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Resources & Opportunities for Global Surgery Research

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Disclosures

- No disclosures

Finding Opportunities

Step 1:

Soul Search

Step 2:

Find a mentor

Step 3:

Show up and do the work

- Identify broad area of **specialty**
  (Peds, Gyne, Onc, Trauma, H&N, Gen Surg etc)
- Is there a **type** of research you are most interested in?
  (Quality, safety, outcomes, access, policy, epi etc)
- Is there a **geographical area** you want to work in?
  (West Africa, Haiti, South Asia, etc)

OWN IT!!!!

What are Your Assets?

Step 1: Soul search | Step 2: Find a mentor | Step 3: Show up and do the work

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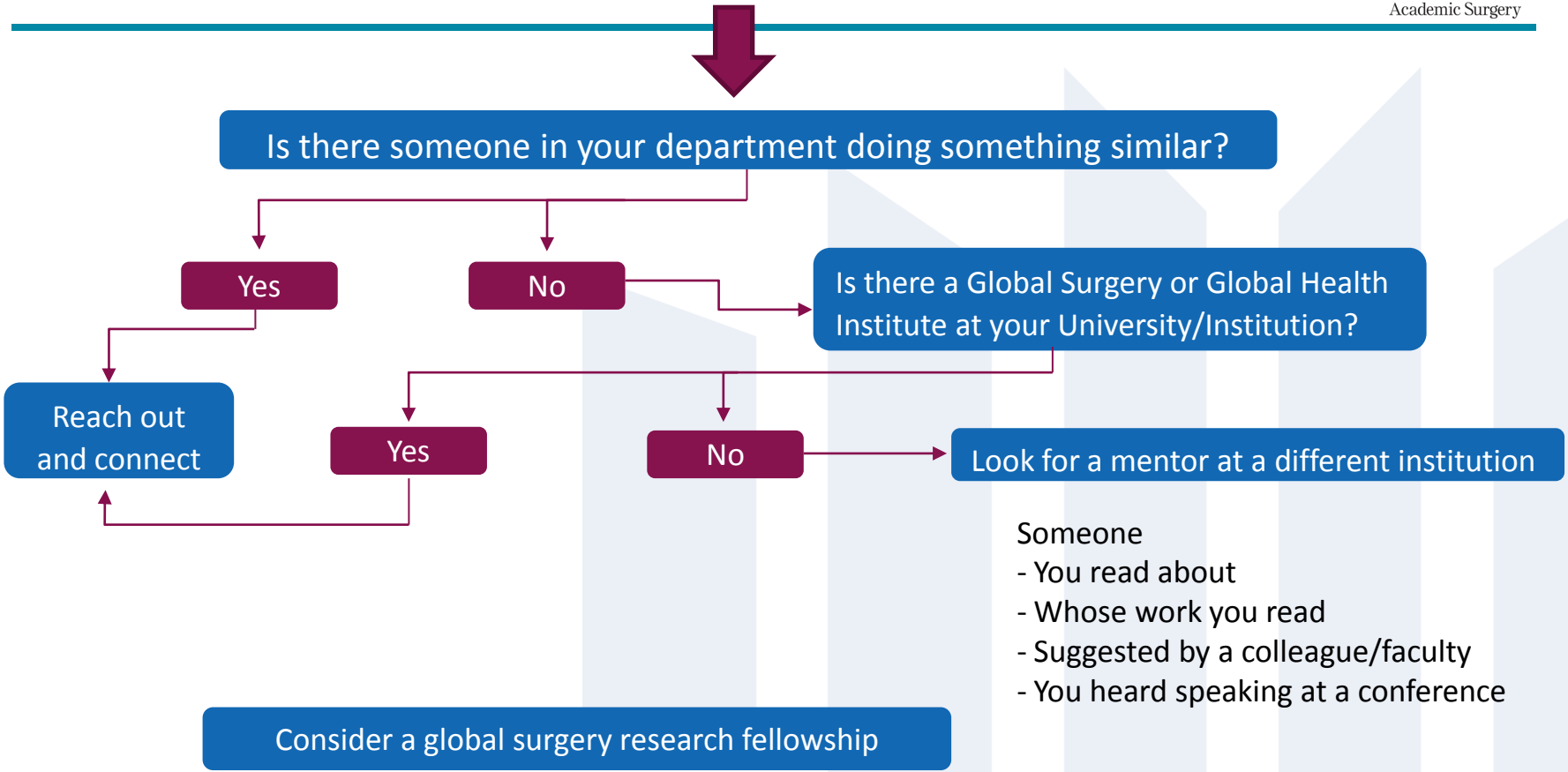
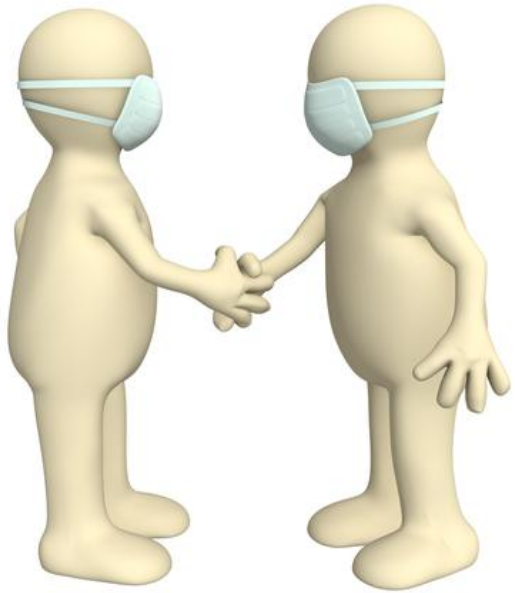


