SURGERY AND GLOBAL HEALTH

Jennifer Bruny, MD
University of Colorado
Children’s Hospital of Colorado
Paul Farmer “Surgery is the neglected stepchild of global health”

- No global funding organization focuses specifically on the provision of surgical care
- None of the major donors are willing to support and acknowledge surgery as an imperative part of global public health
  - None of the “grand challenges in global health” identified by the Gates Foundation in 2004 relates to surgical conditions
 Extreme Affordability
 Surgery and Global Health Conference
 University of Utah
ACCESS TO SURGICAL SERVICES

- Number of operating room theaters per 100,000 people
  - Eastern Europe – 25
  - West sub-Saharan Africa – 1
  - High income subregions – more than 14
  - Low income subregions – less than 2

- Physician shortage
  - 2.4 million too few physicians and nurses to provide essential care
  - Developed countries rely on international graduates for 25% of their physicians
  - Developing nations spend $500 million per year to educate health-care workers who eventually leave to work in developed countries
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* Disability-adjusted life years, equal to one year of healthy life lost
2 billion people have no access to basic surgery care.

While the world's poorest third get only 3.5%.

The world's richest third get 75%.

11% of the Global Burden of Disease can be broken with Surgery.

Out of 234 million surgeries done worldwide.
11% of Global Disease Burden – Treated with Surgery

- Injuries – 38%
- Malignancies – 19%
- Congenital anomalies – 9%
- Complications of pregnancy – 6%
- Cataracts – 5%
- Perinatal conditions – 4%
WHY SURGERY?

- 5 million injuries result in death each year
- 1 out of 10 deaths
- 500,000 deaths per year due to pregnancy complications
ROAD TRAFFIC INJURIES

- Daily - >3,000 deaths worldwide related to road traffic injuries
- Age 4 – 14 traffic accidents #2 cause of death
- Low-income and middle-income countries account for 85% of deaths and 90% of DALYs
  - Unmeasured effect on family poverty
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cureblindness.org
The Himalayan Cataract Project
Tilganga Institute of Ophthalmology in Kathmandu, Nepal

• 80 million – blindness due to cataracts
  • Work
  • Life expectancy
  • Family economy
  • Local economy
• Innovation
  • Sutureless technique with intra-ocular lens

• Local Production
  • Mass production of affordable lens

• Development of Long Term Local Capacity through Skill Transfer
Sustainable Eye Care Through Cost Recovery

- 45% Patients that can afford to pay the full price
- 35% Eye care provided for free
- 20% Patients pay what they can

More Than 172,000 Eye Surgeries Through Tilganga Eye Centre and Outreach
High Quality – treating with medical care comparable to western standards

Innovative – refining the best surgical techniques, efficient practices and training methods

High Impact – delivering on-site care and long-term care simultaneously

Affordable – sustaining a formula of cost containment that makes care possible for everyone

Replicable – disseminating a proven model that can be taken anywhere to cure blindness
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Figure 1.2 Neonatal and maternal mortality are related to the absence of a skilled birth attendant

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Laparoscopy in Mongolia
Swanson Family Foundation
SAGES

- 2006
- 5% of cholecystectomy done lap
- 15% wound infection rate – open
- 7-20 day hospital stay
HOW TO DO SURGERY? – PERSONAL LEVEL

- Full time
- Part time (research)
- Short term missions
  - At established hospital
  - At NGO
HOW TO DO SURGERY – STRUCTURAL LEVEL

- Twining programs
- Short term “vertical” mission
  - Cleft palate
- Partnering short term missions with local resources
  - How well are partner institutions serving broader goals of public health?
  - Of the primary health care movement?
  - Of global health equity?
BUILDING PUBLIC SECTOR INFRASTRUCTURE

- District level
  - OR capabilities
  - Post-operative care
  - Blood banking
  - Laboratory
  - Anesthesia machines
  - Staff to use and repair machines
  - Uninterrupted source of electricity