

test score of 11.6. Data is still being collected for 6, 9, and 12 months post-course completion.

**Interpretation:** As part of an ongoing initiative, a novel lay-provider trauma course was developed and implemented in rural Peru to address disparities of pre-hospital care in LMIC. Initial data indicates course efficacy with adequate knowledge and skill retention. Future project goals include completing longitudinal course evaluation, expanding training capacity, transitioning to in-country leadership, and collecting end-point data regarding patient outcomes in the Cusco region of Peru.

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### Does the Measure Matter? Observed Quality of Care Score and Child Mortality in a Multi-Country Analysis

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**Background:** As interest grows on what occurs within the “black box” of health care service delivery in lower and middle income countries, rigorous metrics are necessary to measure the quality of care that a health facility provides. Face validity of a quality metric for health administrators and policy makers requires that higher quality scores be associated with better health outcomes in the population the facility serves. This analysis aims to validate a metric of sick child care quality adapted from the Integrated Management of Childhood Illnesses (IMCI) guidelines by assessing its association with under-5 mortality rates.

**Methods:** We use nationally representative health facility and population data in Kenya, Malawi, Namibia and Senegal. The quality of sick child care is defined as the proportion of 24 clinical care items from the IMCI guidelines that a provider completes during a sick child visit, averaged across the facility. Under-5 mortality is calculated in each sampled facility’s catchment area. We use negative binomial models to examine the unadjusted association between facility quality and mortality. We stratify the association at median utilization of care for children under 5 to examine areas where quality is most likely to contribute to mortality, and we examine how the association differs based on underlying regional mortality risk.

**Findings:** Among the 1,454 facilities in the sample, IMCI quality score averaged 0.37 (SD 0.15) and median mortality in the catchment area was 0 deaths per 1000 (IQR 0–58). Quality and mortality were negatively but not significantly associated overall and in strata of utilization; the association was stronger within high utilization areas (IRR -0.50; 95% CI -1.44, 0.63 vs. IRR -0.24; 95% CI -1.56, 1.08), as hypothesized. Quality was most strongly associated with mortality in regions with moderate mortality (IRR -0.89; 95% CI -1.71, -0.07) in comparison with regions with low or high mortality risk.

**Interpretation:** This analysis suggests that a score of adherence to IMCI guidelines in a facility may be associated with catchment area under-5 mortality rates, particularly in areas where people frequently utilize care and have average baseline mortality risk. Further research

is needed to validate this quality of care metric as a predictor of child mortality.

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### Collaborative Methods to Prioritize Oral Health and Healthcare in Kenya

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**Program/Project Purpose:** With only one dentist for every 42,000 people, Kenya falls below the World Health Organization’s (WHO) recommendation of one dentist for every 7,000 individuals. Despite a well-trained dental and public health workforce, oral health is not included in the country’s health policy framework and donors do not target oral health. A cross-national partnership (Columbia University, the University of Nairobi, the Kenya Ministry of Health, Kenya Dental Association), is using collaborative methods to bring visibility to oral health and develop a framework to prioritize and inform oral health policy and advocacy in Kenya. These methods may be modified for other sites/settings.

**Structure/Method/Design:** A six-month planning phase that included in-country and phone meetings culminated in a two-day Oral Health Summit (Summit) designed to discuss oral health needs, resources and gaps in oral health policy, care and funding. Participants included medical/dental professionals and educators, public health experts, policy makers, funders, pharmaceutical/dental products manufacturers, community health workers, and community-based organizations. Key stakeholder presentations, data from a recently concluded national oral health (WHO Pathfinder) survey, SWOT analysis and consensus building exercises were used to develop shared goals and vision. A modified Delphi Method conducted among an expanded group of collaborative members was used to prioritize needs and develop a framework to inform health policy.

**Outcome & Evaluation:** Over 80 participants attended the Summit. Data suggest high levels of disease, and rural/urban disparity in service delivery, but policy and public resources are inadequate to address needs. Stakeholders identified priorities within five topical areas: policy, training, data/surveillance, integration with non-dental healing and helping professions, and collaboration with the private sector. As a direct result of the Summit, The Ministry of Health provides weekly oral health social media outputs, and the Inter-religious Council of Kenya has mobilized resources for oral health outreach.

**Going Forward:** The partnership has put in motion plans for participatory demonstration projects that can inform policy. The potential of the partnership will be used to build capacity and seek funding for future initiatives, but integration with existing care

systems and policy change will require continued stakeholder commitment, improvements in data collection and interpretation, and intervention testing, all of which require collaborative/participatory methods to be effective.

