

the HMIS forms representing passive surveillance with the potential for underreporting. Extrapolation to assess impact, such as a rise in vaccine-preventable diseases or maternal and under-five mortality, remains to be confirmed in future studies. For now, scheduling catch-up vaccinations, reinstating routine antenatal care and family planning services, as well as recommitting resources to the IMCI strategy should be made a priority.

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Abstract #: 2.095_NEP

Malnutrition in Lao PDR: Does maternal health knowledge buffer the negative effects of environmental risk factors on child stunting?

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Background: Lao PDR is one of the least developed countries in the world and one of the most challenging places for children to develop. Forty-six percent of the population in Laos lives below the national poverty line (World Bank, 1999) and the prevalence rate of stunting (chronic malnutrition) is close to 50% (Save the Children, 2014). Although many of the determinants of stunting are well understood, the rates of stunting in Laos remain alarmingly high. Maternal health knowledge, even within illiterate, non-educated populations, has been shown to predict short-term nutritional improvements in children in Indonesia (Webb & Block, 2003). However, health knowledge among Lao mothers remains understudied, especially as it relates to important child health outcomes. The goal of the present study is to understand the prevalence and determinants of childhood stunting in Lao PDR, specifically investigating parental knowledge about nutrition and healthcare practices. The moderating effects of parental knowledge on the association between children's environmental risk and objective measures of malnutrition will be also be examined.

Methods: Data were obtained from 800 families with children under age 5 in three districts and 90 villages in the northern province of Luang Prabang, Lao PDR using a two-stage cluster sample method based on the 30-cluster random sample technique standardized by the WHO. This technique meets the standards of reliability and provides results with a level of confidence of 95%. Families were interviewed using a structured survey questionnaire and extensive anthropometric data was collected.

Findings/Interpretation: Preliminary results (Figure 1) show that malnourished children remain a major population in Lao PDR, with stunting rates approaching 50% in the present sample. In addition, results point to the protective effects of maternal education and village location (rural vs. urban). Maternal health knowledge (i.e., of symptoms, danger signs, and approaches to treatment), household risk (i.e., potable water, healthy sanitation, mosquito nets, etc.), and nutritional practices are currently being analyzed. Our preliminary data also show that children of mothers with greater health knowledge evidence lower rates of

stunting. Further interpretations pending analyses will be discussed.

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Abstract #: 2.096_NEP

Barriers to surgery in low- and middle-income countries: Patient perceptions in Vietnam

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Background: The Emergency and Essential Surgical Care program (WHO, 2005) and Lancet *Global Surgery 2030 Commission* have brought to light the growing need for surgical care in low- and middle-income countries (LMICs), along with challenges of adequately providing surgical services. We conducted a large-scale, cross-sectional study of barriers to cleft surgery to develop an updated, evidence-based model for barriers to surgical care in LMICs.

Methods: We administered a validated 78-question survey examining access/barriers to comprehensive surgical care to a random selection of households that attended Operation Smile's 25th Anniversary missions in Vietnam (November 2014, in the cities of Hanoi, Nghe An, Hue, Ho Chi Minh, An Giang and Bac Lieu). Operation Smile provides gratis comprehensive and surgical cleft care for underserved children in LMICs. 884 households presented to the missions and 453 (51%) were surveyed. Patients/guardians provided written consent. This study was IRB approved by the University of Southern California.

Findings: In this population, the average age of cleft lip and cleft palate surgery was 37 and 46 months, respectively, which is well outside the optimal window (18 months). Fifty-four percent of respondents stated cost was the most significant barrier to obtaining cleft surgery. Barriers to surgical care were considerable for families with insurance, as 52% of households who had insurance were unable to access cleft surgery prior to the mission, compared to 25% without coverage ($p < 0.001$). Of households that accessed surgery in the past, 83% had their surgery done by a charity, despite 63% having insurance coverage. This may suggest limitations to existing insurance structures in Vietnam, as patients continue to rely heavily on external institutions and out-of-pocket systems. Households in our study attributed this discrepancy to lack of supplies and trained professionals, mistrust of medical providers, and lack of long-term and comprehensive care (59%, 34% and 32% of respondents, respectively).