Someone
- You read about
- Whose work you read
- Suggested by a colleague/faculty
- You heard speaking at a conference

What is the Style of the Mentor?



Is the work motivated by Local Priorities?

Finding Opportunities

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Step 1:
Soul Search

- Identify broad area of specialty
- Is there a **type** of research you are most interested in?
- Is there a geographical area you want to work in?

Step 2:
Find a mentor

- Explore your department
- Explore your institution/university
- Reach outside your institution
- Consider a research fellowship

Step 3:
Show up and do the work

- Continue training yourself
- Be creative, responsible, and persistent
- Stick to the excellent research and ethical standards

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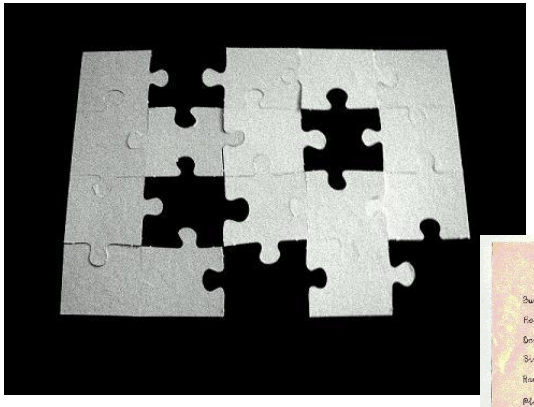
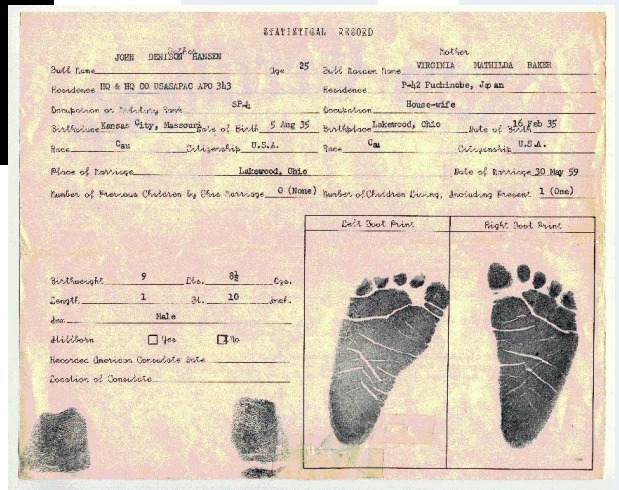
Data for global surgery research.

IRB Process

- Local Hospital / University IRB - $300
- National IRB - $300
- US Institutional IRB -

Primary Data is Sparse in LMIC




STATISTICAL RECORD

JOHN DENISON HANSEN — Mother

Full Name: JOHN DENISON HANSEN — Age: 25 — Full Maiden Name: VIRGINIA MATHILDA BAKER

Residence: HQ & HQ CO USASAPAC APO 343 — Residence: P-42 Fuchinobe, Japan

Occupation or Military Rank: SP-4 — Occupation: House-wife

Birthplace: Kansas City, Missouri — Date of Birth: 5 Aug 35 — Birthplace: Lakewood, Ohio — Date of Birth: 16 Feb 35

Race: Cau — Citizenship: U.S.A. — Race: Cau — Citizenship: U.S.A.

