Human Resources for Health in Global Surgery and Anaesthesia

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The Surgical Workforce

• An interdependent network of surgical, anaesthetic, and obstetric providers, nurses, radiologists, pathologists, technicians, rehabilitation specialists, managers, trainees, community health workers, and more

• Shortages in numbers and distribution exist throughout the surgical workforce
  – By how much previously unknown
The Surgical Workforce

There are approximately

1 million specialist surgeons
550,000 specialist anaesthetists
480,000 specialist obstetricians

worldwide
The Surgical Workforce

1/6 of the world’s anaesthetists
1/5 of the world’s surgeons
1/4 of the world’s obstetricians

Serve the poorest 1/2 of the world
The Surgical Workforce

12% of the specialist surgical workforce works in Africa and southeast Asia, serving 1/3 of the world’s population
The Surgical Workforce

With these numbers is it possible to achieve

Universal access to safe, affordable surgical and anaesthesia care when needed?

How much is enough?
The Surgical Workforce Indicators

**FIGURE 1.** The relation between MMR and density of surgical providers in 143 countries with available data. Logarithmic trendline used to show the gradient of improvement in MMR as providers increase.
The Surgical Workforce

• **44%** of the world lives in countries with **less** than **20** specialist **Surgeons**, **Anaesthetists**, and **Obstetricians** per 100,000 population

• **28%** of the world lives in countries with **more** than **40** specialist **Surgeons**, **Anaesthetists**, and **Obstetricians** per 100,000 population

• Today: global **shortage** of **1 million** specialist **Surgeons**, **Anaesthetists**, and **Obstetricians** in **136 low- and middle-income countries** (40/100K)

• By **2030**, **minimum of 2.28 million** additional specialist **Surgeons**, **Anaesthetists**, and **Obstetricians** are needed (40/100k)
The Required Scale Up of the Surgical Workforce (20/100K)
Task Shifting

• At least 30 countries employ surgical task shifting

• At least 108 countries employ anaesthetic task shifting

• Controversial

• Task Sharing: tasks are transferred from one professional to another to maximise human resources, but both the specialist provider and the provider with less training share the responsibility for a high-quality outcome of the task.
Task Sharing

Cost and time savings of 40%
Task Sharing

• Each country should decide whether task sharing is appropriate for their needs

• Associate Clinicians and General Practitioners are not meant to replace specialist providers

• Clear scopes of practice should be defined

• Associate clinicians and general practitioners should be held to high standards of accreditation, licensing, and relicensing
Additional Means to Expand the Workforce

- Contract the Private Sector to Train
- Hardwire a training component into surgical/anaesthetic NGOs
- Regional partnerships
- High-Income Country (HIC) partnerships
- Tele-mentoring and education
- Train the Trainer (TTT)

Photo courtesy of Robert Riviello
Additional Means to Expand the Workforce

• Distribution
  – Rural exposure during training with appropriate support and infrastructure
  – Local Training
  – Rural Incentives
  – Loan Repayment options for Rural Service
  – Bonding
Beyond Numbers: Quality of Training

- Competency-based training
- Curriculum based on needs of communities
- Simulation
- Accreditation of all training programs (for all cadres)
- Licensing and re-licensing for all cadres
- Continuing Professional Development (CPD) for all cadres
Thank You!