

GLOBAL SURGERY 2030

National Surgical Plan Terms of Reference

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FINANCING, INFORMATION MANAGEMENT & TECHNOLOGY

Committee Terms of Reference

Introduction

The efforts of this committee will focus on three broad areas. First, understanding and assessing current data flows as well as opportunities to optimize and advance this to improve patient care. In addition, will evaluate current data sources, measurements, and management platforms. Based on this information, the group will develop a strategy to prioritize and optimize resources. This committee is also responsible for creating metrics for topics deemed most important within the other committees and will therefore work closely with them in doing so. Second, the group will evaluate current use of technology and develop a strategy to explore opportunities to optimize future application of new technologies.

Lastly, the group will look at surgery from a financial perspective. This will involve consideration of the impact of expenditures to patients as well as opportunities for health sector development. In investigating costs associated with surgery, they will look at direct costs of delivering care and out of pocket costs to patients and their families. Key considerations will include options for health financing, accounting, budget allocation, and investments.

Key Stakeholders

- Governments (Ministries of Health, Education, Finance & Labor in LMICs)
- Funding organizations (World Bank, USAID)
- Monitoring organizations (WHO, UN)
- Educational Bodies (Training Colleges, Others)
- Academic & Professional Entities
- Industry

Suggested Readings

Information Management & Technology

- The Lancet Commission on Global Surgery; Global Surgery 2030: evidence and solutions for achieving health, welfare, and economic development; Information Management, pgs 35-44
- Weiser et al, Standardised metrics for global surgical surveillance

Financing

- The Lancet Commission on Global Surgery; Global Surgery 2030: evidence and solutions for achieving health, welfare, and economic development; Economics and Financing, pgs 27-35
- Jamison DT et al, Global health 2035: a world converging within a generation, Lancet 2013; Executive Summary & Section 6: Health systems finance, pages 1898-1901 & 1930-1939
- Alkire BC, Shrimme MG, Dare AJ, Vincent JR, Meara JG. Global economic consequences of selected surgical diseases: a modeling study. Lancet Glob Health 2015; 3.

Facilitated Discussion Outline

KEY METRICS

1. All (with respect to information management capabilities); and specifically:
 - a. Protection against impoverishing expenditure
 - b. Protection against catastrophic expenditure

Financing

SURGERY & ANESTHESIA WITHIN UNIVERSAL HEALTH COVERAGE

1. What is the system of universal health coverage within the country?
2. What procedures, packages, platforms of care are provided within UHC as pertains to surgical and anesthesia care?

TRACKING FINANCIAL FLOWS TO SURGERY

1. What percent of health financing is public vs private vs donations?
2. What percent of the national health budget is invested into surgical care?
3. What is currently spent on surgical and anesthesia care? Is there health spending and funding flow clarity/transparency? If not, how can we achieve that?
4. What is the projected cost of scale-up of surgical care?
 - a. Cost of first-level hospital construction
 - b. Cost of workforce scale-up
5. What are key or possible areas of external funding?
6. Are budget/resources allocated by district or province based on surgical need/output?
 - a. If not, how could we start doing this? Do we want to start doing this?
 - b. What ways can we adjust allocation for unanticipated need?
7. Recommendations?

PATIENT COSTS OF SURGICAL CARE

1. What does the insurance system look like? How many people have private insurance?
 - a. What types of surgical care is not covered under the universal health care scheme?
2. Out of pocket costs
 - a. Supposed to be free access to care but patients still have out of pocket expenses such as transportation, can we quantify this amount?
 - i. What else are people paying for? (e.g. gloves, gauze, medications)
 - ii. What are the consequences of these costs? Delayed care? Not presenting at all?
3. Patient/family productivity losses
 - a. Can we quantify this amount lost in wages or productivity elsewhere?

HEALTH SYSTEM COSTS OF SURGICAL CARE

1. What is known about the costs for surgical care?
 - a. Specifically, what are the costs for the 3 Bellwether procedures?
2. What are the costs to develop surgical infrastructure and ancillary support?
3. What financial investments will be required to scale up surgical services offered?
4. Marginal costs of surgery - After infrastructure has been established, what is the cost of a single operation?

OTHER

1. What sectors are currently using framework contracts? Where may be advantageous areas to expand framework contracts to in order to avoid influences of price fluctuations?
 - a. Pharmaceuticals
 - b. Consumables
2. Are there Pay for Performance or Results Based Financing Programs?
 - a. What are they?
 - b. Are there opportunities to expand this into the surgical sector?
 - i. Discuss metrics/indicators to measure

CROSS-SECTORIAL RELATIONSHIPS

1. How does the Ministry of Health work with the Ministry of Finance?
 - a. What priority is health to the Ministry of Finance?
 - b. What type of relationships should we be establishing or fostering?