Place of Marriage: Lakewood, Ohio — Date of Marriage: 30 May 59

Number of Previous Children by this Marriage: 0 (None) — Number of Children Living, Including Present: 1 (One)

Birthweight: 9 lbs. 8½ ozs.

Length: 1 — 31. 10 — def.

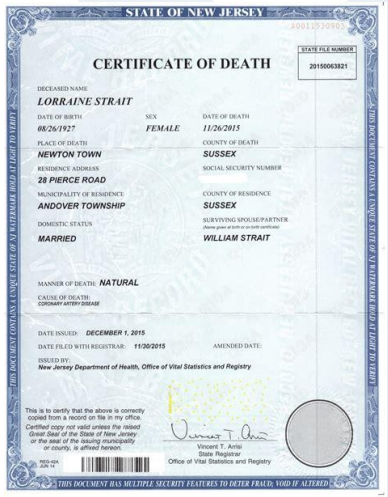
Sex: Male

Stillborn: ☐ Yes ☒ No

Recorded American Consulate: Date

Location of Consulate:

Left Foot Print | Right Foot Print


STATE OF NEW JERSEY

CERTIFICATE OF DEATH

STATE FILE NUMBER: 20150063821

DECEASED NAME: LORRAINE STRAIT

DATE OF BIRTH: 08/26/1927 — SEX: FEMALE — DATE OF DEATH: 11/26/2015

PLACE OF DEATH: NEWTON TOWN — COUNTY OF DEATH: SUSSEX

RESIDENCE ADDRESS: 28 PIERCE ROAD — SOCIAL SECURITY NUMBER

MUNICIPALITY OF RESIDENCE: ANDOVER TOWNSHIP — COUNTY OF RESIDENCE: SUSSEX

DOMESTIC STATUS: MARRIED — SURVIVING SPOUSE/PARTNER (Name given at birth or on birth certificate): WILLIAM STRAIT

MANNER OF DEATH: NATURAL

CAUSE OF DEATH: CORONARY ARTERY DISEASE

DATE ISSUED: DECEMBER 1, 2015

DATE FILED WITH REGISTRAR: 11/30/2015 — AMENDED DATE:

ISSUED BY: New Jersey Department of Health, Office of Vital Statistics and Registry

This is to certify that the above is correctly copied from a record on file in my office. Certified copy not valid unless the raised Great Seal of the State of New Jersey or the seal of the issuing municipality or county, is affixed hereon.

Vincent T. Arrisi
State Registrar
Office of Vital Statistics and Registry

THIS DOCUMENT HAS MULTIPLE SECURITY FEATURES TO DETER FRAUD. VOID IF ALTERED.

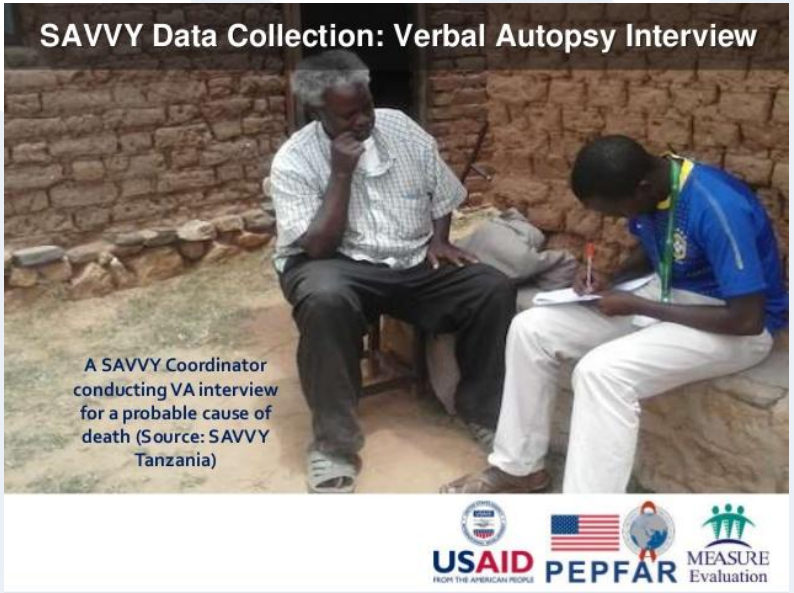
THIS DOCUMENT CONTAINS A UNIQUE STATE OF NJ WATERMARK HOLD IT UP TO LIGHT TO VERIFY

