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Abstract #: 2.071_NEP

One community at a time

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Program/Project Purpose: Mental health conditions continue to be one of the leading causes of disability worldwide. This is largely because adequate mental health care is not readily accessible in many parts of the world, including in many parts of the U.S. These disparities in access to care are the result of a complex interplay between availability of mental health care providers, affordability of care, and additional factors that influence the perception and acceptability of mental health care (e.g., stigma, culture, policy). Solutions that work must address this complexity. The purpose of this program was to develop a community partnership model to reduce mental healthcare disparities that address the complexity of challenges faced by underserved communities, locally and globally.

Structure/Method/Design: Funded through a grant from the USDA, we have developed a model for reducing mental health care disparities around the world one community at a time. We used rural towns (<2500; designated as Mental Health Care Professional Shortage Areas) in the U.S. as laboratories for the mental health care disparities problem worldwide. Our innovative model emphasizes working within the local cultural context to a) build community capacity to make a difference by mobilizing existing resources, b) collaborate with local medical providers, and c) determine sustainable ways to increase access and acceptability to mental health care (including telemental health).

Outcome & Evaluation: Through the collection of qualitative and quantitative data from patients, medical providers, and staff at end-user sites, we evaluated the feasibility of the model. Five years after its implementation, we interviewed members of the communities in which the model was used to determine principles that facilitated sustainability. Key findings of both the feasibility and sustainability study will be presented.

Going Forward: The application of this model has implications for addressing global mental health disparities. We have increased the scale of the project globally as we are implementing the model in Brazil and are in discussions with other global partners in Portugal and Australia; demonstrating how local solutions can have global impact.

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Hepatitis C Treatment Outcomes in Kigali, Rwanda

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Background: Existing research on hepatitis C virus (HCV) treatment outcomes in sub-Saharan Africa is very limited. This study

was undertaken to determine the HCV sustained virologic response (SVR) 24 weeks after treatment completion and the frequency and severity of adverse events in patients undergoing HCV therapy in Kigali, Rwanda.

Methods: The study was a retrospective review study of all patients \geq 18 years old treated for HCV with ribavirin and interferon combination therapy at King Faisal Hospital in Kigali, Rwanda from January 1, 2007 to December 31, 2014. Patient's paper and electronic charts were reviewed for data collection. Approval for the study was obtained from the University of Maryland Institutional Review Board and King Faisal Hospital K-Ethics and Research Committee.

Findings: The study included 69 patients; 52% were male, and the median age at the start of treatment was 48 years (range 25–69). The majority of patients had HCV Genotype 4 (61%) and <2% of patients had genotypes 1, 2, 3, or 5 (33% unknown genotype). Sustained virologic response 24 weeks following completion of treatment was 32%. 57% relapsed after six months, and 12% of patients had unknown outcomes. The most frequent side effects included headache (56%), fatigue (51%), and non-abdominal pain (49%). The most common adverse laboratory values were neutropenia (94%), thrombocytopenia (39%), and anemia (30%). Three patients (4%) died following treatment (causes of death unknown).

Interpretation: Sustained virological response of patients in this study was lower than in other studies conducted in sub-Saharan Africa. Cytopenias were the most frequent side effects and were consistent with other studies. More comprehensive studies on HCV care and treatment outcomes with the new direct acting antivirals will need to be completed as these drugs become available in Rwanda.

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Challenges and strategies for implementing mental health measurement for research in low-resource settings

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Background: The gap between need and access to mental health care is widest in low-resource settings. Health systems in these settings devote few resources to the expansion of mental health care, and mental health is missing from the agenda of most global health donors. This is partially explained by the paucity of data regarding the nature and extent of the burden of mental illness in these settings. The accurate and comparable measurement of this burden will be essential to advocating for, developing, and implementing appropriate policies and services for mental health in low-resource settings. This study surveys the unique challenges associated with measurement of mental health in these settings globally, and proposes a framework for use by future implementers.

Methods: We reviewed the literature on mental health measurement in low-resource settings, focusing on studies that have attempted to adapt valid, reliable assessment tools from high-resource settings and implement them in low-resource settings. We also collected case studies from researchers in the field who have direct experience in this area.