LINKS WITH WORKFORCE

1. Salaries?
2. Prospect of incentive programs to keep people in rural areas?

Information Management & Technology

SURGICAL AND ANESTHESIA INDICATORS

1. What data can be useful to the system?
2. Specifically, what data are currently being collected pertaining to surgical and anesthesia:
 - a. Access and availability
 - b. Safety and Quality (Structures/Processes/Outcomes)
 - c. Finance
 - i. Financial impact/performance on system
 - ii. Financial impact on patients
3. How can we collect the LCoGS-recommended minimum surgical dataset? (i.e. which databases/registries already have these answers?)
 - a. Access to timely essential surgery
 - b. Specialist surgical workforce density
 - c. Surgical Volume
 - d. Perioperative mortality rate
 - e. Protection against catastrophic expenditure
 - f. Protection against impoverishing expenditure

DATA COLLECTION MODALITIES

1. What methods of data collection/registries exist?
 - a. Data collectors
 - b. Disease/condition specific registries?
2. What barriers exist to facility-level data collection and reporting?
3. Is this data being used to strengthen and improve the system (QI)?
 - a. Method of key event review?
4. How can we begin to use the data available? How can we better use this information moving forward?
5. What additional information is important and useful to collect/measure?
6. Recommendations?

IT INFRASTRUCTURE

1. What are the current practices and platforms?
2. What gaps currently exist?
3. What are the challenges to development and implementation of IT infrastructure?
4. Recommendations?
 - a. Applicability, utility (which tools provide value added)
 - b. How to measure improvement?

ELECTRONIC MEDICAL RECORDS

1. What is currently being used?
 - a. What information are they collecting/measuring?
2. What are the plans for scale up?
 - a. What plans exist to create a unique patient identifier across hospitals?
 - b. Discussion of both expansion of scope and expansion of utilization.
3. Medical classification system
4. Recommendations?

RESEARCH

1. What type of surgical and anesthesia research is most necessary?
2. Content: types of research, focus of research (project generation and direction)?
 - a. What nationwide or systems research is currently being coordinated?
 - b. What should we be adding to the research docket?
 - c. In what sector is research most lacking?
3. Recommendations?

HEALTHCARE DELIVERY & INFRASTRUCTURE

Committee Terms of Reference

Introduction

This committee will explore practical aspects of surgical care delivery and infrastructure. They will identify delays to care that may result from insufficient or inadequate surgical facilities, facility readiness, blood supply, and referral systems. It will also evaluate existing supply chain reliability and needs, equipment/technologies, drugs, gaps in surgical volume, system coordination and quality and safety of the system.

Key Stakeholders

- Governments (Ministries of Health, Education, Finance & Labor in LMICs)
- Funding organizations (World Bank, USAID)
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- Educational Bodies (Training Colleges, Others)
- Academic & Professional Entities
- Industry

Suggested Readings

Healthcare Delivery

- The Lancet Commission on Global Surgery, Health Delivery & Management, pages 579-587
- Raykar NP, Bowder AN, Liu C, Vega M, Kim JH, Boye G, Greenberg SL, Riesel JN, Gillies RD, Meara JG, Roy N. Geospatial mapping to estimate timely access to surgical care in nine low-income and middle-income countries. *The Lancet*. 2015 Apr 27;385:S16.

Facilitated Discussion Outline

KEY METRICS

1. Relevant LCoGS indicators
 - a. 2h access
 - b. Volume of surgery at all facilities
 - c. Peri-operative mortality rate
2. Additional metrics
 - a. Blood donation rate
 - b. Facility oxygen

NUMBER AND DISTRIBUTION OF SURGICAL FACILITIES

1. What percent of your population has access to surgical facilities that perform surgery?
 - a. Do you know how many functional surgical facilities exist and where are they located?
 - i. If not, where/how can this information be obtained?
 - b. Are facilities equipped with minimum needs to provide the Bellwether procedures?
 - i. What constitutes these minimum needs? (can committee propose a consensus list)
 - ii. Core supplementary needs
 1. How is blood banking distributed nationwide?
 2. How is oxygen distributed nationwide?
 3. Laboratory services?
 4. Pathology?
 5. Imaging services?
 6. Biomedical equipment repair strategy?

PERIOPERATIVE SERVICES

1. PACU
 - a. Is there a PACU with monitored beds and dedicated nursing/clinical support?
2. Advanced Care
 - a. Are there ICUs or advanced care units for critically ill patients at each district hospital?
 - b. What are the minimum standards of an advanced care unit?