Medical Records are Often Paper Charts

Local Prospective Databases

Survey & Interview Data

Verbal Autopsy



Existing data

World J Surg (2013) 37:1562–1570
DOI 10.1007/s00268-012-1876-6

World Journal of Surgery

Getting the Job Done: Analysis of the Impact and Effectiveness of the SmileTrain Program in Alleviating the Global Burden of Cleft Disease

D. Poenaru

Mercy Ships

PROJECT HOPE WORLDWIDE

Systematic reviews

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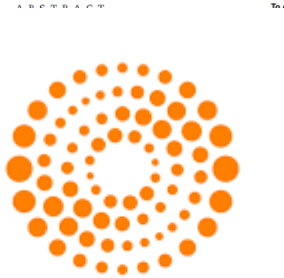
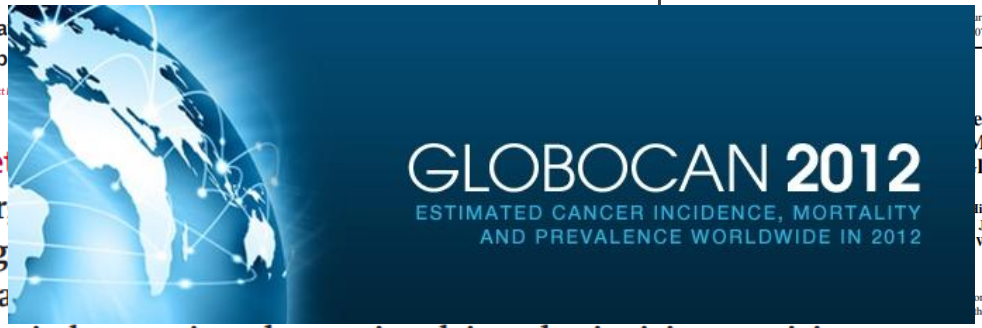


Publicly available data



hospital operating theatre involving the incision, excision,
regional or general anaesthesia or sedation. We created a mo
graphic

World Health Organization

middle-income countries, especially in the Middle East and Asia. With the so-called epidemiological transition that has accompanied industrialisation,[2] disorders afflicting populations are shifting from diseases of pestilence and infection that are an indicator of pre-industrial societies to those that are identified in industrialised and rising economies.[2,3] Ischaemic heart disease, cerebrovascular disease, cancers, and mental illness have all risen substantially in low-income, middle-income, and high-income countries.[4] Injuries also account for a large and growing amount of the disease burden as vehicular traffic

Because of this epidemiological transition, surgery will assume an increasing role in public health. In view of its complexity and risks, an understanding of the quantity and distribution of surgical interventions is therefore essential to guide efforts to improve its safety and redress shortages of such services. As part of WHO's patient safety programme,[6] we aimed to estimate the number of major operations undertaken worldwide, to describe their distribution, and to assess the importance of surgical care in global public-health policy.

World Journal of Surgery

GBD 20

CELEBRATING 20 YEARS
OF COLLABORATION AND INNOVATION

Abstract

Background Inj
burden of disease
burden of injury
(LMICs) that co
were made ava
population.

Methods We examined all causes of injury from the Global Burden of Disease 2010 Study. We split the disability-adjusted life years (DALYs) for these conditions between surgically "avertable" and "nonavertable" burdens. For estimating the avertable fatal burden, we applied the lowest fatal

potentially avertable by basic surgical care (52.3 million DALYs). The avertable proportion was greater for deaths than for nonfatal burden (23 vs. 20 %), suggesting that surgical services for injuries more effectively save lives than ameliorate disability. Sub-Saharan Africa had the

vertable burden (25 %).
avertable DALYs (17.4
e largest total avertable
ALYs).
has the potential to play
njury-related burden in

