



FORTE:

Swedish Research Council for
Health, Working Life and Welfare

Report



ICMR-FORTE JOINT PLANNING WORKSHOP ON

AGEING AND HEALTH



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Workshop Report

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Message



Dr Soumya Swaminathan
Secretary, Department of Health Research
Director General, Indian Council of Medical Research
Government of India

Under the agreement on cooperation in the field of healthcare and public health between India and Sweden signed on 24th February 2009, the Swedish Research Council for Health Working Life and Welfare (FORTE) and ICMR stated the intention to partner in Ageing Research and Elderly Care. A Memorandum of Intent (MOI) between ICMR and FORTE for cooperation in the field of ageing research and health was signed during the visit of the Honorable President of India to Sweden in June 2015. It is expected that this MOI will result in some joint proposals that will benefit elderly care and improve the well being of older persons.

The joint planning workshop partnered by ICMR and FORTE has brought out some salient recommendations that can be taken forward for bilateral cooperation. While the presentations from the Swedish group highlighted the achievements of Sweden in strengthening care of the elderly, it has also brought out some knowledge gaps in health care systems available for the elderly in India. Some of the areas where Sweden has gained experience could be practiced in India after tailoring them for Indian needs. The Swedish delegates on the other hand have taken home the achievements of some of the established elderly care programs in India.

I am confident that India and Sweden would benefit immensely by undertaking collaborative research projects in home based care and assistive technology for the disabled elderly which is the need of the hour.

Message



Ms Ewa Ställdal

Director General, The Swedish Research Council for Health,
Working life and Welfare
The Government of Sweden

Many of the challenges facing societies across the globe today are shared due to the pervasive impact of globalization. Transformations of working life owing to advances in new technologies and digitalization, the quality and organization of welfare systems, migration flows, ethnic relations and integration issues, and challenges to the development of equal living conditions are some of the most salient issues of today on a global scale. However, in many societies the demographic development is one of the most pressing issues at hand. The increasing proportion of elderly people in the population puts welfare systems, health and care systems as well as families under pressure. The fact that many people are living longer with chronic diseases puts additional strain on these social systems. This affects both welfare policy and how welfare systems are designed.

The focus of research in this area should therefore be on active and healthy ageing. The development of welfare technology and sustainable urban planning are other important perspectives for ageing and health. In short, research is needed on how to redesign the welfare system and create improved societal conditions to meet the challenges associated with the demographic development. International research collaboration is essential to meet these challenges in our globalised world.

In this context I am delighted with the collaboration between Forte and ICMR. ICMR and Forte have agreed to collaborate in research by signing a Memorandum of Intent in June 2015 in the presence of the President of India and the Prime Minister of Sweden.

The joint workshop has produced some very fruitful and important topics for further cooperation. In particular, the development of cultural and gender appropriate innovative and assistive technology for the elderly and interventions to prevent or reduce the severity of functional impairment are important areas of interest for our continued bilateral cooperation in the coming years.

I am certain that both Sweden and India will benefit greatly from the initiation of joint research projects, paving the way for improved conditions for healthy ageing and care.

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EXECUTIVE SUMMARY

The Memorandum of Understanding on Cooperation in the field of Health Care and Public Health between the Government of the Republic of India and the Government of the Kingdom of Sweden signed in 2009 covers 12 identified areas of mutual interest. The Ministry of Health and Family Welfare of the Government of India and the Ministry of Health and Social Affairs of the Government of the Kingdom of Sweden are the designated agencies for the implementation of this MOU. Under the overarching agreement between the Ministries, fresh dialogues for cooperative research in Ageing and Health had begun in early 2014. To address one issue of elderly care, Indian Council of Medical Research and Forte – Swedish Research Council for Health, Working Life and Welfare, partnered together to host a workshop entitled Ageing and Health. The purpose of this workshop was to explore the relationship between social, economic and environmental impact on healthy ageing, forms and systems of care of the elderly in both countries and use of technology for safer ageing. This activity is a prelude to the signing of a draft Memorandum of Intent between the two agencies on Ageing and Health. The discussion at the workshop evolved to include planning and implementation of the steps to move forward for a joint call for proposals between India and Sweden in Elderly health Care.

Through a series of presentations followed by discussion on the demographic pattern of ageing, models of care of elderly patients, laws and regulations targeted on aged population and use of technology for assisting the elderly, the participants from Sweden and India identified broad areas of collaboration to improve the overall health and well being of the older population.

The key action plans for moving forward in this joint activity were identified as follows :

ICMR and FORTE should support for collaborative research studies on

1. Designing geriatric training courses and capacity building for health workers in the existing health system for in home-based care of disabled older people
2. Developing innovative assistive technology that is affordable and also appropriate (culture, gender, age specific) for the elderly.
3. Interventions to prevent or reduce the severity of functional impairment, especially impairments secondary to cognitive decline.
4. Planning longitudinal studies on prevalence and incidence of depression and cognitive disorders in older people with diabetes and or hypertension

Since ageing research in Sweden has provided important leads on various aspects of elderly health care, India could learn from their experiences and take the best practices forward.

1. INTRODUCTION

1.1 BACKGROUND AND CONTEXT

Both India and Sweden are facing the challenge of demographic change in which the elderly make an increasing share of the population. While one fifth of the Sweden population covered persons above the age of 65 years in 2014, India is facing a similar challenge with about 8 percent of the population over 60 years of age and this number is expected to reach the 20 percent mark in 2050. With such a high share of elderly, the Swedish government has taken major steps to address the growing demand for welfare services, healthcare services, social care, and the care of the elderly. Sweden has successfully evolved models for active ageing by encouraging health care innovations, appropriate medical and information technology and timely medical aid. India has on the other hand made little effort to develop such models of health care for the elderly on home based care interventions health insurance etc. The National Program of Health-Care for the Elderly in India that was launched in 2010-11 is an effort by the Ministry of Health and Family Welfare to gear up the health care delivery system for provision of separate, specialized and comprehensive health care to the senior citizens at various level of State health care delivery system including outreach services.

The Memorandum of Understanding between the Government of the Republic of India and the Government of the Kingdom of Sweden on Cooperation in the field of Healthcare and Public Health signed in February 2009 had completed five years in 2014. Apart from the twelve priority areas in which the two countries had agreed to strengthen cooperation, elderly health care was also identified as an area where concrete activities and programmes of cooperation could be implemented between research institutions. Forte, the Swedish Research Council for Health Working life and Welfare, a government agency under the Swedish Ministry of Health and Social Affairs, in early 2014 expressed interest to work with ICMR on elderly health care through mutually beneficial interaction under the broad MOU between the two governments. In particular, a Memorandum of Intent (MOI) was drafted between the two agencies on bilateral cooperation in the field of ageing research to enhance the understanding of demographic change in relation to migration, physical and mental health and well-being of the elderly, forms and systems of care of the elderly and the use of ICT technology for elderly support in daily activities of living.

ICMR has identified geriatric research as a fully fledged programme to encourage researchers to generate and test scientifically proven methods that can be implemented for active and healthy ageing. India will stand to gain a lot by collaborating with Sweden in areas of ageing research. The lessons learnt from Sweden will provide guidance to the Indian researchers in tackling the issues of increasing elderly persons and their growing health needs. India and Sweden can look forward for a healthy exchange programme for preventive, promotive, curative and rehabilitative aspects of elderly health care.

1.2 GOALS AND OBJECTIVES

This workshop was jointly organized by the Indian Council of Medical Research and Forte for planning the collaborative activities and for supporting interdisciplinary research involving the cooperation of researchers and stakeholders in healthcare and social care from the two countries under the MOI on Ageing and Health. A two day workshop on AGEING AND HEALTH was held at ICMR Headquarters, New Delhi from November 24th -25th, 2014. The goal of the workshop was to further a discussion begun at an earlier meeting in January 2014 with the Swedish delegates on collaborative research in Ageing and Health between the two countries.

The overall objective of the workshop was

- To identify common areas of research and possibilities of mutual learning where health professionals and researchers from both sides could jointly work together
- To share useful experiences, good practices and lessons learnt between the researchers from the two countries
- To identify themes and models for further exploration and knowledge exchange.

The purpose of the workshop was to bring together a variety of geriatric researchers from the two sides to learn about and identify opportunities for supporting and expanding active research in elderly health care.

The long term expected result of the workshop was a joint Call for Proposals for Swedish and Indian Researchers with funding opportunities from FORTE and ICMR for collaborative activities in ageing research.

1.3 METHODOLOGY

The workshop composed of four sessions that was guided by a participatory methodology to facilitate interactions and exchange of experiences between the participants. While one was presenting, other participants would identify interesting issues or 'highlights' from the presentations, related to the country's programme. Cross-cutting issues and common concerns were identified for further study and knowledge exchange, as well as to match the needs and experiences to offer between the two countries. Learning from the experience of others was emphasized in each session. This would require active study and identification of useful principles and practices that one can replicate. Two broad approaches of learning from each other's experience could be identified. One that the ideas and insights acquired in the workshop will require further research for adaptation to suit the requirements of the home situation. The other way is through experience or 'learning by doing,' being the main way to acquire 'tacit' knowledge.

1.4 PARTICIPANT PROFILE:

The workshop included presentations from experts in geriatric mental health, clinical medicine, social gerontology, e-health, technology and communications, government officials, and nongovernmental organizations.

2. WORKSHOP PROCEEDINGS

2.1 INAUGURAL SESSION

In the inaugural session **Dr. V.M.Katoch**, Director General, ICMR greeted the delegates of both the countries and expressed satisfaction in the years of collaboration in terms of strengthening the health systems. Ageing is an important area of collaboration as Sweden is ahead of India in terms of



research in ageing and this collaboration gives an opportunity for learning from their best practices. The society norms and family structure in India are changing and the elderly are suffering due to the impact of this changing scenario. Instead of building large health facilities for the older persons it is necessary to identify tools of management that reduce the burden of health care access by building affordable care and right kind of access of care needs. Strategies that address the health needs of the elderly that is not institution specific targets the masses need to be identified. The joint collaboration should focus on joint funding of research ideas and knowledge exchange between the two countries in affordable care and access to health care needs and affordable technology for the elderly.

Ms.Dharitri Panda, Joint secretary for Government of India, Ministry of Health and Family Welfare, Govt. of India appreciated the efforts of ICMR in bringing together the scientists from the two countries. The Government of India recognized the growing population of elderly and the associated physical illnesses and social impact on the society and has initiated programmes for the care of the elderly. The Ministry of Social Justice and Empowerment has formulated guidelines to State Governments and departments for taking action for welfare of older persons in the National Policy on Older Persons (1999). The Maintenance & Welfare of Parents & Senior citizens Act (2007) has been formulated by Ministry of Social Justice and Empowerment which makes it obligatory for children to take care of parents. The National Programme on Health Care for Elderly NPHCE (2010) provides for long-term accessible, affordable, qualitative, and dedicated care services to an Ageing population, to promote the concept of Active and Healthy Ageing and Convergence with National Rural Health Mission, AYUSH and other line departments like Ministry of Social Justice and Empowerment.