**Source of Funding:** Columbia University (PGIF) and Unilever.

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### Expanding Pediatric and Maternal Clinical Care and Education Utilizing a Successful Pediatric HIV Infrastructure for Global Health Programs in Resource-Limited Settings

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**Program/Project Purpose:** This College of Medicine (COM) and Academic Medical Center (AMC), through their joint non-profit focused on pediatric HIV care and education in resource limited settings (Pedi-HIV), have established 8 comprehensive, family-based clinical centers of excellence (COEs) in 7 countries. Through public-private partnerships with governments and donors, Pedi-HIV has created one of the largest pediatric HIV treatment network of affiliated non-governmental organizations (NGOs) training over 74,000 healthcare workers and treating over 300,000 patients.

The success of this model has encouraged other key services integrate into the COE platforms which allows them to address the evolving healthcare needs amongst these populations. Expanded services include women's and maternal health services, pediatric hematology/oncology, pediatric emergency medicine and tuberculosis treatment.

**Structure/Method/Design:** Pedi-HIV operates COEs by embracing a public-private partnership model with government and donors, operating under memoranda of agreement with government and integrated into each Ministry of Health systems of care. Building on the reputation of excellence in providing pediatric HIV care, barriers to entry for other services to establish treatment and capacity-building programs have been greatly reduced.

**Outcome & Evaluation:** As a result, treatment and capacity building programs have begun in obstetrics/gynecology, pediatric hematology/oncology, tuberculosis, surgery and anesthesiology, and emergency medicine at 6 of the 8 COEs. The COM/AMC now focuses on developing operational infrastructure, a strategic plan, managing strategic investment projects, defining success metrics, providing operation advice/expertise and providing a forum for discussion, coordination and collaboration to include these expanded services and capacity building initiatives.

**Going Forward:** The COM/AMC provides a team of qualified individuals across project management areas to support the expansion of the services offered and work with COE leadership in each country to achieve excellence in program development and management and ensure effective utilization of resources.

The COM/AMC will continue to identify resources and partners to build sustainable capacity enhancement, including development of formal training programs, global health rotations,

infrastructure development and improvement. Qualitative and quantitative monitoring and evaluation frameworks have been developed to document improvements and enhanced efficacies in care and treatment.

**Source of Funding:** Funding provided by the local and U.S. governments, international NGOs, foundations and the AMC.

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### Healthcare in Nunavik, Canada: Basis for a Mixed Method Study

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**Background:** For low populated remote areas, like Northern Quebec, it is highly problematic to recruit healthcare professionals. Consequently, workers in such settings practice in a stressful work environment. The source of the stress is both the lack of human resources and the lack of an acquired collaborative mechanism within the context of expanded scope of practice (Strasser 2010, Lessard 2005).

Our study will investigate how the law and healthcare actors' perceptions of the normative instruments impact their capacity to practice collaboratively. Our hypothesis is that there is a relation between collaboration and perception about the normative structure of interprofessional practice. To prove this, we will use an explanatory mixed method (Creswell 2007), allowing us to ensure a comprehensive approach to the research question.

**Methods:** This study focuses on the two larger professional groups working in Healthcare in Quebec: medicine and nursing.

First, a description of the current normative environment is mandatory. After this stage, our team will conduct a survey research exploring capacities to collaborate, conflict resolution, knowledge of regulation and demographics. These results will then be explored by three focus groups representing remote and urban healthcare workers. Our aim at that stage is to identify themes related to the results from the quantitative phase. Finally, we will analyze the results of all stages by allowing discussion in a group of stakeholders.

**Findings:** This study is in its earlier stage. Our literature review shows that each profession has its own education process and regulatory body. Nonetheless, the major regulatory bodies related to healthcare in Quebec issued last year a common statement encouraging a collaborative practice.

Regarding regulation knowledge, we found that all but one of the nineteen (19) interprofessional education program across Canada are lacking legal education linked to collaboration.

**Interpretation:** Silos in education and professional regulation are known to encourage competitive behavior. Although regulatory bodies have a clear political agenda that in theory encourages collaborative practice (OIIQ, CMQ, OPQ 2015), flexible and accessible mechanisms to support such practice are in fact lacking. Possible contributing factors to that absence are lack of knowledge about regulation or perceptions about regulation. We plan to explore these elements in the next stages of our study.

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