DEPARTMENT OF HEALTH & HUMAN SERVICES · USA
CDC

njuries, and Risk Factors
million deaths and 279
ears (DALYs) globally
. Injuries accounted for
11 % of the total disease burden globally (2,490 million

Secondary analysis of collected data

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Global operating theatre distribution and pulse oximetry supply: an estimation from reported data

Luke M Funk, Thomas G Weiser, William R Berry, Stuart R Lipsitz, Alan F Merry, Angela C Enright, Iain H Wilson, Gerald Dziekan, Atul A Gawande

Summary

Background Surgery is an essential part of health care, but resources to ensure the availability of surgical services are often inadequate. We estimated the global distribution of operating theatres and quantified the availability of pulse oximetry, which is an essential monitoring device during surgery and a potential measure of operating theatre resources.

Methods We calculated ratios of the number of operating theatres to hospital beds in seven geographical regions worldwide on the basis of profiles from 769 hospitals in 92 countries that participated in WHO's safe surgery saves lives initiative. We used hospital bed figures from 190 WHO member states to estimate the number of operating theatres per 100 000 people in 21 subregions throughout the world. To estimate availability of pulse oximetry, we sent surveys to anaesthesia providers in 72 countries selected to ensure a geographically and demographically diverse sample. A predictive regression model was used to estimate the pulse oximetry need for countries that did not provide data.

Findings The estimated number of operating theatres ranged from 1·0 (95% CI 0·9–1·2) per 100 000 people in west sub-Saharan Africa to 25·1 (20·9–30·1) per 100 000 in eastern Europe. High-income subregions all averaged more than 14 per 100 000 people, whereas all low-income subregions, representing 2·2 billion people, had fewer than two theatres per 100 000. Pulse oximetry data from 54 countries suggested that around 77 700 (63 195–95 533) theatres worldwide (19·2% [15·2–23·9]) were not equipped with pulse oximeters.

Interpretation Improvements in public-health strategies and monitoring are needed to reduce disparities for more than 2 billion people without adequate access to surgical care.

Funding WHO.

Lancet 2010; 376: 1055–61

Published Online July 1, 2010 DOI:10.1016/S0140-6736(10)60392-3

See Editorial page 1025
See Comment page 1027
See Perspectives page 1045

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Correspondence to: Dr Luke M Funk, Department of Health Policy and Management, Harvard School of Public Health, Boston, MA 02115, USA lfunk@partners.org

Introduction

Illnesses that need surgical treatment account for a substantial amount of the global burden of disease. Conservative estimates suggest that 11% of the world's disability-adjusted life years are attributable to diseases that are often treated with surgery.[1] Heart and cerebrovascular diseases are the top two causes of death worldwide, cancer is one of the five principal causes of mortality, and injuries from road traffic accidents are among the top ten causes of death.[2] Other surgically treatable disorders such as obstructed labour,[3] obstetric fistulas,[4] and congenital birth defects[5] are major causes of morbidity and mortality in the developing world. As health-care systems in developing regions confront an ageing population with an increased frequency of non-communicable diseases,[5,6] the extent of surgical need will increase substantially. Africa and southeast Asia are already

Asia suggest substantial shortages in anaesthesia and surgical resources.[8–10] However, we know little about these shortages, especially with respect to availability of functioning surgical facilities or staff and equipment levels. Therefore, we aimed to estimate and compare the regional densities and distributions of operating theatres worldwide.

We also sought a simple indicator of availability of anaesthesia and surgical equipment within surgical facilities. We identified pulse oximetry as a component of safe anaesthesia and surgery that is internationally recognised to be essential,[11,12] yet is often unavailable in low-income settings.[13,14] Therefore, availability of pulse oximetry was used as a proxy for adequacy of operating theatre equipment supply because of this scarcity in low-income settings,[13] and because international organi-

Surgical care needs of low-resource populations: an estimate of the prevalence of surgically treatable conditions and avoidable deaths in 48 countries

Shailvi Gupta, Reinou S Groen, Patrick Kyamanywa, Emmanuel A Ameh, Mohamed Labib, Damian L Clarke, Peter Donkor, Miliard Derbew, Rachid Sani, Thaim B Kamara, Sunil Shrestha, Benedict C Nwomeh, Sherry M Wren, Raymond R Price, Adam L Kushner

Published Online April 27, 2015

Poster 2

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Abstract

Background Surgical care needs in low-resource countries are increasingly recognised as an important aspect of global health, yet data for the size of the problem are insufficient. The Surgeons OverSeas Assessment of Surgical Need (SOSAS) is a population-based cluster survey previously used in Nepal, Rwanda, and Sierra Leone.

