GOVERNANCE/MANAGEMENT/HUMAN RIGHTS/ECONOMICS

Satisfaction, incentives and the relation to workforce retention in the health service in Ghana

C. Lamisi Anaba[1], B. Pinkowski Tersbøl[2], M. von Euler-Chelpin[2]; [1]St Dominic Hospital Akwatia Eastern Region, Akwatia Eastern Region, GH, [2]University of Copenhagen, Denmark, Copenhagen, Denmark

Program/Project Purpose: Retaining health staff especially the young professionals in rural areas has been extremely difficult as more prefer urban postings with regard to the lack of extrinsic motivational incentives in rural service; with existing challenges with health workforce shortages in developing countries.
Structure/Method/Design: A health facility-based study; a quantitative cross-sectional survey supplemented with qualitative in-depth interviews was used. Data was collected and examined from the health workforce of four of the National Catholic Health Services facilities. Close-ended self-administered structured questionnaires for critical staff cadre and in-depth interviews with health managers were employed to collect primary data. A total of 402 questionnaires were administered, and out of this, 334 were retrieved. The age range was from 22 to 59 years with a mean of 34.2 years. 57% were females and 43% were males. 8% were medical doctors, 69% nurses and midwives, 1% pharmacists, 5% anaesthetists and 16% technical officers' category. Retention of the health workforce was measured by asking them their intention to practise in another facility within the next five years. 60% indicated intention to relocate. 31% of that intended to join the teaching hospitals. Professional and career development was the most common reason with a rate score of 34% for intention to relocate to other facilities. Staff category with the highest intention to relocate was medical doctors. Having job satisfaction, non-financial incentives were preferred over financial incentives, with an OR of 8.12 (95% CI, 4.5 — 15.9), being recognised and appreciated had OR 13.4 (95% CI: 6.8 — 26.5), among those who felt fairly treated indicated with OR 3.8 (95% CI: 1.5 — 9.9).
Outcomes & Evaluation: The findings of this study indicated that health managers and health workers perceive motivation (incentives) and factors that both give job satisfaction and increase retention differently. Whilst health managers perceive working conditions and financial incentives; the health workforce indicated fair treatment and recognition and appreciation as the most important factors for job satisfaction and retention. Though financial incentives are mostly the preferred incentives, in this study; the non-financial incentives were found to be the most important incentive to job satisfaction but not increasing retention. Data does not suggest that there is a direct pathway between incentives, job satisfaction and retention but being a valued person by a superior and being recognised and appreciated at the workplace does increase intended retention.
Going Forward: In Summary, professional development and recognition were significantly associated with increased retention. Retention was also gender associated with a significantly higher intention to relocate among male staff. Recognition and appreciation of staff as
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Framework for measuring effective coverage to monitor progress towards universal health coverage