STATE OF SUPPLY CHAIN, ORDERING, PURCHASING

1. What are the core challenges?
2. Is there a system of centralized purchasing for surgical equipment, supplies, medicines ordered into the country?
3. What is the system of distributed of these goods throughout the country?
4. Are there frequent stockouts and of which equipment, supplies, medicines?
5. How can the supply chain be improved?
6. Integration of Donated Equipment
 - a. Is there a high volume of donated equipment?
 - i. What are the challenges and benefits?
 - ii. How can it be optimized? Should there be a nationally coordinated donation strategy?

ABILITY OF FIRST-LEVEL HOSPITALS TO CONSISTENTLY AND RELIABLY PROVIDE LAPAROTOMY, CAESAREAN DELIVERY, STABILIZATION OF OPEN FRACTURE (THE BELLWETHER PROCEDURES)

1. How much surgery is performed at each facility?
 - a. Where/how can this information be obtained?
 - i. The Lancet Commission's definition of surgical procedure is something that is performed "inside an operating theatre." - What classifies as an "operating theatre"?

- b. How many of the Bellwether procedures are performed yearly at each facility?
 - i. Is this monitored and can it be?
 - ii. According to Lancet Commission, surgical functionality is defined as ability to perform Bellwether Procedures consistently and reliably
- c. Is there variation in ability to deliver service during times of day or times of week?
 - i. Are there contingencies (referral plans) for those time periods?

NATIONAL BLOOD PLAN

1. Do all first-level hospitals have access to a safe, affordable blood supply?
 - a. Which do and which do not?
 - b. How many blood banks exist?
 - c. Where are they located?
2. What is the blood donation rate?
 - a. Where can this information be found?
3. Are alternatives to blood transfusion utilized?
4. Are protocols for blood transfusions present in the hospital?

CONNECTIVITY ACROSS CARE DELIVERY CHAIN

1. Referral into the surgical system and connections to the community
 - a. Does the community rely on PHCs or traditional healers?
 - i. What is the linkage between these levels and the first-level hospital?
 - ii. Are there outreach efforts involving PHCs, traditional healers, community health workers? What can be done to enhance?
2. Referral between levels of care (1st-level to 2nd-level or 3rd-level)
 - a. Do formal and functional mechanisms exist for referral to higher levels of care?
 - i. Referral criteria (e.g. appropriateness of referral)
 - ii. Transfer logistics (e.g. ambulances)
 - b. What is the feedback to lower levels of care from the tertiary back to referrer?
 - c. Minimum set of procedures that should be handled at each level

COORDINATION OF CARE AMONGST PUBLIC/PRIVATE

1. How much care is delivered by the public sector? How much is delivered by the private, for-profit sector? How much is delivered by the NGO/charitable sector?
2. How is the private sector integrated into the care delivery system? How are NGOs incentivized for a diagonal approach?

HEALTHCARE MANAGEMENT TRAINING

1. Are there formally trained, professional healthcare managers in the system (or is leadership defaulted to clinical leadership)

QUALITY IMPROVEMENT PROCESSES AND OUTCOMES MONITORING

1. What measures of outcomes or system quality are routinely monitored?
 - a. Is the peri-operative mortality rate tracked at individual facilities?
 - i. Is it tracked at the system level?
 - b. Is the WHO Safe Surgery Checklist implemented across the system?

SYSTEM-WIDE CONNECTIVITY

1. Are there current telemedicine technologies available for system wide connectivity?
2. Are there technologies focused on system wide education?
3. How are current technologies used for clinical support?

SURGICAL WORKFORCE

Committee Terms of Reference

Introduction

Comprised of surgeons, obstetricians, anesthesiologists, nurses, and allied health personnel, the surgical workforce creates the backbone of the surgical health system. Despite the continuous supply of new trainees, this supply is insufficient to meet the growing demand as evidenced by the surgical burden of disease. This is made worse by attrition and migration of workforce members to both urban areas and other countries.

In this committee, we will first address the current state of the surgical health workforce crisis. Existing education, training, and licensing practices will be evaluated with attention paid to the urban-rural divide, incentives, attrition, and current workforce planning initiatives.

Secondly, we will identify gaps present using the initial review of the current state to highlight key areas requiring attention in National Surgical and National Health Strategic Plans.

Thirdly, we will create short-, mid-, and long-term solutions to fill these gaps and ensure a continuous supply of educated and trained employees into the workforce.

