Answers

. Does fluid management protocol followed with IVC collapsibility improve the outcome of critically ill patients?
. Can oxygen with a nasal cannula at the initial stages of pneumonia prevent ICU admission?
. Noninvasive ventilation is better than invasive ventilation in COPD patients with respiratory failure.
. Effect on mortality of adjuvant steroid therapy in patients on invasive ventilation secondary to respiratory infections
. effect of fluid overload in critical care unit: restrictive versus aggressive fluid therapy: which one is better
. Target oxygen threshold: what should we target for ARDS especially due to severe chest infections
. Does awake prone positioning reduce the need for invasive ventilation in Acute Hypoxaemic respiratory failure?
. What is the optimal oxygen thresholds in Acute Hypoxaemic respiratory failure?
. What is the optimal approach to weaning from invasive MV?
. Does awake self-proning during respiratory failure due to infection reduce the need for mechanical ventilation or reaching the threshold where mechanical ventilation would be considered if it was available
. How many hours out of 24h of awake self-proning is needed during respiratory failure due to infection, to reduce the need for mechanical ventilation or reaching the threshold where mechanical ventilation would be considered, if it was available
. Does non-invasive ventilation (HFNC vs CPAP) infer a survival advantage above that of low flow O2 in patients where mechanical ventilation for respiratory failure would be considered, but where this treatment is not available
. What are the challenges in providing respiratory support in LMICs
. What is the burden of diseases requiring respiratory support in LMICs
. cost-effectiveness study of new intervention for improved respiratory support in LMICs
. Are the healthcare workers in LMICs trained to triage, identify, manage and refer SARI patients based on their Oxygen needs to respective levels of care to prevent delay
. Are the ventilation weaning mechanisms standardised for follow up care
. Are all the Oxygen delivery units standardised and accredited by institutions for Quality Control
. Hypothesis: High flow support using air or a reduced )2 concentration is as efficacious as conventional high flow
. Hypothesis: Positional support (proning, turning) can reduce the risk of invasive ventilation
. Hypothesis: A reduced target oxygenation threshold is not inferior to a normal threshold in non-intubated patients receiving respiratory support
. To determine the best ventilatory support for patients with severe CAP
. To determine the best co-adjundant treatment for patients with severe CAP
. To compare HFNC to other ventilatory strategies for acute respiratory failure.
. Outcomes and improvement per intervention
. Need assessment for designing intervention
. Identifying high risk population subgroups who could benefit the most from simple interventions
. Burden of SARI in LMICs
. Impact of training HCW and availability non-invasive CPAP on the outcome of SARI.
. Utilization and Availability of low flow oxygen and continuous pulse oximetry in our EPU settings will improve favorable outcome in children with SARI.
. Does protocolized Spo2-targeted oxygen therapy (including standard flow, high flow, and pressure-based respiratory support as available) improve survival?
. Are there any available pharmacologics that could improve outcomes for hypoxemia patients of particular causes (steroids in pneumonia, etc)
. Do the hypo- and hyper-inflammatory subphenotypes identified in HICs correspond to those in LIC populations? Can these by identified by regularly-collected VS and labs? (This is critical to know whether the ongoing and emerging studies on interventions for one subphenotypes in HICs apply or don't in LICs)
. Hypothesis: Among hospitalised adults in low income settings (participants) a conservative oxygen regimen (intervention) is non-inferior to a liberal oxygen regimen (comparator) with respect to in-hospital mortality (primary outcome).
. Hypothesis: Among adults who required unplanned life support in the ICU (participants) implementation of an individualised oxygen therapy regimen based on a validated machine-learning model (Intervention) compared to usual care (comparator) reduces in-hospital mortality (primary outcome).
. Hypothesis: Among hospitalised adults in low and middle income countries (participants) a closed loop control strategy using automatic titration of high flow oxygen therapy* to achieve a prescribed saturation target (intervention) compared to usual care (comparator) reduces in-hospital mortality.
[NB: * this emerging technology is coming to market and, in settings where oxygen is readily available but staffing is limited, may allow safer use of oxygen to minimise the risks of hypoxaemia or hyperoxaemia]

