Overview of the Lancet Global Health Oxygen Commission

April 2024
What is a *Lancet* Commission?

A scientific review, inquiry, and response to an urgent, and perhaps neglected or understudied, health predicament

- Science-led
- International collaboration
- Multidisciplinary
- Aims for (transformational) change
- Focused on policy and/or political action
- Report of no more than 20,000 words and 250 references
- Published in regular journal and printed as a stand-alone booklet
- Around two years in the making
What makes a strong *Lancet* Commission report?

- Bold message
- New, compelling findings
- New idea
- Forward looking and actionable conclusions
- Active afterlife
What are the goals of the Commission?

Identify and address major evidence gaps related to:
- hypoxemia and oxygen need burden
- oxygen access
- oxygen solutions
- oxygen financing, political economy and priorities for future research

Mobilize a broad coalition to promote best practices in:
- addressing gaps in medical oxygen delivery systems
- facilitating and conducting relevant knowledge generation to inform implementation

Accelerate investment efforts and impact towards stronger oxygen systems and reduced morbidity and mortality globally
What problem is the Commission addressing?
What are the barriers to oxygen access?

• **Weak hypoxemia detection and referral pathways** (e.g., lack pulse oximetry, social barriers, transport and cost barriers, etc.)
• **Unreliable and costly medical oxygen supply** to smaller facilities and disadvantaged communities (e.g., high cost, high risk, lack of pooled procurement)
• **Weak biomedical support** for oxygen-related devices (include lack of engineers, guidelines, tools, procurement, technology management plans, etc.)
• **Lack of strategic planning** and action on medical oxygen systems (e.g., funded plans, M&E systems, accountability, crisis flexibility, etc.)
• **Low healthcare worker capacity**, opportunity, and motivation to provide oxygen therapy (lack of staff, guidelines, clinical mentoring, etc.)
• **Weak broader health systems** infrastructure, workforce, and systems (e.g., workforce planning, quality of care, universal access, affordable health services)
Commission governance

**Commissioners**
20 experts from academia

- Makerere University, Uganda, Co-chair
- icddr,b, Bangladesh, Co-chair
- University of Melbourne/Murdoch Children’s Research Institute, Co-chair
- Karolinska Institutet, Sweden
- Every Breath Counts, USA
- Lancet Global Health, UK

**Executive**
6 institutions

**Advisors**
40 stakeholders from diverse sectors

**Oxygen Access Collaborators**
100+ global network
## Four work packages

<table>
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<tr>
<th>Category</th>
<th>Care levels</th>
<th>Ages</th>
<th>Indications</th>
<th>Health systems</th>
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<tbody>
<tr>
<td>1 Oxygen need</td>
<td>Home-care, Primary, Secondary, Tertiary, Transport, Emergency response</td>
<td>Neonates, Children, Adolescents, Adults, Older people</td>
<td>Pneumonia, COVID-19 &amp; other Acute &amp; Chronic Respiratory conditions, Birth &amp; Newborn Care, Emergency &amp; Critical Care, Anaesthesia &amp; Safe Surgery</td>
<td>Integrated Service Delivery, Health &amp; Biomedical Workforce, Logistics, &amp; Health Information management, Essential Medicines/Devices, Infrastructure, Financing &amp; Governance</td>
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<td>2 Oxygen access/coverage</td>
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<td>4 Oxygen financing/political economy</td>
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Four work package leads

1. Oxygen need
   - icddr,b

2. Oxygen access
   - Murdoch Children’s Research Institute

3. Oxygen solutions
   - Makerere University

4. Oxygen financing/political economy
   - Karolinska Institutet

Co-ordinates Executive Committee, Commissioners, Advisors, and Oxygen Access Collaborators and leads advocacy and communications.
### Oxygen need research questions

What is the burden (global and LMIC) of oxygen need from patients with hypoxemia and other conditions?

- Number of patients
- Underlying conditions
- Quantity of medical oxygen
- Cost of medical oxygen
How should medical oxygen access be defined, measured, and monitored?

- Standardising definitions
- Metrics for measurement
- Procedures for monitoring
- Synthesis of the state of oxygen access/coverage globally (and identification of critical data gaps)
- Recommendations for improving measurement and monitoring
3 Oxygen solutions research questions

- What are the barriers and enablers of medical oxygen access?

- What influences adoption, scale-up, and sustainability of pulse oximetry?

- What health worker and work environment factors influence the implementation outcomes of medical oxygen solutions*?

- To what extent have healthcare packages been used to contribute to scaling up and sustaining medical oxygen solutions*?

*pulse oximetry, oxygen sources, delivery interfaces, and associated procedures and processes
Outcomes of interest

Acceptability: Is the intervention acceptable to those implementing it?

Feasibility: Is the intervention easy to understand and use?

Appropriateness: Is the intervention perceived as relevant, compatible with setting, cultures?

Fidelity: Is the intervention able to be implemented as intended?

Adoptability: Is the intervention adopted?

Penetration: Is the intervention integrated and institutionalized as agency practice?

Cost: Is the intervention affordable?

Sustainability: Is the intervention easily maintained?
Political economy/financing research goals

- Develop and validate a scorecard to inform and track progress on medical oxygen access at the national level.
- Pilot-test and refine the scorecard with WHO Member States to assess the quality of current medical oxygen access, and to track progress at global, regional, and national levels.
- Document case studies of implementation of oxygen solutions in seven countries (Bangladesh, India, Malawi, Nigeria, Peru, Sweden, Uganda).
- Develop and conduct a cost-effectiveness analysis of selected scenarios increasing coverage of pulse oximetry and oxygen therapy in select countries.
Cross-cutting research questions

What is the investment case for improving medical oxygen systems?

- integrate data on need, coverage, cost, and benefit, and contribute to articulating an investment case

What is the missing data and what research questions need to be investigated?

- Commission will endeavour to set a research agenda and influence investment decisions
Proposed timeline (revised)

Meetings: Executive Committee (monthly), Oxygen Access Collaborators (monthly), Commissioners & Advisors (quarterly)
Stakeholder consultations

1. **Patients and caregivers**: To ensure patient input to the Commission, patients and their family representatives with direct experience of oxygen treatment across all regions will be invited to submit testimony.

2. **Industry**: To ensure industry input to the Commission, medical oxygen and respiratory device manufacturers serving all regions will be invited to share their views.

3. **Ministries of Health**: To ensure government input to the Commission, Ministries of Health representing countries in all regions will be invited to share their views.
Commission afterlife

Launches in WHO regions following publication with Regional Oxygen Ambassadors to promote recommendations with:

- Political influence in Africa, Asia/Pacific, Middle East, Americas, and Europe
- Large networks of influence (political, professional, and/or social)
- Excellent public speaking skills
- Credibility with health decision-makers

Adoption of recommendations by:

- Global Oxygen Alliance (GO₂AL) activities
- WHO Increasing Access to Oxygen Resolution implementation
- SDGs, including Universal Health Coverage movement
- Pandemic Prevention, Preparedness, and Response stakeholders
THE LANCET GLOBAL HEALTH COMMISSION

MEDICAL OXYGEN SECURITY

Find out more...

https://stoppneumonia.org/latest/lancet-global-health-oxygen-commission/
Join us!