The expected outcomes are 2 National Centres of Ageing ,20 Regional Geriatric Centers, 40 Post-graduates in Geriatric Medicine, 10-bedded Geriatric ward in all District Hospitals & a dedicated OPD, Weekly and bi-weekly geriatric OPD at all CHCs & PHCs, Domiciliary services with help of sub-centers and Training of Human Resources in elderly care

Ms. Ewa Ställdal, Director General, Forte informed that Sweden is a decentralised system with universal coverage. The national objectives for the policy for the elderly are focused on individual care and treatment. Since 2011 there is a provision in the Social Services Act that regulates elderly care in Sweden, on core values of dignity for the elderly. The National Board of Health and welfare makes a national survey every year of the user's view of elderly care and treatment. This survey findings show that the majority of the elder persons in Sweden felt that their opinion is well

addressed by the Government. Around 90 percent among those with home help service and persons living in special housing, felt very secure with their service and accommodation. Over 95 percent felt they were treated well and most of them also felt confidence for the staff. 6% of Persons above 65 years or older live in special housing and 12% get home help service. The older persons are influenced – physically and psychologically – by living habits, environment, societal conditions and the effectiveness of healthcare. Forte supports and initiates public



health research on social determinants, disability, use and abuse of alcohol and other drugs and psychosocial factors on their impact on ageing. Forte finances on different aspects of working life. Many projects address work environments and their effect on health and ageing. The increasing share of people with long-term illnesses and disabilities amongst laborers also points to the importance of studying the interplay between working conditions, health, and social insurance. Forte funds research on work and health, care sciences, welfare and social insurance, work organization, labour market, Public health and social care and relations. Forms of funding include Project grants, Junior research grants, Programme grants, Post-doc grants, Forte-centres of excellence, Network grants, Conference grants, Publication grants, Travel grants, Forte fellowship Visiting researchers' grants, EU planning grants, COFAS (post-doc).

In his welcome address, **Dr. D.K. Shukla**, Head (NCD), ICMR on behalf of the DG, ICMR, extended his warm welcome to all the participants. He informed that the workshop coincides with the meeting of ministers of India and Sweden for redeeming the MOU on public health which has completed five years. The memorandum of intent for collaborative research in Ageing and health between FORTE and ICMR has already been drafted and will be reviewed in the inter-ministerial meeting. The recommendations from this workshop will guide the way forward for collaborative research projects on Elderly Health Care between the two countries.



Dr. Geetha Menon, the main convener of the workshop from ICMR gave a brief account on the objectives and goal of the workshop and underlined the areas that needed further research. She informed that based on the initial dialogues between ICMR scientists and the Forte delegates, a



Memorandum of Intent under the overarching MOU between the two countries on collaborative activities was being finalized. While describing the complex process of ageing that is driven by physiological, behavioural, social, and environmental changes, Dr .Menon highlighted the need for combining novel theory, experimental evolution, and data sets from long-term field studies, quantitative genetics and genomics to understand why and how ageing evolves.

Researchers from experimental sciences, humanities, medicine

and social sciences are undertaking experiments to understand age related changes in cognitive function, genetic, environmental and medical determinants of longevity, investigating the risk of dangerous drug interactions and polypharmacy, social mobility and caring structures for the aged and several factors on the health promotion of the aged. The challenge was to understand the interplay of these multiple factors and health over the whole lifespan. Dr. Menon further flagged a few research questions that could be built up as research studies through exchange of ideas between the scientists of the two countries. A few of these were:

- Studies to understand people's conception of 'Health' in old age
- Studies on prevalence and causes of physical and mental ill-health and disability among the older population
- Cost-effective interventions or protocols for treating the main causes of ill-health among older people
- Studies to identify the best lifestyle health promotion or medical intervention model that will improve the health of future cohorts of older people
- Studies to identify the major individual, familial and structural life course factors and policy contexts shaping health and functional capacity in old age
- Factors affecting access to primary health care and home based care services for older people
- Impact of technology on elderly care and support
- Studies to understand the role of older people in the family and community health and transmission of health knowledge

Ms Kruna Madunic, the main convener from Forte, gave a brief description of the Forte structure and their initiatives on ageing and health. Forte is one of four major Swedish government research funding agencies and is an agency under the Swedish Ministry of Health and Social Affairs. Forte's research is



coordinated in five major areas: Socio-scientific alcohol and drugs research, functional impairments, international migration and ethnic relations, children and young people and the elderly. The Swedish government has allocated 10 million euros per year for ageing research and Forte has primary responsibility for coordinating this. In the last decade about 45 million euros have been funded on the ageing and health research through project grants lasting from 3 to 5 years and through Centers of Excellence with a duration for 10 years. Three of the Centers of Excellence are focused on ageing research. Ageing Research Centre (ARC), Centre for Ageing and Supportive Environments (CASE) and Age Cap undertake research activities in ageing through two graduate schools at ARC and CASE. Forte supports European ageing research through Expert Horizon 2020, ERA-AGE2, FLARE postdoc-funding, Joint Programming Neurodegenerative Disease Research, (JPND), and through More Years Better Lives (MYBL) and NORDFORSK. New insights and interaction are essential in fulfilling Forte's responsibility for knowledge transfer and for collaboration and dialogue with users – facilitating their daily lives.

Dr. Ravinder Singh, co convener of this workshop explained the status of geriatrics research in India. The research focuses more on providing basic normative data on the status and needs of elderly, factors of good QOL in elderly and formulation, execution and evaluation of appropriate interventions to improve the lot of elderly. Funding ageing research is shared among the Ministries involved in ageing research are Health and Family Welfare, Social Justice and Empowerment, Human Resource Development (Research and Education), Statistics and Programme Implementation and Planning (Planning Commission). There are over 1000 published papers from India in peer reviewed Journals and over 50 research projects have been undertaken on health care of rural aged, social determinants of functional status, geriatric-psychiatric morbidity, Centenarians Study etc. In India geriatric training and research is undertaken in the following institutions:



All India Institute of Medical Sciences
Madras Govt. Medical College,
Banaras Hindu University,
Sri Venkateswara University,
King George Medical University,
National Institute of Health and Family Welfare and
Indian Institute of Population Sciences.

Research Methodology is also being taught in
Govt. Medical College, Chennai,
AIIMS, New Delhi,
Indira Gandhi National Open University,
National Institute of Health and Family Welfare,
National Institute of Social Defence,

SV University, Tirupati,
Heritage Hospital, Hyderabad,
Tata Instt. Of Social Sciences, Mumbai, and Longevity Centre, Pune

Geriatric research activities are more focused in Biological and Molecular aspects, Psychological and Social issues, Clinical studies, and in Social and Behavioral studies. Biological studies are undertaken in Guru Nanak Dev University, Banaras Hindu University, University of Gwalior, Kurukshetra University, Jawaharlal Nehru University, Central University of Hyderabad, Aligarh MU. In these institutes studies on Gene Ageing, DNA Repair, Nutrition and Ageing , Role of free radicals, neurotoxins, and gonadotropic hormones in Ageing. Several non-governmental agencies like Helpage India have demonstrated different models of elderly care. Several associations are working on geriatric related issues viz. Indian Academy of Geriatrics, Geriatric Society of India, Association of Gerontology and Indian Association of Geriatric Mental Health. There are a few Indian journals that publish articles on gerontology and geriatrics research viz. Indian Journals on Geriatrics and Gerontology, Indian Journal of Medical Research (IJMR), Journal of the Indian Academy of Geriatrics, Indian Journal of Gerontology, Indian Journal of Geriatric Mental Health and Research and Development Journal. ICMR has already conducted research on aspects related to Health Care of Rural Aged, the psychiatric morbidity profile and their determinants of Functional Status. Some other identified Areas of Research are

- Assessment of Nutritional Status among Rural and Urban Elderly,
- Studies on Difficulties in Activities of Daily Living and Assess Quality of Life among Elderly,
- Evaluation of Burden and Management of Chronic Diseases in Elderly ,
- Molecular Biology Studies,
- Drug Studies, Studies on Health Systems Research.

Dr. Ravinder highlighted the following areas where more research needs to be focused:

- Applied or Action Research totally lacking,
- Life-course studies needed,
- Positive ageing studies,
- Standard Sampling Procedures to be developed and adopted,
- Valid and reliable data collection tools to be developed
- Safe and effective models of interventional research,
- Role of family and caregiver and alternate strategies if they are not available,
- Priorities for long-term and short-term interventions,
- Role of NGOs, their networking, and strengthening,
- Media and political sensitization.

Dr. Alok Mathur, CMO in the Ministry of Health and Family Welfare who is also coordinating the National Mental Health Program (NMHP), informed the audience about specific programmes for the elderly. The National Mental Health programme of the Government of India that was launched in 1982 and restructured in 2003 is followed by District Mental Health Program in 1996

and Manpower development scheme in 2009 to address the huge burden of mental disorders and shortage of qualified professionals in the field of mental health. This programme has four objectives viz.



- To ensure the availability and accessibility of minimum mental healthcare for all
- To encourage the application of mental health knowledge in general health care and social development
- To promote community participation in the mental health service development
- To enhance human resource in mental health sub-specialties.

The Manpower Development scheme includes establishment of centers of Excellence and post graduate training departments with mental health care facilities in clinical psychology, psychiatric social work & psychiatric nursing. Financial Support to the tune of Rs. 35.77 cr is earmarked for each centre for capital work, equipments, faculty induction and retention during the plan period. Support to the Centers of Excellence for completion of the pending work of the 11th plan is also earmarked. For upgrading the departments, financial support of Rs. 1.067 to 1.256 cr per dept would be provided for establishing/improving department in specialties of mental health, equipments, tools and basic infrastructure & for engaging required faculty for starting/ enhancing the PG courses and Support for faculty would be provided to the 27 PG Departments in Mental Health Specialties already established during the 11th Five Year Plan. The spillover activities of X Plan include modernization of state mental hospitals and up-gradation of psychiatric wings of medical colleges/general hospitals.

Under the District Mental Health Programme in which at present 232 districts are covered, early detection & treatment programme, prevention & promotion services (Life Skills Education, Work place stress management, suicide prevention), training & research, IEC and monitoring and evaluation is included. A total outlay of Rs.2380.04 cr is earmarked for the 12th five year plan. The government is also supporting PPP Model Activities, Day Care Centres, Residential Continuing Care Centre, Long Term Residential Continuing Care Centre, Community Health Centres, Primary Health Centres, Mental Health Services and Mental Health Helpline. In the NMHP, tertiary level activities envisaged in the 12th Five Year Plan are Manpower Development Schemes, Up-gradation of two Central MH Institutes to provide Neurological and Neurosurgical Facilities on the pattern of NIMHANS at Central Institute of Psychiatry, Ranchi. & Lokopriya Gopinath Bordoloi Regional Institute of Mental Health, Tezpur. Mental Health Care Bill, 2012 provides for establishment of Mental Health Review Commission & Mental Health Review Boards (in 35 States/ uts). The program also supports the central and state mental health authority for regulation, development, direction & coordination of mental health services under the central & state governments respectively.

