

Background: Demographic and socio-demographic factors such as place of residence, maternal age, educational attainment, occupation, parity, house-hold wealth and religion are critical determinants of healthcare utilization. We examined socio-demographic determinants affecting child health service utilization in urban Ethiopia to support recommendations for policy makers and public health managers.

Methods: Using the 2011 Ethiopian Demographic and Health Survey (2011 EDHS) data, we investigated factors determining health service utilization (treatment seeking behavior for childhood illnesses and vaccination) and socio-demographic demographic factors such as maternal age, maternal educational attainment, and household wealth using descriptive statistics.

Findings: Among Ethiopian urban children age 12-24 months, 63% received the recommended three doses of DPT vaccine; 44% of urban children under 5 years of age with a fever or cough received appropriate treatment and 51% of the children with diarrhea were treated with oral rehydration salts (ORS) or recommended home fluids. Slightly more male children received medical treatment (56% for diarrhea and 43% for fever or cough) compared to females (44% and 32%) respectively. Maternal education and household wealth are shown to be the most important determinants of health care seeking for childhood illnesses and vaccination. The proportion of children who received DPT3 vaccination increased as maternal education and household wealth increased. Much higher proportion of children (78%) who are born to women who attended higher education received DPT3 than children born to women of no education (37%). Almost all (94%) children born to the wealthiest quintile households received DPT3 compared to only 42% of children in the poorest quintile. Maternal education and household wealth influence decisions to seek health care for childhood illnesses in urban Ethiopia. Much higher (86%) of urban children born to highly educated women receive ORS or recommended home solution for diarrhea compared to only 34% of children born to women without primary education. The relationship between education and fever treatment was not as large: nearly half (45%) of children born to highly educated mothers received treatment for fever or cough compared to children born to mothers with no education (34.5%).

Interpretation: In urban Ethiopia, inequalities in wealth and education are shown to affect child healthcare utilization. Health programs in urban Ethiopia should focus on the poor and less educated segment of urban population in order to improve child health outcomes.

Funding: No funding was obtained.

Abstract #: 01SEDH012

“Rather than talking in Tamil, they should be talking to Tamils”: Sri Lankan Tamil refugee readiness for repatriation

Abstract opted out of publication.

Abstract #: 01SEDH013

Building partnerships for trans-disciplinary global health research: the caribbean consortium for research in environmental and occupational health

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Program/Project Purpose: The Caribbean Consortium for Research in Environmental and Occupational Health (CCREOH) was established in September 2012. The overall aims of CCREOH is to characterize key environmental and occupational health (EOH) risks associated with gold mining-related mercury contamination, pesticide use in agriculture, and indigenous nutraceutical contamination to inform a gap- and opportunities assessment of relevant environmental policies; to create a sustainable public health and EOH network to serve as the trans-disciplinary research and training hub for CCREOH; to develop a trans-disciplinary research roadmap to guide the consortium’s EOH research leveraging all consortium partner assets; and to develop a capacity building portfolio including a regional EOH training program to successfully implement the priority areas articulated in the CCREOH research roadmap.

Structure/Method/Design: The overarching goal is to address high-priority EOH risks in Suriname and those common to the increasingly vulnerable Caribbean region while preserving the unique assets, health, and cultural traditions of indigenous and other health disparate populations. CCREOH’s investigator team is indicative of its trans-disciplinary research portfolio, bringing together an array of scientists from biology to epidemiology including toxicology and medicine. CCREOH builds on the existing partnerships between the Anton de Kom University of Suriname, Faculty of Medical Sciences, Tulane University, School of Public Health and Tropical Medicine, and the Caribbean Public Health Agency. Partner countries include Trinidad and Tobago, Guyana, and northern Brazil. Currently, research is exploring the antiproliferative effects of medicinal plants, analyzing pesticide residues in frequently consumed vegetables and fruits, as well as the role pesticides play as an effector in suicide attempts and successful suicides, and evaluating the data derived from preliminary environmental and occupational health policy assessments in partner countries.

Outcomes & Evaluation: Plant extracts inhibited the cell growth and may interfere with certain aspects of angiogenesis. Initial pesticide analysis revealed levels of endosulfan that exceeded maximum residual levels. Community health workers (CHW) successfully designed and pilot tested text messages regarding the use, storage and disposal of pesticides. Policy assessments showed a disconnect between increased development in agriculture and mining and lack of environmental health safeguards; a lack of science-driven EOH policies to protect public health; and an exponential increasing NCD burden in growing health disparate communities.

Going Forward: Studies to assess plant extracts for capacity to form capillaries as well as potential anti-oxidant properties are in preparation. Continued EOH assessments will include historical deposition of mercury and expanded pesticide analysis on agricultural products. Additional CHWs will be trained. A regional dietary assessment tool will be developed to ascertain potentially contaminated food intake. A priority is a proposal submission for a full GEOHealth research and training hub.

