

innovation in education, training, and research with international partners and regional corporate and economic leaders.

Structure/Method/Design: The four academic health centers (Buffalo, Brooklyn, Stonybrook and Syracuse) linked with the School of Public Health in Albany and the Manhattan based School of Optometry. A series of meetings were held to identify opportunities for cross campus collaboration.

Outcome & Evaluation: In early 2016, the SUNY-GHI Steering Committee approved a new “Virtual Grand Rounds” lecture series. The 2016-2017 series features five global health lectures, with each participating partner institution hosting one lecture each. The lectures are broadcast across the SUNY network and recorded using web conferencing software.

The 2016 – 2017 Virtual Grand Rounds Series was launched in September 2016 with a lecture on the global emergence of mosquito-borne disease in the Americas, including Zika, given by a faculty member from the University at Albany School of Public Health’s Department of Biomedical Sciences and the New York State Department of Health’s Wadsworth Center. By using the University at Albany School of Public Health’s Adobe Connect video conferencing capabilities, nearly 100 students and faculty in classrooms across five SUNY campuses as well as representatives from several partner institutions globally were able to remotely engage in the presentation and a lively follow-on discussion.

Going Forward: The 2016-2017 Virtual Grand Rounds Series will continue with lectures by the SUNY Upstate Medical Center, SUNY Downstate Medical Center, Stony Brook University, and the University at Buffalo. Planning for the 2017-2018 series is already underway. The SUNY-GHI will use this new forum to foster cross-campus communication among faculty, students and international partners as well as promote foci of global health discussions on each campus.

Source of Funding: State University of New York (SUNY).

Abstract #: 1.066_HHR

Rethinking R&D: Partnerships as Drivers of Global Health Innovation

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Program/Project Purpose: Emerging infectious diseases (EIDs) pose a significant health and socioeconomic threat. Five major global outbreaks in the last fifteen years have resulted in over 250,000 deaths and \$100 billion in financial losses. Each pandemic shares a critical common thread — the lack of an effective, clinically approved vaccine prior to the outbreak’s escalation. Interestingly, the public health imperative of EIDs appears to galvanize stakeholders into fast-tracking the research and development (R&D) timeframe, with vaccine candidates advancing from pre-clinical to clinical trials 80% faster during an outbreak. This investigation aims to study the factors that have accelerated R&D for the Ebola and Zika pandemics, and use the lessons learned to develop policy tools for future EIDs.

Structure/Method/Design: Candidates in clinical trials were screened through official National Library of Medicine and National Institutes of Health databases. Preclinical candidates were identified

and then cross-referenced through World Health Organization reports, disease-specific networks, industry outlets, and academic literature using a staggered search strategy of “pathogen/product/region/R&D stage/R&D player’s role”. External factors were accounted for by mapping R&D progression against outbreak timelines. Finally, stakeholders from representative organizations in the public, private, and nonprofit sector were interviewed to provide feedback regarding vaccine R&D’s policy challenges.

Outcome & Evaluation: Analysis revealed product development partnerships (PDPs) to be the primary drivers of R&D for EIDs. Interestingly, while small companies and academic institutions comprised the majority of PDPs, representatives from those organizations cited a significant lack of financial backing and incentives for such endeavors prior to the outbreak. Specifically, stakeholders advocated for greater funding to support the transition from preclinical to Phase I. Overall, stakeholders called for greater investment in PDPs, highlighting the need for financial risk sharing due to R&D’s high rate of technical attrition.

Going Forward: Institutional analysis and stakeholder interviews suggest that the infrastructure to manage EIDs exists, but is underfunded. New R&D policies must recognize the diversity of innovation “homes” and take steps to tailor incentives to unique partner profiles. Forward-looking investment in R&D alliances will be critical in the transition from reactive to proactive models of pandemic preparedness.

Source of Funding: 1) Duke University, Bass Connections Program 2) The World Health Organization.

Abstract #: 1.067_HHR

Using Data Visualization to Create New Tools for Interactive CHW Supervision in the Last Mile

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Program/Project Purpose: Since 2015, Medic Mobile has been working with Muso in Mali to design, build, and deploy dashboards that are used by supervisors to provide performance feedback to community health workers (CHWs). In 2015, Muso and Medic co-designed a 6-month randomized controlled trial (RCT) to measure the impact of this intervention on CHWs performance. This session will focus on the process used to design and test the dashboards, as well as the results of the study.

Structure/Method/Design: In Muso’s health system strengthening intervention, CHWs receive individual monthly supervision from a dedicated cadre of CHW supervisors. Muso’s 360° CHW Supervision model allows supervisors to collect information on CHW performance from multiple angles, including patient feedback, direct observation, and one-on-one feedback sessions. Medic Mobile and Muso have co-designed a supervision tool, the CHW Performance Dashboard, designed to facilitate discussion during the one-on-one feedback session. A web-based application analyzes CHW patient data collected on paper or via a mobile application, and creates an easy-to-read personalized CHW dashboard. The dashboard graphically displays each CHW’s performance along three indicators: quantity, speed and quality of care. This dashboard

is then printed on paper and used as a visual and discussion aid for supervision.

