NEW AND EMERGING PRIORITIES FOR GLOBAL HEALTH

Reproductive healthcare needs of sex workers in Rural South Africa: a community assessment

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Project Purpose: There is a community-driven priority in the Limpopo province of South Africa for programs addressing the reproductive healthcare needs among a growing population of mobile sex workers. Access and availability of women's health services is limited and many challenges exist. This study was developed to place communities at the forefront to more specifically adapt a public health response to regional barriers and attitudes. Our aim was to build strong community partnerships, gain understanding of issues in women's health services, and collaborate with community members to address those issues.

Methods: This project collected quantitative and qualitative data from migrant sex workers in rural South Africa. Participants were recruited through voluntary interest from a local health clinic performing outreach for sex workers. We (1) created partnerships and built trust within the community, and (2) worked together with the community to collect both qualitative and quantitative data, such as community groups to discuss health needs as well as distribution of "knowledge, attitude, and practice" (KAP) surveys.

Outcome: Ninety-four sex workers were surveyed and participated in qualitative discussion groups. The survey data identified risk factors to poor reproductive healthcare outcomes, including limited education, young age at first sexual contact, large number of sexual partners, little knowledge of sexually transmitted infections, distrust in the use of healthcare facilities, and limited use of contraception. Community discussion groups revealed a desire for easier and more accessible healthcare, showing the biggest barriers to care as lack of money and transportation, and safety concerns related to profession, including fear of violence from partner and/or client. With input from civic leaders, public interest and community outreach groups, a community advisory board was successfully formed for future collaboration.

Going Forward: By working with local stakeholders and sex workers, we created an interactive and tailored assessment to discuss healthcare disparities. We helped foster community ownership of local healthcare provision, contributing to the efficacy and sustainability of future projects. We demonstrated successful implementation of both qualitative and quantitative research, setting the stage for future research in which partners will create and implement a sustainable and cooperative public health campaign.

Abstract #: *1.001_NEP*

Towards improving healthy food access through community-supported-agriculture-farmshare programs in food desert areas and among low income populations

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Background: A report indicated that San Bernardino's Home and School Retail Food Environment Index (HS RFEI) was rated highest in California with an index of 8.9, while California's was 7.9 (Babey, Wolstein, & Diamant, 2011). The RFEI is a rating of food stores offering mainly unhealthful choices (i.e. corporate fast-food chains) compared to those offering predominantly healthful options (e.g. fresh produce) in a locality. The RFEI implications are that California, and more specifically, San Bernardino city are disproportionately affected with very limited options for healthy foods. Current study aimed to explore Community Supported Agriculture Farmshare (CSA-F) programs as alternative food sources in disadvantaged communities.

Methods: Participants were outreached via door to door canvassing, flyers distribution, and community meeting announcements. One hundred and eighty-two participants (one-per-household) in two low-income residential communities in San Bernardino were enrolled and received (for at least 8 weeks) the following: Group I: Weekly Farmshare produce, participate in one-hour health education class, and in another one-hour of weekly physical-activity. Group II: Attended a once weekly one-hour physical-activity-session.

Findings: Based on their ages, percentages of body fat, visceral fat, resting metabolism, and muscle, participants' body mass indexes were predicted with a significant multivariable linear regression equation: $F(5, 159) = 271.15$, $p < 0.001$; $R^2 = .89$. When split by group, participants in the Farmshare/exercise/education group had a 4-point drop in their heart rates after 8 weeks. Their baseline heart rates (Mean= 74.8, SE= 1.8), was significantly higher compared to after eight weeks (M= 70.6, SE= 1.4), $t(39)=-2.51$, *p-value=0.016*. Daily fruits and vegetable consumption per day also increased about 1.2 significant points in the Farmshare/exercise/education group; baseline M= 5.7, SE=0.41, compared to after 8 weeks M= 7.0, SE= 0.35, $t(45)= 3.32$, *p-value= 0.002*.

Interpretations: Innovative alternative food choices like Farmshare programs can be viable options for supplying healthy foods to local communities, however, cost, feasibility, and enlightenment regarding such choices remain impediments for their patronage among study participants. Similar options, fostering new relationships by connecting local farmers with their consumers, may elicit not only an agrarian awareness, but a keen global and environmental responsiveness as reported.

