new specialized trial retractor system was successfully performed*

- A 20-year-old youth who accidentally fell from the 17th floor at a construction site was successfully managed at the emergency department. The patient had suffered severe traumatic brain injury with blood clots, multiple facial fractures, cervical spine fractures, liver and right kidney injuries and both lower limb bone fractures.



*Traumatic brain injury with blood clots, multiple facial fractures was successfully performed*

- A right complex primary total knee replacement with long stem tibial component and deformity correction was successfully performed for a 62-year-old female patient with a weight of 128kg.



*Total knee replacement and deformity correction was successfully performed*

- A complex primary TKR with long stem tibial component and deformity correction was successfully done for an obese female patient. A 3-D model was created in partnership with Anatomize 3D to plan the surgical approach.
- Reverse shoulder arthroplasty successfully performed for a patient

### Apollo Hospitals, Secunderabad

- A complex procedure, Laparoscopic Ultra Low Anterior Resection (ULAR) for carcinoma rectum was successfully performed for two patients

### Apollo Hospitals, Seshadripuram

- A case of relapsed Hodgkin Lymphoma Ophelia Syndrome was successfully managed.

### Apollo Cancer Institute, Teynampet

- A new technique the 'Tubeless VATS' was successfully performed to treat a 15-year-old male patient from Bangladesh, diagnosed with Ewing's Sarcoma of the left femur. This minimally invasive procedure has been performed for the first time in India.
- Koch's kyphotic deformity was successfully diagnosed and managed for a 3-year-old boy. The patient had presented with head tilt to the left side associated with restriction of head movement and kyphotic deformity of the upper dorsal spine. The patient underwent posterior deformity correction D1 to D8 and appropriate medical management post-biopsy with satisfactory correction of his kyphotic deformity.
- Successful correction of abnormal curvature of the spine on a 42-year-old female patient from the USA, through less invasive surgery. The patient was diagnosed with idiopathic scoliosis, an abnormal curvature of the spine. She was suffering from the condition for 30 years. She consulted several top spine surgeons in the US and all of them suggested

fusing her spine and fixing it with rods. Her deformity was corrected through fusion-less scoliosis surgery using a flexible cable.

- Craniotomy and total excision of meningioma were successfully performed for a 55-year-old female patient diagnosed with large right sphenoid wing meningioma engulfing right ICA, MCA, ACA and PCOM. The lesion was excised totally and all engulfed vessels were decompressed. Postoperatively she was discharged on the seventh day.
- Tubercular Spondylodiscitis (POTTS SPINE) was successfully diagnosed and managed through surgery in a 13-year-old male child. The child had presented with complaints of extreme pain in the back
- Extra corporeal radiation therapy (ECRT) in primary bone sarcoma was successfully performed for a patient.

## Apollo Hospitals, Vizag

- A new surgical technique, Arthroscopic ACIC (Autologous Collagen Induced Chondrogenesis) using the modified Shetty-Kim technique was successfully performed to treat the osteochondral defect in the talar dome in the left ankle of a 37-year-old male patient. This is the first time such kind of technique has been used in AP, Telangana and adjoining regions.
- Sentinel node biopsy for endometrial cancer was successfully performed for a 70-year-old female patient. This procedure was carried out for the first time in the state of Andhra Pradesh.
- Stereotactic Body Radiotherapy (SBRT) of the prostate was successfully performed for an 82-year-old patient with post-PTCA stenting for coronary artery disease and diagnosed with localized carcinoma prostate
- A large ovarian tumor weighing 14kgs was

successfully removed from 83-year-old, obese female patient. The patient weighed around 110 kg, had a history of NSTEMI, congestive cardiac failure, chronic kidney disease, diabetes, history of craniotomy for evacuation of intracranial bleed and asthma.

## COVID Vaccination Drive

India's COVID vaccination plan was ambitious with the target to immunize 1.3 billion population. The vaccination drive in India was flagged off on 16th January 2021 with the priority given to an estimated three crore health care and frontline workers.

## COVID Vaccination at Apollo Hospitals

The COVID vaccination program took off at Apollo Hospitals on 17th Jan 2021 and the first person to receive the shot at Apollo Hospitals was Chairman, Dr. Prathap C. Reddy. Apollo Vaccination Center was amongst the first 3000 sites in the country selected to vaccinate over 3 lakh healthcare workers on the first day of the drive.



Chairman, Dr Prathap C Reddy, the first person in Apollo Hospitals to receive COVID vaccination

This initiative took away the vaccine hesitancy and the vaccination program at Apollo Hospitals started off with a full swing.

## Vaccination Centers at Apollo Hospitals

Around 200 vaccination sites were created across all the Apollo Hospitals location in India to provide immunization to the community making it the largest vaccination program by any private hospital in the country.

The vaccination sites followed all the stringent protocols for hygiene, infection prevention, vaccine cold chain maintenance, patient monitoring and feedback mechanism. Over 10,000 staff were trained in safe vaccination protocols to ensure a seamless delivery at all the vaccination centers. Stringent audits were regularly undertaken for the vaccination centers at all Apollo Hospitals locations to check the adherence to protocols.

The second phase of vaccination started on March 1st 2021 for citizens above 60 years of age and above 45 years with co-morbidities, covering 10 crore people. Registration and patient schedules were obtained through Aarogya Setu app and the Cowin website.

Amidst a growing surge in COVID-19 cases across the country during the second wave of COVID pandemic, the government rolled out the third phase of vaccination drive from April 1st, for those above 45 years of age. Having been gravely struck by the 2nd wave, it was challenging to implement a mass vaccination drive while mitigating the COVID-19 wave. In spite of the difficult situation, Apollo Hospitals was able to handle both the vaccination drive and treatment of COVID patients during the second wave.

The fourth phase of the vaccination allowed private hospitals to buy vaccines directly from the vaccine manufacturers. This enabled the initiation of mega-events for vaccination and paved the way for reaching out to many corporates.



To encourage people to get vaccinated and to make them comfortable, vaccination drives were conducted outside the Apollo Hospitals.

The drive witnessed many people actively participating in the vaccination camp following all precautionary measures meant for COVID.



Making the vaccination more intense, the "Mega COVID Vaccination drive" was conducted on June 30th 2021, covering 50 cities. This drive was a part of the Apollo Group's commitment to support the government in achieving the target of administering 500 million vaccines by July 2021.

Apollo 24/7 app was used to book a slot to make the vaccination faster and easier for everyone.

Schools, Malls, and Community centers were redesigned as vaccination centers to bring more people for vaccination.





Under the Mega Vaccination Drive, Apollo Hospitals excelled in simultaneous execution of vaccination in many centers making the best usage of the available human resources.



### Corporate Vaccination Drive

Nearly 984 corporates from all over India, tied up with Apollo Hospitals for vaccination. Apollo Hospitals could provide vaccination to over 13,65,203 staff of various corporates through the corporate tie-ups. Some of the examples of the corporates which collaborated are Oil India Limited, Godfrey Phillips India Limited, Cairn Oil and Gas, ITC Limited, Indian Renewable Energy Development Agency(IREDA), NHPC Limited, HAMEL.

Glimpses of onsite vaccination camps for corporates



Apollo Hospitals achieved vaccination both inside the hospital and outside, at public places by strictly adhering to the norms laid down by the government.



## Vaccination Program for Diplomatic Missions



Many embassies and consulates approached Apollo Hospitals for vaccinating their members by virtue of their trust.



*Leading by example, The Dean of Diplomatic Corps in India, H.E. Mr. Alem Tsesaye Woldemariam was the first diplomat to get the vaccine at Apollo Hospitals, Delhi*

## Boosting up Vaccination

On account of Independence Day, Apollo Hospitals provided vaccination at a no-profit cost price from 12th to 21st August 2021.



## Achievements

The dominance of Apollo Hospital amongst the other private hospitals was evident right from the beginning in spite of numerous stumbling blocks like inefficient vaccine distribution, inability to procure vaccines at the early phases, limited slots allotment during the initial phase and stringent regulatory measures by the government.

In 2021 64% of India's adult population was fully vaccinated and around 90% had received the first dose. Contributing to this success story of vaccination, Apollo Hospitals shines as the largest private service provider accounting for about 52,99,726 vaccinations till December 2021.

## Apollo Center of Excellence in Critical Care (ACECC)

The ACECC was launched by Chairman, Dr Prathap C Reddy in 2021 in presence of national and international dignitaries. The ACECC is the hub of critical care integration, transformation and expansion. The aim is to establish ACECC as world leader in the area of remote critical care.

## ACECC Governance Board

In order to ensure that the work streams undertaken by ACECC Steering Group are totally aligned to the strategic aims of Apollo Hospitals, ACECC Governance Board has been established. This will provide a high-level governance, direction and advice to the ongoing work of ACECC.

## Excellence in Delivering Critical Care during Pandemic

Remote management was systematically undertaken for patients seeking care at home to critical patients seeking COVID care in hospital set-ups. Over 17000 patients were cared for remotely including those in remote and semi-urban locations. Apart from this,

advanced care for patients requiring ECMO was provided through national and international experts. Protocol and evidence based COVID care was provided. For capacity building, ventilator care courses were initiated and critical care training was provided to junior doctors.

## Work-Streams and Initiatives of ACECC

- **Detailing of levels of critical care and triggers for escalation and referrals.** This includes the implementation plan, terms of engagement and value proposition.

- **Critical care quality indicators**

Dashboard for the quality of critical care services across the Apollo Hospitals.

- **Repository of critical care protocols and SOPs**

Manual of Critical Care Protocols and SOPs would serve as benchmark for the high quality critical care delivered by Apollo Hospitals

- **Collaborations with Apollo Connect**

The Apollo Connect and ACECC are fully aligned in their aims and objectives of working with non-Apollo units.

- **Apollo Knowledge Series webinars**

These educational sessions are held once every month. Each webinar involves a lead moderator, critical care doctor and a critical care nurse – all from different units of Apollo Hospitals. The invitations go to all the relevant clinical Apollo as well as non-Apollo units. The attendance to these webinars has set a new record.

- **Newsletter and Observership**

The ACECC newsletter is published once every three months.

The observership is being offered by Apollo Connect to non-Apollo Hospitals.

- **Various collaborative National/International initiatives**

The centre of excellence is engaged with the faculty of intensive care medicine as well as remote critical care in the following countries- UK, Australia, New Zealand, Canada and USA

- **eICU implementation**

ACECC is harnessing digital technology to create an integrated network of eICUs providing world-class critical care not just across the Apollo Hospitals network but also in partnership with non-Apollo units in India and abroad. The ACECC will enable wider and timely access to critical care and help in implementing a standardised scope of management and treatment in emergencies and critical medical situations.

The eICU system has a dedicated command center with doctors, nurses, technicians and state of the art video communication technology using various off the shelf providers. Remote hospital ICUs in different parts of India are connected through the internet. A limited bandwidth of 2–4 mbps is used with a dedicated leased line and backup connectivity. Communication occurs through a dedicated EMR system, through phone and WhatsApp based data exchange.

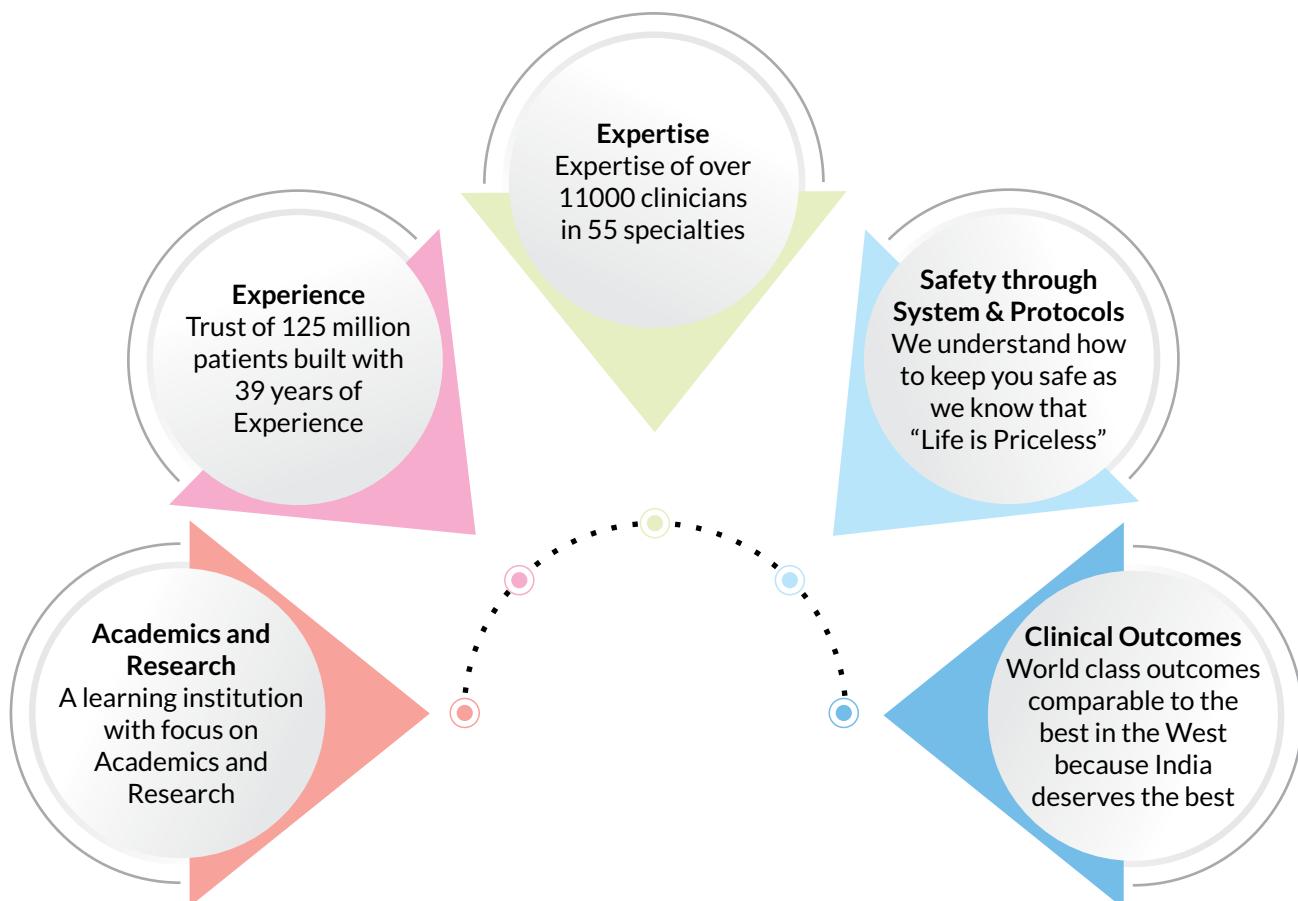


## Centers of Excellence (COEs)

Apollo Hospitals has dedicated Centers of Excellence (COEs) for several key specialities and super-specialties. These centers of excellence are unique in terms of their service spectrum and are spread across the various Apollo Hospitals locations:

- Cardiovascular Sciences
- Orthopedics
- Neurosciences
- Oncology
- Transplant
- Emergency

## Key differentiating factors for Centers of Excellence



## Center of Excellence - Cardiovascular Science



<https://www.livescience.com/34655-human-heart.html>

Apollo Hospitals is the leading institution for cardiovascular sciences in India, attracting patients across the globe for best-in-class outcomes, seamless service delivery at reasonable price points, when compared internationally.

The pioneering work for the prevention of cardiovascular diseases is now strengthened with risk scoring which is powered by artificial intelligence; so that patients are treated much before the advanced stage of disease progression.

Apollo Hospitals has third generation Cath Labs, Cardiac Critical Care Units and Intensive Care Units for support.

### Cardiac services are offered at 36 units:

Apollo Hospitals, Ahmedabad
Apollo Hospitals, Bangalore
Apollo Hospitals, Bilaspur
Apollo Hospitals, Bhubaneshwar
Apollo Hospitals, Chennai
Indraprastha Apollo Hospitals, Delhi
Apollo Jubilee Hills, Hyderabad
Apollo Gleneagles Hospitals, Kolkata
Apollo Hospitals, Madurai
Apollo Hospitals, Navi Mumbai
Apollo Hospitals, Vizag

Apollo Hospitals, Secunderabad
Apollo Reach Hospitals, Karimnagar
Apollo Hospitals, OMR
Apollo Hospitals, Kakinada
Apollo Hospitals, DRDO
Apollo First Med Hospital, Chennai
Apollo Hospitals, Guwahati
Apollo Hospitals, Nellore
Apollo Hospitals, Karur
Apollo Reach Hospitals, Karaikudi
Apollo BGS Hospitals, Mysore
Apollo Hospitals, Indore
Apollo Hospitals, Nashik
Apollo Hospitals, Tondiarpet
Apollo Cancer Institute, Teynampet
Apollo Hospitals, Jayanagar
Apollo Children's Hospitals, Chennai
Apollo Hospitals, Trichy
Apollo Hospitals, Seshadripuram
Apollo Hospitals, Vanagaram
Apollo Hospitals, Hyderguda
Apollo Jehangir Hospitals, Pune
Apollo Hospitals, Noida
Apollo Health City, Vizag
Apollomedics Hospitals, Lucknow

### Existing Clinical Expertise-Cardiology

TAVI / TAVR
Mitral Clip
Complex Angioplasties
Robotic Angioplasties

### Existing Clinical Expertise- Cardiac Surgery

MICAS
Heart Failure Assist Devices
Heart Transplant/Heart-Lung Transplant (En-bloc)
Robot Assisted Cardiac Surgeries

## Cardiology COE – Service Spectrum

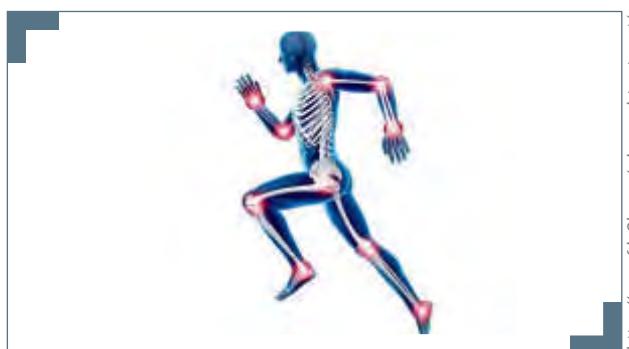
- Interventional Cardiology
  - Diagnostic
    - Coronary Angiogram
    - Electrophysiology (EP) Study
  - Procedures
    - Coronary Angioplasty (PTCA)
    - RF Ablation
    - Trans-catheter Aortic Valve Implantation (TAVI)
    - Trans-catheter Mitral Valve Implantation (TMVI)
    - Tricuspid Valve procedure
    - Rotablation
    - Intravascular Lithotripsy (IVL)
    - ECMO procedures
    - Endovascular graft for Aortic aneurisms
    - Peripheral angioplasty
  - Devices
    - Temporary pacemaker
    - Permanent Pacemaker
    - Implantable Cardioverter Defibrillator (ICD)
- Cardiac Surgery
  - Coronary artery bypass graft (CABG)
  - Aortic Valve Replacement / Repair (AVR)
  - Mitral Valve Replacement / Repaired (MVR)
  - Minimally Invasive Cardiac Surgery (MICS)
  - Robotically Assisted Cardiac Surgery
  - Pediatric Surgery
  - Surgery for congenital disorders
  - Left Ventricular Assist Device (LVAD)
  - Heart Lung Transplant
  - Endoscopic venous / arterial harvesting

- Medical Cardiology
  - Cardiac Imaging
  - Electrocardiogram (ECG)
  - 2D Echo-cardiogram
  - 3D Echo-cardiogram
  - Holter Monitor
  - Emergency Heart Command Center
  - Hypertension / stroke management

## Academics and Research- Cardiovascular Science

Academics and Research	Number
Adjunct Titles of Clinical Tutors	13
DNB seats	
Cardiac Anaesthesia - 3	
Paediatric Cardiology -4	
Cardiology - 31	
Cardio Thoracic Surgery - 11	

## Center of Excellence – Orthopedics



<https://www.fdp2b.com/advanced-treatment/orthopaedics/>

With a team of the best orthopedicians providing excellent treatment at Apollo Hospitals, the patients are assured of complete recovery from bone and joint problems. Orthopedic services at Apollo Hospitals have the latest cutting-edge technology in terms of equipments, operating rooms, recovery areas and

advanced physical therapy facilities. Dedicated and well equipped orthopedic surgery complexes with laminar flow and various modern equipment like image intensifiers, operating microscopes, computer navigation systems and top of the line arthroscopy systems form an integral part of this COE.

## Orthopaedics COE – Service Spectrum

- Articular cartilage implantation (ACI)
- Arthritis care

Apollo Hospitals, Ambawadi
Apollo Hospitals, Nashik
Apollo Hospitals, Tondiarpet
Apollo Cancer Institute, Teynampet
Apollo Hospitals, Jayanagar
Apollo Hospitals, Hyderguda
Apollo Jehangir Hospitals, Pune
Apollo Hospitals, Noida
Apollo Hospitals, Vanagaram
Apollo Children's Hospitals, Chennai
Apollo Hospitals, Trichy
Apollomedics Hospitals, Lucknow

### Orthopedics services are offered at 40 units:

Apollo Hospitals, Ahmedabad
Apollo Hospitals, Bangalore
Apollo Hospitals, Bilaspur
Apollo Hospitals, Bhubaneshwar
Apollo Hospitals, Chennai
Indraprastha Apollo Hospitals, Delhi
Apollo Jubilee Hills, Hyderabad
Apollo Gleneagles Hospitals, Kolkata
Apollo Hospitals, Madurai
Apollo Hospitals, Navi Mumbai
Apollo Hospitals, Vizag
Apollo Hospitals, Secunderabad
Apollo Reach Hospitals, Karimnagar
Apollo Hospitals, OMR
Apollo Hospitals, Seshadripuram
Apollo Hospitals, Kakinada
Apollo Hospitals, DRDO
Apollo First Med Hospitals, Chennai
Apollo Hospitals, Karaikudi
Apollo KH Hospitals, Ranipet
Apollo Hospitals, Guwahati
Apollo Hospitals, Aragonda
Apollo Hospitals, Nellore
Apollo BGS Hospitals, Mysore
Apollo Hospitals, Karur
Apollo Health city, Vizag
Apollo Hospitals, Indore

### Existing Clinical Expertise-Orthopedics

Bilateral Minimally Invasive Knee Surgery
3D Robotic knee replacement (Unicondylar)
Cell Therapy
Eazy- AIM - Electronic digital targeting system
Rehabilitation Centre - ApoKos
Renaissance Spine Robot
Joint Navigation
Robotic rehabilitation – Lokomat
Point of care 3D Medical printing lab

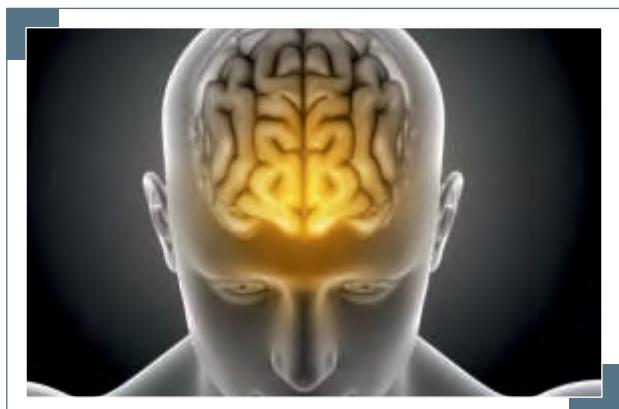
- Arthroscopic and reconstructive techniques
- Bilateral minimally invasive knee surgery and 3D robotic knee replacement
- Cartilage regeneration surgery, including micro fracturing, mosaic-plasty
- Comprehensive foot and ankle care
- Dedicated units for traumatology
- Fast track Total Knee Replacement
- Geriatric orthopaedic care
- Joint replacements including hip resurfacing and knee replacements (primary, complex primary and revision replacements)

- Modern sports medicine centres
- Minimally invasive knee replacement surgery (MIKRS)
- Orthopedic Oncology for treating bone cancers
- Physical therapy units to provide rehabilitation and pain management
- Regenerative medicine
- Robotic-guided techniques
- Shoulder surgeries and the most delicate hand micro surgeries
- Specialised pediatric orthopedics units offering the whole range of pediatric orthopedics
- Using a revolutionary combination of CT imaging/mapping, modelling software (virtual)
- 3D printing technology
- Pediatric Orthopedics

## Academics and Research- Orthopedics

Academics and Research	Number
Adjunct Titles of Clinical Tutors	08
<b>DNB seats</b>	
Orthopedics - 40	

## Center of Excellence – Neurosciences



<https://www.scmp.com/lifestyle/health-beauty/article/1941638/9-unanswered-questions-about-human-brain>

The Apollo Institute of Neurosciences has revolutionized high-end neurological care in the country. The legacy of innovation and excellence is

further augmented through the latest emergency services, neuro-intensive care facilities and neuro rehabilitation. The main goal is to work at the cutting-edge of neuro-imaging including Intraoperative MRI, neuro-intensive care and medical and radiation oncology services to deliver outcomes that match the leading neurology institutions in the world. We have established a comprehensive epilepsy management programme.

To elevate the level of stroke care, a highly skilled multidisciplinary neurosciences team has dedicated itself to enhancing patient care through cutting edge technology. Treatments of seizures or epilepsy as well as modern treatments for movement disorders like Parkinson's disease are further specializations under the functional neuro-surgical units. The Apollo Institute of Neurosciences has taken stroke management to the next level by standardizing stroke diagnosis and empowering clinicians with AI technology to redefine stroke protocols across all the hospitals. AI for stroke will reduce the treatment time, to make faster, more accurate diagnosis and treatment decisions to improve clinical outcome for stroke patients. More than 1000 major neurosurgeries are being carried out every year.

Apollo Hospitals have partnered with nursing homes to build largest network of comprehensive stroke management that will lead to multiple patient benefits. This AI platform uses artificial intelligence to create high quality, advanced images from non-contrast CT, CT angiography, CT perfusion, MRI diffusion and perfusion scans. This facilitates hospitals to speed up time-critical triage or transfer decisions for better patient outcomes. The stroke team will be able to remotely access the brain scans of stroke patients with the AI analysis on a mobile app or email for faster decision making without losing time. The physicians are able to evaluate the patient without needing to be physically present and visit only when the AI analysis of the scans suggest indication for treatment.

The AI technology enabled advanced stroke management is to be launched at Apollo Hospitals locations at Bengaluru, Chennai, Navi Mumbai, Ahmedabad, Hyderabad, Delhi, Jayanagar, Sheshadripuram, Mysore and Indore.

### **Neuro services are offered at 37 units:**

Apollo Hospitals, Ahmedabad
Apollo Hospitals, Bangalore
Apollo Hospitals, Bilaspur
Apollo Hospitals, Bhubaneshwar
Apollo Hospitals, Chennai
Indraprastha Apollo Hospitals, Delhi
Apollo Jubilee Hills, Hyderabad
Apollo Gleneagles Hospitals, Kolkata
Apollo Hospitals, Madurai
Apollo Hospitals, Navi Mumbai
Apollo Hospitals, Vizag
Apollo Hospitals, Secunderabad
Apollo Reach Hospitals, Karimnagar
Apollo Hospitals, OMR
Apollo Hospitals, Seshadripuram
Apollo Hospitals, Kakinada
Apollo Hospitals, DRDO
Apollo First Med Hospitals, Chennai
Apollo KH Hospitals, Ranipet
Apollo Hospitals, Nellore
Apollo BGS Hospitals, Mysore
Apollo Hospitals, Karur
Apollo Health City, Vizag
Apollo Hospitals, Indore
Apollo Hospitals, Nashik
Apollo Hospitals, Tondiarpet
Apollo Cancer Institute, Teynampet
Apollo Hospitals, Jayanagar
Apollo Hospitals, Hyderguda
Apollo Jehangir Hospitals, Pune
Apollo Hospitals, Noida
Apollo Hospitals, Vanagaram

Apollo Children's Hospitals, Chennai

Apollo Hospitals, Trichy

Apollomedics Hospitals, Lucknow

Apollo Hospitals, Guwahati

### **Existing Clinical Expertise-Neurosciences**

Micro – Neurosurgery
Complex Spinal Surgeries/ Minimal Access Spine Surgery
Surgery for Spinal Cord Tumors
Surgery for Acute Head Injury and Spinal Injuries
Stroke prevention / Stroke treatment
Epilepsy Surgery
Skull Base Surgery
Surgery for Parkinson's disease
ICG Integrated Spectroscopic Surgery
Neuro-Endoscopic Surgery for Pituitary Tumors/CSF Leaks
Endovascular Coiling of Aneurysms/ Vascular Malformations
Vertebroplasty

### **Neurosciences COE – Service Spectrum**

- Auditory brain-stem implant (ABI)
- Botulinum toxin injection for neurological disorders
- Brain Tumour surgeries- including deep-seated and closer to brain stem tumour surgeries with intraoperative MRI
- Deep brain stimulation (DBS) for Parkinson's disease and movement disorders

- EC-IC bypass (extracranial-intracranial bypass) – where the brain's blood supply is augmented by diverting blood from blood vessels of face to brain
  - Endovascular coiling of aneurysms and vascular
  - ICG integrated spectroscopic endoscopic pituitary surgery
  - Mechanical thrombectomy for acute stroke
  - Micro – neurosurgery
  - Neuro-endoscopic surgery for pituitary tumors and CSF leaks
  - Pediatric neurosurgery
  - Skull base surgery
  - Stroke prevention / stroke treatment
  - Surgery for parkinson's disease
  - Surgery for spinal cord tumors
  - Surgery for acute head injury and spinal injuries
  - Thrombolysis- intravenous intra-arterial and mechanical for acute stroke
  - Mechanical Thrombectomy
- Vertebroplasty

## Academics and Research- Neurosciences

Academics and Research	Number
Adjunct Titles of Clinical Tutors	09

DNB seats
Neuro Surgery - 20
Neurology - 18
Neuro Anaesthesia - 3

## Center of Excellence – Oncology



<https://www.medanta.org/patient-education-blog/common-types-of-blood-cancer/>

Apollo Hospitals brings together the brightest minds in surgical, medical and radiation oncology, along with a complete range of high-end ancillary experts. The cancer care system at Apollo Cancer Centres involves over 250+ Medical, Surgical and Radiation oncology specialists as well as diagnostic consultants who offer comprehensive Cancer Care. The mission is to take the fight against cancer to the next frontier, and redefine clinical benchmarks and outcomes.

### Apollo Cancer Centres are present at the following 14 units:

Apollo Proton Cancer Centre, Chennai
Apollo Cancer Centre, Teynampet
Apollo Hospitals, Ahmedabad
Apollo Hospitals, Bangalore
Apollo Hospitals, Bilaspur
Apollo Hospitals, Bhubaneswar
Indraprastha Apollo Hospitals, Delhi
Apollo Jubilee Hills, Hyderabad
Apollo Hospitals, Navi Mumbai
Apollo Hospitals, Vizag
Apollo Medics Hospital, Lucknow
Apollo Hospitals, Madurai
Apollo Gleneagles Hospitals, Kolkata
Apollo Hospitals, Navsari (New Project)

<b>Existing Clinical Expertise-Oncology</b>
Robotic Surgery
Limbo Salvage Surgery
HIPEC
TACE
RFA
Bio Bank
Tubeless VATS
Total body irradiation (TBI)
Cancer Genetics
Liquid Biopsy
Vaccine Therapy
Immunotherapy and Targeted Therapy

## Oncology COE – Service Spectrum

- Body radiation therapy (SBRT)
- Brachytherapy – intra cavitary
- Brachytherapy (ICBT), interstitial
- Brachytherapy (ISBT), intraluminal high dose rate brachytherapy (ILBT)
- Bone marrow transplantation services
- Breast conservative surgery
- Cellvizio – endomicroscopy system which generates optical biopsy
- Comprehensive suite of chemotherapy services
- Digital mammography
- Extra corporeal radiotherapy
- Genetic profiling
- Hematological malignancy treatment
- Hormonal therapy
- Image guided radiation therapy (IGRT)
- Immunotherapy
- Intensity modulated radiation therapy (IMRT)
- Limb surgeries for peripheral solid tumours
- Liver resections – staged hepatectomy and ALLPS
- Lobectomy/ pneumonectomy
- Mandibulectomy and advanced plastic surgery services
- Mediastinal mass excisions and chest wall tumour excision with reconstruction
- Minimally invasive oesophagectomy
- Molecular profiling
- The only proton therapy system in this part of world
- Paediatric oncology services
- Palliative radiotherapy
- Precision oncology focusing on precise treatment and outcomes
- Radical neck dissection
- Radical nephrectomy and radical cystectomy
- Rapidarc radiosurgery
- Respiratory gated radiotherapy
- Retroperitoneal lymph node dissection
- Robotic intervention, specially for urology and colorectal cancers
- Spect fibroscan
- Stereotactic radio surgery (SRS) with brainlab, stereotactic radio therapy (SRT)
- Stereotactic surgery suite using cyber knife

- Surgical gastroenterology services
- Total body irradiation
- Total/ partial penectomy with groin node sampling/ dissection
- Tumour board
- Volumetric radiotherapy (VMAT)
- 99 TC bone scan
- 128 slice pet scan

### Institute for Complex Spine Surgeries

Apollo Hospitals launched the Apollo Institute of Spine Surgery, and an advanced robotic system, Excelsis GPS Spine Surgery Robot, for complex spine surgeries.

Three patients with complex spine issues underwent robotic procedures using the spine surgery robot.

The surgery was performed by Apollo spine care team, supported by other surgeons from Germany and Australia.

Over 100 robotic spine surgeries were successfully completed.



Robotic Spine Surgery team completed 100 surgeries

Robotic spine surgery team completed 100 robotic spine surgeries for the first time in India

### Academics and Research- Oncology

Academics and Research	Number
Adjunct Titles of Clinical Tutors	14
DNB seats	
Medical Oncology - 22	
Surgical Oncology - 10	
Paediatric Haemto Oncology - 2	

### Center of Excellence- Transplant



<https://www.bbc.com/news/health-23203560>

With an unparalleled experience of performing over 21,177 Solid Organs Transplant (kidney- 16,828; liver- 3,910 and other organs- 439), Apollo Hospitals leads the world in being the busiest Solid Organ Transplant Program in the world since 2013.

Apollo Hospitals has emerged as a leading transplant centre and has assured safe solid organs transplantations.

In the year 2021, Apollo Hospitals performed 1224 transplants (199 liver transplants, 1002 kidney transplants, 23 other transplants)

#### Transplant services are offered at 21 units:

Apollo Hospitals, Ahmedabad

Apollo Hospitals, Bangalore

Apollo Hospitals, Bilaspur
Apollo Hospitals, Bhubaneshwar
Apollo Hospitals, Chennai
Indraprastha Apollo Hospitals, Delhi
Apollo Jubilee Hills, Hyderabad
Apollo Gleneagles Hospitals, Kolkata
Apollo Hospitals, Madurai
Apollo Hospitals, Navi Mumbai
Apollo Hospitals, Trichy
Apollo Hospitals, Guwahati
Apollo Hospitals, Nellore
Apollo BGS Hospitals, Mysore
Apollo Hospitals, Indore
Apollo Hospitals, Nashik
Apollo Hospitals, Noida
Apollo Hospitals, Vizag
Apollo Hospitals, Vanagaram
Apollo Health City, Vizag
Apollomedics Hospitals, Lucknow

Existing Clinical Expertise-Transplant
Haemodiafiltration
Everlinc
Liver Transplants in very small infants (<5kgs)
Multi-organ/Small bowel transplants
ABO incompatible transplants
Transplants in individuals with Situs

- Deceased donor organ transplant
- Adult transplant
- Paediatric transplant
- Kidney transplant
- Liver transplant
- Heart transplant
- Lung transplant
- Combined heart and lung transplant
- Pancreas transplant

- Intestinal transplant
- Multi-organ transplant
- Cornea transplant
- ABO incompatible transplants

## Infrastructure

Apollo has unbeatable infrastructure for the transplant programme:

- Modular OTs
- Dedicated Transplant ICUs
- Dedicated Post Transplant wards
- Highly Skilled and Trained Clinical and Support Teams
- Organ Oxmetra, can keep a liver 'alive' for up to 24 hours after donation.

## Academics and Research- Transplant

Academics and Research	Number
Adjunct Titles of Clinical Tutors	03

## Center of Excellence – Emergency



Apollo Hospitals has pioneered in pre-hospital and emergency care through its 72 hospitals across the country.

Access and continuity of care is maintained through the emergency departments which have uniform protocols and pathways. The protocols are designed for quicker response and have shown outcomes that are at par with the very best in the world. The multi-specialty prowess is leveraged actively to deliver the crucial edge in emergency care.

### **Emergency COE – Service Spectrum**

<b>Existing Clinical Expertise-Emergency</b>
Emergency 2.0
Air Ambulance
Code FAST
E-ICU
ReSQCPR System
Clinical Pathways – Acute MI, Acute Stroke, Poly trauma and Sepsis
Advanced Resuscitation Services – Targeted Temperature Management, Primary Angioplasty and ECMO.
Aero Medical Transport – Domestic and International Retrievals.
Highway Trauma Rescue and Retrievals
Pandemic Response – Triage, Screening and Treatment.



- Air Ambulance
- Golden Hour concept for early management of Stroke - Code FAST Protocol
- Acute MI management – primary angioplasty
- Trauma management
- Sepsis management, E-ICU

**Elements of the Emergency Centre of Excellence include**

- Prehospital Care
  - Easy access national number – 1066
  - Ground support - BLS and 24 X 7 ACLS ambulances, 2-wheeler first responder services, critical care transport.
  - Air Ambulance – Fixed wing national and international retrievals, helicopter EMS (HEMS).
- Triaging
  - Uniform protocols to minimize waiting times
- Emergency Department
  - Advanced resuscitation services (ARS)
  - Clinical pathway based care – acute MI (chest pain), acute stroke, polytrauma, sepsis.
  - Major emergencies – All major medical and surgical emergencies including obs and gynae, environmental and toxicological emergencies.
  - Minor emergencies – All health-related issues which need medical attention. Fast track clinics



including after-hours services. Minor procedures including procedural anesthesia.

- Medico legal emergencies – Motor vehicle crashes, burns, fall from height, workplace injuries, assault, poisonings, animal bites and sexual abuse.
- Bedside ultrasound and echo procedures – For FAST scan, central lines, HHD catheters, lung ultrasound and 2 D echo
- Pain management
- Specialized Emergency Care
  - Pediatric Emergency Care
  - Geriatric Emergency Care
  - Infectious Diseases – Isolation, Barrier Nursing
  - Crisis and Disaster Management
    - Disaster medical assistance team (DMAT)
    - Pre-hospital / on scene disaster response
    - Pandemic response – isolation and medical management
  - Community Programs
    - CPR training
    - First aid training
    - Workplace based emergency response training
  - Quality Initiatives
    - More than 12 parameters are monitored across each of the Emergency Departments of the Apollo Group and graded with the best centers across the globe to achieve optimal outcomes. Quality improvement projects are also undertaken by each department
  - Tele Emergency Services
    - Occupational health units
    - Remote health units

- Awareness programs – seasonal emergencies

- Academics and Research- Emergency

The Emergency Departments at Apollo Hospitals not only run DNB courses but also host DNB final exams

An MRCEM trainee from Apollo Hospitals, Chennai was awarded the Alison- Gourdie Gold medal by the RCEM for scoring the highest marks in MRCEM exams.

Apollo Hospitals, Hyderabad and Apollo Hospitals, Chennai host the MRCEM OSCE exams for the RCEM

### Academics and Research- Emergency

Academics and Research	Number
Adjunct Titles of Clinical Tutors	04

DNB seats

Emergency Medicine - 28

2021

Clinical  
Excellence

Information  
Technology

Apollo  
24|7

Apollo  
Telehealth

Apollo  
Home Care

Academics

CSR

Research

Recognition

Consultants'  
Achievements

# Information Technology

Artificial Intelligence (AI) Program at Apollo Hospitals	85
Quality Accreditation for Clinical AI Program	86
CHIME Digital Health Survey	86
Integration of Medmantra with Ayushman Bharat Digital Mission	86

# Information Technology

## Information Technology

Information Technology (IT) has transformed the way healthcare is being delivered today. The revolutionary impact of IT, has greatly improved the quality and access to healthcare. Quality improvement and clinical decision support are being powered through Healthcare IT and are not just enabling patient monitoring but also giving specific and targeted recommendations for improving patients' health.

### The Clinical AI (Artificial Intelligence) Program at Apollo Hospitals

The Clinical AI API (Application Programming Interface) are artificial intelligence-based clinical algorithms, designed, developed, and deployed from ethically sourced data to provide insights and information on Clinical Decision Support for intended clinical areas.

At Apollo Hospitals the Clinical AI APIs are available for the following conditions:

- Cardiovascular Disease (AICVD)
- Antibiotic Recommendation (EARS)
- Liver Fibrosis (AILF)
- Acute Exacerbation of COPD and Asthma (AICOPD)
- Prediabetes Risk (Prediabetes Risk Scanner)



There are multiple other programs in the pipeline

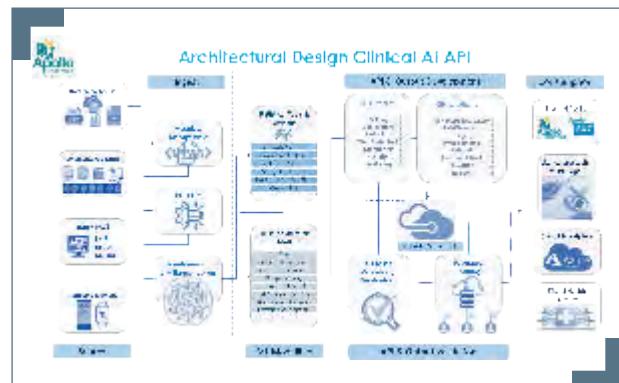
The Clinical AI Program is aimed at improving clinical practice and population health. Though in its initial stage, the program impacts at the following four fundamental levels:

- a) **Patient level-** by enabling them with better decisions to access and to process their own data, federated – secured – meaningfully used to promote health
- b) **Clinician level-** by enabling accurate interpretation of patient data, including electronic health records and images, predominantly through supported networks
- c) **Health system level (that could potentially use Clinical AI APIs) -** by improving throughput, enhancing patient safety and reducing healthcare cost
- d) **For technology providers -** by constructing digital health platforms and creating positive

network effects where patients, providers, payors and physicians can derive intense clinical value

### Quality Management Accreditation for Clinical AI

There are very few healthcare organizations worldwide that have designed, developed, deployed Clinical AI and have also completed Quality Management Accreditation / Certification process. The ISO 13485: 2016 – Medical Device Audit was successfully completed for Clinical AI APIs – designed, developed and deployed at Apollo Hospitals (in-house) and has been recommended for certification. The audit was conducted by the British Standards Institute (BSI).



Process for Clinical AI API development at Apollo Hospitals



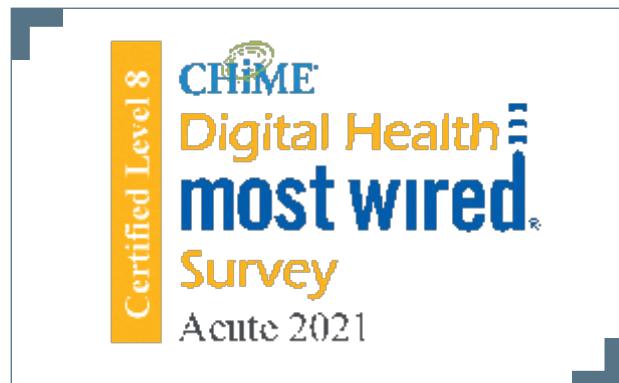
### CHIME Digital Health Most Wired Survey

In the year 2021, Apollo Hospitals, was awarded the Digital Health Most Wired Level 8 status. This was the second year in a row when Apollo Hospitals was awarded this status.

The Most Wired survey and certification program serves as a comprehensive “Digital Health Check” for healthcare organizations across the nation. Unique in the industry, the certification reflects provider's commitment to the digital transformation necessary to deliver best patient care. The survey criteria went beyond a typical IT survey or adoption scale and broadly evaluated philosophies, programs, processes and outcomes.

As success in digital health increasingly determines the quality of patient care, the scope of the CHIME Digital Health Most Wired survey reflects the progress made by leading healthcare providers as they reinvent healthcare for a new century.

More than 36,000 facilities were represented in the 2021 survey, a 20 percent increase from the number of facilities represented in the previous year. These impressive gains reflected the ongoing drive toward digital transformation in healthcare during the second year of the COVID-19 pandemic.



### Integration of Medmantra with Ayushman Bharat Digital Mission (ABDM) Ecosystem

Appreciation and recognition of efforts for completing the integration of Medmantra with Ayushman Bharat Digital Mission (ABDM) ecosystem was given by National Health Authority Ayushman Bharat Digital Mission (ABDM) and NitiAAyog, the Government of India. Medmantra is the HMIS for Apollo Hospitals.

2021

Clinical  
Excellence

Information  
Technology

Apollo  
24|7

Apollo  
Telehealth

Apollo  
Home Care

Academics

CSR

Research

Recognition

Consultants'  
Achievements

# Apollo 24|7

Services

89

Milestones Achieved

90

# Apollo 24|7

## **Apollo 24|7: “Going From Strength To Strength”**

Apollo 24|7 is a Personalised Health Experience that gives users an edge over the rest with priority access, value prices, and utmost care when needed the most.

As a part of the Apollo Hospitals Group, Apollo 24|7 is a complete healthcare app created with the intent of becoming round-the-clock Healthcare buddy.

The Apollo Group has been the pioneer of world-class Healthcare in India and have been touching lives for over 35 years. Through Apollo 24|7, Apollo Hospitals, wish to bring care, empathy, and quality into the digital space.

### **Services Offered**

A to Z of healthcare services are available right at the fingertips:

#### **Online Doctor Consultation**

Top doctors in India can be consulted via video/audio call/ chat within 15 minutes on the Apollo 24|7 app. There is no longer hassle for queues or waiting times. Apollo Doctors in over 90 specialties can be consulted for hassle-free follow-up consultations. Doctors from all Apollo Hospitals and Apollo Clinics are available for virtual consultation on Apollo 24|7 app.

#### **Medicines Delivery**

Medicines are delivered within 2 hours across many cities in India. The robust network of 4750+ Apollo Pharmacy stores ensures that medicines reach even

the farthest corners of the country in the fastest time possible.

#### **Diagnostic Tests**

Lab tests- blood tests, full body checks and preventive health checks for a home pick-up across major cities.

#### **Digitised Health Records**

Apollo 24|7 is an integrated platform that stores all health records being generated physically or digitally across the Apollo ecosystem for each consumer on the app. User's past consultations, doctor notes/prescriptions, offline store purchase bills – all will be automatically available on the app.

#### **Apollo 24|7 Diabetes Management**

This service empowers users to live healthy and normal Lives. The application integrates with HealthKit APIs and other fitness/ medical devices to capture user health data about physical activity and vital parameters. Caregivers use this information to correlate users' lifestyle aspects with metabolic conditions. Caregivers understand correlations and patterns and advise them to modify specific aspects of their care paths.

- Health kit feature
- Health kit/ care kit functionality for step count
- Compare daily and weekly step counts
- Additional Features
- Symptom tracker
- Health articles and news from trusted sources



- More than 0.6 million diagnostic lab orders completed
- Customer Satisfaction at levels of 3.51 (on a scale of 4)
- Customers served across over 19,000 pin codes, served across 1543 cities
- Customers in over 1067 pin codes serviced through 2 hours/ 4 hours/ same day medicine delivery
- Engagement of ~4.8 crores (unique) OneApollo Customers across the Group

#### **Apollo 247 has accomplished the following major milestones till date:**

- More than 14 million app downloads
- More than 14 million registered users and more than 7.7 million new patients
- More than 6000 active doctors on the system across over 160 specialities
- Over 1.4 million virtual consultations completed
- Over 4.4 million omni-channel home deliveries of medicines

2021

Clinical  
Excellence

Information  
Technology

Apollo  
24|7

Apollo  
Telehealth

Apollo  
Home Care

Academics

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Achievements

# Apollo TeleHealth Services (ATHS)

Milestones Achieved

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Public Private Partnership Projects

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Remote COVID-19 Management

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# Apollo TeleHealth Services (ATHS)

Apollo Remote Healthcare is the largest telehealth service provider in the world – providing healthcare both through physical and digital mediums.

Apollo Remote Healthcare began its journey over 20 years ago and has witnessed the establishment of more than 800 healthcare centres in public-private-partnership (PPP) mode, 110 tele-clinics in franchisee mode and 350,000 public touch points at Gram Panchayat Level through Digital India Initiative. By touching lives of more than 13 million people, Apollo Remote Healthcare today is the largest telemedicine provider in the world.



## Milestones Achieved in 2021

- Augmentation of Public Healthcare Projects-** Public Healthcare Projects were augmented within the states of Andhra Pradesh, Himachal Pradesh, Jharkhand, Uttar Pradesh and Meghalaya. This included enhancement of 3,50,000 Community Services Centres (CSCs) across India.
- Corporate Projects-** Promoting illness to wellness in multiple corporate projects through

services like- Doc-On-Call, Condition Management Programs, COVID Helpline, Emotional / Mental Health Counselling and CSR programs were undertaken. This included over 100,000 teleconsultations.

- Remote COVID Management -** Remote COVID Management for 11 PSU units was initiated through tele-emergency and tele-ICU provision to treat moderate to severe COVID cases and provide specialist teleconsultations for comorbidities.
- Rare Distinction-** Achieved the rare distinction of delivering more than 20,000 clinical transactions on a daily basis and touching more than 13 million lives.
- Largest Public Private Partnership-** Apollo Remote Healthcare became the largest Public Private Partnership (PPP) with more than 16.5 million teleconsultations delivered.
- Use of Technology-** The use of technology like AI along with Big Data has enabled continuity of care in the pandemic through telemedicine and remote healthcare. The use of this technology shall be continued to transform every point of interaction with the patient and community.
- Certification-** After being the largest multi-specialty telemedicine network in the world, Apollo Remote Healthcare been granted ISO 13131:2021 certification by the British Standards Institution (BSI). ISO 13131:2021 belongs to a class of standards that provides

flexible, general guidelines that support innovation in healthcare. This certification recognizes the industry leadership of Apollo Remote Healthcare in developing and deploying user-friendly technological solutions and the high standards for medical services delivery.

*Apollo Remote Healthcare is the "first ever" organization in the world to attain this certification.*

- **First Drone Delivery Healthcare Pilot in India-** Though India is regarded as the 'pharmacy of the world' yet in many remote parts of the country, access to basic healthcare is missing. Due to topographical constraints and poor transport connectivity, accessibility to healthcare is a distant dream for many, especially with the onset of COVID-19 pandemic. That is where drone-based healthcare delivery plays a crucial role. Delivery of vaccines and medicines can be made more accessible and quicker with drones to the remotest corners of the country and to hazard-prone areas. The first drone delivering healthcare pilot was conducted at Vikarabad, Telangana in association with the World Economic Forum, Niti Aayog and Government of Telangana with multiple drone companies participating as consortia.
- **Digital Dispensaries-** Launched five digital dispensaries across the state of Meghalaya in the august presence of the chief minister of Meghalaya, Shri Conrad Sangma, with a host of essential medical services like general practitioner and specialist doctor tele-consultation, laboratory investigations, NCD Screening and social health education.



*Apollo Telemedicine and Digital Dispensary*



*Hon'able Jyotiraditya M Scindia, Civil Aviation Minister,  
Hon'able KT Rama Rao, Telangana IT Minister and Hon'able Patlolla  
Sabitha Indra Reddy, Telangana Education Minister launches  
'Medicine from the Sky' project*

## **Augmenting Healthcare with Public-Private Partnership Projects**

### **Tele-Emergency in Himachal Pradesh**

In a first-of-its-kind healthcare service delivery innovation in India, Apollo TeleHealth is providing

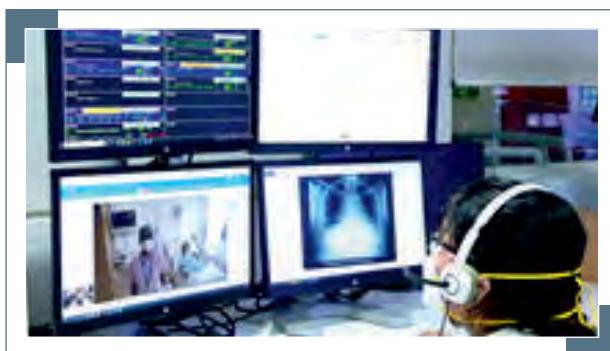
tele-emergency services to a population of more than 40000 in the state of Himachal Pradesh through its four prominent Tele-clinics, that are situated at a height of 14000 ft above sea level. In five years of operations, over 23000 teleconsultations have been delivered and 1320 emergencies have been stabilized. The facility also provides screening of cervical cancer and tele-laboratory services.



Tele-Emergency Services in Himachal Pradesh

### Telemedicine at Common Service Centres

By synergizing healthcare services, Information and Communication Technologies (ICT), and patient information system, Apollo TeleHealth provides solutions like primary care tele-consultations and specialist tele-consultations through 350,000 Common Service Centres (CSC) across India. The service delivery model is part of the Digital India initiative of the Government of India enabling access to telemedicine to over 700 million people.



Telemedicine at Common Service Centres

### Urban Primary Health Centre (UPHC) in Andhra Pradesh

Over 195 Urban Primary Health Centres in Andhra Pradesh are operated and maintained by Apollo TeleHealth. In last four years of operations, more than 3.4 million lives were touched through 14.8 million tele consultations, 8.8 million lab tests, 1.4 million immunizations, 570000 antenatal checks and through free medicine dispensing. Over five million COVID assessments and 700000 COVID tests were conducted.



Urban Primary Health Centre (UPHC) in Andhra Pradesh

### Tele-Ophthalmology Program in Andhra Pradesh

Over 115 Community Health Centres were augmented with tele-ophthalmology services through Mukhyamantri e-Eye Kendram (MeEK) across Andhra Pradesh by Apollo TeleHealth. More than 1.9 million lives were touched by performing 1.8 million refraction checks, 1.5 million spectacles delivery and 600000 fundus imaging.



Tele-Ophthalmology (MeEK)

### Jharkhand Digital Dispensaries

Apollo TeleHealth set up Digital Dispensaries across 100 selected primary health centers (PHCs) of Jharkhand State. These PHCs have state-of-the-art equipment for vital signs monitoring, screening programs and ICT devices along with other hospital equipment for the said services. General practitioner and specialist consultations are rendered across selected specialties like, gynecology, pediatrics, dermatology and general medicine at all these centers. Over 640000 tele-consultations have been delivered and 310000 lives have been touched.



Jharkhand Digital Dispensaries

### Tele-Radiology in Uttar Pradesh

Apollo TeleHealth along with the Government of Uttar Pradesh, India implemented Tele- radiology services across 134 Community Health Centres (CHCs) for providing read services for X-Ray, CT and MRI. More than 150000 radiology reports have been delivered till date since inception. The project is targeted to deliver 2400 tele read services on daily basis and cater to a population of 12 million people.



Tele-Radiology Center

### Telemedicine in Uttar Pradesh

Apollo TeleHealth has set up their telemedicine centres across 120 identified community health centres in eastern parts of Uttar Pradesh to bridge the gap of availability of specialists in the state. Services which are available throughout these centres include tele-consultations across 13 selected specialties like general medicine, paediatrics, gynaecology, skin and VD, neurology, nephrology, urology, rehabilitation and physical medicine, oncology and gastroenterology. More than 450000 teleconsultations have been provided till date since inception. The project is targeted to deliver 2000 consultations on daily basis and cater to a population of 10 million people.

### Remote Establishments across India with PSUs

The public sector energy companies in association with Apollo TeleHealth have initiated telehealth services programs in more than 10 locations across India. The program is implemented by deploying latest advancements in Information and Communication Technology (ICT) coupled with trained human resources and advanced diagnostics. Under this program, primary, specialty, super-specialty, and emergency teleconsultations are provided to employees and their family members. Additionally, physiotherapy services with a dedicated physiotherapist have been enabled at the facility. A pharmacy stocking essential medicines and with a licensed pharmacist has been provided to complete the service delivery. With the intent to promote preventive health-seeking behaviour, health profiling

of employees and social health education sessions are organized. Over 5000 teleconsultations and more than 800 emergency patients have been stabilized till date.



Tele health Services Programme established with PSUs

### Remote COVID-19 Management

Apollo TeleHealth has initiated Remote COVID-19 Care Management, which comprises of a 24x7 emergency, tele-ICU, dedicated COVID-19 care and tele-speciality consultation facility. A 24x7 Doc-on-Call facility is also enabled for employees to seek instant doctor support on medical queries. The initiative handled 2000 COVID cases, provided 16000 GP teleconsultations, 1200 specialist teleconsultations and stabilized 90 emergency patients.



Remote COVID-19 Management

# Apollo HomeCare

Apollo HomeCare Highlights

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Service Spectrum for Apollo HomeCare

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# Home Care

Apollo HomeCare with its unique treatment options delivers clinical excellence with compassion and care at the comfort of patients' home. The year 2021 would be remembered as the turning point for home healthcare in India by gaining acceptance as the mainstream healthcare delivery avenue for both COVID and non-COVID patients.

## Highlights for 2021:

The highlight activities for 2021 included the following:

**COVID vaccination** - Apollo HomeCare was the only home healthcare organisation, authorised for COVID vaccination at Hyderabad and Bangalore. Several on-site and off-site vaccination camps were conducted and over 25000 vaccines were administered.



Vaccination camps in the community organised by Apollo HomeCare

**Facilitating the bio-bubble compliance for the Board of Control for Cricket in India (BCCI) matches and events-** Apollo HomeCare was the medical partner for BCCI in Delhi and Kolkata for 16 events.

**Chemotherapy at home-** Given the challenges of lockdown, risks of secondary COVID infection in immunosuppressed oncology patients, home chemotherapy sessions were conducted for patients

in Delhi, Bangalore and Chennai. This ensured continuum of care for high-risk oncology patients within the safety, comfort and convenience of their homes.



Chemotherapy at home

**Blood transfusion at home** – More than 100 blood transfusions at home were performed in the last one year. This was conducted with strict compliance to safety and clinical protocols.



Blood transfusion at home

**Integrated care continuum program-** Two integrated care continuum programs were launched:

- I. 'Follow your heart program' -Cardiac COE – this includes post-heart surgery care at home
- II. 'Back on your toes program' -Orthopedics COE – this includes post joint replacement surgery care at home.

Both these programs are for a two-week duration and are enabled with remote monitoring services. The comprehensive programs facilitate early discharge from the hospital and ensure faster and better post-procedure recovery.



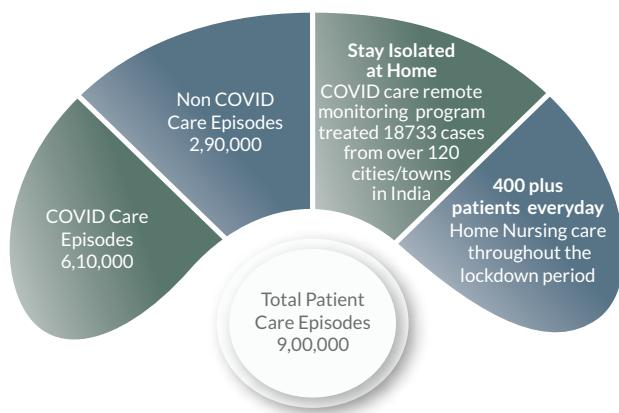
*Eldership kit being explained to the beneficiary*

**Eldership-** This is a subscription program for the elderly. This holistic program aims at healthy ageing. It focuses on senior care needs for clinical care, rehabilitation, emotional and dietary aspects apart from ensuring care coordination and security for the seniors at home.

**"Carenting" ElderCare at Home-** "Carenting" is an eldercare plan uniquely designed to meet the medical, emotional and recreational needs of elders at home. The plan aims at identifying the health risk factors early and taking care of all the health care needs of elders under the guidance of a professional team. The plan includes annual health check-ups, dietitian consultations, physiotherapy, physician visits, dedicated health manager and health coach consultation.

**Stay I at home-** This program called Apollo STAY I @ home is for the mildly positive/asymptomatic COVID patients to be treated at home. The program focussed on the clinical needs, motivational needs and lung rehabilitation of COVID patients under home isolation. A home isolation kit which included thermometer, masks, sanitizer, pulse oximeter, spirometer, gloves and disposable bags were also provided to the patients.

### Summary snapshot:



## Service Spectrum at Apollo HomeCare

### Home Visit Programs

- Visits by home health doctor, nurse and physiotherapist
- Medical Procedures (Minor)
- Investigations
- Vaccinations

### Home Partnership Programs

- Ortho Rehab
- Heart Rehab
- Neuro Rehab
- Lung Rehab
- Mother and Baby Care
- Elderly Care
- Post COVID Rehab
- Carenting
- Stay I at home

2021

Clinical  
Excellence

Information  
Technology

Apollo  
24|7

Apollo  
Telehealth

Apollo  
Home Care

Academics

CSR

Research

Recognition

Consultants'  
Achievements

# Academics

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# Academics

## Apollo Knowledge

In order to keep pace with the rapid innovation and use of technology, it is important for learning and training institutions in healthcare to dismantle silos and embrace a modern, collaborative, and integrated approach to medical education, training, and talent acquisition. This approach has been the cornerstone of the Apollo Hospitals.

### Vision of Apollo Knowledge

To enable a global learning ecosystem that helps develop human resource skills to create an empowered healthcare system for a healthier world.

### Core Values

- Academic excellence
- Collaboration
- Research and innovation
- Social responsibility
- Inclusion and diversity

### Apollo Knowledge Canvas

Right from its inception, the Apollo Hospitals Group has made effective outlays in medical education and research with an aim to create a large pool of

dedicated medical professionals to serve humanity.

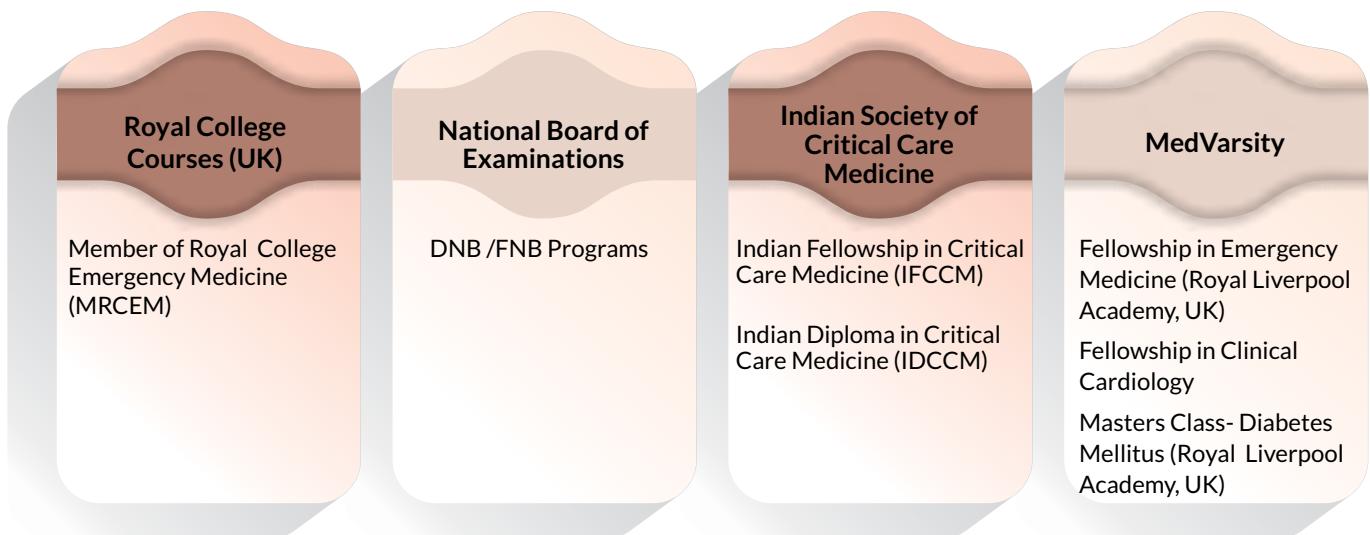
The Group endeavours to give learners unparalleled learning experience through mentorship, hands-on experience and pedagogical excellence. Through its efforts, the group nurtures a new generation of healthcare leaders who are inspired to alleviate human health concerns through innovation, compassion, and care.

