

Surgical indicators from a national database: Using Brazil as a model

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Background: In an effort to strengthen surgical systems worldwide, the Lancet Commission on Global Surgery recommended the measurement of six indicators at the country level: the proportion of the population within two hours of a surgical hospital (two-hour access), the number of surgical, anesthesia, and obstetric specialists per 100,000 population (SAO density), the number of surgical procedures per 100,000 population per year (surgical volume), the perioperative mortality rate (POMR), and the risk of impoverishing and catastrophic expenditures paying for surgical care. We aim to prove the feasibility of obtaining these surgical indicators from national healthcare databases, such as DATASUS in Brazil.

Methods: Using DATASUS, five of six indicators could be measured, calculated or simulated from 2008–2014. The sixth, two-hour access, is currently being processed by the Ministry of Health. We directly calculated SAO density, surgical volume, and POMR, and we modeled impoverishing and catastrophic expenditures using the Gini index and GDP per capita to create a gamma distribution of incomes.

Findings: Surgical indicators can be drawn from Brazil's national database: In 2014, SAO density was 34.7 per 100,000 population, surgical volume was 4,433 procedures per 100,000 population per year, and POMR was 1.71%. 1.85 million people (20.61% of all surgical patients) experienced impoverishing expenditure and 1.39 million people (15.42%) experienced catastrophic expenditure due to surgery.

Over the past seven years, surgical volume and catastrophic expenditure have remained unchanged. The surgical workforce density has decreased (42.8/100,000 population to 34.7/100,000 population) while POMR (1.53% to 1.71%) and impoverishing expenditure (18.04% to 20.61%) have increased.

Interpretation: Although SAO density in Brazil has decreased in recent years, Brazil still meets an international threshold set by the global surgery community. Surgical volume, POMR, and financial risk protection are areas for improvement. Two-hour access will be reported shortly pending data validation. There is significant regional variation in surgical indicators, warranting further studies to validate these numbers at the regional or state level as well as efforts to ensure equitable distribution of healthcare resources. This study shows that surgical indicators can be extracted from a national health database.

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Perceptions and knowledge of mental illness in rural Kenya

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Program/Project Purpose: Residents of rural communities in Kenya face numerous challenges that prevent them from accessing mental health care. Barriers include financial and geographical constraints, but also a pervasive stigma that prevents mentally ill individuals from seeking treatment. The Global Health Initiative (GHI) at the University of British Columbia commenced the Mental Health Project in three rural communities surrounding Kisumu that would address these barriers. The aim of the project was to explore community knowledge, beliefs and practices surrounding mental illness in order to develop community-based interventions to improve mental health care in the region.

Structure/Method/Design: The project involved two main components: assessing community knowledge and attitudes towards mental health, and education through mental health workshops. Focus groups were conducted with men, women and community health workers (CHWs), in three villages within the Kisumu region. Key informant interviews were conducted with a psychologist, a school headmaster and a faith healer to gain their perspectives as providers of mental health care. Using the information collected in conjunction with CHW-specific WHO mental health modules, a mental health education workshop was developed and delivered to the CHWs of the rural communities.

Outcome & Evaluation: Focus groups and interviews identified significant barriers to accessing mental health care, including long distances to tertiary hospitals, a scarcity of qualified professionals, financial constraints, and stigma. Community members, including CHWs, reported receiving no formal mental health education. This lack of education has contributed to the significant stigma surrounding mental illness, which has been further exacerbated by the belief of an association between mental illness and the supernatural. The education component of the project aims to address this stigma by providing basic education on common mental illnesses and strategies in caring for mentally ill individuals.

Going Forward: The GHI team will continue the Mental Health Project in the Kisumu region by developing comprehensive mental health training workshops for CHWs. The goal is to provide CHWs with the tools to disseminate appropriate mental health knowledge through household visits, and deliver mental health workshops to community members, therefore creating a sustainable program to tackle barriers to mental health care.

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Global equity in biomedical research: Assessing research innovation, technology access and student empowerment to meet the world's most neglected health needs

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Background: More than 1 billion people worldwide suffer from “neglected diseases” — illnesses that receive little to no R&D investments because those affected are too poor to provide a market for new medicines. Furthermore, 10 million people die each year simply because they don’t have access to lifesaving medicines that already exist — often because those treatments are far too expensive. Universities can use their unique positions as public-interest, largely publicly-funded research institutions to address these challenges.