Dr. Giriraj informed Ministry of Social justice and empowerment is the nodal ministry for the “National Policy on Older Persons” that was announced by the Government of India in the year 1999 in pursuance of the UN General Assembly Resolution 47/5 to observe 1999 as International Year of Older Persons and in keeping with the assurances to older persons contained in the Constitution of India. The policy supports financial security, health & nutrition, shelter, education, training and research needs of the elderly, protects against abuse and exploitation and strengthens legal rights. It safeguards life and property, makes available opportunities for development of the Older Persons. He said that statistics show the growing numbers of persons above 60 years belong to the middle and upper income groups, who will be better off economically with the same degree of financial security, have higher professional and educational qualifications and lead an active life in their 60s.



Seeking attention on the principal areas of intervention of the policy Dr. Giriraj informed that social security has been focused as a top priority. Senior citizens are facing abuse within the household .Emphasises on protection of older persons. Protection from domestic violence will be considered. The National Policy recognises the NGO Sector as a very important Institutional mechanism to provide user friendly affordable services to implement the endeavours of the State in this direction. The grant-in-aid policy will provide incentives to encourage organisations to raise their own resources and not become dependent only on government funding for providing services on a sustainable basis. Older persons will be encouraged to organise themselves to provide services to fellow senior citizens. Values of caring and sharing need to be reinforced. Strengthening of research activities on ageing will be carried out. Every three years, a detailed review will be prepared by the Nodal Ministry on the implementation of the national Policy. An Autonomous National Council for Older Persons headed by the Minister of Social Justice and Empowerment will be set up to promote and co-ordinate the concerns of older persons. Introduction of Geriatrics as a specialization in Medical Colleges will be emphasised. Introduction of Courses on Geriatric Care in Nursing Training Institutions and Para-medical Institutions in their curriculum also required. Strengthening of orientation courses on geriatric care at in service training centres is required. Development of curriculum and course materials are also required in schools of social work and Universities, Exchange of training personnel, Envisages sensitization programmes on ageing for legislative, judicial and executive wings. Media-Recognizes the role of media in highlighting demographic trend and issues related to elderly emphasis on involvement of mass media as well as informal and traditional communication channels, Participation of media personnel in orientation programmes on ageing and Greater interaction between Media personnel and persons active in the field of ageing is crucial.

SESSION 1 DEMOGRAPHIC CHANGE AND MIGRATION, CHALLENGES AND POSSIBILITIES

Changes in population growth rate, size and age structure are intrinsically related to changes in migration, fertility and mortality. International migration may have weak influence on the overall population of a country but national migration has a strong influence on the social, mental and economic well being of the elderly. The speakers in this session highlight the findings from studies on these aspects addressing the challenges faced by the two countries.

Longitudinal Ageing Study in India (LASI)

Prof. P. Arokiasamy

Prof. P. Arokiasamy shared the details of the “Longitudinal Ageing Study in India”. The LASI study will be a joint collaboration between the International Institute for Population Sciences (IIPS), Mumbai, Nodal institution, Regional Geriatric Care Centres, National AIDS Research



Institute (NARI), Pune, Harvard School of Public Health, and University of Southern California. Financial Sponsors of LASI are Ministry of Health and Family Welfare(MOHFW), Government of India, Ministry of Social Justice and Empowerment, Government of India (MOSJE),National Institute of Ageing/National Institute of Health (NIH/NIA) and United Nations Fund for Population Activities (UNFPA).

The LASI study addresses the national and state level needs of data on the burden of disease, functional health, health care and social and economic wellbeing of older adults aged 45 and above that will also strengthen the National Programme on Health Care of Elderly (NPHCE). The LASI study will collect data in all the states on a population of 60000 individuals on health, social and economic determinants using an internationally comparable research design. In the health domain, prevalence of communicable diseases and non-communicable diseases (NCD) and their risk factors will be collected. Health care financing will assess the coverage of health care utilization by choice of health care sources and provider preferences, household health expenditure, treatment cost, types of health insurance, out of pocket health expenditure (OUP), catastrophic health expenditure (CHE) and the extent of medical impoverishment. Social determinants cover the family structure and care, living arrangement and networks: social and financial support, social activities and connectedness and life satisfaction. Economic determinants will assess the economic well-being or vulnerability, household income, expenditure, assets and debits, employment, retirement, pension economic security, vulnerability and expectations, food security, and poverty.

Aging today and tomorrow-Secular trends.

Prof. Ingmar Skoog

Professor Ingmar Skoog elaborated to the audience about the activities of AgeCap, the Centre of Excellence he is heading. As a Research Centre For Ageing And Health supported by Forte and Gothenburg University and with collaboration of five research groups from different disciplines at the University of Gothenburg: NEUROCHEM (Neurochemical Pathophysiology and Diagnostics), LEXLIV (labour market exit and living conditions in old age), FRESH (Frail Elderly support research group), ADA-GERO (adult development and aging) and EPINEP (neuropsychiatric Epidemiology), its main goal is to understand capability in older individuals through a multidisciplinary approach.



The most significant studies were the H70 and H85 longitudinal studies in Gothenburg that started in 1971. In these studies, data on Neuropsychiatric examination, Medical examination (somatic disorders), Functional ability (ADL, iadl, vision and hearing), physical, social and cultural activities, Psychometric testings, Personality (Eysenck, Five Factor, KASAM), Genus, Blood, serum, plasma, Genetic analyses , ECG, Lung function, Physical function, Dietary examination, DEXA examination, CT and MRI of brain, Lumbar puncture/ Neurochemistry are being collected.

According to the study, the elderly today are less vulnerable to different insults. The findings indicate that the cohort of 75 year olds in 2005 were more extrovert, aggressive (women) and curious, more competitive and need close relations as compared to those in 1976. As years pass by men and women are becoming more similar in personality.

Depression in 1970s has led to less social contacts than depression of 2000 as expansion of different media has increased the social reserve. Psychometric test results predicted dementia and mortality in 70-year-olds born in 1901-02 but not in those born in 1930. The lower prevalence of dementia is partly due to higher education in the later-born birth cohort and better cognitive reserve. New cohorts are less vulnerable to different insults, e.g. Stroke and the health paradox: New generations of elderly have more disorders, but are coping well with their disorders. Professor Skoog concluded by saying those time-trends show the influence of environmental factors compared to genetic factors. He emphasized the need for more epidemiological studies for estimating prevalence and identifying the risk factors, social gradient, changing phenotypes of disorders.

Healthcare of elderly in India: challenges of access and affordability

Dr. Subhojit Dey

Dr. Subhojit Dey informed that Indians are living longer, a trend expected to continue as India transitions from a rapid growth phase in its demographic transition to slow and then zero growth status, evident in the fattening of the population pyramid by 2050. The morbidity levels in the elderly are 2-3 times higher as compared to younger persons.



The elderly face a dual burden, of communicable and noncommunicable diseases. Health care access is affected by a number of factors viz. Pathological progression of disease, mobility, dependency, family nuclearisation, employment, economy (earning potential, informality), population-wide inequities (gender, caste, religion, state etc. Social determinants of access are gender (widowhood), Social/economic status (income, religion, and caste), Kinship systems and social support, Stigma & isolation (elder abuse/neglect) and Ecological factors (sanitation, crime and safety). The physical determinants of access are immobility. For healthy ageing a paradigm shift involves support of family/spousal support, strengthening the role of Civil society organizations/Public Private Partnerships, Government concessions/subsidization, and engagement of Self help groups/collectives.

The 60th NSSO data shows that the number of employed elderly workers has been growing linearly over the past three decades indicating the need for engagement in work to meet the health affordability constraints. However, it has not translated into growing savings or earning as per NSS data. This may be due to the fact that only 10% or 30 million of the 314 million Indians have regular jobs, the rest working in the informal or casual sector. Due to the lack of any formal social security net in the informal sector, the elderly are forced to work as self-employed or casual laborers. 4% of the elderly are not able to participate in the workforce specifically due to disabilities, a proportion that grows to 24.7% in the 70-79 age-group and 12.25% among those aged 80 and above. These dips in income turn a lot of elderly into dependents. Most elderly live with their spouse and other members of the family if they are not widowed. In addition, to loss of income and increased dependency, what reduce the affordability of healthcare for the elderly is the high and formidable costs of getting treated and buying medicines. Affordability of drugs for elderly is a critical area of future research. Without adequate arrangements of health insurance in India most elderly have to make out of pocket (OOP) payments which further drive them towards poverty.

Impacts of migration in elderly care

Dr. S Irudaya Rajan

Dr. S. Irudaya Rajan shared his findings on impacts of migration on elderly care in Kerala. Kerala has 13% of the population above 60 years. Kerala is the first state to have palliative care policy. 60 plus will overcome children in Kerala. The Kerala Migration



Survey, 2014 has shown that 9.1 per cent of the Total Population of Kerala is migrants of which 14.6% are in the age group 20-59 and 7.6% are return migrants above 60 years. 71.9% are male migrants and 73.5% are female migrants. 37 % of Kerala State income Rs.75000 crores is generated from migrant population. About 15.3% of the elderly have not migrated in the state. 69% of the migrant household has one elderly, 29.4% have two elderly and 1.4 % have three or more elderly. All such households have one adult member in the age group 20-59. Geriatrics depression is not found in 73.4 of these households and the health perception among 46.5 % of males in these households is excellent.

SESSION 2: MENTAL HEALTH AND WELLBEING OF THE ELDERLY

As age advances, many adults are at risk of developing mental disorders, neurological disorders or substance use problems along with other chronic health conditions. Mental health problems are under-identified by the older people themselves and also the health-care professionals and the stigma surrounding mental illness makes people reluctant to seek help. The speakers from the two countries describe the mental health care services provided to elderly persons and discuss the various determinants of health conditions in this population.

Well-Being of the Elderly in Community Indian Scenario

Dr. Srikala Bharath

Dr. Bharath explained the concept of well being as stated in the World Happiness Index. This includes mental illness, the objective benefits of happiness, and the importance of ethics, policy implications and subjective well-being. The well being and quality of life impacts the economic aspects (Work Status, Financial Independence and Welfare schemes), the Family (Living Arrangement, Decision Making and Social Activities, Health (Physical Morbidity, Disability, Substance Use, Mental Health, SWB, QOL, Exercise and Help Seeking. Studies and surveys have been done on ascertaining the well being of the elderly in select states by various agencies like UNFPA, ISEC, TISS, and ICMR. These reports have shown that



43% of households are headed by a male above 60 years and 17% (Female) of the household were headed by an elderly female. More than half of the elderly were involved in some kind of work. Less educated elderly and widowed women were financially dependent. They however contributed to the family by providing advice, resolving conflicts, doing household chores, running errand, child care, cooking and cleaning. 10 % faced verbal abuse and 4% faced physical abuse. 73% of the Older People did not attend any social, political or community based activities. 66% did not participate due to health conditions and more than10% due to financial issues. 54% of Male and 49% of Female went out to meet family once or twice a year. Life Style diseases common among the elderly are

Dementia, Arthritis, HT, T2DM, Dyslipidemia, Chronic Renal Failure, Depression, Metabolic syndrome, COPD, Cirrhosis. Over 55% rated their health to be not very good. Incidence of NCD was observed in 77% of women and 61% of men. Nutrition in women was poorer than men. The mental health and well being study in 2013 indicates poor SES, illiteracy, fully financial dependence is associated to poor mental Health and well being. Being Married, >8 years of education, having worked and now working were associated with better Mental Health. Studies in Bangalore have shown that rural elderly had better physical and psychological QOL while the urban elderly had better social and environmental QOL. Various policies for elderly have called for action and the welling being of the older persons through financial security, concessions, relief, services towards health and welfare. She concluded that to provide basic health care towards improving elderly QOL it is important to collaborate with health care services, social welfare schemes and rural health development-oriented schemes.