### Institutes

An education focus that is shaping healthcare human capital:

- 1) Apollo Hospital Based Training Programmes (DNB)
- 2) Apollo Medvarsity
- 3) Apollo MedSkills
- 4) Apollo Institute of Medical Sciences and Research (Hyderabad and Chittoor)
- 5) Apollo Education UK (AEUK) and Apollo Buckingham Health Sciences Campus UK.
- 6) The Apollo University
- 7) Apollo College of Nursing, Physiotherapy and Hospital Management

## Post Graduate Medical Education in Apollo Hospitals



### DNB/DrNB/FNB Programs

Apollo Hospitals conducts the largest Diplomate of National Board (DNB), Doctorate of National Board (DrNB) and Fellowship of National Board (FNB) programmes in the country. These programmes are run under the aegis of the National Board of Examinations in Medical Sciences (NBEMS). As of 31st December 2021 Apollo Hospitals has trained 920 candidates in 18 locations across the country. In 2020 there was a total of 612 seats across the Group which increased to 619 seats in 2021. The target is to increase the number of specialities/ seats by one-third every year for the next three years.

The NBEMS has accredited Apollo Hospitals for training and examinations in total 49 specialties.

Currently, Apollo Hospitals has 16 Broad Specialities, 21 Super Specialties and 8 Postdoctoral fellowships (FNB) and 4 Diploma Programmes.

The National Board of Examinations in Medical Science (NBEMS) has granted accreditation to the

following DNB/FNB programs at different locations of Apollo Hospitals:

Broad Specialities	
1.	Anaesthesiology
2.	General Medicine
3.	General Surgery
4.	Nuclear Medicine
5.	Immunohematology and Transfusion Medicine
6.	Obstetrics and Gynaecology
7.	Orthopedics
8.	ENT
9.	Pathology
10.	Radio Diagnosis
11.	Radiotherapy
12.	Respiratory Diseases
13.	Emergency Medicine
14.	Family Medicine
15.	Pediatrics
16.	Microbiology

<b>Fellowships (FNB)</b>	
1.	Minimal Access Surgery
2.	Paediatric Haemato oncology
3.	Infectious Diseases
4.	Interventional Cardiology
5.	Paediatric Gastroenterology
6.	Liver Transplantation
7.	Arthroplasty
8.	Cross Sectional and Body Imaging Programme

<b>Super Specialties</b>	
1.	Cardio-Thoracic Surgery
2.	Cardio-Thoracic Surgery (Direct 6 Years Course)
3.	Cardiology
4.	Endocrinology
5.	Gastroenterology
6.	Genito Urinary Surgery (Urology)
7.	Medical Oncology
8.	Nephrology
9.	Neuro Surgery
10.	Neuro Surgery (Direct 6 Years Course)
11.	Neurology
12.	Vascular Surgery
13.	Paediatric Surgery
14.	Plastic Surgery
15.	Plastic Surgery (Direct 6 yrs course)
16.	Rheumatology
17.	Surgical Gastroenterology
18.	Surgical Oncology
19.	Cardiac Anaesthesia
20.	Paediatric Cardiology
21.	Neuro Anaesthesia and Critical Care

New Courses (DNB/DrNB/FNB) proposed to NBEMS for 2022:

<b>Courses (DNB/DrNB/FNB)</b>	
1.	Anaesthesiology for Minimal Access
2.	Paediatric Urology
3.	Fetal Medicine
4.	Molecular Biology
5.	Clinical Immunology
6.	Disaster Management
7.	Geriatrics
8.	Spine Surgery combined Neurology and Orthopaedic

<b>NBEMS Diploma courses</b>	
1.	Diploma in Paediatrics
2.	Diploma in Radio Diagnosis
3.	Diploma in Anaesthesiology
4.	Diploma in Tuberculosis and Chest Disease

Apollo Hospitals has started the following NBEMS Diploma Courses

	<b>NBEMS Diploma courses</b>	<b>Locations</b>
1.	Diploma in Paediatrics	Lucknow
2.	Diploma in Radio Diagnosis	Lucknow and Kolkata
3.	Diploma in Anaesthesiology	Lucknow
4.	Diploma in Tuberculosis and Chest Disease	Kolkata

## **Apollo Clinical Knowledge Network (ACKN)**

### **Apollo Clinical Knowledge Network (ACKN) - I**

ACKN has been instituted in order to create a knowledge center for an academic exchange across different Apollo Hospitals. Weekly clinical meetings are conducted for Consultants, DNB and Junior Medical Staff across the Group. Medvarsity serves as the connectivity engine for ACKN.

The various locations of Apollo Hospitals Groups connect every week and consultants from across the Group become a part of clinical knowledge enhancement. The clinical presentations are made by consultants from individual Apollo Hospitals locations and are transmitted live across the Apollo

Hospitals.

The DNB/FNB Academic Coordinators of each unit are the single points of contact. To build a culture of multi-disciplinary clinical deliberations, these clinical meetings are organized with each of the NBE approved hospitals on rotational basis.

ACKN was conceptualised to boost up academics and knowledge sharing culture at Apollo Hospitals. The aim is to connect all units of Apollo Hospitals and enable clinical knowledge enhancement. The case deliberations recorded by Medvarsity are made available 24X7 to any clinical staff who might have missed the session.

In the academic year, 2021 a total of 47 presentations were organised at 16 locations.

Following is the list of Clinical Presentations which were held in 2021

<b>Apollo Hospitals Locations</b>	<b>Topics</b>
Mysore	Right lower lobe lung mass
Guwahati	Cytokine storm in pre-term babies born to COVID-19 infected mothers
Pune	An interesting case of post COVID complication
Pune	An interesting case of fever with rash
Vizag	Management of periampullary carcinoma with failed ERCP
Bangalore	Management of post Whipple's bleeder from portal vein pseudoaneurysm in an elderly male
Bilaspur	An unusual presentation of a case of a bullet injury in abdomen with neurological deficit
Kolkata	COVID-19 and stroke- causal or incidental
Ahmedabad	A case of mucormycosis and amphotericin b toxicity in post covid era
Bhubaneswar	PEDICEL screw in- section: technique and salvage
Vizag	Recent advances in joint preservation techniques: Case reports
Bangalore	Acute stroke intervention, an interesting case
Bilaspur	Bentall procedure on a "COVID-19" suspect
Madurai	Physiological and psychological fusses levied by personal protective equipment and their alleviation strategies
Bangalore	Acute stroke intervention, an interesting case
Bilaspur	Bentall procedure on a "COVID-19" suspect

Madurai	Physiological and psychological fuses levied by personal protective equipment and their alleviation strategies
Mysore	A difficult journey: Tricuspid endocarditis in 17 Years old ESRD
Guwahati	Fungal infections in the brain
Mumbai	Therapeutic coil embolisation to aid liver transplantation in type II Hepatopulmonary syndrome with severe hypoxemia
Pune	COVID-19 presentation in children in current pandemic due to mutant virus
Hyderabad	The post-COVID state - The battle continues
Chennai	Clinical Dilemmas in COVID-19 effected Pregnancies
Delhi	Robotic surgery in lingual hemangioma
Kolkata	Precision Oncology with 360-degree approach
Ahmedabad	COVID-19 is associated with mucormycosis-our management protocol
Bhubaneswar	Bi-RADS for mammography and sonomammography
Vizag	Cytoreductive surgery and HIPEC
Bangalore	Neurological complications in COVID-19 - a review
Bilaspur	A rare clinical presentation of ectopic pregnancy
Madurai	Strangulated inguinal hernia
Mysore	COVID-19 and cardiovascular disease
Guwahati	A case of bioresorbable vascular scaffold in high bleeding risk patient
Mumbai	Management of pericardial effusion, "Thinking beyond tuberculosis"
Hyderabad	Management of brachial plexus injuries
Chennai	Surgery in post COVID lung
Delhi	Fertility Preservation - What clinicians should know
Kolkata	Skin lesions in hematological malignancy - how dermatology can save the life of the patient
Ahmedabad	Autoimmune liver cirrhosis with overlap syndrome, ulcerative colitis and sclerosing cholangitis in a young boy; a rare entity
Bhubaneswar	Stereotactic radiosurgery/ Stereotactic radiotherapy an overview
Vizag	All about prone ventilation in COVID-19
Bangalore	<ul style="list-style-type: none"> <li>• Role of HIPEC in ovarian cancer</li> <li>• Case of growing teratoma syndrome</li> <li>• A case of recurrent papillary carcinoma thyroid post-surgery &amp; radioiodine therapy</li> <li>• A rare retroperitoneal mass in a 50-year-old male</li> </ul>
Bilaspur	A case of jaw swelling in an infant
Madurai	A case of post COVID multiple ischaemic strictures in the ileum
Mysore	A case of carcinoma of the fallopian tube
Guwahati	COVID-19 related multisystem inflammatory syndrome in adults (Mis-A)
Mumbai	A rare case of malignant hyperthermia - a challenge to an anesthetist

Pune	Variable presentation of dengue fever in children
Seshadripuram	Severe amlodipine toxicity - a case rescued with extracorporeal membrane
Jayanagar	Neurological disorders associated with COVID-19

## Apollo Clinical Knowledge Network (ACKN) - II

ACKN creates an academic exchange not just for the medical teams but also for the Physiotherapy, Dietetics and the Nursing teams across Apollo Hospitals. Every Tuesday, the respective disciplines and teams across Apollo Hospitals collaborate for knowledge sharing.

Following is the number of sessions conducted for each discipline in 2021

Monthly Schedule	Discipline	Number of sessions conducted
1 <sup>st</sup> Tuesday	Physiotherapy	17
2 <sup>nd</sup> Tuesday	DNB-Non-Clinical aspect	19
3 <sup>rd</sup> Tuesday	Nutrition	24
4 <sup>th</sup> Tuesday	Nursing	16

## Learning Management System (LMS)

Learning Management System (LMS) is aimed at developing teaching and training modules for JMS and DNB trainees. In the year 2021, over 73 modules from 18 Apollo Hospitals locations have been recorded.

## Medvarsity Online

Medvarsity Online is Asia's largest healthcare Ed-Tech company, with over 5 lakh medical professionals trained and certified. More than 200 clinical and management courses are offered for doctors, nurses and general management personnel are offered. These courses cover specialties such as diabetes mellitus, emergency medicine, cardiology, critical

care medicine, pediatric, internal medicine, gynecology, nutrition, wellness, healthcare informatics, digital health, mental health, healthcare accreditation, healthcare and hospital management and telemedicine. The clinical courses are exclusively designed by doctors, for doctors, whereas the non-clinical courses are designed by industry experts. Medvarsity's partnerships with leading universities across the globe enables it to present the best courses and faculty to the students. Medvarsity's core philosophy, 'knowledge changes lives', guides its team of 300 that includes doctors, management professionals, designers, storytellers and technologists.

## Partnerships, initiatives and impact created by Medvarsity in 2021

1. Medvarsity, has trained and certified 25,000 medical practitioners, launched 38 new clinical and non-clinical courses and achieved a 150% growth year-on-year (YOY) in 2021.
2. Clinical training partnerships were launched with the NM Wadia Institute of Cardiology, Chandan Hospital, Krishna Institute of Medical Sciences, Sreechand Hospital, Believers Church Medical Hospital and Cloudnine Hospitals. These strategic partnerships were designed to create value for Medvarsity learners in the specialized area of healthcare.
3. Curated simulation-based programs in embryology and reproductive medicine in association with Apollo Fertility to offer Fellowship in Reproductive Medicine and Fellowship in Embryology.
4. In order to foray into the oral care segment, Medvarsity developed the Fellowship in Endodontics

course in association with Apollo White. The course pedagogy ensures comprehensive topic coverage while also providing observership and hands-on opportunities. Medvarsity also partnered with Clove Dental for a one-month comprehensive contact program which included simulations for endodontic procedures and hands-on experience for root canal procedures.

5. The CPD Standards Office, UK has accredited and awarded Continuing Professional Development (CPD) credits to ten Medvarsity courses.

6. The Indian Nursing Council has awarded three CNE Credits each for six of Medvarsity's nursing courses.

#### 7. Academic Partnerships:

- The Indian Association of Physiotherapists has accredited rehabilitation courses - Fellowship in Cardiac Rehabilitation and Fellowship in Neurological Rehabilitation
- The Indian Association of Clinical Cardiologists has accredited Cardiology courses- Certificate in Essentials of Cardiology, and Advanced Certificate in Clinical Cardiology
- The Indian Society of Hypertension has accredited the Certificate course in Hypertension Management
- The College of Critical Care has come on board as an accreditation partner for the Fellowship in Critical Care Medicine

8. Through ANGEL, and in association with Microsoft and ImpactGuru, Medvarsity offers free professional courses for nurses, on subjects like COVID Clinical Management, COVID ICU Care, Ventilator Training and more. This initiative has been undertaken as a token of gratitude for its role in the fight against the pandemic. These professional courses upskill and empower nurses to further their contributions toward healthcare and improving human life. This initiative aims at training 100

thousand nurses across India over a period of five years.

9. Medvarsity launched HealthJobs.One, India's first-ever online job, career and community platform dedicated to healthcare professionals, and the healthcare industry where aspirants can search for jobs with focus and ease. Healthcare companies too can recruit the best talents from across the healthcare industry, and connect with the healthcare community.

10. Medvarsity launched BookMySim, the world's first-ever online platform to aggregate medical simulations and training workshops for healthcare professionals. The platform hosts advanced simulation training programs such as coronary angioplasty and laparoscopic surgeries. Intermediate and basic simulation-based training programs such as basic life support and ultrasound techniques are also a part of the curriculum.

11. Academic collaboration was formed with leading healthcare organizations such as Boston Scientific, Philips, Skanary, Laerdal, Next ICU, Panimalar, GSL Medical College and DY Patil. Through these partnerships, the available expertise and resource material shall power more than 100 simulation training sessions spread across 18 cities in India.

### Medvarsity courses launched in 2021

Over 38 clinical and non-clinical courses were launched:

FELLOWSHIP COURSES
Fellowship in Clinical Nutrition
Fellowship in Cardiac Rehab Edition II
Fellowship in Neuro Rehab Edition II
Fellowship in Critical Care Medicine Edition II
Fellowship in Pulmonology
Fellowship in Orthopaedic Rehabilitation - Edition II
Fellowship in Internal Medicine
Fellowship in Gastroenterology
Fellowship in Sports Rehab - Edition II
Fellowship in Diabetes Mellitus - Edition II

<b>ADVANCED CERTIFICATE COURSES</b>
Advanced Certificate Course in Pulmonology
Advanced Certificate in COVID 19 and Critical Care Essentials
Advanced Certificate Course in NABH Edition II
Advanced Certificate Course in Critical Care Medicine Edition II
Advanced Certificate Course in Gastroenterology
Advanced Certificate Course in Infection Prevention Control Edition II
Advance Certificate in Cardiopulmonary Physiotherapy
Advance Certificate in Diabetes Mellitus - Edition II
Advanced Certificate in Neonatal Critical Care
Advanced Certificate in Cancer and Palliative Care Nursing - Edition II
Advanced Certificate in Internal Medicine

<b>CERTIFICATE COURSES</b>
Certificate Course in Critical Care Medicine Edition II
Certificate Course in Gastroenterology
Certificate Course in Pulmonology
Certificate Course in Infection Prevention Control Edition II
Americares
R-ITI
Anaesthesia (e-LA)
Training in plastic, reconstructive and aesthetic surgery (e-LPRAS)
Dermatology (e-Derm)
Diabetes Care: Care of people with Metabolic Problems
Electronic Fetal Monitoring (eFM)
Ophthalmology (Eye-Site)
Certificate in Cardiopulmonary Physiotherapy
Certificate Course in Nephrology
Certificate in Diabetes Mellitus - Edition II
Certificate Course in Clinical Insulin Management
Certificate in Internal Medicine

## Achievements in 2021

1. Medvarsity saw an increase of 150% in student enrolment numbers year on year (YOY).
2. Over 1.5 million healthcare professionals visited medvarsity.com to explore healthcare courses of their choice.
3. Medvarsity crossed 2.8 million views and 65,700 watch hours with 10,000 subscribers on their YouTube channel that exhibits video content on the value proposition of the courses, expert advice on a wide variety of topics for medical students, healthcare professionals as well as general public, student and alumni testimonials and the latest news and updates on healthcare and medical education.

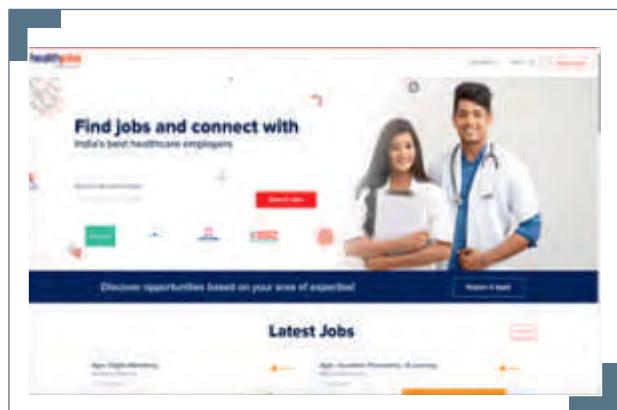
Medvarsity organized 220 live webinars and case discussions were attended by 16,500 healthcare professionals. Industry experts and key opinion leaders from the field of cardiology, digital health, oncology, healthcare quality, digital pathology, family medicine, critical care medicine and nutrition interacted with the audience.

## Apollo MedSkills Limited

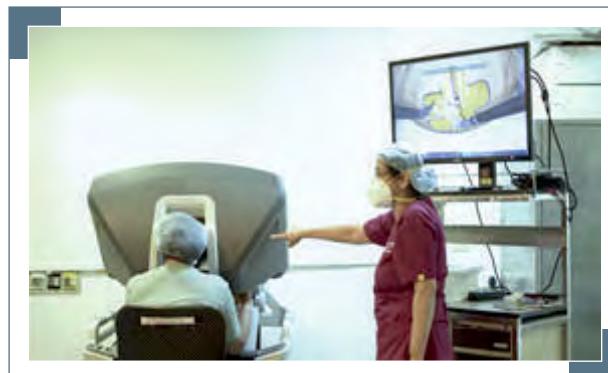
Healthcare has become one of India's largest sectors, both in terms of revenue and employment. Currently, the healthcare sector is in dire need of about 1.7 million skilled professionals so as to equalize the supply and demand chain. To reduce the skill gap by conducting skilling courses that are prevalent in the country, the National Skill Development Corporation (NSDC), the Government of India, formed a partnership with Apollo Hospitals Group to promote healthcare skilling through Apollo MedSkills. Established in 2012, Apollo MedSkills aims to provide the competent workforce for the global healthcare industry.



BookMySim (Website)



HealthJobs (Website)



Simulation on Robotic Hysterectomy

## Milestones

- 2.6 lakh students trained as healthcare workforce
- 21 active centres
- Operations footprint across the length and breadth of India
- Project Implementing Partner for various initiatives
- Skilling the un-employed and school-drop out youth for lifelong employability
- Up-skilling nurses to achieve improved patient care
- Executive Programmes in Hospital and

Healthcare Management are conducted to meet the demand due to the rise in healthcare facilities

Due to the COVID-19 pandemic, awareness about the health issues has taken the centre stage reinforcing the need for a skilled workforce in the healthcare sector. Advances in medicine and new technologies have mandated the healthcare industry and the workforce to quickly adapt and meet the evolving needs.

Apollo MedSkills was engaged by various government agencies such as health ministries, state governments, corporates and academic institutions as their healthcare project implementing partner. Through this association, MedSkills facilitated continuous mobility of skilled and industry-relevant resources.

## Projects initiated in 2021

### DAWA SEWA - Indian Railways and Apollo Collaboration

Spread over 5 years, this project is for execution in three phases. It aims to provide clinical and medical services and the project scope includes upskilling, franchising of diagnostics, pharmacy and clinical consultations.

- Phase I focuses on the Anand Vihar railway station situated in Delhi
- Phase II focuses on Nizamuddin (Delhi), CST (Mumbai), Secunderabad (Hyderabad) and Guwahati (Assam) along with five other key railway stations
- Phase III focuses on the rest of the key railway platforms in India



Dawa Sewa Project

### Centre of Excellence (COE) in Paramedical and Allied Healthcare Sciences: Delhi Skills and Entrepreneurship University (DSEU)

DSEU selected Apollo MedSkills Limited as their Healthcare Industry partner for the next 10 years.

Under this PPP model, Apollo MedSkills would undertake the following:

- Operate the COE in the Okhla center at Delhi

- Institutionalize and independently operate the COE for Paramedical and Allied Healthcare Sciences under the overall guidance and supervision of DSEU. This would be in accordance with relevant laws, regulations, ordinances and statutes.

- Deliver two-year master's and three-year graduate programmes

#### *Key highlights of the collaboration*

- The COE would be a showcase for international delegations/ministers.

- High-value /high-impact project to cater to international academic programmes.

### Skill Impact Bond

The Skill Impact Bond is a collaborative effort of NSDC, prominent global organisations and premium donors who share a collective vision of enhanced learning outcomes through skill development. Under this CSR partnership, the project aims to target and impact 50,000 candidates.

Apollo MedSkills has been allocated to serve 1/5th of the targeted candidates. Apollo MedSkills, through the Skill Impact Bond would hence:

- Impact 10,000 young people in India over 4 years
- Offer the following courses:
  - Geriatric Aide
  - Retail Sales Associate - Pharmacy
  - Home Health Aide
  - Hospital Operations Executive
- Ensure that 70% of the allocated candidates include women and girls and the course impacts them by securing their livelihoods.

### Placement Linked Healthcare Skilling Partnerships

Apollo MedSkills was engaged by the Ministry of Rural Development (MoRD) – DDU-GKY, National

Skill Development Corporation (NSDC), National Backward Classes Finance and Development Corporation, National Scheduled Castes Finance and Development Corporation in the capacity of Healthcare Skills Training Partner.

More than 2850 beneficiaries across the states of Uttar Pradesh, Haryana, Uttarakhand, Jammu and Kashmir, Telangana, Tripura, Tamil Nadu, Andhra Pradesh and Madhya Pradesh are receiving classroom/virtual training through world-class simulation labs and on-job training in hospitals, clinics, diagnostics and pharmacies.

These trainings include courses for General Duty Assistants, Home Health Aides, Phlebotomy Technicians, Geriatric Aide, Medical Lab Technicians and Pharmacy Assistants and communication and computer skills trainings for all courses. The assessment process is conducted by the industry council once the students complete the trainings. Certificates are issued to students on successful completion of the course. Providing job opportunities and employment is the most essential part of the program.

Placement linked healthcare skilling has high impact for both beneficiaries and their families by uplifting their academic, livelihood, social, and economic fronts through:

- Continuing education
- Acquiring life-long skills
- Employment assured skills securing livelihoods
- More workforce added to the frontline in the sector
- Improvement in delivery of patient-care
- Huge scope for career building and career progression in the sector
- Awareness and exposure to the wide-range employment opportunities in the healthcare industry

Thousands of Apollo MedSkills alumni are now frontline healthcare workers, nurse assistants, home-care assistants, lab technicians, emergency medical technicians, geriatric-care assistants, phlebotomy technicians, pharmacy assistants, support executives, hospital operations executives. They were associated with COVID-19 wards of over 120 health facilities including corporate hospitals, government notified COVID centers, clinics and diagnostics across India.

Example of students having achieved placement



*Battula Aadarsh, a native of Hyderabad, placed as Emergency Medical Technician*



*Meena Kumari and Kiran native of Delhi, placed as "Covid Warrior" Home Care Assistant*



*Raviteja, a native of Telangana, placed as General Duty Assistant*

## CSR Partnerships

There was a purposeful effort to accelerate healthcare services delivery by corporates from diverse sectors. The following corporates engaged with Apollo MedSkills as their healthcare partner to enable and channel their philanthropic and CSR initiatives in healthcare:

- Indian Oil Corporation Limited
- BMW
- NSDC-Ingersoll Rand
- BOSCH
- RPG Foundation
- Google and Siemens

Over 23,500 aspiring youth and women across India coming from diverse financial, economic, geographical, academic and social backgrounds were included in the ongoing healthcare training programmes under their CSR initiatives. More than 50% of the target beneficiaries have completed training and working in the COVID wards, hospitals, emergency wards, clinics, diagnostic centers, as geriatric-aides, home health assistants and general duty assistants.

## Building Management Professionals for Healthcare

Apollo MedSkills provides up-skilling and management-oriented programmes as per industry needs and standards. The programmes are run in collaboration with India's top-ranked universities-IIM Lucknow, University of Hyderabad and are available for graduates, doctors, critical care nurses through Executive Education Programmes, Diploma Programmes and Advanced Certificate Programmes. Those who pursue and complete these programmes obtain credit points that are useful for lateral entry for higher studies in universities across the globe. Two batches of around 100 students have successfully completed their programmes.



## Apollo Institute of Medical Sciences and Research (AIMSR)

The Apollo Institute of Medical Sciences and Research (AIMSR), has established itself as a medical college of national and global repute. The medical college is established at both Hyderabad and Chittoor, in the Andhra Pradesh/ Telangana region.

The Apollo Medical College, Hyderabad, is spread across ten acres of the Apollo Health City. The academic and research centers, administrative blocks and the 300-bedded teaching hospital, occupy nearly 250,000 square feet of the Apollo Medical College Campus.

## Academics

### Convocation ceremony

The convocation ceremony for the batches of 2014 and 2015, was graced by Chairman, Dr Pratap C Reddy, Dr Sangita Reddy, Joint Managing Director, Apollo Hospitals, Dr B Karunakar Reddy, Hon'ble Vice-Chancellor, Kaloji Narayana Rao University of Health Sciences, Warangal, Telangana and Dr Vijay Dixit, Chief Cardio-Thoracic Surgeon, Apollo Hospitals, Jubilee Hills, Hyderabad

Dr Prathap C Reddy Gold Medal was awarded to the best outgoing students for consistent academic excellence. Overall, 39 gold medals and 10 silver medals were awarded.



Graduation Ceremony- MBBS Class of 2014



Graduation Ceremony- MBBS Class of 2015

## Student Progress

Since the year 2012, over 900 students have gained admission to AIMSRI. Five batches of students have completed their compulsory rotator residential internship. Over 70% of AIMSRI graduates have been accepted and enrolled for various post-graduate programs both nationally and internationally.

The 2016 batch, final MBBS part-II secured a pass percentage of 99%, with 3 distinctions, and over 50 students obtaining a first-class.

During the year 2021, AIMSRI obtained approval for increasing the number of MBBS seats from the NMC and the Kaloji Narayana Rao (KNR) Universities. The number of MBBS seats has thus increased to 150 from 100, with the first batch of 150 students joining in March 2022.

## College Events and Activities

The following were the significant activities and events in 2021:

- The Rotaract Club of Apollo Medical College was established.
- Three editions of the College News Letter "Eunoia" were released in January, July and October 2021.

- The renovated and spacious Skill Lab was inaugurated.

## Faculty Achievements and Activities

Faculty Training Programs were conducted through webinars, workshops and in-person sessions conducted in the college.

The National Science Day CME was organized on 26th February 2021 with Chief Guest Dr G Bhanu Prakash Reddy Scientist 'G' and Head, Biochemistry, NIN Hyderabad, and Dr Giriraj Ratan Chandak, Chief Scientist, CCMB, Hyderabad



National Science Day 2021

The faculty members participated in over 19 conferences, presented 29 posters and 4 papers. They were invited as guest speakers in 12 conferences.

The faculty received nine national and state society awards and four state appointments. Seven of the faculty members were invited as examiners to other universities.

## Collaborations

Collaborations were formed with CANSEARCH Foundation, University of Geneva, Switzerland; JIPMER, Puducherry and AIIMS, New Delhi. This

collaboration is under the Indo-Swiss Collaborative Research Grant Call (ISJRP-2020), Department of Biotechnology, New Delhi.

## Research and Publications

In the year 2021, over ten Research and Ethics Committee meetings were conducted, where 71 research proposals were approved. This included the 34 thesis proposals from the post-graduate students.

Out of the 54 faculty publications during 2021, over two-thirds were indexed in Pubmed or Scopus.

## Hospital Activities in 2021

- AIMS General Hospital successfully underwent NABH assessment
- The Physical Medicine and Rehabilitation (PMR) Department was inaugurated at the teaching hospital.
- COVID vaccination was initiated with 100% vaccination achieved in the employees.
- The Apollo ART Centre HIV clinic, founded in 2018 through public-private partnership treated had over 60 patients receiving ART medication free of cost.
- TB Clinic was established with the hospital becoming a designated microscopy centre. Sputum AFB testing is done free of cost and medication issued as per the NTEP guidelines.
- Outreach Clinics have been initiated and are conducted daily at Shamshabad for specialties like general medicine, general surgery, pediatrics, obstetrics and gynaecology and orthopaedics.



AIMSR General Hospital at the launch of the new Outreach Clinic at Shamshabad

- COVID care was successfully conducted for more than 500 patients. Post discharge, patients were followed up in the care clinics.
- Six major operation theatres were refurbished with high end equipment and state-of-art technology.

## Apollo Medical College, Chittoor

Apollo Medical College, Chittoor is developed across 108-acre campus with ultra-modern teaching facilities. Started in 2016 with 150 admissions, there are currently 750 students studying in the campus. The campus also provides for para clinical departments, nursing college and physiotherapy college.

The 850 bedded Chittoor Government District Hospital is managed by Apollo Medical College, Chittoor as per the MOU with Government of Andhra Pradesh. The District Government Hospital has been upgraded as the Teaching Hospital of Apollo Medical College, Chittoor

The new upgraded hospital has state-of- art facilities with ICU's, casualty, laboratories of international standards for students to get hands on experience. The hospital covers over 21 disciplines of medical and surgical specialties.



*Upgradation of facilities at District Hospital*

## Apollo Buckingham Health Sciences Campus (ABHSC) Crewe, United Kingdom

MMU Cheshire Campus has been converted into a Medical School, which would help in retaining the campus for academic activities. Campus acquired by Apollo and branded as Apollo Buckingham Health Sciences Campus

The following are the details:

- Joint Venture between Apollo Education UK (AEUK) and University of Buckingham
- MBBS, Bio Sciences courses commenced
- Podiatry and Nutritional Science courses planned
- Under the aegis of Apollo Hospitals, courses and training programmes are being planned and developed at ABHSC to support the NHS in meeting the acute workforce shortages
  - Nurses and Paramedical workforce
  - GP's and Specialists
  - Radiologists (through programme with Royal College of Radiologists)
  - Emergency Physicians (through programme with Royal College of Emergency Medicine)



## **The Apollo University**

The Apollo University aims to advance the frontiers of knowledge and transform the lives of Indians by investing in education, research, technology and community engagement. By encouraging learning and teaching, discovery and innovation, technology and collaboration, we will become a destination for thinkers, leaders, academics and caregivers. The Apollo University offers courses in medical sciences and cutting-edge technology and sets its curriculum in partnership with leading educational institutions across the world.

The Apollo University has commenced its first academic batch in the year 2021 with UG and PG courses.

**The following are the list of courses:**

School of Health Sciences

B. Sc. Physician Assistant

B. Sc Medical Lab Technology

B. Sc Imaging Technology

B. Sc Anesthesiology and Operation Technology

B. Sc Renal Dialysis Technology

B. Sc Respiratory Technology

B. Sc. Emergency and Medical Technology

B. Sc. Optometry Technology

B. Sc. Biomedical Sciences

B.Sc. Health Psychology

B.Sc Genetics and Molecular Biology

M.Sc. Clinical Psychology

Masters in Public Health

School of Technology

B.Tech Computer Science and Engineering

M.Sc Health Informatics and Analytics

School of Management

BBA - Bachelor of Business Administration

MBA Hospital and Healthcare Management

School of Social Sciences

Bachelor of Social Work

Master of Social Work

2021

Clinical  
Excellence

Information  
Technology

Apollo  
24|7

Apollo  
Telehealth

Apollo  
Home Care

Academics

CSR

Research

Recognition

Consultants'  
Achievements

# Corporate Social Responsibility (CSR)

Billion Hearts Beating Foundation

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Apollo Total Health

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# Corporate Social Responsibility (CSR)

## The Billion Hearts Beating Foundation (BHB)

The Billion Hearts Beating Foundation is a not-for-profit organization founded in 2010 by Apollo Hospitals. This foundation serves the healthcare needs of citizens, who may not have access to quality care, medicines and medical knowledge.

### Mission

The mission of the Billion Hearts Beating Foundation is to work towards creating a better India, where basic preventive healthcare is available to all. It aims to touch a billion lives through access to free preventive healthcare.

### Presence

The Billion Hearts Beating Foundation operates in eight states, supporting 151 senior care homes, two emergency clinics, and two day-care clinics across India, serving more than one lakh people every year.

### Health Projects

The focus is on preserving life and rendering the best possible quality of life through medical care.

#### A. Project Aushad

Project Aushad enables the elderly to live with dignity by:

- Providing senior care homes with personalized monthly medication

- Equipping senior care homes with basic healthcare amenities
- Providing nutritious dry rations monthly
- Supplying hygiene kits

*Impact:* Over 55,000 elders have benefitted in 2021 in 151 senior care homes



Project Aushad for Senior Care Homes

## B. Project Prashikshan

Institutes that serve the public are offered courses around basic life support (BLS) for their employees/ members so that they become better 'First Responders'. Project Prashikshan bolsters the work of those in public service through the following:

- Offline sessions on basic life support (BLS) training include first aid and cardiopulmonary resuscitation (CPR) for emergency response. These skills are imparted to National Cadets Corps (NCC), state police, and other frontline warriors
- Online sessions on BLS training are provided to support organizations and communities that cannot access them offline

*Impact:* Over 1,500 people have been trained in 2021 across India



Offline Sessions on Basic Life Support

## C. Project Suraksha

Organizations that work towards humanitarian causes are offered free periodic health camps to assess and review residents' health. Project Suraksha provides essential medical relief through:

- Health camps that cover preventive health checks
- Community day-care centres that offer nutritious food, medical treatment and medicines to people from surrounding areas
- Emergency care centres at places of public importance and high traffic to provide immediate critical care
- COVID-19 relief equipment and critical medical supplies (ventilators, ECHO machines, oxygen cylinders) in isolation centres

*Impact:* Over 3,000 senior citizens benefitted from more than 170 health camps that were conducted. About 10,000 individuals benefitted from the supply of COVID-19 relief items in 2021.



Distribution of COVID-19 Relief Equipment and Critical Medical Supplies



*Project Aushad for Senior Care Homes*

## 1. Project Suraksha: COVID-19 preparedness, protection, prevention

Preparedness and response to COVID-19 were undertaken through the following initiatives:

- COVID-19 isolation wards were set up at Chennai, Kolkata, Lucknow and Bengaluru. Over 863 items (including ventilators, oxygen cylinders, ECHO machines) were supplied at these centers
- COVID relief items (reusable masks, gloves, disinfectants) were distributed in senior care homes
- COVID relief items were supplied to partner NGOs for distribution

*Impact:* 2,500 patients benefited from the COVID-19 isolation wards in 2021



*Project Aushad for Senior Care Homes*

## 2. Project Suraksha: Free clinics

The aim of this initiative is to provide care, first aid, and emergency medical treatment free of cost in areas where the clinics are situated.

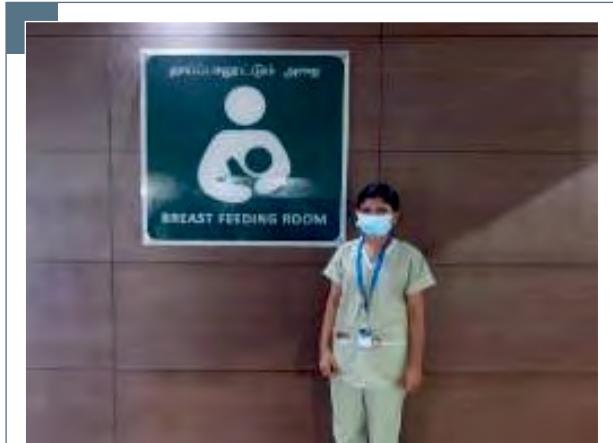
### - *Tirumala Tirupati Devasthanams (TTD), Andhra Pradesh - 24/7 Emergency Cardiac Centre*

This high-traffic zone often sees medical emergencies from pilgrims who are unaware of their medical conditions before they embark upon their journey. The services include:

- Free 24/7 emergency cardiac centre services
- Stabilization of emergency patients and shift to hospital of choice
- Provision of all lifesaving equipment free of cost

- Availability of fully equipped ambulance for shifting critical patients

*Impact:* An average of 50 critical patients are treated every month.



- **Koyambedu CMBT, Chennai, Tamil Nadu - 24/7 Emergency Clinic**

This high-traffic zone often sees medical emergencies from individuals in transit. The services include:

- Free 24/7 emergency facility
- Provision of first aid and emergency treatment to patients transiting from the bus terminus, Chennai Metro Rail, Koyambedu market and the neighbourhood

- Provision of emergency medicines free of cost

*Impact:* An average of 1,000 patients are treated every month



- **Koyambedu CMBT, Chennai, Tamil Nadu - Breastfeeding Room**

Women can access this safe space in the busy bus service station. The services include:

- Free women-only 24/7 facility
- Cubicles with comfortable chairs designed for mothers to breastfeed their infants
- Changing table and washing point
- Help with milk extraction if necessary
- Knowledge of breastfeeding imparted

*Impact:* An average of 50 women breastfeed in this space every month

- **Tambaram and Vanagaram, Chennai, Tamil Nadu, Day-care Clinics**

The aim was to target people living in the mofussil areas on the outskirts of Chennai, without ready access to healthcare. The services include:

- Free day-care facilities

- Diagnoses and treatment for acute and chronic health conditions, including medications, lab testing, and case management
- Patients are provided with a nutritious lunch

*Impact:* An average of 1,000 patients benefits every month



## Milestones

- On the occasion of World Senior Citizen Day 2021, BHB extended its support to 21 new old age homes
- Project Aushad touched a new milestone of reaching out to 151 senior citizen homes in 8 states across India
- BHB organized health check camps and provided follow-up medication free of cost for all senior

citizens residing in senior care homes

- BHB gave every home a first aid kit stocked with essential supplies
- BHB distributed over 700 hygiene kits to the senior residents of its associated senior care homes



World senior Citizen Day Celebrations

## Supply of Ration Kits

- BHB celebrated National Nutrition Week to raise awareness about the importance of good nutrition and health
- BHB extended its support by supplying ration kits to the senior residents





*Distribution of Ration Kits*

### **Founder's Day Celebration**

BHB Foundation distributed donation boxes that included clothes and dry ration for the needy through various Apollo Hospitals to commemorate Founders' Day.

### **Total Health Project**

India's healthcare has been characterized by deep contrasts, and its systems are widely disparate from region to region. Bridging this chasm is imperative for a healthier nation.

In 2013, Chairman, Dr Prathap C Reddy envisioned and initiated the pilot of a 'population health model' under the aegis of the Total Health Foundation in Aragonda in the Thavanampalle Mandal of Chittoor district in Andhra Pradesh.

Total Health stands on the strong foundation of social innovation. Built on the principle of "Population Health", Total Health aims at the

equitable distribution of good health, through the community- a blueprint for complete transformation.

The scope of the Total Health Program is all inclusive. The primary objective was to establish India's first integrated rural healthcare service delivery network.

At the core of the programme is a comprehensive screening that segregates the population into risk buckets. The programme then uses a holistic health methodology to reduce the incidence of disease in high-risk categories.

The community services provided by Total Health encompass seven significant areas:

1. Health
2. Nutrition
3. Water, Sanitation and Hygiene
4. Environment
5. Women Empowerment and Livelihood Support
6. Lifestyle Modifications
7. Community-Based Infrastructure Support

Total Health connotes the total well-being of an individual, inclusive of physical, mental, social, ecological, and spiritual health. More importantly, it transcends the barriers and caters to the health care requirements and aspirations of the community through their journey from 'womb to tomb'

The Total Health Program works for the development of over 70,000 people. This is from infancy to the senior-most citizen—from the first breath to the last breath. It aims to improve the lives of the community by making them physically and mentally and at the same time protecting their environment healthy.

The program started with a baseline household door to door arduous survey to study the health, social and economic status of the communities. The health survey instrument is based on World Health Organization's (WHO) "STEP" approach. It covered 31275 people and classified them into three basic

groups of low risk, moderate risk and high risk according to their ten-year risk of getting a non-communicable disease (NCD). These individuals are being followed up further by investigations, counseling and medication through the Mobile and Satellite Health Clinics of Total Health.

In addition, Total Health conducts cancer screening for women and eye screening for the community with a focus on NCD patients. Various community development activities linked with health and women empowerment are also conducted.

The various initiatives undertaken under the aegis of Total Health Program in 2021 include:

## Health

### Non-Communicable Disease Camps (NCD) and Package

Over 53 camps were conducted and 1632 beneficiaries were covered.

Total number of beneficiaries enrolled under this NCD program was 2504.

### Eye Screening Camp

This camp was conducted in collaboration with Sri Venkateswara Aravind Eye Hospital, Tirupati. Two camps were conducted and these covered over 364 beneficiaries. Sight correction spectacles were distributed to 154 beneficiaries. The total number of IOL surgeries performed was 49.



Three cancer screening camps were organised for both men and women. These camps were conducted in collaboration with Apollo Institute of Medical Sciences and Research (AIMSR), DBR Hospitals, Pavithra Diagnostics and the Lions Club. Cervical, oral and breast cancer screenings were conducted for over 112 female beneficiaries. Prostate cancer screening was conducted for over 65 male beneficiaries.

### School Health Camps

Seven camps were conducted in collaboration with District and Mandal Education Office, Chittoor and the Government Schools in Thavanampalle Mandal. Total 679 students were screened for various diseases during these camps.



## Ear Screening Camps

Over 48 screening camps were conducted in collaboration with AIMSR, Chittoor and Medtronic Lab. The hearing screening was conducted for over 943 community members.



Ear Screening Camps

## Fight against COVID-19

A functional 20 bedded COVID isolation center was established. Over 331 patients were registered at this center and there were over 135 admissions at this center. Over 155 patients were referred for home isolation.

The following services were provided to the patients:

- Yoga sessions
- Sun bath
- Playing songs for two hours to avoid loneliness
- Disinfectant spraying
- Awareness sessions
- Provision of nutritious food
- Regular monitoring

Free vaccination drive was organized in Aragonda Gram Panchayat with over 1211 beneficiaries



Yoga Sessions for fight against COVID-19

## Other initiatives included:

Awareness session on COVID-19 through mike announcements

Distribution of face masks to the community and front-line workers

Established Fever Clinics



Masks distributions for the Front-Line workers

## Mobile Clinics

The mobile clinics provide primary medical care, basic investigations, pharmacy, health education, referral services and other essential services. These clinics are equipped with a medical laboratory and pharmacy. The two mobile clinics have covered 13,000 beneficiaries through OPDs. These are providing health services in 93 villages across 32 Gram Panchayats.



Mobile Clinics for General Health Check-up

## Satellite Clinics

Total Health runs satellite clinics to provide the essential primary medical health care services in ten Gram Panchayats. It serves the needs of individuals with NCDs and other medical ailments. The two satellite clinics have benefitted 8700 beneficiaries.

## AYUSH Wing

More than 4300 beneficiaries utilized the AYUSH treatment.



Ayush Treatment

## Arrjava Warrior program

Arrjava Warriors are people from the community, who bridge the gap between the medical team and lay people. In Total Health, Aragonda, they are a team of certified yoga practitioners, who travel from village to village in the Chittoor district of Andhra

Pradesh, taking classes for the community from early in the morning and through the working day. In Total Health, Amrabad, they are a team of Chenchu tribespeople who are trained in first aid and basic life support (BLS) so they can cater to the needs of those who live deep within the tiger reserve, people who have no access to healthcare and have to walk distances from 20-50 km to deliver a baby or get first aid for a scorpion bite. The Arrjava Warriors covered 195 villages, 59 schools and covered more than 3100 beneficiaries.



Arrjava Warriors

## Nutrition Centers for Pregnant and Lactating Mothers

There are six nutrition centers and where over 485 beneficiaries obtained supplementary nutritious food along with health care services and institutional deliveries.



Nutrition Center for Pregnant and Lactating Mothers

### **Geriatric Nutrition Center**

There are three nutrition center for the elderly. These centers have over 149 beneficiaries who get mid-day meal along with health care services. One center has been converted into a Geriatric Club.



Nutrition Center Senior Citizens

### **Water, Sanitation and Hygiene**

#### **Access to clean drinking water**

In collaboration with Lions Club, 13 potable drinking water plants were installed which covered 13 gram

panchayats. More than 35,000 beneficiaries utilize this service. More than 3 lakh water cans were distributed.

### **Sustainable Toilet Project**

Sustainable toilets were constructed in four schools at Aragonda and Arundatiwada villages. The schools included ZPHS Boys and Girls High School as well as MPP Schools. The initiative was undertaken in collaboration with Arogya Rakshak Project supported by Reckitt.



Sustainable Toilet Project for Schools

### **Hygiene Camps and Education**

In collaboration with Arogya Rakshak Project by Reckitt, the following activities were undertaken:

- Hand washing awareness sessions were conducted in 104 Government Z.P.H. and M.P.P Schools of four mandals
- Personal and menstrual hygiene session were conducted in the community in 32 gram panchayats
- Hygiene corners were established in 30 schools
- Training of the trainer's program was conducted for all school teachers in government schools of Thavanampalle Mandal, Bangarupalyam, Irala and Chittoor. Total 150 teachers attended the program.
- Training sessions on infection control were conducted



Hygiene Awareness and Education Camps

## Women Empowerment and Livelihood Support

### Sustainable Skilling

This includes tailoring courses designed to train the women on making jute products and apparels. Over

360 individuals have been trained in tailoring out of which 55 rural women have been employed in Total Health for manufacturing of jute bags and earning an additional income.

These initiatives were undertaken in collaboration with the District Rural Development Agency (DRDA) and National Jute Board, National Jute Board, Government of India, AP HRD Institute, Bapatla.

### Production details for 2021:

Over 37,000 units of jute bags were manufactured  
Over 68,000 units of apparels were manufactured and sold to provide income to the workers

The items were sold to organizational buyers to provide income to the workers



Jute Bags Manufacturing Unit at Total Health

## Youth Skill Training Course

Refrigeration and air-conditioning skills training course has been initiated in collaboration with Blue Star Ltd. Two batches were successfully completed and the 21 students trained and are employed.



Refrigeration and Air-conditioning Skills Training Center



Kitchen Gardening

## Environment

### Tree Plantation

Plantation of over 11000 tree saplings were done for eleven varieties of plants. This initiative was undertaken with the collaboration of Forest Department of Andhra Pradesh and Telangana.



Tree Plantation

### Kitchen Gardening

More than 8,000 families have benefitted from non-pesticide kitchen garden. There has been an emphasis on using papaya and drumstick leaves. Distribution and plantation of over 8800 kitchen variety of plants was undertaken.

### Poly-house

In collaboration with the Agriculture Department, a poly-house has been set-up. Local farmers were motivated for alternate farming practices with multi crop focus. English cucumber and green leaf farming is done in the poly-house. Total cucumber harvest was 9,000 kgs and green leaves harvest was 2,093 kgs in 2021.



Agriculture Program

### Solar Street Lamps

In order to improve the supply of electricity and lighting of roads/public places, Total Health sponsors and maintains 35 solar street lamps in and around Aragonda in partnership with Philips.



## Community Infrastructure Support

The following infrastructure was created for the community:

- Walking plaza
- Play ground
- Community halls
- Athletic track (100 metres by 200 metres)
- Meditation centres (27 centres)

## Total Health- Tribal Rehabilitation Program

In order to reconcile, develop and conserve the tribal areas, the following activities were undertaken:

- Baseline survey completed in 42 pentas
- Health screening camps were conducted
- COVID-19 care centers were established
- Health awareness sessions were conducted
- Nutrition camps were conducted where 300 children benefitted
- Training on water filtrations methods were given to the community
- Naturalist training of 130 base camp watchers along with folk-lore focused tourist guide training of 50 Chenchu youth was conducted
- Employment was provided to over 100 women by providing them with skills through honey bottling and labeling
- Training on candle making was provided to the tribal villagers and sales of these candles was promoted
- Established satellite clinic for providing health services to the tribal community



*Total Health Project is already a case study in the Harvard T. H. Chan School of Public Health, USA*

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# Research

## Apollo Hospital Education and Research Foundation (AHERF)

AHERF is a not-for-profit organisation recognised by the Department of Scientific and Industrial Research (DSIR), and is focused on basic, translational and epidemiological research. AHERF comprises of Cell and Molecular Biology Research Centre (CMBRC) and has centres at Chennai, Hyderabad and Delhi to carry out research activities. The CMBRC enables basic and translational research projects in cutting edge areas such as liquid biopsy, molecular diagnostics, pharmacogenetics and exosomes. Further AHERF also spearheads a faculty development programme to spawn research pilots for basic research projects.

AHERF is working on various cutting-edge technology research projects using exosome technology as a base platform. The projects focus on diagnostics, drug delivery and therapeutic application. The foundation is aiming to develop many more research projects related to cancer, diabetes, cardiovascular disease and neuro-regenerative diseases.

## Exosome-Base Technology

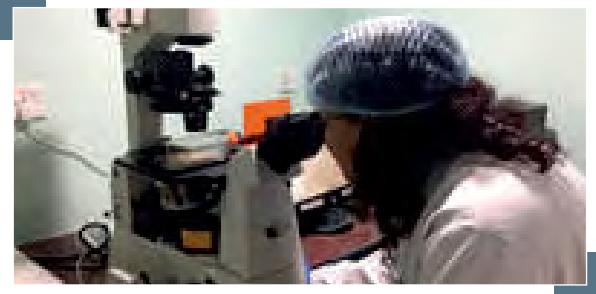
Circulatory biomarker - biology program: AHERF has established a wide array of circulatory biomarkers in the form of cell free DNA, exosomes and circulatory tumor cells. The CMBRC lab of AHERF has been working on exosomes and has developed platforms for diagnostics, cell free therapeutic and drug delivery platforms. AHERF has made a foray into diagnostics and drug delivery system and is making efforts to develop exosome-based therapeutics.

Biomarkers: Using exosome biology, serum EGFRvIII from the blood has been isolated as a diagnostic marker for detecting high grade gliomas. This has been established, validated and published as abstracts in Journal of Neuro-oncology. CMBRC is working on establishment of detection biomarkers in diabetic nephropathy, renal transplant rejection and head-neck cancers. The proof of concept have been submitted for publication.

Drug Delivery agents: CMBRC is in the initial process of working on exosomes as drug delivery agents and the proof-of-concept study is ongoing.

S.No	Category	Project	Overview
1	Diagnostics	Development of urinary biomarker for early renal rejection	This project aims to develop a urinary biomarker as a diagnostic panel for development of early kidney rejection. The initial outcome of the project report is being submitted for publication.
2	Diagnostics	Development of early diagnostic panel for identifying diagnostic nephropathy	This project aims to establish early diagnostic panel for identifying diagnostic nephropathy using urine and serum biomarkers. The study is completed in high-risk diabetes patients and the results verified in a small cohort of diabetic nephropathy patients.
3	Diagnostics	Development of companion diagnostic for mithramycin drug in glioma	This project aims to establish a diagnostic panel which will function as a companion diagnostic for mithramycin drug in glioblastoma patients. Validation studies are ongoing.
4	Drug delivery	Development of exosomal curcumin from milk exosomes	This project aims to develop exosomal curcumin which has shown improved stability and solubility as a drug delivery agent. Manuscript submitted in Clinics in Oncology.

5	Drug delivery	Development of fruit exosomes as drug delivery vehicle.	This project aims to develop edible chemotherapy, reducing toxicity of chemotherapeutic drugs. The method standardization process for improvised version of oncology drugs for breast, prostate cancer using milk exosomes as a platform technology is on-going.
6	Therapeutic	Development of exosomal dendritic cell vaccine	This project will aim to develop exosomal dendritic cell vaccine as an alternate for the tumor tissue for developing dendritic cell vaccine in vitro. This project proposal is for ethics review and approval before it is initiated.



## Extra Mural Grants Received from Government Agencies

- Successfully secured Department of Biotechnology (DBT) grant in collaboration with Apollo Medical College for 'identification of pharmacogenomics determinants causing toxicity in paediatric ALL'. The project is expected to be completed by end of 2022.
- Successfully secured grant by Novartis for 'development of urinary exosomal diagnostics.'

The manuscript has been submitted for publication.

- Secured Biotechnology Ignition Grant (BIG) grant for 'development of Alzheimer diagnostics. The evaluation study proposal is in progress.'
- Secured BIG grant for 'development of salivary exosome diagnostics in oral cancer'. The clinical evaluation study is ongoing.
- Prime Minister's Research Fellowship was granted for two of the research scholars working on research projects at CMBRC.

## Covid-19 Research Study Projects

Research work for following Covid-19 study projects is aimed at publishing:

- Diagnostic values of laboratory biomarkers in predicting a severe course of COVID-19 on hospital admission
- Association between ABO blood groups and their clinical variables during COVID-19 infection
- Clinical outcomes of various drug-combinations in COVID-19 disease management
- Prevalence and impact of pre-existing comorbidities on overall clinical outcomes of hospitalized COVID-19 patients

## Collaborations

### Collaboration with University of Hyderabad

This collaboration will allow the faculty of UoH to interact with clinicians for conducting joint research projects; organizing seminars/ workshops/ training programs and conducting project work for MD/PhD students. This will foster collaborative research activities, epidemiological and population studies, interventional studies and clinical trials, health systems research, patient safety and quality of health care programs, conduct of conferences and workshops.

### Collaboration with Manitoba Chemosensory Biology Group (University of Manitoba)

AHERF has collaborated with University of Manitoba to develop salivary exosome protocols for detecting bitter receptors – G-protein-coupled receptors (GPCR) in pathological conditions. The Project has been completed and a publication compiled as a method paper for "Methods in Molecular Biology".

### Mitra Biotech

With this collaboration with Mitra Biotech, AHERF

carried out a joint study to develop and validate chemosensitivity assay based on tumors response to in-vitro oncology drugs. The outcome data from the study has been submitted for publication.

### Collaboration with Stemcyte India

Stemcyte provides complete stem cell solution from banking to application and treatment. AHERF and Stemcyte undertook a collaborative research agreement to establish exosome therapeutics from cord blood. The project focusses on establishment of mesenchymal stem cell exosomes as cell free regenerative medicine. The outcomes data will be submitted for publication as stem cell exosome technology for treating cardiology and oncology complications.

### Collaboration with AMITY University India

AHERF signed an agreement with Amity University Uttar Pradesh and SRM University Andhra Pradesh to conduct a joint collaborative research study on "Intelligent Decision Support System for Cardiovascular Disease Detection using ECG Traces at Tertiary Care Centers and Extended Community". The outcomes obtained from the project would form the rationale of point of care device capable of being ported as a mobile health application, capable of tagging the ECGs to detect the cardiovascular disease anomaly at a community level. The project is funded by ICMR and is ongoing at Apollo Hospitals Chennai and New Delhi. AHERF coordinates the conduct of the study and governance.

### Collaborative research projects with Apollo Hospitals

AHERF has developed an exosome technology platform for detection and screening of glioblastomas (GBMs) from blood in collaboration with Apollo Hospitals, Hyderabad and Chennai and Datar Genetics. The technology developed by AHERF enables EGFR VIII detection from serum exosomes which enables information about the GBM profile without the need for an invasive biopsy. Further, this panel can also be used for real time monitoring of GBM

post-surgery for cases of metastasis. Conceptualized at AHERF and after completion of the proof of concept, a dual validation was done at AHERF and Datar Genetics before it was commercialized by Datar as diagnostic marker for glioblastoma.

### DNA+

AHERF was involved in scientific due diligence to bring out the genetic pre-disposition gene test. Apollo Hospitals has partnered with Datar Genetics to offer a comprehensive disease pre-disposition test – DNA+. This one-time test analyzes and assesses the unique DNA make-up to understand its impact on genetic predisposition for more than 60 conditions including cardiovascular disease, diabetes and cancers. This helps to educate and inform patients about any life style modifications. This test, DNA+ is performed across the hospital centers pan India and more than 20,000 patients have benefitted.

### Collaboration with IICT-Hyderabad

AHERF signed an agreement with CSIR-Indian Institute of Chemical Technology (CSIR-IICT). The aim of the collaboration is to foster and develop

- Exosome and exosome mimetic drug delivery systems
- Dendritic cell-based vaccine

As part of the collaboration, characterizations of exosomes are being carried out by IICT for AHERF projects.

### Collaboration with IIT Hyderabad

The aim of this collaboration with Indian Institute of Technology Hyderabad (IIT) Hyderabad, is to develop and foster:

- Advanced drug delivery systems using exosomes
- Development of micro-fluids to quantify extracellular vesicles.

- Development of urinary exosome diagnostics for graft rejection
- Development of companion diagnostics in cancer

### Academic Collaborations

#### *Delhi Pharmaceutical Sciences and Research University*

A joint clinical research course in association with Delhi Pharmaceutical Sciences and Research University and AHERF is a one-year program in clinical research at AHERF, Delhi. The first batch was successfully completed in Sept 2021 and second batch started in Dec 2021.

#### *National Institute of Pharmaceutical Education and Research(NIPER), Hyderabad*

This collaboration with NIPER aims to work for the development of novel exosomal drug formulations.

### AHERF Incubated Companies

**Sapien Life Science** – A start-up seeded at AHERF and independently working from the last 6 years for developing bio-bank's for research purpose. Sapien is the largest bio-repository of India with over 200,000 tissues stored with stratified clinical data

**Urvogelbio Private Ltd** – A biotechnology start-up founded in December 2017, incubated at AHERF, Hyderabad. The start-up is developing non-invasive brain pathology diagnostics for prognosis, diagnosis, therapy monitoring of CNS diseases, including Alzheimers' and other neuro-degenerative disorders. The start-up completed proof of concept using the Biotechnology Ignition Grant (BIG) from BIRAC.

**Sephirah Innovations** - This start-up raised seed funding from AHERF, Hyderabad for establishing proof of principle of detection of HPV positive cancers from saliva. Later, the company secured a BIG grant from BIRAC and established RNA and protein markers for detecting oral HPV positive cancers. The company is exploring to expand the technology to detect other biomarkers for increased sensitivity.

## Faculty Development Projects

To establish a sound academic research program and generate research funding. Extramural funding from major funding agencies is possible only if data from pilot projects is presented to support the hypothesis that is being addressed. To generate such data, junior/middle level consultants need to be encouraged to generate investigator driven pilot proposals.

This program proposes to establish a pilot program for developing a research culture at Apollo Hospitals.

Projects are sanctioned on the basis of following

- A full proposal be developed for extramural support
- A paper is to be submitted for publication
- Data is to be presented at National/ International meetings

Measurable elements of success include:

- Number of publications
- Amount of extra-mural grants generated

### The lists of studies approved under Faculty Development Program are as follows:

Natural Drug Delivery System using Milk Exosomes	<ul style="list-style-type: none"> <li>• Establishment of exosome isolation and standardization from milk.</li> <li>• Research project to explore curcumin formulation with exosome</li> </ul> <p><b>Status:</b> The study reported the development of a curcumin formulation with improved solubility, stability, and cellular permeability for breast-cancer treatments. Manuscript published in 'Clinics in Oncology'.</p>
Diabetic Nephropathy Detection Panel through Urinary Exosome	<ul style="list-style-type: none"> <li>• Study completed and urinary exosome isolation protocol was established</li> <li>• The outcome of this study was to establish inflammatory diagnostic panel for diabetic nephropathy</li> </ul> <p><b>Status:</b> Completed study in high-risk diabetes patients and verified the results in a small cohort of diabetic nephropathy patients. Manuscript for publication.</p>
Effect of Intra-dialytic exercises on Maximal Oxygen Consumption and Quality of Life	<ul style="list-style-type: none"> <li>• Study envisages improving quality of life of patients undergoing dialysis.</li> <li>• The outcome showed positive indication and significant impact in improving quality of life of patient's undergoing hemodialysis</li> </ul> <p><b>Status:</b> Study completed. Submitting paper for publication.</p>
Predicting Metastatic Potential of Breast Cancer using Vascular, Functional and Metabolic Parameters obtained with simultaneous PET/MRI: A Retrospective Study	<ul style="list-style-type: none"> <li>• Study was aimed to find out the factors and synergistic effects associated with the metastasis of the vascular, functional and metabolic parameters in breast cancer patients.</li> <li>• The result has retracted the predictive role for distant metastases with tumor proliferative markers like Ki67 and various angiogenic &amp; metabolic parameters.</li> </ul> <p><b>Status:</b> The work has been sent for publication</p>
Local Antibiotic Delivery Method using Vit-D3	<ul style="list-style-type: none"> <li>• A novel method of using vitamin D3 granules impregnated with Tobramycin or Vancomycin will be delivered at the local site of wound infection</li> <li>• Pilot study with 5 patients recruited, 3 of them reached the end point of the study</li> </ul> <p><b>Status:</b> Proposal submitted for international funding with AIP Inc platforms</p>

Qualitative and Quantitative evaluation of morpho-metabolic changes in bone cartilage	<ul style="list-style-type: none"> <li>Study aims at assessing early metabolic and structural markers of knee OA across multiple tissues in the joint</li> </ul> <p><b>Status:</b> The study approved and initiated in Apr 2022</p>
TGF-beta 1 as a Diagnostic Predictor in Lung Fibrosis	<ul style="list-style-type: none"> <li>Pilot study on evaluating the role of TGF beta-1 in hospitalized COVID-19 patients and its association with lung fibrosis</li> </ul> <p><b>Status:</b> Study in progress with patient enrolment</p>
Efficacy of Norepinephrine versus Epinephrine in Paediatric Septic Shock	<ul style="list-style-type: none"> <li>Plan to convert into an observational study, to observe the ECHO and treatment lines</li> <li>Study obtained approval from Ethics Committee</li> </ul> <p><b>Status:</b> Study initiated and in progress</p>
Proposal for a Pilot Study of Vitamin C in Sepsis- the Indian LOVIT (Lessening Organ Dysfunction /Injury with Vitamin C) trial	<ul style="list-style-type: none"> <li>A randomized controlled trial to ascertain the effect of high-dose intravenous vitamin C, compared to placebo, on mortality or persistent organ dysfunction at 28 days in septic ICU patients.</li> </ul> <p><b>Status:</b> Study initiated and ongoing with 28 patients enrolled</p>
Two tier Vascular Access Surveillance System	<ul style="list-style-type: none"> <li>To develop low cost VAS and to study the efficacy</li> <li>Ethics Committee approval obtained and protocol training imparted to the study teams</li> </ul> <p><b>Status:</b> Study initiated with patient enrolment</p>
Compare Detection of HPV-16 Biomarkers in Serum and Saliva Samples with Tumor P-16 in Oropharyngeal Squamous Cell Cancer	<ul style="list-style-type: none"> <li>Preliminary diagnostic test evaluation performed</li> <li>Additional markers to be added to strengthen the panel</li> </ul> <p><b>Status:</b> Study initiated, patient recruitment in progress</p>

## Apollo Research and Innovations (ARI)

Apollo Research and Innovations (ARI), a division of Apollo Hospitals, focuses on scouting, evaluating, deploying and integrating innovations across Apollo Hospitals, with an objective of improving outcomes, affordability and accessibility for patients. Innovations span across drugs, devices, healthcare, software or consumer goods of clinical relevance. ARI provides an end-to-end platform for converging clinical insights, technology and business to spawn innovation and research within the Apollo Hospitals ecosystem.

The vision of ARI is to foster innovation in technology, therapy, processes and business models to achieve greater access, affordable costs and global quality standards. Some of the key areas of innovations include convergence of healthcare with life sciences and technology, innovation in software, innovation in medical devices and in public health.

ARI currently has a comprehensive ecosystem to undertake clinical studies for sponsored drug trials, devices, software as well as consumer goods. Apollo Hospitals is also India's single largest clinical site solutions organization having undertaken over 1250

clinical studies, operated by a dedicated team of over 80 professionals located across 22 sites in 14 different Apollo locations for over ten therapeutic areas. This competence has been further evolved to extend co-development capabilities and augment the same with some very creative business models.



## Work Scope

ARI works across a diverse set of focus areas namely – clinical studies, clinical research training programs, evaluation and/ or pre-market validation studies, device and software validation studies and co-development, basic and translational research, public health studies, personalized medication and healthcare innovation through creative collaborations.

### A.Clinical Research- Overview

#### A.1 Institutional Ethics Committee

- Institutional Ethics Committee – Clinical Studies
- The Institutional Ethics Committee – Clinical Studies [IEC-CS] and Institutional Ethics Committee -Bio Medical Research [IEC-BMR] at various Apollo Hospital locations are re-registered with DCGI and certified by the National Accreditation Board for Hospitals (NABH)
- Central Ethics Committee for Stem Cell Research CEC-SCR is being constituted centrally for the Apollo Hospitals across India with a focus to review and approve the stem cell research proposals as per DBT-ICMR guidelines. Approval

has been sought from the National Apex Committee (NAC) and Department of Biotechnology (DBT).