Findings: We first outline an approach that uses qualitative data to adjust existing, validated assessments so that they directly reflect the psychosocial constructs of the new target population, and so that they are more easily implemented in that context. We then describe the incorporation of cognitive interviews to ensure understanding and agreement in items between researchers and participants. Lastly, we outline an efficient method for improving the reliability of measures through the careful training and supervision of research teams.

Interpretation: Inaccurate estimation of the prevalence of mental illness, as well as misunderstandings regarding its etiologies and expressions, are associated with unnecessary costs to the health system and to people living with mental illness. Researchers interested in accurately measuring the mental health burden in a low-resource setting must carefully modify validated assessment tools. By adhering to at least one of the strategies outlined in this study, researchers will improve the reliability and validity of their assessments, leading to improved understanding of the burden of mental health in the settings where action is most needed.

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Estimation of unmet need for inguinal hernia repair among infants in low- and middle-income countries

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Background: Inguinal hernias in infants are common and usually mandate semi-urgent repair in high-income countries. With an estimated two to five billion people worldwide lacking access to prompt and safe surgical care, many of these hernias go un-treated, particularly in low- and middle-income country (LMIC) settings. There is a paucity of data regarding the global burden of this problem. The goal of this study is to estimate the incidence of inguinal hernias in infants in LMICs, extrapolate rates of incarceration, and estimate the impact of providing universal hernia repair.

Methods: Estimates of annual live births in LMICs (135 million), incidence of infant inguinal hernia (3-5%), incarceration frequency (10-30%), and percentage of the population lacking access to surgical care (28%-70%) were used to calculate the annual volume of inguinal hernias in infants in LMICs without access to adequate surgical care. Disability adjusted life years (DALYs) averted were calculated using the estimate of 5.7 per repair in LMIC settings.

Findings: Of the 135 million annual live births in LMICs, an estimated 4.05 to 6.75 million will present with an inguinal hernia in the first year of life. Of these, 1.13 to 4.73 million may go untreated due to lack of access to surgical care. Between 405,000 and 2.03 million hernias will incarcerate, leading to associated complications,

including death. An estimated 6.46 to 26.9 million DALYs could be averted by timely repair.

Interpretation: A large unmet need for inguinal hernias exists for infants in LMIC settings. With increasing success in efforts to reduce mortality in children under the age of 5, the incidence of inguinal hernia will likely increase. Efforts to improve data collection and increase resources may help reduce preventable deaths and disabilities.

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Impact of access to cesarean section and safe anesthesia on maternal mortality ratio in low-income countries: A new reality in the post 2015 era

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Background: Despite global efforts to reduce the maternal mortality ratio (MMR) through the WHO Millennium Development Goal 5 (MDG#5), MMR remains unacceptably high in Low-income countries (LICs). Maternal death and disability from hemorrhage, infection, eclampsia, and obstructed labor, may be averted by timely cesarean section (CS) and safe anesthesia. Most LICs have CS rates less than that recommended by the World Health Organization (WHO). Without access to CS, it is unlikely that MMR in LICs will be further reduced. Our purpose was to measure the MMR gap between the current MMR in LICs and the MMR if LICs were to raise their CS rates to the WHO recommended levels (10-15%).

Methods: This model makes the assumption that increasing the CS rates to the recommended rates of 10-15% will similarly decrease the MMR in these LICs. World Health Organization health statistics were used to generate estimated MMRs for countries with CS rates between 10-15% (N=14). A weighted MMR average was determined for these countries. This MMR was subtracted from the MMR of each LIC to determine the MMR gap. The percent decrease in MMR due to increasing CS rate was calculated and averaged across the LICs.

Findings: We found an average 62.75%, 95%CI [56.38, 69.11%] reduction in MMR when LICs increase their CS rates to WHO recommended levels (10-15%).

Interpretation: Maternal mortality is unacceptably high in LICs. Increasing CS rates to WHO recommended rates will decrease the maternal mortality in these countries, significantly decreasing the mortality ratio toward the projected MDG#5.

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Impact of HIV on postpartum hemorrhage in South Africa

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