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

Representatives and were asked to participate as panellists. The methodologies addressed and used throughout the event were problem-based learning, reflective practice, formative feedback, and self-directed learning. The event was online and organised by Honduran healthcare professionals in 7 different countries. The congress allowed a national reflection on the methods currently used to train Honduran healthcare professionals and how this impacts patient care. Furthermore, a national discussion between the different medical schools was achieved which can open an opportunity for them to work together to improve training at all levels in the future. A much-needed transition from a traditional teacher-centre approach to a student-centred approach was discussed. Ultimately, the second national training survey following the first survey conducted in 2019 to assess the short-term impact of our national intervention is programmed.

17 DEVELOPMENT OF AN INTRODUCTION TO LEADERSHIP FOR EMERGING AND ASPIRING DOCTORS (I LEAD) COURSE

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It is accepted that all medical trainees have a leadership role alongside their clinical duties and it is widely required that specialty trainees complete a leadership training course prior to CCT. However there is little training and guidance for more junior trainees, nor a structured pathway of leadership training that would enable trainees to make impactful contributions to their teams and to quality improvement throughout their training journey. Therefore Health Education England aimed to develop a leadership training programme that was accessible from foundation level onwards to inspire and engage trainees and provide a platform to more in-depth training to those with a specialist interest in clinical leadership. This work focusses on the development and delivery of the Introduction to Leadership for Emerging and Aspiring Doctors (I LEAD) course for trainees at Addenbrooke's Hospital.

Three learning pillars were identified of leading self, leading others/teams and leading for improvement. The themes of patient safety, innovation and resource utilisation were present across each of these pillars. We designed sessions to explore team working, psychological safety, culture & leadership, operational management, quality and service improvement.

Anonymised written feedback was collected from 100 participants. 88% found the study day useful and felt it would change their practice, 9% were neutral and 3% did not find it helpful.

It is our intention that the health care system will benefit in a number of ways. We would anticipate increased staff well-being and retention due to self-management strategies. Skills gained in managing others and the team will lead to more effective and efficient teams. Increased understanding will lead to increased engagement with quality improvement projects and service development. Ultimately the identification and development of the clinical leaders of the future will continue to benefit all stakeholders moving forwards.

18 ENABLING FACTORS FOR QUALITY IMPROVEMENT ACTIVITY – RESULTS FROM A NATIONAL SURVEY

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Aims To identify enablers of success that can be used by junior doctors when undertaking Quality Improvement (QI) projects.

Methods In 2019/20 the Trainee Steering Group (TSG) of the Faculty of Medical Leadership and Management (FMLM) conducted a survey of FMLM members which explored aspects of leadership and management development.

Results 64 respondents answered questions related to QI.

For those involved in successful QI projects the key groups identified in supporting the projects were Other doctors (57%), Consultants (54%), Audit/QI departments (34%), medical students (24%) and nursing staff (24%).

Factors which were felt to have enabled a project's success were the involvement of senior figures (25%), importance of a team approach (22%), time to undertake QI, QI support (including QI departments, teaching and forums) (13%) and enthusiasm/perseverance (13%).

Ways in which respondents felt their employer could help make sustainable improvements included facilitating time to undertake QI activities (25%), supportive senior leadership and environments which support QI (23%) and mechanisms to 'handover' QI projects thereby overcoming the impact of short trainee rotations (14%).

Conclusions When junior doctors undertake QI projects their chance of success can be strengthened by working in a team which ideally includes a senior leader. They also benefit from engaging with their organisation's QI resources and support. Finding time to execute the project is essential and needs consideration and planning.

Organisations enable the success of junior doctor QI involvement by creating environments in which QI is celebrated, supported and visibly encouraged by senior leaders. Developing a process for 'handing over' projects is recommended. Facilitation of time to undertake QI remains a key enabler.

The TSG have produced 'Top Tips for QI', a document to share these key messages with junior doctors, enabling them to learn from the experience of their peers.

19 ESTABLISHMENT OF ACUTE RESPIRATORY HUB (ARH) SERVICE DURING COVID-19 PANDEMIC

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Background During the COVID-19 pandemic, it was necessary to rapidly reconfigure primary care to enable COVID-19 patients to be seen in dedicated respiratory hubs to avoid risk to existing primary care staff, avoid admissions and protect secondary care services. A rapid deployment of primary care respiratory services was implemented as a result.

Aims/Objectives To study the experience of rapid re-deployment of primary care services into dedicated respiratory hubs during the COVID-19 pandemic.