- Institutional Ethics Committee – Bio Medical Research

#### A.2 Experience in Clinical Trials

ARI has vast experience in ethical conduct of clinical trials, clinical research studies, registries and data collection studies, validation studies, investigator-initiated research studies, non-clinical studies, basic research studies and translational research studies. ARI has the experience of conducting over 1250 clinical studies over the last 21 years across 22 locations pan India. The studies consist of 6% phase II, 67% phase III, 20% phase IV studies. The remaining 7% are registries/ data collection studies for trials. More than 50 studies were completed in 2021 and currently 175 clinical trials are ongoing in oncology, cardiology, infectious disease, nephrology, gastroenterology and other therapeutic areas.

#### A.3 Experience in the conduct of COVID-19 related clinical trials

Multiple Apollo Hospitals sites were involved in the conduct of Covid-19 related clinical studies. Over 18 studies were completed last year while 32 studies are still ongoing across various locations. The studies focus to evaluate the effect and safety of the drugs with immunosuppressive nature, re-purposed anti-malarial drugs, steroids, low molecular weight heparin, protease inhibitors, vaccines, monoclonal antibodies, and cocktail therapies. In addition to this, a few COVID-19 studies are ongoing in collaboration with global institutions/ universities. Collaborative research studies are ongoing with CSIR, IIGB, ICMR and CCMB. Regulatory review process is ongoing for a few global collaborative phase 2 and 3 trials at Apollo Hospitals in Chennai, Hyderabad and Delhi. As a healthcare chain and with established site offices, Apollo Hospitals is conducting many in-house observational/ data collection/ outcome studies as Investigator Initiated Research Projects for COVID-19.

Apollo Hospitals brought out over 100 publications from the COVID-19 studies. Some of the examples where ARI team supported the studies are:

- Evaluation of the performance of novel rapid diagnostics for SARS-CoV-2 at point-of-care.
- An International randomized trial of additional treatments for COVID-19 in hospitalized patients who are receiving the local standard of care
- Higher vs. lower doses of dexamethasone in patients with COVID-19 And severe hypoxia: the COVID STEROID 2 trial
- A randomized controlled trial of oxygen delivery through nasal cannula or simple face mask versus non-invasive PEEP (NIP) masks in patients with confirmed COVID-19 infection
- Development and validation of a multivariable prediction model [MPM] using machine learning to predict the outcome of admitted COVID-19 patients at admission

#### A.4 Device Studies

Over the years, ARI has established expertise in designing and conducting clinical validation studies for new and innovative devices. Some examples of the studies completed successfully are as follows:

**ASHA+** commercialized at Apollo Hospitals – ARI successfully conducted a validation study of a vitals monitoring device ASHA+ at Chennai. The device is commercialized through Apollo Hospitals and is available for use to the public.

**CNOGA** A validation study to evaluate the performance of TensorTip MTX – an Israeli device for vitals monitoring in comparison to standard point of care devices used at Apollo Hospitals for measuring the vitals. The study outcome showed correlation of the parameters measured with the standard PoC diagnostic devices and is ready for commercialization.

**SALCIT** device for asthma diagnosis – The non-

invasive Salcit Tech relies primarily on respiratory sound (cough and wheeze) characteristics. It provides lab free early screening and recovery monitoring services. The data shows positive and the preparation of outcome report is ongoing.

#### New projects underway:

**GI Dynamics** – A multi center open label randomized controlled study to evaluate the efficacy and safety of GI Dynamic's EndoBarrier System along with moderate lifestyle, dietary counselling with standard medication management in patients with baseline HbA1c equal or above 8%.

**USmellit** – A non-therapeutic correlative validation study of a rapid quantitative test for loss of smell in COVID-19 subjects in India.

**HemoDx** – This study is to determine whether dried saliva collected at home or within healthcare settings using HemoDx collection device and kit can be used as alternate collection method to nasopharyngeal/oropharyngeal swabs for detecting active SARS-CoV-2 infections. Project in discussion phase.

**Breath Analyzer** – A non-interventional pilot validation study of TERA BioStation T101 as screening tool for COVID-19 in breath samples.

#### A.5 India Council of Medical Research (ICMR) Projects

##### A.5.1 Anti-Microbial Stewardship Program (AMSP)

To address the increasing burden of multidrug resistant infections, AMSP is promoted worldwide to rationalize usage of antibiotics.

A few AMSP projects supported by ARI are:

- **Capacity Building** – A collaborative AMSP project by CDC Atlanta and ICMR to assess and strengthen both clinical and antimicrobial usage and infection control for containment of AMR pathogens.

- AMR Surveillance** – The project was initiated to understand the epidemiology of resistance and ways to overcome it. The project was aimed at assessing targeted hospital and community-based surveillance studies to provide nationwide resistance data to monitor trends in AMR and develop appropriate control measures.
- Antimicrobial Stewardship Program [AMSP]** – The focus is to evaluate the process and outcome measures related to AMSP in 20 tertiary care hospitals as part of ICMR AMR network. The study aims to ensure accurate data collection for antibiotics utilization and thus optimizing antimicrobial selection and reduction of adverse drug events.
- Expansion of AMSP** – The effective outcome of the AMSP projects at Apollo Hospitals has led to the expansion of the AMSP program along with infection control practices (ICP).
- AMSP Project supported by Pfizer** – The project aims to train the medical college students on AMSP through video sessions by infectious disease consultants, critical care specialists, microbiologists and other AMSP leaders.

#### A.5.2 CURE Diabetes Project sponsored by ICMR

ICMR approval obtained for a phase I research project on Human Pancreatic Islet Transplantation to cure diabetes. The project focus is to standardize the process that involves the digestion and standardization of enzymes to extract islet cells from cadaver pancreas. The basic process starts when the donated organ is received and assessed by an isolation team and ends with the release of the isolated islets for transplantation. The first stage of the process is the cleaning of the pancreas, which consists of organ dissection and removal of the spleen, duodenum and any underlying fat. The next step consists of pancreatic distension and digestion, a process through which an enzyme that breaks up collagen chains (collagenase) is infused into the main pancreatic duct, leading to the

disaggregation of the pancreatic tissue. Finally, the purification of the islets, to assess the characterization and functionality of isolated cells. Therefore, the objective is to develop clinical grade islet cells for transplantation and engineer an optimal islet transplantation site, as novel approaches for curing diabetes and its complications.

#### A.6 ARI facilitated Studies

**Apollo-Abbott Cardiac Registry** - The objective of the registry is to evaluate risk factor for CAD in patients undergoing health checks with high sensitivity Troponin I as predictive marker. The study is initiated in six of Apollo Hospitals. The patients identified with moderate and high risk were followed up with collection of data is going on. The study aims to include HS Troponin I as a routine marker in health check. ARI is involved in the follow up of patients and documentation. Bio-bank sample storage initiated in two centres and will be extended to another 4 centres.

**Apollo Cardiovascular Registry** – This is a multicentre prospective observational study for cardiovascular risk factors and aims to build a standardized predictive risk score for Indian population. This study aims to build an intuitive model based on artificial intelligence and deep learning algorithms. The objective is to determine the effectiveness of this model as compared to traditional risk score frameworks like Framingham Risk Score. Study was approved by the Ethics Committee across nine centres at various locations across India. The outcomes of the study are submitted for publication.

**Credence Genomics NGS (Next Generation Sequencing)** - ARI coordinated the validation of the technology introduced by Micro-Genomics, a division of Credence Genomics, Sri Lanka. The study involved validation of NGS (Next Generation Sequencing) technique for diagnosis of infectious disease pathogens with a sensitivity of over 90% and TAT of 36 hours both for bacterial and fungal infections. The test is commercialized through Apollo Hospitals and is available to the public.

## A.7 Collaborations

### Collaboration with DBT-INSACOG

Seven of the Apollo Hospital locations are part of the national research program – “A Prospective Cohort Study to Evaluate the Severity and Outcomes of SARS-CoV-2 Infection and Correlation of Clinical Outcomes with Virus Variants”. The study is funded by the Department of Biotechnology (Government of India), and is being conducted as collaboration between Indian SARS-CoV-2 Genomics Consortium (INSACOG) and the sequencing centers associated with them. These include Translational Health Sciences and Technical Institute (THSTI) and over 14 other hospitals in India. The aim of the study is to collect data and analyze if the clinical severity of infection due to various SARS-CoV-2 variants is similar or more than the reported severity during the first wave of infection in India. The study also will evaluate whether these variants predispose to fungal infections and other complications and the long-term sequelae of COVID-19.

### Collaboration with Sanofi

Sanofi jointly conducts a list of GCP workshops and other program such as pharmacovigilance, medical writing, monitoring, audits, inspection, regulatory updates in association with ARI.

### Collaboration with National Institute of Pharmaceutical Education and Research (NIPER), Hyderabad

National Institute of Pharmaceutical Education and Research (NIPER), Hyderabad – An MoU was signed between ARI and NIPER to focus on clinical research training and collaborative research.

### B. Clinical Research Training – Overview

The broad objective of this initiative is to train and equip young professionals with critical skills needed to develop, promote and practice scientifically and ethically valid clinical research. The training programme involves collaborations with industry leaders to give hands-on experience to aid the clinical research aspirants to meet the industry needs. The one-year regular full-time course of “Advanced Post Graduate Diploma in Clinical Research (APGDCR)” program with six months of theory and six months of internship is ongoing at Chennai.

ARI developed and introduced a portfolio of online clinical research courses during the pandemic.

The five executive programmes are for three months duration each. These include introduction to Clinical Research (EPCR), Clinical Data Management (EPCDM), Pharmacovigilance (EPPVG), Clinical Research Internship (EPCRI) and Clinical Research Project (EPCR P).



### **Executive Program in Clinical Research [EPCR]:**

This is a three months basic course. The sessions have lectures on topics directly associated with clinical research and also include group discussion and presentations to build a team spirit mandatory for better job satisfaction.

### **Executive Program in Clinical Data Management [EPCDM]:**

This three-month course in clinical data management is a comprehensive course offering candidates with knowledge on clinical data management processes and tools.

### **Executive Program in Pharmacovigilance [EPPVG]:**

A three months course in Pharmacovigilance covers the guidelines, regulations, plan and implementation of PVG with practical sessions and discussion with industry experts.

### **Executive Program in Clinical Research Internship [EPCRI]:**

A three to six months course in clinical research internship provides basic practical knowledge through on-site training on augmenting skills and practice domain.

### **Executive Program in Clinical Research Projects [EPCR]:**

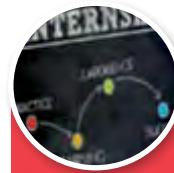
This three months course in project development provides students practical aspects of leadership skills to manage clinical trials independently.

#### **Combinations:**

These five executive programmes are designed in a manner so as to build on the expertise by choosing to specialize in one or more areas of interests. These courses are for a duration of six, nine and twelve months leading to certifications as given below:



**PDCR**  
Six months  
ADDED  
specialization



**APDCR**  
Nine months  
ON SITE  
experience



**APGDCR**  
Twelve  
months  
COMPLETE  
exposure

### **Professional Diploma in Clinical Research [PDCR]:**

A six months program covering the basic level theory for three months and followed by advanced domain specific training in one of the areas of PVG/ CDM/ internship/ project for another three months.

### **Advanced Professional Diploma in Clinical Research [APDCR]:**

A nine months program covering the basic level theory for three months and followed by advanced domain specific training in any two of the areas of PVG/ CDM/ internship/ project for another six months.

### **Advanced Post Graduate Diploma in Clinical Research[APGDCR]:**

A twelve months program covering the basic level theory for three months and followed by advanced domain specific training in any three of the areas of PVG/ CDM/ internship/ project for another nine months.

### **C. New Initiatives**

#### **C.1 Industry Connect Sessions through Interactive Webinars**

ARI conducted a total of 12 webinars in 2021 with over 1000 National and International attendees. Industry stalwarts, experts from the pharmaceutical industry, clinical research organizations, regulatory

bodies, principal investigators and consultants, enriched the sessions through their vast knowledge. These sessions also helped to promote industry connect and create awareness of clinical research, industry practices and regulations amongst students and budding professionals. The topics discussed included Good Clinical Practice (GCP), New Drugs and Clinical Trials Rules, importance of training in clinical research and career opportunities.



## C.2 International Clinical Trial Day

A virtual International Clinical Trials Day was celebrated during May 2021 at Apollo Hospitals in Chennai, Hyderabad, New Delhi and Ahmedabad. ARI released the Google questionnaire on “Knowledge and Awareness in Clinical Research rules and regulations” which was circulated amongst researchers, research staff and Ethics Committee members across all sites. The event also included skit performance on history of clinical research and action play on Covid vaccine awareness.

## D. Start-up Collaborations

ARI expanded the Site Solution Services to start providing CRO services for the collaborative research studies and clinical trials. With this initiative two major global multi-centric phase II/III clinical trials were initiated in 2021. ARI is working on the regulatory submission for more global multi-centric device studies.

ARI collaborated with the below mentioned start-ups to bring out the best technologies for validation, clinical application and commercialization. ARI also participated in T-Hub Demo days, worked with CCMB-Atal Incubator Centre and is also exploring new domestic and international start-ups to bring in latest technologies.

- **T-Works (COVID-19 specific innovations)** - At the start of the global pandemic, in a joint effort to ensure preparedness for the worst-case scenario, ARI facilitated interaction between the biomedical teams and clinicians of Apollo Hospitals with T-Works, India's largest prototyping centre at Hyderabad. The objective of this initiative was to develop an emergency use ventilator that could be used in peripheral centers and district hospitals. It can also be used as a transport ventilator in ambulances. With this collaboration, T-works was able to develop the first version of the ventilator in a short span of 32 days that successfully underwent technical evaluation at NIMS

Hyderabad. Multiple versions of this mechanical ventilator are being developed for the future. ARI received a certificate of gratitude from T-works for the support they provided towards the development of the ventilator.

- German Accelerator – Next Step India Program -** ARI collaborated with German Accelerator in its Next Step India Program, a four-week market exploration program. The cohort spent a week at ARI wherein clinical immersions, market discussions, specific clinician one-on-one sessions were arranged.

- Crely Inc -** Crely Inc., a USA based digital health platform for osteoarthritis, uses digital biomarkers and artificial intelligence (AI) algorithms to improve patient outcomes and minimize post-acute care (PAC) cost. Crely is developing a medical device enabled SaaS platform that aims to detect surgical site infection after surgery and provide actionable intelligence to the clinicians. ARI facilitated talks between the orthopedics clinicians at Apollo Hospitals and the team at Crely to increase the scope of the product in India.

#### E. Publications based on studies supported by ARI

S. No.	Apollo Hospitals, ARI Site	Title
1.	Chennai	A randomized double-blind placebo-controlled trial for the evaluation of a polycap low dose aspirin and vitamin D supplementation in primary prevention- an international polycap study
2.	Chennai	Supine vs prone position in non-ventilated patients with mild to moderate ARDS – a feasibility study
3.	Chennai	Feasibility and safety of peripheral intravenous administration of vasopressor agent in resource limited settings
4.	Navi Mumbai	A study to assess the effect of planned teaching on knowledge of ostomates regarding stoma care at Apollo Hospitals, Navi Mumbai
5.	Navi Mumbai	The experience of language in adults living with diabetes
6.	Ahmedabad	A prospective, open label, single arm, single center exploratory evaluation of muscle injury using magnetic resonance imaging after an intragluteal injection of diclofenac sodium (generic) - 75 mg/3 mL
7.	Hyderabad	Correlation between ambulatory blood pressure monitoring and office blood pressure measurement in patients with hypertension: a community study
8.	Hyderabad	Risk factors predisposing to acute stroke in India: a prospective study, published by the International Society of Hypertension
9.	Kolkata	Effects of meditation on structural changes of the brain in patients with mild cognitive impairment or Alzheimer's disease dementia

## Apollo Medicine

Apollo Medicine, the official journal of Apollo Hospitals is a peer reviewed and indexed journal. It is published by Wolters Kluwer in both print and electronic formats. Apollo Medicine (ISSN No 0976-0016) has been conceptualized with the idea of providing a platform for researchers as well as clinicians ever since its inception in September 2004.



The journal is published quarterly in March, June, September and December. It is distributed to:

- Medical Heads and Consultants of Apollo Hospitals
- Medical Colleges, both government and private, across the country
- Joint directors and secretaries in the Ministry of Health and Family Welfare, Government of India
- National Medical Commission/ ICMR/ Medical Council/ Nursing Council/ Dental Council
- National libraries across the country

- Various subscribers around the world

All issues of the journal are accessible at [www.apollomedicine.org](http://www.apollomedicine.org). Seventy-two issues both print and online have been published till date including two supplementary issues.

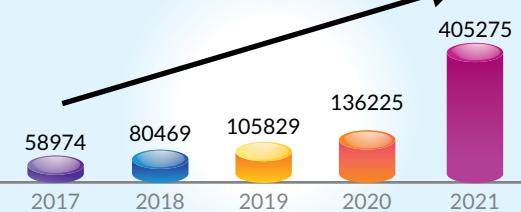
The Apollo Medicine accepts the following categories of manuscripts:

- Editorials
- Original article
- Review article
- Case report
- Clinical image
- Technology update
- Technology in medicine
- Interesting case pictures
- Interesting case videos
- Manuscripts on patient safety and quality in healthcare
- A brief on different government national programmes
- Manuscripts on medico legal cases/ lessons for doctors/ manuscripts on ethics/ manuscripts on common psychiatry disorders
- Protocols and clinical guidelines from the leading hospitals/ professional societies
- Letter to the editor

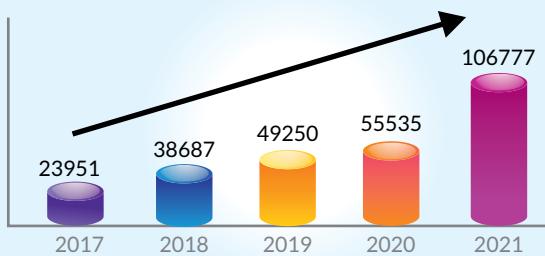
Apollo Medicine has shown an upward trend in readership as is evident from the following trends:

Article downloads has almost doubled from 55,535 to 1,06,777 in 2021 and Page Views has almost tripled from 136225 to 405275 in 2021

### Page View Trends



### Article Download Trends



The journal is registered with the following abstracting partners:

- Baidu Scholar
- CNKI (China National Knowledge Infrastructure)
- EBSCO Publishing's Electronic Databases
- Exlibris – Primo Central
- Google Scholar
- Hinari
- Infotrieve
- ProQuest
- TdNet
- Wanfang Data

Apollo Medicine was successfully indexed with Directory of Open Access Journals (DOAJ) in 2021.

Most interesting articles are also posted weekly on social media platforms such as Facebook, Twitter and LinkedIn.

The editorial board was restructured in 2021 and currently 54 members are on board. The female membership of the board is currently at 26% and overseas membership is around 20%.

Some of the theme-based issues published in the year 2021 were:

- Neurosciences -July to September 2021
- Gastro-sciences- October to December 2021

### Adjunct Titles for Clinical Tutorship, Distinguished Clinical Tutorship and Emeritus Clinical Tutorship of Apollo Hospitals Educational and Research Foundation (AHERF)

The Policy of grant of Clinical Tutorship, Distinguished Clinical Tutorship and Emeritus Clinical Tutorship of AHERF was implemented in the year 2017 in order to boost the state of clinical training across Apollo Group.

Senior faculty members from Apollo Hospitals Group, who have an active interest in clinical training are nominated for an adjunct title post.

Thirty two Consultants have been conferred with Adjunct title of "Clinical Tutor", 97 Consultants with Adjunct title of "Distinguished Clinical Tutor" and 04 Consultants with "Emeritus Clinical Tutor" across the Group.

Apollo Excellence Report – 2021, carries the names of only those Consultants who were conferred Adjunct titles of Clinical Tutor and Distinguished Clinical Tutor of AHERF in the year 2021. The names of Consultants who were conferred Adjunct Titles in 2017, 2018, 2019 and 2020 were mentioned in the Apollo Excellence Reports of respective years.

**List of Apollo Hospitals Consultants conferred with  
Adjunct Titles of Clinical Tutors/ Distinguished Clinical  
Tutors/ Emeritus Clinical Tutor of (AHERF) in 2021**



1. Dr Aditendraditya Singh Bhati  
Neurosurgery  
Indraprastha Apollo Hospitals,  
New Delhi  
Clinical Tutor



5. Dr Ghanshyam Verma  
Respiratory Medicine  
Apollo Hospitals, Vanagaram  
Clinical Tutor



6. Dr Jayanta Sharma  
Internal Medicine  
Apollo Hospitals, Kolkata  
Distinguished Clinical Tutor



7. Dr K Krishna Kumar  
ENT  
Apollo Speciality Hospitals,  
OMR, Chennai  
Emeritus Clinical Tutor



8. Dr K Swarna Deepak  
Critical Care Medicine  
Apollo Hospitals, Hyderabad  
Clinical Tutor



9. Dr Kailash Nath Singh  
Nephrology  
Indraprastha Apollo Hospitals,  
New Delhi  
Distinguished Clinical Tutor



10. Dr Madhu Sudan Modi  
GI, Hepato-Pancreato-Biliary  
Surgery  
Apollo Hospitals, Bhubaneswar  
Distinguished Clinical Tutor



3. Dr Anne Thomas  
Anaesthesia  
Apollo Adlux Hospitals, Kochi  
Distinguished Clinical Tutor



4. Dr Dodul Mondal  
Radiation Oncology  
Indraprastha Apollo Hospitals,  
New Delhi  
Clinical Tutor



11. Dr Mohan Patel  
Nephrology  
Apollo Hospitals, Nashik  
Clinical Tutor



17. Dr Sushant Kumar  
Gastroenterology and Hepatology  
Apollo Hospitals, Bhubaneswar  
Distinguished Clinical Tutor



12. Dr Nairuthya Shivathirthan  
GI and HPB Surgery  
Apollo Hospitals, Mysore  
Distinguished Clinical Tutor



18. Dr Uma Krishnaswamy  
Breast Surgery  
Apollo Hospitals, Greams Road,  
Chennai  
Distinguished Clinical Tutor



13. Dr Prashanthi Raju  
Preventive Medicine  
Apollo Hospitals, Hyderabad  
Distinguished Clinical Tutor



19. Dr Usha Goenka  
Clinical Imaging and  
Interventional Radiology  
Apollo Hospitals, Kolkata  
Distinguished Clinical Tutor



14. Dr S Ramakrishnan  
Rheumatology  
Apollo Hospitals, Greams Road,  
Chennai  
Distinguished Clinical Tutor



20. Dr Waliullah  
Surgical Gastroenterology  
Apollo Medics Hospitals,  
Lucknow  
Clinical Tutor



15. Dr Sarita Rao  
Cardiology  
Apollo Hospitals, Indore  
Distinguished Clinical Tutor



16. Dr Sudeep Khanna  
Gastroenterology  
Indraprastha Apollo Hospitals,  
New Delhi  
Distinguished Clinical Tutor

## Adjunct Titles of Professorships and Associate Professorships of Apollo Hospitals Education and Research Foundation (AHERF)

Policy of grant of Adjunct Title of Professor and Associated Professor of AHERF was implemented in the year 2012 in order to boost the state of academics and research across Apollo Group.

Senior faculty members from Apollo Hospitals Group, who have an active interest in academics and research are nominated for the grant of these Adjunct Titles.

A total of 153 Consultants have been conferred with Adjunct Title of Professor and Associate professor of AHERF in various specialities covering Anaesthesiology, Allergy and Immunology, Biochemistry, Cardiology, CTVS, Critical Care Medicine, Clinical Imaging and Interventional Radiology, Clinical Medical Physicist, Colorectal surgery, Community Medicine, Dermatology, Endocrinology and Diabetology, Emergency Medicine, ENT and Head and Neck Surgery, Gastroenterology and Hepatology, Minimal Access surgery, Gynecology, Genetic Medicine, General Surgery, Hand and Microvascular Reconstructive Surgery, Head and Neck oncology, Haematology, Histopathology and Cytopathology, Infectious Disease, Internal and Hyperbaric Medicine, Interventional Cardiology, Infectious Diseases, Liver Transplant, Molecular Biology, Microbiology, Nephrology, Neuroanesthesia, Neurology, Neurosurgery, Nuclear Medicine, Oncology, Orthopedics, Orthopaedics and Joint Replacement Surgery, Pediatrics, Pediatric Neurosurgery, Pediatric Cardiology, Pediatric Cardiac Surgery, Pediatric Gastroenterology and Hepatology, Pediatric Surgery, Paediatric Intensive Care, Pediatric Neurology, Pediatric Nephrology, Pediatric and Adolescent Endocrinology, Pediatric Hemato oncology, Plastic Surgery, Pulmonology, Radiology, Respiratory Medicine, Rheumatology, Surgical Gastroenterology, Surgical Oncology, Transfusion Medicine, Tropical medicine, Urology and Transplant surgery.

#### *List of consultants conferred with Adjunct Titles of Professors and Associate Professors of AHERF in 2021*



1. **Dr Ajit Pai**  
Surgical Oncology and Robotic Surgery  
Apollo Cancer Institute, Chennai  
Professor



2. **Dr Ashok Thorat**  
HPB and Liver Transplant Surgery  
Apollo Hospitals, Navi Mumbai  
Professor



3. **Dr Dayananda S Sharma**  
Clinical Medical Physics applied to high precision Radiotherapy using both photon and proton  
Apollo Proton Cancer Centre, Chennai  
Professor



4. **Dr Dhanya Dharmpalan**  
Pediatrics and Pediatric infectious disease  
Apollo Hospitals, Navi Mumbai  
Professor



5. **Dr K Ganapathy**  
Medical Physicist  
Apollo Proton Cancer Centre, Chennai  
Associate Professor

Apollo Excellence Report – 2021, carries the names of only those Consultants who were conferred Title of Adjunct Professor and Associate Professor of AHERF in the year 2021. The names of remaining Adjunct title holders were mentioned in the Apollo Excellence Report of respective years.



6. Dr M P Noufal  
Medical Physicist  
Apollo Proton Cancer Centre,  
Chennai  
Associate Professor



11. Dr Rajesh Shinde  
GI Cancer Surgery  
Apollo Hospitals, Navi Mumbai  
Professor



7. Dr Pradyut Waghray  
Pulmonary Medicine  
Apollo Hospitals, Hyderabad  
Professor



12. Dr Ramesh Venkataraman  
Critical Care  
Apollo Hospitals, Greams Road  
Chennai  
Professor



8. Dr Pratheema Ramachandran  
Critical Care Medicine  
Apollo Speciality Hospitals,  
OMR, Chennai  
Associate Professor



13. Dr Revathi Raj  
Pediatric Hematology-  
Oncology  
Apollo Cancer Institute,  
Chennai  
Professor



9. Dr R Dhananjayan  
Biochemistry  
Apollo Hospitals, Vanagaram  
Professor



14. Dr Sanjeev Jadhav  
CVTS and Heart-Lung  
Transplant  
Apollo Hospitals, Navi Mumbai  
Associate Professor



10. Dr Rajeev Kumar Rajput  
Cardiology  
Indraprastha Apollo Hospitals,  
New Delhi  
Professor



15. Dr Seema Singhal  
Histopathology and  
Cytopathology  
Indraprastha Apollo  
Hospitals, New Delhi  
Professor



16. Dr Surabhi Jajodia (Goenka)  
Clinical Imaging and  
Interventional Radiology  
Apollo Hospitals, Kolkata  
Associate Professor



17. Dr Surajit Gorai  
Dermatology  
Apollo Hospitals, Kolkata  
Associate Professor



18. Dr Srinath S  
General surgery  
Apollo Hospitals, Mysore  
Associate professor



19. Dr Tirthankar Chaudhury  
Diabetes and Endocrinology  
Apollo Hospitals, Kolkata  
Associate Professor



20. Dr Vinit Suri  
Neurology  
Indraprastha Apollo  
Hospitals, New Delhi  
Professor

## Clinical Fellowship of Apollo Hospitals Education and Research Foundation (AHERF)

Clinical Fellowship accredited by Apollo Hospitals Educational and Research Foundation (AHERF) was started in the year 2013.

As per policy, Clinical Fellowships by AHERF are offered in those specialties where no structured or limited training programs exists at post graduate level in India.

There is a defined eligibility criteria for the duration of fellowship. Candidates with MBBS qualification are also eligible for certain fellowships.

These fellowships are for 6 months, 1 year and 2 years' duration.

Fifty three Clinical Fellowships with 79 seats have been approved at 19 Apollo Group locations to run the Clinical Fellowship.

1. Stroke in Neurology
2. Cardiac/CTVS Anaesthesia
3. Endoscopy in Gastroenterology
4. Clinical Nephrology
5. Renal Dialysis
6. Transplant Nephrology
7. Interventional Pulmonology
8. Hyperbaric Medicine
9. Endocrinology
10. Head and Neck Oncologic surgery
11. Liver Transplant Anaesthesia
12. Liver Transplant and HPB surgery
13. Genitourinary surgery
14. Renal Transplant surgery
15. Interventional Cardiology

- 16. Radiation Oncology
- 17. Emergency Neurology
- 18. Transfusion Medicine
- 19. Developmental Pediatrics
- 20. Arthroscopy and Sport Medicine
- 21. Anaesthesiology
- 22. Implantation Otology
- 23. Pediatric and Adolescent Endocrinology
- 24. Minimal access and robotic surgery in Gynaecology
- 25. Hepatology
- 26. In Vitro Fertilization (IVF)
- 27. Clinical Genetics
- 28. Colorectal Surgery
- 29. Clinical Apheresis
- 30. Pediatric Cardiac Critical Care
- 31. Vascular/ Endovascular surgery
- 32. Breast Oncosurgery
- 33. Gynae Oncosurgery
- 34. Applied Clinical Medicine
- 35. Pediatric Urology
- 36. Nuclear Medicine
- 37. Diagnostic and Interventional Neuroradiology
- 38. Allergy and Clinical Immunology
- 39. Dermatopathology
- 40. Spine Surgery
- 41. Interventional Radiology
- 42. Dialysis
- 43. Critical Care Nephrology
- 44. Minimally Invasive Neurosurgery (Brain and Spine)-Guwahati
- 45. Coronary Imaging and Physiology

- 46. Adult Interventional Cardiology
- 47. Bone Marrow Transplant and Cellular Therapy
- 48. Clinical Microbiology and Infectious Disease
- 49. Oncopathology
- 50. Onco-imaging
- 51. Critical Care
- 52. Stroke and Interventional Neuroradiology
- 53. Non-Invasive Cardiology

### **Apollo Group locations where Clinical Fellowship of AHERF have been approved**

- 1. Delhi
- 2. Bangalore
- 3. Bilaspur
- 4. Pune
- 5. Kolkata
- 6. Bhubaneswar
- 7. Kakinada
- 8. Secunderabad
- 9. Chennai-Main
- 10. ASH Chennai
- 11. Hyderabad
- 12. Guwahati
- 13. Navi Mumbai
- 14. Lucknow
- 15. Indore
- 16. Seshadripuram
- 17. Nellore
- 18. Vanagaram
- 19. Jayanagar

### **Training**

Training is being conducted as per teaching/ training

schedule prepared by the supervisor/guide and subsequently approved by AHERF.

There is a defined process of training which includes:

1. Hands on training by observing procedures and surgeries, case presentation during clinical meetings, observations, training through simulator and videos
2. Clinical training is imparted through Clinical Meetings/ CMEs/ Departmental Meetings/ Symposiums and bed side case presentation. Fellows can join the Journal club.

## Final Assessment / Evaluation process and Exit examination

Final examination is conducted at the end of the fellowship program by one external examiner and one internal examiner. The final examination consists of the following:

- i. **Written Examination** - 25 Marks (10 questions which require brief answers and each question shall carry 2.5 marks). External examiner will set the paper.
- ii. **Multiple Choice Questions (MCQs) type** - 25 Marks (10 questions. Each question having 4 multiple choice answers. Each question shall carry 2.5 marks). External examiner will set the paper.
- iii. **Viva** - 20 Marks (10 marks for external and 10 for internal examiner). External examiner will give due weightage to the article or paper published by the Clinical Fellow in a reputed journal while giving marks under Viva.
- iv. **Practical Clinical Skill Assessment Test** - 30 Marks (one long case carrying 20 marks and one short case carrying 10 marks). This pattern may be changed by the internal examiner in consultation with external examiner depending upon the specialty.

**Log book** is provided to each candidate by the institution and the same is maintained by each candidate on daily basis. Logbook is countersigned by the supervisor/guide on regular basis.

*Clinical fellows who successfully complete their training and examination, are conferred with certificate of Clinical Fellowship of AHERF in the respective speciality.*



1. Dr D Mohammad Haneef  
Interventional Radiology  
Apollo Hospitals, Bangalore  
Name of Guide/Consultant  
Dr Amitha Vikrama



2. Dr Girija Shankar Mohanty  
Minimal Access and Robotic Surgery in Gynaecology  
Apollo Hospitals, Hyderabad  
Name of Guide/Consultant  
Dr Rooma Sinha



3. Dr Iftekhar Ahmed  
Paediatric Cardiac Intensive Care  
Indraprastha Apollo Hospitals, New Delhi  
Name of Guide/Consultant  
Dr Reetesh Gupta



4. Dr Sowmya S. Maddipati  
Minimal Access and Robotic Surgery in Gynaecology  
Apollo Hospitals, Hyderabad  
Name of Guide/Consultant  
Dr Anuradha Pandaals



5. Dr Unaiza  
Liver Transplant Anesthesia  
Indraprastha Apollo Hospitals, New Delhi  
Name of Guide/Consultant  
Dr Sanjeev Aneja

## Adjunct Title of International Professors

Policy of grant of Adjunct Title of International Professor of AHERF was implemented in the year 2019 with the aim to enhance research and academic activities by creating a think tank.

Renowned doctors from reputed healthcare institutions overseas, who have excellence in academics and research, are nominated for grant of Adjunct International Professor of AHERF.

Twenty five consultants have been conferred with Adjunct Title of International Professor of AHERF till 2021. These Adjunct International Professors represent different specialities like Cardiology, CTVS, Colorectal surgery, Gastroenterology and Hepatology, Hyperbaric Medicine, Infectious Disease, Internal Medicine, Laparoscopic/ Bariatric/ General Surgery, Liver Transplant Anesthesia, Nephrology, Neurosurgery, Oncoplastic Breast Surgery, Orthopedic surgery, Otolaryngologist-Head and Neck Surgery, Pediatric Cardiology, Pancreatic and Biliary Disorders, Pediatrics, Rheumatology and Urology/ Roboticsurgery.

### *List of consultants conferred with Adjunct Title of International Professor of AHERF*



1. Professor AA Shetty  
Orthopedic surgery  
Location: UK

**Current Appointment:** Chair and Professor of Orthopedics, Director of Research, Institute of Medical Sciences, Faculty of Health and Wellbeing, Canterbury Christchurch University, UK

Programme Director MCh in Surgery, Institute of Medical Sciences, Faculty of Health and Wellbeing, Canterbury Christchurch University, UK

Adjunct Professor of Orthopaedics and Director of Cell therapy, SDM Medical College, Dharwad, India

Adjunct professor stem Cell Research and Regenerative Medicine, NITTE University, Mangalore, and Adjunct visiting Professor KMC Manipal, India

Visiting Professor MGR University, Chennai, India

Visiting Professor, Yenopaya Medical College, Mangalore, India, Scientific Advisor, Cartilage Research and Clinical trial, Konee, Republic of China, Consultant Knee Surgeon, Spire Alexandra Hospital, Chatham, UK

**Publications:** 52 papers

**Presentation:** 42 presentation

**Lectures:** 27 lecturers

**Experience:** 29 years



2. Achal Kumar Dhir  
Liver Transplant Anesthesia  
Canada

**Current Appointment:** Director, Liver Transplant Anesthesia.

Associate Professor, Department of Anesthesia and Perioperative Medicine, University of Western Ontario, London, Ontario, Canada

**Publications:** 31 papers

**Lectures:** 55 lectures

**Experience:** 35 years



3. Dr Amita Sharma  
Pediatrics  
USA

**Current Appointment:** Assistant Professor, Pediatrics, Harvard Medical School

Associate Pediatrician, Massachusetts General Hospital

Consulting Staff, Pediatric Nephrology, Shriner's Hospital and North Shore Children Hospital

**Publications:** 27 papers

**Presentation:** 13 presentations

**Lectures:** 68 lectures

**Experience:** 31 years



5. Dr Arunmoy Chakravorty  
Oncoplastic Breast Surgery  
UK

**Current Appointment:** Consultant Oncoplastic Breast Surgeon Hillingdon Hospital NHS Foundation Trust

Honorary Clinical Senior Lecturer, Faculty of Medicine, Imperial College, London

**Publications:** 16 publications

**Presentation:** 26 presentations

**Experience:** 25 years



6. Vijit Lahiri  
Cardiology  
UK

**Current Appointment:** Medical Director, British Cardiac Research Trust, 28-32 Wellington Road, London

Honorary Professor, Middlesex University, Trent Park, Bramley Road, London

Advisory Board Member, CardioVax Project, Los Angeles, USA

Trustee, TATA Medical Centre Trust, London & India,

Advisory Board, Vaccination in Atherosclerosis, The Netherlands

**Publications:** 841 publications

**Lectures:** 368 lectures

**Experience:** 42 years



4. Dr Archana Chatterjee  
Pediatrics  
USA

**Current Appointment:** Dean Chicago Medical School

Vice President for Medical Affairs

Rosalind Franklin University of Medicine and Science, Chicago, USA

Professor (Tenure Track) of Pediatrics in the Department of Clinical Sciences, CMS

Adjunct Professor, Dept. of Pediatrics, University of South Dakota Sanford School of Medicine (USD SSOM)

**Publications:** 133 papers

**Presentation:** 130 presentations

**Experience:** 28 years



7. Professor B Nirmal Kumar  
Otolaryngology -Head and Neck  
Surgery  
UK

**Current Appointment:** Consultant Otolaryngologist-  
Head and Neck Surgeon,

Director of Medical education, Wrightington, Wigan  
and Leigh Teaching Hospital NHS Foundation Trust

Specialty Research Lead for ENT NIHR CRN, GM

Honorary Professor, Edge Hill University Medical  
School

President ENT-UK

Examiner, Intercollegiate Exam Board, FRCS

Specialist Advisor, NICE

Fellow, Academy of Medical Educators

Elected Council Member, RCS Edinburgh

**Publications:** 121 publications

**Lectures:** Supervised >60 candidates in ORL-HNS,  
Educational Lead for surgical trainees (CT/ST) in  
otolaryngology and STC

**Experience:** 29 years



8. Dr Chetan Parmar  
Bariatric and General Surgery  
UK

**Current Appointment:** Consultant Bariatric and  
General Surgery,

Head of Department (Clinical Lead) Whittington  
Hospital, London

Honorary Associate Professor – University College  
London (UCL) Medical School

Lead of Scientific Committee – British Obesity &  
Metabolic Surgery Society (BOMSS)

Patient Safety Committee (BOMSS)

Faculty - Imperial College London (General Surgery  
Curriculum program)

**Publications:** 237 publications

**Presentation:** 75 presentation

**Experience:** 19 years



9. Dr K Anantha Subramaniyam  
Cardiology  
USA

**Current Appointment:** Professor of Medicine, Wayne  
State University

Co-Director Adult Congenital Heart Disease. Senior  
Staff Cardiologist, Henry Ford Hospital, Heart and  
Vascular Institute, Detroit, MI

Director, Nuclear Cardiology, Henry Ford Hospital,  
Heart and Vascular Institute, Detroit, MI

Director, Echocardiography Laboratory, Henry Ford  
Hospital, Detroit, MI

Program Director, Advanced Cardiac Imaging  
Fellowship

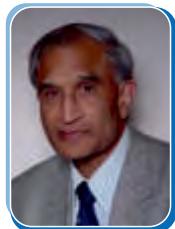
Director, Heart Smart Cardiac Risk Screening  
Program, Co-Medical Director, Cardiac Ultra-  
sonography Program, Baker College - Honorary  
Advisory Position

**Publications:** 206 publications

**Presentation:** 48 presentations

**Lectures:** 53 lectures

**Experience:** 19 years



10. Dr K K Jain  
Hyperbaric Medicine/ Neurology  
USA

**Current Appointment:** CEO, Jain Pharma Biotech and Consultant in Neurology

Senior Associate editor, MedLink Corporation, San Diego, California.

Consultant in hyperbaric medicine, biotechnology and pharmaceutical medicine. Research in cell/gene therapy, neuroprotection, and nanobiotechnology

Visiting professorships and invited lectures worldwide on various topics in biotechnology and applications to medicine with focus on development of personalized medicine

**Publications:** 480 papers, 31 books, 50 special reports

**Lectures:** Various lectures

**Experience:** 54 years



11. Dr Kamal Kishor Solanki  
Rheumatology  
New Zealand

**Current Appointment:** Senior Consultant Rheumatologist in the tertiary teaching Waikato hospital, Hamilton, New Zealand.

Honorary Senior Clinical Lecturer, Waikato School of Medicine (affiliated to Auckland University); Hamilton, NZ. 24 papers

**Publications:** 24 papers, 6 Manuscripts-draft, 22-second author

**Presentations:** 6 Oral and 19 Poster presentations

**Experience:** 18 years



12. Dr Kulwinder S Dua  
Gastroenterology and Hepatology  
USA

**Current Appointment:** Professor of Medicine and Pediatrics Division of Gastroenterology and Hepatology Medical College of Wisconsin, Milwaukee, U.S.A.

Chief, Division of Gastroenterology and Hepatology, Clement J Zablocki V.A. Medical center, Milwaukee, U.S.A.

Director, Advance GI Endoscopy Program, Medical College of Wisconsin

Director, Pancreatobiliary Division Digestive Disease Center of Wisconsin Milwaukee, U.S.A.

Vice-Chair, International Committee American Society of Gastrointestinal Endoscopy

**Publications:** 100 papers, 8 Chapters

**Lectures:** 153 lectures

**Experience:** 38 years



**13. Dr Manish Chand**  
General and Colorectal Surgery  
UK

**Current Appointment:** Associate Professor/ Senior Lecturer, Consultant Colorectal Surgeon, University College London and University College Hospital

**Publications:** 87 papers

**Presentations:** 72 presentations

**Lectures:** 18 lectures

**Experience:** 14 years



**15. Dr Namita Seth Mohta**  
Internal Medicine  
USA

**Current Appointment:** Affiliate Consultant -Day Health Strategies, Boston, MA

Executive Editor of NEJM Catalyst

**Publications:** 41 papers

**Lectures:** Numerous

**Experience:** 18



**14. Dr Nalini M. Guda**  
Gastroenterology  
USA

**Current Appointment:** Aurora St Luke's Medical Center, Milwaukee, WI.

Director of Advanced Endoscopy Fellowship, GI Associates, Milwaukee

Clinical Adjunct Professor of Medicine, University of Wisconsin School of Medicine and Public Health

**Publications:** 53 papers, 12 Chapters

**Lectures:** 58 lectures

**Experience:** 18 years



**16. Dr Nikhil Vasdev**  
Urology /Robotic Surgery  
UK

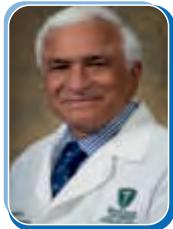
**Current Appointment:** Consultant Urological and Robotic Surgeon, Associate Medical Director for Cancer Services and Co-Director Lister Robotic Urological Fellowship Programme at Hertfordshire and Bedfordshire Urological Cancer Centre, Lister Hospital Stevenage, Hertfordshire, UK.

Senior Clinical Lecturer in Urology School of Life and Medical Sciences, University of Hertfordshire

**Publications:** 125 publications

**Presentations:** 99 presentations

**Experience:** 15 years



17. Dr PH Chandrasekar  
Infectious Diseases  
USA



19. Dr Prasad G Iyer  
Gastroenterology and Hepatology  
USA

**Current Appointment:** Professor, Department of Internal Medicine, Wayne State University, School of Medicine, Detroit, MI

Chief, Infectious Diseases, Department of Internal Medicine, Wayne State, University School of Medicine

**Publications:** 383 papers, 35 case reports

**Presentations:** 99 presentations

**Lectures:** 40 lectures

**Experience:** 36 years



18. Dr Prabir Roy Chaudhury  
Nephrology  
USA

**Current Appointment:** Professor of Medicine and Co-Director, UNC Kidney Center, University of North Carolina, Chapel Hill, North Carolina, from March 2019.

Staff Physician and Nephrologist: Salisbury (Bill Hefner) VA Medical Center, Salisbury, North Carolina, from September 2019

**Publications:** 374 papers, 31 review articles

**Lectures:** 395 lectures

**Experience:** 21 years

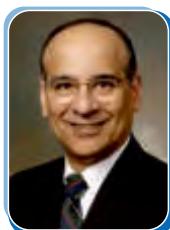
**Current Appointment:** Consultant - Division of Gastroenterology and Hepatology, Director of Post-Doctoral Programs, Co-Director - Advanced Fellowship, Professor of Medicine and Medical Director at Mayo Clinic, Rochester, Minnesota

**Publications:** 307 papers, 8 chapters in book, 3 editorials, 7 Letters

**Presentations:** 161 presentations

**Lectures:** 35 lectures

**Experience:** 12 years



20. Prof. Raj K Narayan  
Neurosurgery  
USA

**Current Appointment:** Professor at The Center for Bioelectronic Medicine, The Feinstein Institute for Medical Research.

Director, Harvey Cushing Institute of Neuroscience, North Shore University Hospital Chair & Professor of Neurosurgery, Donald and Barbara Zucker School of Medicine at Hofstra/Northwell

**Publications:** 135 papers, 2 Books, 63 chapters

**Presentations:** 57 presentations

**Lectures:** 74 lectures

**Experience:** 34 years



21. Dr Roby Debashish Rakshit  
Interventional Cardiology  
UK

**Current Appointment:** Consultant Interventional Cardiology, Royal Free Hospital, London

Clinical Director of Cardiology - Hospital of St. John & St. Elizabeth

Consultant Cardiologist -Wellington Hospital

Associate Professor of Cardiology -University College London

**Publications:** More than 100 publications

**Experience:** 23 years



23. Dr Sushma Reddy  
Paediatric Cardiology  
USA

**Current Appointment:** Assistant professor in Paediatric Cardiology at Stanford school of Medicine, PaloAlto and Consultant paediatric cardiology at Lucile Salter Packard Children's Hospital at Stanford.

Director- Paediatric Heart centre Bio Bank

**Publications:** 34 papers

**Lectures:** 12 lectures

**Experience:** 16 years



22. Dr Shyam S. Varadarajulu  
Pancreatic and Biliary Disorders  
USA

**Current Appointment:** Professor of Medicine, University of Central Florida College of Medicine

Medical Director, Florida Hospital Center for Interventional Endoscopy

**Publications:** 310 papers original article, 37 Case reports, 48 editorials, 25 chapters in book

**Presentations:** 42 presentations

**Lectures:** 136 lectures

**Experience:** 16 years



24. Dr Shyam S. Varadarajulu  
Pancreatic and Biliary Disorders  
USA

**Current Appointment:** Consultant Cardiothoracic Radiologist, Harefield Hospital, Royal Brompton and Harefield NHS Trust, London

Honorary Senior Clinical Lecturer, Imperial College, London

**Publications:** 41 papers

**Presentations:** 16 publications

**Experience:** 29 years



25. Dr Vinod S Menon  
Laparoscopic, Bariatric and  
General Surgery  
UK

**Current Appointment:** Consultant Upper GI,  
Laparoscopic, Bariatric and General Surgeon

Honorary Associate Clinical Professor, University of  
Warwick

Director – West Midlands Surgical Training Centre  
(WMSTC)

Examiner-MRCS

Honorary Secretary, British Obesity and Metabolic  
Surgery Society (BOMSS)

Council member of BOMSS

Publications: 106 papers

**Lectures:** Lecturer in Surgery at the Swansea Medical  
School gave me ample opportunity to actively teach  
undergraduate medical students

**Experience:** 29 years

## Recognition of Books

Guidelines to recognize books published by  
Consultants were institutionalized in December  
2018.

Fifteen books of Apollo Hospitals Consultants were  
recognized with cash awards along with citations from  
the Chairman.

List of books of consultants recognized in 2021

**Dr Chirag A Shah, Hemato-oncology and Bone  
Marrow Transplant, Ahmedabad**

- Gynecological cancer - women's cancer

*Date of publication: 1st edition, August 2020*

*Author/Editor of Text book: Dr. Chirag Shah*

- Gynecological cancer - Women's cancer

*Date of publication: 1st edition, September 2020*

*Author/Editor of Text book: Dr. Chirag Shah*

- Cancer of the digestive tract

*Date of publication: 1st edition, August 2020*

*Author/Editor of Text book: Dr. Chirag Shah*

- Mouth and throat cancer

*Date of publication: 1st edition, August 2020*

*Author/Editor of Text book: Dr. Chirag Shah*

- Breast Cancer

*Date of publication: 1st edition, August 2020*

*Author/Editor of Text book: Dr. Chirag Shah*

- Blood cancer

*Date of publication: 1st edition, September 2020*

*Author/Editor of Text book:* Dr. Chirag Shah

**Dr Dhanya Dharmapalan, Pediatric Infectious Disease, Navi Mumbai**

- IAP Recent Advances in Pediatrics

*Date of publication:* 1st edition, 2020

*Author/Editor of Text book:* Dr. Dhanya Dharmapalan

- Partha's Comprehensive Manual for Pediatric and Adolescent Practice

*Date of publication:* 1st edition, January 2020

*Author/Editor of Text book:* Dr. Dhanya Dharmapalan

**Dr Md. Ibrarullah, Surgical Gastroenterology, Bhubaneswar**

- Atlas of Diagnostic Endoscopy

*Date of publication:* 3rd edition, 2020

*Author/Editor of Text book:* Dr. Md Ibrarullah

**Dr Om Prakash Sharma, Geriatric Medicine, Delhi**

- Management Issues in Geriatric Care

*Date of publication:* 1st edition, 2020

*Author/Editor of Text book:* Dr. Om Prakash Sharma

**Dr Rajesh Chawla, Respiratory and Critical Care Medicine, Delhi**

- ICU Protocols: A step-wise approach

*Date of publication:* Vol 1 and Vol II, 2nd edition 2020

*Author/Editor of Text book:* Dr. Rajesh Chawla

**Dr Raju Vaishya, Orthopaedics and Joint Replacement Surgery, Delhi**

- An update on Medical 3D Printing

*Date of publication:* 1st edition, January 2020

*Author/Editor of Text book:* Dr. Raju Vaishya

- Bone and Joints: Treatment and Prevention of Orthopedic Diseases - March 2020

*Date of publication:* January 2020

*Author/Editor of Text book:* Dr. Raju Vaishya

**Dr Rohini Handa, Rheumatology, Delhi**

- Rheumatology Clinics Psoriasis and Psoriatic Arthritis

*Date of publication:* 1st edition, 2020

*Author/Editor of Text book:* Dr. Rohini Handa

**Dr Rooma Sinha, Minimal Access and Robotic Surgeon-Gynecology, Hyderabad**

- Fibroid uterus- Surgical challenges in Minimal Access Surgery

*Date of publication:* 1st edition, 2020

*Author/Editor of Text book:* Dr. Rooma Sinha

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# Recognition

Apollo Hospitals were recognised and felicitated at various national and international forums for their achievements and contributions, in the year 2021.

## ET (Economic Times) Lifetime Achievement Award 2021

**Dr Prathap C Reddy, Chairman, Apollo Hospitals Group** was conferred with Economic Times Lifetime Achievement Award for filling the void in India's healthcare system.



Chairman, Dr Prathap C Reddy, Apollo Hospitals Group, felicitated with ET Lifetime Achievement Award

## ICSI (Institute of Company Secretaries of India) Life Time Achievement Award 2021

**Dr Prathap C Reddy, Chairman, Apollo Hospitals Group** was conferred with ICSI Life Time Achievement Award for translating excellence in corporate governance into reality.



Hon'ble Minister of Home Affairs, Shri Amit Shah, conferred the ICSI Lifetime Achievement Award to Dr Prathap C Reddy, Chairman, Apollo Hospitals. The award was received by Ms Suneeta Reddy, Managing Director, Apollo Hospitals

## Champion of Humanity Award 2021

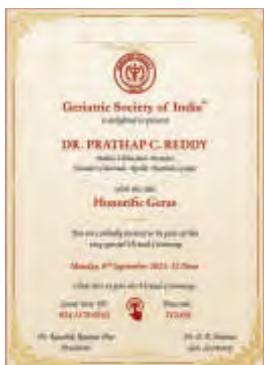
**Dr Prathap C Reddy, Chairman, Apollo Hospitals Group** was felicitated with the Champion of Humanity Award by the Hindustan Chamber of Commerce.



Hon'ble Vice President of India, Shri Venkiah Naidu felicitated Dr Prathap C Reddy, Chairman, Apollo Hospitals

## Honorific Geras Title 2021

**Dr Prathap C Reddy, Chairman, Apollo Hospitals Group** was honoured with the title Honorific Geras by the Geriatric Society of India.



Chairman, Dr Prathap C Reddy, Apollo Hospitals Group,  
felicitated with the title Honorific Geras

## World's Best Smart Hospitals Award 2021

The Newsweek with Statista has developed a list of 250 hospitals that best avail themselves of the most advanced technologies. They lead in their use of AI, robotic surgery, digital imaging, telemedicine, smart buildings, information technology, infrastructure and EHRs.

The award was conferred on Apollo Hospitals Group for using the most advanced technologies.



## ISO 13131:2021 Certification 2021

The certificate was granted to **Apollo Tele-Health Services** by the British Standards Institution (BSI). The Apollo TeleHealth becomes the 1st ever organisation globally to attain the standard of ISO 13131:2021.



Chairman, Dr Prathap C Reddy; Vice Chairperson, Ms Preetha Reddy;  
Joint Managing Director Ms Sangita Reddy, Apollo Hospitals;  
receiving the ISO 13131:2021 Certification

## Hospital Management Asia Award (HMA) 2021

The Asian Hospitals Management Awards recognizes and honours hospitals in Asia that implement best practices. It is an accepted hospitals management awards program for Asia Pacific Region.

The awards won by Apollo Hospitals were:

**Category:** Excellence Award for Most Advanced Healthcare Technology

**Apollo Hospitals Enterprise Limited - Gold Award**  
Winner – Silver lining in dark clouds – Pandemic driven acceleration of patient communication App

**Category:** Best in Talent Development

**Apollo Speciality Hospital - OMR - Project WISSEN-** The state of art practice in a maternity ward



## International Hospital Federation (IHF) Award 2021

The International Hospital Federation Awards are recognized around the world as the premier award programme to honor hospitals and healthcare organizations.

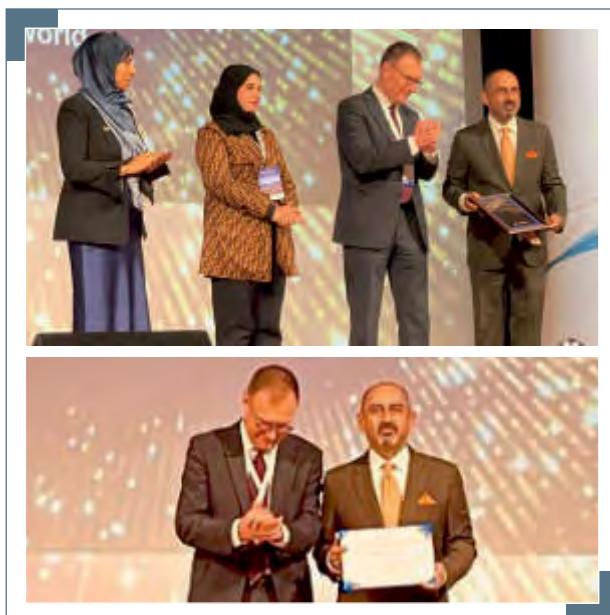
The awards won by Apollo Hospitals were:

Category: Excellence Award for Health Services During Crisis

**Apollo Hospitals Enterprise Limited - PROJECT KAVACH** - Re-inventing Patient Safety in A Post COVID World

Category: Excellence Award for Green Hospitals

**Apollo Hospitals, Chennai** - CE for GE – Conserve Energy for Green Earth



Apollo Hospitals team receiving the IHF Award

## The EEF (Energy and Environment Foundation) Global Awards 2021

The EEF Global Awards recognise and honour outstanding organisations that take responsibility for adding value through excellence in healthcare, innovation and technology in a disciplined manner.

The award was conferred on **Apollo Hospitals Group** in the category of 'Global Healthcare Operational Excellence Company of the Year 2021'



## Guinness World Records 2021

The award was conferred on **Apollo Hospitals, Ahmedabad** for the official attempt of most pledges received for a stroke awareness campaign in a week.



## **FICCI (Federation of Indian Chambers of Commerce and Industry) Annual Healthcare Excellence Award 2021**

The Awards were instituted to felicitate organizations and individuals for their contributions to the industry by innovating for increased efficiency, affordability, and improved performance of healthcare delivery at large. The 13th edition of the FICCI Healthcare Excellence Awards was organised in Delhi

The awards won by Apollo Hospitals were:

Category: Excellence in Home Healthcare

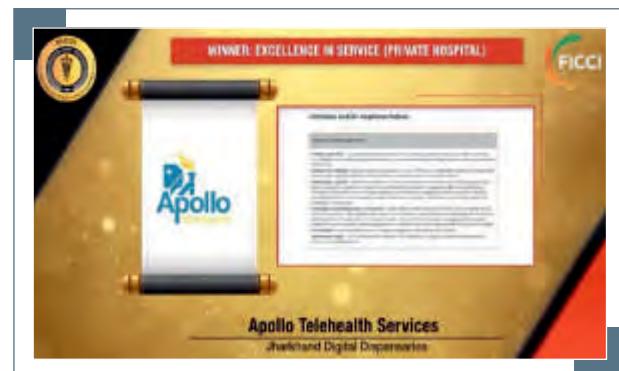
Apollo Home Care

Category: Excellence in Services

Apollo Tele-Health Services Private Limites

## **FICCI Heal Award 2021**

The award was conferred to Apollo Tele-Health Services for the project Digital Dispensary in Jharkhand in the category of Excellence in Service



## **Excellence in Quality Award 2021**

TANCARE'21 the flagship event of FICCI TNSC provides an opportunity for Hospitals in Madurai and Southern Districts of Tamil Nadu to understand and address the challenges of the emerging 'Hub of Healthcare Excellence'.

The awards won by Apollo hospitals were:

**Apollo Speciality Hospitals, Madurai** as the best NABH Accredited Cardiology and Neurology Speciality Hospital



Apollo Hospitals, Madurai team receiving Excellence in Quality Award

**Apollo Speciality Hospitals, Trichy as the best NABH Accredited Nephrology and Urology Speciality Hospital**



Apollo Hospitals, Trichy team receiving Excellence in Quality Award

**Apollo Reach Hospitals, Karaikudi as the best Entry Level NABH Certified Hospital for COVID Management**

### AN Care – FICCI Award 2021

The award was conferred on Apollo Hospitals, Trichy for the Department of Nephrology

### AHPI (Association of Healthcare Providers India) Award for Excellence in Healthcare 2021

Association of Healthcare Providers (India) has introduced AHPI healthcare awards to recognize the excellence achieved by the organization in the healthcare industry in various fields.

The awards won by Apollo Hospitals were:

Category: Excellence in COVID management Award

**Indraprastha Apollo Hospitals, New Delhi**

Category: Nursing Excellence Award

**Apollo Cancer Centre, Chennai**



Apollo Hospitals, Delhi team receiving AHPI Award



Apollo Hospitals, Cancer Centre team receiving AHPI Award

### Times Health Icon Award 2021

The award was conferred on Apollo Hospitals, Ahmedabad for excellence in the field of Cardiology and Cardiothoracic Surgery, Emergency and Trauma.



Apollo Hospitals, Ahmedabad team receiving Times Health Icon Award

## Times Healthcare Leaders Award 2021

The award was conferred on Apollo Hospitals, Ahmedabad for:

Excellent Performance in Medical services and provision for MICS (Minimally Invasive Cardiac Surgery)

Excellence in Chest Medicine

Excellence in Critical Care

Excellence in Multi-Speciality



## IGBC (Indian Green Building Council) Platinum Certification 2021

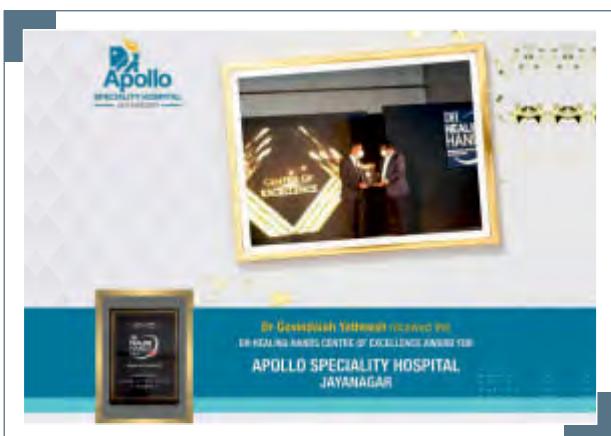
The award was conferred on Apollo Proton Cancer Centre for providing Green Healthcare Facility- the best in Indoor Environmental Quality, Sanitization, Hygiene, Water Conservation, Energy Efficiency and eco-friendly concepts by IGBC (Indian Green Building Council).



Apollo Hospitals, APCC, team receiving IGBC Platinum certification

## Centre of Excellence Award 2021

The award was conferred on **Apollo Speciality Hospitals, Jayanagar, Bangalore** by the Deccan Herald Healing Hands Initiative for the work during COVID-19.



Apollo Hospitals, Jayanagar, team receiving Centre of Excellence Award

## Smart Cities Award 2021

The award was conferred on **Apollo Hospitals, Kolkata** in the category of Green Building award at the 28th Convergence India and 6th Smart Cities India Expo.



Apollo Hospitals, Kolkata team receiving Smart Cities Award

## CII (Confederation of Indian Industry) Award 2021

The award was conferred on **Apollo Cancer Hospital, Teynampet** for SE and Nursing at the Kaizen award competition.

The award was conferred on **Apollo Cancer Hospital, Teynampet** for Med Tech

The award was conferred on **Apollo Proton Cancer Centre** for Excellence in Oncology

## CII TN Medclave Award 2021

The award was conferred for Excellence in Oncology on Managing the Future of Healthcare organised by the Confederation of Indian Industry (CII).

The awards won by Apollo Hospitals were:

Category: Best Hospital for Oncology (200+ Beds)

**Apollo Cancer Centre, Teynampet**

Category: Best Hospital for Oncology (50 – 100 Beds)

**Apollo Proton Cancer Centre**

## CII Kaizen Award 2021

The award was conferred on **Apollo Hospitals, OMR** for the projects –

AIDET Script

A promising test in these testing times

## CII Southern Region Kaizen Competition 2021

The award was conferred on Apollo Hospitals, Chennai at the 16th edition of the CII Southern Region Kaizen Competition

## News 18 Healthcare Excellence Award 2021

The award was conferred on Apollo Hospitals, Guwahati for:

Best Multispecialty Department under one roof

Best practices in Patient Safety



## Long Service Award 2021

The award was conferred on Apollo Hospitals, Ahmedabad by Bajaj Allianz General Insurance for serving the BAGiC beneficiaries since the inception of the hospital.



Apollo Hospitals, Ahmedabad team receiving Long Service Award

## Exemplary Performance in COVID-19 Vaccination Drive Award 2021

The award was conferred on Apollo Hospitals, Ahmedabad by the Deputy Chief Minister of Gujarat, Shri Nitinbhai Patel.



Apollo Hospitals, Ahmedabad team receiving award for Exemplary Performance in COVID-19 Vaccination Drive

## ET Now Award 2021

The award was conferred on Apollo Hospitals, Jubilee Hills, Hyderabad

## Zee 24 Hour Health Award 2021

The award was conferred on Apollo Hospitals, Kolkata for Facilitation for Excellence in Emergency Care



Apollo Hospitals, Kolkata team receiving Zee 24 Hour Health Award

## Pepper Award 2021

The Silver award was conferred on Apollo Adlux hospital, Kochi in the category of Integrated Brand campaign.



Apollo Hospitals, Kochi team receiving Pepper Award

## COVID Warrior Award 2021

The award was conferred on Apollo Hospitals, Bhubaneswar for the Emergency Team by Sidharth TV and Sidharth 91.9 FM

## IMA (Indian Marketing) Award 2021

The award was conferred on Apollo Hospitals, Noida for adherence to all safety protocols during the COVID pandemic

## CSR Health Impact Award 2021

The award was conferred on Apollo MedSkills Limited for the project paramedics training in category of COVID Healthcare Providers (Pvt. Sector) at the 5th edition of CSR Health Impact Awards organized by IHW Council.



