Educational Needs in Simulation Identified by Surgical Program Directors in Low-Middle Income Countries

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Introduction

Background:

•The workforce shortage plays a key role in the global burden of surgical disease disproportionately affecting low-middle income countries (LMIC)[1].

•The **educational pipeline**, which includes surgical residency training programs, is vital to the **surgical workforce**.

•The success of surgical residency training has direct ramifications on the preparedness and adequacy of the surgical workforce.

•Surgical simulation has been suggested as a potentially beneficial educational modality in this setting[2,3].

•The **specific educational needs** of surgical residency training programs with respect to simulation in LMIC have not been well-defined.

Methods

Research Question:

How do surgical program directors in LMIC think that **surgical simulation** could be most useful to their residents?

Methods:

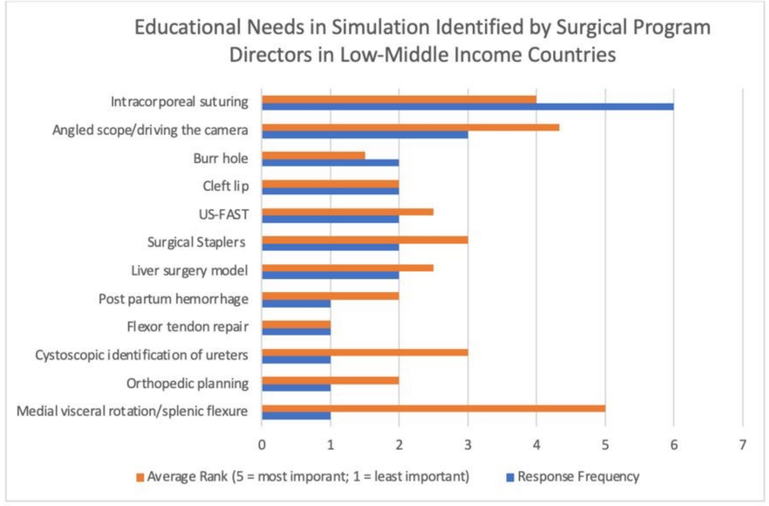
•A survey of program directors (PD) and associate program directors (APD) in 11 general surgery training programs across eight LMICs in Africa (**Ethiopia, Kenya, Cameroon, Niger, Tanzania, Gabon, Malawi, and Egypt**) was conducted.

•In a modified Delphi methodology (2 rounds), PDs and APDs were asked to identify psychomotor skills they felt would most benefit from surgical simulation.

•Initially submitted responses were consolidated, categorized by specialty, and redistributed to PDs to be ranked by priority.

Results

- Response from **8/11** programs.
- Round 1 - 19 unique responses
- Round 2 - Highest priorities attributed to **laparoscopic skills**, specifically: 1) Use of angled laparoscope, 2) Advanced skills including intracorporeal suturing.
- 6/8 program directors ranked **intracorporeal suturing** as a top simulation priority.



Conclusion

- A potential area of focus for curriculum development in surgical residency training programs in LMIC is the **simulation of laparoscopy** (including advanced laparoscopic skills).
- Surgical educators in these LMIC surgery training programs had high interest in advanced laparoscopic training, **contrary** to the expected traditional educational focus on **open skills** and procedures.

References:

[1]Meara, John G et al. "Global Surgery 2030: evidence and solutions for achieving health, welfare, and economic development." Lancet (London, England)

[2]Campain, Nicholas J et al. "An Evaluation of the Role of Simulation Training for Teaching Surgical Skills in Sub-Saharan Africa." World journal of surgery

[3]Tansley, Gavin et al. "Efficacy of Surgical Simulation Training in a Low-Income Country." World journal of surgery