Answers

. Outcome in patients at different oxygen target thresholds.
. Standardization of NIV protocols in patients with acute respiratory failure.
. Outcomes in patients initiated on Oxygen therapy with nasal canula vs face mask.
. Is use of HFNC in LMICs cost effective?
. Cost effective strategy for management of sedation in patients on mechanical ventilation
. Optimal fluid management strategies
. In what conditions, would NIV avoid utilization of IMV for AHRF patients? (given resource allocation standpoint)
. In what conditions, would NIV be non-inferior or superior to HFNC? (given oxygen supply standpoint)
. what would be the optimal SpO2 among black patients with AHRF, and how frequent is the optimal frequency of the SpO2 monitoring? (given SpO2 differences across ethnicity, and access to ABG or continuous SpO2 monitoring)
. Liberal vs conservative oxygen threshold in unintubated patients
. Hisg vs low PEEP in invasiveky ventilated patiwnts
. Coap vs hfno
. What are the optimal mechanical ventilation strategies for severe resp failure?
. How to transition to and ventilate during spontaneous ventilation
. What are the fastest and safest ways to wean respiratory supports
. burden of illness
. Effectiveness of low-cost non-invasive ventilation strategies (especially technologies developed and available in low and low-middle income settings)
. Effectiveness of awake prone position for patients with hypoxic respiratory failure
. Safety and effectiveness of pharmacological therapies (steroids, other immunomodulators etc.,)
. What is the best IV fluids protocol in critically ill patients?
. What is the impact of hyperlipidemia on the prognosis of critically ill patients
. Research Question: What is the most effective and cost-efficient oxygen delivery method (e.g., nasal cannula, non-rebreather mask, or high-flow nasal cannula) for reducing mortality in patients with SARI in LMICs?
Hypothesis: High-flow nasal cannula therapy improves survival rates and reduces hospital stays compared to standard nasal cannula in patients with SARI, while remaining cost-effective in LMIC settings
. Research Question: Does the routine use of pulse oximetry for triage and monitoring improve early detection of hypoxemia and outcomes in patients with SARI in LMIC healthcare facilities?
Hypothesis: Routine use of pulse oximetry reduces delayed oxygen initiation and decreases mortality rates in SARI patients compared to clinical signs-based assessment alone.
. Research Question: Can task-shifting oxygen management to trained non-physician healthcare workers improve access to timely and appropriate oxygen therapy in LMIC primary care facilities for patients with SARI?
Hypothesis: Training non-physician healthcare workers to manage oxygen delivery in SARI patients leads to improved access and comparable outcomes to physician-led care in LMICs.
. Burden of illness
. Availability of interventions
. Support of patients
. Effect of high flow o2 tgerapy in COPD patients
. Targeted fluid therap in critically ill patients
. Sedation vs no sedation in mechanically ventikated patients
. How to make mechanical ventilation safe in the hands of untrained/minimally trained staff?
. What is the best first line non-invasive respiratory support outside an intensive care setting?
. Can Boussignac CPAP improve outcome of mild to moderate hypoxaemic respiratory failure (if access to invasive mechanical ventilatory support is limited)?
. What is the impact of non-in Visa ventilation compared to oxygen therapy in hypoxic respiratory failure?
. What is the correct oxygen saturation target by which to titrate oxygen therapy?
. What is the best fluid strategy in patients with hypoxic respiratory failure due to sepsis?
. BiPAP therapy for hypercarbic COPD patients to prevent invasive ventilation.
. Bain Circuit CPAP therapy for snakebite patients in early phase to prevent hypoxia and hypercarbia.
. HiFlow nasal cannula for snakebite patients prevent invasive ventilation.
. What is the effectiveness of HFNC compared to standard oxygen therapy in preventing progression to mechanical ventilation in patients with moderate hypoxemic respiratory failure in LMICs?
. How does training and equipping frontline healthcare workers in LMICs to use non-invasive ventilation (e.g., CPAP and HFNC) impact patient outcomes in acute respiratory failure?
. What is the prevalence and mortality rate of hypoxemia in patients presenting with acute respiratory infections in high-altitude settings?

