

**Going Forward:** Support and collaboration from the MOH and the YSMU enabled the development of a program that was well-received by local healthcare providers and the Armenian populace. Due to the positive response from participants who expressed interest in future projects, we hope to build upon this foundation to continue improving access to health promotion materials, as well as establishing better screening practices by local providers.

**Source of Funding:** None.

**Abstract #:** 1.014\_NCD

### Malnutrition and Associated Factors among Community-dwelling Elderly in Sri Lanka

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**Background:** Malnutrition among elderly is a multi-dimensional problem which predisposes them to increased risks of disability, hospitalisation and mortality. This study aimed to investigate the prevalence of and associated factors for malnutrition in community-dwelling elderly.

**Methods:** A cross-sectional study was conducted in six divisional secretariats in Kandy district, Sri Lanka using multi-stage sampling. The nutritional status was categorised into three categories, ie: at risk of malnutrition, malnutrition and well nutrition using the Mini Nutritional Assessment- Short Form (MNA-SF). A standardised questionnaire was used to record demographic data and other potential factors associated with malnutrition. Physical activity and depression were assessed using International Physical Activity Questionnaire and Geriatric Depression Scale respectively. Complex sample multinomial logistic regression analysis was performed.

**Findings:** A total of 1200 participants were recruited. Majority of the participants were females with mean age of 70.8 years (95% confidence interval: 70.13-71.47). Out of 999 participants who completed the MNA-SF, the prevalence of malnutrition, risk of being malnutrition and well nutrition were 13.6%, 51.2% and 35.2% respectively. The prevalence of malnutrition was higher in very old (> 80 years of age) elderly. In the multivariate model after adjusted for sex, alcohol consumption, smoking, betel chewing, medication usage, age, number of people living with and having hypertension, elderly with hypertension (aOR: 1.71, 95% CI: 1.02, 2.89), alcohol consumption (aOR: 4.06, 95% CI: 1.17, 14.07), and age (aOR: 1.06, 95% CI: 1.01, 1.11) were positively associated with malnutrition. Increased number of people living with the elderly was protective of being at risk for malnutrition (aOR: 0.91, 95% CI: 0.85, 0.97).

**Interpretation:** The prevalence of risk of being malnourished in the community-dwelling elderly in Sri Lanka was high. Age, alcohol use and hypertension were independently associated with malnutrition while number of people living with the elderly was protective of being at risk of being malnutrition.

**Source of Funding:** None.

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### The Prevalence of Proximal DVT in Orthopaedic Trauma Patients in Northern Tanzania Without the Routine Use of Thromboprophylaxis

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**Background:** The standard-of-care for lower limb orthopaedic trauma in Tanzania is associated with prolonged, bed-based immobilization. This, along with a nearly complete lack of thromboprophylaxis, significantly raises the risk for deep vein thrombosis (DVT). However, there have been few studies on DVT prevalence in East African patients. We aimed to estimate the cross-sectional prevalence of proximal DVT in lower limb orthopaedic trauma patients in northern Tanzania.

**Methods:** Over four weeks, we performed compression ultrasound on patients in the Orthopaedics and Traumatology Ward at Kilimanjaro Christian Medical Center (Moshi). All patients who were at least 15 years old, had sustained pelvic or lower limb trauma, had no spinal cord injury, were immobilized, were not on thromboprophylaxis at the time of initial study encounter, and provided assent/consent, were entered into the study. Patients were scanned weekly from the point of enrollment until either the end of the study period, hospital discharge, or voluntary withdrawal. 60 patients were scanned.

**Findings:** The mean±SD age was 40.4±19.6 yrs., 77% were male, 38% had more than one injury, and 46% had at least one open injury. Proximal DVTs were found in six patients, giving an estimated 10% prevalence. DVTs were found in the common femoral (CFV) and superficial femoral (SFV) veins in three patients, in the CFV in one patient, in the SFV in one patient, and in the popliteal vein in one patient. One patient showed clinical signs of pulmonary embolism. There were no mortalities. DVT was more prevalent in females (29% vs. 4%), giving a relative risk of 6.6 (95% CI [1.3, 32.2], p=0.0082). Multinomial logistic regression analysis confirmed female sex as an independent predictor, giving an odds ratio of 18.3 (95% CI [1.2, 289.2], p=0.039).

**Interpretation:** While limited in cohort size and degree of follow-up, our study offers a benchmark on proximal DVT prevalence in an at-risk Tanzanian patient population. The fact that females are at a significantly higher risk for DVT suggests a basis for prioritizing thromboprophylaxis in a resource-constrained hospital setting.

**Source of Funding:** Travel expenses were covered by the Center for Global Health at the University of Pennsylvania's Perelman School of Medicine. Siemens donated the ultrasound equipment.

