**Background:** Since seminal evaluation experiences starting with the Multi-Country Evaluation of the IMCI and the Five-Year Evaluation of the Global Fund, and through recent GAVI, PEPFAR, PMI, and AmFAR evaluations, the challenges in using classic evaluation approaches like impact evaluation and even "mixed methods" when evaluating global health initiatives with any degree of complexity have shown themselves to be difficult to address.

In response, several methodological approaches have been proposed as "answers" and complements to more classic approaches to global health program evaluation: implementation science, contribution analysis, causal chain analysis, case study. Regardless of their disciplinary roots, most of these are concerned with addressing context and program implementation variation. All are striving to demonstrate and improve the rigor of the range of methods that are used to evaluate under messy conditions. These are the studies that will build the evidence base on what works, why, and under what conditions, supporting the progress in global health that needs to be made post-2015. There is a critical role for interdisciplinary, academic contributions to this important work.

Structure/Method/Design: This presentation will systematically assess critical points for university contribution to global health program evaluation activities, referencing current methodological challenges and proposed methodological approaches to evaluating under complex, real-world conditions. The critical role of partnerships between implementers and universities will be highlighted, using examples featured in a recent Institute of Medicine workshop on evaluation methods, and from the presenter's own experiences.

Results (Scientific Abstract)/Collaborative Partners (Programmatic Abstract): Essential areas for university contribution are highlighted, including: for design, analysis, and publication; for methodological leadership within a study; and for leading a broader change in the paradigm of what is considered "good" evaluation.

**Summary/Conclusion:** These will be presented as means to strengthen the quality of future global health evaluations, and as a key area of academic scholarship in global health that is very often overlooked.

## Lessons learned from a community-engaged emergency referral systems-strengthening initiative in a remote, impoverished setting of northern Ghana

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**Background:** Approximately 800 women die from pregnancy- or childbirth-related complications around the world every day. Most direct causes of maternal and perinatal deaths could be prevented if women received timely care during medical emergencies. However, poor road conditions, scarcity of vehicles, and limited means of communication continue to be major barriers to reaching urgently needed care in resource-poor settings. While Ghana has a well-organized, decentralized health system, the country does not have clear policies or guidelines for developing or providing emergency referral services. In March 2012, an emergency referral scheme was piloted by the Ghana Health Service (GHS) in collaboration with community stakeholders and health workers in one subdistrict of the Upper East Region—the poorest, most remote region of the country. Based on lessons learned from the pilot, the project was scaled up to 12 subdistricts. The scale-up project, known as the Sustainable Emergency Referral Care (SERC) initiative aims to test the hypothesis that context-specific, community- and subdistrict-level interventions designed to strengthen emergency referral systems will improve access to care in rural, impoverished communities in Ghana.

Structure/Method/Design: A fleet of 24 Motorkings was procured by the GHS to serve as ambulances at the subdistrict and community levels in three districts. Modifications were made to the vehicles to ensure patient safety and comfort. Vehicles were strategically placed at subdistrict health centers and community health facilities to ensure that all communities in intervention areas have access to a vehicle dedicated specifically to emergency transport. Communication between communities and health workers is facilitated through the implementation of a communications system for emergency referral and distribution of mobile phones to health workers and volunteers. A key set of health and process indicators are being analyzed on a quarterly basis.

**Results (Scientific Abstract)/Collaborative Partners (Programmatic Abstract):** SERC is funded by grants from the British charity "Comic Relief" to the GHS. SERC is a component of a collaborative initiative of the GHS and the Columbia University Mailman School of Public Health known as the Ghana Essential Health Intervention Programme.

Summary/Conclusion: An initial process evaluation of SERC indicated challenges related to inconsistent documentation practices; varying levels of driver and staff motivation; and issues with protocol adherence. Refresher trainings along with enhanced community engagement and supervision have been initiated to address these challenges. Overall, the SERC initiative has been well received by communities and has been successful in reducing delays in reaching care and increasing access to emergency referral services.

## Using an electronic medical record system to identify factors associated with attrition from the HIV antiretroviral therapy program at two hospitals in Haiti

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**Background:** Patient retention is important for the success of Haiti's national antiretroviral therapy (ART) program.

Structure/Method/Design: This retrospective cohort study examined ART attrition among adult patients enrolled on ART from 2005 to 2011 in two large public-sector departmental hospitals, using the iSanté electronic data system. The study characterized ART attrition levels and explored the patient demographic, clinical, temporal, and service utilization factors associated with ART attrition. The study used time-to-event analysis methods.

**Results (Scientific Abstract)/Collaborative Partners (Programmatic Abstract):** Among the 2,023 patients in the study, ART attrition on average was 17.0 per 100 person years (95% CI, 15.8-18.3). In adjusted analyses, risk for ART attrition was up to 89% higher for patients living in distant communes compared to patients