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'Safe anaesthesia care for all' in India - Challenges

The provision of adequate surgical cover is a prerequisite to accomplishing local and global health goals.^[1] A large section of people seeking surgical care cannot afford the financial burden of medical treatment. About 90% of patients in low- and lower-middle-income countries do not have access to primary surgical care.^[2] Safe anaesthetic care is essential to ensure safe outcomes of surgery. Five billion people across the world have no access to safe anaesthetic care. In this issue of the journal, Law *et al.* spell out various issues and barriers in the path to achieve safe and accessible anaesthesia care.^[3]

The Lancet Commission on Global Surgery (LCoGS) recommends a density of 20 anaesthetists per 100,000 population.^[2] The commission suggests an average minimum threshold of 5000 surgical procedures per 100,000 population by 2030. Sufficient trained anaesthesia providers are needed to cater for such large surgical volumes. The World Federation of Societies of Anaesthesiologists (WFSA) suggested, as an interim, that 5 of these 20 trained anaesthesia service providers should be physician anaesthesiologists.^[4] Another estimate, using a methodology similar to that followed by the LCoGS, recommended a minimum density of 4 of 100,000 physician anaesthesiologists.^[5] This workforce gap must be filled up by well-trained non-physician anaesthesia providers (NPAPs), primarily to provide services in rural areas.^[6]

In 2006, Kenya initiated a registered nurse anaesthetist (RNA) training programme to overcome the shortage of anaesthesiologists in the country. This 18-month training programme aims strategic placement of these graduates in rural hospitals after a robust, competency-based and context-specific curriculum. The availability of RNAs has increased the anaesthesia capacity at the hospitals, enabling them to enhance

their surgical load.^[7] Hospital administrators reported increased confidence in the care of sicker surgical patients and an increase in the number of surgical interventions. The trained NPAP had a substantial positive impact on hospital economics and increased patient access. The programme had an economic impact of increasing the earning of the physician anaesthesiologists and the RNA. Safe anaesthesia outcomes, after anaesthesia administration by trained NPAP, have also been reported by other studies.^[8,9]

India is on a journey of economic consolidation and rapidly making strides to climb up from the category of 'middle-income' to 'developed.' Ensuring 'Healthcare for All' is vital to achieving this objective. Although healthcare-for-all has been a back burner during politicking, unfortunately, no sombre forays have been made in our national polity to achieve it. The Government of India introduced the Ayushman Bharat as a step towards widening the health cover to the remote areas and the underprivileged. However, its reach in its current avatar has been miserly. We have only 1.27 physician anaesthesiologists per 100,000 population at present.^[3] We face a severe crunch of trained doctors, despite many new medical colleges opening up. It is not possible to train an adequate number of physician anaesthesiologists to meet this shortfall.

In India, we do not have a legal status for NPAPs. Some agencies and universities have certificate courses for NPAPs, but there is no uniformity of background, curriculum, accreditation agency or length of training. The training quality and service delivery of NPAP are thus unsatisfactory, and their certification is unscrupulous. There is an emergent need to initiate an accredited training programme for NPAPs with legal sanction. The essential qualification to enroll in the

programme should be graduation in a paramedical field. The trainees must be licensed after a competency-based examination on completion of the training period. The programme should have a rural component to train them to deliver in such environment. The trained NPAP would work under the direct supervision of physician anaesthesiologists in hospitals.

A significant hurdle faced is the acceptance of NPAPs by the medical community. A Cochrane Collaboration review was designed to consider whether anaesthesia can be provided equally effectively and safely by nurse anaesthetists. The studies reviewed had a bias in allocation concealment and blinding, and thus the review was not conclusive.^[10] Nurse anaesthetists have played in the development of anaesthesia techniques.^[11] Given the magnitude of the shortage of anaesthesia service providers, anaesthesiologists need to take a lead role in the development of an NPAP workforce. Anaesthesiologists should propose, design, guide and conduct appropriate NPAP training programmes to ensure quality. Successful training of NPAPs requires adequate volume and variety of surgery, appropriate equipment, a structured and comprehensive programme, and recognition of the programme by the government and medical professional bodies.^[12] The economic output lost secondary to surgical conditions has a profound effect on the gross domestic product (GDP). It is estimated that by 2030, the lower-middle-income countries the surgical load could reduce annual GDP growth by almost 2%.^[13] Investment in healthcare infrastructure and workforce development makes good economic sense. Cost-effectiveness analysis, using the World Health Organization cost-effectiveness ratio, suggests that surgical and anaesthesia care in these countries is a good health investment, even when considering capital investment.^[14] Our government should recognise that it is good politics to invest in an effective, well-trained paramedical workforce.

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