## CXO Health Excellence Award 2021

The award was conferred on Apollo MedSkills Limited at the 6th Digital Innovation Health Summit.

## Best Professional Hospital 2021

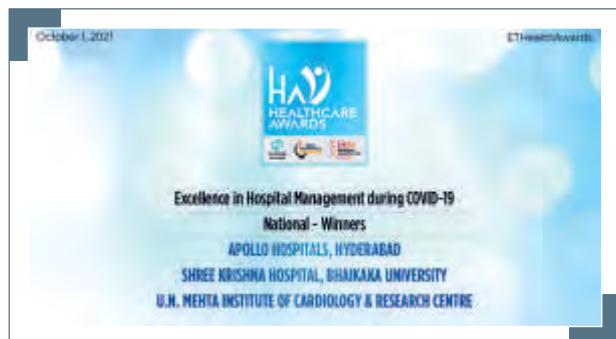
The award was conferred on Apollo Hospitals, Bhubaneshwar at the Panchayati Raj Divas



Apollo Hospitals, Bhubaneshwar, team receiving Best Professional Hospital Award

## Economic Times Healthcare Award 2021

The award was conferred on Apollo Hospitals, Hyderabad for Excellence in Hospital Management during COVID-19



## DSCI Excellence Award 2021

The award was conferred on Apollo Hospitals Enterprise Ltd for Best Security Practices in Healthcare Sector.

## India's Most Trusted Hospitals 2021

The Reader's Digest Trusted Brand Survey 2021 has ranked Apollo Hospitals in Chennai, Delhi, Navi Mumbai, Hyderabad, Bangalore, Kolkata, Bhubaneswar, Lucknow and Apollo Spectra Hospitals, Nehru Place as India's Most Trusted Hospitals.

## The Week - Hansa Survey Recognition 2021

Apollo Hospitals at Delhi, Chennai, Kolkata, Hyderabad were honoured as the best hospitals in India at THE WEEK's 18th edition of Best Hospitals of India by Mr Bhagat Singh Koshyari, Governor of Maharashtra.



Apollo Hospitals, team receiving The Week Award from Shri Bhagat Singh Koshyari, Hon'ble Governor of Maharashtra.

## Times Health Survey 2021

Apollo Hospitals in Chennai, Delhi, Hyderabad and Kolkata have bagged the top 9 positions in the All India Multispeciality Hospital Survey 2021 conducted by Times Health Survey.

Apollo Hospitals, Chennai was ranked as the best multispecialty hospital in India.

Apollo Hospitals at Delhi, Hyderabad, Kolkata, Bangalore, were ranked among the top best 15 multispecialty hospitals in the country

Apollo Hospitals, Chennai was ranked as the best hospital in the southern region. Indraprastha Apollo Hospitals, Delhi was ranked as the best multispecialty hospital in the northern region. Apollo Hospitals, Kolkata was ranked as the best multispecialty hospital in the eastern region.

Apollo Hospitals were ranked as the best multispecialty hospitals in the cities of Ahmedabad, Hyderabad, Chennai, Kolkata and Delhi.

## Times Critical Care Survey 2021

Apollo Hospitals, Chennai was ranked as the best multispecialty hospital in India for the specialties of Cardiology, Gastroenterology, Nephrology, Oncology and Pediatrics.

## Times Lifestyle Study 2021

Indraprastha Apollo Hospitals, Delhi was ranked as the best multispecialty hospital in India for the specialties of Plastic Surgery, Dentistry and Hair

Apollo Hospitals, Chennai was ranked as the best multi-speciality hospitals in India for the speciality of Skin

## The WEEK-Hansa Research Best Hospitals Survey 2021

Apollo Hospitals has been recognised as the Best Multispecialty Hospitals amongst private hospitals by The Week-Hansa Research Best Hospitals Survey 2021 in India.

The Best Hospital Survey 2021 conducted by THE WEEK in association with Hansa India, ranks multispecialty hospitals at an all India level, city level and speciality-wise. Various parameters were considered in the process of selecting the best hospitals; like the competency of the doctors, patient care and availability of multi-specialty facilities, reputation, infrastructure, innovation and environment. A total of 1,957 doctors (803 physicians and 1,154 specialists) from 17 cities were consulted, in their opinion regarding the top-ranking hospitals in India and hospitals with best ranking specialties.

Apollo Gleneagles Hospitals, Kolkata was ranked the first best Multi-speciality Corporate Hospital in the East Zone.

Indraprastha Apollo Hospitals, Delhi was ranked as the first best Multi-speciality Corporate Hospital in North Zone.

Apollo Hospitals, Chennai and Hyderabad were ranked as the first and second best Multi-speciality Corporate Hospitals in South Zone.

Apollo Hospitals was also ranked as the best multi-speciality hospitals in the cities of Delhi, Chennai, Hyderabad, Kolkata, Lucknow and Bhubaneshwar by the survey.

Apollo Hospitals at Chennai, Delhi, Hyderabad, Bangalore, Kolkata featured among the top 15 hospitals in the country in the specialities of Oncology, Orthopedics, Gastroenterology, Cardiology, Neurology, Paediatrics, Pulmonology, Diabetes care, Paediatrics Standalone,



# Consultants' Achievements

# Consultants' Achievements

## Apollo Children's Hospital

### 1. Dr Dhanasekhar Kesavelu

Pediatric Gastroenterology, Apollo Children's Hospital Chennai

#### Publications

Dr Dhanasekhar Kesavelu, Dr Nithya Franklyn, Review on the role and recommendation for dietary fibers in childhood constipation, International Journal of Medical Science and Clinical Invention, Volume 8: Issue 1: Page 5214-5218, 2021

Dhanasekhar Kesavelu, Sheela K, General health and pharmacological benefits of curcumin – a natural healing agent, International Journal of Research in Pharmaceutical Sciences, Volume 12: Issue 1: Page 334-338, January 2021

Dr Dhanasekhar Kesavelu, Dr K Sheela, Role of vitamin D for oral health and overall health, Indian Journal of Forensic Medicine and Toxicology, Volume 15: Issue 1, January – March 2021

Kesavelu D, Recent advances in the management of infantile colic, J Prob Health, Volume 9: Issue 226: Page 1-5, 1st January 2021

Kesavelu D, Franklyn N, Sreedharan L, Can nutrition play a role as a stimulant for Covid 19 in children?, Rev Recent Clin Trials, Volume 16: Issue 2: Page 146-150, 2021

Dhanasekhar Kesavelu, Acute myopathy leading to severe rhabdomyolysis-an unusual presentation,

Sri Lanka Journal of Child Health, Volume 50: Issue 1: Page 165-167, March 2021

Dhanasekhar Kesavelu, V S Lekha, Clinical profiling of a chicken based formula in an Indian Children's Hospital, Asian Journal of Pediatric Research, Volume 6: Issue 2: Page 5-11, 23rd July 2021

Dhanasekhar Kesavelu, Lekha VS, Sarah Nallianan, The nutritional preponderance and propensity to Covid-19 in children, Journal of Gastroenterology and Hepatology Reports, Volume 2: Issue 4: Page 1-2, 2021

### 2. Dr M S Viswanathan

Pediatric Gastroenterology and Hepatology, Apollo Children's Hospital, Chennai

#### Publications

Viswanathan M Sivaramakrishnan, Subash Gupta, Surendran Sudhindran, Neeraj Saraf, Anand Vijai, Subramaniam Swaminathan, Charles Panackel, Naimish N Mehta, Joy Varghese, Shweta Singh, Mettu S Reddy, Prashant Bhangui, Ravi Mohanka, Sonal Asthana, Sanjeev Rohatgi, Liver transplant society of india guidelines for liver transplant during Covid-19 times, J Clin Exp Hepatol, Volume 12: Issue 1: Page 180-185, 20th August 2021

#### Lectures

Speaker, Facing the Challenges of a New Era of Malnutrition Pandemic, Guidelines and approach to CMPA management, APPSPGHAN Nutrition Masterclass, Webinar, 11th December 2021

Moderator, Facing the Challenges of a New Era of Malnutrition Pandemic, Nutrition Masterclass, APPSPGHAN, Webinar, 11th December 2021

Moderator, Dr Way Seah Lee, Faculty of Medicine, University of Malaya, Malaysia, 2021

Moderator, Enhancing nutrition during the 1st 1000 days in Asia - Sirinuch Chomtho, Faculty of Medicine, Chulalongkorn University, Thailand, 2021

Moderator, Collaboration in Asia for the top priorities in pediatric nutritional research, Jin Soo Moon, Seoul National University Children's Hospital, Republic of Korea

Speaker, Rational approach to lower GI bleed in infant, Puduvai Pedicon, 45th Annual Conference of IAP Tamilnadu State Chapter, Pondicherry, 18th December 2021

Speaker, Chronic, intractable diarrhea in infants, TNISG CON, Mid-term Conference, Virtual, 12th September 2021

Speaker, Lessons learnt from Covid and what it holds for future? - Hospital experience, Marina Pedicon, 4th Annual Conference of IAP-CCB, Virtual, 28th November 2021

Organising Committee Treasurer, 8th ISPGHAN Annual Conference (eCON), October 2021

Session Moderator, 8th ISPGHAN Annual Conference (eCON), October 2021

## Presentations

E poster, G-eP-121, Management of a complicated pancreatic pseudocyst in a young child, Viswanathan Sivaramakrishnan, Arun BE Raghavendra, Hariharan Muthuswamy, Piramanayagam Paramasivan, 6th Virtual World

Congress of Paediatric Gastroenterology, Hepatology and Nutrition, June 2021

E poster, H-eP-079, A challenging case of an unusual hepatic tumour in a teenage girl, Viswanathan Sivaramakrishnan, Anand Khakkar, Satheesh Ramamurthy, 6th World Congress of Paediatric Gastroenterology, Hepatology and Nutrition, Virtual, June 2021

## Editorial Boards Membership

Reviewer, 6th World Congress of Paediatric Gastroenterology, Hepatology and Nutrition, Vienna, since June 2021

Reviewer, 54th Annual conference of European Society for Paediatric Gastroenterology, Hepatology and Nutrition (ESPGHAN), Copenhagen, since June 2022

## Professional Societies' Positions

Nutrition Committee Member, Asia Pan-pacific Society for Pediatric Gastroenterology, Hepatology, Nutrition, (APPSPGHAN), since 2020

Treasurer, Indian Society of Pediatric Gastroenterology, Hepatology and Nutrition, (ISPGHAN), since 2020

Executive Council Member, Liver Transplant Society of India, since 2021

Executive Board member, Indian Academy of Pediatrics, Tamilnadu State Chapter, since 2021

## Awards

Active Pediatrician Award, IAP Tamil Nadu State Chapter, January 2021

Distinguished Clinical Tutor Award, Apollo Hospital Educational and Research Foundation (AHERF), 2021

## Apollo Womens Hospitals, Chennai

### 3. Dr Sowbarnika Ramamoorthy

Obstetrics and Gynecology, Apollo Women's Hospitals, Chennai

#### Chapters contributed to text books

Dr Sowbarnika Ramamoorthy, Family Medicine and OSCE for Residents and faculty, Editors- Dr Ramya G, edition, Publisher, Page, 13th September 2021

#### Publications

Sowbarnika Ramamoorthy, Human Papilloma virus vaccination: Cornerstone of cervical cancer elimination, International Journal of Advanced Medical and Health Research, 2021

## AFMH

### 4. Dr Ashwin Mani

Critical Care, Apollo First Med Hospitals, Chennai

#### Publications

Ashwin Mani, Nagarajan Ramakrishnan, Impact of covid-19 on non-covid intensive care unit service utilization, case mix and outcomes: a registry-based analysis from Indian Registry of Intensive Care (IRIS) group, Wellcome Open Research Volume 6: Issue 159: Page 1-19, 10th November 2021

### 5. Dr Meghena Mathew

Critical Care, Apollo First Med Hospitals, Chennai

#### Publications

Meghena Mathew, Ashwin Mani, Nagarajan Ramakrishnan, Impact of covid-19 on non-covid intensive care unit service utilization, case mix and outcomes: a registry-based analysis from Indian Registry of Intensive Care (IRIS) group, Wellcome

Open Research Volume 6: Issue 159: Page 1-19, 10th November 2021

## AIMSR

### 6. Dr Abhidhya Reddy R

Anaesthesiology, Apollo Institute of Medical Sciences and Research, Hyderabad

#### Presentations

Poster presentation, Submental intubation: Case Report, ISACON, Warangal 2021

### 7. Dr Aishwarya Reddy Bollampally

Surgery, Apollo Institute of Medical Sciences and Research, Hyderabad

#### Publications

Aishwarya Reddy Bollampally, Baskaran Dhanapal, Faiz Hussain Mohammed, Right paraduodenal hernia: A rare cause of small bowel strangulation, Cureus, Volume 12: Issue 11: Page e11807, 2021

### 8. Dr Anu Mohan Das

Community Medicine, Apollo Institute of Medical Sciences and Research, Hyderabad

#### Publications

Mohandas A, Varma P, Pattnaik S, Balakrishna N, Kranthi KG, A community-based study on dengue awareness and preventive practices among urban slum population in Hyderabad, South India, Int J Res Med Sci, Volume 9: Issue 2: Page 479-484, February 2021

Mohandas A, Pattnaik S, Challa Sairam, Syed Saba, Mathur Neeta, Das B N, Varma Pavani, Coverage evaluation of BCG, MR, and new vaccines (Fip, Fractional Dose Inactivated Polio Vaccine) under universal immunization program and optional vaccines in rural India, SSRG International Journal

of Medical Science, Volume 8: Issue 4: Page 1-4, 2021

Mohandas A, Das BN, Syed S, Study of stress, anxiety, depression and coping strategies among nursing students in a tertiary care teaching hospital, South India, Int J Community Med Public Health, Volume 8: Issue 7: Page 3400- 3405, July 2021

Mohandas A, Bandegudda S, Gupta A, Sharma SB, Role of diet in renal stone disease in Indian population: A case control study, Int J Nutr Sci, Volume 6: Issue 3: Page 2-9, 2021s

### Presentations

Poster presentation, Tuberculosis among diabetics and their treatment outcome: Cross sectional study in a resettlement colony of East Delhi, NATCON, January 2021

Poster presentation, Status of Anti-Hepatitis B surface Antigen titers among vaccinated Health Care Personnel in a Teaching hospital in South India, IAPSMCON, 19th -21st March 2021

### 9. Dr Archana Narasipuram

Anatomy, Apollo Institute of Medical Sciences and Research, Hyderabad

### Publications

Archana Narasipuram, Hima Bindu Nalluri, Morphometric evaluation of shape and dimensions of foramen magnum-a study on human dried skull, International Journal of Scientific Research, Volume 10: Issue 8: Page 46-48, August 2021

### 10. Dr Ashok Alimchandani

Psychiatry, Apollo Institute of Medical Sciences and Research, Hyderabad

### Lectures

Talk, Evolutionary Psychiatry and its applications in Clinical Practice, Hyderabad Psychiatric Society, February 2021

### Awards

Dr MAM Khan Oration Award, for outstanding contribution to the field of Psychiatry, Hyderabad Psychiatric Society, February 2021

### 11. Dr Ayesha Juhi

Physiology, Apollo Institute of Medical Sciences and Research, Hyderabad

### Awards

Dr Naganna Memorial Award, for the Best Faculty Paper in Medical Education, AP-MEDUCON, SVIMS, Tirupati, 2021

### 12. Dr Baskaran Dhanapal

Surgery, Apollo Institute of Medical Sciences and Research, Hyderabad

### Publications

Baskaran Dhanapal, Aishwarya Reddy Bollampally, Faiz Hussain Mohammed, Right paraduodenal hernia: A rare cause of small bowel strangulation, Cureus, Volume 12: Issue 11: Page e11807, 2021

### 13. Dr Biranchi Narayan Das

Community Medicine, Apollo Institute of Medical Sciences and Research, Hyderabad

### Publications

Das B N, Pattnaik S, Challa Sairam, Syed Saba, Mathur Neeta, Varma Pavani, Mohandas A, Coverage evaluation of BCG, MR, and new vaccines (Fip, Fractional Dose Inactivated Polio Vaccine) under universal immunization program and optional vaccines in rural India, SSRG

International Journal of Medical Science, Volume 8: Issue 4: Page 1-4, 2021

Das BN, Mohandas A, Syed S, Study of stress, anxiety, depression and coping strategies among nursing students in a tertiary care teaching hospital, South India, Int J Community Med Public Health, Volume 8: Issue 7: Page 3400- 3405, July 2021

### Presentations

Poster presentation, Study of stress, anxiety, depression and coping strategies among nursing students in a tertiary care teaching hospital, South India, IAPSMCON, 19th -21st March 2021

### **14. Dr Challa Sairam**

Community Medicine, Apollo Institute of Medical Sciences and Research, Hyderabad

### Publications

Challa Sairam, Pattnaik S, Syed Saba, Mathur Neeta, Das B N, Varma Pavani, Mohandas A, Coverage Evaluation of BCG, MR, and new vaccines (Fipv, Fractional Dose Inactivated Polio Vaccine) under universal immunization program and optional vaccines in rural India, SSRG International Journal of Medical Science, Volume 8: Issue 4: Page 1-4, 2021

### **15. Dr Danish Omair**

Anaesthesiology, Apollo Institute of Medical Sciences and Research, Hyderabad

### Presentations

Poster presentation, Rheumatoid arthritis And Anesthesia, ISACON, Warangal 2021

### **16. Dr Dilip Mathai**

Dean, Apollo Institute of Medical Sciences and Research, Hyderabad

### Publications

Dilip Mathai, Raghavendra Rao MV, Mubasheer Ali, Chennamchetty Vijay Kumar, Raghunandan Reddy, Manick Das, Mahendrakumar Verma, Hitesh Lakshmi Billa, Aruna Kumari B, Facing the threat of future pandemics, International Journal of Current Medical and Pharmaceutical Research, Volume 8: Issue 01 Suppl A: Page 5918-5922, January 2021

Dilip Mathai, Raghavendra Rao MV, Mohammed Khaleel, Srinivasa Rao D, Adarsh Meher Nisanth, Mohammad Azeeza Siddiq, G, Suvarna, Jitendra Kumar Naik S, Ahmad Abdul Khabeer, The mystery of mischievous mucormycosis, life and death dilemma, SSRG International Journal of Medical Science, Volume 8: Issue 1: Page 1-4, January 2021

Dilip Mathai, Raghavendra Rao MV, Abrar A Khan, Srinivasa Rao D, Mohammad Khaleel, Mubasheer Ali, How fungus can debilitate your immune system, Journal of Clinical Immunology and Microbiology, Volume 2: Issue 1: Page 1-14, February 2021

Dilip Mathai, Rao RMV, Khaleel M, Chennamchetty VK, Rao S, Khan A, Calvo T, Nishanth AM, Kudari, Verma MK, Immunity in medically important parasitic infections, Viral Immunology Journal, Volume 5: Issue 1: Page 1-8, February 2021

Dilip Mathai, Raghavendra Rao MV, Srinivasa Rao D, Jithendra Kumar Naik, Adarsh Meher Nisanth, Mahendra Kumar Verma, Vijay Kumar C, Ahmad Abdul Khabeer, Khizer Hussain, The role of immunity in fighting and checking the spread of viral diseases, Archives in Biomedical Engineering and Biotechnology, Volume 5: Issue 2: Page 1- 8, February 2021

Dilip Mathai, Raghavendra Rao MV, Tiara calvo, Frank Navarrete, Mahendra K Verma, Abar A Khan, RK Kudari, Kumar Ponnusamy, Siva Anoop Yella, Badam Aruna Kumari, Is Cannabis Sativa, the mind altering nightmare plant of the World,

International Education and Research Journal, Volume 7: Issue 6: Page 55-59, June 2021

Dilip Mathai, Raghavendra Rao M V, Aruna Kumari B, Pallavi SP, Tina Presilla, Mahendra Kumar Varma, Ahmad Khabeer, Vijay Kumar Chennamchetty, The crossing of uncontrolled diabetes mellitus and horrible Covid-19 upshot the Hurricane for black fungus, International Journal of Current Medical and Pharmaceutical Research, Volume 7: Issue 7: Page 5846-5851, July 2021

Dilip Mathai, Anjali Vasudevan, Srinivas Rao, Mahendra Kumar Verma, Raghavendra Rao MV, Prediction of B-Cell Epitopes from the nucleocapsid protein of SARS-COV2 combining sequence based and molecular docking approaches, International Journal of Current Advanced Research, Volume 10: Issue 7: Page 24731- 24734, July 2021

Dilip Mathai, MV Raghavendra Rao, Aruna Kumari, Tiara Calvo, Abrar Khan, D Srinivasa Rao, Tina Priscilla, Mahendra Kumar Verma, Vijay Kumar C, The Banality of Immunity, Death and Distress of Tobacco smoking (Strike The Right), Global Journal for Research Analysis, Volume 10: Issue 7: Page 1-5, July 2021

Dilip Mathai, Raghavendra Rao MV, Siva Anoop Yella, Mohammed Khaleel, YK Verma, Srinivasa Rao D, Adarsh Meher Nisanth, C Vijay Kumar, Abrar A Khan, Reshma Fattech, Is Brain Aggression a Mystery?, E cronicon open access, Volume 13: Issue 8, 2021

Dilip Mathai, Raghavendra Rao MV, Mubasheer Ali, Vijay Kumar C, Tina Presilla, Yogendra Kumar Verma, Vishnu Rao P, Mahendra Kumar Varma, Srinivasa Rao D, The triple threat of the Covid-19 pandemic (White, Yellow and Green Fungus), SSRG International Journal of Medical Science, Volume 8: Issue 8: Page 8-14, August 2021

Dilip Mathai, Raghavendra Rao MV, Mubasheer Ali,

Yogendra Kumar Verma, Mahendra Kumar Verma, Tiara Calvo Leon, Chennamchetty Vijay Kumar, Gil C Apacible Aruna Kumari, Understanding nSARS – cov-2 and pneumonia co-infection – Review, SSR Inst. Int.J. Life. Sci, Volume 7: Issue 6: Page 2913-2920, Octoer 2021

Dilip Mathai, Raghavendra Rao, Mubasheer Ali, Yogendra Kumar Verma, Tina Priscilla, Maddineni Sai Aditya, Tiara Calvo Leon, Gil C Apacible, MRSA remains a great priority due to the tremendous mortality- A bird's eye view, Global Journal for Research Analysis, Volume 10: Issue 11: Page 1-5, November 2021

Dilip Mathai, Raghavendra Rao, Mubasheer Alii M V, Chennamchetty Vijay Kumar, Mahendra Kumar Verma, Nikita Chitrapu, Ritika Chitrapu, Gil C Apacible, Meddineni Sai Aditya, Co-Affect of SARS-COV-2 with other respiratory viruses, International Journal of Current Advanced Research, Volume 10: Issue 11: Page 25057- 25063, November 2021

Dilip Mathai, Raghavendra Rao M V. Mubasheer Ali, Yogendra Kumar Verma, Aruna Kumari Badam, Mahendra Kumar Verma, Vijay Kumar Chennamchetty, the sky gets dark slowly in view of the emergency of "the super omicron variant, middle east, Journal of Applied Sciences and Technology, Volume 4: Issue 4: Page 53-59, December 2021

Dilip Mathai, Aishwarya Tusher Pandit, D Sreenivasa Rao, K L Prathyusha, Yogendra Verma, Nikita Chitrapu, Ritika Chitrapu, Raghavendra Rao MV, IS genetic obesity a boon or bane?, International Education and Research Journal, Volume 7: Issue 12: Page 27-29, December 2021

## Lectures

Guest speaker, Antimicrobial Stewardship -Where do we stand as a Country, CAHO-CQE, 30th January 2021

Panelist, Infectious Disease Beyond Covid, FICCI, Virtual, 1st October 2021

Panel member, Rationalising Antibiotic use in healthcare, Conference of Telangana State Action Plan on Antimicrobial Resistance, 10th October 2021

Lecture, Acute undifferentiated fevers, 5th Annual conference of Telangana State Association of Physician of India Conference, TSAPCON, Shilpkala vedika, Hitech city, Hyderabad, 22nd October

Lecture, Antimicrobial Stewardship for the Practicing Physician, TAPICON, Velankanni, Tamil Nadu, 28th November 2021

Lecture, The Art of Bedside Medicine, Medicine Annual Conference (MAC), Virtual, 19th November 2021

NBE Assessor, Infectious Diseases Fellowship program at KIMS, Trivandrum, 8th -9th December 2021

#### **Editorial Boards Membership**

Chief Editor, Clinical Key Essentials Elsevier, since 2021

Editor Journal, Global Infectious Diseases, since 2021

#### **Professional Societies' Positions**

Convenor, Infectious Diseases Specialty Board of the National Board of Examinations, since 2019

#### **Examinership**

Examiner, DNB General Medicine, Princes Durru Shevar Children and General Hospital, Hyderabad, 27th July 2021

External Examiner, D M Infectious Disease, CMC Vellore, Virtual, 9th September 2021

### **17. Dr Dorababu**

Pharmacology, Apollo Institute of Medical Sciences and Research, Hyderabad

#### **Awards**

Recognition as centre for Pharmacogenomics, University of Geneva, 2021

### **18. Dr Faiz Hussain**

Surgery, Apollo Institute of Medical Sciences and Research, Hyderabad

#### **Publications**

Faiz Hussain Mohammed, Aishwarya Reddy Bollampally, Baskaran Dhanapal, Right Paroduodenal Hernia: A rare cause of small bowel strangulation, Cureus, Volume 12: Issue 11: Page e11807, 2021

Faiz Hussain Mohammad, Hajira Fatima, N, Hima Bindu, Dasari Chandipriya, bilateral variation in the branching pattern of the axillary artery - A case report, Int. J. Adv. Res, Volume 9: Issue 5, Page 629-633, 2021

Faiz Hussain, Rohit Kiran Phadnis, Niharika Arram, Neha Gala, Nikhita Yadav, Androgen insensitivity syndrome – A case report, International Journal of Medical and Biomedical Studies, Volume 5: Issue 8: Page 355-358, August 2021

### **19. Dr Hima Bindu Nalluri**

Anatomy, Apollo Institute of Medical Sciences and Research, Hyderabad

#### **Publications**

N Hima Bindu, Hajira Fatima, Faiz Hussain Mohammad, Dasari Chandipriya, Bilateral variation in the branching pattern of the axillary artery - A case report, Int. J. Adv. Res, Volume 9: Issue 5, Page 629-633, 2021

Hima Bindu Nalluri, Archana Narasipuram, Morphometric evaluation of shape and dimensions of foramen magnum-A study on human dried skull, International Journal of Scientific Research, Volume 10: Issue 8: Page 46-48, August 2021

## **20. Dr Hitesh Lakshmi Billa**

Interventional Pulmonology, Apollo Institute of Medical Sciences and Research, Hyderabad

### **Publications**

Raghavendra Rao MV, Mubasheer Ali, Chennamchetty Vijay Kumar, Raghunandan Reddy, Manick Das, Mahendrakumar Verma, Hitesh Lakshmi Billa, Dilip Mathai, Aruna Kumari B, Facing the threat of future pandemics, International Journal of Current Medical and Pharmaceutical Research, Volume 8: Issue 01 Suppl A: Page 5918-5922, January 2021

## **21. Dr Hymavathi Bommisetti**

Ophthalmology, Apollo Institute of Medical Sciences and Research, Hyderabad

### **Awards**

FICO fellowship, Ophthalmology, 2021

## **22. Dr Krishna Kumari**

Obstetrics and Gynecology, Apollo Institute of Medical Sciences and Research, Hyderabad

### **Publications**

Krishna Kumari M, Nisha Bhatia, Pure Lipoma of Uterus-rare site for a common tumor, IOSR Journal of Dental and Medical Sciences (IOSR-JDMS), Volume 20: Issue 12: Page 6-7, December 2021

### **Lectures**

Talk, Domestic Violence in Pregnancy, ICOG National Conference, Virtual, February 2021

Talk, SLE in Pregnancy, South Zone Yuva FOGSI, Vizag, March 2021

Speaker, Assessment of Critically ill Obstetric patients, East Zone FOGSI Critical Care Conference, June 2021

Talk, Interventions to minimize surgical site infections in Gynecological Surgeries, International FIGO Conference, October 2021

### **Professional Societies' Positions**

Governing Council Member, ICOG, since 2021

## **23. Dr L Sridhar**

General Surgery, Apollo Institute of Medical Sciences and Research, Hyderabad

### **Professional Societies' Positions**

National EC member, Association of Surgeons of India, since 2021

## **24. Dr Madhavi Singh**

Anaesthesiology, Apollo Institute of Medical Sciences and Research, Hyderabad

### **Presentations**

Poster presentation, Perioperative stroke: Anaesthetic considerations, National ISACON, Ahmedabad 2021

Poster presentation, Anaesthetic management of Gestational Trophoblastic Disease, with Subclinical Hyperthyroidism and Anaemia, ISACON, Warangal 2021

Paper presentation, Validation Study of Gasman Simulation model in Datex Advanced CS2 Anaesthesia workstation using low flow Anaesthesia using sevoflurane, isoflurane and desflurane at the National Conference, ISACON, Ahmedabad, 2021

## 25. Dr Mani Vigna Raj

Anaesthesiology, Apollo Institute of Medical Sciences and Research, Hyderabad

### Presentations

Poster presentation, Anaesthetic management of geriatric patients with reduced EF and Global Hypokinesia, ISACON, Warangal, 2021

Poster presentation, Submental intubation: Case Report, ISACON, Warangal, 2021

## 26. Dr Manick Das

Microbiology, Apollo Institute of Medical Sciences and Research, Hyderabad

### Publications

Manick Das, Raghavendra Rao MV, Mubasheer Ali, Chennamchetty Vijay Kumar, Raghunandan Reddy, Mahendrakumar Verma, Hitesh Lakshmi Billa, Dilip Mathai, Aruna Kumari B, Facing the threat of future pandemics, International Journal of Current Medical and Pharmaceutical Research, Volume 8: Issue 01 Suppl A: Page 5918-5922, January 2021

## 27. Mulla Mohammad Rafi

Emergency Medicine, Apollo Institute of Medical Sciences and Research, Hyderabad

### Publications

Mulla Mohammad Rafi, Mohammed Ismail Nizami, Uppaluri Sarath Chandra, Ashima Sharma, Gaddam, Dharani Reddy, Lubna Tarannum, Awareness of COVID-19 among patient attendants, coming to the emergency department in a tertiary, care center in Hyderabad Metropolitan region: A, questionnaire-based survey, Journal of Emergency Practice and Trauma, Volume 7: Issue 1: Page 36-40, 2021

## 28. N L N Moorthy

Radiology, Apollo Institute of Medical Sciences and Research, Hyderabad

### Publications

NLN Moorthy, Sindhura Manne, Srikrishna Dr Nikhita, Van Der Knaap disease - a case report, IOSR Journal of Dental and Medical sciences, Volume 20: Issue 4: Page 50-54, April 2021

NLN Moorthy, Renuka Malireddy, Srithi Bhui, Periosteal chondroma of tibia in paediatrics, IOSR Journal of Dental and Medical Sciences, Volume 20: Issue 8: Page 15-21, August 2021

NLN Moorthy, Anuruth Kishore Vatti, Praveen kumar, Role of Dynamic flexion MRI in Hirayama disease- a case series, IOSR Journal of Dental and Medical sciences, Volume 20: Issue 10: Page 1-20, October 2021

## 29. Dr Nagalla Balakrishna

Statistics, Apollo Institute of Medical Sciences and Research, Hyderabad

### Publications

Balakrishna N, Alekhy S, Naveen KR, SubbaRao MG, Sudershan RV, Safety of cooked foods in home and street vended conditions beyond two hours: relevance of safe storage temperature message from WHO's five keys for safe food in India, International Journal of Food Safety, Nutrition and Public Health (IJFSNPH), Volume 6: Issue 2: Page 104-119, 2021

Balakrishna N, Varma P, Mohandas A, Pattnaik S, Kranthi KG, A community based study on dengue awareness and preventive practices among urban slum population in Hyderabad, South India, Int J Res Med Sci, Volume 9: Page 479-484, 2021

Balakrishna N Sumana S, Alekya M Baseera Majid, Dyselectrolytemia in comorbid hypertensive patients on anti-hypertensive medications, World Journal of Pharmacy and Pharmaceutical Sciences, Volume 10: Issue 2, Page 1252-1263, 2021

Balakrishna N, Mansoori T, Agraharam SG, Manwani S, Intraocular pressure changes after intravitreal bevacizumab or ranibizumab injection: A retrospective study, J Curr Ophthalmol, Volume 33: Issue 1: Page 6-11, 26th March 2021

Balakrishna N, Heterogeneous contributions of change in population distribution of body mass index to change in obesity and underweight, NCD Risk Factor Collaboration (NCD-RisC), NCD Risk Factor Collaboration (NCD-RisC), eLife, Volume 10: Page e60060, 2021

Balakrishna N, Shalini T, Sarin S J, Prasanthi P S, Viswanath K, Reddy G B, Carotenoid status in type 2 diabetes patients with and without retinopathy, Food and Function, Volume 12: Page 4402-4410, 2021

Balakrishna N, Dripta RC, MadhavanNair K, adhakrishna V K, Sudip G, Jagdish B, Sylvia Fernandez R, Guava with an institutional supplementary meal improves iron status of preschoolers: a cluster-randomized controlled trial, Ann. N.Y. Acad. Sci, Volume 1492: Issue 1, Page 82-95, March 2021

Balakrishna N, Maheshwar M, Sylvia Fernandez R, Jagdish B, Narendra K, Media usage profile of adolescents in varied economic background, Journal of Media and Communication Studies, Volume 13: Issue 2: Page 38-49, 2021

Balakrishna N, Maureen MB, Sylvia Fernandez R, Nair MKP, Tilton N, Radhakrishna KV, Ravinder P, Kimberly BH, Reinhart G, Yimgang DP, Kristen MH, A randomized multiple micronutrient powder point-of-use fortification trial implemented in

indian preschools increases expressive language and reduces anemia and iron deficiency, J Nutr, Volume 151: Issue 7: Page 2029-2042, 1st July 2021

Balakrishna N, Worldwide trends in hypertension prevalence and progress in treatment and control from 1990 to 2019: a pooled analysis of 1201 population-representative studies with 104 million participants, NCD Risk Factor Collaboration (NCD-RisC).www.the lancet.com, Volume 398: Page 957-980, 2021

Balakrishna N, Sylvia Fernandez R, Margaret EB, Paula G, Hilary CK, Shahnaz V, Susan LJ, A complementary feeding and play intervention improves the home environment and mental development among toddlers in rural India, Supplement article, Maternal and Child Nutrition, Volume 16: Issue S3: Page, 13066, 2021

Balakrishna N, Harshitha B, Janaki Srinath Puskuri, Supraja T, Swarupa Rani G, Development and sensory evaluation of tamarind leaf based chocolate for nutrient enrichment, The Pharma Innovation Journal, Volume 10: Issue 8: Page 320-326, 2021

Balakrishna N, Reshma N, Arlappa N, Arunakumari T, Association between mother's literacy and infant & young child feeding (IYCF) practices and nutritional status of urban under 5 Year children, AJPR, Volume 7: Issue 1: Page 29-35, 2021

Balakrishna N, Radha Reddy C, Sachin C, Bhagyasri AG, Anita M, Rajiv M, Association between nutrition delivery, modified Nutrition Risk in Critically Ill score, and 28-day mortality, Nutrition in Clinical Practice, Volume 36: Issue 5: Page 1020-1033, 2021

Balakrishna N, Radha Reddy C, Sachin C, Ayesha S, Rajiv M, Syeda AO, Tailoring nutrition therapy amid the COVID-19 pandemic: Does it work?, Clinical Nutrition ESPEN, Volume 45: Page 381-388,

October 2021

Balakrishna N, Ranganathan S, Iyer R N, Significance of adopting nucleic acid amplification technique for blood donor screening in a resource limited setting: A Study from a Single Centre in South India, Indian J Hematol Blood Transfus, <https://doi.org/10.1007/s12288-021-01500-2>, 2021

BalaKrishna N, Ravi Kumar D, Surya Kumari MVL, Dilip NS, A study on resting metabolic rate, total daily energy expenditure, and physical activity level of female college students, Asian Journal of Physical Education and Computer Science in Sports, Volume 23: Issue 1: Page 58-62, 2021

Balakrishna N, Mansoori T, Mohan GP, AgraHaram SG, Pesala V, Incidence and risk factors for intraocular pressure rise after the scleral buckle surgery for retinal detachment, J Curr Ophthalmol, Volume 33: Page 444-448, 2021

### **30. Dr Neeta Mathur**

Community Medicine, Apollo Institute of Medical Sciences and Research, Hyderabad

#### **Publications**

Mathur Neeta, Pattnaik S, Challa Sairam, Syed Saba, Das B N, Varma Pavani, Mohandas A, Coverage evaluation of BCG, MR, and new vaccines (Fipv, Fractional Dose Inactivated Polio Vaccine) under universal immunization program and optional vaccines in rural India, SSRG International Journal of Medical Science, Volume 8: Issue 4: Page 1-4, 2021

### **31. Dr Nikhita G**

Radiodiagnosis, Apollo Institute of Medical Sciences and Research, Hyderabad

#### **Publications**

Nikhita, Sindhura Manne, NLN Moorthy, Srikrishna,

Van Der knaap disease - a case report, IOSR Journal of Dental and Medical sciences, Volume 20: Issue 4: Page 50-54, April 2021

### **32. Dr Nirupama Damarla**

Ophthalmology, Apollo Institute of Medical Sciences and Research, Hyderabad

#### **Lectures**

Talk, HOA Vista, Sarojini Devi Eye Hospital, 2021

#### **Professional Societies' Positions**

Member, Royal College of Surgeons, MRCS, since 2021

Phaco-Surgical training instructor, Sarojini Devi Eye Hospital, since 2021

#### **Awards**

FICO fellowship, Ophthalmology, 2021

### **33. Dr Nisha Bhatia**

Obstetrics and Gynecology, Apollo Institute of Medical Sciences and Research, Hyderabad

#### **Publications**

Nisha Bhatia, Krishna Kumari M, Pure Lipoma of Uterus-rare site for a common tumor, IOSR Journal of Dental and Medical Sciences (IOSR-JDMS), Volume 20: Issue 12: Page 6-7, December 2021

### **34. Dr Pavani Varma**

Community Medicine, Apollo Institute of Medical Sciences and Research, Hyderabad

#### **Publications**

Varma Pavani, Pattnaik S, Challa Sairam, Syed Saba, Mathur Neeta, Das B N, Mohandas A, Coverage evaluation of BCG, MR, and new vaccines (Fipv, Fractional Dose Inactivated Polio Vaccine) under universal immunization program and optional

vaccines in rural India, SSRG International Journal of Medical Science, Volume 8: Issue 4: Page 1-4, 2021

#### Presentations

Poster presentation, Study on adherence to treatment and life style modifications in hypertensive patients attending health centers of teaching hospital, IAPSMCON, Hyderabad, 19th - 21st March 2021

#### 35. Dr Rakesh Vuppala

Otolaryngology, Apollo Institute of Medical Sciences and Research, Hyderabad

#### Publications

Vuppala R, Bhat SM, Cavity problems following canal wall down mastoidectomy in chronic suppurative otitis media: Are we treating adequately or making them regular outpatients, International J Otorhinolaryngol Clin, Volume 13: Issue 1: Page 11-17, January – April 2021

#### 36. Raghavendarao Venkata Morusupalli

Medicine, Apollo Institute of Medical Sciences and Research, Hyderabad

#### Publications

Raghavendra Rao MV, Mohammed Khaleel, Srinivasa Rao D, Adarsh Meher Nisanth, Dilip Mathai, Mohammad Azeza Siddiq, G Suvarna, Jitendra Kumar Naik S, Ahmad Abdul Khabeer, The mystery of mischievous mucormycosis, life and death dilemma, SSRG International Journal of Medical Science, Volume 8: Issue 1: Page 1-4, January 2021

Raghavendra Rao MV, Mubasheer Ali, Chennamchetty Vijay Kumar, Raghunandan Reddy, Manick Das, Mahendrakumar Verma, Hitesh Lakshmi Billa, Dilip Mathai, Aruna Kumari B, Facing

the threat of future pandemics, International Journal of Current Medical and Pharmaceutical Research, Volume 8: Issue 01 Suppl A: Page 5918-5922, January 2021

#### 37. Dr Rani Reddy

Obstetrics and Gynecology, Apollo Institute of Medical Sciences and Research, Hyderabad

#### Editorial Boards Membership

Chief Editor, Update Obstetrics and Gynecology, since 2021

#### Examinership

External Examiner, Fellowship in Robotic Surgery, Apollo Hospital Jubilee Hills, 2021

Examiner, Final MBBS, Osmania Medical College, Hyderabad, 2021

#### 38. Dr Saba Syed

Community Medicine, Apollo Institute of Medical Sciences and Research, Hyderabad

#### Publications

Syed Saba, Pattnaik S, Challa Sairam, Mathur Neeta, Das B N, Varma Pavani, Mohandas A, Coverage Evaluation of BCG, MR, and New vaccines (Fip, Fractional Dose Inactivated Polio Vaccine) Under Universal Immunization Program and Optional Vaccines In Rural India, SSRG International Journal of Medical Science, Volume 8: Issue 4: Page 1-4, 2021

Syed S, Das BN, Mohandas A, Study of stress, anxiety, depression and coping strategies among nursing students in a tertiary care teaching hospital, South India, Int J Community Med Public Health, Volume 8: Issue 7: Page 3400-3405, July 2021

## 39. Dr Sachidanand

Anaesthesiology, Apollo Institute of Medical Sciences and Research, Hyderabad

### Presentations

Poster presentation, Post spinal intraoperative pulmonary edema: Differential diagnosis, ISACON, Warangal, 2021

### Awards

Best Senior Anaesthetist award, ISACON Telangana, KMC Warangal State Conference, 2021

## 40. Dr Sheetal Meena

Anaesthesiology, Apollo Institute of Medical Sciences and Research, Hyderabad

### Presentations

Poster presentation, Anaesthetic management of geriatric patients with reduced EF and Global Hypokinesia, ISACON, Warangal, 2021

## 41. Dr Sindhura Manne

Radiodiagnosis, Apollo Institute of Medical Sciences and Research, Hyderabad

### Publications

Sindhura Manne, NLN Moorthy, Srikrishna Dr Nikhita, Van Der Knaap disease - a case report, IOSR Journal of Dental and Medical sciences, Volume 20: Issue 4: Page 50-54, April 2021

## 42. Dr Snigdha Pattnaik

Community Medicine, Apollo Institute of Medical Sciences and Research, Hyderabad

### Publications

Pattnaik S, Varma P, Mohandas A, Balakrishna N, Kranthi KG, A community based study on dengue awareness and preventive practices among urban

slum population in Hyderabad, South India, Int J Res Med Sci, Volume 9: Page 79-84, 2021

Pattnaik S, Challa Sairam, Syed Saba, Mathur Neeta, Das B N, Varma Pavani, Mohandas A, Coverage Evaluation of BCG, MR, and New vaccines (Fipv, Fractional Dose Inactivated Polio Vaccine) Under Universal Immunization Program and Optional Vaccines In Rural India, SSRG International Journal of Medical Science, Volume 8: Issue 4: Page 1-4, 2021

### Presentations

Poster presentation, Coverage Evaluation of BCG, MR, NATCON, 2021

Oral presentation, Population based Global physical activity surveillance for prevention of Non Communicable Disease in Urban slum of Sheikpet, IAPSMCON, Hyderabad, 19th-21st March 2021

## 43. Dr Sree Lakshmi Latha

Psychiatry, Apollo Institute of Medical Sciences and Research, Hyderabad

### Publications

Sreelakshmi latha A, Tina Priscilla K, Impact of Covid-19 Pandemic on Health Care Workers - An Observational Study, International Journal of Medical and Applied Sciences, Value 10: Issue 2: Page 36-44, 2021

## 44. Dr Srikrishna S

Paediatrics, Apollo Institute of Medical Sciences and Research, Hyderabad

### Publications

Sindhura Manne, NLN Moorthy, Srikrishna Dr Nikhita, Van Der Knaap disease - a case report, IOSR Journal of Dental and Medical sciences, Volume 20: Issue 4: Page 50-54, April 2021

## **Professional Societies' Positions**

EB Member, National Indian Academy of Pediatrics, since 2021

## **45. Dr Srithi Bhui**

Radiodiagnosis, Apollo Institute of Medical Sciences and Research, Hyderabad

### **Publications**

Srithi Bhui, Renuka Malireddy, NLN Moorthy, Periosteal chondroma of tibia in paediatrics, IOSR Journal of Dental and Medical Sciences, Volume 20: Issue 8: Page 15-21, August 2021

## **46. Dr Sumana Sen**

Physiology, Apollo Institute of Medical Sciences and Research, Hyderabad

### **Publications**

Sumana S, Alekya M Baseera Majid, Balakrishna N, Dyselectrolytemia in comorbid hypertensive patients on anti-hypertensive medications, World Journal of Pharmacy and Pharmaceutical Sciences, Volume 10: Issue 2: Page 1252-1263, 2021

## **47. Dr Tina Priscilla**

Dermatology, Apollo Institute of Medical Sciences and Research, Hyderabad

### **Publications**

Tina Priscilla Katta, Mansukh Ghalla, Rasya Dixit, K Srinivasa Murthy, Expert consensus on the use of sunscreen agents: Indian perspective, Int J Res Dermatol, Volume 8: Issue 1: Page 168-174, December 2021

Tina Presilla, Raghavendra Rao M V, Aruna Kumari B, Pallavi SP, Dilip Mathai, Mahendra Kumar Varma, Ahmad Khabeer, Vijay Kumar Chennamchetty, The crossing of uncontrolled diabetes mellitus and horrible covid-19 upshot the

hurricane for black fungus, International Journal of Current Medical and Pharmaceutical Research, Volume 7: Issue 7: Page 5846-5851, July 2021

Tina Priscilla, MV Raghavendra Rao, Aruna Kumari, Tiara Calvo, Abrar Khan, Dilip Mathai, D Srinivasa Rao, Mahindra Kumar Verma, Vijay Kumar C, The banality of immunity, death and distress of tobacco smoking (Strike The Right), Global Journal for Research Analysis, Volume 10: Issue 7: Page 1-5, July 2021

Tina Presilla, Raghavendra Rao M V, Mubasheer Ali, Vijay Kumar C, Dilip Mathai, Yogendra Kumar Verma, Vishnu Rao P, Mahendra Kumar Varma, Srinivasa Rao D, The triple threat of the Covid-19 pandemic (White, Yellow and Green Fungus), SSRG International Journal of Medical Science, Volume 8: Issue 8: Page 8-14, August 2021

Tina Priscilla K, Aruna kumari B, Skin a predictor of HIV - warning bells, Global Journal For Research Analysis, Volume 10: Issue 8: Page 64-67, August 2021

Tina Priscilla K, Sreelakshmi Iatha A, Impact of Covid-19 Pandemic on Health Care Workers - An Observational Study, International Journal of Medical and Applied Sciences, Volume 10: Issue 2: Page 36-44, 2021

Tina Priscilla, Raghavendra Rao, Mubasheer Ali, Yogendra Kumar Verma, Dilip Mathai, Maddineni Sai Aditya, Tiara Calvo Leon, Gil C Apacible, MRSA remains a great priority due to the tremendous mortality- A bird's eye view, Global Journal for Research Analysis, Volume 10: Issue 11: Page 1-5, November 2021

### **Editorial Board Membership**

Reviewer, Journal of Cosmetic Dermatology, since 2021

## Professional Societies' Positions

Member, Indian Association of Leprology, since 2021

### 48. Dr U Srinivas

Anaesthesiology, Apollo Institute of Medical Sciences and Research, Hyderabad

#### Presentations

Poster presentation, Mitral Valve Replacement in a Single Lung Patient, National Conference, ISACON, Ahmedabad 2021

### 49. Dr Vinod Kumar

ENT, Apollo Institute of Medical Sciences and Research, Hyderabad

#### Examinership

Examiner, Paper evaluation, KNRUHS, 2021

## APCC

### 50. Dr Abubacker Sulaiman

Radiology, Apollo Proton Cancer Centre

#### Publications

Abubacker Sulaiman, Sumati Sundaraiya, Adhithyan Rajendran, Cardiac tuberculosis on 18F-FDG PET imaging—A great masquerader of cardiac sarcoidosis, Indian J Radiol Imaging, Volume 31: Issue 4: Page 1002-1007, 30th November 2021

### 51. Dr Adhithyan Rajendran

Radiology, Apollo Proton Cancer Centre

#### Publications

Adhithyan Rajendran, Sumati Sundaraiya, Abubacker Sulaiman, Cardiac Tuberculosis on 18F-FDG pet imaging—a great masquerader of cardiac

sarcoidosis, Indian J Radiol Imaging, Volume 31: Issue 4: Page 1002-1007, 30th November 2021

Adhithyan R, Kannath S, Thomas B, Jayadevan E, Sylaja P N, Kesavadas C, Assessment of collaterals using multiphasic CT Angiography in acute stroke: Its correlation with clinical outcomes, Neurol India, Volume 69: Issue 6: Page 1586-1591, November – December 2021

### 52. Dr Ajit Pai

Surgical Oncology, Apollo Proton Cancer Centre

#### Publications

Pai Ajit, Death comes calling: When the physician becomes the patient, Annals of Surgery, Volume 273: Issue 2: Page e44-e45, February 2021

### 53. Dr Anand Murugesan

Anaesthesiology and Pain Management, Apollo Proton Cancer Centre

#### Publications

Murugesan A, Daivam I, Nangia S, Burela N, Panda PK, Raghuraman M S, Pulsed radiofrequency lesioning of the lumbosacral dorsal root ganglion in a patient with lumbosacral plexopathy due to locally advanced pelvic liposarcoma, Indian J Pain, Volume 35: Issue 1: Page 75-78, 27th April 2021

Anand Murugesan, Deepak Gurunathan, M S Raghuraman, Daivam Indumathi, M Thiriloga Sundary, Comparison of 0.125% and 0.2% ropivacaine in continuous lumbar plexus block for postoperative analgesia after total hip arthroplasty, The Indian Anaesthetists' Forum, Volume 22: Issue 2: Page 143-146, July December 2021

Anand Murugesan, M S Raghuraman, Vinod Krishnagopal, Radiofrequency ablation of stellate ganglion for neuropathic pain due to brachial plexus neurofibroma in a patient with neurofibromatosis type 1, The Indian

Anaesthetists' Forum, Volume 22: Issue 2: Page 197-198, 29th September 2021

Anand Murugesan, M. S. Raghuraman, Srinivas Chilukuri, Thirumalai Raja, Hydro-dissection of dorsal scapular nerve for neuropathy post radical neck dissection and radiation: A case report, Indian Journal of Palliative Care, Volume 27: Issue 4: Page 577-579, October - December 2021

#### **54. Dr Arvind Sukumaran**

Neurosurgery, Apollo Proton Cancer Centre

##### **Publications**

Sukumaran A, Hong MA, Riva Cambrin J, Pediatric to Adult Hydrocephalus: A Smooth Transition, Neurol India, Volume 69: Issue Suppl S2: Page 390-394, November - December 2021

#### **55. Dr Ashwathy Susan Mathew**

Radiation Oncology, Apollo Proton Cancer Centre

##### **Publications**

Mathew AS, Dawson LA, Current understanding of ablative radiation therapy in hepatocellular carcinoma, J Hepatocell Carcinoma, Volume 8: Page 575-586, 14th June 202

#### **56. Dr Bhawna Sirohi**

Medical Oncology, Apollo Proton Cancer Centre

##### **Publications**

Sirohi B, Desai A, Mathew A, Clinical Trial Access in Low- and Middle-Income Countries: A Case Study on India, Cancer Invest, Volume 39: Issue 9: Page 685-689, October 2021

Bhawna Sirohi Emma Lidington, Carla Vlooswijk, Kate Stallard, Emily Travis, Eugenie Younger, Penelope Edwards, Meera Nandhabalan, Nikki Hunter, Neelam Sarpal, Denise Flett, Amy Din, Naureen Starling, James Larkin, Susannah Stanway,

Marielle Nobbenhuis, Susana Banerjee, Zoltan Szucs, Anne-Sophie Darlington, Michael Gonzalez, Winette T A van der Graaf, Olga Husson, This is not part of my life plan': A qualitative study on the psychosocial experiences and practical challenges in young adults with cancer age 25 to 39 years at diagnosis, Eur J Cancer Care (Engl), Volume 30: Issue 5: Page e13458, September 2021

Sirohi B, Stanway S, Lodge M, Sullivan R, Diprose K, Young AM, Crisp N, Lewis P, Eden T, Aggarwal A, Nadin A, Chinegwundoh F, Byrne G, Cowan R, The UK's contribution to cancer control in low-income and middle-income countries, Lancet Oncol, Volume 22: Issue 9: Page e410-e418, September 2021

Sirohi B, Soomers VLMN, Lidington E, Gonzalez MA, Darlington AS, van der Graaf WTA, Husson O, The prolonged diagnostic pathway of young adults (Aged 25-39) with cancer in the United Kingdom: Results from the Young Adult Cancer Patient Journey Study, J Clin Med, Volume 10: Issue 20: Page 4646, 11th October 2021

Sirohi B, Lidington E, Darlington AS, Din A, Stanway S, Banerjee S, Szucs Z, Gonzalez M, Sharma A, van der Graaf WTA, Husson O, Describing unmet supportive care needs among young adults with cancer (25-39 Years) and the relationship with health-related quality of life, psychological distress, and illness cognitions, J Clin Med, Volume 10: Issue 19: Page 4449, 28th September 2021

Sirohi B, Chaudhari VA, Mitra A, Gupta V, Ostwal V, Ramaswamy A, Engineer R, Shetty N, Bal M, DeSouza A, Bhandare MS, Shrikhande SV. Neoadjuvant therapy in borderline resectable pancreatic cancer: Outcomes in the era of changing practices and evolving evidence, Surgery, Volume 171: Issue 5: Page 1388-1395, December 2021

Sirohi B, Gupta P, Dutta U, Rana P, Singhal M, Gulati A, Kalra N, Soundararajan R, Kalage D, Chhabra M, Sharma V, Gupta V, Yadav TD, Kaman L, Irrinki S,

Singh H, Sakaray Y, Das CK, Saikia U, Nada R, Srinivasan R, Sandhu MS, Sharma R, Shetty N, Eapen A, Kaur H, Kambadakone A, de Haas R, Kapoor VK, Barreto SG, Sharma AK, Patel A, Garg P, Pal SK, Goel M, Patkar S, Behari A, Agarwal AK, Javle M, Garcea G, Nervi F, Adsay V, Roa JC, Han HS, Gallbladder reporting and data system (GB-RADS) for risk stratification of gallbladder wall thickening on ultrasonography: an international expert consensus, *Abdom Radiol (NY)*, Volume 47: Issue 2: Page 554-565, 1st December 2021

#### Professional Societies' Positions

Member, ASCO's Health Equity and Outcomes Committee, since 2021

#### **57. Dr Indumathi Daivam**

Anaesthesiology and Pain Management, Apollo Proton Cancer Centre

#### Publications

Daivam I, Murugesan A, Panda PK, Jalali R, Challenges of repetitive sedation in a 16-month old child undergoing proton beam therapy, *Indian J Anaesth*, Volume 65: Issue 5: Page 416-418, May 2021

#### **58. Dr Manjula Rao**

Breast Surgical Oncology, Apollo Proton Cancer Centre

#### Publications

Manjula Rao, Manikanadan Dhanushkodi, Locally Advanced Breast Cancer—A Narrative Review of Management in the Indian Scenario, *Indian Journal of Medical and Paediatric Oncology*, Volume 42: Issue 2: Page 137-145, 2021

#### **59. Dr Naveen Hedne**

Surgical Oncology, Apollo Proton Cancer Centre

#### Publications

Hedne N, James BL, Sunny SP, Heidari AE, Ramanjinappa RD, Lam T, Tran AV, Kankanala S, Sil S, Tiwari V, Patrick S, Pillai V, Shetty V, Shah D, Shah N, Chen ZP, Kandasarma U, Raghavan SA, Gurudath S, Nagaraj PB, Wilder-Smith P, Suresh A, Kuriakose MA, Validation of a point-of-care optical coherence tomography device with machine learning algorithm for detection of oral potentially malignant and malignant lesions, *Cancers (Basel)*, Volume 13: Issue 14: Page 3583, 17th July 2021

#### **60. Dr Noufal MP**

Medical Physicist, Apollo Proton Cancer Centre

#### Publications

Noufal MP, Sharma SD, Patro K, Arjunan M, Krishnan G, Tyagarajan R, Rana S, Chillukuri S, Jalali R, Impact of spot positional errors in robustly optimized intensity-modulated proton therapy plan of craniospinal irradiation, *Radiol Phys Technol*, National Library of Medicine, Volume 14: Issue 3: Page 271-278, 5th June 2021

Noufal MP, Sharma SD, Krishnan G, Sawant M, Gaikwad U, Jalali R, Robustly optimized hybrid intensity-modulated proton therapy for craniospinal irradiation, *J Can Res Ther*, doi: 10.4103/jcrt.JCRT\_740\_20, 18th August 2021

Noufal MP, Widesott L, Sharma SD, Righetto R, Cianchetti M, Schwarz M. The role of plan robustness evaluation in comparing protons and photons plans - an application on impt and imrt plans in skull base chordomas, *J Med Phys*, Volume 45: Issue 4: Page 206-214, 2nd February 2021

Noufal MP, Arjunan M, Krishnan G, Sharma DS, Patro KC, Thiagarajan R, Srinivas C, Jalali R, Dosimetric impact of random spot positioning errors in intensity modulated proton therapy plans of small and large volume tumors, *Br J Radiology*, Volume 94: Issue 1119, 2nd February 2021

Noufal MP, Arjunan M, Sharma DS, Kaushik S, Krishnan G, Patro KC, Rajesh T, Jalali R, A novel hybrid 3D dose reconstruction approach for pre-treatment verification of intensity modulated proton therapy plans, Phys Med Biol, Volume 66: Issue 5: Page 055015, 19th February 2021

## 61. Dr Pankaj Kumar Panda

Research Officer, Apollo Proton Cancer Centre

### Editorial Board Membership

Associate Editor, South Asian Journal of Cancer, since 2021

### Examinership

Examiner, School of Psychology, PhD Thesis, The University of Sydney Australia March-April 2021

## 62. Dr Rakesh Jalali

Radiation Oncology, Apollo Proton Cancer Centre

### Publications

Jalali R, Krishnatry R, Manjali JJ, Chinnaswamy G, Chatterjee A, Goda JS, Janu A, Sahu A, Gupta T, Clinical approach to re-irradiation for recurrent diffuse intrinsic pontine glioma, Japanese Journal of Clinical Oncology, Volume 51: Issue 5: Pages 762-768, May 2021

Jalali R, Kumar G, DSouza H, Menon N, Srinivas S, Vallathol DH, Boppana M, Rajpurohit A, Mahajan A, Janu A, Chatterjee A, Krishnatry R, Gupta T, Patil VM, Safety and efficacy of bevacizumab biosimilar in recurrent/ progressive glioblastoma, Ecancermedicalscience, Volume 15: Page 1166, 13th January 2021

Jalali R, Barange M, Epari S, Gurav M, Shetty O, Sahay A, Shetty P, Goda J, Moiyadi A, Gupta T, Tert promoter mutation in adult glioblastomas: It's Correlation with other relevant molecular markers, Neurol India, Volume 69: Issue 1: Page 126-134,

January – February 2021

Jalali R, Patil R, Gupta T, Maitre M, Dasgupta A, Sahay A, Epari S, Shirsat N, Chatterjee A, Krishnatry R, Goda JS, Moiyadi A, Patil V, Chinnaswamy G, Bano N, Clinical Audit of Survival Outcomes and Prognostic Factors in Adolescents and Adults with Medulloblastoma, J Adolesc Young Adult Oncol, Volume 11: Issue 1: Page 68-77, 23rd April 2021

Jalali R, Bajpai J, Kapoor A, Gounder MM, Checkpoint inhibitors and radiotherapy in refractory malignant melanocytic schwannoma with Carney complex: first evidence of efficacy, BMJ Case Rep, Volume 14: Issue 5: Page e240296, 28th May 2021

Rakesh Jalali, Akash Deogharkar, Satishkumar Vishram Singh, Harish Shrikrishna Bharambe, Raikamal Paul, Aliasgar Moiyadi, Atul Goel, Prakash Shetty, Epari Sridhar, Tejpal Gupta, Naina Goel, Nikhil Gadewal, Sahana Muthukumar, Neelam Vishwanath Shirsat, Downregulation of ARID1B, a tumor suppressor in the WNT subgroup medulloblastoma, activates multiple oncogenic signaling pathways, Hum Mol Genet, Volume 30: Issue 18: Page 1721-1733, 28th August 2021

Jalali R, Anand S, Chatterjee A, Gupta T, Panda P, Moiyadi A, Epari S, Patil V, Krishnatry R, Goda JS, Upfront therapy of aggressive/high-risk low-grade glioma: single institution outcome analysis of temozolamide-based radio-chemotherapy and adjuvant chemotherapy, World Neurosurg, Volume 154: Page e176-e184, October 2021

Jalali R, Madhugiri VS, Subekshanan V, Dutt A, Moiyadi A, Epari S, Shetty P, Gupta T, Dutt AK, Biomarkers of systemic inflammation in patients with glioblastoma: An analysis of correlation with tumour-related factors and survival, Neurol India, Volume 69: Issue 4: Page 894-901, July – August 2021

Jalali R, Paul R, Bapat P, Deogharkar A, Kazi S, Singh SKV, Gupta T, Sridhar E, Moiyadi A, Shetty P, Shirsat NV, MiR-592 activates the mTOR kinase, ERK1/ERK2 kinase signaling and imparts neuronal differentiation signature characteristic of group 4 medulloblastoma, *Hum Mol Genet*, Volume 30: Issue 24: Page 2416-2428, 30th November 2021

Jalali R, Kotecha R, Dutta D, Muacevic A, Editorial: Novel Applications of Stereotactic Body Radiotherapy (SBRT), *Front Oncol*, Volume 11: Page 760078, 3rd September 2021

Jalali R, Sudarsan RT, Advances in radiation therapy in malignant brain tumors, *Int J Neurooncol*, Volume 4: Issue Suppl S1: Page 208-216, 2021

### 63. Dr Raymond Dominic Savio

Critical Care, Apollo Proton Cancer Centre

#### Publications

Savio RD, Procalcitonin (in COVID-19): The incessant quest, *Indian J Crit Care Med*, Volume 25: Issue 1: Page 1-2, 2021

Raymond Dominic Savio, Pratheema Ramachandran, R Ebenezer, Nagarajan Ramakrishnan, Impact of covid-19 on non-covid intensive care unit service utilization, case mix and outcomes: a registry-based analysis from indian registry of intensive care (iris) group, *Wellcome Open Research* Volume 6: Issue 159: Page 1-19, 10th November 2021

### 64. Rishan Thimma Sudarsan

Radiation Oncology, Apollo Proton Cancer Centre

#### Publications

Rishan Thimma Sudarsan, Srinivas Chilukuri, Noufal Manthala Padannayil, Pankaj Kumar Panda, Rakesh Jalali, Introduction of Proton Beam Therapy in Intracranial Germ Cell Tumors in India, *Indian Pediatr*, Volume 58: Issue 2: Page 182-183, 2021

### 65. Dr Roopesh Kumar

Neurosurgery, Apollo Proton Cancer Centre

#### Chapters contributed to text books

Dr Roopesh Kumar, Intracranial ependymoma, Chapter 66, *Comprehensive neurosurgery*, Editor- A Vincent Thamburaj, Sanjai Behari, Sachin Chemate, Volume 2, Bohr publications, 2021

Dr Roopesh Kumar, Orbital tumours, Chapter 81, *Comprehensive neurosurgery*, Editor- A Vincent Thamburaj, Sanjai Behari, Sachin Chemate, Volume 2, Bohr publications, 2021

#### Publications

Roopesh Kumar V R, Sanjeevi V, More than just a urinary catheter: achieving hemostasis using foley catheter in deep cerebral cavities—technical nuances, *Springer, Egypt J Neurosurgery*, Volume 36: Issue 22, 25th October 2021

Roopesh Kumar Vadivel Rathakrishnan, Sunil Kapilavayi Raghavendra, Managing the anomalous vertebral artery in C1-C2 stabilization for congenital atlantoaxial instability, *J Neurol Surg B Skull Base*, Volume 82: Issue (Suppl 1): Page S63-S64, February 2021

V R Roopesh Kumar, Vishwaraj Ratha, Nishanth Sampath, Sudhakar Subramaniam, Technical considerations in awake craniotomy with cortical and subcortical motor mapping in preadolescents, pushing the envelope, *Pediatr Neurosurg*, Volume 56: Issue 2: Page 171-178, 23rd March 2021