Mental Health Care of Older People in India

Dr. S C Tiwari

Dr. S.C. Tiwari informed that Changing socio-economic matrix and emergence of nuclear families has resulted in inadequate care of the physical and mental health problems in the elderly. In Ancient and Medieval India mental disorders were considered the act of witchcraft, a result of one's sins and wrongs and divine curse. Accordingly, treatment approaches included Faith healing, Worship, Upvasa/ holy bath/ herbal preparations, Yoga and yognidra but of these there was no specific treatment approaches for older. There is no specific mental health care policy for older adults despite evidence of enormous mental health morbidity in older persons. Initiatives to address the mental health of elderly started in 1980 with Memory clinics/ dementia clinics. In 1985-93 ICMR started Advanced Research Centre for Rural Aged, Madurai, in 1998, the IPS Geriatric psychiatry specialty section, in 1999 Geriatric psychiatry opds and Geriatric psychiatry ipds. In 2004, Indian Association for Geriatric Mental health (IAGMH) was initiated and in 2005 IAGMH Research awards/ orations, Department of Geriatric Mental Health and JGMH Journal were started. Modern Mental Health Care of Older People includes non formal care that is Home based, Religious places, Temples/ shrines/ mosques. The Community based care involves special care hospitals (palliative care), Specialized institutions like old age home, ngos etc. In India there is a huge service gap for mental health care of older people. Geriatric mental health care services available only in Lucknow, Varanasi in UP and in Mumbai. There are no community outreach programs and no awareness about geriatric mental illnesses.

Emphasizing the need to cater to Mental Health Problems of Older People in India, Dr. Tiwari told the audience that establishing mental health care centers, developing skilled manpower, arranging safe place and environment and providing quality care are some of activities that needs to be in



place. Further develop district level health care, residential, respite and day care facilities, training services and paid care giver and legal services, establish residential homes with mental health care facilities and effective interaction, communication and management facility in accordance with the Indian culture is needed. He concluded his talk by suggesting that National Policy for Health Care in Elderly (2010) needs to incorporate old age mental health in NPHCE in terms of capacity building of health care teams, IEC activities, provide affordable/ free treatment (to manage both medical and mental morbidity), effective long term care through community based programs, develop geriatric friendly set-ups and provide economic security to the elderly.

The epidemiology of mental disorders in the elderly: Results from the population studies in Gothenburg, Sweden

Professor Ingmar Skoog

Professor Ingmar Skoog presented the findings from the Gothenburg studies on neuropsychiatric epidemiology which include H70-study and H85-study and the 95+ Study. This study is a



Prospective Population Study on a cohort of women from 1968-2010 who were interviewed for Neuropsychiatric disease, medical examination (somatic disorders), alcohol, smoking, Functional ability (ADL, iADL), Anthropometric measurements (length, weight etc), social network, physical, social and cultural activities, life events, Psychometric testing, Personality (Eysenck, Five Factor, KASAM), Blood, serum, plasma, genetic analyses, ECG, blood pressure, Lung function, Physical function (walking speed, hand grip, balance, chair stand etc), Audiology, Ophthalmology, Dietary examination, DEXA (bone, muscle, fat), CT and MRI of brain. Lumbar puncture/ Neurochemistry include Dementia (DSM-III-R, DSM-IV, DSM-5), Psychiatric disorders, Depression, GAD (generalized anxiety disorder), social phobia, specific phobia, OCD and psychotic symptoms.

The results revealed that the prevalence of dementia in H70-study is 5% in 75 years and 11% in 79 years, 30% in 85 year old and 51% in 95 year old. 12% have depressive disorders in 70-74 year old women and a total of 13% of 85 year old and 9% of 95-year-olds had mental disorders. He further added that the importance of longitudinal studies is to follow individuals with mental disorders into late life. He emphasized the need for preventive strategies as dementia can be prevented. Dr Skoog stated that depression had major consequences in the form of social deprivation, loneliness, poor quality of life, increased use of health services, increased use of homecare services, aggravation, somatization, cardiovascular disorders, and decline in cognition, ADL-impairment, chronicity, suicide and increased non-suicidal mortality. Depression also increases risk for myocardial infarction (re-infarction), stroke, cancer and epilepsy. Vascular brain disorders with psychiatric consequences are associated with stroke, silent cerebral infarcts, ischemic white matter lesions and vessel wall pathology. The consequences of subcortical ischemic vascular disease (white matter lesions) are dementia, mild cognitive symptoms, depression, functional disability, gait disturbance and falls, hip fracture, urinary incontinence and brain atrophy. He concluded his talk by stating that the mental disorders are very common among the elderly which leads to several serious consequences. Also very little research has been

conducted on other mental disorders than dementia and it remains often undetected or untreated. In the end Professor Skoog stressed the importance of longitudinal studies. Comparative studies over countries and cultures are important.

District Mental Health Program of India (DMHP)

Dr K.S. Shaji

Dr. K. Shaji shared his experience on District Mental Health Program of India. This programme was initiated keeping in view the fact that the 640 districts in India are Independent Administrative Units with a variable population, geography, Health Care Infrastructure and



Health Care Indicators. It has a decentralized Community Based Approach. It started with four districts in 1996-97, 123 districts in the xith Five year Plan and is now operational in 232 districts. The programme uses health care infrastructure under the District Medical Officer, Inter-sectoral collaboration, Community Participation, Mental Health Team & Nodal Officer. Basic (Minimum) Model Mental Health for the team is Clinician/Psychiatrist, Nurse, Psychologist, Psychiatric Social

Worker, Data Entry Operator, Motor Vehicle (driver /maintenance), and Medicines. Decentralized Mental Health care for elderly people has 15-20 outreach clinics in each district, is better utilized by older people. In Kerala 12- 18 % of the users of DMHP are older people. Clinic-based Services through DMHP are Monthly Clinics with Specialist in puts in many parts of the District, Specialist Services outside tertiary care settings, Current users are people with mood disorder/psychosis /dementia, and the Number of users are Increasing and Services and Medicines are free. Clinic-based Services through primary care and users are Large. Treatment Gap for Depression is Huge and Primary Care Doctors Need Training (to diagnose and manage conditions like Depression/Dementia/ Delirium). Health Workers & Outreach Services Health workers can be trained to identify cases and Support Home-based Care, Locally resident health workers with catchment area responsibility can identify dementia cases in community following brief training, It is feasible to deliver simple caregiver interventions by training community health workers. Mental Health Care for Older People has

1. Specialty Clinics started as “Dementia Clinic” at a Primary Health Centre (PHC) in 2001, following studies by 10/66 dementia Research Group at Thrissur, Kerala
2. Monthly Clinic is Funded by Local Administration: Supported by Psychiatrists from Medical College. Now the “Geriatric Mental Health Clinic” serves older people with Depression, Dementia & Psychotic disorders. Interventions are to focus on the caregiver, provide information & education, provide support in managing distressing symptoms, provide Drugs and follow up. Mental Health Services for Older People includes Clinics and the community outreach services supported and sustained by DMHP, Primary Care Clinics equipped for geriatric care (depression/dementia/delirium) and Collaboration with Palliative Care Initiatives and Special

services for older people. DMHP has the potential for scale up in Non-specialist Health Care Providers, by providing Training to identify cases, to deliver simple interventions, need sustained support to refresh knowledge and to upgrade skills. mhGAP intervention Guide is a dementia module prepared by WHO that can be used for dementia care and used as framework. The proposal is to adapt the DMHP to meet the mental health needs of Kerala's aging population by supporting caregivers and home-based carers, working with NGOs like "ARDSI", working with initiatives like "Palliative Care". The idea is to help DMHP to shift focus: From "distribution of Drugs" to "identifying and supporting caregivers, Enhancing community care resources by "connecting people", Content and mode of providing "basic minimum training needed" for community health workers volunteers/informal carers to deliver dementia care, The need to have "Geriatric Care Workers" who will be trained in a manner useful to all and also Starting has started a "Centers for Geriatric Care, Training & Research" in India

Health Determinants of Elderly

Dr. A.B.Dey

Dr. Dey said that ageing is a process that converts fit adults into frailer adults with a progressively increased risk of illness, injury, and death. The determinants of health are social and economic environment, physical environment and person's individual characteristics & behaviors. The association of these factors with the health condition of an elderly is as follows

- Higher income and social status are linked to better health, wider the gap in income greater the differences in health.
- Lower education levels are linked with poor health, more stress and lower self-confidence.
- Safe water and clean air, healthy workplaces, safe houses, communities and roads all contribute to good health.
- Elderly persons who are employed are found to be healthier, particularly those who have more control over their working conditions.
- Greater support from families, friends and communities is linked to better health.
- Customs and traditions, and the beliefs of the family and community all affect health. Genetics plays a determining role in lifespan, health and the likelihood of developing certain illnesses.
- Personal behavior and coping skills like balanced eating, keeping active, smoking, drinking, and how we deal with life's stresses and challenges all affect health.
- Access and use of services that prevent and treat disease influences health. There are gender differences in health condition and types of diseases at different ages. Major determinants for deteriorating health conditions and functionality in older people are falls and injury, non-communicable diseases, mental health disorders and elder abuse and maltreatment.



Dr. Dey shared with the audience the findings of an ICMR Task Force Study done on 1016 (M523/F493) subjects from different communities and mostly living in extended families. Majority (64%) were either illiterate or educated up to primary level. Over 80% were retired and spent their time in taking care of grand children and doing household work. Social interaction was the most frequent way of relaxation. Most (54%) were completely dependent economically. Only 32% had pension or other retirement funds. 70% had no access to health insurance or subsidized health care. One third was smokers and one tenth consumed alcohol. 85% were physically independent and 37% subjects were completely independent in instrumental activities of daily living. Over 50 % of the elders had hypertension while many had joint pains and dyspeptic symptoms. 38% expressed their inability to approach the health care system alone for health needs. Visual impairment was observed in 66.6%. Disabilities increased with age and use of assistive devices was very limited due to economic reasons. Cognitive impairment on HMSE was common. Quality of life declined in all domains of assessment with increasing age although it was significant in the age group above 80 years. Females especially widows performed poorly as compared to other groups in ADL and HMSE and had a poorer QOL, self rated health and projected future self-rated happiness. Dr Dey emphasized that education and socioeconomic status significantly affected all the parameters and determinants viz. the functional status of the older people. IADL, cognitive status, quality of life; current, past and perceived future self rated health; self rated mental health, social support, current past and perceived future self-rated happiness; life satisfaction and social and cultural activities.