Interpretation: Despite high rates of insurance coverage, families had considerable difficulty accessing surgical care. We show that patient perceptions of financial/structural/cultural barriers play a large

role in whether or not they ultimately obtain surgery, which can guide how international stakeholders can grow sustainable surgical access.

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Abstract #: 2.097_NEP

Efficacy of brief interventions for mental illnesses in low- and middle-income countries

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Introduction: The lifetime prevalence of common mental disorders in low- and middle-income countries (LMICs) is estimated at 23%, accounting for 11.1% of the total burden of disease. However, due to few mental health resources in these countries, there is a large unmet need for treatment. Cost-effective, resource-efficient interventions could help increase the availability and accessibility of mental health services in LMICs. Brief interventions (BIs) are time-limited psychotherapies of 1-8 sessions developed to provide effective treatment at low cost and with little resource burden. They are widely used and proven effective in high-income countries, but their cross-applicability in LMIC settings is unclear.

Purpose: To review the published literature on the effectiveness of BIs in the treatment of mental illnesses in LMICs.

Method: A systematic search of the PubMed database was conducted to identify English-language articles published up to October 2015, using the keywords: “mental disorder”, “mental health”, “brief intervention”, and “low and middle income countries”. Additionally, a manual search of the reference lists of sourced articles was performed.

Results: A total of 16 studies were found. The majority of these studies examined BIs for depression and anxiety (n=6), followed by posttraumatic stress disorder (PTSD) (n=3), drug and alcohol use disorders (n=3), panic disorder (n=2), and suicide prevention (n=2). Results showed that 4-8 sessions of relaxation, problem-solving, and cognitive therapy techniques reduced symptoms of depression and/or anxiety in women; 4-6 sessions of narrative exposure therapy reduced symptoms of PTSD in refugees; single-session motivational interventions reduced moderate drug and/or alcohol use; and 7 sessions of behavioural exposure therapy reduced symptoms of panic disorder. There were mixed results for the benefit of a single information session with short-term follow-up in suicide prevention.

Conclusion: There is preliminary evidence that BIs are effective in treating mental illness in LMICs. Limitations of the data include the small number of studies, small samples, few randomized investigations, and high dropout rates. Given the significant unmet need for mental health care in LMICs and the potential cost- and resource- advantages of BIs, more research with larger, controlled trials would be valuable to confirm and extend these results.

Abstract #: 2.098_NEP

Contraception use in communities surrounding Trujillo, Peru

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Background: In choosing a contraceptive method, a woman may take into account cost, availability, side effects, feasibility, and duration of use. The role that her partner plays in the selection of a method of contraception is often a consideration, as well. Partner awareness in contraception has remained largely uninvestigated in the literature. The purpose of this study was to identify trends in contraceptive use, including partner awareness, among the women of periurban Trujillo, Peru.

Methods: Investigators performed a standardized survey of 99 women in communities around Trujillo, Peru. Surveys were administered in the local language and were recorded and analyzed electronically to assess reported use and trends in contraception and partner awareness.

Findings: Results show that 38% of surveyed women have used a method in which their partner must be aware of contraceptive use (condom, female condom, sponge or jelly, withdrawal, vasectomy), while 67% of women have chosen to use a method in which their partner is not required to know (oral contraceptive, intrauterine device, implant, injection, tubal ligation, diaphragm, emergency contraception). 19% of women chose a method that did not fit into either category (lactation amenorrhea, calendar).

Interpretation: This data demonstrates that methods that do not require partner involvement are generally more appealing to women surveyed in these communities. This provides useful insight to providers of contraception services in these communities, as they must also consider partner awareness when providing contraceptive options and counseling.

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Occupational hazards to ambulance providers in low and middle-income countries

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Program/Project Purpose: Provision of pre-hospital care in low and middle income countries (LMICs) has been traditionally modeled after systems found in developed nations. However, studies have shown that pre-hospital care providers in LMICs face occupational hazards often unaddressed in developed country models. To better characterize the spectrum of hazards faced by