Methods Using previously published SOSAS data from three resource-poor countries (Nepal, Rwanda, and Sierra Leone), a weighted average of overall prevalence of surgically treatable conditions was estimated and the number of deaths that could have been avoided by providing access to surgical care was calculated for the broader community of low-resource countries. Such conditions included, but were not limited to, injuries (road traffic incidents, falls, burns, and gunshot or stab wounds), masses (solid or soft, reducible), deformities (congenital or acquired), abdominal distention, and obstructed delivery. Population and health expenditure per capita data were obtained from the World Bank. Low-resource countries were defined as those with a per capita health expenditure of US$100 or less annually. The overall prevalence estimate from the previously published SOSAS data was extrapolated to each low-resource country. Using crude death rates for each country and the calculated proportion of avoidable deaths, a total number of deaths possibly averted in the previous year with access to appropriate surgical care was calculated.

Findings The overall prevalence of surgically treatable conditions was 11·16% (95% CI 11·15–11·17) and 25·6% (95% CI 25·4–25·7) of deaths were potentially avoidable by providing access to surgical care. Using these percentages for the 48 low-resource countries, an estimated 288·2 million people are living with a surgically treatable condition and 5·6 million deaths could be averted annually by the provision of surgical care. In the Nepal SOSAS study, the observed agreement between self-reported verbal responses and visual physical examination findings was 94·6%. Such high correlation helps to validate the SOSAS tool.

Interpretation Hundreds of millions of people with surgically treatable conditions live in low-resource countries, and about 25% of the mortality annually could be avoided with better access to surgical care. Strengthening surgical care must be considered when strengthening health systems and in setting future sustainable development goals.

Funding None.

Contributors

SG, ALK, RSG, and BCN conceived and designed the study. SG, RSG, SS, TBK, PK, and ALK collected the data. SG, RSG, and ALK interpreted the data. SG and ALK wrote the Abstract. All authors approve the final version of the Abstract for publication.

Declaration of interests

We declare no competing interests.

National Health Surveys

World J Surg (2013) 37:1470–1477
DOI 10.1007/s00268-012-1732-8

Disparities in Access to Surgical Care within a Lower Income Country: An Alarming Inequity

Syed Nabeel Zafar · Zafar Fatmi · Aftab Iqbal · Roomasa Channa · Adil H. Haider

Published online: 1 August 2012

Abstract
Background Surgical care is not uniformly available worldwide. Inequities in surgical care and access may also vary within countries, and the present study aimed to explore these disparities in Pakistan.
Methods The National Health Survey of Pakistan was analyzed. The proportion of people with a history of abdominal surgery (AS) was calculated and associated factors were determined by weighted multivariate logistic regression. Factors tested were age, gender, urban/rural residence, province, literacy, community development index (CDI), and economic status (ES). The CDI was developed for each sampling unit from select household and individual data. The ES was constructed from ownership of assets.
Results A total of 59 million adults were represented. Abdominal surgery had been performed in 3.2 % adults (95 % confidence interval [CI] = 2.67, 3.84), which corresponded to an annual rate of 85.9 abdominal surgeries per 100,000 population. Wide disparities were noted, with annual rates of AS varying from 37.8 to 215.6 per 100,000 population. Urban residents were independently twice as likely as rural populations to have had AS (95 % CI = 1.3, 2.8). Higher age (OR = 2.6; 95 % CI = 1.7, 4.0), female gender (OR = 1.5; 95 % CI = 1.1, 2.1), and higher ES (OR = 1.9; 95 % CI = 1.2, 2.9) were also independently associated with AS. In rural populations ES was the only factor associated with surgery, whereas in urban populations gender and CDI had important roles to play.
Conclusions Access to surgical care is disparate and grossly inadequate in Pakistan. This likely contributes to significant preventable morbidity and death. Physical access to surgical facilities, especially in rural areas and for those with a low CDI, is an important concern and should be prioritized in any forthcoming national policies.