SESSION 3 WELFARE MODELS INCLUDING FORMS AND SYSTEMS FOR HEALTH CARE AND SOCIAL SERVICES OF THE ELDERLY

The changing patterns of family structure and demand for health care continues to grow worldwide as the number of elderly people with multiple chronic conditions increase. These challenges cannot be solved by contemporary health care systems. Specialization and technological improvements have further led to fragmentation of organizations that provide primary and secondary care, health care, and social care for elderly people with complex care needs. The speakers in this session share their experience and innovative approaches of an integrated health care model that provides evidence based framework.

Calcutta Metropolitan Institute of Gerontology (CMIG): Regional Resource and Training Centre on Ageing

Dr. Indrani Chakravarty



Describing the origin of CMIG, Dr Chakravarty told the group that her organization is involved in community development through intensive research & action oriented programs. The service activities are the following:

- Community Economic Development,

- Capacity Building & Social Capital Formation,
- Community Based Participatory Research,
- Community Empowerment and Community Participation.

CMIG's has two day care centres (Sopan Kutir and purbalok)and on mobile medicare unit. The elderly persons with no social security are picked up from slum areas. They are empowered to engage themselves in income-generating programs, with provision for food, medical treatment and recreational activities. The health profile of the beneficiaries of CMIG shows the following:

- 85% elderly suffer from muscular & skeletal disease,
- 35% have respiratory problems,
- 78% have digestive problems,
- 40% have chronic cough & cold
- 85% have some skin disease
- 23% have raised blood pressure/heart trouble,
- 13% have raised blood sugar and 2.5% have insomnia, dementia, senility & others.

Most of them have B2, B6, C, D, and Calcium and Iron deficiencies.

The beneficiaries get a combination of conventional & non-conventional medical treatment. The organization has done five major projects in collaboration/funding with ICSSR, UNFPA, TISS and ISEC on elder care and technology assessment. The studies have reported more morbidity in rural elders, higher prevalence of chronic diseases, physical disabilities and more mental health problems in elderly population of West Bengal as compared to other states. Dr Chakaravarty emphasized the need for improving mental health services for the elderly using trained manpower. As a part of the training programme CMIG provides short term and six monthly professional courses in elderly care and management alongwith distance learning programmes in post graduate courses. Cognitive Neuroscience & Technology Intervention for Elderly is another dimension of activity of CMIG wherein innovative technology to improve the physical and cognitive functionality is the focus. .

Dementia Care – from medical evidence to best praxis, using modern technology

Dr. Wilhelmina Hoffman

Dr. Hoffman described the activities of the Swedish Dementia Centre in cooperation between the Karolinska Institute and Silviahemmet for improving Dementia Care.



The aim of the centre is to collect structure and spread evidence-based knowledge and best practice in order to stimulate the development of dementia care and family support. The Centre converts knowledge from longitudinal studies and research data on dementia into a language that is useful in dementia care through web-based education programs. It offers a two year web-based Master's Courses in Dementia Care for Physicians addressing research, diagnosis and treatment on dementia care. It provides fact sheets, informative material on Dementia diseases, Alzheimer's disease, dementia and driving, dementia care by family and friends, weapons and dementia, vascular

dementia and lewy body dementia for the patient and its family. The National Guidelines for dementia care established in 2010 by the National Board of Health and Welfare has been also taken up in the web based programme. Other web-based dementia care programmes free of charge and connected to the national guidelines are:

- Demens ABC, July 2010,
- Plus Primary Health Care, September 2012,
- Plus Needs Assessor, May 2013,
- Plus Home Cares, December 2013,
- Plus Nursing Homes, March 2014, and
- Dementia ABC,
- Homepage for teenagers,
- Dementia podcast,
- Handbook and education on the web and mobile applications to avoid restrain, and web education for the police.

The Welfare mix in Sweden's social care of older people

Dr. Lena Dahlberg

Dr. Lena Dahlberg portrayed Sweden as a typical example of a Nordic or social-democratic welfare model, with universal and generous welfare policies, based on principles of equality and solidarity. The state, rather than families, has the formal responsibility for health care (solidarity). High value is placed on individual independence, while family bonds should be voluntary and not obligatory. Despite this, families are deeply involved in the care of older people. The welfare mix is central in the discussion on welfare regimes. The discussion on welfare mix identifies different sectors or spheres in society, namely the state (including the regional and local authorities), the market, families and the third sector. These sectors are distinguished in terms of whether they are: public/private, where the state is public and the other three sectors are private, for-profit/non-profit, where the market is for-profit and the other sectors are non-profit, informal/formal, where families, relatives and friends are informal and the other sectors are formal.



In Sweden, care for older people is a responsibility of a traditionally strong public sector. Since around the year of 2000, there has been an increase in engaging home-based care. 60 percent of the population of Sweden are in favour of home help, 20 percent on nursing homes and least on children living with their parents or visiting them and provide them with the necessary care. In Sweden, although families are not responsible for taking care of their older relatives, approximately two thirds of the care for older people is done by the family. Parallel to the reductions in public care, there has also been an increase in informal care in the last decades, and expectations on families to care for their older relatives have risen. The state has implemented legislation for

development of support for carers and also stimulated the development of grants to local authorities. The requirement for receiving these grants was that the local authorities had to a) have a formal plan for their development work, and b) collaborate with voluntary organizations. Voluntary organizations tend to provide home visits, study circles, leisure activities, and excursions and so on, rather than care as such. They are also involved in supporting informal carers. Sweden has opened up for competition with public care providers, where private companies can provide tax-funded care for older people. The consequence was that older people could choose their care provider. A second reform introduced tax deduction for privately paid household services. This covers both domestic services such as house cleaning, gardening etc. And care. Approximately 20 percent of home help (18.1 percent) and institutional care (20.9 percent) is provided by private companies. One implication of having a multitude of care providers is that the coordination of different services becomes more challenging. This particularly affects the most frail and individuals with co-morbidity. There has been a shift towards welfare pluralism with a multitude of actors providing care for older people. With marketization of care, care-receivers are rebranded as customers. This means that the responsibility of raising issues around quality of care now falls back on the individual care-receiver/customer. Informal carers are more often seen as partners, with an increasing acknowledgement that they have skills and knowledge that are important for the care of the older person. Relatives also act as advocates for older people, supporting them in choosing care providers and making decisions related to care. Informal care is primarily amongst people with lower education, while those with higher education and more financial resources increasingly are buying private services. People with more resources tend to have better skills and better capacity to make the most of free choices on a market (e.g. Command of information).

Comprehensive care models for the elderly

Dr. Radha S Murthy



Sharing the problems of the aged she said that the main concerns of the elderly are inadequate support systems, lack of effective government policies and economic security. She has founded the Nightingales Medical Trust provides for affordable medical care at home, improve access to health care, increased acceptance and continued enjoyment of home life. The Nightingales Centre for Ageing & Alzheimer's has a multidisciplinary team of psychiatrist, psychologists, physiotherapist, physicians and dementia care experts. It is a comprehensive 86-bed dementia care facility that provides long-term services (90), short-term services(450), memory

clinic (1000), training and rehab services, Nightingales Telemedicine enabled residential care facility, Dementia Day Care and Rural Mobile Medicare is to develop and implement a model of telemedicine application to deliver affordable and accessible residential dementia care and to

develop diagnostic protocols and management protocols for management of people with Dementia without experts on site. It is based on the hub and spokes model. Rural mobile medicare services provide periodical health camps, preventive health, screening and awareness. Nightingales elders enrichment centres (NEEC aims at mitigating loneliness and providing emotional and psychological support. Services include health & medicare, counseling, memory exercises, physiotherapy & fitness programme, total day care package and recreational activities. Nightingales sandhya kirana (Daycare center for lower income group) is a joint project with Bangalore City Corporation that provides, health and physical fitness recreation and cultural programs and skill development and income generation, midday meals and nutritional supplements. Nightingales trust also has Elders helpline (a Joint project of Bangalore City Police and Nightingales Medical Trust) and jobs 60+ that is a comprehensive centre for the economic empowerment for non pensioned elders. This service enhances the skills and fitness for elders seeking suitable jobs, provides training in basic computer skills and promoting employment opportunities through free job portal for seniors. Dr. Murthy concluded her presentation emphasizing the need for replicating Telemedicine Enabled Dementia Care Centres and building Technology enabled elderly care services

SESSION 4 USE OF ASSISTIVE TECHNOLOGY FOR A SAFE, HEALTHY AND ACTIVE AGEING

Geriatrics Problems and Suggested Solutions

Prof. Sneh Anand



Dr Anand described the use of technology to assist the elderly overcome some of the age related impairments and disabilities. The most prevalent health problem is cataract and visual impairment followed by arthritis and locomotion disorders. She presented devices which can be used. One way is Rehabilitation via Human Computer Interface (HCI) using Electroencephalogram (EEG), using Photoplethysmogram (PPG) for cardiovascular regulation & arterial stiffness, using Electro-occulogram (EOG), using Blowswitch and using Impedance Plethysmogram (IPG). Another is the non-invasive & continuous Blood Glucose Monitoring device that works on the principle that glucose affects the electrical property of the skin and underlying tissue thereby changing their impedance to be monitored. Also for diagnosis of Muscle Power-Rate and recruitment coding is a device which works on changing electric signals. Another device is a iontophoretic unit for transversal iontophoresis of the Drug and comparison with existing iontophoretic.

Sustainable technology for health care and daily support for elderly people

Professor Britt Östlund

Professor Östlund informed that the major global challenges for health care in the 20th century are to integrate epidemiological research and demographic transitions, expectations and needs of citizens, professional differentiation and technological development. There has been a narrow

technology focus in health care. At KTH there is a system based approach. KTH contributes with sustainable, secure and permanent systems that support professional collaboration, patient centered care, mobility and e-health. The technological literacy is the level of individual competence or ability to use ICT relative to the ICT levels in the society. The use of technology in old age requires determinants and motivating factors. The degree of becoming pragmatic economizes with time and effort. The extent to which ICT structures daily life determines inclusion and exclusion, maintaining social relations or keeping them away. The Swedish Home Help Service is an example of a technology-based system that has proved sustainable over time; it is patient centered and has the multidisciplinary concepts.



Usefulness of ICT in healthcare - innovation for a patient centric perspective

Ms. Monica Winge.



Ms. Winge informed the audience that Swedish elderly patients are treated in their homes by various organizations, that places heavy demands on health care staff to communicate and to collaborate. This needs IT support coordinating patient's health and social care activities, staff availability and their use, patient empowerment, collaboration between units and professions, and security of health care. In Sweden in 2006 a common agenda was set for all stakeholders and end-users in health care and social care. The IT strategy includes six action areas and these are bringing laws and regulations into line with an increased use of

ICT, information structure and terminology, enhancement of the technical infrastructure, facilitating interoperable, supportive ICT systems, facilitating access to information across organizational boundaries and launching new e-services for citizens. Ms. Winge emphasized the need to improve value based care for the elderly patients by changing the organizational perspective to patient perspective. Each operation must find its forms and contribute to building knowledge which leads to sustainable health and social care, better value creation and a more effective use of resources. For better resource management health and social care must be organized as a team supported by new services and e-services.