#### Lectures

Lecture, Endoscopic management of fungal ventriculitis, *Neuroendocon*, Hyderabad, April 2021

Lecture, Acetazolamide challenged MRI perfusion for identifying patients with stroke, *Neurovascon 2021*, PGI, Chandigarh, September 2021

Lecture, Microsurgical clip reconstruction of giant ICA Aneurysm, Neurovascon 2021, PGI Chandigarh, 2021

Lecture, Microsurgical nuances of trans cranial approach for craniopharyngioma, SKULLBASECON, AIIMS, Jodhpur, October 2021

Lecture, Awake craniotomy for thalamic glioma –achieving safe maximal excision, NSICON, Virtual, December 2021

Lecture, Complications of intraoperative neuromonitoring, Asia Pacific IONM Meeting, Virtual, April 2021

Lecture, Microsurgical excision of thalamic gliomas, SWONS, Chennai, November 2021

Lecture, Surgical strategies in medial sphenoid wing meningiomas, International Meningioma Society Meeting, Virtual, June 2021

Live, A complex recurrent pituitary adenoma, Live Operative workshop, Neuroendocon, Apollo Hospitals, Hyderabad, April 2021

Faculty, Microvascular anastomosis, Workshop, PGI, Chandigarh, September 2021

#### Editorial Board Membership

Associate Editor, Journal of cerebrovascular sciences, since 2019

Editor, Video section, Neurology India, since 2018

#### Professional Societies' Positions

Joint Secretary, Associations of Neurosurgeons, Tamilnadu, since 2019

Executive Committee, Neurological Society of India, since 2021

Chairman, Young Neurosurgeons forum of India, since 2021

#### Awards

Best Paper Award, Asia Pacific Stroke Congress, Virtual, December 2021

### 66. Dr Sapna Nangia

Radiation Oncology, Apollo Proton Cancer Centre

#### Publications

Nangia S, Singh M, Khosa R, Rout SK, Singh G, Oomen S, The hippocampus – a new OAR for postoperative radiotherapy for bucco-alveolar cancer? A dosimetric and biological analysis, Advances in Radiation Oncology, Volume 6: Issue 3: Page 100681, May–June 2021

#### Orations

Lecture, 11th Dr G N Agarwal Oration, King George's Medical University, 34th Foundation Day Celebration, 2021

#### Awards

Dr MC Pant Oration award, 32nd UP AROICON, Agra, 18th – 19th December

### 67. Dr Srinivas Chilukuri

Radiation Oncology, Apollo Proton Cancer Centre

#### Publications

Chilukuri S, Murthy V. Adjuvant radiation for prostate cancer: too early to abandon?, BJU Int, Volume 128: Issue 1: Page 23-24, July 2021

### 68. Dr Sristi Patodia

Critical Care, Apollo Proton Cancer Centre

#### Publications

Sristi Patodia, Ashwin Mani, Nagarajan Ramakrishnan, Impact of covid-19 on non-covid intensive care unit service utilization, case mix and outcomes: a registry-based analysis from Indian

registry of intensive care (iris) group, Wellcome Open Research Volume 6: Issue 159: Page 1-19, 10th November 2021

## 69. Dr Sujith Kumar Mullapally

Breast Surgical Oncology, Apollo Proton Cancer Centre

### Chapters contributed to text books

Dr Sujith Kumar Mullapally, Solid tumours- An Overview, Chapter 160, Post graduate Medicine, Editor- Gurpreet S Wander, 1st edition, Jaypee Brothers, Page 1263- 1273, July 2021

### Publications

Mullapally SK, The nature of life, Indian Journal of Medical and Pediatric Oncology, Volume 42: Issue 2: Page 177, 2021

Mullapally SK, Panda PK, Bevacizumab in recurrent glioma: variable doses, volatile benefits, Cancer Res Stat Treat, Volume 4: Issue 3: Page 576-577, October 2021

Mullapally SK, Bajpai J, Kapoor A, Ghosh J, Rekhi B, Pazopanib in metastatic soft tissue sarcomas: testing the waters in developing world, Indian J Cancer, Volume 58: Issue 3: Page 365-370, July-September 2021

Mullapally SK, Revendran J, Advanced lung cancer: the scope of the pulmonologist, Cancer Res Stat Treat, Volume 4: Issue 3: Page 599-600, 8th October 2021

Mullapally SK, Vadgaonkar RA, Nayak SS, Doni S, Digumarti L, Digumarti R, Distinct patterns of occurrence, common associations, and survival of patients with second primary malignancies: A 5-year single institute experience with review of literature, Indian J Pathol Microbiology, Volume 64: Issue 4: Page 725-731, October- December 2021

Mullapally SK, Dr G S Bhattacharya, A life full of

dimensions (1958-2021), National Library of Medicine, South Asian J Cancer, Volume 10: Issue 3: Page 137, 20th December 2021

### Lectures

Lecture, Updates in lung cancer-2021, Department of Pulmonology, Sree Balaji Medical College, Chromepet, Chennai, 24th November 2021

Lecture, Targeted therapy and immunotherapy-updates, Malabar Cancer Care Society, Kannur, Kerala, 8th October 2021

### Presentations

Oral Paper Presentation, Cervical cancer screening in malabar region of Kerala: lessons from two decades of community-based screening, 17th World Congress for Cervical Pathology and Colposcopy, Hyderabad, 1st – 5th July 2021

### Editorial Boards Membership

Executive Editor, South Asian Journal of Cancer, since 2021

Editorial Board, Indian Journal of Medical and Paediatric Oncology, since 2020

Editorial Board, Indian Journal of Cancer, since 2020

### Professional Societies' Positions

Member, Indian Society of Medical and Paediatric Oncology, since 2017

Member, Indian Society of Oncology, since 2010

Member, Association of Radiation Oncologists of India, since 2010

### Member of task forces of the Government of India or State Governments

Chairman, Subcommittee for ICMR Task force for Kidney Cancers, 2021

Chairman, Subcommittee for ICMR Task force for Testicular cancers, 2021

## 70. Dr Venkatesan Sanjeevi

Neurosurgery, Apollo Proton Cancer Centre

### Publications

Sanjeevi V, Roopesh Kumar V R, More than just a urinary catheter: achieving hemostasis using foley catheter in deep cerebral cavities—technical nuances, Springer, Egypt J Neurosurgery, Volume 36: Issue 22, 25th October 2021

## 71. Dr Vishnu Ramanujan

Orthopaedic Oncosurgery, Apollo Proton Cancer Centre

### Publications

Ramanujan V, Shah A, Muralidharan K, AnRaja A, Outcomes of vascular resection and reconstruction in extremity soft tissue sarcoma and bone tumors. Vasc Specialist Int, Volume 37: Issue 1: Page 22-28, 31st March 2021

Vishnu Ramanujan, Anand Raja, Chandra Kumar Krishnan, Vivek Patel, In situ preparation for nerve preservation in extremity soft tissue sarcoma. Point of surgical technique, Indian J Surg Oncol, Volume 12: Issue 3: Page 641-646, September 2021

## Ahmedabad

## 72. Dr Chirag Desai

Surgical Gastroenterology, Apollo Hospitals, Ahmedabad

### Professional Societies' Positions

President, Ahmedabad Surgeons Association, since 2021

### Awards

India Book of Records Award, Heaviest Tumor Removal in India, 2021

## 73. Dr Jitendra Parmar

Radiology, Apollo Hospitals, Ahmedabad

### Publications

Parmar J, Patel T Shah S, Prasad SB Desai M, Kothari J Dubey P, Singh M Chaudhari N, V Lobar, Pneumonia in Covid-19: a case report of two patients for an atypical imaging pattern, Current Trends in Medical and Clinical Case Reports, Open Access Journal, Volume 2.2: Issue 2: Page 1-4, 11th March 2021

Jitendra Parmar, Tapan Patel, Sandip Shah, Jay Kothari, Sameer Dani, Sagar Vyas, Spontaneous renal artery dissection in Covid-19 pneumonia: Potential danger of cytokine storm, Page 6696443, DOI: 10.1155/2021/6696443, 10th April 2021

## 74. Dr Kirty Nahar

Obstetrics and Gynaecology, Apollo Hospitals, Ahmedabad

### Publications

Kirty Nahar, Nikita Nahar, Prosthetic mitral valve thrombosis in a known case of rheumatic heart disease at 37 weeks pregnancy: a case report, International Journal of Reproduction, Contraception, Obstetrics and Gynecology, Int J Reprod Contracept Obstet Gynecol, Volume 10: Issue 8: Page 3254-3260, August 2021

Kirty Nahar, Nikita Nahar, Radical vulvectomy for a rare case of squamous cell carcinoma vulva: a case report, International Journal of Reproduction, Contraception, Obstetrics and Gynecology, Int J Reprod Contracept Obstet Gynecol, Volume 10: Issue 8: Page 3215-3222, August 2021

## 75. Dr Manoj K Singh

Critical Care, Apollo Hospitals, Ahmedabad

### Publications

Manoj K Singh, Bharat Jagiasi, Prashant Nasa, Gunjan Chanchalani, Ahsan Ahmed, Ajith Kumar AK, Kanwalpreet Sodhi, Kishore Mangal, Nitesh Gupta, Prasanna U Bidkar, Ranvir S Tyagi, Reshu G Khanikar, Swagata Tripathy, Swapna Khanzode, Kesavarapu Subba Reddy, Saurabh Saigal, Vijay Anand Sivakumar, Yash Javeri, Seema S Tekwani, Variation in therapeutic strategies for the management of severe COVID-19 in India: A nationwide cross-sectional survey, Int J Clin Pract, Volume 75: Issue 10: Page e14574, October 2021

## 76. Dr Mukesh Sharma

Interventional Neurology, Apollo Hospitals, Ahmedabad

### Publications

Mukesh Sharma, Sucheta Mudgerikar, Anand Alurkar, Aashka Ponda, Tharpal Maheshwary, Single-center experience using the STENT RETRIEVER for the treatment of acute ischemic stroke with distal arterial occlusions (M2, M3, A2, and P2 segments), Journal of Vascular and Interventional Neurology, Volume 12: Issue 2: Page 14-17, July 2021

## 77. Dr Sameer Dani

Cardiology, Apollo Hospitals, Ahmedabad

### Publications

Sameer Dani, C Venkata S Ram, Abraham Oomman, Rakesh Gupta, K O Ramachari, G Praveen Kumar, Jayanthi Swaminathan, Sathyanarayana Kondati, Ishita Sengupta, Correlation Between Ambulatory Blood Pressure Monitoring and Office Blood Pressure Measurement in Patients with Hypertension: A

Community Study, Am J Med Sci, Volume 362: Issue 6: Page 546-552, December 2021

## 78. Dr Shravan Bohra

Gastroenterology and Hepatology, Apollo Hospitals, Ahmedabad

### Chapters contributed to text books

Dr Shravan Bohra, Indications of Liver Transplantation, Indian Scenario, Essentials of Liver Transplant: An Indian perspective, Editors- Pathik Parikh, 1st edition, Salubris Medical Publishers, Page 1-9, 2021

## 79. Dr Sucheta Mudgerikar

Neurology, Apollo Hospitals, Ahmedabad

### Publications

Sucheta Mudgerikar, Mukesh Sharma, Anand Alurkar, Aashka Ponda, Tharpal Maheshwary, Single-center experience using the STENT RETRIEVER for the treatment of acute ischemic stroke with distal arterial occlusions (M2, M3, A2, and P2 segments), Journal of Vascular and Interventional Neurology, Volume 12: Issue 2: Page 14-17, July 2021

## Bangalore

## 80. Dr A N Venkatesh

Emergency Medicine, Apollo Hospitals, Bangalore

### Lectures

Talk, COVID in India, Emergency Medicine International Conference, Antalya, Turkey, 25th – 28th November 2021

Talk, Does Iodine based contrast media cause renal injury? Yes or No, ESEM (Emirates Society of Emergency medicine) ICEM – International Conference on Emergency Medicine, Virtual, 2021

Talk, Lung protective strategies for ARDS IN ED, with emphasis on Covid -19 ARDS, SEMICON, West Bengal, 7th – 9th December 2021

Organising Chair, EMCON (International Emergency Medicine Conference), Bangalore, 19th -21st November 2021

#### Professional Societies' Positions

National President, Society for Emergency medicine, India, since 2020

Board Member, Finance Committee, International Federation of Emergency Medicine – IFEM, since 2021

Member, New and Advanced Technologies Special Interest Group (NATSIG), International Federation of Emergency Medicine – IFEM, since 2021

Member, Quality and safety special interest group (QISIG), International Federation of Emergency Medicine – IFEM, since 2021

Member, Disaster Medicine Special interest group (DMSIG), International Federation of Emergency Medicine – IFEM, since 2021

#### Examinership

Examiner, MRCEM (Membership of Royal College of Emergency Medicine), UK, 16th – 18th June 2021

Examiner, MRCEM (Membership of Royal College of Emergency Medicine), UK, 12th – 14th July 2021

Examiner, MRCEM (Membership of Royal College of Emergency Medicine), UK, 11th – 13th October 2021

### 81. Dr Anoop P

Hematology, Apollo Hospitals, Bangalore

#### Publications

Parameswaran Anoop, Channappa N Patil, Rajeeva Moger, Swarna Shivakumar, Rohan K Aurangabadwala, Ravindra Mehta, Refractory Autoimmune Hematological Presentations of Undiagnosed Tuberculosis, Journal of The Association of Physicians of India, Volume 69, Page 86-88, September 2021

### 82. Dr Aruna R Patil

Radiology, Apollo Hospitals, Bangalore

#### Publications

Aruna R Patil, Sunder Narasimhan, Dual Aneurysm Formation in an Occupationally Predisposed Male: Atypical Hypothenar Hammer Syndrome, Indian Journal of Radiology and Imaging, Volume 31: Issue 4: Page 1027-1030, 30th November 2021

Aruna R Patil, Amit Bansal, Nilotpal Chakma, Ravishankar Bhat, Swarna Shivakumar, Magnetic Resonance Imaging in Giant Perianal Epidermoid, Journal of Gastrointestinal and Abdominal Radiology, Volume 5: Issue 1: Page 55-57, 2021

Aruna R Patil, Apurva Javalgi, Manohara Babu, Swarna Shivakumar, Imaging in a case of classic Trevor's disease, Indian journal of Musculoskeletal Radiology, Volume 3: Issue 2: Page 133-136, 20th December 2021

Aruna R Patil, Manish Samson, Imaging in calcific tendinitis of linea Aspera: A case report and review of literature, Indian Journal of Musculoskeletal Radiology, Volume 3: Issue 2: Page 129-132, 20th December 2021

Aruna R Patil, Madhukar Medipally, Amit Bansal, Nilotpal Chakma, Computed Tomography Diagnosis of Posterior Rectus Sheath Hernia Causing Intermittent Small Bowel Obstruction, Apollo Medicine, Volume 18: Issue 2: Page 142-145, 17th May 2021

Aruna R Patil, Painful Os peroneum syndrome, RSNA case collection, doi: 10.1148/cases.20212609, June 2021

### Lectures

Lecture, Adnexal torsion, Society of Abdominal Radiology (SAR), Indian Plenary Session, Virtual, 20th -25th March 2021

Lecture, Ventral hernia imaging, ISGAR – Indian society of GI and Abdominal Radiology, 4th Annual Conference, Virtual, 18th – 19th September 2021

Lecture, Film panel discussion, ISGAR – Indian society of GI and Abdominal Radiology, Bangalore, 18th – 19th September 2021

Organizing secretary, ISGAR – Indian society of GI and Abdominal Radiology, Place 18th – 19th September 2021

Lecture, Imaging in pediatric Covid-19, 8th Bengaluru PEDICON, Bangalore, 17th September 2021

Lecture, Workshop on bedside imaging, 8th Bengaluru PEDICON, Bangalore, 17th September 2021

Lecture, Imaging in pediatric Covid, BBMP initiative at NIMHANS, Virtual, 9th June 2021

Lecture, Meckels diverticulum imaging, Indian Society of Gastrointestinal and Abdominal Radiology, ISGAR, Virtual, May 2021

Focused assessment with sonography in trauma (FAST) and focused assessment for free fluid, 8th Bengaluru PEDICON, Bangalore, 17th September 2021

### Presentations

Poster presentation, Sciatic Nerve Imaging, RSNA (Radiological Society of North America), Chicago, November 2021

Poster presentation, Gonadal vein imaging, RSNA (Radiological Society of North America), Chicago, November 2021

### Professional Societies' Positions

Joint Secretary, 4th Annual conference, Indian Society of Gastrointestinal and Abdominal Radiology, Apollo Hospitals, Bengaluru, 18th – 19th September 2021

Vice president, ABCF (Apollo Bangalore Consultant Forum), since October 2021

### Awards

Young Researcher Award, Apollo Health Education and Research Foundation, 5th February 2021

Distinguished Young Achiever Award, Association of National Board Accredited Institutions, 5th September 2021

### Examinership

Examiner, DNB Radiology, FAT- practicals, NBE, Bangalore, July 2021

## 83. Dr Chitra Ramamurthy

Obstetrics and Gynecology, Infertility Specialist, Apollo Hospitals, Bangalore

### Professional Societies' Positions

Member, Indian Medical Association

Member, Bangalore Society of Obstetrics and Gynaecology

Member, Obstetrics and Gynaecology Society of India

Member, Gynaec Oncology Society of India

Member, European Society of Human Reproduction and Embryology (ESHRE)

Member, Indian Society for Assisted Reproduction

Founder Member, Children Heart Foundation

#### **84. Dr Deepti B S**

Neuroanaesthesia and Critical Care, Apollo Hospitals, Bangalore

#### **Publications**

Deepti Srinivas, Keshavan Venkatesh, Archisha Kapoor, Rashmi Patil, Unilateral Neurogenic Pulmonary Edema Following Cerebral Aneurysmal Clipping: An Atypical Presentation of Hypoxemia, Journal of Neuroanaesthesiology and Critical Care, <https://doi.org/10.1055/s-0041-1739346>, 19th November 2021

#### **Presentations**

Speaker, Thromboprophylaxis in neurosurgical patients-how aggressive how feasible?, Indian Society of Neuroanaesthesiology and Critical care Conference, Virtual, January 2021

#### **85. Dr Mala Prakash**

Obstetrics and Gynecology, infertility Specialist, Apollo Hospitals, Bangalore

#### **Professional Societies' Positions**

Member, Indian Medical Association

Member, Bangalore Society of Obstetrics and Gynecology

Member, European Society of Human Reproduction and Embryology (ESHRE)

Member, Indian Society for Assisted Reproduction (ISAR)

#### **86. Dr Rashmi Devaraj**

Neurology, Apollo Hospitals, Bangalore

#### **Publications**

Dr Rashmi Devraj, Aseptic meningitis followed by bilateral optic neuritis: an uncommon phenotype of MOGAD, Neurology Clinical Practice, (International green journal), Volume 11: Issue 5: Page e790-793, October 2021

#### **Professional Societies' Positions**

Life Member, Indian Academy of Neurology

Life Member, Indian Academy of Pediatrics

Member, Global Covid Neuro Coalition

#### **87. Dr P Satishchandra**

Neurology, Apollo Hospitals, Bangalore

#### **Publications**

Satishchandra P, Rajasekaran AK, Shivashankar N, Sinha S, Saini J, Subbakrishna DK, Auditory temporal ordering in patients with medial temporal lobe epilepsy with and without hippocampal sclerosis, Neurol India, Volume 69: Issue 2: Page 414-418, March- April 2021

Satishchandra P, Beghi E, Michael BD, Solomon T, Westenberg E, Winkler AS, Approaches to understanding Covid-19 and its neurological associations, Covid-19 Neuro Research Coalition, Ann Neurol, Volume 89: Issue 6: Page 1059-1067, 9th April 2021

Satishchandra Parthasarthy, R Srinivasa, Sanjib Sinha, Sudhir Kothari, Rahul Baviskar, Sita Jayalakshmi, Bhawana Sharma, Ravindra K Garg, Joy Desai, Nandan Yardi, Meenakshi Sundaram Salvadeeswaran, Sangeeta Ravat, Mohan Das, Roop Gursahani, Swaroop Suresh, Alok Rasal, Sami Elmoufti, Adjunctive Brivaracetam in Indian Patients with Uncontrolled Focal Epilepsy: Results from a Pooled Analysis of Two Double-Blind, Randomized, Placebo-Controlled Trials, Neurol India, Volume 68: Issue 6: Page 1400-1408, 2021

Satishchandra P, Poyuran R, Mahadevan A, Mhatre R, Arimappamagan A, Sinha S, Bharath RD, Rao MB, Saini J, Raghavendra K, Mundlamuri RC, Sadashiva N, Rajeswaran J, Chandramouli BA, Shankar SK, Neuropathological spectrum of drug resistant epilepsy: 15-years-experience from a tertiary care centre, *J Clin Neurosci*, Volume 91: Page 226-236, September 2021

Satishchandra P, Kadam R, Arimappamagan A, Bhaskara Rao M, Sadashiva N, Mundlamuri RC, Raghavendra K, Asranna A, Viswanathan LG, Mariyappa N, Kulanthaivelu K, Mangalore S, Nagaraj C, Saini J, Bharath RD, Rajeswaran J, Mahadevan A, Sinha S, Posterior quadrant disconnection for childhood onset sub-hemispheric posterior head region epilepsy: Indications in an Indian cohort and outcome, *Pediatr Neurosurg*, Volume 56: Issue 6: Page 538-548, November 2021

Satishchandra P, Devaraj R, Shafi P, Nagesh C, Alladi S, Aseptic Meningitis Followed by Bilateral Optic Neuritis: An Uncommon Phenotype of MOGAD, *Neurol Clin Pract*, Volume 11: Issue 5: Page 790-793, October 2021

Satishchandra P, R C Mundlamuri, Divate P, Neuropathy MPV17 gene variant mutation presenting as leuco-encephalopathy with peripheral, *Neurology India*, Volume 69: Issue 6: Page 1817-1819, 23rd December 2021

### Orations

Chaired, IAN Oration, 28th Indian Academy of Neurology Conference, Bangalore, 11th -14th November 2021

Chaired, Baldevsingh Oration, President Neurological Society of India (NSI), 28th Indian Academy of Neurology Conference, Bangalore, 11th -14th November 2021

Chaired, Award paper session in movement disorders, 28th Indian Academy of Neurology

Conference, Bangalore, 11th -14th November 2021

### Lectures

Talk, Developing Neurosciences in India, NIMHANS Experience, Trivandrum Neuro Club Meeting, 20th May 2021

Talk, Status epilepticus among the elderly, 11th June 2021

Chaired a session, New challenges of epilepsy care in the aging society, 3rd June 2021

Lecture, 28th Indian Academy of Neurology Conference, Bangalore, 11-14th Nov, 2021

Chaired a publication session, Driving and epilepsy during IBEs Epilepsy and Society Symposium, 13th June 2021

Lecture, Epilepsy and infections, Networking Academic session, 12th June 2021

Moderator, Panel Discussion, Positioning of newer AEDS in the current era, 26th September, 2021

Chaired, Epivision- On SANAD, Meet, Place, 28th August 2021

Panel Discussion, Advisory Board Meeting, Tysabri in India, 29th August 2021

Chairperson, Symposium on Neurodegeneration and Epilepsy, 5th AOON and Neuropathology Society of India (NPSI) conference, 26th September 2021

Panel Discussion, Recent advances in the diagnosis and management of strokes, Apollo hospitals, Virtual, 29th October 2021

Lecture, Beat epilepsy stay informed, Epilepsy and Driving, Indian Epilepsy Association (IEA), 3rd Webinar, 31st October, 2021

## Presentation

Participated, XIII Asia Oceania Epilepsy Conference, Japan, 10th -13th June 2021

## Editorial Board Membership

Editorial Member, Journal of Clinical and Scientific Research, SVIMS, Tirupathi

Reviewer, Epilepsy Research, Epilepsy and Behavior, Neurology India, Journal Annals of Indian Academy of Neurology

## Professional Societies' Positions

Chairman, Research panel on Stroke at NCDIR, Bangalore, since 2019

Scientific Advisory Member (SAC), National Centre for Disease Informatics and Research (NCDIR), Bangalore, since 2019

Member, Research Advisory Committee (RAC), International Institute of Information Technology (IIIT), Bangalore, since 2018

Member, Evaluation committee for Clinical Trials, Department of Health research (DHR), Government of India, since

President, Indian Epilepsy Association (IEA), since 2021

Life member, Indian Epilepsy Congress (IEC) Trust, since 2020

## Member of task forces of the Government of India or State Governments

Member, ICMR Task force Expert, National Registry on Multiple Sclerosis and other allied demyelinating disorders, ICMR, New Delhi

Member, ICMR, Task force on Dementia and Vascular Cognitive impairment

## Awards

Fellow, Karnataka Science and Technology, 2021

## 88. Dr Rani Bhat

Gynecological Oncology, Apollo Hospitals, Bangalore

## Publications

R Bhat, K Sumanth, V Dakheria, Risk factors in young reproductive women with endometrial cancer: an observational study, Int J Gynecol Cancer, Volume 31: Issue Suppl 3: Page A1-A395, 12th October 2021

## Lectures

Panelist, Gynecological oncology challenges in obese women, The Indian Menopause Society Conference, Bangalore chapter, 28th October 2021

Panelist, Role of MIS in gynecological oncology, AICC RCOG Conference, 1st -3rd October 2021

## Editorial Boards Membership

Member, International Journal of Medicine and Medical Sciences, since 2015

Member, Oman Medical Journal, since 2015

## 89. Dr Satish Nair

ENT, Head and Neck Surgery, Apollo Hospitals, Bangalore

## Publications

Satish Nair, Ameena Ibrahim, Swetha Kumar, Aruna R Patil, J G Aishwarya, Ashish S Shah, Radiological and cadaveric study of anatomical safe zone for transoral base of tongue surgery, J Robot Surg, Volume 15: Issue 5: Page 711-716, October 2021

Satish Nair, J G Aishwarya, Pooja K Vasu, Aditya

Karthikeyan, Martina Shalini, Outcomes of Totally Endoscopic Versus Microscopic Techniques in Middle Ear Cholesteatoma: A Systematic Review and Meta-Analysis, Indian Journal of Otolaryngology and Head & Neck Surgery, DOI:10.1007/s12070-021-02869-2, October 2021

Satish Nair, J G Aishwarya, Aditya Jain, V Pavithra, Sneha Mohan, Mini-Incision Parotidectomy-Our Technique, DOI:10.1007/s12070-021-02882-5, September 2021

Satish Nair, Namrata Srivastava, K V R Brijith, J G Aishwarya, Surgical Landmarks for Parapharyngeal Internal Carotid Artery During Extended Endoscopic Surgery of Nasopharynx: A Cadaveric and Radiological Study, Indian Journal of Otolaryngology and Head and Neck Surgery, DOI:10.1007/s12070-021-02508-w, March 2021

Satish Nair, J G Aishwarya, Nagamani Warrier, V Pavithra, Aditya Jain, Mehrin Shamim, Krishna Ramanathan, Pooja K Vasu, Endoscopic ear surgery in middle ear cholesteatoma, Laparoscopic, Endoscopic and Robotic Surgery, Volume 4: Issue 1: Page 24-29, March 2021

Satish Nair, Ashish S Shah, V Pavithra, J G Aishwarya, K V R Brijith, Deeksha Thakur, Anatomical and Surgical Study to Evaluate the Accuracy of "C-M-S" Technique in Facial Nerve Identification During Parotid Surgery, Indian J Otolaryngol Head Neck Surg, Volume 73: Issue 2: Page 188-192, June 2021

## 90. Dr Steve Paul Manjaly

Geriatric Medicine, Apollo Hospitals, Bangalore

### Lectures

Talk, Healthy Ageing- A wellness, Sevika Sangham, the Women's Fellowship of the Marthoma Syrian Church, Singapore, 9th October 2021

Lecture, Comorbidities in Dementia, Knowdementia Workshop, World Alzheimer's Day, Manipal Center, Bangalore, 21st September 2021

Faculty, Expert Panel DEMCLINIC Cognitive screening platform for dementia, ARDSI and Nightingale's Medical Trust, Bangalore, September 2021

Faculty - Expert panel Certificate course in Integrated Geriatric Care, Public Health Foundation of India, 2021

### Professional Societies' Positions

Executive Committee Member, Indian Academy of Geriatrics, since 2021

## 91. Dr Sunil Narayan Dutt

Head and Neck Surgery, Apollo Hospitals, Bangalore

### Publications

Dutt SN, Vadlamani S, Dorasala S, Diagnostic Positional Tests and Therapeutic Maneuvers in the Management of Benign Paroxysmal Positional Vertigo, Indian Journal of Otolaryngology and Head & Neck Surgery, DOI 10.1007/s12070-020-02292-z, 2nd January 2021

S N Dutt, A Kumar, A A Mittal, S Vadlamani, S K Gaur, Cochlear implantation in auditory neuropathy spectrum disorders: role of transtympanic electrically evoked auditory brainstem responses and serial neural response telemetry, National Library of Medicine, J Laryngol Otol, Volume 135: Issue 7: Page 602-609, July 2021

S N Dutt, D Manjunath, S Vadlamani, S K Gaur, An unusual case of ear mould impression material as a foreign body in the middle ear: case report, J Laryngol Otol, Volume 135: Issue 3: Page 276-279, March 2021

Sunil Narayan Dutt, Dathathri Anantaramaiah Halyur, Praveen H Rayanagoudar, Apurva Kumar, Neurofibromatosis 2: Primary Modality of Hearing Rehabilitation with Cochlear Implant, Indian Journal of Otolaryngology and Head and Neck Surgery, Volume 73: Page 395–400, 15th June 2021

Sunil N Dutt, Sumit Kumar Gaur, Swathi Vadlamani, Shrivalli Nandikur, Evolving a Radiological Protocol for Cochlear Duct Length Measurement: Three Audit Cycles, Indian Journal of Otolaryngology and Head & Neck Surgery, DOI:10.1007/s12070-021-02774-8, August 2021

### Lectures

Guest Faculty, Transtympanic EABR for cochlear implantation, British Academic Conference in Otolaryngology, (BACO), The United Kingdom, Birmingham, UK, Virtual, 2021

Panel Moderator, Cochlear Implants, Nepal Cochlear Implant Conference, Kathmandu, Nepal, Virtual, 2021

Organising Chairman, 18th National Conference of the Cochlear Implant Group of India Conference, CIGICON, Virtual, 2021

President, 6th World Congress of Cochlear Implants in Emerging Nations (GCIAN), Bangalore, India, Virtual, 2021

Guest Faculty, Research Methodology, Annual Conference of the Indian Academy of Otorhinolaryngology and Head Neck Surgery (IAOHS), Guwahati, India, Virtual, 2021

Guest Faculty, Single-Sided Deafness- Appraisal of Options: An Indian Perspective, Asia Pacific Symposium of Cochlear Implants and Related Sciences (APSCI), Melbourne, Australia, Virtual, 2021

### Editorial Boards Membership

Chairman, Editorial Board, Indian Journal of

Otolaryngology and Head and Neck Surgery (IJOHNS), since 2021

Editorial Board Member, Otology-Neurotology (USA), since 2015

### Professional Societies' Positions

President, The Cochlear Implant Group of India (CIGI), since 2019

President, Global Cochlear Implant Access Network (GCIAN), since 2019

### Member of task forces of the Government of India or State Governments

Advisory Board Member, ADIP (Assistance to Disabled Persons) Scheme, Ministry of Health, Social Justice, Government of India, since 2019

Member, Technical Specifications Committee, State CI Programme, Government of Karnataka, since 2017

Member, State Cochlear Implant Committee, Government of Karnataka, since 2020

Member, Advisory Board, SRM University (Deemed), Chennai

### Examinership

Coordinator - Examiner, National Board of Examinations (DNB) in ENT, November 2021

## 92. Dr Swathi Vadlamani

Head and Neck Surgery, Apollo Hospitals, Bangalore

### Publications

Vadlamani S, Dutt SN, Dorasala S, Diagnostic Positional Tests and Therapeutic Maneuvers in the Management of Benign Paroxysmal Positional Vertigo, Indian Journal of Otolaryngology and Head & Neck Surgery, DOI 10.1007/s12070-020-02292-z, 2nd January 2021

## Bhubaneshwar

### 93. Dr Amitav Mohanty

Internal Medicine, Apollo Hospitals, Bhubaneswar

#### Editorial Boards Membership

Joint Editor, Odisha Physician Journal, since 2019

#### Member of task forces of the Government of India or State Governments

Member, Governing Body Member, API Odisha

### 94. Dr Chinmaya Pani

Medical Oncology, Apollo Hospitals, Bhubaneswar

#### Publications

Dr Chinmaya Pani, Liquid Biopsy, the hype vs. hope in molecular and clinical Oncology, Elsevier, Volume 48: Issue 3: Page 259-267, 27th November 2021

### 95. Dr Debabrata Padhy

Orthopedics, Apollo Hospitals, Bhubaneswar

#### Professional Societies' Positions

Executive Body Member, Indian Arthroplasty Association, since 2019

Founder Secretary, Odisha Arthroplasty Association, since 2017

### 96. Dr Debashish Nayak

CTVS, Apollo Hospitals, Bhubaneswar

#### Lectures

Lecture, Minimal Invasive Cardiac Surgery Conference, Delhi, 23rd -26th September 2021

### 97. Dr Dipika Mohanty

Hematology, Apollo Hospitals, Bhubaneswar

#### Publications

Dr Dipika Mohanty, A novel autologous stem cell procedure for the treatment of aplastic anaemia using reprogrammed mature adult cells- a pilot study, Indian Journal of Medical Research, Volume 135: Issue 6: Page 853-872, June 2021

Dr Dipika Mohanty, Dr Suryanaray Mohanty, Dr Manas Ranjan Kar, Maheswar Panda, Prenatal diagnosis of hemoglobinopathy by Chorionic villi sampling (CVS) in Odisha-The first report, International Journal of Surgery and Invasive Procedures, Int J Surg Invasive Procedures, Volume 4: Issue 1: Page 172-178, 17th February 2021

#### Editorial Board Membership

Editorial Board Member, Indian Journal of Medical Research, since 2015

Editor, Indian Journal of Hematology and Transfusion Medicine, since 2013

Editor, Indian Journal of Human Genetics, since 2013

Editorial Board Member, Journal of Blood Transfusion and Diseases, USA, since 2016

Reviewer, Current Pharmaceutical Bio-technology Journal, since 2013

Guest editor, Frontier in Medicine, since 2020

Member, Editorial Board of Indian Journal of Haematology and Transfusion Medicine, since 2014

Member, Editorial Board Hemophilia Journal

#### Professional Societies' Positions

Member, International Society of Thrombosis and Haemostasis

Member, World Federation of Hemophilia

Counsellor, International society of Haematology for Asian Pacific Division, since 1996

Member, Indian Association of Pathologists and Microbiologists

President, Indian Society of Haematology and Blood Transfusion

President, Indian Society of Human Genetics, since 2014

President, Bombay Haemophilia Society

Member Indian Society of Atherosclerosis Research

Chairman, Research committee of All India Institution of Medical Science, since 2019

Chairman, Stem Cell Committee, All India Institution of Medical Science, since 2020

Member, Ethics Committee of L.V. Prasad Eye Institute, Bhubaneswar, since 2019

#### **Member of task forces of Government of India or State Governments**

Member, Peer Review Committee of ICMR, Hematology, Physiology, Genetics and Pharmacology

Advisor, Health Surveillance of Himoglobinopathies

Member, Task Force for Hematology, Genetics, ICMR

Member, Technical Advisor Committee, Transfusion Medicine, Government of India

Member, Technical Advisor Committee, Department of Biotechnology, India

Member, Task Force on Stem Cell Research in India, Dept. of Biotechnology and Indian Council of Medical Research, since 2016

Member, Task Force for Genomics and Genetics, Dept of Biotechnology, since 2016

#### **Awards**

Rula Awards, IJRULA in affiliation, World Research Council and United Medical Council, 1st January 2021

### **98. Dr G S S Mohapatra**

Obstetrics and Gynecology, Apollo Hospitals, Bhubaneswar

#### **Awards**

Times Health Award by Hon'ble Petroleum Minister Mr Dharmendra Pradhan, 2021

### **99. Dr Madhusudan Modi**

Surgical Gastroenterology, Apollo Hospitals Bhubaneswar

#### **Professional Societies' Positions**

Advisor, International Association Oncology (IAO), 2nd September 2021

Member, International Hepato Pancreatic Biliary Association, IHPBA (Indian chapter) (M64)

Member, Indian Association of Surgical Gastroenterology, IASG (M62)

Member, Indian Association of Gastrointestinal Endo-Surgery, IAGES (1142)

Member, TATA Memorial Medical Alumni Society

Member, Indian Association of Oncology/Surgical Oncology, IAO, IASO(M21)

Member, Association of Colorectal Surgeons of India (1211)

#### **Examinership**

Examiner, The Royal College of Surgeons of England, London, 2021

## 100. Dr Manoj Chhotray

General medicine, Apollo Hospitals, Bhubaneswar

### Professional Societies' Positions

President, Indian Medical Association, since 2016

Vice president, Indian Rheumatological Association, since 2017

Indian Chapter of IHPBA, since 2015

Fellow, American College of Surgeons, since 2018

Member, Indian Journal of Surgery, since 2019

### Awards

Citizen of the Year, OTV in the Health Care Category, 2021

## 101. Dr Mohammad Ibrarullah

Surgical Gastroenterology, Apollo Hospitals, Bhubaneswar

### Book Published

Editor- Dr Md Ibrarullah, Safe Laparoscopic Cholecystectomy: An illustrated atlas, Taylor and Francis, CRC Press, USA, 22nd September 2021

### Lectures

Cholecystectomy for acute cholecystitis, Jaipur Surgical Festival, Jaipur, December 2021

### Editorial Boards Membership

Editor, Indian Journal of Surgery, since 2019

### Professional Societies' Positions

Life member, Indian Association of Surgical Gastroenterology, since 2012

Life member, Indian Society of Gastroenterology, since 2013

Joint Secretary, Indian Association of Surgical Gastroenterology, since 2012

Life member, Indian Medical Association, since 2016

Life member, Indian Chapter of International Pancreas Club, since 2017

Life member and Executive Committee Member,

## 102. Dr Nachiketa Mohapatra

Histopathology, Apollo Hospitals, Bhubaneswar

### Professional Societies' Positions

Secretary, Indian Society of Pathologists and Microbiologists, Odisha, since 2020

## 103. Dr Nisith Mohanty

Nephrology, Apollo Hospitals, Bhubaneswar

### Lectures

Lecture, ISN National Conference, Chennai, 4th – 11th December 2021

### Professional Societies' Positions

Head Nephrology, IMS and SUNM Hospitals Bhubaneswar, since 2019

## 104. Dr Prafulla Kumar Sahoo

Neurosurgery, Apollo Hospitals, Bhubaneswar

### Professional Societies' Positions

Secretary, Neurological Society of Odisha (NSO), since 2019

## 105. Dr Saroj Sahu

Nuclear Medicine, Apollo Hospitals, Bhubaneswar

### Professional Societies' Positions

Lifetime Member, IGNM, since 2019

Lifetime Member, Society of Nuclear Medicine, since 2018

## **106. Dr Saroj Pattanaik**

Critical Care, Apollo Hospitals, Bhubaneswar

### **Publications**

Dr Saroj Pattanaik, Dr Jyotinarayan Sahoo, Hypercalcemia critical care communication, Critical care Communication, Volume 16: Issue 5, November - December 2021

Dr Saroj Kumar Pattanaik, International nosocomial infection control consortium (INICC) report, data summary of 45 countries for 2013-2018, Adult and Pediatric Units, Device-associated Module, American Journal of Infection Control, Volume 49: Issue 10: Page 1267-1274, October 2021

### **Professional Societies' Positions**

Executive Member, National Executive Committee of IAPEN, India, since 2021

## **107. Dr Sambit Das**

Endocrinology, Apollo Hospitals, Bhubaneswar

### **Publications**

Rajesh Rajput, Sujeet Jha, Jayanta Kumar Panda, Appalavenkata Kandregula Subrahmanyam, Sambit Das, An expert opinion on the management of type 2 diabetes mellitus in children and adolescents, Journalofdiabetology, Volume 12: issue 4: Page 424-433, 2021

## **108. Dr Sharmili Sinha**

Critical care, Apollo Hospitals, Bhubaneswar

### **Book Published**

Associate Editor- Dr Sharmili Sinha, Infections in ICU- Indian Society of Critical Care Medicine,

ISCC, 28th Annual Report, 2021

### **Chapters contributed to text books**

Dr Sharmili Sinha, Visiting Policies in ICU During Covid-19, Chapter 38, Update Book on COVID-19 and Critical Care, Editors- Dr Banambar Ray, Dr Khusrav Bajan, Dr Prashant Nasa, Dr D P Samaddar, Dr Kedar Toraskar, Dr Abhijeet Raha, Organising Committee of World Conference on Covid and Critical Care, 2021

### **Lectures**

Lecture, An Educational Society endorsed by Egyptian Society of Anesthesiologists) – Weaning from Ventilation, Mega Online Anesthesiology Course, Virtual, 26th September 2021

Lecture, Management of intracranial hypertension in patients with traumatic brain injury, Mega Online Anesthesiology Course, Virtual, 26th September 2021

Lecture, Renal symposium- acute kidney injury, Mega Online Anesthesiology Course, Virtual, 21st November 2021

Lecture, Ventilation in patients with Covid 19, 36th Annual International Conference of Egyptian Society of Anesthesiologist (EgSA), Virtual, 1st August 2021

Lecture, CARE Bundles to prevent nosocomial infections in ICU, ISCCM and Society of Neuro Critical Care -Asia and Oceania Chapter, Annual Meet, Virtual, 25th September 2021

Lecture, Motivating team during Covid -19, 1st World Covid Conference on Critical Care, Virtual, 23rd October 2021

Lecture, Ventilator induced lung injury-stress and strain, 1st World Covid Conference on Critical Care, Virtual, 24th October 2021

Co-ordinator, Obstetrics critical care- Covid 19 and beyond, ISCCM, Cuttack branch, Bhubaneswar, 1st October 2021

Moderator, Obstetrics critical care- Covid 19 and beyond, ISCCM, Cuttack branch, Bhubaneswar, 1st October 2021

Panel discussion, Management of Covid 19 related Critical illness in Obstetrics -Challenges and Learnings, ISCCM, Cuttack branch, Bhubaneswar, 1st October 2021

#### **Editorial Boards Memberships**

Associate Editor, Critical Care Communications, ISCCM, since 2021

#### **Professional Societies' Positions**

Chairperson, Indian society of Critical Care, Bhubaneswar, since 2019

Organizing Chairperson, 2nd Odisha Annual Critical Care Conference, ISCCM, Bhubaneswar, since 2019

Executive Council Member, National Indian Society of Critical Care Medicine, Mumbai, since 2020

Co-ordinator, Indian Society of Critical Care Medicine, since 2020

Lifetime Member, Indian Society of Critical Care Medicine, since 2017

Lifetime member, Society of Critical Care Medicine, since 2016

Lifetime Member, European Society of Intensive Care Medicine, since 2016

Lifetime Member, Neuro Critical Care Society, USA, since 2017

Lifetime Member, Indian Society of Anaesthesiologists, since 2018

Member, Communication Committee, ISCCM, since 2021

Executive Council Member, Second Consecutive Term, ISCCM, Mumbai, since 2021

#### **Examinership**

Internal Examiner, DNB Critical Care, Apollo Hospitals, 2021

#### **Awards**

Presidential Citation Award, Outstanding Contribution to ISCCM in Critical Care 2021, February 2021

Fellowship, Indian College of Critical Care Medicine, 2021

### **109. Dr Sourav Mishra**

Medical Oncology, Apollo Hospitals, Bhubaneswar

#### **Publications**

Mishra SK, Mohanty SK, Bhardwaj, p53 and p16 ink4a As predictive and prognostic biomarkers for nodal metastasis and survival in a contemporary cohort of penile squamous cell carcinoma, Clin Genitourin Cancer, Volume 19: Issue 6: Page 510-520, December 2021

Sourav K Mishra, Sambit K Mohanty, Ankit Tiwari, Shivani Sharma, Mohit Bhardwaj, Niharika Pattnaik, Sunil Jaiswal, Manas R Baisakh, Subodh Das, Manas R Pradhan, Tapas R Swain, Kaliprasad Satpathy, Sean R Williamson, Anil V Parwani, Reappraisal of HER2 amplification in high-grade urothelial carcinoma based on 2018 ASCO/CAP clinical practice guidelines, Am J Clin Pathol, Volume 156: Issue 6: Page 1130-1141, 2021

Mishra S, Patnayak R, Panda SS, Jena A, Strongyloides stercoralis hyperinfection in a patient with acute lymphoblastic leukemia, J Postgrad Med, Volume 67: Issue 2: Page 113-114,

July 2021

Mishra S K, Panda S P, Pradhan N D, Panda S S, Osseous Ewing's Sarcoma in children: Challenges in local treatment and its impact on treatment outcome, Annals of the Romanian Society for Cell Biology, Volume 25: Issue 3: Page 7512-7519, February 2021

Mishra SK, Bhardwaj MK, Salona B, Mohanty SK, Potential prognostic significance of patterns of del(13q) in plasma cell myelomas Reappraisal of a perennial bone of contention, Indian J Med Paediatr Oncol, Volume 42: Issue 3: Page 297-300, 2021

Mishra SK, Narayanan S, Anand S, Prasanna R, Bimodal multispectral imaging system with cloud-based machine learning algorithm for real-time screening and detection of oral potentially malignant lesions and biopsy guidance, Volume 26: Issue 8: Page 086003, 2021

Sourav Mishra, Sindhu Kilaru, Soumya Surath Panda, Debahuti Mohapatra, Manas Baisakh, Spoorthy Kolluri, Suma Devaraj, Lalatendu Moharana, Ghanashyam Biswas, Cutaneous involvement in diffuse large B cell lymphoma at presentation: report of two rare cases and literature review, J Egypt Natl Canc Inst, Volume 33: Issue 1: Page 25, 13th September 2021

Sambit K Mohanty, Abhishek Satapathy, Aditi Aggarwal, Sourav K Mishra, Nakul Y Sampat, Shivani Sharma, Sean R Williamson, Oncocytic renal neoplasms with diffuse keratin 7 immunohistochemistry harbor frequent alterations in the mammalian target of rapamycin pathway, Modern Pathology, Volume 35: Page 361-375, 20th November 2021

#### Lectures

Organizer, Indo-oncology cancer summit, Symposium, Virtual, September 2021

Lecture, 5th Tata Annual Biostatistics and Clinical Research Methodology Course, Virtual, 10th -12th September and 17th -19th September 2021

Lecture, ESMO preceptorship in urothelial malignancies, Virtual, 17th -18th November 2021

Lecture, ESMO preceptorship in immuno oncology, Virtual, 22nd -23rd November 2021

#### Presentations

Poster presentation, ROS1-gene rearranged lung adenocarcinomas: Demographic, Clinicopathologic, and Treatment Profile in a Cohort of 409 Indian Patients, Molecular Analysis for Precision Oncology Congress, Virtual, 7th - 9th October 2021

Oral Presentation, p53 and p16ink4a as predictive and prognostic biomarkers for nodal metastasis and survival in a contemporary cohort of penile squamous cell carcinoma, Molecular Analysis for Precision Oncology Congress, Virtual, 7th - 9th October 2021

#### Awards

Best Medical Oncologist, Times Excellence Award in Health Icon, Times Group Odisha, 2021

### **110. Dr Sthiti Das**

Radiation, Apollo Hospitals, Bhubaneswar

#### Awards

Times Power Women Award, Times of India, 2021

### **111. Dr Suryakanta Pradhan**

ENT, Apollo Hospitals, Bhubaneswar

#### Publications

Surya Kanta Pradhan, Foreign body (safety pin) in airway in a 2-month-old baby, Apollo Medicine, Volume 18: Issue 5: Page 39-41, 19th July 2021

## 112. Dr Sushant Kumar Sethi

Gastroenterology, Apollo Hospitals, Bhubaneswar

### Chapters contributed to text books

Dr Sushant Kumar, A prospective Clinical Study of upper Gastrointestinal Bleeding, Chapter 11, Highlights on Medicine and Medical Science, Editor- Dr. Shigenori, Volume 16, B P International, Page 117-123, 14th July 2021

### Editorial Board Membership

Member, American College of Gastroenterology, since 2012

## Bilaspur

## 113. Dr Kalpana Dash

Endocrinology, Apollo Hospitals, Bilaspur

### Publications

Rajendra Pradeepa, Radhakrishnan Subashini, Ulagamathesan Venkatesan, Somorjit Ningombam, Anil Purty, Mary John, Taranga Reang, Rosang Luaia, Saroj Kumar Tripathy, Sagar Modi, Jatinder Kumar Mokta, Ankush Desai, Kalpana Dash, Mohan Deepa, Elangovan Nirmal, Ranjit Unnikrishnan, Ranjit Mohan Anjana, Tanvir Kaurl, Rupinder Singh Dhaliwal I, Viswanathan Mohan, for the ICMR-INDIAB Study Group a Madras Diabetes Research, Effect of internal migration on diabetes and metabolic abnormalities in India - The ICMR-INDIAB study Journal of Diabetes and Its Complications, Volume 35: Issue 12: Page 108051, December 2021

## Chennai

## 114. Dr A Navaladi Shankar

Orthopaedic Surgery, Apollo Hospitals, Chennai

### Professional Societies' Positions

President, Madras Orthopaedic Society, since 2021

## 115. Dr Abdul Ghafur

Infectious Diseases, Apollo Hospitals, Chennai

### Publications

Abdul Ghafur, Raja Thirumalairaj, Purvish M Parikh, Amit Agarwal, Randeep Singh, Arvind Krishnamurthy, Sharad S Desai, Amita Maheshwari, Prashant Mehta, S P Somashekhar, Ahamed Iqbal, Dhairyasheel N Savant, Syed Md Akram Hussain, Amit Bhatt, Tashi Wangdi, Jyoti Bajpai, Anantbhushan A Ranade, K Govind Babu, Ajay Bapna, Ghanshyam Biswas, Hemant Malhotra, M Vamshi Krishna, Rajendra Prasad Baral, Rajesh Vashishta, Ahmad Javid Safi, Sharmila Agarwal, J P Agarwal, Krishna Kumar Rathnam, P. N. Mohapatra, Rajeev Vijay Kumar, Senthil Rajappa, Sewanti Atul Limaye, Amish Vora, Vijay AP Reddy, Bhavesh B Parekh, G K Rath, South Asian Declaration—Consensus Guidelines for COVID-19 Vaccination in Cancer Patients, South Asian J Cancer, Volume 10: Issue 1: Page 3–8, January 2021

## 116. Dr Abraham Oomman

Cardiology, Apollo Hospitals, Chennai

### Publications

Abraham Oomman, C Venkata S Ram, Sameer Dani, Rakesh Gupta, K O Ramachari, G Praveen Kumar, Jayanthi Swaminathan, Sathyaranayana Kondati, Ishita Sengupta, Correlation Between Ambulatory Blood Pressure Monitoring and Office Blood Pressure Measurement in Patients with Hypertension: A Community Study, Am J Med Sci, Volume 362: Issue 6: Page 546-552, December

2021

## **117. Dr Ajay Padmanaban**

Critical Care, Apollo Hospitals, Chennai

### **Publications**

Ajay Padmanaban, Anders Granholm, Marie Warrer Munch, Sheila Nainan Myatra, Bharath Kumar Tirupakuzhi Vijayaraghavan, Oommen John, Dexamethasone 12 mg versus 6 mg for patients with COVID-19 and severe hypoxaemia: a pre-planned, secondary Bayesian analysis of the COVID STEROID 2 trial, Intensive Care Med, Volume 48: Issue 1: Page 45-55, 10th November 2021

## **118. Dr Ashok Parameswaran**

Histopathology and Cytology, Apollo Main Hospitals, Chennai

### **Publications**

Ashok Parameswaran, Saloni Naresh Shah, Prasanna Kumar Reddy, Metastatic Extraskeletal Mesenchymal Chondrosarcoma of the Pancreas: Report of an Unusual Case with Review of Literature, Asian Journal of Oncology, Volume 7: Issue 6: Page 1-4, 2021

## **119. Dr Bharath Kumar TV**

Critical Care, Apollo Hospitals, Chennai

### **Publications**

Bharath Kumar Tirupakuzhi Vijayaraghavan, Anders Granholm, Marie Warrer Munch, Sheila Nainan Myatra, Oommen John, Ajay Padmanaban, Dexamethasone 12 mg versus 6 mg for patients with COVID-19 and severe hypoxaemia: a pre-planned, secondary Bayesian analysis of the COVID STEROID 2 trial, Intensive Care Med, Volume 48: Issue 1: Page 45-55, 10th November 2021

Bharath Kumar TV, Raymond Dominic Savio, Pratheema Ramachandran, R Ebenezer, Nagarajan Ramakrishnan, Impact of covid-19 on non-covid intensive care unit service utilization, case mix and outcomes: a registry-based analysis from indian registry of intensive care (iris) group, Wellcome Open Research Volume 6: Issue 159: Page 1-19, 10th November 2021

Bharath Kumar Tirupakuzhi Vijayaraghavan, Abhinav Bassi, Sumaiya Arfin, Rohina Joshi, Nikita Bathla, Naomi E Hammond, Dorrilyn Rajbhandari, Balasubramanian Venkatesh, Vivekanand Jha, Challenges in operationalising clinical trials in India during the COVID-19 pandemic, The Lancet Global Health, Volume 10: Issue 3: Page e317-e319, 22nd December 2021

## **120. Dr C Vijaykumar**

Internal Medicine, Apollo Main Hospitals Chennai

### **Publications**

Vijai Kumar Chinnaswami, Udhaya Balasubramanian, Aishwarya K Marimuthu, Laboratory Profile of Adult Hemoglobinopathies Picked Up During Routine Health Check in a Tertiary Care Hospital from South India, Published in IJCP, November 2021

## **121. Dr Immaneni Sathyamurthy**

Cadiology, Apollo Main hospitals, Chennai

### **Books Published**

Editors- I Sathyamurthy, Dr Rajeev Agarwala, Dr Brian Pinto, Dr CK Ponde, Dr A Sreenivas Kumar, Dr Bijay Kumar Mahala, Heart Rate Is It A Missing Link, 1st edition, CBS Publishers and Distributors Pvt Ltd, 2021

### **Chapters contributed to text books**

I Sathyamurthy, Heart rate and heart failure, Chapter 5, Heart Rate Is It A Missing Link, Editor- Dr JC Mohan, Dr Monotosh Panja, Dr Rajeev Agarwala, Dr Brian Pinto, Dr CK Ponde, Dr A Sreenivas Kumar, Dr Bijay Kumar Mahala, 1st edition, CBS Publishers and Distributors Pvt Ltd, Page 108-142, 2021

I Sathyamurthy, K N Srinivasan, Postinfarction ventricular septal defect: how to mitigate and intervene?, Chapter 31, Cardiology Update, Editor- Parthasarathi Banerjee, Evangel Publications, Page 242-248, 2021

## Publications

I Sathyamurthy, Narra Lavanya, Kirubakaran, K N Srinivasan, Myocardial Infarction following Marijuana consumption in a young male. Case report, JICC, Volume 11: Issue 1: Page 29-31, 18th February 2021

I Sathyamurthy, K Jayanthi, Post CABG myocardial ischemia and infarction – a review, Jour of Ind Coll Cardio, Volume 11: Issue 2: Page 58-61, 3rd May 2021

I Sathyamurthy, K N Srinivasan, Manodaya Neelagandan, Relation between covid-19 vaccination and myocardial infarction- causal or coincidental, IHJ Cardiovascular Case reports, Volume 5: Issue 2: Page 71-74, May-August 2021

Sathyamurthy Immaneni, T Manikandan, K Kirubakaran, K N Srinivasan, Rajeswari Nayak, Abraham Oomman, K Pramod, Sengottuvelu Gunasekara, Angiographic profile and therapeutic approach of prior coronary artery bypass graft patients presenting with acute coronary syndromes, J Indian coll cardiology, Volume 11: Issue 3: Page 104-108, 24th August 2021

Immaneni Sathyamurthy, MS Hiremath, J P Sawhney, Subhash Chandra, Hrudanand Mishra,

CK Ponde, Expert opinion on p2y12 inhibitors use in management of acute coronary syndromes: focus on ticagrelor, Journal of Associations of Physicians of India, Volume 69: Page 75-82, October 2021

I Sathyamurthy, G. Sengottuvelu, Can OCT change the therapeutic strategy in ACS due to plaque erosion, Indian Heart Journal 2021, Volume 73: Issue 3: Page 259- 263, May- June 2021

I Sathyamurthy, Sai Satish, Transcatheter aortic valve replacement for bicuspid aortic valve, J Indian coll cardiology, Volume 11: Page 166- 171, 2021

## 122. Dr JKA Jameel

Surgical Gastroenterology and Minimal Access Surgery, Apollo Main Hospital, Chennai

## Publications

JKA Jameel, N Sunil, D Raghavendra, L Mekala, P K Reddy, Giant de-differentiated liposarcoma of the ascending colon – a rare entity, Surgical case reports, Volume 4: Issue 7: Page 2-5, 29th July 2021

## Lectures

Panelist, Management of complications of Low anterior resection of rectum, Medtronic Symposium, September 2021

Chairperson, Laparoscopic fundoplication, Indian Association of Gastrointestinal Endosurgeons (IAGES), Annual Conference, India, Virtual, May 2021

Chairperson, Colorectal master, Association of Surgeons of India (ASI), Tamilnadu Branch, Annual Conference, Chennai, India, December 2021

Chairperson, Laparoscopic management of

Appendiceal Mucocele, Indian Society of Gastroenterology (ISG), Tamilnadu Chapter Meeting, Chennai, India, December 2021

### **Presentations**

Presentation, Laparoscopic excision of gist of the stomach, Association of Surgeons of India (ASI), Tamil Nadu Branch, Annual Conference, Tamil Nadu, December 2021

Presentation, Principles of management of small bowel Obstruction, Interesting case capsules, Indian Medical Association (IMA), Tambaram branch, Chennai, October 2021

Presentation, Various perspectives in managing complex hernias, laparoscopic mesh repair (IPOM) of recurrent incisional hernia, Medtronic Hernia Symposium, July 2021

Presentation, Pancreatic cancer- work up- current concepts in pancreatic cancer, Symposium on pancreatic cancer, Apollo cancer institutes, Chennai, March 2021

### **Examinership**

Examiner, Royal College of Surgeons of Edinburgh, 2021

Examiner, Royal College of Physicians and Surgeons of Glasgow, UK, 2021

### **Awards**

Distinguished Clinical Tutor, Apollo Hospitals Educational and Research Foundation (AHERF), since September 2021

## **123. Dr Jagadeesh Chandrasekaran**

Internal Medicine, Apollo Hospitals, Chennai

### **Publications**

Jagadeesh Chandrasekaran, Aishwarya K Marimuthu, Monisha Anandhan, Lakshmikanthan Sundararajan, Balasubramaniam Ramakrishnan,

Utility of various inflammatory markers in predicting outcomes of hospitalized patients with Covid-19 pneumonia: A single center experience - Original Article, Lung India, Volume 38: Page 448-53, August 2021

Jagadeesh Chandrasekaran, V K Vineeth, Aarthee Asokan, P Senthur Nambi, Empyema of gall bladder-typoid-case report, International Journal of Health Sciences and Research, Volume11: Issue: 8; Page 194-197, August 2021

### **Professional Societies' Positions**

Member, Occupational and environmental health committee, American College of Chest Physicians, since 2019

## **124. Dr K Ganapathy**

Neurosurgery, Apollo Hospitals, Chennai

### **Publications**

Krishnan Ganapathy, Santos Das, Sangita Reddy, Vikram Thaploo, Ayesha Nazneen, Akhila Kosuru, Uday Shankar Nag, Digital Health Care in Public Private Partnership Mode, Telemedicine and eHealth, Volume 27: Issue 12: Page 1363-1371, December 2021

### **Professional Societies' Positions**

National Emeritus Professor, National Academy of Medical Sciences, since 2021

## **125. Dr Magesh Rajendran**

Geriatrics, Apollo Main Hospitals, Chennai

### **Orations**

Lecture, Health Maintenance in the elderly, GERICON, Jodhpur Oration, 19th December 2021

### **Lectures**

Lecture, Polypharmacy in elderly, GERONTOCON, Virtual, 28th – 29th October 2021

### **Editorial Board Membership**

Member, Journal of Indian Academy of Geriatrics,  
Since 2020

### **Professional Societies Positions**

General Secretary, Indian Academy of Geriatrics,  
Since 2019

## **126. Dr Mamta Soni**

Hematology and Clinical Pathology, Apollo Main Hospitals, Chennai

### **Publications**

Soni M, Gopalakrishnan R, Significance of RDW in predicting mortality in Covid-19, An analysis of 622 cases, Int J Lab Hematol, Volume 43: Issue 4: Page O221-O223, 27th March 2021

Mamta Soni, Quantification of haemophagocytes on bone marrow aspirate smears and its correlation with the clinical outcomes, a prospective study, National Journal of Laboratory Medicine, Volume 10: Issue 3: Page P054-P055, July 2021

Soni M, Evaluation of eosinopenia as a diagnostic and prognostic indicator in COVID-19 infection, Int J Lab Hematol, Volume 43: Issue 6: Page e303, 11th May 2021

Soni M, Menon M, Vasudevan S, Govindarajan V, Diagnosis of hyperoxalosis on bone marrow aspirate smears, Apollo Medicine, Volume 18: Page S45-S47, 28th July 2021

Soni M, Kannan G, Leukocyte morphological changes in Covid 19, a peripheral smear study and analysis at a Tertiary Health Care Centre in India, Apollo Medicine, Volume 18: Issue 3: Page 158-161, 2nd July 2021

### **Lectures**

Lecture, Hematology in Covid -19, TNMC CME in

Madha Medical College and Research Institute, Chennai, 15th November 2021

### **Editorial Board Membership**

Member, Apollo Medicine Journal, since March 2020

### **Professional Societies' Positions**

Lead and Technical Assessor NABL, since 2021

## **127. Dr Murlidharan Venkatesan**

Spine Surgery, Apollo Main Hospitals, Chennai

### **Publications**

Venkatesan M, Akbari KK, Badikillaya V, Ramanan RV, Hegde SK, Resurgence of the role of computed tomography myelogram in the era of MRI for surgical decision making of lumbar degenerative disc disorder, International Journal of Spine Surgery, Volume 15: Issue 4: Page 788-794, 21st July 2021

Venkatesan M, Subramaniam M H, Hegde SK, Clinicoradiological outcome of 3 or more levels anterior cervical corpectomy and reconstruction, International Journal of spine surgery, Volume 15, Issue 4: Page 740-751, 27th July 2021

Venkatesan M, Badikillaya V, Akbari KK, Sudarshan P, Suthar H, Hegde SK, Comparative analysis of unilateral versus bilateral instrumentation in TLIF for lumbar degenerative disorder, Single Center Large series, International Journal of spine surgery, Volume 15: Issue 5: Page 929-936, 22nd September 2021

Venkatesan M, Hegde SK, Akbari KK, Badikillaya VM, Efficacy of anterior vertebral body tethering in skeletally mature children with adolescent idiopathic scoliosis: a preliminary report, International Journal of Spine Surgery, Volume 15: Issue 5, Page 995-1003, 22nd September 2021

## Professional Societies' Positions

Executive Member, Core Educational Committee, Association of Spine Surgeons of India (AASI), since 2021

Executive Member, Global Outreach Committee, Scoliosis Research Society (SRS), since 2021

## 128. Dr Nagaranjan Ramakrishnan

Critical Care Medicine and Sleep Medicine, Apollo Main Hospitals, Chennai

### Publications

Nagarajan Ramakrishnan, Diptesh Aryal, Abi Beane, Arjen M Dondorp, Cameron Green, Rashan Haniffa, Madiha Hashmi, Devachandran Jayakumar, John C Marshall, Colin J McArthur, Srinivas Murthy, Steven A Webb, Subhash P Acharya, Pramodya G P Ishani, Issrah Jawad, Sushil Khanal, Kanchan Koirala, Subekshya Luitel, Upulee Pabasara, Hem Raj Paneru, Ashok Kumar, Shoaib Siddiq Patel, Nawal Salahuddin, Mohiuddin Shaikh, Timo Tolppa, Ishara Udayanga, Zulfiqar Umranji, Operationalisation of the Randomized Embedded Multifactorial Adaptive Platform for COVID-19 trials in a low and lower-middle income critical care learning health system, Wellcome Open Res, Volume 6: Issue 14, 28th January 2021

