

**Program/Project Purpose:** Exposure to secondhand smoke (SHS) causes many health problems. In China, 740 million non-smokers are exposed to SHS, which leads to approximately 100,000 deaths every year. To systematically assess SHS exposure and perceived health risks of tobacco use, China CDC collaborated with five cities, including Chengdu, Chongqing, Wuhan, Xiamen and Xi'an, to launch the Tobacco Questions for Surveys (TQS) in 2015.

**Structure/Method/Design:** The TQS was a subset of key questions from the Global Adult Tobacco Survey (GATS). The target population was non-institutionalized adult residents age 15 and above in urban areas. Multi-stage cluster sampling was applied to select 2,500 individuals from each city. SAS and R were used to obtain point estimates with standard errors accounting for the complex sample design features. SHS exposure was defined as noticing someone smoking in the past 30 days in specific venues. Perceived health risks of tobacco use included whether respondents were aware that smoking or SHS could cause specific diseases.

**Outcome & Evaluation:** The SHS exposure prevalence was higher than 40% in indoor workplaces (the highest is 53.0%) and higher than 35% at homes across five cities. The SHS exposure prevalence in healthcare facilities was around 20% across five cities. Among public venues surveyed, the SHS exposure in bars/night clubs was the highest (all above 90%), followed by that in restaurants (63.8% to 73.3%). Public transportation had the lowest SHS exposure (7.7% to 12.2%).

While over 85% of adults in all cities were aware that smoking could cause lung cancer, only around 40% believed smoking could cause stroke and heart attack. The perception of erectile dysfunction was the lowest. The awareness of SHS exposure causing lung cancer in adults was the highest (all above 79%), followed by lung diseases in children (71.5% to 81.2%). Smokers were more aware of the harmful effects of smoking and SHS exposure than nonsmokers. As education level increased, the perceived health risks of all diseases increased in all cities.

**Going Forward:** Tailored intervention is needed to reduce SHS exposure, and comprehensive tobacco control policies are needed to protect vulnerable groups. It's important to implement health education on the adverse effects of smoking and SHS exposure, emphasizing health risks other than lung diseases.

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### Attacks on Health Facilities as an Indicator of the Human Cost of Conflict in Syria

*S.E. Ri, T. Ogata, R. Snyder, R. Haar; University of California, Berkeley, Berkeley, USA*

**Background:** The primary indicator of the human cost of conflict has consistently been the number of armed forces and civilian deaths. Although it has been the best proxy available to measure the frequency and intensity of violence, the mortality rate is difficult to enumerate during or even after a conflict. In the case of the conflict in Syria, estimated mortality rates range from 250,000 to

470,000, highlighting the difficulty in obtaining accurate death tolls in a violent context.

In contemporary conflicts, civilian infrastructure is increasingly targeted for destruction. As violations of international humanitarian law, attacks on health-care facilities have immeasurable short and long-term repercussions on communities. In Syria, there is growing evidence that government forces have systematically destroyed its health system by attacks on hospitals, health workers and patients.

**Methods:** The recent surge of technology and its applications has provided an unprecedented ability for human rights organizations to document attacks on health-care infrastructure. Our study utilizes open-source data documenting health-care facilities attacked per month in Syria, and compares that to the trends in the civilian casualty rate. We identify various approaches for identifying health-care infrastructure damage and note the limitations in methods for enumerating civilian casualties.

**Findings:** Our study finds that while the trends in civilian casualties and attacks on health-care facilities show similar patterns in the early stages of the Syrian conflict, the civilian casualty rate stabilized over time whilst the number of attacks on health-care infrastructure increased. We also highlight the consistency between the rate of attack on health-care facilities and other humanitarian indicators. Our findings reveal that only using civilian casualty rates to measure the level of violence would belie the true cost of war, particularly when the collapse of structures used to enumerate casualties may compromise the accuracy of mortality indicators.

**Interpretation:** Attacks on health-care infrastructure are a valuable indicator to include in measuring the intensity of an armed conflict. In the case of Syria, this information could provide a more nuanced understanding of the consequences of the destruction of health-care infrastructure, and could expose the nature of indirect deaths in conflict.

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### Constructing and Governing Partnerships for Capacity Building in Implementation Science

*J. Sherry<sup>1</sup>, S. Ski<sup>2</sup>, K.-A. Jones<sup>1</sup>; <sup>1</sup>Graduate School of Public Health and Health Policy at the City University of New York (GSPHHP/CUNY), Washington, DC, USA, <sup>2</sup>University Research Co., Bethesda, MD, USA*

**Program/Project Purpose:** Partnership approaches are critical to strengthen institutional and leadership capacity in low- and middle-income countries – capacities to both conduct Implementation Research and Delivery Science (IRDS) and to utilize IRDS evidence to improve health outcomes. Institutional leadership and capacity development for IRDS is needed at multiple levels and demands novel approaches to generate high-quality evidence; to make findings accessible and relevant to real world problems; and to influence programs and policies. USAID's Translating Research into Action (TRAction) project has supported IRDS partnerships in several countries, working to build IRDS capacity and improve health. IRDS depends on partnerships that include research, implementation and policy institutions.