CONCLUSION AND SUMMARY OF THE RECOMMENDATIONS

The participants discussed the broad areas on which the workshop was structured. It was recognized that the elderly population is going to increase in India. Sweden which has the second largest population of elderly has made health and social care of the older group a significant part of the Swedish Welfare policy. The social and health care setup has undergone major reforms in Sweden. Elderly are provided service centres, nursing homes and home health services apart from old age homes and rehabilitation centres to cater to their social and health needs. The focus is more on home care using the services of efficient, multi-professional teams trained for this purpose. The Swedish government is aiming to improve coordination of home healthcare, elderly care, hospital care and health-center care provided to elderly people by investing large money in health and social measures. All the participants felt that India which has recently begun to face the challenges of a growing elderly population may learn from the Swedish experience instead of focusing on new approaches. However, the models of care and interventions need to be tailored for the elderly population of India. The future joint collaborative programmes between the two countries need to focus on approaches and designs that are affordable, appropriate and adaptable to the local conditions. Collectively all the participants agreed that since ageing research in Sweden has provided important leads on various aspects of elderly health care, India should learn from their experiences and take the best practices forward.

The specific recommendations of the workshop were to encourage researchers from the two countries to undertake collaborative studies for:

1. Designing geriatric training courses for health workers who can assist in home-based care of disabled older people
2. Assistive technology that is affordable and also appropriate (culture, gender, age specific) for the elderly.
3. Interventions to prevent or reduce the severity of functional impairment, especially impairments secondary to cognitive decline.
4. Longitudinal studies on prevalence and incidence of depression and cognitive disorders in older people with diabetes and or hypertension

As a part of this 2 day activity, ICMR scientists and the Swedish- researchers also visited a senior citizen home. The Swedish group had an informal conversation with the residents on their daily activities and interests. Some valuable life incident anecdotes were shared by the residents with the visitors. The Swedish delegates gathered a lot of information on their social and mental well being through this exchange. Later the group visited the geriatric health care unit in AIIMS, New Delhi where they met a few physicians and patients to get an idea of the kind of health care delivered to the elderly.

APPENDIX 1

WORKSHOP AGENDA

Day one- Monday, 24th November, 2014

9.30-9..40 AM	Welcome remarks by Dr.. D.K. Shukla, Head Division of Non-communicable diseases, ICMR
9.40 -9.50 AM	Background of the workshop and strategic areas of collaboration - Dr. Geetha R Menon, Scientist C, NCD
9.50-10.00 AM	Forte structure and initiatives on Ageing and Health- Ms Kruna Madunic, Forte
10.00-10.10 AM	ICMR research in Geriatrics : Dr. Ravinder Singh, Scientist C, NCD
10.10 -10.20 AM	National Mental Health Programme - Impact on health care of elderly- Dr. Alok Mathur, CMO, DGHS
10.20-10.30 AM	National Policy for Senior citizens- Dr. R Giriraj, Deputy Director, NISD
10.30-11.00 AM	Coffee/TEA-Break

Session 1. Demographic change and migration, challenges and possibilities.

Time : 11.00 AM-12.30 PM

Chairperson: Prof. Dr. S.C Tiwari

Co-Chair: Prof. Britt Östlund

Rapporteur: Dr. Geetha R Menon, ICMR

11.00 - 11.15 AM	Longitudinal Ageing Study in India- Dr. Arokiasamy, IIPS, Mumbai
11.15-11.45 AM	The new aging: How aging changed from the 1970s to the 2000s in the H70 population studies from Gothenburg : Professor Ingmar Skoog, Professor and Chief Physician, Institute of Neuroscience and Physiology, Neuropsychiatric Epidemiology Group, Sahlgrenska Academy/University of Gothenburg
11.45 - 12.00 noon	Health care of elderly in India; challenges of access and affordability- Dr. Subhajit Dey, IIPH, Delhi, PHFI, Gurgaon
12.00 – 12.15 PM	Impacts of migration in elderly care -Dr. Irudaya Rajan, Centre for Development Studies, Kerala
12.15-12.30 PM	Discussions
12.30-1.00 PM	Lunch

Session 2. Mental health and wellbeing of the elderly

Time: 1.00 PM- 2.00PM

Chairperson: Dr. Indira Jaiprakash

Co-Chair: Dr. Lena Dahlberg

Rapporteur: Dr. Tripti Khanna, ICMR

1.00 – 1.15 PM	Lifestyle and wellbeing of the elderly in the community-Dr. Srikala Bharath,
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	NIMHANS, Bangalore
1.15 – 1.30 PM	Mental Health Care for Older People in India- SC Tiwari , KGMU, Lucknow
1.30 – 2.00 PM	The epidemiology of mental disorders in the elderly. Results from the population studies in Gothenburg, Sweden: Professor Ingmar Skoog, Professor and Chief Physician, Institute of Neuroscience and Physiology, Neuropsychiatric Epidemiology Group, Sahlgrenska Academy/University of Gothenburg
	Inaugural Session 2.00-2.30 PM
2.00-2.10 PM	Introductory remarks by Director General ICMR and Secretary, DHR
2.10-2.20 PM	Remarks on Swedish national policy for the elderly care by Ewa Ställdal, Director General, Forte
2.20-2.30 PM	National Programme for Health Care of the Elderly- Ms Dharitri Panda, Joint Secretary, MOHFW
	Session 2 continued..... 2.30-3.30 PM
2.30-2.45 PM	District Mental Health Program in India -Dr. K.S Shaji, Thrissur
2.45-3.00 PM	Health Determinants of Elderly - Dr. A B Dey, AIIMS, New Delhi
3.00-3.30 PM	Discussions
3.30-4.00PM	Coffee/TEA-Break
4.00-5.00 PM	Rapporteurs for session 1 and session 2

Day two- Tuesday, 25th November, 2014

Session 3. Welfare models including forms and systems for health care and social services of the elderly
Chairperson: Professor Ingmar Skoog Co-Chair: Professor A.M. Khan
Rapporteur: Dr. Reema Roshan, ICMR

10.00-10.15 AM	Calcutta Metropolitan Institute of Gerontology- Regional Resource and Training Centre on Ageing Dr. Indrani Chakravarthy
10.15-10.30 AM	Dementia care - from medical evidence to best praxis, using modern technology. Dr. Wilhelmina Hoffman, CEO, The Swedish Dementia Centre and Operations Manager, Silviahemmet Foundation
10.30 -10.45 AM	Social Programmes for the Elderly- Dr. Anupama Dutta, Helpage India, Delhi
10.45-11.00 AM	The welfare mix in Sweden's social care of older people: Dr. Lena Dahlberg, Associate Professor, Dalarna University & Guest researcher at Aging Research Center, Karolinska Institute and Stockholm University
11.00-11.15 AM	Models of elderly care - Dr. Radha S Murthy , Nightingales Trust, Bangalore
11.15 -11.45 AM	Discussions
	Coffee/TEA-Break

Session 4. Use of assistive technology for a safe, healthy and active ageing

Chairperson: Dr. Wilhelmina Hoffman Co-Chair: Dr. Alok Ray
Rapporteur: Dr. Ravinder Singh, ICMR

12.00-12.15 PM	Designing appropriate technological solutions for the disabled and elderly – Dr. Sneh Anand IIT Delhi
12.15-12.30 PM	Sustainable technology for health care and daily support for elderly people. Professor Britt Östlund, Royal Institute for Technology, KTH; The School for Technology and Health
12.30-12.45 PM	Technology interventions for the benefit of elderly- Dr. Usha Dixit, Department of Science and technology, Delhi
12.45 – 1.00 PM	Usefulness of ICT in healthcare - innovation for a patient centric perspective. Ms. Monica Winge, Expert e-Health and Researcher at Stockholm University
1.00 - 1.30 PM	Discussions
1.30 – 2.00 PM	Rapporteurs of session 3 and 4
2.00 – 2.05 PM	Closing remarks
	Lunch
2.30-3.30 PM	Breakout meeting of the ICMR and Forte participants to discuss issues on collaboration between researchers from both countries on Health Care of elderly

APPENDIX 2

ABOUT THE PARTICIPANTS:

FROM SWEDEN:



Ewa Ställdal Eriksson,
Director General,
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Eva Ställdal has a BA in Political Science from Stockholm University and a PhDc from Gothenburg University. She is the Director General at The Swedish Research Council for Health, Working Life and Welfare, FORTE. Eva Ställdal worked as senior advisor in matters regarding medical education and research at the Ministry of Education for eight years 1979-1987. In 1987 she was appointed Director of the Department of Education and Research at Karolinska Institutet. 1993 she was appointed Head Secretary of a national investigation and evaluation of the "Governmental Reform of Higher Education and Research in Sweden" by the Minister of Education. The report served as a base for several new political decisions within universities. During the latest 30 years Eva Ställdal has been responsible for and member of several Governmental Committees in Health Care and academic education and research. She has written articles and given speeches regarding medical and health care education and research and its impact on the Society and the Health Care System. In 2014 she became Director General at Forte reporting directly to the Ministry of Health and Social Affairs in Sweden. Eva Ställdal is and has been member of several boards of trustees such as The National Post & Telecom Agency, SOS Alarm AB Sweden, SweCare Foundation, Jönköping University. During 2009-2014 Ställdal was vice president and member of the Board for a MedTech Company, Bactiguard, registered on the stock market.



Prof. Ingmar Skoog,
Professor and Chief Physician,
Institute of Neuroscience and Physiology,
Neuropsychiatric Epidemiology Group,
Sahlgrenska Academy/University of Gothenburg, Sweden
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Ingmar Skoog became M.D. in 1985, Ph.D. in 1993, specialist in psychiatry 1993, and professor in Psychiatry in 2001. He is currently leading the Neuropsychiatric Epidemiology Unit at the Institute of Neuroscience and Physiology at the Sahlgrenska Academy of the University of Gothenburg, Sweden. He has been involved in epidemiological research since 1983. The main research interest has been dementia and other mental disorders in the elderly, with special emphasis on the relation between cardiovascular disorders, Alzheimer's disease and depression. Professor Ingmar Skoog is one of the world-leading researchers on issues related to mental health and ageing and he has been involved in the world's longest running population study and was the first to report on the link between vascular disease risk factors and dementia. He continues to explore vascular, genetic and hormonal factors linked to dementia and other mental health disorders in the ageing population. He has published more than 300 scientific papers. He has

worked with a number of global groups including The World Health Organization, European Union, British Medical Research Council and the Harvard School of Public Health. He is a recipient of number of prestigious awards, including the Zenith Fellows Award from the Alzheimer's Association, the Danish Strömgren prize in psychiatry and the International College of Geriatric Psychoneuropharmacology Senior Investigator Award. Professor Skoog is Centre Director for the Centre for Ageing and Health – AgeCap, at Salgrenska/the University of Gothenburg.