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A. Iqbal

Introduction

Surgery is an essential component of healthcare. Provision of acute surgical care, including trauma and obstetrics, and even elective procedures focused on correcting cataracts or club foot prevent significant disability and premature death [1]. Surgical disease accounts for at least 11 % of the world's disability adjusted life years (DALYS) [1] and is no longer considered a luxury. Multiple studies have shown the provision of essential surgery to be a highly cost-

Regional Gradients in Institutional Cesarean Delivery Rates: Evidence from Five Countries in Asia

Ardeshir Sepehri, PhD, and Harminder Guliani, PhD

ABSTRACT: Background: *Although the influence of the type of institutional setting on the risk of cesarean birth is well documented, less is known about the regional variations in institution-specific cesarean rates within countries. Our purpose was to examine regional variations in cesarean rates across public and private facilities in five Asian countries with a sizeable private sector: Bangladesh, India, Indonesia, Pakistan, and the Philippines.* **Methods:** *Demographic Health Survey data and a hierarchical model were used to assess regional variations in the mode of delivery while controlling for a wide range of socioeconomic, demographic, and maternal risk factors.* **Results:** *The risk of cesarean birth was greater in a private facility than in a government hospital by 36–48 percent in India and Indonesia and by 130 percent in Bangladesh. Regional gradients in cesarean birth were found to be steeper for deliveries in private facilities than in government hospitals in India, Indonesia, and the Philippines. The residents of India's high-use states were 55 percent more likely to undergo a cesarean delivery in a government hospital and 83 percent more likely in a private facility than their counterparts in the medium-use states. Similarly, compared to the residents of the Philippines's medium-use provinces, giving birth in a government facility increased the likelihood of a cesarean delivery by 84 percent and by 173 percent in a private facility.* **Conclusions:** *Large regional variations in cesarean rates suggest the need for more informed clinical decision making with respect to the selection of cases for cesarean delivery and the establishment of well-developed guidelines and standards at the provincial or state levels. (BIRTH 44:1 March 2017)*

Key words: *cesarean section, institutional setting, regional variations*

Your own experiences

surgeons are currently, and will be for the foreseeable future, involved in these short-term stints [8]. This article deals with practical and ethical considerations for pediatric surgeons participating in short-term global health volunteer activities. The authors have participated in volunteer activities in Africa, South America, Eastern Europe, India, the Middle East, and the Far East. Two of the authors (DM, JA) have lived and worked for extended periods in African LMIC hospitals where they have also been hosts for HIC volunteers. The recommendations are therefore written from the standpoint of both pediatric surgical volunteers and the hosts of these volunteers.

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desire to teach national doctors how to perform safe, technologically appropriate procedures so that children can be successfully treated locally by the national doctors after the volunteer has returned home [10,11].

1.3 Other volunteers are motivated by the desire to create or strengthen a global pediatric surgical partnership where both the host and volunteer visitor learn from each other and where the partnership leads to improvement in pediatric surgical care for children globally [12].

1.4 Still other volunteers want to create partnerships to enhance meaningful translational research projects to improve pediatric surgical care globally [13].

1.5 With the decreased surgical exposure to "index cases" for HIC general surgery residents and pediatric surgery fellows, some

Funding Opportunities

Grants

- AAS global surgery grants
- Training Grants
- Fogarty / NIH
- Local Institution grants
- Fund Raising

Training Opportunities

Fellowship examples

- Paul Farmer Global Surgery Research Fellowship
- Paul Farmer Global Surgery Clinical Fellowship
- Rutgers New Jersey Medical School Global Surgery Fellowship
- International Surgical Oncology Global Cancer Disparities Fellowship – MSKCC
- Northwestern Trauma & Surgical Initiative
- VECD Global health Fellowship - Fogarty
- Global Surgery Research Fellowship- University of Utah
- UCSF center for global surgical studies
- Global surgery research program – Brigham and Women's Hospital

- Many more research and fellowships opportunities……..