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Livestock production and antibiotic resistant pneumonia in the elderly population of the United States

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Background: In the United States, antibiotic resistance complicates serious infections in over 2 million people a year, leading to health and economic impacts. Because 80% of antibiotics are sold for animal production, concern is growing over livestock's contribution to antibiotic resistance in humans. Although many bacterial species that cause pneumonia are found in livestock facilities, the potential impact of livestock production on antibiotic resistant pneumonia has been largely unexplored. This study aims to determine the antibiotic resistance rate in bacterial pneumonia (BP) in the US vulnerable population and its spatio-temporal pattern, focusing on *Streptococcus pneumoniae* (ICD9CM: 481) and *Pseudomonas* spp. (ICD9CM: 482.1) and resistance to the top antibiotic classes in livestock production, tetracyclines and penicillins.

Methods: We Abstracted all hospitalization records related to pneumonia (ICD9-CM Codes 480-488) from the Centers for Medicare and Medicaid Services (CMS) dataset for years 1991- 2006 in adults aged 65 and older. Each record contains information on 10 diagnostic codes, including laboratory-confirmed resistance, residence zip code, average length of stay, and direct charges.

Findings: Out of 16,363,215 hospitalizations related to pneumonia, 3,231,256 (19.7%) cases were due to BP. *S. pneumoniae* and *Pseudomonas* spp. were the most common causes of BP and responsible for 516,634 (15.9%) and 465,295 (14.3%) cases, respectively, of which 0.65% and 1.54% of cases were resistant. Of these, 3.4% and 6.8% were multi-drug resistant, respectively. A resistance rate of 4.3% among BP hospitalizations was driven by *Staphylococcus aureus*, associated with over 20% of resistant cases. The proportion of resistant BP cases increased by 0.5% per year. In 5 states (CT, WV, KY, CA, NC) the proportion of resistant BP exceeded the national average by 20%.

Interpretation: Although *S. pneumoniae* is not common to farms, it may derive antibiotic resistance from emissions, such as through horizontal gene transfer. *Pseudomonas* spp. have been detected in livestock facilities and show potential for zoonotic transmission. Many risk factors may contribute to the high rate of resistant BP, including high human antibiotic use (as in KY and WV), high animal productions (as in NC and CA, top swine and dairy producers, respectively), or regulations that influence the extent contaminants enter the environment (as CA's weak requirements for NPDES permits). Such risk factors must be further explored. We are now correlating this dataset spatially to the county level livestock density derived from the USDA NASS Annual Surveys and Agricultural Census. As developed previously by Jagai et al, the livestock data combined with human population census allows creation of four exposure categories to compare rates of antibiotic resistance across counties with high/ low livestock and high/ low human density. The results of the analysis will be presented.

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Abstract #: 01SEDH015

Meanings of fatherhood in urban Tajikistan

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Background: Increasing attention has been devoted to understanding the impact of fathers' involvement with their children on health. Available literature on fatherhood in countries throughout the

world is limited, particularly in Asian Muslim societies. This formative study aimed to begin to fill that gap with research on urban Tajik fathers' perspectives about their paternal roles, their meanings of being a "good father", as well as their conceptualizations of the rewards, constraints and difficulties of fatherhood.

Methods: Through personal contacts and snowball sampling, 30 fathers with children ages 0 to 19 years old living in an urban area of Tajikistan were recruited to participate in the study. The first author conducted open-ended interviews in Russian using Skype or in person using a pre-defined interview guide that focused on the following themes: fathers' childcare responsibilities, definition of a "good father", the best and most difficult thing about being a father and key fatherhood constraints. Interviews lasted, on average, 20 minutes. The thematic analysis method guided data coding and analysis.

Findings: Respondents ranged from 28 to 59 years old and had one to five children. Using Palkovitz's conceptual framework on parental involvement, we clustered responses regarding respondents' childcare responsibilities into three broad domains: behavioral domain (e.g., shared activities, teaching and educating, communication, providing), affective domain (e.g., thought processes and monitoring) and cognitive domain (e.g., affection and emotional support). Results also revealed that respondents' definitions of a "good father" centered on five axes: (1) provider, (2) mentor/teacher, (3) nurturer, (4) care giver and (5) friend. Fathers identified several constraints that affect their fatherhood experiences, including work and education responsibilities, age and gender of their children, responsibility of fatherhood, effective disciplinary approaches and inability to meet children's expectations. Most respondents commented on the joy, happiness, prosperity, inspiration and support fatherhood brought to them.

Interpretation: Our findings provide opportunities for service providers and public health experts to better understand how urban Tajik fathers define their paternal responsibilities and the factors that are shaping their fatherhood experiences. These results may be useful for policy makers to define policies and programs that should be implemented in order to reduce gender disparities in care-giving practices in families and to encourage fathers to be more involved in childcare. The results provide a foundation for future research.

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Abstract #: 01SEDH016

High uptake of a women-only and sex work-specific drop in centre: independently linked to sexual and reproductive health care for sex workers

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Background: Women sex workers (SWs) face high sexual and reproductive health (SRH) disparities globally, and there has been increasing recognition of the need for women-centred care and sex work tailored services to address these disparities. Most successful strategies to improve SWs' access to HIV care have been based on community empowerment models in low and middle-income country settings. This study longitudinally examined the uptake of a women-only and sex-work-specific drop-in service (WISH Drop-In Center) and its impact on SWs' access to SRH services.

Methods: Data were drawn from a community-based, prospective cohort of 547 women SWs (2010-2013), known as AESHA (An Evaluation of Sex Workers Health Access), in Vancouver, British