Key Stakeholders

- Governments (Ministries of Health, Education, Finance & Labor in LMICs)
- Funding organizations (World Bank, USAID)
- Monitoring organizations (WHO, UN)
- Educational Bodies (Training Colleges, Others)
- Academic & Professional Entities
- Industry

Suggested Readings

- The Lancet Commission on Global Surgery, Workforce, training and education, pages 19-27
- The Labor Market for Health Workers in Africa; The World Bank, 2013
- Kolstad JR. How to make rural jobs more attractive to health workers. Findings from a discrete choice experiment in Tanzania. *Health Econ* 2011; 20: 196–211.
- Makapela NC, Useh U. Rural allowance and the retention of health professionals in selected hospitals in the North West Province of South Africa. *J Hum Ergol (Tokyo)* 2013; 44: 129–38.
- White CD, Willett K, Mitchell C, Constantine S. Making a difference: education and training retains and supports rural and remote doctors in Queensland. *Rural Remote Health* 2007; 7: 700.
- WHO. Increasing access to health workers in remote and rural areas through improved retention: global policy recommendations. 2010. http://www.searo.who.int/nepal/mediacentre/2010_increasing_access_to_health_workers_in_remote_and_rural_areas.pdf (accessed March 20, 2015).
- WHO. Task shifting: global recommendations and guidelines. 2008. <http://www.who.int/healthsystems/TTR-TaskShifting.pdf>

Facilitated Discussion Outline

KEY METRICS

1. Relevant LCoGS indicators
 - a. Surgeon, anesthesiologist, and obstetrician density
 - b. 2h access (what facilities employ a full-time surgeon, anesthesiologist, or obstetrician)
2. Additional metrics
 - a. Number, location, and density of task-sharers/task-shifters
 - b. Number, location, and density of allied surgical personnel
 - c. Provider growth rate, attrition rate, retiree rate
 - d. Training program number, number accredited, growth rate; associated output, available postgraduate positions (number and location)

WORKFORCE

1. Are the specific numbers of surgeons, anesthesiologists, obstetricians, or allied health providers (nursing, biomedical engineers, radiologists, pathologists, laboratory technicians, operational managers, etc.) monitored?
 - a. What is the past and present density of these varying providers? How has it evolved to this?
 - b. What training programs exist for these fields? How long have they existed? What are their historical and projected outputs? Are any more training programs being developed currently?
 - c. What options exist when a provider is unavailable to provide care? Can related professions access additional training for broader based care to address the needs?
2. How is the workforce population distributed (LMIC vs. HIC, rural vs. urban, public vs. private)? What major factors have led to this distribution (incentives, requirements, access, etc.)?
3. Expansion/redistribution
 - a. Describe the desired situation
 - b. How do we get there?
 - c. How to measure success/failure?
 - i. How possible is it to collect population density of the different surgical providers? Can attrition and retiree information be collected as well?

EDUCATION AND TRAINING

1. Define the current situation:
 - a. What are the current baseline requirements, processes, and lengths of time necessary to train in the varying surgical fields?
 - b. How many general trainees seek out surgical positions each year?
 - c. How are these training positions created and funded?
 - d. Who is responsible for curricula, education material availability/accessibility, and teaching? How are these training programs accredited and monitored to ensure success?
 - e. What options for continuing education or maintaining standards exist for the surgical workforce?
2. What efforts have been made to increase training output or quality?
 - a. What has succeeded and what has failed? Are outcome measures collected for existing interventions?

3. Expansion
 - a. Describe the desired situation
 - b. How do we get there?
4. Barriers
 - a. How to measure success/failure?
 - b. What are the metrics

SUPPLY AND DEMAND

1. How is the inflow/outflow both internally and externally of trainees and professionals monitored and how significant is this problem?
 - a. What fields are most affected and what other options do these individuals pursue?
 - b. What factors affect this decision?
 - i. E.g. Disaster relief, wars, educational, personal, and financial opportunities, remuneration
 - c. Do public, private, NGO, military, etc. institutions face the same situation?
 - d. What efforts have been made to decrease the outflow and increase the inflow?
 - i. What has succeeded and what has failed?
2. Retention
 - a. Describe the desired situation
 - b. How do we get there?
3. Barriers
 - a. How to measure success/failure?
 - b. What are the metrics

TASK SHIFTING/SHARING

1. Define the Current Situation
 - a. Who are middle level providers?
 - b. What is the difference between task shifting and task sharing?
 - c. How did this develop?
 - d. What are the pros and cons?
2. Describe the Desired situation and how we get there especially in regards to:
 - a. Appropriate supervision/monitoring
 - b. Decision making is a cultivated and learned skill
 - c. What are the barriers to achieving the desired situation?
 - d. Controversial topic
3. Outcomes
 - a. Is there a difference in outcomes between mid-level providers and surgeons?
 - b. Cite cases where task shifting/sharing has been successful
 - c. Are there any publications describing an instance in which task sharing/shifting did not work?