R. Baral, J. Dieleman; Institute for Health Metrics and Evaluation, University of Washington, Seattle, WA/US

Background: Standardized assessments of the effective coverage of health interventions across countries over time are vital for monitoring the progress toward Universal Health Coverage (UHC) and for evaluating the impact of policy initiatives and processes that aim to improve UHC. Despite the emphasis, little is known about where the countries stand with respect to providing effective health services. No standardized metric exists to provide information on the coverage and effectiveness of health systems in a comparable and comprehensive manner.
Methods: We propose a framework to assess the effective coverage of health systems across the globe. Conceptually, a health system can intervene throughout the health-outcome pathway to deter the realization of an adverse outcome by (i) promoting healthy behavior and limiting development of risk factors, (ii) preventing risk factors from causing diseases, and (iii) treating the diseases before they cause the adverse health outcomes. We measure health system effectiveness at all three points along the pathway (promotion, prevention, and treatment) using regression methods. Specifically, our underlying strategy for measuring effective coverage of the health systems is to measure the unexplained variation of risk factors, disease prevalence, or adverse health outcomes, after controlling for factors outside the immediate scope of health system, using cross-country linear regression. The tracer conditions selected for the analysis includes (i) risk factors such as smoking prevalence, obesity prevalence, fasting plasma glucose level, systolic blood pressure; (ii) prevention/promotion interventions such as immunization, antenatal care; and (iii) treatment interventions for diseases/conditions such as breast cancer, lung cancer, chronic kidney diseases, chronic obstructive pulmonary diseases, diabetes; heart disease; injuries; depression, diarrhea, HIV/AIDS; maternal health, malaria, pneumonia, and tuberculosis. Selection of tracer conditions are based on their share on global disease burden and their importance to broader public health. To inform our measurement, we draw upon the 2010 Global Burden of Disease study that generated systematic and rigorous estimates of disease burden and health outcomes for a wide range of diseases.
Findings: Based on our framework, we will generate estimates of effective coverage for 187 countries from years 1990 to 2010. Regression residuals for each tracer condition will be weighted by their relative burden to generate a measure of health system effectiveness. Based on this metric, countries will be ranked to depict the relative assessment of their health system effectiveness and its trend over years.
Interpretation: Inclusion of UHC in the post-2015 development goals will only increase demand for its rigorous measurement. Our framework attempts to provide a comprehensive measure of health systems effective coverage. Results from this analysis would potentially be very informative in tracking the trajectory of health system effectiveness, its growth over time, and countries' progress towards the achievement of UHC.
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A systematic approach to produce robust, comparable and timely cost-effectiveness estimates for a set of interventions: proof of concept in two low-income countries

T. Cravo Oliveira[1], E. Gakidou[2], T. Vos[3], H. Higashi[3], C. Murray[1]; [1]Institute for Health Metrics and Evaluation, University of Washington, Seattle, WA/US, [2]Institute for Health Metrics and Evaluation at the

University of Washington, Seattle, WA/US, [3]Institute for Health Metrics and Evaluation, Seattle, WA/US

Background: Under the current paradigm, cost-effectiveness studies provide limited value to policy makers in low-resource settings. Studies appear with substantial delays in the academic literature and are often based on large-scale multi-intervention assessments in settings with drastically different infrastructure, resources and cultures. Timely and contextual evidence is rarely available. Given recent developments in standardizing the analysis of the global burden of disease (GBD), we believe a similar approach can be applied to the generation of cost-effectiveness estimates. To achieve this, we are developing a systematic protocol and guidelines for conducting cost-effectiveness analyses based on the integration of information. We are applying this approach to two low-income countries — Kenya and Zambia — as a proof of concept.
Methods: We define cost-effectiveness as a combination of five inputs: incremental costing, the current coverage of interventions, the remaining burden of disease that needs to be addressed, efficacy of interventions, and the gap between efficacy and effectiveness, which we label as quality. The first step is to identify a set of interventions based on highest potential impact and strategic priorities of the two countries involved. The list of interventions for Kenya is currently being finalized. To develop cost functions, we will use data collected through the Access, Bottlenecks, Costs and Equity (ABCE) project that incorporate facility-level efficiency. GBD estimates will be used to determine the burden. We will initially develop first order approximations of coverage based on available survey data, or encounter data for interventions that are not normally included in demographic health surveys. We will map from efficacy in the units reported in the literature to changes in disability-adjusted life years (DALYs) checking for consistency with GBD assumptions regarding prevalence, case-fatality rates, severity distributions and disability weights. To account for the impact of provider quality and consumer behavior on the real-world effectiveness of interventions, we are collaborating with Emory University in developing a framework to estimate effectiveness and its determinants.
Findings: Bringing together data on the five inputs will allow us to produce estimates of the cost-effectiveness of the interventions of interest to policy makers in Kenya and Zambia. We aim to produce our first round of estimates in 2015 for a subset of those interventions.
Interpretation: Developing a system that is able to generate timely, evidence-based, setting-specific and up-to-date estimates of cost-effectiveness for each country will take multiple iterations. Ultimately, the aim is to be able to determine the fraction of each disease that can be averted over a defined period with policies that meet certain threshold definitions of cost per DALY averted, while incorporating uncertainty.
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Determining demographic risk factors for receiving counterfeit cancer drugs