Abstract #: *1.002_NEP*

Working with neuro-rehabilitation programs to address oral health in India

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Background: Several studies indicate high incidence and severity of oral diseases in individuals with neurologic impairments, including those due to traumatic brain injuries (TBI). Close to 1.6 million TBIs are sustained annually in India, representing 16% of the global TBI burden. Although oral condition is central to quality of life, including ability to eat, speak and express emotion, oral health is not systematically addressed in this population. This qualitative work was designed to identify best practice methods of integrating oral health and healthcare in neuro-rehabilitation systems in India by assessing the structure of the system and professional and lay caregiver oral health needs. These data will be used to inform training and policy designed to integrate oral health in existing systems of care.

Methods: Ten semi-structured key informant interviews with professional caregivers (physical therapists/occupational therapists/nurses) and environmental scans of three programs were conducted to assess the structure of the neuro-rehabilitation system. Structured interviews were conducted with a convenience sample of 46 lay caregivers of patients receiving care at neuro-rehabilitation programs in New Delhi and Jodhpur. Interviews were transcribed, coded, and analyzed for emerging themes.

Findings: 89% of lay caregivers are female, 17% have received oral health education, and 67% find providing daily oral care difficult; 63% of patients have never seen a dentist due to low caregiver perceived need. Professional caregivers recognize the importance of oral health but do not have the skills to address it, and policies around delivery of oral health and healthcare are not comprehensive. Thematic evaluation suggests that oral health can be integrated into neuro-rehabilitation programs through: co-delivery of neuro-therapy and daily oral care, and inclusion of oral health risk assessment in intake/ interval patient evaluations and patient referral systems.

Interpretation: Integration of oral health in existing neuro-rehabilitation systems can serve as a sustainable model of oral care delivery with high reach, but lay and professional caregivers must be trained and incentivized. The data will be used to inform development and evaluation of a training program for lay and professional caregivers.

Abstract #: *1.003_NEP*

Diabetes and tuberculosis interaction in Kazakhstan

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Background: The global increase in diabetes prevalence highlights an urgent need to address diabetes interaction with tuberculosis (TB) prevention and treatment. In Kazakhstan where multi-drug resistant TB (MDR-TB) is serious, an estimated 26% of new TB cases have MDR-TB. Studies show that for individuals with TB, co-occurring diabetes is often associated with TB treatment failure which may lead to MDR-TB. The factors associated with the synergistic relationship between TB and diabetes is understudied in Kazakhstan. The aim of this paper is to examine factors associated with the co-occurrence of diabetes and TB in Kazakhstan using data from a population based study of the Social, Environmental and Genetic Factors Determining Susceptibility to Tuberculosis project.

Methods: Using a cross sectional study design, we collected data from 1600 participants consisting of TB positive individuals, household controls and community controls recruited from June 2012 to May 2014 from four regions in Kazakhstan: Almaty city, Almatinskaya oblast (province), Kyzylordinskaya oblast, and Kostanayskaya oblast. For this analysis, we focused on the TB positive individuals and used multivariate analysis to test the prevalence of co-occurring TB and diabetes as well as the associated multilevel risk factors.

Findings: Of the 562 TB positive individuals 7.1% report having concomitant diabetes. A significant proportion of new TB positive cases were associated with both diabetes and smoking — accounting for 28%. We found that major risk factors associated with co-occurring TB and diabetes include: age, education and living in a rural area.

Interpretation: To our knowledge, this is the first study on the co-occurrence of TB and diabetes in Kazakhstan. The high prevalence of co-occurring TB and diabetes has implications on screening index or TB positive cases as well as individuals with diabetes. National TB programs in countries like Kazakhstan should move towards integrated screenings for both diseases given the increasing prevalence of diabetes and its negative effects on TB treatment and management. Integrated screenings for both TB and diabetes in Kazakhstan is not only urgent but must address risk factors such as age, education and rural living. More evidence based research on co-occurring TB and diabetes is needed in high TB burdened settings.

Abstract #: *1.004_NEP*

Hematological abnormalities among patients with systemic Lupus Erythematosus at Kenyatta National Hospital, Nairobi

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Background: Systemic Lupus Erythematosus (SLE), an autoimmune disease characterized by multi-organ failure, has been increasingly identified in clinics in African settings. Hematological abnormalities have been demonstrated to be common among SLE