

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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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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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