Nagarajan Ramakrishnan, Chintamani Abhishek, Bala Prakash, Babu K Abraham, Senthil Kumar, Ramesh Venkataraman, Incidence and Impact of Healthcare-associated Infections on Patients Primarily Admitted with Sepsis and Non-sepsis Diagnoses, Indian J Crit Care Med, Volume 25: Issue 3: Page 292-295, March 2021

Ramakrishnan N, Chronic critical illness: are we just adding years to life, Indian J Crit Care Med, Volume 25: Issue 5: Page 482-483, May 2021

Nagarajan Ramakrishnan, Vijay Viswanathan, Banshi Saboo, Sanjay Agarwal, RSSDI clinical

practice recommendations for screening, diagnosis, and treatment in type 2 diabetes mellitus with obstructive sleep apnea, International Journal of Diabetes in Developing Countries, Volume 41: Page 4-21, 25th February 2021

Ramakrishnan N, Jayakumar D, Ramachandran P, Rabindrarajan, E, Vijayaraghavan BKT, Venkataraman R, Standard care versus awake prone position in adult non-intubated patients with acute hypoxic respiratory failure secondary to covid-19 infection—a multicenter feasibility randomized controlled trial, J Intensive Care Med, Volume 36: Issue 8: Page 918-924, 5th May 2021

Ramakrishnan N, Sridharan S, B Princess I, Melioidosis in critical care: a review, Indian J Crit Care Med, Volume 25: Issue Suppl 2: Page S161-S165, May 2021

Ramakrishnan N, Kar S, Chawla R, Haranath SP, Ramasubban S, Vaishya R, Sibal A, Reddy S, Multivariable mortality risk prediction using machine learning for covid-19 patients at admission, Sci Rep, Volume 11: Issue 1: Page 12801, 17th June 2021

Nagarajan Ramakrishnan, Janani Baradwaj, Prabash PR, Arun Kumar M, R Ebenezer, V Paranthaman, Imaging findings and neuroradiological manifestations in patients of covid-19, International Journal of Contemporary Medicine Surgery and Radiology, Volume 6: Issue 2: Page B38-B42, April-July 2021

Nagarajan Ramakrishnan, Bharath Kumar Tirupakuzhi Vijayaraghavan, Covid-19 symptoms at hospital admission vary with age and sex: results from the ISARIC prospective multinational observational study, ISARIC Clinical Characterization Group, Research article, Infection, Volume 49: Issue 5: Page 885-905, July 2021

Nagarajan Ramakrishnan, Devachandran Jayakumar, Dr Pavan Kumar Vecham, Dr Bharath

Kumar Tirupakuzhi Vijayaraghavan, ISARIC clinical data report clinical data report, BMJ Yale medRxiv, doi: <https://doi.org/10.1101/2020.07.17.20155218>, 14th Jul 2021

Nagarajan Ramakrishnan, Bharath Kumar Tirupakuzhi Vijayaraghavan, Dr Ajay Padmanabhan, Higher vs lower doses of dexamethasone in patients with covid-19 and severe hypoxia (COVID STEROID 2) trial: Protocol and statistical analysis plan Research article, Acta Anaesthesiological Scandinavica, Volume 65: Issue 6: Page 834-845, July 2021

Ramakrishnan N, Raymond Savio, Ramesh Venkataraman, Senthilkumar Rajagopal, Babu Abraham, Nutrition therapy in patients requiring non- invasive ventilation in the intensive care unit: feasibility, tolerance, and complications, Indian Journal of Respiratory Care, Volume 10: Issue 3: Page 289-293, September 2021

Ramakrishnan N, Effect of 12 mg vs 6 mg of dexamethasone on the number of days alive without life support in adults with covid-19 and severe hypoxemia the covid steroid 2 randomized trial, JAMA, Original Investigation, Caring for the critically ill patient, doi:10.1001/jama.2021.18295, Volume 3326: Issue 18: Page 1807-1817, 9th November 2021

Nagarajan Ramakrishnan, Ramesh Venkataraman, Intensive Care in India in 2018–2019: the second indian intensive care case mix and practice patterns study, as part of indicaps-ii investigators, Indian Journal of Critical Care Medicine, Volume 25: Issue 10: Page 1093-1107, October 2021

Nagarajan Ramakrishnan, Impact of covid-19 on non-covid intensive care unit service utilization, case mix and outcomes: a registry-based analysis from indian registry of intensive care (iris) group, Wellcome Open Research Volume 6: Issue 159: Page 1-19, 10th November 2021

ISARIC Clinical Characterisation Group, The value of open-source clinical science in pandemic response: lessons from ISARIC, Lancet Infect Dis, Volume 21: Issue 12: Page 1623-1624, December 2021

### Lectures

Lecture, Creating a Culture of Safety in ICUs, Criticare, Virtual, February 2021

Lecture, An Update on Management of Covid-19, Webinar, 13th May 2021

Lecture, Handling Insomnia during Covid-19 Pandemic, Covid Care series, Webinar, 24th May 2021

Lecture, Wake up and Learn about Sleep problems, Webinar, 19th June 2021

National Co-ordinator, Practical aspects of ECMO, Meeting, 8th July 2021

### Presentations

Presentation, Venous thromboembolism (VTE) in Covid, CHEST, American College of Chest Physicians in Collaboration with SEAD Academia), 25th September 2021

Moderator, Transfer of Critically ill, Apollo Centre of Excellence for Critical Care (ACECC), 24th November 2021

### Editorial Boards Membership

Editor, Indian Journal of Sleep Medicine, since 2010

Associate Editor, Apollo Medicine Journal, since 2012

Scientific Reviewer, Indian Journal of Critical Care Medicine, since 2006

Scientific Reviewer, Indian Journal of Medical Research, since 2012

Scientific Reviewer, Sleep and Vigilance, since 2018

#### **Professional Societies' Positions**

Member, Indian society of Critical Care Medicine, Credentials Committee, since 2020

Member, National Advisory Committee, Indian Sleep Disorders Association, since January 2021

#### **Member of task forces of Government of India or State Governments**

National Co-Ordinator, Practical aspects of ECMO, since 8 July 2021

#### **Examinership**

Examiner, Indian Diploma in Critical Care Medicine, 2021

Examiner, Indian Fellowship in Critical Care Medicine, 2021

Examiner, National Board of Examinations in Critical Care Medicine, 2021

### **129. Dr Nandini Sethuraman**

Microbiology, Apollo Main Hospitals, Chennai

#### **Publications**

Nandini Sethuraman, Anitha Madhavan, Arun Sachu, Anil Kumar, Jayalakshmi Vasudevanicker, Evaluation of Matrix-assisted laser desorption/ionization Time-of flight Mass spectrometry (MALDI TOF MS) and VITEK 2 in routine microbial identification, Ghana Medical Journal, Volume 55: Issue 4: Page 308-310, December 2021

Nandini Sethuraman, Atul Patel, Ritesh Agarwal, Shivaprakash M Rudramurthy, Manoj Shevkani,

Immaculata Xess, Ratna Sharma, Jayanthi Savio, Surabhi Madan, Prakash Shastri, Deepak Thangaraju, Rungmei Marak, Karuna Tadepalli, Pratik Savaj, Ayesha Sunavala, Neha Gupta, Tanu Singhal, Valliappan Muthu, Arunloke Chakrabarti, Multicenter Epidemiologic Study of Coronavirus Disease-Associated Mucormycosis, India, Emerg Infect Dis, Volume 27: Issue 9: Page 2349-2359, September 2021

Nandini Sethuraman, Rohit Vashisht, Ram Gopalakrishnan, Senthur Nambi, Dorairajan Sureshkumar, Yamunadevi Ramanathan, Ramasubramanian Venkatasubramanian, Microbial Etiology of Community Acquired Meningoencephalitis In Adults: A Retrospective Review, Journal of Microbiology and Infectious Diseases, Volume 11: Issue 1: Page 15-20, 2021

Nandini Sethuraman, Suresh Kumar, V Ramasubramanian, Sowmya Sridharan, Panchatcharam S Nambi, Clinical Profile of Non-neutropenic Patients with Invasive Candidiasis: A Retrospective Study in a Tertiary Care Center, Indian Journal of Critical Care Medicine, Volume 25: Issue 3: Page 267-272, February 2021

### **130. Dr Neetu Mariam Alex**

Internal Medicine, Apollo Main Hospitals, Chennai

#### **Publications**

Neetu Mariam Alex, Phani Krishna Machiraju, Safinaaz, Sriram Sankaran, Posterior reversible encephalopathy syndrome as the first manifestation of mixed connective tissue disorder: a case report, Journal of Medical Care Reports, Volume 15: Issue 40: Page 1 - 7, 2021

Neetu Mariam Alex, Phani Krishna Machiraju, Safinaaz, Nikita Mary Baby, Pneumomediastinum in Covid-19: A series of three cases and review of literature, SAGE Open Medical Case Reports, Volume 9: Page 1-6, 2021

## 131. Dr Nitesh Jain

Urology, Apollo Main Hospitals, Chennai

### Publications

Nitesh Jain, Jatin Soni, Mathisekaran Thangarasu, Sanjay Prakash, A case report on non urological cause of bilateral hydronephrosis, Indian Journal of Urology, Volume 37: Issue 3: Page 281-282, 2021

Sanjay Prakash Jayaprakash, Mathisekaran Thangarasu, Nitesh Jain, Video journal - Pelvic lipomatosis - Rare benign disease - Tips and tricks for robotic management, Journal of Video Endourology, Volume 35: Issue 8, 8th October 2021

## 132. Dr Prasanna Kumar Reddy

Surgical Gastroenterology and Minimal Access Surgery, Apollo Main Hospitals, Chennai

### Publications

Prasanna Kumar Reddy, Saloni Naresh Shah, Ashok Parameswaran, Metastatic Extraskeletal Mesenchymal Chondrosarcoma of the Pancreas: Report of an Unusual Case with Review of Literature, Asian Journal of Oncology, Volume 7: Issue 6: Page 1-4, 2021

## 133. Dr Phani Krishna Machiraju

Internal Medicine, Apollo Main Hospitals, Chennai

### Publications

Phani Krishna Machiraju, Neetu Mariam Alex, Safinaaz, Sriram Sankaran, Posterior reversible encephalopathy syndrome as the first manifestation of mixed connective tissue disorder: a case report, Journal of Medical Care Reports, Volume 15: Issue 40: Page 1 - 7, 2021

Phani Krishna Machiraju, Neetu Mariam Alex, Safinaaz, Nikita Mary Baby, Pneumomediastinum in Covid-19: A series of three cases and review of

literature, SAGE Open Medical Case Reports, Volume 9: Page 1-6, 2021

## 134. Dr Premkumar Balachandran

Minimal Access, Bariatric and Robotic Surgery, Apollo Main Hospitals, Chennai

### Lectures

Lecture, The management of complicated inguinal hernia, Indian Association of Gastrointestinal Endosurgeons, Fellowship in Advanced Laparoscopic Surgery (FALS) Course, Kanyakumari, December 2021

Lecture, E tep Rives stoppa repair of ventral hernia, Association of Surgeons of India, Tamilnadu, TNASICON, Chennai, December 2021

Lecture, E Tep for inguinal hernia, Fellowship of Indian Association of Gastrointestinal Endosurgeons (FIAGES), South Zone, Chennai, September 2021

Lecture, Safe operating strategies in hernia, GROIN, Abdominal Wall Reconstructions Surgeons Community, AWRSC, Chennai, July 2021

Lecture, Introduction to haemostasis and haemostatic solutions, 18th Annual Congress of Indian Association of Gastrointestinal Surgeons IAGES, Coimbatore, May 2021

Lecture, Laparoscopic E Tep Rives stoppa repair for concomitant groin and ventral hernia, Inguinal hernia, New Zealand Association and Abdominal Wall Reconstructions Surgeons Community ANZAWR, Virtual, May 2021

### Editorial Board membership

Editorial Board Member, World Journal of Laparoscopic Surgery, since 2008

Editorial Board Member, Frontiers in Visceral Surgery, since 2014

Editorial Board Member, Cureus Journal, since 2021

#### Professional Societies' Positions

Vice president, International College of Robotic Surgeons, since 2012

Founding EC member, Indo German Endo Laparoscopic Society (IGELS), since 2018

#### Awards

Certificate of Excellence for outstanding contribution and advancement in laparoscopic and hernia surgery, Global Healthcare Award 2021

### **135. Dr Radhakrishnan Satheesan**

Pediatric Surgery, Apollo Hospitals, Chennai

#### Publications

Radhakrishnan Satheesan, Saloni Naresh Shah, N Geetha, Ashok Parameswaran, Fetal lung interstitial tumor: An uncommon pediatric pulmonary neoplasm, Lung India, Volume 38: Issue 2: Page 186-190, March – April 2021

### **136. Dr Ram Gopalakrishnan**

Infectious Diseases, Apollo Hospitals, Chennai

#### Publications

Gopalakrishnan R, Soni M, Significance of RDW in predicting mortality in Covid-19, An analysis of 622 cases, Int J Lab Hematol, Volume 43: Issue 4: Page O221-O223, 27th March 2021

### **137. Dr Rama Narasimhan**

Internal Medicine, Apollo Hospitals, Chennai

#### Publications

Rama Narasimhan, Nagashree Undinti, Charumathi R, Neetu Mariam Alex, Severe acute respiratory distress syndrome in COVID-19 infected

pregnancy: a case report, International Journal of Reproduction, Contraception, Obstetrics and Gynecology Undinti N et al. Int J Reprod Contracept Obstet Gynecol, Volume 10: Issue 1: Page 368-372, January 2021

### **138. Dr Ramesh Venkataraman**

Critical care, Apollo Hospitals, Chennai

#### Publications

Ramesh Venkataraman, Nagarajan Ramakrishnan, Impact of covid-19 on non-covid intensive care unit service utilization, case mix and outcomes: a registry-based analysis from Indian registry of intensive care (iris) group, Wellcome Open Research Volume 6: Issue 159: Page 1-19, 10th November 2021

#### Awards

Felicitated, for contribution to Critical Care Education, 1st Alumni Meet of Indian College of Critical Care Medicine, 20th December 2021

### **139. Dr Refai Showkathali**

Interventional Cardiology, Apollo Hospitals Chennai

#### Publications

Refai Showkathali, Radhapriya Yalamanchi, Balasubramanian Ramakrishnan, Abraham Oommann, Aruna Sivaprkash, Pramod Kumar, Thrombolysis in Acute Pulmonary Embolism: Are we overdoing it?, Heart Views, Volume 22: Issue 2: Page 115-120, April – June 2021

Refai Showkathali, Radhapriya Yalamanchi, Muthukumaran C Sivaprakasam, Raja Vijendra Reddy Janke, Krishnaswamy Chandrasekharan, Vijay Shankar Sadhasivam, Unanticipated complication of Transcatheter Correction of superior Sinus Venosus Atrial Septal Defect, Journal of Cardiology Cases, Volume 25: Issue 2:

Page 99-102, August 2021

### **Presentations**

Live Case presentation, A case on transcatheter closure of SVC ASD with PAPVC using aortic stent graft, Best of Structural Complex Cases, Society of Coronary angiography and Intervention, Virtual, 2021

### **Editorial Boards Membership**

Editorial Board Member, World Journal of Cardiovascular Medicine, since 2021

Editorial Board Member, Apollo Medicine, since 2021

### **140. Dr Rohit Aravindakshan Kooloth**

Critical Care, Apollo Hospitals, Chennai

#### **Publications**

Rohit Aravindakshan, Nagarajan Ramakrishnan, Impact of covid-19 on non-covid intensive care unit service utilization, case mix and outcomes: a registry-based analysis from Indian registry of intensive care (iris) group, Wellcome Open Research Volume 6: Issue 159: Page 1-19, 10th November 2021

### **141. Dr Sai Satish**

Interventional Cardiology, Apollo Hospitals, Chennai

#### **Publications**

Sai Satish, Khung Keong Yeo, Jack Wei Chieh Tan, Darren L Walters, JoAnn Lindenfeld, Michael Kang-Yin Lee, Angus Shing Fung Chui, Teguh Santoso, Shunsuke Kubo, John Chan Kok Meng, Kenny YK Sin, See Hooi Ewe, David Sim, Asian Pacific Society of Cardiology Consensus Recommendations on the Use of MitraClip for Mitral Regurgitation, European Cardiology Review, Volume 16: Page

e25, 1st June 2021

Sai Satish, Saibal Kar, Ashish Indani, Vijayakumar Subban, Ganapathy Arumugam, Hemalatha Senthil, Hema Kethavath, Mathew Samuel Kalarickal, Krishnaswamy Chandrasekaran, Percutaneous edge-to-edge mitral valve repair for symptomatic high surgical risk patients with significant mitral regurgitation e Short term and one year follow up results from a single center in India, Indian Heart Journal, Volume 73: Issue 4: Page 497-498, July – August 2021

### **142. Dr Saloni Naresh Shah**

Histopathology and Cytology, Apollo Main Hospitals, Chennai

#### **Publications**

Saloni Naresh Shah, Ashok Parameswaran, Prasanna Kumar Reddy, Metastatic Extraskeletal Mesenchymal Chondrosarcoma of the Pancreas: Report of an Unusual Case with Review of Literature, Asian Journal of Oncology, Volume 7: Issue 6: Page 1-4, 2021

### **143. Dr Sengottuvelu Gunasekaran**

Interventional Cardiology, Apollo Main Hospitals, Chennai

#### **Publications**

G Sengottuvelu, I Sathyamurthy, Can OCT change the therapeutic strategy in ACS due to plaque erosion? Indian Heart Journal, Volume 73: Issue 3: Page 259-253, 8th April 2021

Gunasekaran Sengottuvelu, Upendra Kaul, Atul Abhyankar, Rajpal K, Abhaichand, Ajit Bhagwat, Charanthalayil Gopalan Bahuleyan, Priyadarshini Arambam, Diana Yumnam, Serial evaluation of vascular responses after implantation of everolimus-eluting coronary stent by optical coherence tomography, Catheter Cardiovasc

Intervention, Volume 99, Issue 2: Page 381-390, 1st June 2021

Sengottuvelu Gunasekaran, Chandrashekhar Ponde, Manjula Suresh, Sundeep Mishra, Thomas Alexander, Tiny Nair, Acute ST-elevation myocardial infarction management during Covid-19 era: An Indian survey report by 1083 cardiologists, Journal of the American College of Cardiology, Volume 77: Issue 18: Page 3161, 11th May 2021

Sengottuvelu Gunasekaran, Immaneni Sathyamurthy, Manikandan T, Kirubakaran K, KN Srinivasan, Rajeswari Nayak, Abraham Oomman, K Pramod Kumar, Angiographic profile and therapeutic approach of prior coronary artery bypass graft patients presenting with acute coronary syndromes, Journal of Indian College of Cardiology, Volume 11: Issue 3: Page 104-108, 24th August 2021

Sengottuvelu Gunasekaran, Muthukumaran C Sivaprakasam, J Raja Vijendra Reddy, Sivakumar Kothandam, Sreeja Pavithran, Rohitraj Rajagopalan Gopalavilasam, M Jayranganath, Edwin Francis, Early multicenter experience of a new balloon expandable MyVal transcatheter heart valve in dysfunctional stenosed right ventricular outflow tract conduits, Annals of Pediatric Cardiology, Volume 14: Issue 3: Page 293-301, July-September 2021

Sengottuvelu Gunasekaran, Rony Mathew, Jabir Abdulkutty, Tejas Patel, Balbir Singh, Nagendra Chouhan, Fazila-Tun Nesa Malik, Samuel Mathew, Viveka Kumar, Vijayakumar Subban, TCT-168 real-time optical coherence tomography and angiographic coregistration in percutaneous coronary intervention—impact on treatment strategy: one-year clinical outcomes and subgroup analysis study, Journal of the American College of Cardiology, Volume 78: issue 19: Page B70, November 2021

## **144. Dr Sheba Sweetline Kanthy Jacob**

Pathology, Apollo Main Hospitals, Chennai

### **Publications**

Sheba Sweetline Kanthy, Distribution and expression of programmed death ligand – 1 in non-small cell carcinomas of the lung in a tertiary care centre in south india, Turkish Journal of Pathology, Volume 37: Issue 2: Page 139-144, 2021

Sheba S K Jacob, Chronic myeloid leukemia in a allograft liver mimicking an acute rejection, Journal of liver Transplantation, Volume 1: Page 100006, January – March 2021

### **Lectures**

Sheba S K Jacob, Plaques of disaster: imaging and histopathological correlation, The XII Cardiac Morphology Course, 2021

### **Professional Societies' Positions**

Executive Committee Member, Association of Pathologists and Microbiologists, Tamil Nadu, since 2018

## **145. Dr Sheela Nagusah**

Internal Medicine, Apollo Main Hospitals, Chennai

### **Awards**

Fellowship, General Infectious Disease, Christian Medical College, Vellore, 2021

## **146. Dr Shreya Kar**

Histopathology, Apollo Main Hospitals, Chennai

### **Publications**

Shreya Kar, Saloni Naresh Shah, Maya Menon, N Geetha, Primary Ewing's sarcoma/Primitive neuroectodermal tumour of the kidney: Report of four cases from a tertiary care centre, Current

Problems in Cancer: Case Reports, Volume 3: Page 100043, March 2021

### **147. Dr Ramasubramanian Venkatasubramanian**

Infectious Diseases and Tropical Medicine, Apollo Main Hospitals, Chennai

#### **Publications**

V Ramasubramanian, Nandini Sethuraman, Suresh Kumar, Ram Gopalakrishnan, Sowmya Sridharan, Panchatcharam S Nambi, Clinical Profile of Non-neutropenic Patients with Invasive Candidiasis: A Retrospective Study in a Tertiary Care Center, Indian Journal of Critical Care Medicine, Volume 25: Issue 3: Page 267-272, February 2021

### **148. Dr V L Arul Selvan**

Neurology, Apollo Main Hospitals, Chennai

#### **Publications**

C Venkata S Ram, Sudhir Kumar, Pushpendra Nath Renjen, G Praveen Kumar, Jayanthi Swaminathan, C Rajesh Reddy, Sathyanarayana Kondati, Mukesh Sharma, V L Arul Selvan, Meenakshi Sundaram, Anupama Vasudevan, Daniel Lackland, Risk factors predisposing to acute stroke in India: a prospective study, International Society of Hypertension, Volume 39: Issue 11: Page 2183-2189, 1st December 2021

### **Delhi**

### **149. Dr Aabha Nagral**

Gastroenterology, Indraprastha Apollo Hospitals, Delhi

#### **Publications**

Aabha Nagral, Kunal Adhyaru, Omkar S Rudra, Amit Gharat, Sonal Bhandare, Herbal Immune

Booster-Induced Liver Injury in the COVID-19 Pandemic - A Case Series, Journal of Clinical and Experimental Hepatology, Volume 11: Issue 6: Page 732-738, November-December 2021

Aabha Nagral, Ashwin Deshmukh, Ajay Jhaveri, Shaji Marar, Techniques and Outcomes of Transjugular Intrahepatic Portosystemic Shunting in Infants with Budd-Chiari Syndrome, TIPS in Infants with Budd-Chiari Syndrome, Volume 32: Issue 12: Page 1637-1643, December 2021

### **150. Dr Akshatha Sharma**

Fetal Medicine, Indraprastha Apollo Hospitals, Delhi

#### **Publications**

Akshatha Sharma, Smriti Prasad, Daljit Singh Sahota, P Vanamail, Saloni Arora, Anita Kaul, Performance of Fetal Medicine Foundation algorithm for first trimester preeclampsia screening in an indigenous south Asian population, BMC Pregnancy Childbirth, Volume 21: Issue 1: Page 805, 4th December 2021

Akshatha Sharma, Aanchal Sablok, Rachna Gupta, Seema Thakur, Anita Kaul, Isolated fetal ascites: Etiology and prognosis - A 10-Year experience from a tertiary referral care center in India, Journal of Indian Association of Pediatric Surgeons, Volume 26: Issue 3: Page 162-169, 17th May 2021

### **151. Dr Amarnath Jena**

Nuclear Medicine, Indraprastha Apollo Hospitals, Delhi

#### **Publications**

Amarnath Jena, Sangeeta Taneja, Prerana Rana, Nidhi Goyal, Abhishek Vaish, Rajesh Botchu, Raju Vaishya, Emerging role of integrated PET MRI in osteoarthritis, Skeletal Radiology, Volume 50: Issue 10: Page 2349-2363, June 2021

Amarnath Jena, Nidhi Goyal, Raju Vaishya, 18F-NaF Simultaneous PET/MRI in Osteoarthritis: initial observations with case illustration, Volume 22: e-101569, Page 1-5, 1st December 2021

Amarnath Jena, Sangeeta Taneja, Anna Ara Khan, Shanti K Sogani, Does qualitative simultaneous 18F-DOPA PET/mp-MRI improve diagnostic workup? An Initial Experience, Clinical Nuclear Medicine, Volume 46: Issue 9: Page 703-709, September 2021

Amarnath Jena, Vinit Suri, Shishir Pandey, Jyoti Singh, Acute-onset chronic inflammatory demyelinating polyneuropathy after COVID-19 infection and subsequent ChAdOx1 nCoV-19 vaccination, BMJ Case Rep, Volume 14: Issue 10: Page e245816, 1-4, 4th October 2021

Amarnath Jena, Pradeep Singh Negi, Shashi Bhushan Mehta, Use of Multiple-Tube Phantom: A Method to Globally Correct Native T1 Relaxation Time Inhomogeneity in Dedicated Molecular Magnetic Resonance Breast Coil, Journal of Medical Physics, Volume 46: Issue 1; Page 41-46, January – March 2021

### Lectures

Lecture, Dual tracer study in parkinsonian syndrome, Delhi Neurological Association, 1st May 2021

Lecture, Pitfalls and artifacts of PET/MRI, 19th ANMPICON Virtual Conference, 18- 19th September 2021

### **152. Dr Amita Mahajan**

Pediatric Hematology and Oncology, Indraprastha Apollo Hospitals, Delhi

### Publications

Amita Mahajan, Chandrika Verma, Kushagra Taneja, COVID-19 in Pediatric Oncology Patients:

Clinical Course and Outcomes from a Tertiary Care Center in North India, Indian J Pediatr, Volume 89: Issue 2: Page 207, 2021

Amita Mahajan, Kushagra Taneja, Chandrika Verma, Bilateral Leukemic Pulmonary Infiltrates: An Initial Presentation of Acute Lymphoblastic Leukemia Relapse, Indian J Pediatr, Volume 89: Issue 5: Page 515, 23rd July 2021

### **153. Dr Anita Kaul**

Fetal Medicine, Indraprastha Apollo Hospitals, Delhi

### Publications

Anita Kaul, Smriti Prasad, Daljit Singh Sahota, P Vanamail, Akshatha Sharma, Saloni Arora, Performance of Fetal Medicine Foundation algorithm for first trimester preeclampsia screening in an indigenous south Asian population, BMC Pregnancy Childbirth, Volume 21: Issue 1: Page 805, 4th December 2021

Anita Kaul, Aanchal Sablok, Akshatha Sharma, Rachna Gupta, Seema Thakur, Isolated fetal ascites: Etiology and prognosis – A 10-Year experience from a tertiary referral care center in India, Journal of Indian Association of Pediatric Surgeons, Volume 26: Issue 3: Page 162-169, 17th May 2021

### **154. Dr Anoop Kohli**

Neurology, Indraprastha Apollo Hospitals, Delhi

### Publications

Anoop Kohli, Charchit Gupta, Shvet Dutta, Chirag Madan, Perampanel in cases of refractory temporal lobe epilepsy-A report of post-operative and two eligible for temporal lobectomy, Interdisciplinary Neurosurgery: Advanced Techniques and case Management, Volume 24: Page 101094, 1st June 2021

Anoop Kohli, Charchit Gupta, Shvet Dutta, Chirag

Madan, Changes in stroke presentation in neo-Covid patients: A case study, Interdisciplinary Neurosurgery, Advanced Techniques and case Management, Volume 24: Page 100949, 1st June 2021

#### **Editorial Boards Membership**

Reviewer, Journal of Cerebrovascular Disease

#### **Professional Societies' Positions**

Member, Indian Academy of Neurology

Member, Platinum Premier, American Stroke Association

### **155. Dr Anupam Sibal**

Pediatric Gastroenterology and Hepatology, Indraprastha Apollo Hospitals, Delhi

#### **Chapters contributed to text books**

Dr Anupam Sibal, Acute Liver Failure, Section 37, Chapter 37.10, PG Textbook of Pediatrics, Editor - Piyush Gupta, Jaypee Brothers Medical Publishers, Volume 1, Edition 3/e, 2021

#### **Publications**

Anupam Sibal, Raju Vaishya, Sujeet Kumar Singh, Arpita Malani, Shreya, Emergence of COVID-19 variants among ChAdOx1 nCoV-19 (recombinant) vaccine recipients, Indian J Med Res, Volume 153: Issue 5-6: Page 559–561, May – June 2021

Anupam Sibal, Raju Vaishya, Arpita Malani, Leena Mendiratta, Hena Butta, Sujeet Kumar Singh, Hari Prasad K, ChAdOx1 n-COV 19 vaccine protected health care workers from severe infection caused by the variants, Mayo Clin Proc, Volume 96: Issue 10: Page 2726–2727, October 2021

Anupam Sibal, Raju Vaishya, Arpita Malani, K Hari Prasad, SARS-CoV-2 infection after COVID-19 immunization in healthcare workers: A

retrospective, pilot study, Indian J Med Res, Volume 153: Issue 5 and 6: Page 550-524, May - June 2021

Anupam Sibal, Raju Vaishya, P Shiva Kumar, Severe impact of COVID-19 pandemic on non-COVID patient care and health delivery: An observational study from a large multispecialty hospital of India, Indian J Med Sci, Volume 73: Issue 2: Page 159-163, 24th September 2021

Anupam Sibal, Raju Vaishya, Himani Sharma, Sujeet K Singh, Lack of vaccination and associated comorbidities predispose to the need for intensive care in individuals infected with the delta variant – A case cohort study from a tertiary care hospital in New Delhi, India, Volume 15: Issue 4: Page 102203, July- August 2021

Anupam Sibal, Namita Seth Mohta, Apollo Hospitals response to Covid-19 in India: Behind the scenes, NEJM Catal Innov Care Deliv, Volume 2: Issue 7, 16th June 2021

Anupam Sibal, Raju Vaishya, Arpita Malani, Sujoy Kar, Hari Prasad K, Kiran SV, Sangita Reddy, Shobana Kamineni, Suneeta Reddy, Preetha Reddy, Prathap Chandra Reddy, Symptomatic post-vaccination SARS-CoV-2 infections in healthcare workers- A multicenter cohort study, Diabetes and Metabolic Syndrome Journal, Volume 15: Issue 6: Page 102306, November–December 2021

Anupam Sibal, Sujoy Kar, Rajesh Chawla, Sai Praveen Haranath, Suresh Ramasubban, Nagarajan Ramakrishnan, Raju Vaishya, Sangita Reddy, Multivariable mortality risk prediction using machine learning for COVID-19 patients at admission (AICOVID), Nature, Volume 11: Page 12801, 17th June 2021

#### **Lectures**

Lecture, A discussion on the aftermath of India's COVID-19 vaccination programme and the reforms needed in the country's public healthcare

systems, Beyond the Vaccine: Public Health System's Revival in India, 9th February 2021

Lecture, Insights on Building a safety culture in hospital, Session on Patient Safety, Does Indian healthcare have a culture of safety at Hospital Tech, 16th April 2021

Lecture, Implications of the global action plan for frontline health care facilities and services, ISQua Virtual Conference, 9th July 2021

Lecture, 3rd Wave-Possibilities and trends, CII Task Force on 3rd Wave of Covid-India's Preparedness, 23rd July 2021

Lecture, Acute Liver Failure, Pediatric Hepatology CME, 30th July 2021

Lecture, Covid-19 impact and implications in pediatric gastroenterology, 1st APPSPGHAN-NASPGHAN Webinar, 21st August 2021

Lecture, Evolving Healthcare needs- New investment opportunities, CII- Indo ASEAN Business Summit, 7th October 2021

Lecture, Capacity Building for the next decade, FICCI Heal, Transforming Healthcare Beyond Covid, 22nd October 2021

Lecture, Research and Innovation in Healthcare, CII ASIA HEALTH, Transforming Healthcare for A Better Tomorrow, 28th October 2021

#### **Editorial Board Membership**

Executive Editor, Apollo Medicine Journal, since 2016

#### **Professional Societies' Positions**

President, Global Association of Physicians of Indian Origin (GAPIO), since January 2020

Honorary Clinical Professor, Macquarie University, Sydney, Australia, since June 2015

Member, Asian Pan-Pacific Society of Pediatric Gastroenterology Hepatology and Nutrition (APPSPGHAN), Executive Council, since 2005

#### **156. Dr Arun Prasad**

General Surgery and Bariatric Surgery, Indraprastha Apollo Hospitals, Delhi

#### **Publications**

Arun Prasad, Aparna Govil Bhasker, Manish Khaitan, Vivek Bindal, Amardeep Kumar, Anirudh Rajkumar, Anshuman Kaushal, Chirag Parikh, Daksh Sethi, Deep Goel, Deepak Thampi Hareendran, Digvijay Bedi, Gurvinder Singh Jammu, Jayanth Leo, Kuldeepak Kular, Mahendra Narwaria, Mahesh Chikkachanappa, Manish Motwani, Manoj Bharucha, Mohamed Ismail, Nandkishore Dukkipati, Neha Shah, Om Tantia, Parag Patel, R Padmakumar, Rahul Singh, Raj Palaniappan, Rajesh Shrivastava, Ram Raksha Pal Rajput, Ramen Goel, Randeep Wadhawan, Rohit Garg, Sandeep Aggarwal, Sanjay Patolia, Sarfaraz J Baig, Shashank Shah, H V Shivaram, Shrihari Dhorepatil, Sukhvinder Singh Saggu, Surendra Ugale, T Perungo, Vandana Soni, Impact of COVID-19 pandemic on bariatric surgery in India: An obesity and metabolic surgery society of India survey of 1307 patients, J Minim Access Surg, Volume 17: Issue 4: Page 542-547, October December 2021

Prasad A, Goel R, Nasta AM, Goel M, Complications after bariatric surgery: A multicentric study of 11,568 patients from Indian bariatric surgery outcomes reporting group, J Minim Access Surg, Volume 17: Issue 2: Page 213-220, April -June 2021

Prasad A, Mahawar KK, Omar I, The first modified Delphi consensus statement on sleeve gastrectomy, Surg Endosc, Volume 35: Issue 12: Page 7027-7033, December 2021

## Editorial Board Membership

Editorial Board Member, Obesity Surgery Society of India, Journal of Bariatric Surgery, since 2021

Editor-in-Chief, World Journal of Gastrointestinal Surgery, since 2021

Editor, Journal of Minimal Access Surgery

## Professional Societies' Positions

Member, Primary Trauma Care Foundation, Oxford UK, since 2021

President, Obesity Surgery Society of India

Member, International federation from the Surgery of Obesity

President, MGB-OAGB club

Founder member, Indian branch of Clinical Robotic Surgeons Association

Founder member, BRICS Bariatric Surgery Society

Academic Coordinator, International Bariatric Club Academy

Vice President, Indian Association of Gastroendoscopic Surgeons

Executive Member, Association of Surgeons of India

## 157. Dr Ashish Malik

Anesthesiology and Critical Care, Indraprastha Apollo Hospitals, Delhi

## Professional Societies Positions

Member, Anaesthesia Critical Care Committee of International Liver Transplant Society, since 2021

## 158. Dr Ashish Sabharwal

Urology, Andrology and Robotic Surgery, Indraprastha Apollo Hospitals, Delhi

## Professional Societies' Positions

Proctor, Robotic Surgery, Da Vinci company Intuitive Surgical, USA, January Since 2021

## 159. Dr Ashwani Kumar

ENT Head and Neck and Cochlear Implant, Indraprastha Apollo Hospitals, Delhi

## Presentations

Paper Presentation, Management of single-sided deafness with Bonebridge: Post cholesteatoma surgery - A case study, 6th World Congress of Cochlear Implants in Emerging Nations CIGICON, Virtual, 14th November 2021

## 160. Dr Abhishek Vaish

Orthopaedics, Indraprastha Apollo Hospitals, Delhi

## Publications

Abhishek Vaish, Raju Vaishya, Vishwa Bandhu Bhasin, Etiopathology and management of stiff knees: A Current Concept Review, Indian J Orthop, Volume 20: Issue 55: Issue 2: Page 276-284, April 2021

Abhishek Vaish, Dhananjaya Sharma, Raju Vaishya, Preprint: already the bride or still the bridesmaid?, Postgraduate Medical Journal, Volume 98: Page 319-320, 19th August 2021

Abhishek Vaish, Aabid Husain Ansari, Amit Kumar Gupta, Raju Vaishya, Single-stage surgical correction of a bilateral acquired coxa vara deformity in a young woman, BMJ Case Rep, Volume 14: Issue 10: Page e245754, 5th October 2021

Abhishek Vaish, Srinivas B S Kambhampati, Raju Vaishya, Mohit Kumar Patralekh, Trends of arthroscopy publications in PubMed and Scopus, Knee Surgery and Related Research, Volume 33: Issue 14: Page 1 – 8, 29th April 2021

Vaish A, Vaishya R, Predatory Journals – Alarming danger to the Society, J Clin Orthop Trauma, National Library of Medicine, doi:10.1016/j.jcot.2021.101507, Volume 21: Page 101507, July 2021

Abhishek Vaish, Karthik Vishwanathan, Srinivas B S Kambhampati, Mohit Kumar Patralekh, Raju Vaishya, Bibliometric analysis of the top 50 most cited publications of the Journal of Clinical Orthopaedics and Trauma, Journal of Clinical Orthopaedics and Trauma, Volume 22: Page 101590, November 2021

Abhishek Vaish, Vikas Birla, Raju Vaishya, Risk factors and pathogenesis of steroid-induced osteonecrosis of femoral head - A scoping review, Journal of Clinical Orthopaedics and Trauma, Volume 23: Issue 101643, December 2021

Abhishek Vaish, Suresh Babu, Raju Vaishya, Arun Agarwal, Can intermittent fasting be helpful for knee osteoarthritis?, Journal of Clinical Orthopaedics and Trauma, Volume 16: Page 70-74, May 2021

Abhishek Vaish, Ashish Kumar Goyal, Raju Vaishya, Pankaj Baweja, A rare recurrent chondromyxoid fibroma of the proximal tibia in an adolescent female, Journal of Bone and Soft Tissue Tumors (JBST), Volume 6: Issue 3: Page 16-19, March 2021

Abhishek Vaish, Ashish Goyal, Raju Vaishya, Successful salvage of a mangled injury of the ankle in a young male, J Orthop Case Rep, Volume 11: Issue 2: Page 11-14, February 2021

Abhishek Vaish, Mohit Kumar Patralekh, Raju Vaishya, Ashish Gulia, Hitesh Lal, Trends of publication in the orthopedic journals from India: A bibliometric analysis, Indian Journal of Medical Science, Volume 73: Issue 1: Page 134-140, 29th May 2021

Abhishek Vaish, Aabid Husain Ansari, Amit Kumar Gupta, Raju Vaishya, Migration of a broken kirschner wire to the popliteal fossa following

tension band wiring of a patellar fracture, Apollo Medicine, Volume 18: Issue 2: Page 138-141, 12th April 2021

Vaish A, Vaishya R, Multiple Bone Infarcts around knee in a middle-aged female, Apollo Medicine, Volume 18: Issue 4: Page 316-317, 13th July 2021

Vaish A, Mishra AK, Vaishya R, Effect of Body Mass Index on the outcomes of primary Total Knee Arthroplasty up to one year- a prospective cohort study, Preprint Research Square, doi:10.21203/rs.3.rs-829103/v1, Page 1- 10, August 23, 2021

Vaish A, Vaishya R, Disproportionate gender representation in Orthopaedics and its Research, Journal Clinical Orthop Trauma, National Library of Medicine, doi: 10.1016/j.jcot.2021.101572, Volume 22: Page 101572, August 22, 2021

## **161. Dr Chandrika Verma**

Pediatric Hematology and Oncology, Indraprastha Apollo Hospitals, Delhi

### **Publications**

Chandrika Verma, Kushagra Taneja, Amita Mahajan, COVID-19 in Pediatric Oncology Patients: Clinical Course and Outcomes from a Tertiary Care Center in North India, Indian J Pediatr, Volume 89: Issue 2: Page 207, 2021

Chandrika Verma, Kushagra Taneja, Amita Mahajan, Bilateral Leukemic Pulmonary Infiltrates: An Initial Presentation of Acute Lymphoblastic Leukemia Relapse, Indian J Pediatr, Volume 89: Issue 5: Page 515, 23rd July 2021

## **162. Dr D K Bhargava**

Gastroenterology and Hepatology, Indraprastha Apollo Hospitals, Delhi

### **Awards**

Dr S K Sama Memorial Award, Delhi Liver

Foundation, 30th January 2021

## 163. Dr DK Agarwal

Nephrology, Indraprastha Apollo Hospitals, Delhi

### Chapters contributed to text books

Dr DK Agarwal, Renal Diseases in obstetrics and Gynecology, A practical guide for obstetricians, 1st edition, Page 370-381, Notion Press, 2021

Dr DK Agarwal, Hypertension in pregnancy, In practical guide for obstetricians, 1st edition, Page 334-338, Notion Press Publishers, 2021

Dr DK Agarwal, Corona Virus disease in kidney disease, 1st edition, Page 132-140, Editors - Manjit S Kanwar, Comprehensive Text book of COVID-1902, Nutech Print Services Publishers, New Delhi, 2021

### Lectures

Panelist, HF, Diabetes mellitus and CKD: a clinical conundrum, Novartis Pvt Ltd, 17th March 2021

Panelist, Linagliptin, Boehringer Ingelheim, 6th April 2021

Panelist, Role of sGLT2 inhibitors in kidney disease – recent update and the current status, Delhi nephrology society (DNS), 10th April 2021

Panelist, Simple and effective line of treatment: Linagliptin in Broad range of T2DM patients, Boehringer Ingelheim, 16th April 2021

Zoom meeting, SGLT2i and DPP-4i (Empa + Lina FDC and Linagliptin in perspective), by Boehringer-Ingelheim, New Delhi, India, Virtual, 20th June, 2021

Panelist, The state of Doctors in India: What need to change, Mylen Pharma Company, 1st July 2021

Panelist, SGLT-2i: New Hope in CKD, Astra Zeneca Pharma India Ltd, 3rd July 2021

Panelist, Reversing Cardiac remodeling in ADHF patients, Novartis, 27th July 2021

Panelist, Myth Busters Linagliptin in perspective, Boehringer-Ingelheim, 18th August 2021

Panelist, Heart Failure, Diabetes mellitus and chronic kidney disease-a clinical conundrum, Lipid association of India conference, International 2021, Hybrid Conference, New Delhi, India, 21st August 2021

Panelist, After effects of COVID-19: How to manage, IMACGP under banner of IMA South Delhi branch, Virtual, 2nd August 2021

Lecture, Role of biomarkers in the management of renal dysfunction, 7th CLBS symposium 2021 ITSI mid-term meeting, New Delhi, India, 7th September 2021

Lecture, Nephro Connect e CME on Hypertension and CKD – An insight into pathology and management, New Delhi, 28th October 2021

### Professional Societies' Positions

Life Member, Indian Society of Electrocardiology, since 1990

Life Member, Indian Society of Nephrology, since 1991

Life Member, Indian Society of Organ Transplantation, since 1991

Life Member, Hyderabad Transplant forum, since 1994

Life Member, Hypertension Society of India, since 1994

Life Member, Indian Medical Association

### Examinership

Assessor, Clinical assessment for Formative assessment 2020, Pushpawati Singhania Hospital,

New Delhi, 5th August 2021

Examiner, DNB Nephrology exam, National Board of Examination Medical Science New Delhi, New Delhi, 7th August 2021

Coordinator, DNB practical OSCE stations December 2020, sessions in the specialty of nephrology, NBEMS Dwarka Office Dwarka New Delhi, 10th August 2021

#### **164. Dr Dinesh Mohan Chaudhari**

Neurosciences, Indraprastha Apollo Hospitals, Delhi

##### **Publications**

Dinesh Mohan Chaudhari, Pushpendra Nath Renjen, Nidhi Goyal, Kamal Ahmed Severe acute orthostatic headache: spontaneous intracranial hypotension (SIH) BMJ Case Rep, doi:10.1136/bcr-2021-243179, Volume 14: Issue 6: Page e243179, 25th June 2021

##### **Professional Societies' Positions**

Member, American Association of Neurology

Lifetime Member, Delhi Neurological Association

Research Fellow, International Association of Hydrologists

Member, Indian Academy of Neurology

Member, World Stroke Organization

Member, European Stroke Organization

Lifetime Member, Innovative Physicians Forum of India

Life Member, Delhi Medical Council

Member, British HIV Association

Member, Asia Pacific Vascular Intervention Society

#### **165. Dr G Praveen Kumar**

Oncology, Indraprastha Apollo Hospitals, Delhi

##### **Publications**

C Venkata S Ram, Sameer Dani, Abraham Oomman, Rakesh Gupta, K O Ramachari, G Praveen Kumar, Jayanthi Swaminathan, Sathyanarayana Kondati, Ishita Sengupta, Correlation Between Ambulatory Blood Pressure Monitoring and Office Blood Pressure Measurement in Patients with Hypertension: A Community Study, Am J Med Sci, Volume 362: Issue 6: Page 546-552, December 2021

C Venkata S Ram, Sudhir Kumar, Pushpendra Nath Renjen, G Praveen Kumar, Jayanthi Swaminathan, C Rajesh Reddy, Sathyanarayana Kondati, Mukesh Sharma, V L Arul Selvan, Meenakshi Sundaram, Anupama Vasudevan, Daniel Lackland, Risk factors predisposing to acute stroke in India: a prospective study, International Society of Hypertension, Volume 39: Issue 11: Page 2183-2189, 1st December 2021

#### **166. Dr K J Choudhury**

Neuroanesthesia and Pain Management, Indraprastha Apollo Hospitals, Delhi

##### **Awards**

Stalwart in Anaesthesiology, Contribution to the specialty. 60th Annual Conference, 14th -16th October 2021

#### **167. Dr Kalpana Nagpal**

ENT and Head and Neck Surgery, Indraprastha Apollo Hospitals, Delhi

##### **Publications**

Kalpana Nagpal, Suresh Singh Naruka, Nishant Rana, Sumaid Kaul, Robotic-Assisted Removal of

Parapharyngeal Space Tumor via a Retro-auricular Approach: A Case Report, Al-Anbar Medical Journal, Volume 17: Issue 1: Page 37–40, 23rd January 2021

## 168. Dr Karunesh Kumar

Pediatric Gastroenterology and Hepatology, Indraprastha Apollo Hospitals, Delhi

### Publications

Karunesh Kumar, Sagar Mehta, Ravi Bhardwaj, Smita Malhotra, Neerav Goyal, Anupam Sibal Progressive Familial Intrahepatic Cholestasis: A Study in Children from a Liver Transplant Center in India, Journal of Clinical and Experimental Hepatology, Volume 12: Issue 2: Pages 454-460, 2021

## 169. Dr Kushagra Taneja

Pediatric Hematology and Oncology, Indraprastha Apollo Hospitals, Delhi

### Publications

Kushagra Taneja, Chandrika Verma, Amita Mahajan, COVID-19 in Pediatric Oncology Patients: Clinical Course and Outcomes from a Tertiary Care Center in North India, Indian J Pediatr, Volume 89: Issue 2: Page 207, 2021

Kushagra Taneja, Chandrika Verma, Amita Mahajan, Bilateral Leukemic Pulmonary Infiltrates: An Initial Presentation of Acute Lymphoblastic Leukemia Relapse, Indian J Pediatr, Volume 89: Issue 5: Page 515, 23rd July 2021

## 170. Dr M S Kanwar

Respiratory Medicine, Indraprastha Apollo Hospitals, Delhi

### Books Published

Editors- Dr M S Kanwar, Comprehensive Textbook of COVID-19, 1st edition, Salubris Publishers, 1st January 2021

## 171. Dr Mohit Chawdhary

Transfusion Medicine, Indraprastha Apollo Hospitals, Delhi

### Publications

Chawdhary M, A case of Bickerstaff encephalitis with overlapping Gullian Barre syndrome in a pediatric patient treated with therapeutic plasma exchange, Transfusion and Apheresis Science, Volume 60: Issue 6: Page 103260, December 2021

Chawdhary M, Changes in hematological parameters post plateletpheresis: Single-center study from North India, Transfusion and Apheresis Science, Volume 60: Issue 6: Page 103283, December 2021

Chawdhary M, Prospective multi-centric study to analyze pre-transplant compatibility algorithm for live-related donor kidney transplant in Indian setting: The Delhi approach, Transplant Immunology, Volume 69, Page 101487, October 2021

Chawdhary M, Red Blood Cell Exchange in Sickle Cell Disease: A Single-Center Experience, Global Journal of Transfusion Medicine, Volume 6: Issue 2: Page 156-159, 30th November 2021

Chawdhary M, Role of therapeutic plasma exchange in acute humoral rejection patients undergoing live-related renal transplantation: A single-center experience, Asian Journal of Transfusion Science, Volume 15: issue 1: Page 62-67, January – July 2021

## 172. Dr Mohsin Khan

General, GI, Minimal Access and Bariatric Surgery, Indraprastha Apollo Hospitals, Delhi

### Lectures

Faculty, Optimal approach to ventral hernias, 16th Annual International Conference of Association of

Minimal Access Surgeons of India, India Habitat Centre, New Delhi, 27th November 2021

#### Awards

Fellowship, American College of Surgeons, 29th October 2021

### **173. Dr N N Khanna**

Interventional Cardiology and Vascular Interventions, Indraprastha Apollo Hospitals, Delhi

#### Lectures

Chairperson, Project on selection of disease, National Committee Meeting on Telemedicine, Doctors and Diagnostics, TIFAC, May 2021

### **174. Dr Nidhi Goyal**

Radiology, Indraprastha Apollo Hospitals, Delhi

#### Awards

President's Appreciation Award, Exemplary services by Indian Radiology and Imaging Association, 2021

### **175. Dr Nikhil Modi**

Critical Care, Indraprastha Apollo Hospitals, Delhi

#### Lectures

Panelist, Symposium on locally Advanced Lung Cancer: Impact of Multidisciplinary team, Indraprastha Apollo Hospitals, Delhi, 26th November 2021

Panelist, National Symposium on Lung Failure, Indraprastha Apollo Hospitals, Delhi, 15th and 16th September 2021

#### Professional Societies' Positions

Member, Delhi Medical Council

Member, (FCCP) American College of Chest

Physician

Member of National College of Chest Physicians

Member of European Respiratory Society

Member Indian Society of Critical Care Medicine

### **176. Dr Nitin P Ghonge**

Radiology, Indraprastha Apollo Hospitals, Delhi

#### Professional Societies' Positions

Vice Chair, Education Committee, International Society of Radiology, since 2021

#### Awards

Academic Excellence Award, for promoting Academics by the Indian Radiology and Imaging Association, 2021

### **177. Dr Om Prakash Sharma**

Geriatric Medicine, Indraprastha Apollo Hospitals, Delhi

#### Books Published

Editor- Dr Om Prakash Sharma, Non-Clinical Frontiers in Geriatric Care, 2021

Editor- Dr Om Prakash Sharma, A Guide for a Geriatric Social Worker, 2021

#### Chapters contributed to text books

Dr Om Prakash Sharma, Historical aspects of Elderly Health Care, Chapter 2, A Guide for a Geriatric Social Worker (Caregivers), Page 4 – 5, 2021

Dr Om Prakash Sharma, Indian Concerns in Ageing, Chapter 3, Non-Clinical Frontiers in Geriatric Care, Page 8-9, 2021

Dr Om Prakash Sharma, Comprehensive approach in providing Geriatric Care in India, Chapter 221,

Medical Update, Editor- Dr Kamlesh Tewary, Evangel, Page 1412-1418, 2021

Dr Om Prakash Sharma, Diabetes and Vaccinations, Chapter 134, RSSDI Textbook of Diabetes Mellitus, Fifth Edition, Page 2021

#### **Publications**

Indian Journal of Geriatric Care – 3 Issues in 2021  
Detail – Title, Authors, Journal, Volume, issue, page

#### **Lectures**

Lecture, Comprehensive approach in managing geriatric care in India, e-APICON, New Delhi, 4th - 7th March 2021

Lecture, Contemporary issues in the healthcare for the elderly, Global Scenario, IPF Medicon 2021, 9th -10th October 2021

Lecture, Changing concepts In Geriatric Care, GSICON, Kolkata, 2021

Lecture, Introduction to Geriatrics, Certificate course in geriatrics and gerontology, Place, 2021

#### **Editorial Board Membership**

Editor-in-Chief, Indian Journal of Geriatric Care

Editor-in-Chief, Certificate Course in Geriatrics and Gerontology

Editor, Non-Clinical Frontiers in Geriatric Care

Editor, A Guide for a Geriatric Social Worker Patron, Innovative Physicians Forum

#### **Professional Societies' Positions**

General Secretary, Geriatric Society of India

Patron, Innovative Physicians Forum

#### **Awards**

Lifetime Achievement Award, RSSDI Rajasthan Chapter, 2021

## **178. Dr P N Renjen**

Neurology, Indraprastha Apollo Hospitals, Delhi

#### **Orations**

Speaker, Mental Health, Behavior Health, Psychiatry Neurology, Virtual World Healthcare Conference, 16th February 2021

#### **Publications**

Pushpendra Nath Renjen, Dinesh Mohan Chaudhari, Nidhi Goyal, Kamal Ahmed, Severe acute orthostatic headache: spontaneous intracranial hypotension (SIH) BMJ Case Rep, Volume 14: Issue 6: Page e243179, 25th June 2021

Pushpendra N Renjen, Dinesh Chaudhari, Ramesh Krisnan, Shishir Seth, Clinical significance of APTT - antiphospholipid antibody syndrome presenting as stroke, International Journal of Scientific Research, Volume 10: Issue 06: Page 1-2, June 2021

Renjen P N, Puri R, Mehta V, Iyengar S S, Srivastava P, Yusuf J, Pradhan A, Pandian JD, Sharma V K, Management of dyslipidaemia for the prevention of stroke: clinical practice recommendations from the lipid association of India, Curr Vasc Pharmacol, Volume 20: Issue 2: Page 134-155, 6th December 2021

Pushpendra N Renjen, Shishir Pandey, Dinesh Chaudhari, Jyoti Mishra, Swapnil Jain, Overlap syndrome of Miller-Fisher Syndrome (MFS) with pharyngeal-cervical-brachial (PCB) variant-Guillain Barre Syndrome (GBS), International Journal of Scientific Research, Volume 10: Issue 10, October 2021

Pushpendra N Renjen, Neelam Sahu, Dinesh Chaudhari, Swapnil Jain, Reticular activating system: an overview, International Journal of Scientific Research, Volume 10: Issue 10, October 2021

P N Renjen, Dinesh Chaudhary, An atypical presentation of left lateral medullary syndrome – a case report, Neurology India, Volume 69: Issue 6: Page 1831- 1834, 23rd December 2021

Pushpendra Nath Renjen, C Venkata S Ram, Sudhir Kumar, G Praveen Kumar, Risk factors predisposing to acute stroke in India - A prospective study, Journal of Hypertension, Volume 39: Issue 11: Page 2183-2189, 12th August 2021

P Renjen, D Chaudhari, C Gupta, Stroke biomarkers a study of association between mean platelet volume and severity of acute ischemic stroke assessed by modified ranking scale, International Journal of stroke, Volume 16: Issue 2\_Suppl: Page 124-124, 7th January 2021

P Renjen, D Chaudhari, Bilateral thalamic infarcts-a rare stroke mimic Uncommon Stroke Disorders and Challenging Cases, International Journal of stroke, Volume 16: Issue 2\_Suppl, Page 106-107, January 2021

P Renjen, D Chaudhari, Biomarkers in Ischemic and Hemorrhagic Stroke, Neurology India, Volume 69: Issue 5: Page 1466-1466, 13th April 2021

Renjen P N, Mishra A, Chaudhari D M, COVID-19-associated central nervous system mucormycosis, Apollo Medicine, Volume 18: Issue 3: Page 192-195, 18th September 2021

Renjen P N, Garg S, Mishra A, Chaudhari D M, New frontiers in acute stroke management, Apollo Medicine, Volume 18: Issue 3: Page 166-171, 18th September 2021

Renjen PN, Vaishya R, Editorial COVID-19 and neurological problems, Apollo Medicine, Volume 18: Page 153, 15th November 2021

Renjen PN, Chaudhari D, Hota JK, Rastogi H, Ahmad K, Garg S, Carotid stenting in patients with renal insufficiency – A case series and review of literature, Apollo med 2021, Volume 18: Issue 5:

Page 9-11, 5th July 2021

Pushpendra N Renjen, Shishir Pandey, Dinesh Chaudhari, Kamal Ahmad, Guillain-barre syndrome following scrub typhus: A rare case, Ann Indian Acad Neurol, Volume 24: Issue 3: Page 451-452, May - June 2021

Pushpendra Renjen, Dinesh Chaudhari, Rahul Saini, To determine the frequency of left atrial enlargement (LAE) in different subtypes of ischemic stroke based on toast classification, Neurology, Volume 96: Issue 15\_Supplement, April 2021

Renjen PN, Subgroup classification of myasthenia gravis, Ann Indian Acad Neurol, Volume 24: Issue 2: Page 300, January 2021

Pushpendra N Renjen, Venketasubramanian, Stroke care during the COVID-19 Pandemic, International Expert Panel Review, Volume 50: Issue 3: Page 245-261, 2021

## Lectures

Lecture, Prevent brain stroke, Live interactive session with Apollo 24/7, 10th January 2021

Lecture, Stroke Care during the COVID-19 Pandemic, International Expert Panel Review, Neurological Association, Delhi, Virtual, 10th January 2021

Lecture, Controversies in ischemic Stroke treatment and prevention, DNACON, Annual meeting of Delhi Neurological Association, All India Institute of Medical Sciences (AIIMS), Virtual, New Delhi, 5th -7th February 2021

Lecture, Stroke and Rehabilitation, IAPG (Indian Alliance of Patient Groups) and Daksham A Health and Education, 27th February 2021

Lecture, Important Advances in Stroke Research in 2020, 2020 Round up in Neurology, Delhi

Neurological Associations, Indraprastha Apollo Hospitals, New Delhi, 20th March 2021

Lecture, The Brain's Glymphatic System: current Controversies, Annual monthly meeting of Delhi Neurological Association, Virtual, 1st May 2021

Speaker, Association between mean platelet volume and severity of acute ischaemic stroke, KAN (Kerala Association of Neurologist) Monsoon Summit, Virtual, 9th – 11th July 2021

Lecture, Atrial cardiomyopathy and stroke, World Stroke Day CME, Institute of Neurosciences Indraprastha Apollo Hospitals, New Delhi, Virtual, 29th October 2021

#### **Editorial Board Membership**

Member, Apollo Medicine, since Mat 2020

Member, Frontier in stroke Online, 15th November 2021

#### **Examinership**

Examiner, National Board of Examination for Neurology, 2021

### **179. Dr Rajendra Prasad**

Neurosurgery and Spine Surgery, Indraprastha Apollo Hospitals, Delhi

#### **Professional Societies' Positions**

Member, Board of the International Pediatric Brain Injury Society, since 2021

#### **Awards**

The Prince Michael International Award, The Ride with Safety, Campaign for children on behalf of the Indian Head Injury Foundation, 2021

### **180. Dr Raju Vaishya**

Orthopaedics and Joint Replacement Surgery, Indraprastha Apollo Hospitals, Delhi

#### **Chapters contributed to text books**

Dr Raju Vaishya, Knee Osteoarthritis- In Orthopaedics at your Finger Tips, Orthopaedics and Rehabilitation, Editors- Aditya K Agarwal, Paresh Golwala, 1st edition, IP Innovative Publications, Page 445-458, January 2021

Dr Raju Vaishya, Marrow stimulation and Microfracture, Salubris Medical Publishers, (nehru India), Chapter 15, Orthobiologics, Editors- Mandeep Dhillon, 1st Edition, Page 143-150, 2021

Dr Raju Vaishya, Telemedicine, Teaching, and Virtual examination during Covid, Chapter 47, Comprehensive Textbook on COVID-19, Editors- MS Kanwar, 1st edition, Salubris Medical Publishers, Noida, India, Page 342-347, May 2021

Dr Raju Vaishya, The Role of Artificial Intelligence in healthcare during Coronavirus Disease, Chapter 48, Comprehensive Textbook on COVID-19, Editors- MS Kanwar, 1st edition, Salubris Medical Publishers, Noida, India, Page 348-352, May 2021

Dr Raju Vaishya, Principles of Bone Grafting, Chapter 33, Handbook of Orthopaedic Trauma Implantology, Editors- Banerjee A, Biberthaler P, Shanmugasundaram S, Springer, Singapore, Page 1-12, June 2021

Dr Raju Vaishya, Tribological Review of Medical Implants Manufactured by Additive Manufacturing, Chapter 12, Tribology and Sustainability, Editors- Jitendra Kumar Katiyar, 1st edition, CRC Press Publishers, Page 379-95, USA, July 2021

#### **Publications**

Vaishya R, Kambhampati SBS, Karlapudi V, Maini L, Publication trends on arthroscopy from India, J Arthroscopy Surgical Sports Med, Volume 2: Issue 1: Page 66-72, 10th January 2021

Vaishya R, Rajasekharan RB, Rajasekharan S, The role of social advocacy in reducing road traffic accidents in India, J Clinical Orthopedic Trauma 2021, Volume 12: Issue 1: Page 2-3, January 2021

Vaishya R, Jain V, Vaish A, Letter to editor on-surgical practice in the shadow of Covid-19 outbreak, Arch Bone Jt Surgical, Volume 9: Issue 1: Page 131-32, January 2021

Vaishya R, Saseendar S, Vaish A, Navada, Murrell WD, Assessment of safety and efficacy of intra-articular stromal vascular fraction injection for the treatment of knee osteoarthritis, Int Orthopedic Springer, Volume 45: Page 615-625, 12th January 2021

Vaishya R, Iyengar KP, Jain VK, Update on functional imaging of the diabetic foot infection, J Clinical Orthopedic Trauma, Volume 16, Page 119-124, May 2021

Vaishya R, Journal of clinical orthopaedics and trauma- a shining star from India, J Clinical Orthopedic Trauma, National Library of Medicine, Volume 12: Issue 1: Page 04-07, January 2021

Vaishya R, The first-year journey of the journal of arthroscopic surgery and sports medicine, J Arthroscopy Surgical Med 2021, Volume 2: Issue 1: Page 1-3, 10th January 2021

Vaishya R, Iyengar KP, Jain Vk, Bahl S, Can open access publishing be made just for authors from low-middle income countries, Am J Em Med, Volume 48: Page 345-346, 21st January 2021

Vaishya R, Upadhyaya GK, Patralekh MK, Jain VK, Iyengar KP, Gautam D, Malhotra R, Total hip arthroplasty in patients with post-polio residual paralysis: a systematic review, J Arthroplasty 2021, Volume 36: Issue 6: Page 2239-2247, June 2021

Vaishya R, Suresh Babu YS, Vaish A, Agarwal A, Can intermittent fasting be helpful for knee

osteoarthritis, J Clin Orthop Trauma 2021, Volume 16: Page 70-74, January 2021

Vaishya R, Javaid M, Khaleel I, Vaish A, Iyengar KP, Modern technologies for combating the pandemic of covid-19, J Industrial Integration Management, Volume 6: Issue 2: Page 147-159, 2021

Vaishya R, Jaly I, Iyengar KP, Bahl S, Hughes T, Covid-19 pandemic and debates on the operating theatre ventilation system in orthopaedic surgery, J Industrial Integration Management, Volume 6: Issue 2: Page 257-269, 2021

Vaishya R, Bahl S, Iyengar KP, Bagha AL, Jaly I, Jain V, Bioengineering technology in context to COVID-19 pandemic: potential roles and applications, J Industrial Integration Management 2021; Volume 6: Issue 2: Page 193- 207, 2021

Vaishya R, Iyengar KP, Jain VK, Article processing charge is a barrier to publication, J Clin Orthop Trauma, Volume 14: Page 14-16, 2021

Vaishya R, Dattari R, Jain VK, Iyengar KP, Anaesthetic considerations in polytrauma patients, J Clin Orthop Trauma 2021, Volume 12: Issue 1: Page 50-57, January 2021

Vaishya R, Maurya IB, Garg R, Jain VK, Iyengar KP, Perioperative anaesthetic considerations for rotator cuff repair surgeries: a current concept review, J Clinical Orthopedic Trauma, Volume 17: Page 65-71, 11th February 2021