Answers

. Can the addition of telemedicine support for ICU in LMICS reduce the mortality rates in critically ill patients?
. Implementing a nurse-led training protocol for respiratory therapists will improve survival rates among ICU patients in LMICs
. Does the integration of artificial intelligence (AI)-driven predictive algorithms into routine clinical workflows in LMICs hospitals improve early detection and outcomes of acute respiratory distress syndrome (ARDS) compared to standard of clinician-based assessments?
. Helmet NIV compared to Helmet CPAP in hypoxemic respiratory failure
. Mask NIV compared to Helmet NIV in hypoxemic respiratory failure
. High-flow nasal oxygen compared to NIV in acute COPD exacerbations
. High flow nasal cannula reduces rates of mechanical ventilation in children with bronchiolitis
. Optimization of Oxygenation Targets as a means to rationalize oxygen usage in LMIC
. The Impact of Early referral to ECMO centers in LMIC with Severe Acute Respiratory Failure
. Comparing different objective dynamic fluid assessment strategies that best suits LMIC
. Is AI guided escalation strategy for respiratory support superior to usual care
. Early versus delayed HFOT
. repeated short duration versus one single long-duration (16h or more) sessions of prone positionning
. What additional benefit (and at what cost) does NIV provide above HFNO in various acute diseases requiring supplemental oxygenation and respiratory support?
. What is the optimal oxygenation target when providing supplemental oxygen (and does the target differ for invasively ventilated versus non-invasively ventilated patients)?
. How can we safely implement non invasive respiratory support outside intensive care?
. Effect of steroids or antibiotics on clinical outcomes in critical Bronchiolitis/Viral Pneumonia
. what is the optimal oxygen target during acute respiratory failure at sealevel/high alttitude
. What are the major challenges limiting the oxygen access to patients?
. What is the cost benefit for delivering oxygen patient in hospitals?
. What are the morbidity and mortality rate attributable to the lack of oxygen source in a health facility?
. What are the Levels of asthma control of symptoms, defined as well controlled, partially controlled, and uncontrolled asthma, and description of factors affecting asthma control in Malawi.
. Mapping of availability of diagnostics and interventions for management of asthma and chronic obstructive pulmonary disease in secondary and tertiary hospitals in Malawi.
. Implementation research: Designing Malawi specific guidelines and care pathways for diagnosing, management, and follow up of asthma and chronic obstructive pulmonary disease patients in Malawi
. Does high flow with CPAP improve outcomes compared to standard low flow?
. Does early weaning from Oxygen to reduce exposure to hyperoxia improve outcomes?
. Health Economics of conservative use of oxygen in high flow CPAP blending - can this save resources?
. The wide use of HFNO reduces the need for intubation (globally and in LMICs) and reduces mortality
. The wide and proper use of NIV reduces the need for intubation (globally and in LMICs) and reduces mortality
. Improving sedation practices globally and in LIMCs improves the outcomes of invasively ventilated patients.
. Evaluating the role of AI in accurately assessing oxygen requirements, monitoring oxygen delivery, assessing oxygen saturation, regulating oxygen delivery and identifying potential complications of oxygen therapy, especially in special population groups.
. Developing and evaluating efficient portable solar powered oxygen delivery systems appropriate for remote resource poor facilities and communities.
. Evaluating more cost effective and easy to use Non-Invasive oxygen delivery systems in resource-limited settings, suitable for non-critical care specialists.
. Burden of illnesses that require respiratory support in the post-COVID-19 pandemic era.
. Impact of Oxygen interventions in the outcome of adult medical conditions
. Burden of illness
. simplicity, cost, engagement of LMIC partners
. prevention of respiratory failure
. low flow nasal cannula vs high flow nasal cannula to treat mild hypodermic patients (SPO2 90-92%)
. frequency, severity and outcome of severe cardiomyopathy (EF < 25%) in septic shock .
. BMI and outcome of Septic shock secondary to respiratory illness.
. What is the optimal weaning strategy for mechanically ventilated medical patients in South Asia?
. What are the most important outcomes for survivors of critical care and their families?
. What type of post-discharge rehabilitation service is feasible and improves long-term outcomes for survivors of critical illness in South Asia?
. What is the effect of HFNO vs NIV-face mack vs NIV-helmet on clinical outcomes for patients with AHRF?

Answers

. What is the effect of corticosteroids vs no corticosteroids on clinical outcomes for patients with AHRF?
. In a platform trial to determine comparative effectiveness in patients requiring IMV for AHRF is duration of mechanical ventilation shorter if ventilated with a specific ventilatory strategy (including driving pressure limited APRV) compared to usual care.
. In a platform trial to determine comparative effectiveness in patients requiring non-invasive respiratory support for AHRF is duration of mechanical ventilation shorter if ventilated with a specific strategy (including CPAP, HFNO, NIV) compared to usual care.
. In a precision medicine platform trial in patients requiring respiratory support for AHRF is duration of mechanical ventilation shorter if treated with a specific drug therapy compared to usual care.
. Safety and Effectiveness of high flow nasal cannula in acute respiratory failure from only Lower respiratory tract infections.
. Effectiveness of High flow nasal cannula in acute respiratory failure from traumatic chest injuries (Hemo/pneumo-thorax).
. Non-inferiority of Point of care Lung ultrasound in the diagnosis of severe pneumonia versus use of chest X-ray in resource limited settings.
. What are the most effective interventions to decease mortality and morbidity of hospital acquired infections in resources- limited regions?
. Can the use of point-of-care diagnostics reduce delays in the treatment of infectious diseases in resources-limited regions?
. What is the impact of nutritional support on critically ill patients with malnutrition ?
. Knowledge and Factors limiting optimal utilization of oxygen in LMIC
. Develop and validate algorithms for automated oxygen titration systems
. • Evaluate the economic and societal impact of various oxygen therapy interventions
. Comparison of using strict protocolised sedation strategies vs clinician driven strategies for early weaning from invasive ventilation?
. Can implementation of an early warning score in hospital settings accurately detect deteriorating patients and improve survival?
. Which are the appropriate tidal volume targets for invasively ventilated patients in sub-Saharan Africa?
. What are the most appropriate targets (SpO2 / FiO2) to trigger escalation of respiratory support (standard flow oxygen -> NIV/HFNO -> intubation -> +/- intubation + pronation) in sub-Saharan Africa?
. How can health systems support effective delivery of oxygen at the hospital population level to increase patient survival and increase health related QoL
. How can patients with severe chronic respiratory disease be engaged with their care planning to develop proportionate strategies to improve QoL
. What are the optimal strategies to stabilise patients with chronic respiraotory disease in the community and prevent the need for hospital admission and re-admission
. My hypothesis is that HFNC is better than NIV.
. Early invasive ventilation is better than Noninvasive
. Sedation during NIV is better than nonsedative
. Study looking into best minimum targets of oxygenation that would not compromise clinical outcome
. Strategies that would minimise risk of nosocomial pneumonia in patients on nasogastric tube feeding or ventilator in LMIC setting
. Study looking at patients and family preferences on end of life issues/discussions for patients with chronic diseases that are admitted with acute decompensation requiring respiratory support