Methods: Few have tried to systematically measure universities’ contributions in this vital area. The Universities Allied for Essential Medicines (UAEM) Global Equity and Biomedical Research Report Card aims to fill this gap by evaluating academic institutions on three key questions: Are universities investing in innovative medical research that addresses the neglected health needs of low-income communities worldwide? When universities license their medical technology for commercial development, are they doing so in a manner that ensures those treatments reach patients in LMICs at affordable prices? And, are universities educating the next generation of global health leaders about the impact academic institutions can have on global health through research and licensing activities?

Findings: Using both publicly-available and self-reported information, UAEM evaluated and ranked 59 American universities that received the highest total grant funding dollar amount from the National Institutes of Health (NIH) and the National Science Foundation (NSF) in 2014. Evaluation metrics that minimized variation based on levels of research, student body size, and public vs. private institutions were primarily selected to develop weighted scores for each of the three sections: Access, Innovation, and Empowerment. Only one school was awarded an “A”, whereas 47 schools received a grade of C+ or less.

Interpretation: Based on these results, it is evident that universities need to realize their potential to leverage their investment in biomedical research to advance global health equity. By prioritizing research on diseases neglected by for-profit R&D, they can pioneer new treatments that will benefit millions in low and middle-income countries (LMICs). By sharing their medical breakthroughs under non-exclusive licenses or licenses that promote lower prices in developing countries, universities can help poor patients worldwide access life-saving treatments and diagnostics.

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Assessing youth-friendly sexual and reproductive health services for adolescents: A systematic review

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Background: Over the last quarter century, there has been an emergence of evidence-based research directed toward the development, implementation and assessment of the impact of youth-friendly health services (YFHS) to improve the delivery of sexual and reproductive health services for adolescents. Despite these research efforts,

evidence supporting the effectiveness of YFHS is limited, which may be attributed to a lack of consensus on how to measure youth-friendliness to track progress and evaluate outcomes. The purpose of this systematic literature review is to assess how youth-friendly sexual and reproductive health services are measured worldwide.

Methods: We conducted a systematic review of studies measuring youth-friendly sexual and reproductive health services at health facilities published between January 2000 and June 2015 using Pubmed, Web of Science and POPLINE databases. Additional studies were identified by reviewing references of identified sources. Studies were screened to identify measurements and indicators that have been used to measure youth-friendly sexual and reproductive health services.

Findings: Our review identified 20 studies from an initial search of more than 12,000 records, including six from high-income countries and 14 from low-and-middle-income countries. The review identified 119 indicators used for measuring youth-friendly sexual and reproductive health services. The three most frequently assessed domains were accessibility, staff characteristics and competency, and confidentiality and privacy. The majority of the indicators were not specific to youth needs and often reflected basic standards of care. Our review showed no consistency in the tools or indicators used to measure youth-friendliness.

Interpretation: This review shows the need for standardization and prioritization of indicators for the evaluation of YFHS. The results can be used to identify a core set of indicators that can be incorporated into a framework for assessing youth-friendly sexual and reproductive health services. There is a need to further distinguish between those variables that may have greatest impact on the use of services by adolescents, such as respect and privacy, those that impact the quality of services offered, and those that have limited relevance. More rigorous studies using a standardized and prioritized set of indicators is critical to measure the impact and effectiveness of YFHS efforts.

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Health care access during the Ebola epidemic in Liberia

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Background: The Ebola epidemic in West Africa claimed over 4,800 lives in Liberia. The outbreak paralyzed the healthcare system with all government hospitals closed or operating at limited capacity at the height of the epidemic. Little is known about where patients were seeking care when healthcare facilities were closed and what impact this had on health.

Objective: To determine the impact the Ebola outbreak had on access to basic health care in Liberia.

Methods: Healthcare access and Ebola knowledge surveys were administered in interview format to a cluster randomized sample within 1 hours drive in the catchment area around Liberia’s 21 government hospitals. Data was managed in a mobile data application on smart phones and analyzed using SPSS.