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### A Chance to Thrive, Not Just Survive Ebola: A Model for International Psychosocial Support Programming in Emergency and Disaster Settings

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**Program/Project Purpose:** Exposure to community-wide trauma during childhood, such as the Ebola epidemic, is linked to long-term physical and mental health consequences. Psychosocial and mental health services are known to reduce the impact of trauma, yet access is inadequate in resource limited communities. Child-centered, expressive art therapy techniques are proven to improve health outcomes after a traumatic event. In June 2015, Playing to Live (PTL) launched an innovative psychosocial support program utilizing expressive arts techniques to meet this service gap in Liberia. The program targeted 40 former hot-zone communities, providing programming to over 850 children and 140 adults affected by Ebola. Research demonstrated a statistically significant impact in reducing symptoms of psychosocial stress (PSS) experienced over time.

**Structure/Method/Design:** This innovative program trained non-clinicians in foundational techniques of expressive play and art therapy and built transferrable skills within the community that could be utilized both during and after the program implementation. Desired outcomes included a reduction in the number of PSS symptoms in children participants and an increase in techniques for combating the effects of trauma. PTL partnered with Renewed Energy Serving Humanity (RESH) to implement programming; RESH is a Liberian NGO selected for their community based focus and shared goals to serve the holistic needs of children and community members.

**Outcome & Evaluation:** Study participants included children 3–13 years old affected by Ebola in Liberia during 2015. Participants were randomly selected and divided into two treatment groups; monitoring and evaluation was completed using qualitative and quantitative methods. A statistically significant difference in the average reduction of PSS symptoms was identified between the 5-month and 3-month treatment groups'. The 3-month program exhibited a 15% reduction in symptoms whereas the 5-month program exhibited a 38% reduction. A difference of 23% was identified; these results suggest that longer exposure to the intervention results in a greater reduction in PSS.

**Going Forward:** Challenges include funding and sustainability. Despite program success funding was not available after the program conclusion. Due to community commitment, services and trainings continue to be provided by volunteers. PTL seeks to ensure trainings provides community members with long-lasting skills and tools to meet the long-term psychosocial needs. Additional funding for service increase is needed.

**Source of Funding:** Funding was provided by UNICEF.

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### Money or Knowledge? Behavioral Aspects of Malnutrition

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**Background:** Malnutrition accounts for nearly half of child deaths worldwide. Children who are well-nourished are better able to learn in school, grow into more physically capable adults, and require less health care during childhood and adulthood. Moreover, it is difficult to make up for poor childhood nutrition later in life. Prior surveys from the study region, Oromia, Ethiopia, suggest that many

mothers know how to correctly respond to a hypothetical situation where a young child exhibits poor growth. However, mothers frequently appear unaware about their own children's growth deficiencies. Together, these facts suggest that false beliefs about the appropriateness of a child's physical size are a more likely contributor to malnutrition, rather than a weak understanding of how to help a malnourished child.

**Methods:** The study uses a two-by-two randomized trial; the first treatment is a cash transfer labeled for child food consumption, and the second is the provision of personalized information about the quality of the child's height compared to other children like those of the same age and gender in East Africa. Ordinary least squares regression analyses are used; when panel data are available, difference-in-difference analyses are conducted.

**Findings:** Young children in households that received either intervention were 2 to 5 times more likely to consume eggs and milk, two key protein sources that are available in the community but not typically consumed in large quantities by young children. Ninety five percent of caregivers who received the cash transfer reported spending the money themselves, and 86% report using at least some of the money for items only for young children. Over two thirds of caregivers receiving the personalized information remember their child's height quality after 6 weeks, and 60% reported some behavior change after learning about their child's height quality.

**Interpretation:** The intervention provides evidence on the relationship between caregiver beliefs about child nutritional status and the caregiver's behavior, ultimately analyzing how this relationship influences important nutritional choices for young children in a setting with limited resources. Better understanding of the interaction between these key factors is essential in addressing one of the foremost health issues facing developing countries today.

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**Abstract #:** 1.018\_NCD

### I think we can be controlled: A Mixed-Method Comparative Study of Multidimensional Health Locus of Control and (un) Healthy Days in India and the United States

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**Background:** Global health education and health intervention strategies rely upon health behavior change models that assume individuals perceive they control their own health. Particularly in the context of economic and social inequality, this assumption may be false. Thus, achieving individual health improvement through behavior change can be challenging. This analysis aimed to evaluate if and how health locus of control - perception that one's health was controlled by internal or external factors - related to healthy/unhealthy days.

**Methods:** We conducted a global online study including samples from the United States (US) and India (N=505 each). Participants