Vaishya R, Goyal AK, Vaish A, Baweja P, A rare recurrent chondromyxoid fibroma of the proximal tibia in an adolescent female, J Bone Soft Tissue Tumors, Volume 6: Issue 3: Page 16-19, March 2021

Vaishya R, Jain VK, Upadhyaya GK, Patralekh MK, Iyengar KP, Lal H, Impact of covid-19 on clinical practices during lockdown: a pan India survey of orthopaedic surgeons, Malaysian Orthop J, Volume 15: Issue 1: Page 55-62, March 2021

Vaishya R, Vaish A, Goyal A, Successful salvage of a mangled injury of the ankle in a young male: with review of literature, *J Orthop Case Reports*, Volume 11: Issue 2: Page 11-14, February 2021

Vaishya R, Vaish A, Ansari AH, Acute painful calcific tendonitis of Shoulder, *Postgrad Med J*, Volume 98: Issue e1159: Page e2, May 2021

Vaishya R, Jain VK, Iyengar KP, Musculoskeletal manifestations of Covid-19, *J Clin Orthop Trauma*, National Library of Medicine, Volume 17, Page 280-281, 6th March 2021

Vaishya R, Vaish A, Kumar A, Impact of covid-19 on the practice of orthopaedics and trauma – an epidemiological study of the full pandemic year of a tertiary care center of New Delhi, *Int Orthop (SICOT)*, Volume 45: Issue 6: Page 1391-1397, 9th April 2021

Vaishya R, Vaish A, Iyengar KP, Covid-19: India sees new spike in cases despite vaccine rollout, Volume 372, Page n854, 30th March 2021

Vaishya R, Gautam D, Jain VK, Iyengar KP, Malhotra R, Total hip arthroplasty in tubercular arthritis of the hip – surgical challenges and choice of implants, *J Clin Orthop Trauma*, Volume 17: Page 214-17, 28th March 2021

Vaishya R, Iyengar KP, Jain VK, Ish P, Bame community hesitancy in UK for covid-19 vaccine, suggested solutions, *Postgrad Med J*, Volume 0: Page 1-2, doi:10.1136/postgradmedj-2021-139957, 29th March 2021

Raju Vaishya, Abhishek Vaish, Srinivas B S Kambhampati, Mohit Kumar Patralekh, Trends of arthroscopy publications in PubMed and Scopus, *Knee Surgery and Related Research*, Volume 33: Issue 14: Page 1 – 8, 29th April 2021

Vaishya R, Iyengar KP, Jain VK, Falling orthopaedic instruments and implants- potential hazards and strategies to mitigate them, *Perioperative Care and*

*Operating Room Management*, Volume 23: Page 100169, June 2021

Vaishya R, Vaish A, Bhasin VB, Etiopathology and management of stiff, knees: a current concept Review, *Indian J Orthop*, Volume 55: Issue 2: Page 276-284, April 2021

Vaishya R, Vaish A, Ansari AH, Gupta AK, Migration of a broken kirschner-wire to the popliteal fossa following tension-band wiring of a patellar fracture: A Case Report, *Apollo Medicine*, Volume 18: Issue 2: 138-141, 2021

Vaishya R, Iyengar KP, Jain VK, Ish P, Botchu R, Influence of the peltzman effect on the recurrent covid-19 waves in europe, *Postgrad Med J*, Volume 98: Page (e2):e110-e111, April 2021

Vaishya R, Javaid M, Khan IH, Haleem A, Vaish A, Data analytics applications for covid-19 pandemic, *Curr Med Reviews and Practices*, Volume 11: Issue 2: Page 105-106, 2021

Vaishya R, Iyengar KP, Jain VK, Ish P, Long covid-19: an emerging pandemic in itself, *Advances in Respiratory Medicine*, Volume 89, Issue 2, Page 234-236, 2021

Vaishya R, Bhoi D, Jain D, Garg R, Iyengar KP, Hoda W, Jain VK, Complementary and alternative modalities (CAM) for pain management in musculoskeletal diseases (MSDs), *J Clin Orthop Trauma*, Volume 18: Page 171-180, 29th April 2021

Vaishya R, Kumar V, Baburaj V, Pate S, Sharma S, Does the use of intraoperative CT scan improve outcomes in Orthopaedic surgery, a systematic review and meta-analysis, *J Clin Orthop Trauma*, National Library of Medicine, Volume 18: Page 216-223, 15th May 2021

Vaishya R, Vishwanathan K, Srinivas KBS, Top 100 cited articles on diabetes and covid-19: a bibliometric analysis, *diabetes and metabolic*

syndrome: clinical research and reviews, Diabetes Metab Syndr, National library of Medicine, Volume 15: Issue 4: Page 102160, July – August 2021

Vaishya R, Iyengar KP, Jain R, Samy DA, Jain VK, Suraliwala K, Exploring the role and mechanism of covid-19 apps in fighting the current pandemic, Indian J Med Sc, Volume 73: Issue 1: Page 36-40, 29th May 2021

Vaishya R, Monga P, The changing landscape of rotator cuff surgery, J Clin Orthop Trauma, National Library of Medicine, Volume 19: Page 94-95, August 2021

Vaishya R, Patralekh MK, Vaish A, Gulia A, Lal H, Trends of publication in the orthopaedic journals from India- a bibliometric study, Indian J Med Sc, Volume 73: Issue 1: Page 134-140, 29th May 2021

Vaishya R, Babu S, Butta H, Sardana R, Mehndiratta L, Gulati Y, A retrospective analysis of the prosthetic joint infections of the hip and knee at a tertiary care center of India, Apollo Medicine, Volume 18: Issue 2: Page 85-92, 31st May 2021

Vaishya R, Srinivas KBS, Vasudeva N, Patralekh MK, Top 50 cited articles on covid-19 after the first year of the pandemic: a bibliometric analysis, Diabetes and Metabolic Syndrome, Clinical Research and Reviews, Volume 15: Issue 4: Page 102140, 17th May 2021

Vaishya R, the havoc caused by the 2nd wave of covid-19 in India, Apollo Medicine, Volume 18: Issue 2: Page 71-72, 28th May 2021

Vaishya R, Bagaria V, Understanding the covid conundrum and decluttering the scientific literature on covid, Diabetes and Metabolic Syndrome: Clinical Research and Reviews, Volume 15: Issue 4: Page 102137, 14th May 2021

Vaishya R, Jain VK, Iyengar KP, Differences between first wave and second wave of covid-19 in India, Diabetes and metabolic syndrome: Clinical

Research and Reviews, National Library of Medicine, Volume 15: Issue 3: Page 1047-1048, May-June 2021

Vaishya R, Iyengar KP, Jain VK, Garg R, Elucidating reasons of Covid-19 re-infection and its management strategies, Diabetes and Metabolic Syndrome: Clinical Research and Reviews, Volume 15: Issue 3: Page 1001-1006, May-June 2021

Vaishya R, Srinivas KBS, Mechanism of injury in ramp lesions, Letter to the Editor, Am J Sports Med, National Library of Medicine, Volume 49: Issue 9: Page NP49, July 2021

Vaishya R, Kar S, Chawla R, Haranath SP, Ramasubban S, Ramakrishnan N, Sibal A, Reddy S, Development and validation of a multivariable prediction model using machine learning to predict the outcome of admitted covid-19 patients, Scientific Reports- Nature, Volume 11: Issue 12801: Page 01-10, June 2021

Vaishya R, Mlcochova P, Kemp S, Dhar MS, Delta variant emergence and vaccine breakthrough, Research Square, doi: <https://doi.org/10.21203/rs.3.rs-637724/v1>, June 2021

Vaishya R, Iyengar KP, Jain VK, Ish P, Impact of second wave of covid -19 on health care workers in India, Apollo Medicine, Volume 18: Issue 5: Page S12-16, 19th July 2021

Vaishya R, Iyengar KP, Singh B, Jain VK, Ish P, Should Covid -19 vaccination be made mandatory, Lung India, Volume 38: Issue 4: Page 379-81, 2021

Vaishya R, Sibal A, Shivakumar P, Severe impact of covid-19 pandemic on non-covid patient care and health delivery: an observational study from a large multispecialty hospital of India, Indian J Med Sc, Volume 73: Issue 2: Page 159-163, 24th September 2021

Vaishya R, Jena AN, Taneja S, Rana P, Goyal N,

Botchu R, Emerging role of integrated PET-MRI in osteoarthritis, Skeletal Radiology, doi:10.1007/s00256-021-03847-z, Volume 50: Issue 12: Page 2349-2363, 29th June 2021

Vaishya R, Kumar S, Vaish A, Babu YSS, How good are the guidelines for the non-operative management of knee osteoarthritis?, Arch Bone Joint Surgical, Volume 9: Issue 4: Page 472-474, July 2021

Vaishya R, Arthroscopic surgery during the covid-19 pandemic, J Arthroscopy Surg Sports Med, 10.25259/JASSM\_23\_2021, Volume 2: Issue 2: Page 85-86, 30th June 2021

Vaishya R, Vaish A, Predatory journals – alarming danger to the society, J Clin Orthop Trauma, Volume 21: Page 101507, October 2021

Vaishya R, Srinivas KBS, Vishwanathan K, Patralekh MK, Data for orthopaedic surgeons, J Clin Orthop Trauma, Volume 21: Page 101505, October 2021

Vaishya R, Sibal A, Arpita M, Hariprasad K, SARS-CoV-2 infections after COVID-19 immunization in Health care workers- A retrospective, case cohort study, Indian J Med Res, Volume 153: Issue 5-6: Page 550-554, May-June 2021

Vaishya R, Sibal A, Lack of vaccination and associated comorbidities predispose to the need for intensive care in individuals infected with the delta variant – a case cohort study from a tertiary care hospital in New Delhi, India, Diabetes and Metabolic Syndrome: Clinical Research and Reviews 2021, Volume 15: Issue 4: Page 102203, 9th July 2021

Vaishya R, Public osteolysis in an elderly masquerading as malignancy: a case report and review of literature, J Orthop Case Rep, Volume 11: Issue 4: Page 18-22, April 2021

Vaishya R, The visionary who transformed private healthcare in India, Indian J Med Sc, Volume 73:

Issue 2: Page 281-285, 24th September 2021

Vaishya R, Mishra AK, Vaish A, Effect of body mass index on the outcomes of primary total knee arthroplasty up to one year- a prospective cohort study, Preprint, Research Square, doi: 10.21203/rs.3.rs-829103/v1, Page 1-10, 23rd August 2021

Vaishya R, Clinical rheumatology - a book review, Indian J Orthop, Volume 56: Page 365-366, 23rd August 2021

Vaishya R, Vaish A, Disproportionate gender representation in orthopaedics and its research, J Clin Orthop Trauma, Volume 22: Page 101572, 22nd August 2021

Vaishya R, Sibal A, Malani A, Singh SK, Das S, Emergence of covid-19 variants among ChAdOx1 nCoV-19 vaccine recipients, Indian J Med Res, Volume 153: Issue 5-6: Page 559-561, May- June 2021

Vaishya R, Vaish A, Sharma D, Pre-print: already the bride or still the bridesmaid, Postgrad Med J, doi: 10.1136/postgradmedj-2021-140852, 19th August 2021

Vaishya R, Saad A, Iyengar KP, Botchu, The incidence and management of isolated greater trochanteric fractures – a systematic review of 166 cases, J Clin Orthop Trauma, doi: 10.1016/j.jcot.2021.101537, Volume 21: Page 101537, 1st August 2021

Vaishya R, Vaish A, Multiple bone infarcts around knee in a middle-aged female, Apollo Medicine, Volume 18: Issue 4: Page 316-317, July 2021

Vaishya R, Sibal A, Singh SK, ChAdOx1 n-CoV 19 Vaccine protected against severe infection caused by the variants, Mayo Clinic Proceedings, Volume 96: Issue 10: Page 2762-2727, August 2021

Vaishya R, Jena AN, Goyal N, 18F-NaF

Simultaneous PET/MRI in osteoarthritis: initial observations with case illustrations, J Clin Orthop Trauma, Volume 22: Page 101569, 26th August 2021

Vaishya, Mlcochova P, Kemp S, Dhar MS, Papa G, Meng B, Ferreira IATM, SARS-CoV-2 B.1.617.2 Delta variant replication and immune evasion, Nature, Volume 599: Issue (7883): Page 114-119, 6th September 2021

Vaishya R, Jain VK, Gautam D, Iyengar KP, Malhotra R, Challenges in conducting and completing the orthopaedic postgraduate thesis during covid-19 pandemic, Indian J Orthop, Volume 56: Issue 3: Page 492-494, 14th September 2021

Vaishya R, Vishwanathan K, Srinivas KBS, Patralekh KBS, Vaish A, Bibliometric analysis of the top 50 most cited publications of the journal of Clinical Orthopaedics and trauma, J Clin Orthop Trauma, 10.1016/j.jcot.2021.101590, Volume 22: Page 101590, November 2021

Vaishya R, Malani A, Sharma H, Vaish A, Singh SK, Covid vaccination provided protection from severe disease despite low cycle threshold (Ct) values, Diabetes and Metabolic Syndrome: Clinical Research and Reviews, Volume 15: Issue 5: Page 102281, 11th September 2021

Vaishya R, Iyengar KP, Gowers BTV, Jain VK, Ahluwalia RS, Botchu R, Smart sensor implant technology in total knee arthroplasty, J Clin Orthop Trauma, Volume 22: Page 101605, November 2021

Vaishya R, Sibal A, Malani A, Kar S, Symptomatic post-vaccination SARS-CoV-2 infections in healthcare workers- a multicenter cohort study, Diabetes Metabolic Syndrome: Clinical Research and Reviews, Volume 15: Issue 6: Page 102306, November- December 2021

Vaishya R, Patralekh MK, Iyengar KP, Jain VK,

Bibliometric analysis of covid-19 related publications in Indian orthopaedic journals, J Clin Orthop Trauma, Volume 22: Page 101608, 29th September 2021

Vaishya R, Ansari AH, Gupta AK, Vaish A, Single-staged surgical correction of a bilateral acquired coxa-vara deformity in a young woman, BMJ Case Rep, Volume 14: Issue 10: Page e245754, 5th October 2021

Vaishya R, Renjen PN, Covid-19 and neurological problems, Apollo Medicine, Volume 18: Issue 3: Page 153-218, July- September 2021

Vaishya R, Birla VP, Vaish A, Risk factors and pathogenesis of steroid-induced osteonecrosis of femoral head - a scoping review, J Clin Orthop Trauma, Volume 23: Page 101643, 13th October 2021

Vaishya R, Iyengar KP, Jain VK, Virtual post-graduate orthopaedic practical examination- a pilot model, Post Grad Med J, Volume 97: Issue 1152: Page 650-54, October 2021

Vaishya R, Jain V, Iyengar KP, Botchu R, Sacroiliac joint tuberculosis revisited – a clinico-radiological review, J Clin Orthop Truama, Volume 24: Page 101707, 16th November 2021

Vaishya R, Reddy SS, Vaish A, Fracture in an arthrodesed charcot's knee joint, BMJ Case Rep, Volume 14: Issue 11: Page e246529, 17th November 2021

Vaishya R, Pawar N, Vaish A, Core decompression and bone marrow aspirate concentrate injection for avascular necrosis (AVN) of the femoral head: a scoping review, J Clin Orthop Truama, doi: 10.1016/j.jcot.2021.10169, Volume 24: Page 101691, 11th November 2021

Vaishya R, Success story of the journal of clinical orthopaedics and trauma continues, J Clin Orthop Trauma, National Library of Medicine, Volume 24:

Page 101728, 29th November 2021

Vaishya R, Growth of the journal of arthroscopic surgery and sports medicine continues, J ArthroscoscoSurg Med, Volume 3: Issue 1: Page 1-2, 20th December 2021

Vaishya R, Gopinathan P, Growth of journal of orthopaedics, J Orthop, Volume 29: Page A1-A3, 28th December 2021

Vaishya R, Arya A, Apollo Medicine 2021, Volume 18: Issue 4: Page 221, December 2021

Vaishya R, Iyengar KP, Khan IH, Javaid M, Drones for fighting covid 19 pandemic, Curr Med Res Pract, National Library of Medicine, Volume 11: Page 303-304, December 2021

Vaishya R, Patralekh MK, Jain VK, Iyengar KP, Upadhyaya G, Mortality escalates in patients of proximal femoral fractures with COVID-19: A systematic review and meta-analysis of 35 studies on 4225 patients, J Clin Orthop Trauma, Volume 18: Page 80-93, July 2021

### **Editorial Board Membership**

Editor-in-Chief, Journal of Orthopaedics- A PubMed and Scopus indexed journal, since 2021

Founder Editor, Journal of Orthopaedic Reports, December 2021

Editor-in-Chief, Apollo Medicine, since March 2021

Editorial Board Member, International Orthopaedics (SICOT), since November 2021

Editor-in-Chief, Journal of Clinical Orthopaedics and Trauma, since 2019

Editor-in-Chief, Journal of Arthroscopy and Sports Medicine, since April 2020

### **Professional Societies' Positions**

International Faculty and Visiting Professor, Arthroplasty and Arthroscopy, Chitwan Medical College, Nepal, 2021

Executive Committee Member, Delhi Orthopaedic Associations, since 2020

Executive Committee Member, Indian Orthopaedic Association, since 2021

International Faculty and Visiting Professor, Orthopaedics, Chitwan Medical College, Nepal, since July 2021

Research Advisor, Indraprastha Apollo Hospitals, since March 2021

### **Awards**

Second top Researchers in the World, Stanford University, California, October 2021

Asia Book of Records, for publishing 106 papers in a year the year 2020, January 2021

Distinguished Clinical Tutor, Apollo Hospitals for Educational and Research Foundation (AHERF), 2021

### **181. Dr Rakesh Gupta**

Internal Medicine, Indraprastha Apollo Hospitals, Delhi

### **Publications**

Rakesh Gupta, C Venkata S Ram, Sameer Dani, Abraham Oomman, K O Ramachari, G Praveen Kumar, Jayanthi Swaminathan, Sathyanarayana Kondati, Ishita Sengupta, Correlation Between Ambulatory Blood Pressure Monitoring and Office Blood Pressure Measurement in Patients with Hypertension: A Community Study, Am J Med Sci, Volume 362: Issue 6: Page 546-552, December 2021

### **182. Dr Rohini Handa**

Rheumatology, Indraprastha Apollo Hospitals, Delhi

### Books Published

Editor- Dr Rohini Handa, Clinical Rheumatology, 1st edition, Springer Nature, Singapore, March 2021

Editor- Dr Rohini Handa, Rheumatology Clinics: Spondyloarthritis, 1st edition, Evangel Publications, New Delhi, 1st January 2021

Editor- Dr Rohini Handa, Urgencies and Emergencies in Rheumatology, 2nd edition, Evangel Publications, New Delhi, June 2021

### Chapters contributed to text books

Dr Rohini Handa, Refractory Rheumatoid Arthritis, Medicine Update 2021, Editor- Tewary K, Association of Physicians of India and Evangel, Volume 31, Pages 1323-1327, Mumbai, 2021

Dr Rohini Handa, Acute Gout, Chapter 6, Urgencies and Emergencies in Rheumatology, 2nd edition, Editors- Sharma A, Handa R, 2nd edition, Evangel Publishing, New Delhi, Page 54-58 2021

Dr Rohini Handa, Dengue and the Rheumatologist, Chapter 15, Urgencies and Emergencies in Rheumatology, Editors- Sharma A, Handa R, 2nd edition, Evangel Publishing, Page 150-156, New Delhi, 2021

Dr Rohini Handa, Evolution of the concept of Spondyloarthritis, Chapter 1Rheumatology Clinics: Spondyloarthritis, Editors- Handa R, Evangel Publications, Page 1-9, New Delhi, January 2021

### Publications

Handa R, Dadhaniya NV, Sood I, Patil A, Mallaiah U, Upadhyaya S, Gupta SJ, Screening for hydroxychloroquine retinal toxicity in indian patients, J Clin Rheum, Volume 27: Issue 8: Page

e395-e398, 1st December 2021

Handa R, Sharma A, Naidu G, Sharma V, Jha S, Dhooria A, Dhir V, Bhatia P, Sharma V, Bhattacharjee S, Chengappa, Gupta V, Misra DP, Chavan PP, Malaviya S, Dudam R, Sharma B, Kumar S, Bhojwani R, Gupta P, Agarwal V, Sharma K, Singhal M, Rathi M, Nada R, Minz RW, Chaturvedi V, Aggarwal A, Grossi A, Gattorno M, Huang Z, Wang J, Jois R, Negi VS, Khubchandani R, Jain S, Arostegui JL, Chambers EP, Hershfield MS, Aksentijevich I, Zhou Q, Lee PY, Deficiency of adenosine deaminase 2 (DADA2) in adults and children: experience from India, Arthritis Rheumatology, Volume 73: Issue 2: Page 276-285, February 2021

Handa R, Dadhaniya NV, Upadhyaya S, Gupta SJ, Correspondence on assessing the Risk of retinopathy in Indian patients using hydroxychloroquine for rheumatic and musculoskeletal diseases: a retrospective observational study, Indian J Rheumatology, Volume 16: Issue 1: Page 367-368, December 2021

Handa R, Kumar A, Upadhyaya S, Gupta SJ, Validation of hindi version of the pittsburg sleep quality index, J Assoc Physic India, Volume 69: Page 32-35, 2021

Rohini Handa, Tam LS, Tanaka Y, Li Z, Lorenzo JP, Louthrenoo W, Hill C, Pile K, Robinson PC, Dans LF, Hsu LY, Lee SM, Cho J, Hasan ATMT, Salim B, Samreen S, Shaharir SS, Wong P, Chau J, Danda D, Haq SA, Updated APLAR consensus statements on care for patients with rheumatic diseases during the covid-19 pandemic, Int J Rheum Dis, Volume 24: Issue 6: Page 733-745, June 2021

Handa R, Malaviya AN, To treat or not to treat asymptomatic hyperuricemia, J Assoc Physicians India, Volume 69: Issue 7: Page 11-12, July 2021

## Orations

Lecture, Internal Medicine Today-Quo Vadis, Netaji Oration, Annual Conference of Association of Physicians of India, eAPICON, 4th – 7th March 2021

## Lectures

Panelist, Myriad presentations of vasculitis, E-DERMACON, 49th Annual Conference of the Indian Association of Dermatologists, Venereologists and Leprologists, Virtual Conference, 5th – 7th February 2021

Talk, Demystifying spondyloarthritides, 9th Annual Conference of Tripura State Chapter of Indian Academy of Clinical Medicine- IACM, Agartala, 7th February 2021

Talk, How to be a good doctor, Faculty of Medical Sciences, SGT University, Gurugram, 26th February 2021

Talk, Refractory rheumatoid arthritis, eAPICON, Annual Conference of Association of Physicians of India, Virtual, 4th – 7th March 2021

Talk, Recent advances in treatment of RA – a decade in review, Joint International Conference, Care Institute Medical Society for Research and Education and GMERS Medical College, Ahmedabad, 12th -14th March 2021

Talk, Approach to arthritis, Institute of Medical Sciences, Department of Medicine, BHU, Varanasi, 23rd March 2021

Moderator, Fever with rash and arthralgia, Association of Physicians of India and Indian College of Physicians (API-ICP) Master Class, Virtual, 21st August 2021

Moderator, Pulmonary artery hypertension, Delhi Rheumatology Association Mid Term CME- Lung involvement in CTDs, Virtual, 29th August 2021

Talk, What is new in the management of rheumatoid arthritis, HAPICON, 5th Annual Conference of Haryana API, Hybrid Conference, Gurgaon, 26th September 2021

Talk, DMARDs, steroids, biologics, jak inhibitors- how to choose in rheumatoid arthritis, UP APICON, 38th Annual Conference of Association of Physicians of India, UP Chapter, Virtual, 26th September 2021

Talk, Rheumatic diseases in the covid era- what and what not to do, 32nd Annual Conference of Rajasthan, Chapter of Association of Physicians of India- eRAJAPICON, Virtual, 15th – 16th October 2021

Talk, JAK inhibitors- when and how to use them in rheumatology, 11th Annual Conference of Association of Physicians of North Bengal, Virtual, 30th -31st October 2021

Talk, Reactive arthritis, 61st Annual Indian Medical Association Maharashtra State Annual Scientific Conference, MASTACON, 26th – 28th November 2021

Lecture, Meet the expert: osteoporosis, 36th Annual Conference of the Indian Rheumatology Association, IRACON, IRA Virtual, 9th – 12th December 2021

Talk, Connective tissue disorder: case-based discussion, Master Class- West Bengal Forum of Indian College of Physicians Fellows, Virtual, 19th December 2021

Talk, Gouty arthritis, 96th National Annual Conference of the Indian Medical Association, IMA NATCON, Patna, 27th – 28th December 2021

Chair Scientific Committee, Delhi Rheumatology Association (DRA) Annual Rheumatology Update, Virtual, New Delhi, 21st February 2021

## Editorial Board Membership

Member Advisory, Editorial Board, Indian Journal of Rheumatology, since 2000

Advisor Editorial Board, African Journal of Rheumatology, since 2013

Member Editorial Board, Indonesian Journal of Rheumatology, since 2018

#### **Professional Societies' Positions**

Co-Chair Scientific Committee, Asia Pacific League of Associations for Rheumatology, since 2018

Mentor Education Committee, Asia Pacific League of Associations for Rheumatology, since 2021

**Member of Governing Board of MCI / State Medical Council / Autonomous Medical Institutions Under Government of India**

Member, Standing Selection Committee, PGI, Chandigarh

#### **Awards**

Dr IA Modi Award, for Distinguished Clinician, Global Association of Physicians of Indian Origin, February 2021

Distinguished Clinical Tutor Award, Apollo Hospitals Educational and Research Foundation (AHERF), India, 2021

### **183. Dr S K Wangnoo**

Endocrinology and Diabetology, Indraprastha Apollo Hospitals, Delhi

#### **Publications**

S Wangnoo, M Shunmugavelu, S Reddy, V Negalur, S Godbole, V Dhandhania, Nareen Krishna, K Gaurav, Role of gliclazide in safely navigating type 2 diabetes mellitus patients towards euglycemia: Expert opinion from India, Endocrine and Metabolic Science, Volume 4: Page 100102, 30th September 2021

### **184. Dr Sanjiv Jasuja**

Nephrology, Indraprastha Apollo Hospitals, Delhi

#### **Publications**

Sanjiv Jasuja, Raja Ramachandran, Vinant Bhargava, Maurizio Gallieni, Vivekanand Jha, Manisha Sahay, Suceena Alexander, Mamun Mostafi, Jayakrishnan K Pisharam, Sydeny Chi Wai Tang, Chakko Jacob, Atma Gunawan, Goh Bak Leong, Khin Thida Thwin, Rajendra Kumar Agrawal, Kriengsak Vareesangthip, Roberto Tanchanco, Lina Choong, Chula Herath, Chih-Ching Lin, Nguyen The Cuong, Syed Fazal Akhtar, Ali Alsahow, D S Rana, Vijay Kher, M M Rajapurkar, L Jeyaseelan, Sonika Puri, Gaurav Sagar, Anupam Bahl, Shalini Verma, Anil Sethi, Tushar Vachharajani, Interventional Nephrology and Vascular Access Practice - A Perspective from South and South East Asia, Journal of Vascular Access (JVA), doi: 10.1177/11297298211011375, 3rd May 2021

Sanjiv Jasuja, Suceena Alexander, Maurizio Gallieni, Manisha Sahay, Devender S Rana, Vivekanand Jha, Shalini Verma, Raja Ramachandran, Vinant Bhargava, Gaurav Sagar, Anupam Bahl, Mamun Mostafi, Impact of National Economy and Policies on End Stage Kidney Care in South Asia and Southeast Asia, International Journal of Nephrology, Hindawi, <https://doi.org/10.1155/2021/6665901>, 6th May 2021

Sanjiv Jasuja, Gaurav Sagar, Anupam Bahl, Shalini Verma, COVID-19 Infection Clinical Profile, Management, Outcome, and Antibody Response in Kidney Transplant Recipients: A Single Centre Experience, International Journal of Nephrology, Volume 2021: Page 3129411, 3rd October 2021

### **185. Dr Seema Thakur**

Fetal Medicine, Indraprastha Apollo Hospitals, Delhi

#### **Publications**

Seema Thakur, Aanchal Sablok, Akshatha Sharma, Rachna Gupta, Anita Kaul, Isolated fetal ascites: Etiology and prognosis - A 10-Year experience

from a tertiary referral care center in India, Journal of Indian Association of Pediatric Surgeons, Volume 26: Issue 3: Page 162-169, 17th May 2021

## **186. Dr Smita Malhotra**

Pediatric Gastroenterology and Hepatology, Indraprastha Apollo Hospitals, Delhi

### Publications

Smita Malhotra, Sagar Mehta, Karunesh Kumar, Ravi Bhardwaj, Neerav Goyal, Anupam Sibal Progressive Familial Intrahepatic Cholestasis: A Study in Children from a Liver Transplant Center in India, Journal of Clinical and Experimental Hepatology, Volume 12: Issue 2: Pages 454-460, 2021

## **187. Dr Smriti Prasad**

Fetal Medicine, Indraprastha Apollo Hospitals, Delhi

### Publications

Smriti Prasad, Daljit Singh Sahota, P Vanamail, Akshatha Sharma, Saloni Arora, Anita Kaul, Performance of Fetal Medicine Foundation algorithm for first trimester preeclampsia screening in an indigenous south Asian population, BMC Pregnancy Childbirth, Volume 21: Issue 1: Page 805, 4th December 2021

## **188. Dr Soma Agarwal**

Transfusion Medicine, Indraprastha Apollo Hospitals, Delhi

### Publications

Soma Agrawal, Mohit Chowdhry, Minu Lekshmi S, A case of Bickerstaff encephalitis with overlapping Gullian Barre syndrome in a pediatric patient treated with therapeutic plasma exchange, Transfus Apher Sci, Volume 60: Issue 6: Page 103260, December 2021

Soma Agrawal, Mohit Chowdhry, Ankita Sharma, Uday Kumar Thakur, Blood cell exchange in sickle cell disease: A single center experience, Global Journal of Transfusion Medicine, Volume 6: Issue 2: Page 156-159, 30th November 2021

Soma Agrawal, Brinda Kakkar, Raj Nath Makroo, Mohit Chowdhry, Sweta Nayak, Sanjiv Jasuja, Gaurav Sagar, Sandeep Guleria, Role of therapeutic plasma exchange in acute humoral rejection patients undergoing live-related renal transplantation: A single-center experience Asian J Transfus Sci, Volume 15: Issue 1: Page 62-67, January - December 2021

## **189. Dr Sunit Mediratta**

Neurosurgery, Indraprastha Apollo Hospitals, Delhi

### Publications

Sunit Mediratta, A rare case of primary high cervical intramedullary cysticercosis: Uncomplicated surgery but a preoperative diagnostic predicament, Indian Spine J, Volume 4: Issue 2: Page 255-259, July 2021

## **190. Dr Vikas Birla**

Orthopaedics, Indraprastha Apollo Hospitals, Delhi

### Publications

Vikas Birla, Abhishek Vaish, Raju Vaishya, Risk factors and pathogenesis of steroid-induced osteonecrosis of femoral head - A scoping review, J Clin Orthop Trauma, Volume 23: Page 101643, 13th October 2021

## **191. Dr Vinit Suri**

Neurology, Indraprastha Apollo Hospitals, Delhi

### Books Published

Editor- Dr Vinit Suri, Clinical Neurological Examination and Localization, 1st edition, Springer Singapore, 2021

## Professional Societies' Positions

President Elect, Delhi Neurology Association, since March 2021

## 192. Dr Yash Gulati

Orthopaedics, Indraprastha Apollo Hospitals, Delhi

### Chapters contributed to text books

Dr Yash Gulati, Non - Communicable Diseases in Coronavirus Times, Comprehensive Text Book of Covid -19, Sulubris, 2021

## Professional Societies' Positions

President, Delhi Orthopaedic Association

Executive Member, Association of Spine Surgeons of India

Honorary Surgeon to President of India

Honorary Consultant to Indian Armed Forces

Honorary Consultant, Border Security Force

Honorary Consultant, Board of control for cricket in India

Adjunct Professor, Indira Gandhi Open University, IGNOU

Member, Sub Committee on Medical Services, Commonwealth Games, Delhi

Honorary Consultant Sports Rehab, Govt. Of Uttar Pradesh

Special Invitee, Expert Committee on Health, PHD. chamber of Commerce and Industry

Chairman, Committee for Orthopaedic Implants, Bureau of Indian Standards

Trustee, Varisht Nagrik Kesri Club, National Program spearheaded, Punjab kesri Group of

Newspapers for the care of elderly

## DRDO

## 193. Dr Parthasaradhi Sarvepalli

Nephrology, Apollo Hospitals, DRDO

### Publications

Pardha Saradhi S V, Sai Krishna Susarlad, Sonali Palkar, Arundhati Diwan, Supriya Barsode, M Satish, B C Rajashakar, G.Sandhya, Rajendra Lingala, Devi Prasad S hood, Safety and immunogenicity of inactivated hepatitis- A vaccine developed by Human Biologicals Institute in two age groups of healthy subjects: A phase I open label study, Clinical Trial, Vaccine, Volume 39: Issue 15: Pages 2088-2093, 8th April 2021

## Guwahati

## 194. Dr Ankur Agarwala

Urology, Apollo Hospitals, Guwahati

### Publications

Ankur Agarwala, Somendra Bansal, Narmada P Gupta, Bilateral Orchidectomy Revisited in Management of Metastatic Hormone-Sensitive Prostate Cancer, Indian Journal of Surgical Oncology, Volume 12: Issue 3: Page 565-570, September 2021

## 195. Dr Geetanjali Sahariah Khound

Pediatrics, Apollo Hospitals, Guwahati

### Publications

Geetanjali Sahariah Khound, Dibyajyoti Bora, Kamal Kumar Kathar, Rekha Khaund Borkotoky, 1544 Unusual surgical emergencies encountered in paediatric practice, their presentations, management and outcome in a tertiary care centre

in Guwahati, BMJ's Archives of Diseases in Childhood, Volume 106: Issue (Suppl 1): Page A1-A514, 2021

## **196. Dr Kripesh Ranjan Sharma**

Pulmonary Medicine, Apollo Hospitals, Guwahati

### Publications

Kripesh Ranjan Sharma, Deepjyoti Kalita, Ridip Kumar Sarma, Sangeeta Deka, High proportion of drug resistant isolates in adult community acquired pneumonia from Northeast India: A hospital based study, Lung India, Volume 38: Issue 5: Page 460-465, September-October 2021

## **197. Dr Moushumi Saikia**

Lab Medicine, Apollo Hospitals, Guwahati

### Professional Societies' Positions

General Secretary of Central Committee, Association of Clinical Chemistry and Lab Medicine Practitioners, since 2021

## **198 Dr Roshan Agarwala**

Gastroenterology, Apollo Hospitals, Guwahati

### Publications

Roshan Agarwala, Jayanta Samanta, Jahnvi Dhar, Gaurav Muktesh, Pankaj Gupta, Praveen Kumar-M, Aritra Das, Balaji L. Bellam, Rajeev Chauhan, K Hemanth Kumar, Thakur Deen Yadav, Vikas Gupta, Saroj K Sinha, Rakesh, Kochhar, Antonio Facciorusso, Endoscopic drainage versus percutaneous drainage for the management of infected walled-off necrosis: a comparative analysis, Volume 16: Issue 3, <https://www.tandfonline.com/loi/ierh20>, 21st October 2021

## **199. Dr Satish Bawri**

Neurology, Apollo Hospitals, Guwahati

### Publications

Satish Bawri, Munindra Goswami, Ashok K Kayal, Moromi Das, Clinical profile of autoimmune encephalitis: Hospital-based study, Assam Journal of Internal Medicine, Volume 11: Issue 2: Page 30-36, 5th October 2021

## **Hyderabad**

## **200. Dr C Rajesh Reddy**

Neurology, Apollo Jubilee Hills, Hyderabad

### Publications

C Rajesh Reddy, C Venkata S Ram, Sudhir Kumar, Pushpendra Nath Renjen, G Praveen Kumar, Jayanthi Swaminathan, Sathyanarayana Kondati, Mukesh Sharma, V L Arul Selvan, Meenakshi Sundaram, Anupama Vasudevan, Daniel Lackland, Risk factors predisposing to acute stroke in India: a prospective study, International Society of Hypertension, Volume 39: Issue 11: Page 2183-2189, 1st December 2021

## **201. Dr C Venkata S Ram**

Hypertension and Blood Pressure Management, Apollo Jubilee Hills, Hyderabad

### Publications

C Venkata S Ram, Sameer Dani, Abraham Oomman, Rakesh Gupta, K O Ramachari, G Praveen Kumar, Jayanthi Swaminathan, Sathyanarayana Kondati, Ishita Sengupta, Correlation Between Ambulatory Blood Pressure Monitoring and Office Blood Pressure Measurement in Patients with Hypertension: A Community Study, Am J Med Sci, Volume 362: Issue 6: Page 546-552, December 2021

C Venkata S Ram, Sudhir Kumar, Pushpendra Nath Renjen, G Praveen Kumar, Jayanthi Swaminathan, C Rajesh Reddy, Sathyanarayana Kondati, Mukesh Sharma, V L Arul Selvan, Meenakshi Sundaram, Anupama Vasudevan, Daniel Lackland, Risk factors predisposing to acute stroke in India: a prospective study, International Society of Hypertension, Volume 39: Issue 11: Page 2183-2189, 1st December 2021

## **202. Dr Chennamchetty Vijay Kumar**

Pulmonology, Apollo Hospitals, Jubilee Hills, Hyderabad

### **Publications**

Chennamchetty Vijay Kumar, Raghavendra Rao MV, Mubasheer Ali, Raghunandan Reddy, Manick Das, Mahendrakumar Verma, Hitesh Lakshmi Billa, Dilip Mathai, Aruna Kumari B, Facing the Threat of Future Pandemics, International Journal of Current Medical and Pharmaceutical Research, Volume 8: Issue 01 Suppl A: Page 5918-5922, January 2021

## **203. Dr Kavitha Chintala**

Pediatric Cardiology, Apollo Hospitals, Jubilee Hills, Hyderabad

### **Lectures**

Talk, Prognostic assessment and management of complete heart block in a fetus with maternal autoinflammatory disease, 21st Annual Conference, Pediatric Cardiac Society of India (PCSI), Virtual, 20th October 2021

Panelist, Training of teachers, Acquired heart disease, Indian Academy of paediatrics, Virtual, 10th April 2021

### **Presentations**

Paper Presentation, Clinical outcome of extracardiac fontan patients from a single center in lower middle-income country, 21st Annual

Conference, Pediatric Cardiac Society of India, Virtual, 23rd October 2021

Paper Presentation, Need for cardiac catheterization and angiography in fontan surveillance, 21st Annual Conference, Pediatric Cardiac Society of India, Virtual, 21 October 2021

### **Awards**

Best Paper Abstract, Need for cardiac catheterization and angiography in Fontan Surveillance, Interventional Pediatric Cardiology, 21st Annual Conference of Pediatric Cardiac Society of India (PCSI), Virtual, 23rd October 2021

## **204. Dr M Neeraja**

Transplant Immunology, Apollo Hospitals, Jubilee Hills, Hyderabad

### **Publications**

Mamidi Neeraja, Rohit Iyyappu, Neerudi Raj Kumar, Gorle Manoj, Ravi Raju Tatapudi, Identification of the novel allele, HLA-B\*44:256, in an individual from West Bengal in Eastern India, HLA, Volume 99: Issue 1: Page 46-48, 15th October 2021

## **205. Dr Mallika Goyal**

Ophthalmology, Apollo Hospitals, Jubilee Hills, Hyderabad

### **Publications**

Mallika Goyal, Somasheila I Murthy, Sridhar Annum, Retinal manifestations in patients following COVID-19 infection: A consecutive case series, Indian J Ophthalmol, Volume 69: Issue 5: Page 1275-1282, May 2021

Goyal M, Murthy SI, Infectious scleritis due to methicillin-resistant staphylococcus aureus after dengue viral fever, Ocul Immunol Inflamm, Volume 8: Page 1-3, April 2021

Mallika Goyal, Somasheila I Murthy, Sridhar Annum, Bilateral Multifocal Choroiditis following COVID-19 Vaccination, Ocular Immunology and Inflammation, Ocul Immunol Inflamm, Volume 29: Issue 4: Page 753-757, 19th May 2021

Mallika Goyal, Somasheila I Murthy (2021): Reply to a Letter to the Editor on a Published Manuscript: Bilateral Multifocal Choroiditis following COVID-19 Vaccination, Ocular Immunology and Inflammation, Volume 29: Issue 6: Page 1211, 18th August 2021

Mallika Goyal, Somasheila I Murthy, Yadavalli Srinivas, Unilateral retinal vein occlusion in a young, healthy male following Sputnik V vaccination, Indian J Ophthalmol, Volume 69: Issue 12: Page 3793-3794, December 2021

## **206. Dr Mohammed Ziauddin**

Pharmacology, Apollo Hospitals, Jubilee Hills, Hyderabad

### Awards

Vaidya Shiromani Award, of services, 14th July 2021

## **207. Dr Mubasheer Ali**

General Medicine, Apollo Hospitals, Jubilee Hills, Hyderabad

### Publications

Mubasheer Ali, Raghavendra Rao MV, Chennamchetty Vijay Kumar, Raghunandan Reddy, Manick Das, Mahendrakumar Verma, Hitesh Lakshmi Billa, Dilip Mathai, Aruna Kumari B, Facing the Threat of Future Pandemics, International Journal of Current Medical and Pharmaceutical Research, Volume 8: Issue 01 Suppl A: Page 5918-5922, January 2021

## **208. Dr Prabuddha Jyoti Das**

Radiology, Apollo Hospitals, Jubilee Hills, Hyderabad

### Publications

Das PJ, Handique SK, Saharia B, a study on first ischemic stroke patients for prevalence of extracranial carotid artery stenosis and risk factors: our experience in northeast india and review of literature, Journal of Diagnostic Medical Sonography, Volume 37: Issue 2: Page 133-143, January 2021

### Orations

Lecture, Dedicated radiology resident education modules, Webinar, 16th -18th August 2021

Lecture, Dedicated radiology resident education modules, Webinar, 1st – 15th November 2021

### Professional Societies' Positions

Member, National IRIA Web-App and e-Newsletter Committee, since 2021

### Examinership

Examiner coordinator, DNB final practical exam, Apollo Jubilee Hills, 2021

## **209. Dr Pradyut Waghray**

Pulmonology, Apollo Hospitals, Jubilee Hills, Hyderabad

### Awards

Fellow, Royal College of Physicians, London, 2021

## **210. Dr Rajesh Fogla**

Ophthalmology, Apollo Hospitals, Jubilee Hills, Hyderabad

### Awards

AIOS-IJO Gold Award, Inauguration Ceremony, Annual Conference of AIOS, 24th June 2021

## Publications

Fogla R, Luthra G, Chhabra A, Gupta K, Dalal R, Khamar P, Preferred practice patterns for photorefractive keratectomy surgery, Indian Journal of Ophthalmology, Volume 68: Issue 12: Page 2847-2855, 2021

Fogla R, Indumathy TR, Gundersen Flap Removal to Restore Eyesight Without Limbal Transplantation-A Case Report, Cornea, Volume 40: Issue 6: Page 783-785, 1st June 2021

Rajesh Fogla, Role of Anterior Segment OCT for Descemet Membrane Stripping During Descemet Membrane Endothelial Keratoplasty in Eyes With Congenital Hereditary Endothelial Dystrophy, Cornea, Volume 40; Issue 4: Page 458-461, April 202

Fogla R, Sahay P, Sharma N, Preferred practice pattern and observed outcome of deep anterior lamellar keratoplasty - A survey of Indian corneal surgeons, Indian J Ophthalmol, Volume 69: Issue 6: Page 1553-1558, April 2021

Rajesh Fogla , Bhaskar Srinivasan, Corneal Folds After Descemet Membrane Endothelial Keratoplasty in Congenital Hereditary Endothelial Dystrophy, Cornea, Volume 40: Issue 6: Page 715-719, 1st June 2021

Rajesh Fogla, A novel device to visualize Descemet membrane during donor preparation for Descemet membrane endothelial keratoplasty, Indian J Ophthalmol, Volume 69: Issue 6: Page 1609-1613, June 2021

Rajesh Fogla, Prateek Gujar, Spontaneous deflation of the big bubble: a new complication in big bubble deep anterior lamellar keratoplasty, Cornea, Volume 40: Issue 12: Page 1614-1616, 1st December 2021

Fogla R, Thazethaeveetil IR, A Novel Technique for Donor Insertion and Unfolding in Descemet

Membrane Endothelial Keratoplasty, Cornea, Volume 40: Issue 8: Page 1073-1078, 1st August 2021

## 211. Dr Rooma Sinha

Gynaecology, Laparoscopic and Robotic Surgery, Apollo Hospitals, Jubilee Hills, Hyderabad

### Chapters contributed to text books

Dr Rooma Sinha, Preoperative preparation and positioning for Robotic Gynecologic Surgery, Robotic Gynecological Surgery, Editors Anupama Bahadur, Ravi Kant, 1st Edition, Thieme Publication, 2021

### Publications

Rooma Sinha, Rupa, B, Robotic myomectomy: five modifications in our practice, J Obstet Gynecology India, Volume 72: Issue 1: Page 89-92, 28th October 2021

Rooma Sinha, Bana R, Mohanty GS, Acute presentation of port site hernia following robotic-assisted hysterectomy: a case report and review of the literature, J Mid-Life Health, Volume 12: Issue 3: Page 244-246, July – September 2021

Rooma Sinha, Bana R, Mohanty GS, K N, Torsion of submucosal myoma: an unusual hysteroscopic image, J Minim Invasive Gynecol, Volume 28: Issue 12: Page 1964- 1965, 1st December 2021

Rooma Sinha, Bana Rupa, Girija Shankar Mohanty, Two arms-three instruments robot-assisted laparoscopic hysterectomy: a reproducible technique, Laparoscopic, Endoscopic and Robotic Surgery, Volume 4: Issue 2: Page 44-47, 2021

Rooma Sinha, M Deenadayal, V Gunther, I Alkatout, D. Freytag, A. Deenadayal-Mettler, A Deenadayal Tolani, L Mettler, Critical role of 3D ultrasound in the diagnosis and management of robert's uterus: a single-centre case series and a review, Facts Views Vis Obgyn, Volume 13: Issue 1:

Page 41-49, 31st March 2021

### Lectures

Lecture, Doing surgery once in a lifetime in women with endometriosis- is it practical, Society of Endometriosis and Uterine disorder, Endo insight, Virtual, 2021

Lecture, Covid and minimal access surgery, Indian Society of Perinatology and Reproductive Biology Gorakhpur, May 2021

Lecture, Robotics for endometriosis- is it the way forward, Asian Congress of Endometriosis (ACE)- Colombo, October 2021

Lecture, Large fibroid uterus - pushing the boundaries with robotics, Asian Society of Gynecological Robotic Surgeons, Annual Meeting Seoul, South Korea, November 2021

Lecture, Austin Texas- annual meeting, Robotic Hysterectomy for Large Uterus- 5 strategies, American Association Gynecology Laparoscopy, November 2021

Moderator, Robotic surgery is better for benign gynecological disease, AICC RCOG Annual Conference, October 2021

Lecture, Myomectomy-advantage robotics, National Meet, Indian Association Gynecological Endoscopy, August 2021

Lecture, Role of robotics in benign gynecology, Indian Society of Perinatology and Reproductive Biology, October 2021

Lecture, Adolescent Endometriosis, Indian Association Gynecological Endoscopy (IAGE), Telangana, November 2021

Convenor, Tips and tricks of laparoscopic and robotic surgery for deep infiltrating endometriosis, Indian Fertility Society (IFS), FERTIVIOSN, Annual Meeting, Workshop, Delhi, December 2021

Lecture, Choosing the route of myomectomy,

Indian Society of Perinatology and Reproductive Biology, ISOPARB, Hyderabad Chapter, November 2021

Lecture, Advanced endometriosis- management, FOGSI Gorakhpur, 2021

Lecture, Newer trends in robotics and benign gynecology, Hi Grad Expert Series - December, 2021

Lecture, Is there a role of Robotic in benign Gynecology, ISOPARB, Delhi, 2021

### Presentations

Video presentation, 10 steps to robotic hysterectomy, British Society Gynecology Endoscopy, Virtual, 2021

Live Demonstration, Robotic Myomectomy, Indian Association Gynecological Endoscopy (IAGE), MASK, National Meeting, January 2021

### Editorial Boards Membership

Editorial Board Member, Journal of Gynecological Robotic Surgery, since May 2021

### Professional Societies' Positions

Joint Secretary, Indian Association of Gynaecological Endoscopists Chapter, Telangana, 2021

Vice President, Indian Society of Perinatal and Reproductive Biology, since 2021

Member, Asian Society of Gynecological Robotic Surgery, since 2021

## **212. Dr Sai Praveen Haranath**

Pulmonology, Apollo Hospitals, Jubilee Hills, Hyderabad

### Publications

Haranath SP, Kar S, Chawla R, Ramasubban S, Ramakrishnan N, Vaishya R, Sibal A, Reddy S,

Multivariable mortality risk prediction using machine learning for COVID-19 patients at admission (AICOVID), Sci Rep, Volume 11: Issue 1: Page 12801, 17th June 2021

#### Lectures

Speaker, Reporting on COVID-19 Vaccines: What journalists need to know, Harvard T.H Chan School of Public Health, India Research Center, Webinar, 12th May 2021

Moderator, COVID-19: Maximizing Utility While Conserving Resources, American College of Chest Physicians COVID-19, Webinar, 17th May 2021

Talk, CII on COVID safety, Webinar, 21st May 2021

Speaker, NHS Confederation Webinar, 15th December 2021

#### Editorial Board Membership

Reviewer, Chest Journal of Mid-Life Health, since 2021

Editorial Board Member, International Journal of Digital Health, since 2021

#### Professional Societies' Positions

Member, Board of Regents, American College of Chest Physicians, since 2021

Trustee, Chest Foundation, since 2021

Chair, Executive Committee of the Council of Global Governors, American College of Chest Physicians, since 2021

#### Awards

Appreciation Award, for serving on the Board of Chest and the Chest Foundation, American College of Chest Physicians (ACCP) Board of Governors, 2021

### **213. Dr Shilpa Reddy**

Radiation Oncology, Apollo Hospitals, Jubilee Hills, Hyderabad

#### Chapters contributed to text books

Dr Shilpa Reddy, Treatment of cancer cervix by radiotherapy, Chapter 14, Update Obstetrics and Gynaecology, Editors- Pratibha Devabhaktuni, Shilpa Rani Reddy, 1st edition, Paras, Page 236-262, 2021

### **214. Dr Sudha Ranganathan**

Transfusion Medicine, Apollo Hospitals, Jubilee Hills, Hyderabad

#### Publications

Ranganathan S, Iyer R N, Balakrishna N, Significance of adopting nucleic acid amplification technique for blood donor screening in a resource limited setting: A study from a single centre in South India, Indian J Hematol Blood Transfus, <https://doi.org/10.1007/s12288-021-01500-2>, 27th October 2021

### **215. Dr Sudhir Kumar**

Neurology, Apollo Hospitals, Jubilee Hills, Hyderabad

#### Publications

Sudhir Kumar, C Venkata S Ram, Pushpendra Nath Renjen, G Praveen Kumar, Jayanthi Swaminathan, C Rajesh Reddy, Sathyanarayana Kondati, Mukesh Sharma, V L Arul Selvan, Meenakshi Sundaram, Anupama Vasudevan, Daniel Lackland, Risk factors predisposing to acute stroke in India: a prospective study, International Society of Hypertension, Volume 39: Issue 11: Page 2183-2189, 1st December 2021

### **216. Dr Swarnalata Gowrishankar**

Histopathology, Apollo Hospitals, Jubilee Hills, Hyderabad

#### Publications

Gowrishankar S, Agrawal N, The utility of assessing CD68+ glomerular macrophages in assessing

endocapillary hypercellularity in IGA nephropathy, Indian J Nephrol, Volume 31: Issue 1: Page 16-21, January – February 2021

Gowrishankar S, U Anandh, A Sharma, A Salama, I Dasgupta, Kidney transplant dysfunction in a patient with covid - 19 infection: role of concurrent Sars-Cov 2 nephropathy, Chronic rejection and vitamin C-mediated hyperoxalosis: case report, BMC Nephrology 2021, Volume 22: Issue 1: Page 91, 15th March 2021

Gowrishankar S, Sharma M, Jeloka TK, A rare case of APRT deficiency with endstage renal failure and successful renal transplant, Ind J Nephrol, Volume 31: Issue 1: Page 57-60, 27th January 2021

### Lectures

Talk, Renal biopsy: past, present and future, Amrutha sage Lecture Series, Virtual, 10th February 2021

Talk, Crescentic Glomerulonephritis, Annual meeting of Cochin Society of Nephrology, Virtual, 28th February 2021

Talk, Approach to allograft biopsy interpretation, IS RTP, Virtual, July 2021

Talk, Importance of the study of non-neoplastic kidney in tumour nephrectomies, CME of Apollo Diagnostics, Virtual, 16th September 2021

Lecture, The spectrum of renal involvement in monoclonal-gammopathy associated renal disease, Annual conference of KAPCON, Virtual, 1st October 2021

Talk, Update in antibody mediated rejection, Conference of the Indian Society of Organ Transplant, Virtual, 4th October 2021

Lecture, Role of pre-implant biopsy in deceased donor transplantation – a pathologist's perspective, CME on Transplantation, Novartis, Virtual, 30th November 2021

Lecture, Special stains and their utility in renal

biopsy interpretation, Annual conference of the Indian Society of Nephrology, Virtual, 9th December 2021

### Professional Societies' Positions

President, Hyderabad Academy of Pathologists

Executive Member, Indian Society of Renal and Transplant Pathology

International Member, Finance Committee of the Renal Pathology Society

### Awards

Outstanding Teacher Award, National Board of Examination, December 2021

## 217. Dr Venkat Sampath

Medical Oncology, Apollo Hospitals, Jubilee Hills, Hyderabad

### Awards

Vaidya Shiromani Award, of services, 14th July 2021

## 218. Dr Vijay Anand Reddy

Radiation Oncology, Apollo Hospitals, Jubilee Hills, Hyderabad

### Chapters contributed to text books

Dr Shilpa Reddy, Treatment of cancer cervix by radiotherapy, Chapter 14, Update Obstetrics and Gynaecology, Editors- Pratibha Devabhaktuni, Shilpa Rani Reddy, 1st edition, Paras, Page 236-262, 2021

## 219. Dr Vimee Bindra

Gynaecology and Laparoscopic Surgery, Apollo Hospitals, Jubilee Hills, Hyderabad

### Publications

Dr Vimee Bindra, Dr Mamatha Reddy, Dr Girija Shankar Mohanty, Dr Neha Agarwal, Dr Aditya Kulkarni, Bilateral ovarian cysts of mature cystic

teratoma and Endometrioma: Its surgical challenges and review of literature, Journal of endometriosis and pelvic pain disorders, Volume 13: Issue 3, 11th July 2021

## Indore

### 220. Dr Akshat Pandey

Rheumatology, Apollo Hospitals, Indore

#### Books Published

Editors- Dr Akshat Pandey, Glucocorticoids in Rheumatology, National Book Depot, 1st edition, 2021

#### Chapters contributed to text books

Dr Akshat Pandey, History of Glucocorticoids, Chapter 1, Glucocorticoids in Rheumatology, Editors- Akshat Pandey, Vinod Ravindran, 1st edition, National Book Depot, Page 1-6, 2021

#### Professional Societies' Positions

Joint Secretary, Indian Medical Association, since 2021

### 221. Dr Ankur Gupta

Intensive care, Apollo Hospitals, Indore

#### Chapters contributed to text books

Dr Ankur Gupta, Coronavirus disease 2019 (COVID-19): The Medical Perspective- A Review from the Literature Available, Chapter 1, Surviving Covid-19 Pandemic Stay Home Stay Safe, Editors- Rubee Singh, Jacinta Dsilva, Page 89-108, Crescent publishers, 2021

#### Lectures

Lecture, Surviving sepsis guidelines, A peer review, Research Society of Anesthesiology, Clinical Pharmacology, Virtual, 30th December 2021

#### Professional Societies' Positions

National Secretary, Academic Council, Critical Care Education Foundation, since 2021

#### Examinership

Examiner, FCCCM, 23rd -24th July 2021

## Jayanagar

### 222. Dr Shruthi P

Radiology, Apollo Hospitals, Jayanagar

#### Publications

Panduranga S, Kade S, Shivakumar S, A novel differential diagnosis for diffuse cavitating nodules: primary pulmonary plasmacytoma, Egypt J Bronchol, Volume 15: Issue 54: Page 1-4, 2021

## Madurai

### 223. Dr K O Ramachari

General Medicine, Apollo Hospitals, Madurai

#### Publications

K O Ramachari, C Venkata S Ram, Sameer Dani, Abraham Oomman, Rakesh Gupta, G Praveen Kumar, Jayanthi Swaminathan, Sathyanarayana Kondati, Ishita Sengupta, Correlation Between Ambulatory Blood Pressure Monitoring and Office Blood Pressure Measurement in Patients with Hypertension: A Community Study, Am J Med Sci, Volume 362: Issue 6: Page 546-552, December 2021

### 224. Dr Meenakshi Sundaram

Neurology, Apollo Hospitals, Madurai

#### Publications

Meenakshi Sundaram, C Venkata S Ram, Sudhir Kumar, Pushpendra Nath Renjen, G Praveen Kumar, Jayanthi Swaminathan, C Rajesh Reddy,

Sathyendarayana Kondati, Mukesh Sharma, V L Arul Selvan, Anupama Vasudevan, Daniel Lackland, Risk factors predisposing to acute stroke in India: a prospective study, International Society of Hypertension, Volume 39: Issue 11: Page 2183-2189, 1st December 2021

## Kolkata

### 225. Dr Amitabha Ghosh

Neurology, Apollo Hospitals, Kolkata

#### Publications

Ghosh A, Dwivedi M, Dubey N, Pansari AJ, Bapi RS, Das M, Guha M, Banerjee R, Pramanick G, Basu J, Effects of meditation on structural changes of the brain in patient with mild cognitive impairment or alzheimer's disease dementia, Study Department of Science and Technology, Government of India, Doi: 10.3389/fnhum.2021.728993, Volume 15, 12th November 2021

Ghosh A, Paplikar A, Alladi S, Varghese FA, Mekala S, Arshad F, Sharma M, Saroja AO, Divyaratna G, Dutt A, Ellajosyula R, Bilingualism and its implications for neuropsychological evaluation, archives of clinical neuropsychology, Volume 36: Issue 8: Page 1511 – 1522, 27th March 2021

Ghosh A, Menon RN, Varghese F, Paplikar A, Mekala S, Alladi S, Sharma M, Aralikatte Onkarappa S, Gollahalli D, Dutt A, Validation of Indian Council of Medical Research Neurocognitive tool box in diagnosis of mild cognitive impairment in India: Lessons from a harmonization process in a linguistically diverse society, Dement Geriatr Cogn Disord, Volume 49: Issue 4: Page 355-364, 7th January 2021

Amitabha Ghosh, Arindam Biswas, Dipanwita Sadhukhan, Atanu Biswas Shyamal K Das, Tapas K Banerjee, Partha Sarathi Bal, Sandip Pal, Kunal Ray, Jharna Ray, Identification of GBA mutations among neurodegenerative disease patients from eastern India, Neuroscience Letters, Volume 751: Page

135816, 23rd April 2021

#### Orations

The Anupam Das Gupta Oration, Meditation, the brain and Alzheimer's disease, Annual Conference of the Indian Academy of Neurology, Bangalore, 12th November 2021

#### Lectures

Lecture, Meditation and the brain in mild cognitive impairment and Alzheimer's disease, International Behavioral Neurology Videoconference Rounds, Division of Neurology, University of Toronto, Canada, 20th October 2021

Lecture, Biomarkers for dementia, Annual Conference of the Indian Academy of Neurology, Bangalore, 14th November 2021

Lecture, Importance of early diagnosis in Alzheimer's disease, Alzheimer's and Related Disorders Society of India, Kolkata, 19th September 2021

Lecture, Attention and executive functions, Master Class in Cognitive Neurology, Indian Academy of Neurology, Location 7th February 2021

#### Presentations

Presentation, Meditation increases cortical thickness and grey matter volume in areas controlling executive function and memory in persons with MCI or early Alzheimer's disease, Annual Conference of the Indian Academy of Neurology, Bangalore, 14th November 2021

#### Professional Societies' Positions

President, Alzheimer's and Related Disorders Society of India, Kolkata, since 2018

#### Member of Task Forces of the Government of India or State Governments

Member, Cognitive Science Research Initiative Task Force, Department of Science and Technology, Government of India, since 2013

## Awards

DST CSRI Research Grant award, November 2021

Dr Anupam Das Gupta Oration Award, Indian Academy of Neurology, 12th November 2021

## **226. Dr Animesh Saha**

Oncology, Apollo Hospitals, Kolkata

### Publications

Animesh Saha, Matthew Beasley, Nathaniel Hatton, Peter Dickinson, Kevin Franks, Katy Clarke, Pooja Jain, Mark Teo, Patrick Murray, John Lilley, Clinical and dosimetric predictors of radiation pneumonitis in early-stage lung cancer treated with Stereotactic Ablative radiotherapy (SABR) - An analysis of UK's largest cohort of lung SABR patients, Radiother Oncol, Volume 156:Page 153-159, March 2021

## **227. Dr Biplab Sarkar**

Radiation Oncology, Apollo Hospitals, Kolkata

### Publications

Sarkar B, Basu P, Solution of Lagrange's equation of motion form the first principle for volumetric modulated arc therapy delivery, Health Technol, Volume 11: Issue 3: Page 677–680, 5th April 2021

Biplab Sarkar, Tharmarnadar Ganesh, Anusheel Munshi, Arjunan Manikandan, Soumya Roy, Saneg Krishnankutty, Latika Chitral, Jean Sathiya, Anirudh Pradhan, Bidhu Kalyan Mohanti, Rotational positional error-corrected linear set-up margin calculation technique for lung stereotactic body radiotherapy in a dual imaging environment of 4-D cone beam CT and ExacTrac stereoscopic imaging, Radiol Med, Volume 126: Issue 7: Page 979-988, July 2021

## **228. Dr Debatosh Dutta**

Laboratory Services, Apollo Hospitals Kolkata

## Publications

Debatosh Datta, Suyash Pant, Devendra, Possible Interference in Protein – Protein interaction as a new approach in microinhibition of respiratory pathogens on nasal- oral epithelium: An early on-screen study with reference toSARS-CoV-2-ACE2 binding interference, doi: <https://doi.org/10.1101/2021.12.01.470353>, 3rd December 2021

## **229. Dr Enam Murshed Khan**

Pathology, Apollo Hospitals, Kolkata

### Publications

Enam Murshed Khan, Punit Sharma, Indranil Ghosh, 18F-FDG PET/CT for Staging and Response Evaluation in a Rare Case of Childhood Ovarian Primitive Neuroectodermal Tumor, Clin Nucl Med, Volume 46: Issue 5: Page e266-e267, 1st May 2021

## **230. Dr Gobinda Pramanick**

Radiology, Apollo Hospitals, Kolkata

### Publications

Gobinda Pramanick, Madhukar Dwivedi, Neha Dubey, Aditya Jain Pansari, Raju Surampudi Bapi, Meghoranjani Das, Maushumi Guha, Rahul Banerjee, Jayanti Basu, Amitabha Ghosh, Effects of Meditation on Structural Changes of the Brain in Patients with Mild Cognitive Impairment or Alzheimer's Disease Dementia, Front Hum Neurosci, <https://doi.org/10.3389/fnhum.2021.728993>, 12th November 2021

## **231. Dr Indranil Ghosh**

Medical Oncology, Apollo Hospitals, Kolkata

### Publications

Indranil Ghosh, Punit Sharma, Enam Murshed Khan, 18F-FDG PET/CT for Staging and Response

Evaluation in a Rare Case of Childhood Ovarian Primitive Neuroectodermal Tumor, Clin Nucl Med, Volume 46: Issue 5: Page e266-e267, 1st May 2021

## 232. Dr Jayanta Sharma

Internal Medicine, Apollo Hospitals, Kolkata

### Books Published

Editor- Dr Jayanta Sharma, Non- Clinical frontiers in Geriatric Care, GSI, 2021

### Chapters contributed to text books

Dr Jayanta Sharma, Nutrition in Health and Disease, Chapter 65, , Non- Clinical frontiers in Geriatric Care, Editor - Dr O P Sharma, 1st edition, GSI, Page 292-296, 2021

### Lectures

Lecture, Management of long Covid symptoms, Mid-term GERICON, Kolkata, 29th August 2021