Outcome & Evaluation: In this study, CHWs were randomized to receive one-on-one feedback facilitated by the CHW Performance Dashboard, or qualitative feedback without the aid of the dashboard. The performance of each CHW was tracked over six months along three performance indicators: the quantity, speed and quality of care. The RCT tests if this supervision tool improves CHW performance in terms of the quality, speed, and quantity of services they provide.

Going Forward: Since this dashboard study, Muso and Medic have extended their partnership to deploy the Medic Mobile application within Muso's health system. By the end of 2016, all of Muso's CHWs will be equipped with smartphones with the Medic Mobile application which will provide task reminders, patient tracking, decision support, and real time performance feedback. Medic Mobile and Muso are planning to proactively open source, not only the technology, but all tools, methods, and best practices that are developed through their partnership.

Source of Funding: Segal Family Foundation.

Abstract #: 1.068_HHR

Effectiveness of Supportive Supervision Visits on the Consistency of Community-Based Neonatal Sepsis Management Skills of the Health Extension Workers in 167 districts of Ethiopia

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Background: The health extension program of Ethiopia initiated Community-Based Newborn Care (CBNC) strategy to reduce its persistently high neonatal mortality rate. The strategy trained 7,010 health extension workers (HEWs) in 3,952 health posts in 167 districts to provide community-based management of neonatal sepsis, conducted prompt post-training follow-up, continued coaching through supportive supervision, and conducted review meetings. This study examines the effects of the supportive supervision on the consistency of neonatal sepsis management skills of the HEWs.

Methods: The study domain was limited to the 3,924 health posts in 167 districts covering 18 million people supported by the Last Ten Kilometers Project of JSI. A historic longitudinal program monitoring data captured during follow-up visits from case record registers in the intervention health posts between January 2014 and June 2016 was used for this study. Consistency of neonatal sepsis management was defined as consistency of the recorded classification, treatment, and follow-up for neonatal sepsis cases according to the national CBNC protocol. The health post level repeated measures were accounted using random effects multiple logistic regression models. The models also accounted for secular trend to assess the effects of frequency of supportive supervision on the probability that a health post consistently conducted management of neonatal sepsis.

Findings: About 72% (2,864) health posts received at least one supportive supervision visit, 21% (815) received two, and 6% (245) received more than two visits. The consistency of neonatal sepsis management by the health posts improved significantly ($p < 0.05$) over the observation periods—from 60% in January–June 2014 to 72% in January–June 2016. The consistency of neonatal sepsis management was 65%, 68%, and 79% during the first, the second, and the third supervision visits, respectively. The regression analysis indicated that the effect of supportive supervision that was observed between the first two and the third rounds of supervisory visits were statistically significant ($p < 0.05$).

Interpretation: The findings of this study suggest supportive supervision visits were effective intervention in improving the consistency of skills of neonatal sepsis management. As such, at least three rounds of supervision are needed to maintain the consistent skills of management of neonatal sepsis at community level.

Source of Funding: None.

Abstract #: 1.069_HHR

PREventing Maternal And Neonatal Deaths in Rural Northern Ghana (PREMAND): Access to Basic and Comprehensive Obstetric Care

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Background: Maternal and neonatal health outcomes in low-resource settings are largely contingent on access to skilled providers for basic and comprehensive obstetric care. Services considered “comprehensive” include cesarean sections and blood transfusions; two procedures often needed urgently to save the lives of mothers and babies. This study explored the availability of basic and comprehensive obstetric services across four districts in the northern region of Ghana; an area known for its sparse population, high rates of poverty, and limited access to health facilities.

Methods: As part of a larger study of maternal and neonatal mortality, trained field workers identified the location of health facilities and types of obstetric care available in a four-district catchment area across northern Ghana. Field workers administered surveys at all health facilities in the districts to determine the type and number of health providers available as well as the type of obstetric services offered. They also took GPS coordinates to map the location of each facility.

Findings: 91 facilities were identified across the four districts. 86% (N=78) have at least one nurse and slightly more than half (N=47) have at least one midwife. Only 8% of facilities (N=7) have one or more physicians on staff. 63% of facilities (N=57) provide some form of delivery services, although only 10% (N=9) are able to provide all aspects of basic obstetric care (administration of IV medications, manual removal of placenta and retained parts, assistance in vaginal delivery, basic neonatal resuscitation, etc.). For women requiring comprehensive obstetric services, only 5% of facilities have providers able to perform blood transfusions and even fewer (3%) have providers able to provide surgery. The 3 facilities