R. Cuomo, T. Ken Mackey; Global Health Policy Institute, San Diego, CA/US

Background: Context: In 2012, the U.S. FDA reported it had detected counterfeit versions of the anti-cancer drug Avastin in the legitimate drug supply chain. These counterfeit medications had traversed a complex global network of drug distributors, including those in Turkey, Switzerland, Denmark, the United Kingdom, and Canada. Drug safety warnings were sent to U.S. medical clinics where FDA suspected patients may have been exposed to counterfeit Avastin. Why the study was done: This study was done in order to identify demographic risk factors associated with clinics receiving a counterfeit Avastin notice. Aim: The aim of this study was to determine which demographic characteristics are associated with geographic areas that received counterfeit Avastin warning notices.
Methods: Study Design: Geospatial analysis was conducted across 30,431 zip codes in the United States. We also identified zip codes for clinics where legal prosecutions were pursued by the U.S. Department of Justice. Participants: FDA safety notices were received by 781 zip codes. Interventions: N/A Analysis: This research utilizes a multidisciplinary approach to analyze FDA drug safety notifications and legal prosecutions for counterfeit Avastin incidents using geospatial, regulatory, and legal analysis. After geocoding clinics that received an FDA safety warning, we used a basemap from the U.S. Census Bureau linked to 44 demographic characteristics (at the zip code-level) and used multivariate analysis to determine which characteristics were most associated with zip codes where notices were sent. (IRB N/A)
Findings: Participants: Researchers identified 781 zip codes as receiving counterfeit Avastin notices and 29,650 zip codes that had not received these notices. Outcomes: Geospatial analysis provided a visual depiction of where counterfeit Avastin receipt is most likely to occur. Zip codes receiving FDA safety notices were positively associated with demographic characteristics of elderly populations (over the age of 65) and ethnic white populations. These were the demographic variables where Pearson's correlation coefficients were highest. We observed a greater number of counterfeit Avastin incidents in major U.S. states including California (17.7% of all zip codes), Texas (9.2%), Florida (8.5%), and New York (8.2%).
Interpretation General Interpretation: These results identify demographic risk factors that can aid future efforts to proactively respond to detection of counterfeit medicines and efforts to improve patient safety. Limitations and Strengths: The main limitation of this research is that the notices sent to medical clinics correspond to locations where the FDA believed, but had not verified, that counterfeit Avastin was used. The main strength of this research is that it is the first study to analyze how demographic variations correspond geographically and statistically to detection of counterfeit cancer medications.
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Measuring the impact of U.S. global health engagements, an econometric approach

G. Diehl, F.M.I. Monahan; Center for Disaster and Humanitarian Assistance Medicine, Rockville, MD/US

Program/Project Purpose: The National Defense Authorization Act of FY13 states that the Department of Defense (DoD) "shall develop a process to ensure that health engagements conducted by the Department of Defense are effective and efficient in meeting the national security goals of the United States," including ensuring security, stability, and enduring partnerships in areas of interest throughout the world. Directly addressing this topic, the Measures of Effectiveness in Defense Engagement and Learning (MODEL) study, executed through the Uniformed Services University of the Health Sciences (USUHS) and conducted at the Center for Disaster and Humanitarian Assistance Medicine, was funded in 2013 to determine the effectiveness of Global Health Engagements (GHEs) as a Theater Security Cooperation (TSC) tool.
Structure/Method/Design: The MODEL study employs a hypothesis-based, econometric methodology, retrieving DoD health engagements from the Overseas Humanitarian Assistance Shared Information