Prof. Britt Östlund,
Professor in Technology in Caring Sciences,
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Britt Östlund is Professor in Technology in Caring Sciences at KTH, School of Technology and Health, specializing in the study of Technology in Caring Sciences and implementation of new technologies in health care. She has twenty five years' experience in developing products and services to promote modern ageing and methods for user driven innovations, most recently as Professor in Welfare Technology at Lund University and responsible for the Ageing and Design program. She have had a range of commissions and assignments related to the use of IT among older populations, cooperating with politicians on national and local level, companies, non-profit organizations, unions and user groups. She was awarded the Lise Meitner guest professorship at Lund University 2004 leading up to becoming associate professor in rehabilitation engineering 2007 and professor in welfare technology 2013. Today she is active in European projects within the 7th framework program and strategic initiatives to promote collaboration between nursing and engineering and a future health care agenda in times of digitalization.



Dr. Wilhelmina Hoffman, CEO,
Stiftelsen Silviahemmet
President of the Swedish Dementia Centre
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Dr. Hoffman is a medical doctor specialized in geriatric medicine with focus on dementia. She is the MD and CEO of Stiftelsen Silviahemmet a foundation by H.M. Queen Silvia focusing on best dementia care and education for quality of life and President of the Swedish Dementia Centre, a government funded national competence centre. She has been actively involved in dementia care and education and has initiated a memory assessment ward, Stockholm's Sjukhem, Stockholm. She is also the Board member of Swedish Care International. Her focus is dementia care and education with development of education programs for professionals in the healthcare and the social care sector; She is involved in Academic programs in corporation with the Karolinska Institutet and the Sophiahemmet Högskola. Free of charge web-based education programs connected to the national guidelines, for medical evidence and best praxis. Web-based educations connected to national quality registers, closely related to the national Board of Health and Welfare. Accreditation of education level in dementia for care units. Education programs and information material for persons with dementia and their families. Different projects and activities are also promoted by the two centres, aiming at changing attitudes toward a more dementia friendly society.



Dr. Lena Dahlberg,
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Lena Dahlberg is trained in social work and is a guest researcher in Aging Research Center Karolinska Institutet & Stockholm University. She has held the position of director of the Gerontology Centre, Dalarna Research Institute, Falun, Sweden. Her primary area of work is **social gerontology** with focus on Care and support for older people and their informal carers. Her research work from data drawn from national and local studies in Sweden and England focuses on receipt of care from public, private, voluntary and informal care providers with regard to gender, socioeconomic position, informal support network etc. It also considers interaction between different care providers in terms of their substitution and complementary roles. Social exclusion, community, and loneliness in old age. Combatting social exclusion is high on the European policy agenda. Research has shown that the local community is particularly important for older people's inclusion in society. As Principal Investigator of a three year project in England, she has researched community-based social exclusion in one rural and one urban/post-industrial community. Based on this data and on the Swedish Panel Study of Living Conditions of the Oldest Old (SWEOLD; a nationally representative longitudinal study) she has examined the issue of loneliness in old age.



Ms. Monica Winge,
Expert eHealth
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Monica Winge is an expert in e-Health and researcher at the Department of Computer and Systems Sciences at Stockholm University. Her research focuses on patient centric processes and supported collaborative e-services. She has been an expert in e-Health at VINNOVA, Swedish Governmental agency for innovations system. She has lead eHealth projects in Sweden and in EU, India, China and Africa. Monica has acted as an expert in EU-projects and has had the role as a member in AAL - General Assembly in the European commission. She holds a master degree in Health Informatics from Karolinska Institute in Sweden. Monica has also an education and experience as a primary nurse during 25 years, where of 10 years in trauma-surgery. She has worked as a manager of a palliative care unit in Stockholm, and she has been member of the management team, responsible for IT-management and IT-security at the Karolinska hospital. As a project manager Monica has lead several e-Health research projects and national projects such as the National information structure project, and has also been involved in the development of the Swedish national e-Health strategy. She is a member of a e-Health award Jury in Sweden. She has developed and executed as only speaker in an education program in China (Beijing, Shanghai, Guangzhou and Nanjing), 2012-2013. The program consisted of education of 800 Hospital rectors in health management with focus on patient centered leadership, team building and effective use of health care resources.

FROM INDIA:



Dr. D.K.Shukla Scientist -G & Head,
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Dr. D. K Shukla is presently working in the Division of Non Communicable Diseases (NCD) of ICMR, New Delhi as Scientist-G & Head (NCD) to provide scientific, technical and administrative support in conducting the extramural research in the different areas of Non Communicable Diseases and also providing support to 7 ICMR permanent institutes located in different places in the country. He has a vast experience of working more than 30 years in the Division of Non Communicable Disease under different capacity in the Council. He has completed his Ph. D degree in Biostatistics from AIIMS, New Delhi. He is the member of Doctoral Committee for Ph.D. and M.D. at AIIMS New Delhi and other academic institutions. He has published around 50 articles in the national and international Journal. He participated various international and national conferences and made presentation and also chaired different sessions in the conference. His area of specialization is in the planning, monitoring, analysis and report writing of various epidemiological studies under different areas of NCD such as Cancer, Cardiovascular Disease (CVD), and Mental Health Neurology etc., carried out by the Council during last 30 years under Division of Non Communicable Disease. His areas of interest mainly in the NCD Surveillance, Burden of NCD Disease and Risk Factors of NCD , computing and application of various statistical tools in the area of NCD.



Dr. Indira Jayprakash
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Dr. Indira Jai Prakash, former Professor of Psychology, Bangalore University, Bangalore is trained as clinical Psychologist and has a Doctorate from NIMHANS. She is trained at International Institute on Aging (UN) Malta; and Common Health Fellow, Salzburg fellow. She is the Visiting Professor at University of Heidelberg Germany 1995 an expert advisor for WHO (1996-2000). Dr. Jaiprakash has 20 books & monographs and 140 research papers on Aging issues with special focus – older women, psychosocial aspect of Aging.



Prof. A.M. Khan
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Prof Khan has more than 30 years of teaching and training experience in Community Health Administration to medical students and health care officials. He has organized several research

methodology, public health and skill development workshops for university teachers and students. He has completed more than 18 health systems research studies and has supervised several dissertations on elderly health care, health systems and gender based and sexual behavior studies. He has several national and international research publications to his credit apart from his contributions in textbooks and study modules.



Prof. A.B Dey
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Prof. A.B. Dey is an internist by training. Dr. Dey, received training in Geriatric Medicine under the Commonwealth Medical Fellowship in United Kingdom between 1995 and 1996. He has been involved in developing Geriatric Medicine in India through service development, training and research, since 1997 as head of the Geriatric Service in AIIMS. He was instrumental in establishment of the Department of Geriatric Medicine at .He has carried out several funded and non-funded research projects in the field of Geriatrics and Gerontology and has several publications to his credit. His research contributions were recognized by the Indian Council of Medical Research with Professor SM Marwah Award in 1998. The Department of Geriatric Medicine at All India Institute of Medical Sciences, New Delhi received the National Award “Vayoshrestha Samman” as the best institution for research in the field of ageing from Government of India ion 1st October 2014. Dr. A B Dey was the founder president of the Academy and also simultaneously held the post of President of Association of Gerontology (India). Dr. Dey has been actively involved in advising the World Health Organization South East Asia, Western Mediterranean and Western Pacific Regional Offices in developing strategies and policies in old age care. He substantially contributed to development of the National Programme for Health Care of the Elderly, by the Ministry of Health & Family Welfare, Government of India launched in 2010. He served as the first Dean of Research of AIIMS from 2010 to 2013.



Dr. R.Giriraj
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Dr.R. Giriraj has been working as Deputy Director (Old Age Care Division) in National Institute of Social Defence, Ministry of Social Justice & Empowerment since 2005. The NISD has been conducting various training programmes on Social Defence Issues such as Geriatric Care, drug Abuse Prevention, Rehabilitation of Destitute & Transgender Welfare etc. for Government, NGO, Panchayat, Police functionaries. Besides it assists the Ministry of Social Justice & Empowerment for Policy formulation, evaluation of Programmes/Schemes, restructuring of Programmes and policies conducting the research in the fields of Social Defence. Further, he published various articles on Elderly Care issues and recently he published an article entitled “Career in Elderly Care” in Employment News 16th-22nd January, 2016. He was a Member Secretary to the Sub-Committee on Rehabilitation of Destitute which is part of the Working Group Committee on Social Welfare for the formulation of 12th Five Year Plan (2012-2017). He is an approved Guide for Research

Scholars pursuing M.Phil & Ph.Ds. He also cleared UGC (NET Examination) in the year 1999. Further he worked as Asstt. Professor in the Deptt. of Social Work (MSW) of colleges affiliated to Bharathiar University for more than 8 years. He has presented more than seven papers at the National level Seminars, Workshops. He presented Country Paper on Elderly Care in India in Bangkok and Seoul Conferences organized by DESA and Korean Human Rights Commission respectively as representative of Govt. of India. He has published a Book on "Beggary Prevention: Realities, Strategies and Challenges" during 4th February, 2011 at Madurai. He also received Awards from the Universities under the category of outstanding Alumni.



Prof. P. Arokiasamy
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Prof. Arokiasamy has PhD degrees in Population Studies. He has 26 years of postgraduate teaching and research experience including guidance of PhD students at this institute in the subject areas of demography, public health and development studies. He held a Wellcome Trust postdoctoral fellowship in Population Studies 1999-2000 in the department of Social Policy at the London School of Economics (LSE), London. Dr. Arokiasamy has served as international consultant/advisor/expert committee member to the World Health Organization (WHO, Geneva), Harvard School of Public Health, Boston (HSPH), USA, United Nations Population Fund (UNFPA), the Committee on Population, National Academy of Science, USA, Indian National Science Academy (INSA), Ministry of Health and Family Welfare (MoHFW) and the Indian Council of Medical Research (ICMR). He has published more than 75 research papers in top-rated international and national journals, besides five books and 20 printed research reports in the subject areas of population, health and development studies. He has been invited for presentation of papers in numerous international conferences and technical meetings. His research experience also include coordinating major national research projects namely WHO sponsored World Health Survey (WHS) India, 2003-2005, National Family Health Survey (NFHS) -3, 2005-2007 and, the Study on Global AGEing and Adult Health (SAGE), wave 1 2006-2007 and wave 2 2015-16 (funded by WHO, Geneva). He is currently involved in initiating a major nationally representative longitudinal ageing study namely "Longitudinal Ageing Study in India (LASI) in collaboration with Harvard School of Public Health (HSPH) and the University of Southern California (USC) sponsored jointly by the Ministry of Health and Family Welfare (MoHFW), MoSJE, UNFPA India and, the National Institute of Health/National Institute of Aging (NIH/NIA), USA.