**Structure/Method/Design:** TRAction's experience in constructing and governing IRDS partnerships will be presented, focusing on four areas of capacity building: research skills, research management, results dissemination, and utilizing evidence. Partnership strategies have included training and curriculum development in IRDS; engagement of the end users of research (policy makers) throughout the research process; support for multi-level policy engagement to generate demand for evidence in priority areas, and to support evidence-informed decision making once implementation research has been conducted; and improving understanding of and access to IRDS through field building efforts. Challenges and successes in strengthening IRDS capacity will be shared through partnership experiences in IRDS related to Respectful Maternity Care (RMC) in Tanzania; community-level recognition of maternal and newborn complications in Indonesia and India; and Performance-Based Incentives (PBI) in Malawi.

**Outcome & Evaluation:** The RMC effort will illustrate a concurrent research and advocacy approach that then engaged national policy leaders. The Recognition effort will discuss one institution's experience with a multi-country study using a shared research protocol. The PBI discussion will demonstrate the Malawi's government's approach to implementing PBI and using evidence to modify programs and improve outcomes.

**Going Forward:** The critical importance of strengthening institutional leadership and capacity for IRDS — strengthening the capacity of stakeholders to both produce and consume research for evidence-supported decision making — is relevant for multiple health challenges in different settings. The breadth of examples presented here will provide models for future IRDS efforts and demonstrate its potential.

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### **Project Embrace: A Non-Profit Providing Sustainable Medical Materials to Low and Middle Income Countries**

*M.K. Sudabattula; University of Utah, West Jordan, UT, USA*

**Program/Project Purpose:** As an organization, Project Embrace is dedicated to the reutilization of sustainable medical materials — in particular, materials that provide skeletal support and mobility assistance for patients in need. The FDA classifies these types of devices as noninvasive Class I and Class II medical devices; noninvasive meaning these devices remain on the exterior of the patient yet provide medical benefits for the active participant. Currently, in medicine, it is practiced to discard these forms of devices after limited use either to a landfill or by incineration. This is wasteful and harmful to the environment. Project Embrace has emerged as a way to re-use and re-distribute these types of noninvasive medical devices from the United States to patients in impoverished communities across the globe who may benefit from their use. We propose to collect, sanitize, package, and deliver sustainable orthotic materials and mobility-based devices to medical facilities in developing countries abroad.

**Structure/Method/Design:** To establish the mission and operations of Project Embrace, we conducted a needs assessment and feasibility analysis. First, we interviewed key stakeholders in health-care, business, law, and the non-profit industry to collect data on the structure of our market as well as its appetite for our approach. Our analysis confirmed the supply and demand to fuel our model; and that it would be beneficial for all parties involved. Furthermore, we affirmed that our system to collect, sanitize, ship, and deliver our donations not only falls in congruence with the standards set forth by the FDA but is cost-effective through federal grant support, and endorsements through the global health community.

**Outcome & Evaluation:** Moving forward, we aim to launch our first successful campaign of donations, collected from pediatric and adult health facilities in Salt Lake City, Utah to the Vegesna Foundation located in Hyderabad, India, during the summer of 2017. By repurposing excess and waste in one country to meet the need for usable and affordable medical supplies in another country, Project Embrace is an innovative way to address global health inequalities while addressing the pressing concern of environmental justice through the reduction in medical waste in hospitals located in the United States.

**Going Forward:** As an organization, we are finalizing our 501 c(3) designation.

**Source of Funding:** None.

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### **Nurses Attitudes Towards Minor's Capacity to Consent: A Cross Sectional Study Done in Sri Lanka**

*S.R. Tissera<sup>1</sup>, N. Silva<sup>2</sup>; <sup>1</sup>International Institute of Health Sciences, Welisara, Sri Lanka, <sup>2</sup>International Institute of Health Sciences, Colombo, Sri Lanka*

**Background:** Gilic competence is a concept used to decide the capacity of a child (less than 16 years) to consent to medical treatment. This concept is not yet widely practiced in the world and is likely to depend on cultural and social norms of a society. Therefore it is important to assess the attitudes towards these aspects among nurses trained and practicing in a developing country like Sri Lanka to evaluate how a traditional cultural values system would affect such a modern concept of Autonomy.

**Methods:** A descriptive cross sectional study was conducted among 168 conveniently selected practicing nurses from various sectors, using a self administered questionnaire. Ethical clearance was obtained from BioInquirer ethics review committee.

**Findings:** Out of the 168, 84 were with less than 5 years of work experience while 37.5% had more than 5 years. 53.6% (90) identified minors as those below 18 years and 14.3% identified as those below 10 years. 48 (28.6%) said that the consent of a child should never be considered in providing treatment. 67.8% stated that best decisions regarding a child's total health is the decisions taken by parents. Majority (52%) of experienced nurses thought so. 42 (25%) said they will never trust a decision by a minor. Most of these were nurses over 30 years old. 46.4% (78) stated that children at the same have the same capacity to consent. This perception did not