DELIVERING THE NITROUS OXIDE PROJECT: A CASE FOR COLLABORATIVE LEADERSHIP

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Cardiff and Vale University Health Board (CAVUHB) is the largest health board in Wales. I brought together target stakeholders in healthcare and engineering subspecialties at the main site of CAVUHB in order to investigate nitrous oxide (N₂O) consumption. N₂O is a powerful climate pollutant, remaining in the atmosphere for up to 150 years and is 300 times more damaging than carbon dioxide. NHS Wales' total annual emissions for N₂O products is over 22,000 tonnes of carbon dioxide equivalents. Research at NHS Lothian has revealed that approximately 80% of piped N₂O does not reach patients due to systemic leaks, stock expiry, or theft. Results of investigations and audit suggest that the main CAVUHB manifold is exhibiting significant waste: 1.2 million litres of N₂O were purchased, compared to 50,000 litres recorded by anaesthetic machines supplied by the manifold in 2020-21. This project demonstrates how leadership should be collaborative and distributive: starting dialogues between departments led to visible accountability for each element of the N₂O infrastructure. Such teamwork encouraged a shared vision of greater transparency and less waste. Sustained change relies on the progress of the new CAVUHB taskforce comprising representatives from pharmacy, estates, and anaesthetics and will trial portable cylinder provision of nitrous oxide. Locally, mitigating N₂O waste reduces occupational exposure and saves money. Nationally, we co-founded the Nitrous Oxide Project, which promotes a lean systems approach for mitigating N₂O emissions, winning the Association of Anaesthetists Environmental Award for 2021 and shortlisted for the BMJ Environmental Award. I was encouraged and motivated by knowledgeable and supportive leaders whom I respect greatly. Rigorous implementation could result in net-zero emissions of anaesthetic N₂O within the next five years. Moreover, applying this research to Entonox® management could also demonstrate similarly significant benefits.

DEVELOPING A CONSENSUS TO GUIDE ECO-ETHICAL LEADERSHIP AND EDUCATION FOR SUSTAINABLE HEALTHCARE

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Healthcare contributes significantly to nature degradation. We must transform health systems to protect planetary health, on which human health depends. Crucial for this transformation is Education for Sustainable Healthcare (ESH) to prepare current & future health professionals, & nurture leaders who

can advance a shared vision & support constructive, collaborative action.

Methods Under the auspices of AMEE, a multidisciplinary team of health professional educators & students from four continents collaborated to develop a consensus statement (CS) to guide educators, students, educational institutions & accreditation bodies. Three lead authors facilitated the development of a framework, collaborative write-up, & incorporation of iterative feedback from contributors & independent expert reviewers.

Results The CS outlines a vision for the theory & practice of ESH, including a strategy to develop eco-ethical leadership. The CS describes elements of ESH which can be adapted to local contexts:

- Learning outcomes & objectives
- Educational strategies, including to incorporate a planetary health perspective within existing teaching without adding significant burden for educators & learners
- Assessments for learning
- Faculty development
- Route map & timeline for implementation
- Discussion of development of indicators to measure implementation
- Resources list, including curriculum frameworks & underpinning scientific, healthcare & educational literature
- Glossary

Discussion Challenges of online working included time zones, aligning varied perspectives & priorities, & building communities of practice.

Indigenous, student & practitioner perspectives from different countries are represented in the CS. We hope that further, diverse perspectives are involved in interpretation, implementation, & future revisions.

The CS provides a mandate & practical guide to develop health professionals confident & competent to lead transition to sustainable healthcare.

DEVELOPING MEDICAL EDUCATION IN A DEVELOPING COUNTRY

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Medical Education faces many challenges in developing countries like Honduras, especially when a traditional teacher-centred approach is still prominent. Thus, the need for an academic entity that encourages the introduction of new methodologies to enrich the country's medical education. The foundation of the first Honduran Medical Education Association (AEMH) was led by a former Honduran junior educator who is now based in the UK. To understand the extent of the situation several projects were designed using modern teaching methodologies widely used. One of these projects was the 1st Medical Education and Teaching of Research National Congress aimed at students and educators from different healthcare backgrounds representing an important milestone for Honduran Medical Education. As part of this event, event an Expert Panel was conducted in which the deans of medicine of the Medical Schools in Honduras were contacted, as well as the Medical Council