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Dr. Alok Mathur is a medical doctor trained in Public Health (MPH), Field Epidemiology. He is the main programme manager of National Mental Health Programme and activities related with Palliative Care and Telemedicine.



Dr. K.S. Shaji
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Dr. Shaji is a psychiatrist with a special interest in geriatric mental health. He has more than 40 papers in peer reviewed/indexed journals and has contributed many chapters in text books. He is the associate editor of Indian Journal of Psychiatry. He has been coveted with many awards for his contribution viz.

- Dr.Vimla Virmani Award 2009 from the National Academy of Medical Sciences for research work in Dementia Care
- Prof.Surindar Mohan Marwah Award from the Indian Council of Medical Research (ICMR) in Nov 2011 for the contributions in the field of Geriatrics
- ICMR International Fellowship for Senior Bio-medical Scientists for the year 2011-2012



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Dr.. Tiwari has won many Prestigious Fellowships and Awards for his research work such as Tilak Venkoba Rao Oration Award of Indian Psychiatric Society, IAGMH/INTAS Award of Indian Association for Geriatric Mental Health, . Vimla Virmani Award of National Academy of Medical Sciences, WHO Rafaelsen 1988 Fellowship Award for young Behavioural Psychopharmacologists, IPA/BAYER Award in Psychogeriatrics of International Psychogeriatric Association, USA. He has several publications to his credit and has brought the subject of Geriatric Mental Health in India and got it recognised by Medical Council of India and Government of India. He has established the Ist Department of Geriatric Mental Health in the country and started super speciality PG training in Geriatric Mental Health. He has keen interest in research funded by extramural agencies like ICMR, CST, DST & WHO. He has established an Advance Centre for Research, Training and Services in Ageing and Geriatric Mental Health in the Department of Geriatric Mental Health, King Georges Medical University, Lucknow funded by Govt. of UP. The Centre has been also recognized by ICMR as its Centre. Presently, Lucknow Elderly Study is being carried out in by this centre. He is now involved in developing Elderly Dietary Scale and Indian adaptations of many psychogeriatric tools.



Dr. S. Irudaya Rajan
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Dr. Irudaya Rajan has thirty years of research experience working on aging and co-ordinated four waves of Longitudinal Kerala Aging Survey since 2004 and started another longitudinal Kerala Aging Survey 2013, funded by the Government of Kerala. He has authored, co-authored and edited

six books on aging and published numerous articles on several facets of aging in journals such as Journal of Aging and Social Policy, Asia Pacific Population Journal, International Journal of Aging and Human Development, Journal of Housing for the Elderly, Social Security Review, Journal of Cross-Cultural Gerontology and Economic and Political Weekly. He had projects on aging with United Nations, (New York and Bangkok), Indo-Dutch Program on Alternatives in Development (IDPAD), South Asian Network of Economic Institutes, Canadian Institute of Health Research, United Nations Fund for Population Activities, Governments of Goa and Kerala. He is President of the Association of Gerontology, India.



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Dr. Bharath is a Consultant at the Adult and Geriatric Services of NIMHANS, Bangalore with more than 25 years of teaching Experience. She trains both the residents and other non medical personnel in old age psychiatry; guiding residents in research in various aspects of Old Age. For her work she has liasoned with various NGOs towards consultation, training and capacity building in elderly mental health. She is a member of the Dementia Research Group, ARDSI, International Psychogeriatric Association, Indian Association of Geriatric Mental Health and Section Co Ordinator for Forensic and Mental Health Policy. Her specific areas of interest are molecular genetics in dementia, late onset depression and late onset psychosis, carer burden in dementia, cost of Dementia, Imaging in MCI and Alzheimer's Dementia, Late Onset Depression and Psychoses in the Elderly and Community Based Care for Dementia and Depression.



Dr. Radha S. Murthy
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President, Alzheimer's & Related Disorders Society of India, Bangalore Chapter
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Dr. Radha Murthy is trained in Medicine and Surgery. She is a physician with a keen interest in advancing care for the older population and has dedicated much of her medical career to customize service delivery to the elderly. Dementia is a significant problem in India and the future projections suggest even greater demands on long term care as well as major financial implications. She was instrumental in establishing the successful Nightingales Home Health Services and is also the Co - Founder and Managing Trustee of the Nightingales Medical Trust (NMT). Nightingales Medical Trust is a leading and well established NGO working for the well being of the elderly and persons suffering from dementia through various innovative need based projects and programs in Bangalore. Nightingales Medical Trust projects include a 86 bed facility for dementia patients. Elder Enrichment Centres for mitigating loneliness, Elders Helpline with Bangalore City Police addressing elder abuse, Nightingales Job 60+ for training and promoting employment opportunity for non-pensioned elders, Rural Mobile Medicare program and Tele-medicine Enabled Dementia Care Centre. They are also designated as the Regional Resource and Training Centre to build the capacity of Grantee NGOs engaged in age care in four southern states of India. (For further details www.nightingaleseldercare.com). For her commitment towards elder care and exemplary services to the elderly, she was awarded numerous citations and awards including the Bangalorean of the

Year by the Namma Bengaluru Foundation in 2010. In 2012, she won the ADI award for the most promising intervention for people with dementia by the Foundation *Médéric* Alzheimer and the Aheimer Disease International prize.



Dr. Sneh Anand

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Dr. SnehAnand is an MTech in Controls and Instrumentation and PhD in Biomedical engineering. Her research specialization is Biomedical Instrumentation, Rehabilitation Engineering, Technology in Health care and Reproduction biomedical signal processing & Biosensor technology. She has 107 conference papers and invited talks, has supervised 51 PHDs, 103 B. Tech. and M .Tech Thesis. She has to her credit 1 US Patent and 12 Indian patents.



Dr. Subhojit Dey

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Subhojit's expertise lies in the area of cancer research – mainly women's cancers. His other areas of research include alternative medicine, urban health, non-communicable diseases, health communication, health systems, advocacy and policy. He has more than 20 scientific publications including articles, books and book chapters on above areas. Subhojit has had continued interests in the health of populations in developing countries, having worked extensively in USA, Africa and India. Subhojit completed his MBBS from JIPMER, Pondicherry and MD in Alternative Medicine from Indian Institute of Alternative Medicine, Kolkata before doing MPH in International health Epidemiology from University of Michigan School of Public Health (UMPSH), Ann Arbor, USA. He also completed his PhD in Epidemiology from UMSPH with a focus on cancer research in 2009. Subhoijt is currently an Associate Professor at the Indian Institute of Public Health, Delhi (IIPH),



Dr. Indrani Chakravarty

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Dr Chakravarty is instrumental in conceiving and establishing the CMIG in 1988 which is a unique institute in the country that combines research with practical work and care for the elderly. She has been professionally trained in Building Comprehensive and Sustainable Reforms . She has got several honors both at the national and international level and has been awarded the Vayoshreshtha Samman 2006(National Award) from the Ministry of Social Justice & Empowerment, Government of India, for generating and spreading knowledge in the field of

Ageing. She is actively involved as an expert in all policies, laws & action planning for elderly at the GOI & state government level. She has guided many research scholars for their PhD work in the Calcutta University. She has authored more than 25 articles on the challenges of ageing and is one of the contributors in the UNFPA initiatives for building the knowledgebase on the status of elderly in India.

About the Conveners from ICMR and FORTE



Dr. Geetha R Menon
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Dr. Geetha Menon is trained in Biostatistics and Research methods. Her research is on meta-analysis methodology primarily focusing on Bayesian approach. In 2004 she received the Young Scientist Award from the International Society for Clinical Biostatistics for her contributions in Biostatistics. Geetha has a long experience in ICMR as a scientist. She has contributed in the design and analysis of major research projects in non-communicable diseases on cancer, cataract, hearing impairment, diabetes and cardiovascular diseases. Some of the key National projects in which she was involved are Cause of Death by Verbal Autopsy, Sentinel Surveillance of NCD Risk Factors, Road Traffic Injury Surveillance, Burden of Non-Communicable Diseases, and the Integrated Disease Surveillance Programme. She has delivered lectures on epidemiology and biostatistics in many workshops and teaching programmes in other institutes. She has more than 20 research publications to her credit. Her main areas of interest are Burden of Disease, Epidemiology of Chronic diseases and road traffic injuries, developing newer statistical techniques in meta-analysis.



Dr. Ravinder Singh
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Dr. Singh is medical graduate with expertise in Community Health. He has keen interest in Research in the areas of Mental Health, Geriatrics, Disasters, Disability and Environmental Health. Dr. Singh has keen interest in the areas of Stress and Ageing. He has initiated various task force studies on Gujarat Earthquake, Tamil Nadu Tsunami, Urban Mental Health, Suicide Behaviour and Determinants of Functional Status of Older Persons in India. He has prepared Report of the task force on "Mental health morbidity and service needs in Tsunami affected population in Coastal Tamil Nadu", "Development of NCD Surveillance Network in India", "Disaster Management and Mental Health", Monograph on Mental Health Research in India, "Reappraisal of the Situational Analysis of Current Scenario of drug Abuse and HIV/AIDS in the North-Eastern Region of India", Report of the Indo-US Partnership Workshop on "drug Abuse and HIV/AIDS in NE Region of India". He presented a paper on the "drug Abuse and HIV/AIDS in NE Region of India" at International Conference at NIMHANS on 12th February 2006. He has organized various Conferences/Workshops like ICMR -WHO Workshop on "Disaster Management and Mental Health", Indo-US Workshop on "Emergency Response and Preparedness", "Reappraisal of the Situational Analysis of Current Scenario of drug Abuse and HIV/AIDS in the North-Eastern Region of India" and Indo-US Partnership Workshop on "drug Abuse and HIV/AIDS in NE Region of India". He has attended national and International Conferences in India and abroad and presented

papers on various issues related to mental health and ageing. He also submitted a paper on Research Priorities in Geriatrics in South East Asia Region for the SAARC countries.



Ms. Kruna Madunic
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Kruna Madunic has an extensive experience as a Communication Strategist, a Collaboration Strategist and Project Manager from three Swedish governmental agencies. Currently at the Swedish Research Council for Health, Working Life and Welfare, Forte and previously at the Swedish Governmental Agency for Innovation Systems, VINNOVA and the Swedish Environmental Protection Agency. Kruna has worked with the overall strategic communication advising and reporting to the director general, the executive boards, the departmental management groups and chief strategy officers group as well as other staff members with focus on the communication strategy goals. She has been the project manager of more than a hundred national and international conferences, seminars, workshops, hearings, book releases, prize awards and strategic meetings, both national and international ones. Kruna Madunic was project manager of the seminar during Sweden's day in the Swedish pavilion at the World Expo 2010 in Shanghai with Chinese and Swedish high-level speakers from politics, industry and academia, including His Majesty King Carl XIV Gustaf and the Deputy Prime Minister. During the Swedish Presidency of the EU 2009, she was project manager of several conferences. March 2014 she implemented Forte Talks, Fortes most extensive networking and knowledge transferring event ever with approximately 600 participant and 100 international and national speakers from academia and society.

About the rapporteurs



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SOME GLIMPSES OF THE WORKSHOP