Conferences/Meetings

AAS Association for Academic Surgery

ACADEMIC SURGICAL CONGRESS
A United Voice for Academic Surgery
CELEBRATING 14 YEARS

OPERATION GIVINGBACK
American College of Surgeons

West African College of Surgeons
(KNOWLEDGE, HEALTH AND UNITY)
Collège Ouest Africain des Chirurgiens
(SAVOIR, SANTE ET UNITE)

American Academy of Pediatrics
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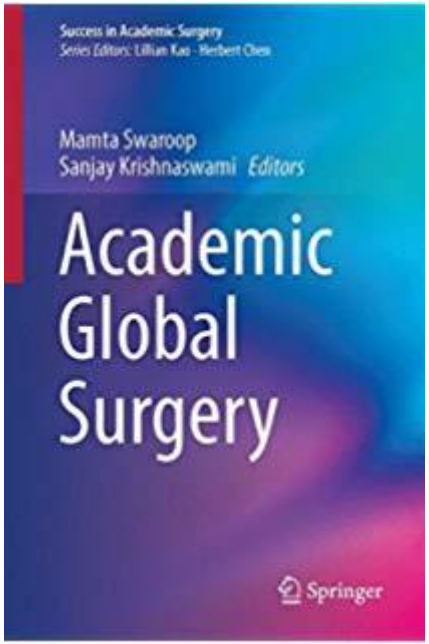
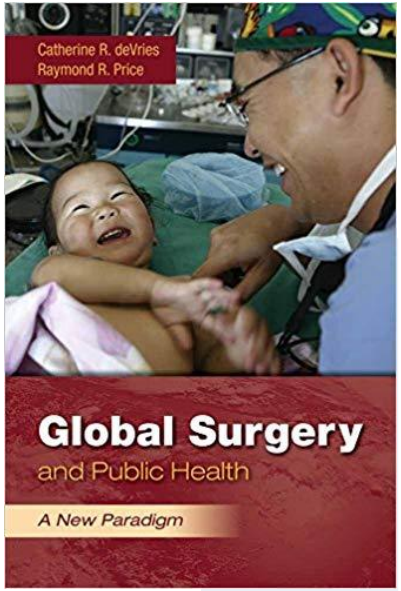
COSECSA
College of Surgeons of East, Central and Southern Africa

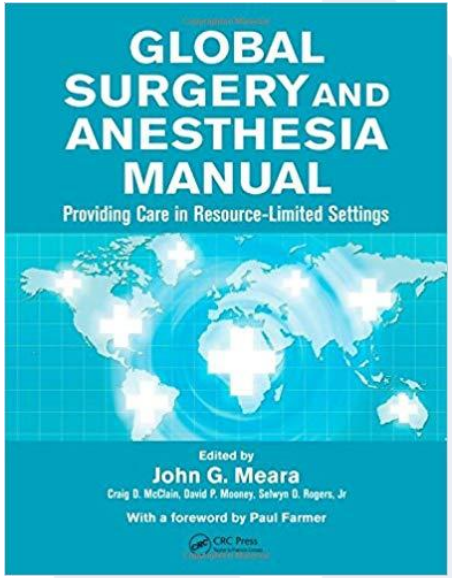
BETHUNE ROUND TABLE 2018

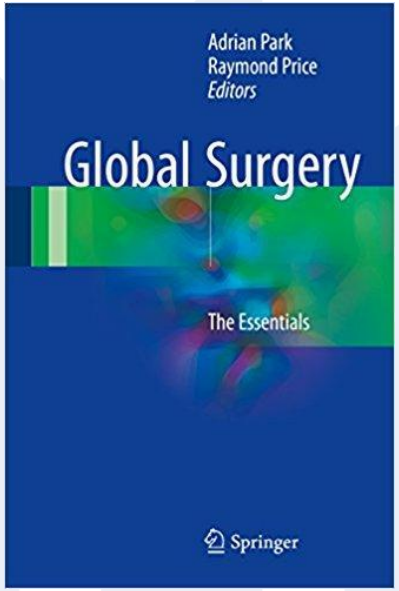
Consortium of Universities for Global Health

Books


Success in Academic Surgery
Series Editors: Lillian Kao · Herbert Chen
Mamta Swaroop
Sanjay Krishnaswami Editors
Academic Global Surgery
Springer


Catherine R. deVries
Raymond R. Price
Global Surgery
and Public Health
A New Paradigm


GLOBAL SURGERY AND ANESTHESIA MANUAL
Providing Care in Resource-Limited Settings
Edited by
John G. Meara
Craig D. McClain, David P. Mooney, Selwyn O. Rogers, Jr
With a foreword by Paul Farmer
CRC Press


Adrian Park
Raymond Price
Editors
Global Surgery
The Essentials
Springer

Thank you