Lecture, Role of nutrition in chronic kidney disease, International Comparison Program World Bank Group, Kolkata, 26th November 2021

### Examinership

Examiner, DNB Medicine, 2021

### Awards

Training of Trainers on Management of Covid award, Health and Family Welfare, Government of West Bengal, 31st January 2021

Covid Warrior Award, Association Of Physicians Of India, 1st July 2021

Training Of Master Trainers award, for Integrated Care Of Older People, Indian Academy Of Geriatrics and WHO, 30th October 2021

## 233. Dr Kinsuk Das

Gastroenterology, Apollo Hospitals, Kolkata

### Lectures

Lecture, Common mistakes that we perform in gastroenterology office practice, Indian Society of Gastroenterology, West Bengal chapter, 24th Annual conference, 26th February 2021

Lecture, Irritable bowel syndrome- journey over 6 decades, North East Gastro Meet, 19th Annual Conference, Guwahati, 2nd October 2021

### Professional Societies' Positions

State President, All India Society of Gastroenterology (ISG), West Bengal Chapter, since 2021

## 234. Dr Koushik Lahiri

Dermatology, Apollo Hospitals, Kolkata

### Books Published

Editor- Dr Koushik Lahiri, Postgraduate Dermatology, Jaypee Brothers Medical Publishers Ltd, 2021

### Chapters contributed to text books

Dr Koushik Lahiri, Hypo and Hyperpigmentary Disorders of Vulva, Chapter 19, Aesthetic and Regenerative Gynecology, Editor- Preeti Jindal, Narendra Malhotra, Shashi Joshi, 1st edition, Springer Nature, Page 181-190, 2021

Dr Koushik Lahiri, Topical Steroid Damaged Skin, Session 11, Chapter 102, Postgraduate Dermatology, Editors- Koushik Lahiri, Abhishek De, 1st edition, Jaypee Brothers Publications, Page 829-834, 2021

Dr Koushik Lahiri, Disorders of Hyperpigmentation, Session 11, Chapter 97, Postgraduate Dermatology, Editors- Koushik Lahiri, Abhishek De, 1st edition, Jaypee Brothers Publications, Page 793-798, 2021

Dr Koushik Lahiri, Empathy and Ethos of Clinical Practice, Session 8, Chapter 8.7, Essentials of Practice Management in Dermatology and Plastic Surgery, Editors- Venkataram, 1st edition, Jaypee Brothers Publications, Page 238-246, 2021

Dr Koushik Lahiri, Squamous Cell Carcinoma and Basal Cell Carcinoma, Postgraduate Dermatology, Editors- Koushik Lahiri, Abhishek De, 1st edition, Jaypee Brothers Publications, Page 744-751, 2021

### Publications

Koushik Lahiri, Rashmi Sarkar, Sushil Tahiliani, Amit Madan, Anil Abraham, Anil Ganjoo, Bela J Shah, Kiran Godse, T Salim, Archana Karadkhele, Snehal Muchchala, Rahul Rathod, Role of topical nadifloxacin as an empirical treatment in patients with skin and soft-tissue infections in India: A review and consensus, Cosmoderma, Volume 1: Issue 61: Page 1-13, 2021

Koushik Lahiri, Nishant Choudhary, Mehak Singh, Increase and consequences of self-medication in dermatology during COVID-19 pandemic: An initial observation, Dermatol Ther, Volume 34: Issue 1: Page e14696, January 2021

### Lectures

Lecture, Topical steroid abuse- role of residents in spreading awareness, 49th Annual Conference of the Indian Association of Dermatologists, Venereologists and Leprologists (IADVL), e-DERMACON, Virtual, 7th February 2021

Lecture, Topical steroid damaged face, 49th Annual Conference of the Indian Association of Dermatologists, Venereologists and Leprologists (IADVL), e-DERMACON, Virtual, 7th February 2021

Lecture, Using fractional lasers in Indian patients for post acne scars, British Medical Laser Association (BMLA), Conference and Educational Course, Virtual, 7th May 2021

Lecture, Counseling in chronic dermatoses, Mid Annual Conference, Indian Association of Dermatologists, Venereologists and Leprologists, MID DERMACON, Virtual, 30th October 2021

Lecture, How to build up a laser and aesthetic practice?, ACSICON, Guwahati, 5th September 2021

Lecture, Minigraftinng in vitiligo: Evolution and evaluation, 6. International Congress of Dermatology, Virtual, 12th November 2021

Lecture, Disease Dermatology to Desire Dermatology, 7. International Congress of Dermatology, Virtual, 12th November 2021

Lecture, Counseling in chronic Dermatoses, 24th Annual State Conference of IADVL, CUTICON, State Branch, Amritsar, 15th December 2021

### Editorial Board Membership

Editorial Board member, Journal of American Academy of Dermatology International (JAADI), since 2019

Editorial Board member, Dermatologic Therapy, since 2020

Editorial Board member, Indian Journal of Dermatology Venereology and Leprology (IJDVL), since 2017

Editor Emeritus, Indian Journal of Dermatology, since 2018

Editor, Indian Journal of Dermatology, since 2012

### Professional Societies' Positions

Director, International Society of Dermatology, since 2021

Chairperson, Association of Cutaneous Surgeons of India (ACSI) International Liaison Committee, since 2021

## Awards

Apollo Distinguished Academician Award, Apollo Hospitals Education and Research Foundation, 5th February 2021

## 235. Dr Litan Naha Biswas

Radiation Oncology, Apollo Hospitals, Kolkata

### Professional Societies' Positions

State President, Association of Radiation Oncologists of India, West Bengal Chapter, since 2021

### Examinership

External Examiner, DNB Final, 2021

## 236. Dr Mahesh Goenka

Gastroenterology and Hepatology, Apollo Hospitals, Kolkata

## Awards

V Parameshvara Life Time Achievement Award, Association of Physicians of India, 2021

## 237. Dr Meghoranjani Das

Neurology, Apollo Hospitals, Kolkata

### Publications

Meghoranjani Das, Madhukar Dwivedi, Neha Dubey, Aditya Jain Pansari, Raju Surampudi Bapi, Maushumi Guha, Rahul Banerjee, Gobinda Pramanick, Jayanti Basu, Amitabha Ghosh, Effects of Meditation on Structural Changes of the Brain in Patients with Mild Cognitive Impairment or Alzheimer's Disease Dementia, Front Hum Neurosci, <https://doi.org/10.3389/fnhum.2021.728993>, 12th November 2021

## 238. Dr Neha Dubey

Neurology, Apollo Hospitals, Kolkata

## Publications

Neha Dubey, Madhukar Dwivedi, Aditya Jain Pansari, Raju Surampudi Bapi, Meghoranjani Das, Maushumi Guha, Rahul Banerjee, Gobinda Pramanick, Jayanti Basu, Amitabha Ghosh, Effects of Meditation on Structural Changes of the Brain in Patients with Mild Cognitive Impairment or Alzheimer's Disease Dementia, Front Hum Neurosci, <https://doi.org/10.3389/fnhum.2021.728993>, 12th November 2021

## 239. Dr Nirmalya Ray

Neuroradiology, Apollo Hospitals, Kolkata

### Publications

Ray N, Ahuja CK, Kumar A, Panda N, Singh P, Post-tracheostomy vascular injury to the anomalous thymic branch managed by endovascular coiling, Vascular and Endovascular Surgery, Volume 56: Issue 2: Page 208-211, 8th October 2021

Ray N, Hosur B, Vyas S, Suthar R, Mukherjee A, Chandra T, Unusual cause of encephalopathy and seizures in a child, Neurology India, Volume 69: Issue 1: Page 167-169, 1st January 2021

Ray N, Chakraborty D, Dey S, Bhaumik S, An interesting case of acute stroke: When many things went wrong, but the patient laughed at last!, Journal of Stroke Medicine, Volume 4: Issue 2: Page 111-114, December 2021

Ray N, Gupta P, Vyas S, Salan T, Jain C, Taneja S, Dhiman RK, Singh P, Ahuja CK, Govind V, Whole brain atlas-based diffusion kurtosis imaging parameters for evaluation of minimal hepatic encephalopathy, The neuroradiology Journal, Volume 35: Issue 1: Page 67-76, 29th June 2021

### Lectures

Lecture, Unexpected complication of aneurysm coiling in presence of anatomical variations, 23rd Annual Conference of the Indian Society of

Neuroradiology (ISNR), 17th-19th December 2021

#### Awards

European Board certification for Interventional Radiology (EBIR), Cardiovascular and Interventional Radiological Society of Europe (CIRSE), 21st October 2021

ESMINT Stroke Diploma, The European Society of Minimally Invasive Neurological Therapy (ESMINT), 14th December 2021

### **240. Dr P N Mohapatra**

Medical Oncology, Apollo Hospitals, Kolkata

#### Publications

P N Mohapatra, Raja Thirumalairaj, Purvish M Parikh, Amit Agarwal, Randeep Singh, Arvind Krishnamurthy, Sharad S Desai, Amita Maheshwari, Prashant Mehta, Abdul Ghafur, S P Somashekhar, Ahamed Iqbal, Dhairyasheel N Savant, Syed Md Akram Hussain, Amit Bhatt, Tashi Wangdi, Jyoti Bajpai, Anantbhushan A Ranade, K Govind Babu, Ajay Bapna, Ghanshyam Biswas, Hemant Malhotra, M Vamshi Krishna, Rajendra Prasad Baral, Rajesh Vashishtha, Ahmad Javid Safi, Sharmila Agarwal, J P Agarwal, Krishna Kumar Rathnam, Rajeev Vijay Kumar, Senthil Rajappa, Sewanti Atul Limaye, Amish Vora, Vijay AP Reddy, Bhavesh B Parekh, G K Rath, South Asian Declaration—Consensus Guidelines for COVID-19 Vaccination in Cancer Patients, South Asian J Cancer, Volume 10: Issue 1: Page 3-8, January 2021

### **241. Dr Punit Sharma**

Nuclear Medicine, Apollo Hospitals, Kolkata

#### Publications

Punit Sharma, Indranil Ghosh, Enam Murshed Khan, 18F-FDG PET/CT for Staging and Response Evaluation in a Rare Case of Childhood Ovarian Primitive Neuroectodermal Tumor, Clin Nucl Med,

Volume 46: Issue 5: Page e266-e267, 1st May 2021

### **242. Dr Shaikat Gupta**

Surgical Oncology, Apollo Hospitals, Kolkata

#### Editorial Boards Membership

Editorial Secretary, Indian Association of Surgical Oncology, since 2021

### **243. Dr Srinjoy Saha**

Plastic Surgery, Apollo Hospitals, Kolkata

#### Publications

Srinjoy Saha, Life threatening panfacial wild dog bites in a child, Wilderness Environmental Medicine, Elsevier, Volume 32: Issue 4: Page 511-516, December 2021

Srinjoy Saha, Gestational gigantomastia with massively hemorrhagic ulcers, BMJ Postgraduate Medical Journal, Volume 98: Issue 1156: Page 151-152, 9th February 2021

Srinjoy Saha, Minimalistic reconstruction of exposed skull in a complex craniovertebral polytrauma, Surgical Neurology International, Volume 12: Page 248, 31st May 2021

Srinjoy Saha, Tissue engineered successful reconstruction of a complex traumatized lower extremity, Journal of Orthopedic case reports, Volume 11: Issue 9: Page 1-6, September 2021

#### Lectures

Lecture, Minimally invasive facial transformation with buccal fat re-grafting: Defining attractiveness, American Society of Plastic Surgeons in Atlanta, USA, 29th October –1st November 2021

Lecture, Minimalistic reconstruction of exposed skull in a complex craniovertebral polytrauma, American Society of Plastic Surgeons in Atlanta,

USA, 29th October –1st November 2021

Lecture, Tissue-engineered successful reconstruction of a complex traumatized lower extremity, 55th Annual Conference of the Association of Plastic Surgeons of India, Virtual, 22nd– 24th October 2021

### **Presentations**

Presentation, Minimally-invasive reconstruction of large defects over skull bones in a life-threatening case of multiple complex craniospinal injuries and polytrauma, Kamat Memorial Award Session, 55th Annual Conference of the Association of Plastic Surgeons of India, Virtual, 22nd- 24th October 2021

### **Awards**

Fellowship, American College of Surgeons, USA, 2021

Fellowship, Royal College of Physicians and Surgeons of Galsgow, UK, 2021

### **244. Dr Sudipta Sekhar Das**

Transfusion Medicine, Apollo Hospitals, Kolkata

### **Publications**

Das SS, Sen S, Zaman RU, Biswas RN, Plateletpheresis in the era of automation: Optimizing donor safety and product quality using modern apheresis instruments. Indian Journal of Hematology and Blood Transfusion, Volume 37: Issue 1: Page 134-139, 2021

Das SS, Chaudhuri K, Biswas RN, Successful Convalescent plasma therapy in a child with severe Coronavirus disease, Indian Pediatrics, Volume 58: Issue 1: Page 89–90, 2021

Das SS, Biswas RN, Blood component therapy in COVID-19 patients hospitalized in a tertiary care centre in Eastern India, Global Journal of

Transfusion Medicine, Volume 6: Page 43-48, 2021

Das SS, Biswas RN, Sen S, Harvesting COVID convalescent plasma using latest generation apheresis systems: Analyzing factors associated with man, machine and manufactured product. Global Journal of Transfusion Medicine Volume 6: Page 54-60, 2021

Das SS, Chakrapani A, Bhattacharya S, Biswas RN, Safi M, Immunohematological and clinical characterization of complement and non-complement associated warm autoimmune haemolytic anaemia and risk factors predicting their occurrences, Indian J Hematol Blood Transfus, Volume 37: Issue 4: Page 623-631, October 2021

Das SS, Biswas RN, Safi M, Auto-anti-A1" in a healthy young blood donor: A rare cause of ABO discrepancy, Asian Journal of Transfusion Science, Volume 15: Page 87-89, 2021

Das SS, Kamilya R, Biswas RN, Ghosh S, An insight to the utilization of allogenic blood transfusion and factors affecting blood transfusion in total knee replacement surgery, Asian Journal of Transfusion Science, Volume 15: Page 133-139, 2021

Das SS, Biswas RN, Safi M, Zaman RU, Alloimmunization to erythrocyte antigens in patients receiving multiple blood transfusions: Clinico-immunohematological and demographic risk factors and impact of extended red cell phenotyping, Global Journal of Transfusion Medicine Volume 6: Page 171-177, 2021

Das SS, Biswas RN, Zaman RU, Sen S, Evaluation of donor demographic, clinical and serological characteristics in COVID convalescent plasma donation by plasmapheresis, Global Journal of Transfusion Medicine, Volume 6: Page 198-204, 2021

### **Lectures**

Panellist, COVID-19 convalescent plasma collection and testing, National Conference of

Indian Society of Blood Transfusion and Immunohematology, Virtual, 26th -27th February 2021

Panellist, Importance and applications of SARS-CoV2 antibody testing in Covid-19 Pandemic, C K Birla Hospitals, Kolkata, 26th February 2021

Speaker, Recent Advances in Hemovigilance, CME on Recent advances in Blood transfusion services, Directorate of Drug Control, Government of India, Kolkata, 6th March 2021

Speaker, Blood group genealogy and role plasma therapy in Covid management, Apollo Gleneagles Hospitals, Kolkata, 12th March 2021

Speaker, DAT Positive: What next?" Ortho Clinical diagnostics of Asia-pacific Region, Webinar, 28th April 2021

Speaker, Clinical uses of Blood, Kishanganj Medical College, Virtual, 14th June 2021

Speaker, Tackling the enemy within AIHA work up, Virtual CME, Kasturba Medical College, Manipal, 6th August 2021

Panellist, Bio-Rad EQAS, Bio-Rad India, Webinar series, 10th August 2021

Speaker, Interesting cases in Immunohematology, Indian Institute of Immunohematology, Mumbai, Virtual workshop, 17th August 2021

Speaker, Transfusion management of AIHA, National virtual CME, Polymed Industries, New Delhi, India, 28th August 2021

Moderator, Hemovigilance program of India, National Institute of Biologicals, Government of India, 16th September 2021

Speaker, Rational use of blood and blood components, Bengal Obstetric and Gynaecological Society (BOGS), Virtual, 18th September 2021

Speaker, Blood group discrepancies and their resolution, Tata Medical Center, Kolkata, Virtual, 28th October 2021

Speaker, DAT negative AIHA, Global Conference of Asian Association of Transfusion Medicine & AABB, Virtual, Jaipur, 3rd -4th December 2021

Speaker, Clinical and Immunohematological characterization of Mixed AIHA, Virtual National conference of Indian Society of Transfusion Medicine, Guwahati, Assam, India, 17th -18th December 2021

#### **Editorial Boards Membership**

Reviewer, International Editorial Board, IBIMA Publishing, USA, since January 2013

Reviewer, Asian Journal of Transfusion Science, India, since June 2012

Reviewer, Journal of Blood Transfusion, USA, since February 2013

Reviewer, International Journal of Case Reports in Medicine, since August 2013

Reviewer, Indian Journal of Hematology and Blood Transfusion, since June 2014

Reviewer, Saudi Medical Journal, since August 2014

Reviewer, Journal of Hematology, Blood Transfusion and Disorders, since 2015

Reviewer, Clinical Chemistry and Laboratory Medicine, since 2016

Reviewer, Global Journal of Transfusion Medicine, since 2016

#### **Professional Societies' Positions**

Lifetime Member, The Indian Society of Blood Transfusion and Immunohematology (ISBTI), since

2003

Lifetime Member, The Indian Society of Haematology and Transfusion Medicine (ISHTM), since 2003

Lifetime Member, The Indian Society of Transfusion Medicine, since 2010

Lifetime Member, The South Asian Association of Transfusion Medicine (SAATM), since 2012

Member, Global Association of Physicians of Indian Origin (GAPIO), since 2012

Member, The International Society of Blood Transfusion (ISBT)

Joint secretary, The Indian Society of Transfusion Medicine

Secretary-General, Bengal Society of Transfusion Medicine, since

Convenor, Special Interest Group – Immunohematology, Indian Society of Transfusion Medicine

#### **Member of task forces of the Government of India or State Governments**

External Resource Person, Transfusion Medicine, National AIDS Control Organization, Government of India

Technical expert, Transfusion Medicine and Blood Banking, Government of West Bengal

Technical expert, Transfusion Medicine and Blood Banking, Government of Odisha and Government of Jharkhand

Member, Secretary of Eastern India, National Hemovigilance Program, Government of India

Core Member, Technical Committee, Cord Blood Banking, Government of West Bengal

NABH assessor, Blood Banks, Quality Council of

India

#### **Awards**

The Apollo Academic Achievement Award, Foundation Day, Apollo Multispeciality Hospitals Kolkata, 20th November 2021

The Corona Warrior Award, Indian Society of Blood Transfusion & Immunohematology (ISBTI), National Annual Conference of Transfusion Medicine, Chennai, February 2021

### **245. Dr Survo Banerjee**

Cardiology, Apollo Hospitals, Kolkata

#### **Chapters Contributed to text Books**

Dr Survo Banerjee, Chapter 1, CSI Cardiology Update 2021, Editor- Partha Sarathi Banerjee, 1st edition, Evangel publishing, Page 258-260, 2021

#### **Publications**

Suvro Banerjee, Uday Sankar Das, Aritra Paul, SGLT2 inhibitors in heart failure with reduced ejection fraction, Egyptian Heart Journal, Volume 73: Issue 93: Page 1-7, 24th October 2021

Banerjee S, Bhattacharya A, Patra S, Prevalence of cardiovascular risk factors among executive and nonexecutive workers in an urban public sector office setting: a cross-sectional epidemiological study from eastern India, Indian J Community Med, Volume 46: Issue: Page 723- 726, 2021

S Banerjee, I Sathyamurthy, MS Hiremath, JP Swanhey, S Chandra, H Mishra, CK Ponde, Expert opinion on P2Y12 inhibitors use in the management of acute coronary syndromes: focus on ticagrelor, Journal of Association of Physicians of India, Volume 69: Page 75-82, 2021

#### **Editorial Board Membership**

Member, Editorial Board, EC Cardiology, since 2017

Member, Editorial Advisory Board for Indian Heart Journal Interventions, since 2019

Member, Abstract Reviewing Committee, ESC Congress, since 2019

#### Professional Societies' Positions

Overseas Regional Advisor, Royal College of Physicians of Edinburg, East Region of India and West Bengal, since 2019

#### Examinerships

Examiner, MRCP (UK), 2021

### **246. Dr Syamasis Bandyopadhyay**

Rheumatology, Apollo Hospitals, Kolkata

#### Publications

Syamasis Bandyopadhyay, Keerthi Talari, Vinod Ravindran, Pradip Kumar, Pravin Patil, Sarath Chandra Mouli, Balebail G Dharmanand, Abhrajit Ray, Shankaralingam Rajeshwari, Sanjiv N Amin, Jyotsna Oak, Ved Chaturvedi, Anand N Malaviya, Sukumar Mukherjee, Expert Panel Consensus Statements on the Optimal Usage of Rituximab for the Management of Rheumatoid Arthritis in India, Indian Journal of Rheumatology, Volume 16: Issue 3: Page 311-321, 21st September 2021

Syamasis Bandyopadhyay, Susobhan Mondal, Treatment Adherence of Patients with Rheumatoid Arthritis during COVID-19 Pandemic Syamasis, Open Journal of Rheumatology and Autoimmune Diseases, Volume 11: Issue 3: Page 106-114, 24th August 2021

### **Lucknow**

### **247. Dr Amit Gupta**

Renal Transplant and Nephrology, Apolomedics Super Speciality Hospital, Lucknow

#### Editorial Boards Membership

Editor, Point of Care, Elsevier Nephrology Journal, since January 2021

#### Member of Governing Board of MCI / State Medical Council / Autonomous Medical Institutions Under Government of India

Member, Selection Committee, Jawaharlal Institute of Postgraduate Medical Education and Research, Pondicherry

Member, Selection Committee, Institute of Liver and Biliary Sciences, New Delhi

#### Examinership

DNB Nephrology, National Board of Examinations, New Delhi, 2021

DM Nephrology, West Bengal Deemed University, March 2021

### **248. Dr Anupam Wakhlu**

Rheumatology and Clinical Immunology, Apolomedics Super Speciality Hospital, Lucknow

#### Publications

Wakhlu A, Manoj M, Sahoo RR, Singh A, Hazarika K, Bafna P, Kaur A, Prevalence of hydroxychloroquine retinopathy with long-term use in a cohort of Indian patients with rheumatic diseases, Rheumatology International, Volume 41: Issue 5: Page 929-937, March 2021

Wakhlu A, Dixit J, Sahoo RR, Malhotra KP, Malhotra HS, Bilateral calf hypertrophy with raised muscle enzymes, Arthritis and Rheumatology, Volume 73: Issue 8: Page 1549, August 2021

Wakhlu A, Bafna P, Sahoo RR, Hazarika K, Manoj M, Rungta S, Prevalence of liver fibrosis by Fibroscan in patients on long-term methotrexate therapy for rheumatoid arthritis, Clinical

Rheumatology, Volume 40: Issue 9: Page 3605-3613, September 2021

Wakhlu A, Sahoo R, Naproxen-Induced hyperkalemia: A familiar surprise, Indian Journal of Rheumatology, Volume 16: Issue 4: Page 471-472, 22nd December 2021

## **249. Dr Apoorv Kumar**

Orthopaedics and Spine Surgery, ApolloMedics Super Speciality Hospital, Lucknow

### Publications

Kumar A, Shaikh H, Kishen TJ, Temporal pattern of pain and disability following the administration of a selective nerve root block in lumbar disc herniation with radiculopathy, International Journal of Spine Surgery, Volume 15: Issue 6: Page 1090-1095, 1st December 2021

## **250. Dr K N Prasad**

Microbiology, ApolloMedics Super Speciality Hospital, Lucknow

### Publications

Prasad KN, Singh S, Pulusu CP, Pathak A, Pradeep BE, Complete genome sequence analysis of an extensively drug-resistant *Pseudomonas aeruginosa* ST773 clinical isolate from North India, Journal of Global Antimicrobial Resistance, Volume 27: Page 244-246, December 2021

Prasad KN, Singh S, Pathak A, Rahman M, Singh A, Nag S, Sahu C, Genetic characterisation of colistin resistant *Klebsiella pneumoniae* clinical isolates from north India, Frontiers in Cellular and Infection Microbiology, Volume 11: Page 479, 21st November 201

Prasad KN, My experience on taeniasis and neurocysticercosis, Tropical Parasitology, Volume 11: Issue 2: Page 71-74, July – December 2021

### Examinerships

PhD Examiner, National Institute of Pharmaceutical Education and Research (NIPER), Chandigarh, January 2021

### Awards

IAMM Endowment Oration Award, Indian Association of Microbiologist, 44th National Conference, Guwahati, 21st December 2021

Prof SC Parija Oration Award, Indian Academy of Tropical Parasitology, 28th February 2021

## **251. Dr Kamlesh Verma**

Surgical Oncology, ApolloMedics Super Speciality Hospital, Lucknow

### Publications

Verma K, Desouza AL, Kazi M, Sugor P, Mahendra BK, Saklani AP, Local recurrence with intersphincteric resection in adverse histology rectal cancers. A retrospective study with competing risk analysis, ANZ Journal of Surgery, Volume 91: Issue 11: Page 2475-2481, November 2021

## **252. Dr Kavita Somani**

Pathology, ApolloMedics Super Speciality Hospital, Lucknow

### Publications

Somani K, Singh P, Incidentally detected muscular sarcocystis with ewing's sarcoma: A case report of a rare combination, Apollo Medicine, Volume 18: Issue 1: Page 51- 53, 8th March 2021

## **253. Dr Mayank Somani**

Internal Medicine, ApolloMedics Super Speciality Hospital, Lucknow

### Awards

Most inspiring CEO-Healthcare, The Times of India

Group, ET inspiring leaders, Lucknow, 20th December 2021

Awadh CORONA Yoddha Samman, Amar Ujala, Deputy Chief Minister, Uttar Pradesh, 7th February 2021

## 254. Dr Pretty Singh

Pathology, Apollomedics Super Speciality Hospital, Lucknow

### Publications

Singh P, Somani K, Incidentally detected muscular sarcocystis with ewing's sarcoma: A case report of a rare combination, Apollo Medicine, Volume 18: Issue 1: Page 51- 53, 8th March 2021

## 255. Dr R C Ahuja

Internal Medicine, Apollomedics Super Speciality Hospital, Lucknow

### Awards

Lifetime Achievement Award, for valuable contribution in Healthcare, King George Medical University, Lucknow, 12th February 2021

## 256. Dr R V Phadke

Intervention Radiology, Apollomedics Super Speciality Hospital, Lucknow

### Publications

Phadke RV, Shetty GS, Singh V, Prasad SN, Neyaz Z, Udiya A, Behari S, Spinal Epidural Fistulas-A Separate Entity to Dural Fistulas with Different Angioarchitecture and Treatment Approach, World Neurosurgery, Volume 149: Page e600-e611, May 2021

Phadke RV, Prasad SN, Singh V, Selvamurugan V, Complete resolution of long pedunculated thrombus of the proximal ascending aorta following conservative management: an interesting

case, BMJ Case Reports CP, Volume 14: Issue 3: Page e236777, May 2021

Prasad SN, Singh V, Selvamurugan V, Phadke RV, Vertebrobasilar dolichoectasia with typical radiological features, BMJ Case Reports, Volume 14: Issue 2, Page 1-2, 1st February 2021

## 257. Dr Rashmi Ranjan Sahoo

Rheumatology and Clinical Immunology, Apollomedics Super Speciality Hospital, Lucknow

### Publications

Sahoo RR, Wakhlu A, Manoj M, Singh A, Hazarika K, Bafna P, Kaur A, Prevalence of hydroxychloroquine retinopathy with long-term use in a cohort of Indian patients with rheumatic diseases, Rheumatology International, Volume 41: Issue 5: Page 929-937, March 2021

Sahoo RR, Wakhlu A, Dixit J, Malhotra KP, Malhotra HS, Bilateral calf hypertrophy with raised muscle enzymes, Arthritis and Rheumatology, Volume 73: Issue 8: Page 1549, August 2021

Sahoo RR, Wakhlu A, Bafna P, Hazarika K, Manoj M, Rungta S, Prevalence of liver fibrosis by Fibroscan in patients on long-term methotrexate therapy for rheumatoid arthritis, Clinical Rheumatology, Volume 40: Issue 9: Page 3605-3613, September 2021

Wakhlu A, Sahoo R, Naproxen-Induced hyperkalemia: A familiar surprise, Indian Journal of Rheumatology, Volume 16: Issue 4: Page 471-472, 22nd December 2021

## 258. Dr Shahzad Alam

Nephrology, Apollomedics Super Speciality Hospital, Lucknow

### Publications

Alam S, Sharma M, Mazumder MA, Mahanta PJ,

Doley PK, Pegu G, Parry MA, Jeelani H, Histological patterns of renal diseases in children: A 12-year experience from a single Tertiary Care Center in North-East India, Saudi Journal of Kidney Diseases and Transplantation, Volume 32: Issue 2: Page 364-370, 1st March 2021

## **259. Dr Usha Kiran Misra**

Neurology, ApolloMedics Super Speciality Hospital, Lucknow

### **Books Published**

Editor- Dr Usha K Misra, Neurological Consequences of Nutritional deficiency, 1st edition, CRC Press, 16th July 2021

### **Chapters contributed to text books**

Kalita J, Misra UK, Tuberculous meningitis, Chapter 189, Postgraduate Medicine, Editor- Gurpreet S Wander, 3rd Volume, 1st edition, Jaypee Brothers, Page 1509-1520, 10th July 2021

### **Publications**

Misra UK, Kalita J, Tuberculous meningitis international research consortium, mechanism, spectrum, consequences and management of hyponatremia in tuberculous meningitis, Wellcome Open Research, Volume 4, Issue 189, 29th March 2021

Misra UK, Tripathi A, Thakur RS, Kalita J, Patel DK, Is cerebral salt wasting related to sympathetic dysregulation in tuberculous meningitis? Neuroscience Letters, Volume 747: Page 135671, 16th March 2021

Misra UK, Kalita J, Tripathi A, Dongre N, Impact of COVID-19 pandemic and lockdown in a cohort of myasthenia gravis patients in India, Clin Neurol Neurosurg, Volume 202: Page 106488, March 2021

Misra UK, Kalita J, Bansal R, Phonophobia and

brainstem excitability in migraine, Eur J Neurosci, Volume 53: Issue 6: Page 1988-1997, March 2021

Misra UK, Kalita J, Dongre N, Insomnia matters in myasthenia gravis, Sleep Med, Volume 79: Page 221-222, March 2021

Misra UK, Kalita J, Kumar V, Kumar S, Movement disorder in wilson disease: correlation with mri and biomarkers of cell injury, J Mol Neurosci, volume 71: Issue 2: Page 338-346, February 2021

Misra UK, Kalita J, Pandey PC, Starry sky in disseminated tuberculosis, Am J Med, Volume 134: Issue 5: Page 603-605, May 2021

Misra UK, Kalita J, Pandey PC, Shukla R, Feasibility and usefulness of tele- follow-up in the patients with tuberculous meningitis, Trans R Soc Trop Med Hyg, Volume 115: Issue 10: Page 1153-1159, 1st October 2021

Misra UK, Kalita J, Rahi SK, Kumar S, Naik S, Bhoi SK, A Study of diffusion tensor imaging in hirayama disease, Neurol India, Volume 69: Issue 4: Page 889-893, July – August 2021

Misra UK, Kumar M, Kalita J, Standard versus sequential anti-tubercular treatment in patients with tuberculous meningitis: a randomized controlled trial, Trans R Soc Trop Med Hyg, Volume 115: Issue 1: Page 94-102, January 2021

Misra UK, Tripathi A, Kalita J, A study of glutamate excitotoxicity in seizures related to tuberculous meningitis, Epilepsy Res, Volume 178: Page 106789, December 2021

Misra UK, Dubey AK, Kalita J, Chaudhary SK, Impact of anticoagulation status on recanalization and outcome of cerebral venous thrombosis, J Clin Neurosci, Volume 89: Page 43-50, July 2021

Misra UK, Kalita J, Kumar V, Parashar V, Neuropsychiatric manifestations of wilson disease: correlation with mri and glutamate excitotoxicity,

Mol Neurobiol, Volume 58: Issue 11: Page 6020-6031, November 2021

Misra UK, Kalita J, Jadhav MS, Singh VK, Prolonged coma in scrub typhus: consider non-convulsive status epilepticus, Trans R Soc Trop Med Hyg, Volume 115: Issue 9: Page 1091-1093, 3rd September 2021

Misra UK, Kalita J, Kumar M, Bansal R, Uniyal R, Is Palinopsia in migraineurs a phenomenon of impaired habituation of visual cortical neurons? Clin EEG Neurosci, volume 53: Issue 3, Page 196-203, March 2021

Misra UK, Kalita J, Kumar S, Singh VK, A Randomized controlled trial of high rate rtms versus rtms and amitriptyline in chronic migraine, Pain Physician, Volume 24: Issue 6: Page E733-E741, September 2021

Misra UK, Kalita J, Singh VK, Kapoor A, Tripathi A, Mishra P, Rest or 30-Min walk as exercise intervention (RESTOREX) in myasthenia gravis: A randomized controlled trial, Eur Neurol, Volume 84: Issue 3: Page 168-174, 2021

Misra UK, Bhoi SK, Naik S, Gupta D, Pradhan PK, Kalita J, Recurrent Spontaneous Cerebrospinal Fluid Leaks at Multiple Levels. Neurol India, Volume 69: Issue 6: Page 1828-1830, November – December 2021

Misra U, Dongre N, Singh VK, Kalita J, Vitamin B12 deficiency presenting as acute febrile encephalopathy and retinopathy, Postgrad Med J, Volume 97: Issue 1145: Page 141-142, March 2021

Misra UK, Singh VK, Kalita J, Kumar S, Cerebral venous sinus thrombosis and pachymeningitis in IgG4 related disease: report of two cases and review of literature, Ann Indian Acad Neurol,

Volume 24: Issue 3: Page 432-436, May – June 2021

### Lectures

Lecture, International Infectious Disease Case Conference, December 2021

### Professional Societies' Positions

Council Members, National Academy of Medical Sciences, New Delhi, India, since 1992

Member, Institutional Human Ethics Committee, Center for Biomedical Research Center, Lucknow, Uttar Pradesh, India, since 1992

Member, Era's Lucknow Medical College and Hospital and Era University, Lucknow, since 2009

Chairman, Neuro- Critical Care and Emergency Neurology Subsection of Indian Academy of Neurology, since 2020

**Member of Governing Board of MCI / State Medical Council / Autonomous Medical Institutions Under Government of India**

Board of Governors, Government Medical University, Saifai, Uttar Pradesh

### 260. Dr Vijay P Raturi

Surgical Oncology, ApolloMedics Super Speciality Hospital, Lucknow

### Publications

Parshuram RV, Okumura M, Hojo H, Nakamura M, Hiyama T, Nakamura N, Zenda S, Motegi A, Hirano Y, Kageyama SI, Fujisawa T, Radiation pneumonitis after palliative radiotherapy in cancer patients with interstitial lung disease, Radiotherapy and Oncology, Volume 161: Page 47-54, August 2021

## Mysore

### 261. Dr Chandra Shekhar Reddy G B

Cardiology, Apollo Hospitals, Mysore

#### Publications

Chandra Shekhar Reddy G B, Siddharth Kumar Chawath, Arun Srinivas, Balloon valvuloplasty for early bioprosthetic aortic valve stenosis in septuagenarian - a ray of hope, Indian Journal of Scientific Research, Volume 10: Issue 10: Page 14-15, October 2021

### 262. Dr Raghavendran

Urology and Renal Transplant Surgery, Apollo Hospitals, Mysore

#### Editorial Boards Membership

Editorial Board Member, Indian Journal of Urology, since 2015

Reviewer, Urologia Internationals, since 2015

Reviewer, BMJ Case reports, since 2016

Reviewer, American Journal of Case Reports, since 2020

Medicine Science Monitor, since 2020

#### Professional Societies' Positions

International member, American Urological Association, Stress Urinary Incontinence, Endourological society, since 2021

## Nashik

### 263. Dr Dhaval Choksi

Gastroenterology, Apollo Hospitals, Nashik

#### Publications

Sridhar Sundaram, Dhaval Choksi, Aditya Kale, Suprabhat Giri, Biswaranjan Patra, Shobna Bhatia, Akash Shukla, Outcomes of dilation of recalcitrant

pancreatic strictures using a wire-guided cystotome, Korean Society of Gastrointestinal Endoscopy, Volume 54: Issue 6: Page 903-908, November 2021

## Navi Mumbai

### 264. Dr Aabha Nagral

Hepatology and Gastroenterology, Apollo Hospitals, Navi Mumbai

#### Publications

Aabha Nagral, Ashwin Deshmukh, Ajay Jhaveri, Shaji Marar, Techniques and Outcomes of Transjugular Intrahepatic Portosystemic Shunting in Infants with Budd-Chiari Syndrome, J Vasc Interv Radiol Volume 32: Issue 12: Page 1637-1643, December 2021

### 265. Dr Amey Sonavane

Gastroenterology and Liver Transplant, Apollo Hospitals, Navi Mumbai

#### Publications

Amey Dilip Sonavane, D Gupta, A Ambekar, Aabha Sanjay Nagral, Acute esophageal necrosis: An uncommon entity, Journal of Postgraduate Medicine, Volume 67: Issue 2: Page 115-116, April 2021

Amey Dilip Sonavane, Aashika Janwadkar, Aabha Sanjay Nagral, Shaji Marar, Positional outflow obstruction as a cause of early refractory ascites post-pediatric living donor liver transplantation, Pediatric Transplantation, Volume 25: Issue 3, January 2021

### 266. Dr Chintan R Trivedi

Radiology, Apollo Hospitals, Navi Mumbai

#### Publications

Chintan R Trivedi, Sanjay P Khare, Lipomatous pseudohypertrophy of pancreas-an extremely

unusual case, Indian Journal Of Applied Research, Volume 11: Issue 2: Page 66-67, February 2021

## **267. Dr Dhanya Dharmapalan**

Paediatric Infectious Disease, Apollo Hospitals, Navi Mumbai

### **Publications**

Dhanya Dharmapalan, T Jacob John, Jagdish Ratnanni, Timely use of Covid-19 vaccines could have saved thousands of lives, Indian J Med Ethics, Page 1-2, 22nd July 2021

Dhanya Dharmapalan, T Jacob John, COVID-19 Eradication for vaccine equity in low income countries, Indian Pediatr, Volume 58: Issue 10: Page 970-972, 15th October 2021

## **268. Dr Garima Sharma**

Obstetrics and Gynaecology, Apollo Hospitals, Navi Mumbai

### **Professional Societies' Positions**

Member, European Society of Human Reproduction and Embryology

Youth Council Member, Mumbai Obstetrics and Gynecological Society, since 2016

Member, Indian Fertility Society

Member, Indian Society of Assisted Reproduction

Member, Maharashtra state chapter, ISAR

## **269. Dr Haridas Munde**

Cardiovascular and Thoracic Surgery, Apollo Hospitals, Navi Mumbai

### **Publications**

Haridas Munde, Rahul R Gupta, K V Charan Reddy, M G Pillai, Shantesh Kaushik, Challenges to Transcatheter Aortic Valve Implantation through

Femoral Access in Elderly with Peripheral Artery Disease: A Case Report, Journal of Clinical Cardiology and Cardiovascular Interventions, Volume 5: Issue 3: Page 1-5, 26th November 2021

## **270. Dr K V Charan Reddy**

Interventional Cardiology, Apollo Hospitals, Navi Mumbai

### **Publications**

K V Charan Reddy, Rahul R Gupta, M G Pillai, Shantesh Kaushik, Haridas Munde, Challenges to Transcatheter Aortic Valve Implantation through Femoral Access in Elderly with Peripheral Artery Disease: A Case Report, Journal of Clinical Cardiology and Cardiovascular Interventions, Volume 5: Issue 3: Page 1-5, 26th November 2021

## **271. Dr Kiran Godse**

Dermatology, Apollo Hospitals, Navi Mumbai

### **Publications**

Godse K, Godse G, Patil A, Skin writometer: A novel instrument for assessing provocation threshold in patients with symptomatic dermographism, IP Indian J Clin Exp Dermatol, Volume 7: Issue 2: Page 178-180, 2021

## **272. Dr Rahul R Gupta**

Interventional Cardiology, Apollo Hospitals, Navi Mumbai

### **Publications**

Rahul R Gupta, K V Charan Reddy, M G Pillai, Shantesh Kaushik, Haridas Munde, Challenges to Transcatheter Aortic Valve Implantation through Femoral Access in Elderly with Peripheral Artery Disease: A Case Report, Journal of Clinical Cardiology and Cardiovascular Interventions, Volume 5: Issue 3: Page 1-5, 26th November 2021

## 273. Dr Sanjay P Khare

Internal Medicine, Apollo Hospitals, Navi Mumbai

### Publications

Dr Sanjay P Khare, Dr Hrishikesh Morkhade and Dr Nazia Khan, A Devious disease deceptively presenting as a straight forward gastro enteritis, Indian Journal of Research, Volume 10: Issue 8: Page 37-38, August 2021

Sanjay P Khare, Chintan R Trivedi, Lipomatous pseudohypertrophy of pancreas-an extremely unusual case, Indian Journal Of Applied Research, Volume 11: Issue 2: Page 66-67, February 2021

Sanjay P Khare, Tanuja Akre, Varsha Gorey, Rituparna Ghosh, Sudarshan Palav, Bariatric Medicine: A new faculty; Dealing with obesity: An account of successful intervention, Apollo Medicine, Volume 18: Issue 5: Page 1-8, 29th June 2021

## 274. Dr Shantesh Kaushik

Cardiovascular and Thoracic Surgery, Apollo Hospitals, Navi Mumbai

### Publications

Rahul R Gupta, K V Charan Reddy, M G Pillai, Shantesh Kaushik, Haridas Munde, Challenges to Transcatheter Aortic Valve Implantation through Femoral Access in Elderly with Peripheral Artery Disease: A Case Report, Journal of Clinical Cardiology and Cardiovascular Interventions, Volume 5: Issue 3: Page 1-5, 26th November 2021

## Nellore

## 275. Dr Bindu Menon

Neurology, Apollo Hospitals, Nellore

### Editorial Board Membership

Associate Editor, Annals of Medicine, since 2021

### Professional Societies' Positions

Representative, European Academy of Neurology Scientific Panel on Epilepsy, Asian Ocean Association of Neurology, 4th March 2021

### Awards

International President's Appreciation certificate, Lions Club, 8th August 2021

Governors Appreciation Award, 8th August 2021

A.B. Baker Teacher Recognition Award, American Academy of Neurology, 2021

## Noida

## 276. Dr Deepa Passi

Paediatrics, Apollo Hospitals, Noida

### Books Published

Editor- Dr Deepa Passi, Substance Abuse in Children and Adolescents, Indian Academy of Paediatrics, Delhi, 2021

### Lectures

Lecture, Study strategies and healthy tips that work for exams, Apollo Hospitals, AACCI, Noida, Virtual, 16th February 2021

Lecture, Building resilience through life-skills, Anti-Obesity Platform, Titliyan NGO, International Adolescent Health Week, Noida, 27th March 2021

Pannel discussion, Adolescent health issues, Anti-Obesity Platform, Noida, 21st April 2021

Lecture, Chronic abdominal pain in children, Anti-Obesity Platform, Noida, 26th June 2021

Panel Discussion, Maintaining positive physical and

mental health during Covid times, Haryana, 20th July 2021

Panel Discussion, Screen time-how much is too much, Zonal Tot Mission Uday School West Zone, 21st July 2021

Panelist, Your guide to mask, Indian Academy of Pediatrics, Delhi, 7th September 2021

Lecture, Vitamin D effect on growth and development of brain, Anti-Obesity Platform, Noida, 19th August 2021

Lecture, Strategies to cope up with school opening, Indian Academy of Paediatrics, Delhi, 6th September 2021

Panel discussion, Unfold the Covid blues, PCNI North Zone, Indian Academy of Paediatrics, Delhi, 30th October 2021

Lecture, Body image issues in teens, Apeejay School, Delhi, 12th October 2021

Lecture, Menstrual Health problems, ADOLESCON, Lucknow, 14th November 2021

Lecture, Body image issues in Adolescents during Covid times, Indian Academy of Paediatrics, Delhi, 20th November 2021

Lecture, Challenges and issues in adolescents, Apollo Hospital, Noida, Virtual, 13th December 2021

#### Professional Societies' Positions

Joint Secretary, Adolescent Health Academy, Delhi, since 1st January 2021

## OMR

### 277. Dr Anil Pande

Neurosurgery, Apollo Speciality Hospitals, OMR

#### Chapters contributed to text books

Dr Anil Pande, Historical Perspectives in Vestibular Schwannomas Surgery, Chapter 1, Vestibular Schwannomas, Editors- M C Vasudevan, A V Thamburaj, 1st edition, BOHR Publishers, Page 1-14, 2021

Dr Anil Pande, Epidemiology and Natural History of Vestibular Schwannomas, Chapter 2, Vestibular Schwannomas, Editors- M C Vasudevan, A V Thamburaj, 1st edition, BOHR Publishers, Page 1-23, 2021

Dr Anil Pande, Complication Avoidance and management in Vestibular Schwannomas Surgery, Chapter 20, Vestibular Schwannomas, Editors- M C Vasudevan, A V Thamburaj, 1st edition, BOHR Publishers, Page 189-211, 2021

Dr Anil Pande, Outcomes of Vestibular Schwannomas Surgery, Chapter 25, Vestibular Schwannomas, Editors- M C Vasudevan, A V Thamburaj, 1st edition, BOHR Publishers, Page 245-253, 2021

Dr Anil Pande, Tuberculosis of the Nervous system, Chapter 27, Vestibular Schwannomas, Editors- M C Vasudevan, A V Thamburaj, 1st edition, BOHR Publishers, Page 391-408, 2021

Dr Anil Pande, Neuromycoses, Chapter 28, Vestibular Schwannomas, Editors- M C Vasudevan, A V Thamburaj, 1st edition, BOHR Publishers, Page 407-423, 2021

Dr Anil Pande, Tuberculous Spondylitis, Chapter 99, Comprehensive Neurosurgery, Editors- Thamburaj, Bihari, BOHR Publishers, 2-14, 2021

#### Publications

Pande A, Rajaraman N, Sadiya N, Patil S, Pandian S, Adhithyan R, Rajendran B, Jalali R, Ghosh S, Spinal drop metastasis of glioblastoma-Two case reports, Clinicopathologic features, Current modalities of

evaluation, and treatment with a review of the literature. World Neurosurg, Volume 146: Page 261-269, February 2021

## **278. Dr J Devachandran**

Critical Care, Apollo Speciality Hospitals, OMR

### **Publications**

Jayakumar D, Ramachandran P, Rabindrarajan E, Vijayaraghavan BKT, Ramakrishnan N, Venkataraman R, Standard care versus awake prone position in adult nonintubated patients with acute hypoxic respiratory failure secondary to Covid-19 infection—a multicenter feasibility randomized controlled trial, Journal of Intensive Care Medicine, Volume 36: Issue 8: Page 918-924, August 2021

Devachandran Jayakumar, Therapeutic anticoagulation with heparin in critically ill patients with Covid-19, N Engl J Med, Volume 385: Page 777-789, 26th August 2021

Devachandran Jayakumar, Therapeutic Anticoagulation with Heparin in Noncritically Ill Patients with Covid-19, N Engl J Med, Volume 385: Page 790-802, 26th August 2021

## **279. Dr Krishna Kumar**

ENT, Apollo Speciality Hospitals, OMR

### **Publications**

K Krishna Kumar, V J Niranjana Bharathi, Rare Case of Benign Spindle Cell Lesion in Subglottis, Acta Scientific Otolaryngology, Volume 3: Issue 6: Page 98-100, 26th May 2021

K Krishna Kumar, V J Niranjana Bharathi, Fungus Cerebri - a case report, acta scientific otolaryngology Special, Issue 1: Page 22-24, 17th September 2021

### **Lectures**

Speaker, South Zone CME on Allergic Rhinitis and Otitis Media with effusion, Virtual, 13th June 2021

Guest speaker, ENT Association, MUCORMYCOSIS, Vellore, 2021

### **Editorial Board Membership**

Reviewer, Indian Journal of Otolaryngology, since 2012

### **Examinership**

Examiner, PhD candidate (Audiology and Speech Therapy), Sri Ramachandra Medical College, 13th October 2021

### **Awards**

Best Article Award, Rare case of benign spindle cell lesion in subglottis, Issue in ACTA Scientific Otolaryngology Journal, 2021

## **280. Dr Pratheema Ramachandran**

Critical Care, Apollo Speciality Hospitals, OMR

### **Publications**

Ramachandran P, Ramakrishnan N, Jayakumar D, Rabindrarajan, E, Vijayaraghavan BKT, Venkataraman R, Standard care versus awake prone position in adult non-intubated patients with acute hypoxic respiratory failure secondary to covid-19 infection—a multicenter feasibility randomized controlled trial, J Intensive Care Med, Volume 36: Issue 8: Page 918-924, 5th May 2021

Pratheema Ramachandran, R Ebenezer, Nagarajan Ramakrishnan, Impact of covid-19 on non-covid intensive care unit service utilization, case mix and outcomes: a registry-based analysis from indian registry of intensive care (iris) group, Wellcome Open Research Volume 6: Issue 159: Page 1-19, 10th November 2021

## **281. Dr Siva Muthukumar**

Cardio Thoracic Surgery, Apollo Speciality Hospitals, OMR

### **Professional Societies' Positions**

Executive Committee Member, Indian Association of Cardiovascular-Thoracic and Thoracic Surgeons IACTS, since 2021

## **Secunderabad**

## **282. Dr Aftab Ahmed**

Diabetology, Apollo Hospitals, Secunderabad

### **Awards**

Excellence Award in Healthcare, Hon'ble Minister for State Welfare and Women and Child Welfare, Government of Telangana, 2021

## **283. Dr Ashish Chauhan**

Internal Medicine, Apollo Hospitals, Secunderabad

### **Awards**

Felicitated, Honourable Minister of Labour, Government of Telangana State, Medical and Blood Donation Camp, Lions Club of Hyderabad and Red Cross Society, 15th September 2021

Seva Ratna Award, for his exemplary services by Justice Chandraiah Chairman Human Rights Commission, Dr S K Joshi IAS Former Chief Secretary Telangana State and Dr Venu Gopalachary Former Union Minister, 2021

## **284. Dr Harita**

Pulmonology, Apollo Hospitals, Secunderabad

### **Awards**

Vaidya Shree Award, Justice Chandraiah the Chairman Human Rights Commission Telangana State, 25th November 2021

## **285. Dr Sowmya Sree**

Critical Care, Apollo Hospitals, Secunderabad

### **Awards**

Women Excellence Award, Telangana States Women's Commission, World Women's Day, March 2021

## **286. Dr T Sateesh**

Critical Care Medicine, Apollo Hospitals, Secunderabad

### **Awards**

Excellence Award in Healthcare, Hon'ble Minister for State Welfare and Women and Child Welfare, Government of Telangana, 2021

## **287. Dr Tarun Kumar Saha**

Nephrology, Apollo Hospitals, Secunderabad

### **Awards**

CME Dronacharya Award, Integrated Health and Wellbeing (IHW), Council Advisory Board, 24th August 2021

## **Teynampet**

## **288. Dr Balaji Venkatachalam**

Diabetology, Apollo Hospitals, Teynampet

### **Chapters contributed to text books**

Dr Balaji Venkatachalam, Cardiovascular coupling - Relevance in critical care, Chapter 17, Critical care update 2021, Editors- Subhash Todi, Dhruva Chaudhry, Deepak Govil, Subhal Bhalchandra Dixit, Jaypee Brothers Medical Publishers (p) Ltd. New Delhi, Page 85-87, July 2021

## 289. Dr Dedeepiya Devaprasad

Internal Medicine, Apollo Hospitals, Teynampet

### Chapters Contributed to Text Books

Dr Dedeepiya Devaprasad, Cardiovascular coupling - Relevance in critical care, Chapter 17, Critical care update 2021, Editors- Subhash Todi, Dhruva Chaudhry, Deepak Govil, Subhal Bhalchandra Dixit, Jaypee Brothers Medical Publishers (p) Ltd. New Delhi, Page 85-87, July 2021

Dr Dedeepiya Devaprasad, Impact of covid-19 on non-covid intensive care unit service utilization, case mix and outcomes: a registry-based analysis from Indian registry of intensive care (iris) group, Wellcome Open Research Volume 6: Issue 159: Page 1-19, 10th November 2021

## 290. Dr Raja Thirumalairaj

Medical Oncology, Apollo Hospitals, Teynampet

### Publications

Raja Thirumalairaj, Purvish M Parikh, Amit Agarwal, Randeep Singh, Arvind Krishnamurthy, Sharad S Desai, Amita Maheshwari, Prashant Mehta, Abdul Ghafur, S P Somashekhar, Ahamed Iqbal, Dhairyasheel N Savant, Syed Md Akram Hussain, Amit Bhatt, Tashi Wangdi, Jyoti Bajpai, Anantbhushan A Ranade, K Govind Babu, Ajay Bapna, Ghanshyam Biswas, Hemant Malhotra, M Vamshi Krishna, Rajendra Prasad Baral, Rajesh Vashishtha, Ahmad Javid Safi, Sharmila Agarwal, J P Agarwal, Krishna Kumar Rathnam, P. N. Mohapatra, Rajeev Vijay Kumar, Senthil Rajappa, Sewanti Atul Limaye, Amish Vora, Vijay AP Reddy, Bhavesh B Parekh, G K Rath, South Asian Declaration—Consensus Guidelines for COVID-19 Vaccination in Cancer Patients, South Asian J Cancer, Volume 10: Issue 1: Page 3-8, January 202

## Vanagaram

## 291. Dr Anita Ramesh

Medical Oncology, Apollo Hospitals, Vanagaram

### Publications

Vijayashree Priyadharsini Jayaseelan, Anita Ramesh, Paramasivam Arumugam, Breast cancer and DDT: putative interactions, associated gene alterations, and molecular pathways, Environ Sci Pollut Res Int, Volume 28: Issue 21: Page 27162-27173, June 2021

## 292. Dr Joy M Thomas

Interventional Cardiology and Electrophysiology, Apollo Hospitals, Vanagaram

### Book Published

Editors- Joy M Thomas, Cardiac Electrophysiology: Basics for the Beginner, 1st edition, Evangel, 2021

### Publications

Joy M Thomas, Jamshed J Dalal, Prafulla Kerkar, Santanu Guha, Arup Dasbiswas, J P S Sawhney, Sivakadaksham Natarajan, Srinivasa Rao Maddury, A Sreenivas Kumar, Nishith Chandra, Gulla Suryaprakash, N I Juvale, Sunil Sathe, Aziz Khan, Sandeep Bansal, Viveka Kumar, Rajshekhar Reddi, Therapeutic adherence in hypertension: Current evidence and expert opinion from India, Indian Heart Journal, Volume 73, Issue 6, Page 667-673, 1st November 2021

### Lectures

Talk, Sinus Node Dysfunction, Basics of ECG, Annual Meeting, Indian Society of Electrocardiology, ISECON, Virtual, 19th February 2021

Talk, When to pace in congenital complete heart

block, Annual Meeting, Pediatric Cardiology Society of India, PCSI, Virtual, 17th October 2021

Talk, Inappropriate sinus tachycardia, Clinical significance and Management, Annual Meeting, Electrophysiology Society, TNEPIC, Tamil Nadu, Virtual, 27th November 2021

Talk, when do I prefer ILR/ELR, Annual Meeting, Electrophysiological Society, TNEPIC, Tamil Nadu, Virtual, 28th November 2021

Talk, Arrhythmia substrates in congenital heart disease, Annual Digital Meeting, Indian Heart Rhythm Society, IHRS Digital, Virtual, 19th December 2021

#### Editorial Board Membership

Co-editor, Indian Society of Electrocardiology, since 2020

### **293. Dr Mitra Ghosh**

Pathology, Apollo Hospitals, Vanagaram

#### Publications

Rajeshwari B, Salapathi Shanmugam, Anila Mathan, Dhananjayan R, Isabella Princess B, Selvan K, Mitra Ghosh, The role of laboratory parameters in assessment of disease severity and outcome in covid-19 patients - A retrospective study in a tertiary care centre in Southern India, Annals of Pathology and Laboratory Medicine, Volume 8: Issue 7: Page A164- A173, July 2021

### **294. Dr Nikhil P J Theckumparampil**

Cardio Thoracic Surgery, Apollo Hospitals, Vanagaram

#### Publications

Kriti Lnu, Uba C Udeh, David B Loran, Chinmay P Patel, Michael G Link, nikhil P theckumparampil, Abstract 12991: Staged Hybrid Convergent Procedure for Persistent Atrial Fibrillation: Single

Center Outcomes From a Community Hospital, Circulation, Volume 144: Issue Suppl\_1, 8th November 2021

### **295. Dr R Dhananjayan**

Biochemistry, Apollo Hospitals, Vanagaram

#### Publications

Dr R Dhananjayan, Serum ferritin levels in coronavirus disease-2019 (Covid-19) patients, European Journal of Biomedical and Pharmaceutical sciences, Volume 8: Issue 1: Page 238-241, 2021

### **296. Dr R Ebenezer**

Critical Care, Apollo Hospitals, Vanagaram

#### Chapters contributed to text books

Dr R Ebenezer, Patient self-inflicted lung injury, Chapter 35, Critical care update, Editors- Subhash Todi, Dhruva Chaudhry, Deepak Govil, Subhal Bhalchandra Dixit, Jaypee Brothers Medical Publishers Ltd. New Delhi, Page 35-38, July 2021

R Ebenezer, Nagarajan Ramakrishnan, Impact of covid-19 on non-covid intensive care unit service utilization, case mix and outcomes: a registry-based analysis from indian registry of intensive care (iris) group, Wellcome Open Research Volume 6: Issue 159: Page 1-19, 10th November 2021

### **297. Dr Rajeshwari B**

Histopathology, Apollo Hospitals, Vanagaram

#### Publications

B.Rajeshwari, S Salapathi, Sadiya N, Mitra Ghosh, Low Grade Appendiceal Mucinous Neoplasms- A short case series with review of literature, Annals of Pathology and Laboratory Medicine, Volume 8: Issue 3, Page C 43-C49, 31st March 2021

Rajeshwari B, Salapathi Shanmugam, Anila Mathan,

Dhananjayan R, Isabella Princess B, Selvan K and Mitra Ghosh, The role of laboratory parameters in assessment of disease severity and outcome in covid-19 patients – a retrospective study in a tertiary care centre in southern india, Annals of Pathology and Laboratory Medicine, Volume 8: Issue 7: Page A164-A173, 15th March 2021

## **298. Dr Salapathi Shanmugan**

Histopathology, Apollo Hospitals, Vanagaram

### **Publications**

S Salapathi, B.Rajeshwari, Sadiya N, Mitra Ghosh, low grade appendiceal mucinous neoplasms- A short case series with review of literature, Annals of Pathology and Laboratory Medicine, Volume 8: Issue 3, Page C 43-C49, 31st March 2021

Salapathi Shanmugam, Rajeshwari B, Anila Mathan, Dhananjayan R, Isabella Princess B, Selvan K and Mitra Ghosh, The role of laboratory parameters in assessment of disease severity and outcome in covid-19 patients – a retrospective study in a tertiary care centre in southern india, Annals of Pathology and Laboratory Medicine, Volume 8: Issue 7: Page A164-A173, 15th March 2021

## **299. Dr T Srikala Prasad**

Urogynecology, Apollo hospitals, Vanagaram

### **Chapters contributed to text books**

Dr T Srikala Prasad, Tips and tricks in safely opening the anterior and posterior pouches, Chapter 7, FOGSI FOCUS- Vaginal Surgeries, Editors- Dr S Shantha Kumari, Dr Kawita Bapat, Dr Krishna Kumari, Dr Anil Sakhare, federation of obstetrics and Gynecology society of India, Pages 41-48, 2021

### **Lectures**

Organizer, Urogynecology Committee of AOFOG, International Urogynecology webinar, 13th June 2021

## **Vizag**

### **300. Dr Karthik Chandra Vallam**

Surgical Oncology and Robotic Surgery, Apollo Hospitals, Vizag

### **Chapters contributed to text books**

Dr Karthik Chandra Vallam, Robotic Radical Hysterectomy, Chapter 12, Robotic Gynecologic Surgery, Editor- Dr Ravikant, Dr Anupama Bahadur, Dr Rajalakshmi Mundra Thieme publications, 2021

### **Publications**

Dr Karthik Chandra Valam, Timing of surgery following SARS-CoV-2 infection: an international prospective cohort study, CovidSurg Collaborative, Association of Anaesthetists, Volume 76: Page 748-758, 9th March 2021

Dr Karthik Chandra Vallam, SARS-CoV-2 vaccination modelling for safe surgery to save lives: data from an international perspective cohort study, Covid Surg Collaborative, Global Surg Collaborative, Volume 108: Issue 9: Page 1056-1063, 27th September 2021

Dr Karthik Vallam, Effects of pre-operative isolation on postoperative pulmonary complications after elective surgery: an international prospective cohort study, Covid Surg Collaborative, GlobalSurg Collaborative, Anesthesia, Volume 76: Issue 11: Page 1454-1464, 9th August 2021

Dr Karthik Chandra Vallam, SARS-CoV-2 infection and venous thromboembolism after surgery: an international prospective cohort study, Covid Surg Collaborative, GlobalSurg Collaborative, Anesthesia, Volume 77: Page 3-6, 24th August 2021

## Lectures

Talk, SLNB in Head and neck cancer using fluorescence imaging, National conference, Indian Association of Surgical Oncologists, Virtual, 24th October 2021

Talk, Sentinel lymph node mapping in head and neck cancer, FHNO Annual Conference, Virtual, 11th December 2021



Indraprastha Apollo Hospitals, Delhi was the first hospital in India to be accredited in 2005. Apollo Hospitals in Chennai, Hyderabad, Bengaluru, Mumbai, Kolkata, Ahmedabad, and Apollo Proton Cancer Centre, Chennai have been accredited by Joint Commission International, USA. The accreditation underlines our commitment to provide our patients with the highest standards of clinical care, safe environment, medication safety, respect for rights and privacy, international infection control standards and access to a dedicated, well-trained staff.

Joint Commission International (JCI), is widely considered as the gold standard in healthcare accreditation. Apollo Hospitals, Hyderabad was the first hospital in the world to receive the disease-specific certification for stroke management.

# PROJECT KAVACH AN INTEGRATED COMPREHENSIVE PLAN TO COMBAT COVID-19

INFORMATION

EDUCATION

SCALING

UPDATING PROTOCOLS

TELEMEDICINE

DATA COLLECTION FOR ACTION AND FUTURE RESEARCH



O1

## INFORMATION & AWARENESS

- Credible and expert information
- Compliant to Government guidelines
- Multi-channel
- Multi-stakeholder
- Multi-lingual

## ROUND THE CLOCK HELPLINE

- 1860-500-1066
- Engaging with stakeholders

## Apollo 24/7

- Online Doctor consultation
- Online booking of medicines
- Online booking for diagnostics
- Doorstep delivery of medicine
- Doorstep sample collection
- Online reports

## COVID-19 SCAN

- COVID risk assessment tool available to download from Google play store, Apple store

## 4750 PHARMACIES

- Across 26 States
- Home delivery

O2 TESTING

- Certified centers for swab testing
- Report available online
- Home testing in select cities

## FEVER CLINIC

- Specialized clinics
- Infectious disease experts
- Screening of patient with Flu like symptoms
- Multi-location

## STAY I

- Social impact initiative for isolation care
- Medically sanitized individual rooms across the country
- All clinical protocols driven by Apollo Ecosystem
- 24/7 Clinical monitoring
- Round the clock e-Consult
- Round the delivery of Medicine, Sample collection
- Door step delivery of Food & Beverage in contactless tamperproof packing

O3

## TREATMENT

- Specialized & dedicated teams in treating Infectious disease
- International Infection control, protocols
- Negative pressure ICU beds
- Isolated quarantine treatment facilities which are away from the main unit
- High quality PPE for hospital personal
- Appropriate stocking of required consumables and disposables
- E-ICU service to monitor patients in remote acute care centers using Telemedicine
- Advanced Treatment intensive care

## VACCINATION

- Vaccination for COVID-19 is available at 200 locations of Apollo Hospitals across the country

## POST-COVID RECOVERY CLINICS

- Recover Clinics have been launched to address the issues faced by the patients who have recovered but are suffering from post-COVID-19 complications

5.5 Million COVID-19 Vaccinations Completed

2,54,075 COVID-19 Patients Treated