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Santa Fe de Bogotá

# Surgical System Situational Analysis: Preparedness, Service Delivery, and Cost

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## Disclosure

- USAID Grant: AID-OAA-A-14-00071, “A syndemic Approach to Trauma Systems Regionalization in Colombia.” Collaborator Dr. Carlos Ordonez, Hospital Universitario del Valle, Cali, Colombia. 10/2014 – present (3-year grant; 4<sup>th</sup> year no cost extension)
- Zoll Medical Corporation – Colombian National Surgical Planning meetings for Latin American Indicator Research Collaboratory. AY 2018-2019



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# Simplify – Contextualize the system

- An entity that maintains its existence through the mutual and successful interaction of its PARTS
- A surgical system situational analysis of its parts:
  - Preparedness, service delivery, and cost protection



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## Surgical Care within the Health System

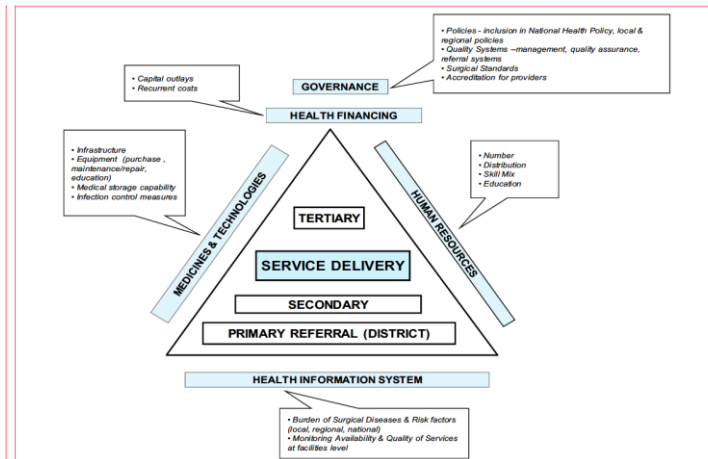


Fig. 1 This figure illustrates our conceptual model concerning the integration of surgical services within a health system, based on the six health systems building blocks (shaded). We elected to place service delivery centrally for emphasis



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**SURGICAL SYMPOSIUM CONTRIBUTION**

**Surgical Care and Health Systems**

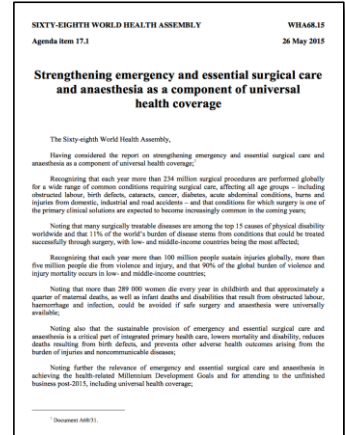
David A. Spiegel · Mohit Misra · Peter Bendix · Lars Hagander · Stephen W. Bickler · C. Umar Saikh · Martin Haacke-Monson · Dinaa Raah-Oudon · Amber Caldwell · Beryl From · Sheik Amir · Robert Taylor · Mays Layeh · Helena Halle · Syed Mohammad Awab · Raymond R. Price · Sarah Crockett · Mune Islam · Health Systems Strengthening Working Group of the Global Initiative for Emergency and Essential Surgical Care

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The surgical system is named and defined; but measured?



WHA 68.15 - Global language for timely, quality, and affordable surgical Healthcare



Simplify communication

- Design of a language we can both speak
- Design of a language that we both understand
- Design of a language that affords cross-disciplinary measurement



2015 5 Key Messages –  
Modeled Measurement: A Call for Action to Provide Timely, Quality, and Affordable Surgical Healthcare Services

**LANCET COMMISSION KEY MESSAGES**

- **5 BILLION** PEOPLE LACK ACCESS TO SAFE, AFFORDABLE SURGICAL AND ANESTHESIA CARE WHEN NEEDED
- **143 MILLION** ADDITIONAL PROCEDURES ARE NEEDED YEARLY TO FILL UNMET NEED
- **33 MILLION** FACE CATASTROPHIC EXPENSE AFTER SURGICAL CARE YEARLY
- **INVESTMENT** IN SURGICAL AND ANESTHESIA CARE SAVES LIVES, IS AFFORDABLE, AND PROMOTES ECONOMIC GROWTH
- **SURGERY IS AN INDIVISIBLE, INDISPENSABLE PART OF HEALTH CARE**

Cost of Surgical Expansion (2015-2030)

**\$350,000,000,000**

Total GDP Losses (2015-2030)

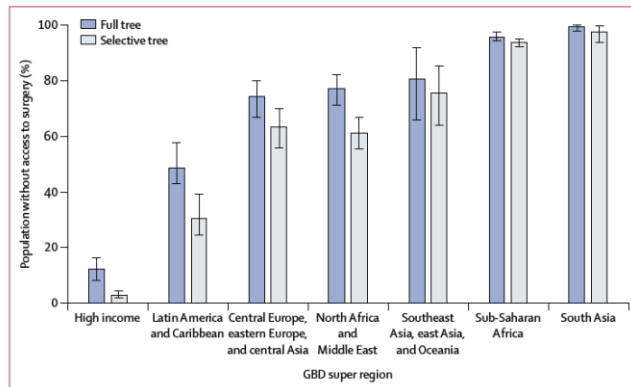
**\$12,300,000,000,000**

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PROGRAM IN GLOBAL SURGERY  
AND SOCIAL CHANGE  
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The problem = 5 Billion People Without Access to Surgery



**Figure 3: Proportion of population without access to surgery by Institute for Health Metrics and Evaluation global burden of disease super region**  
GBD=global burden of disease. Error bars=95% posterior credible interval.

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Access to surgical healthcare service: Chance Nodes

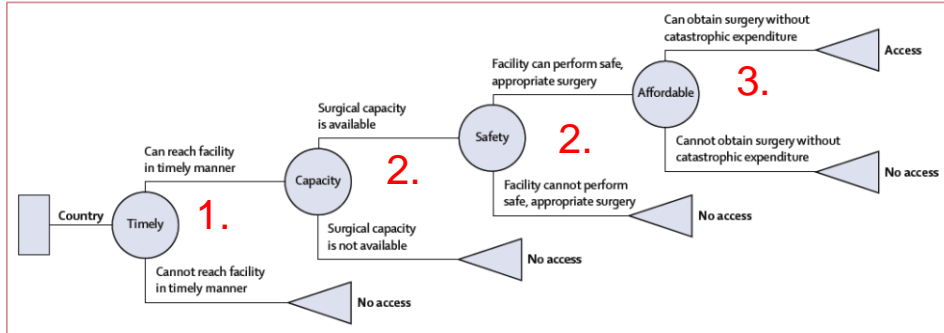


Figure 1: Chance tree to assess global access to surgical care  
Each chance node represents a dimension of access.

- 1. System Preparedness = Timeliness and Professional Capacity
- 2. System Service Delivery = Facilities, Equipment, Volume, Safety, Quality, Mortality
- 3. System Cost Impact = Affordability and Financial Risk Protection



Blake C. Alkire, Nakul P. Raykar, Mark G. Shrimme et al. *Lancet Glob Health* 2015; 3: e316–23. Published Online: April 27, 2015. [http://dx.doi.org/10.1016/S2214-109X\(15\)70115-4](http://dx.doi.org/10.1016/S2214-109X(15)70115-4)

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Thank you