The Lao-American Nutrition Institute (LANI) Building Clinical Nutrition Capacity to Train Dietitians in Lao PDR

Joanna Cummings, MS, RD1,2, Slackchay Rasprasith, BNS2, Bouaphay Keokanya, BSN2, Somphay Mingboubpha, BSN2, Vatthana Phongsavath, MD2, Say-ola Saynasine, MD2, Bouahom Sisounon, BSN2, Toukta Vongsas, MD2, Diane Stadler, PhD, RD1,2

1Oregon Health & Science University (OHSU), Portland, OR; 2Lao American Nutrition Institute (LANI), Vientiane, Lao People’s Democratic Republic

For additional information please contact stadlerd@ohsu.edu or cummings@ohsu.edu

Background:
- In Lao PDR, 36% of children under 5 years of age are stunted (Height/Age Z-score < -2) and 9% are wasted (Weight/Height –score < -2)
- Reducing rates of maternal and child malnutrition is the #1 priority of the Lao Government
- To address the severe, persistent malnutrition in this country, OHSU is collaborating with the Lao Ministry of Health and the United States Government to establish the Lao-American Nutrition Institute (LANI)
  - The Mission of the LANI is to:
    - Build capacity & initiate new approaches to improve the state of nutrition for all Lao people
    - Develop academic & scientific relationships and exchanges
    - Support collaborative research activities
  - Our first cohort of health professionals will become the country’s first dietitians/nutritionists
  - Using “Train-the-Trainer” and “Learn-by-Doing” models, LANI graduates will become “nutrition champions” and mentors for future LAO nutrition professionals

Pre-Program Evaluation:
100% of incoming students strongly agreed/agreed:
- Most physicians/nurses in Lao can recognize nutrition risk in infants and mothers
- Most are not adequately trained to discuss nutrition issues with patients
- Nutrition assessment and dietary counseling should be included in appointments
- Nutrition counseling by a dietitian/nutritionist should be part of routine care

50% lacked the ability to, or knowledge of:
- The role of genetics, diet and pharmacology in disease management
- Calculate body mass index (BMI) or waist-to-hip ratio
- Determine individual energy, nutrient and fluid needs
- Provide nutrition intervention for severe malnutrition
- Provide nutrition education to a patient with HIV/AIDS
- Recommend dietary interventions for Type 2 Diabetes Mellitus

Clinical Practice:
- Twice-weekly Nutrition Rounds at Mahosot and Sethithrath Hospitals in Vientiane
- Nutrition-focused Physical Exam conducted on all patients
- Case presentations and medical nutrition education taught to medical teams
- Oral nutritional supplements provided to patients identified as malnourished
- Nutrition education provided to patient, families and caregivers
  - Specific instructions provided through oral, written and picture communication culturally appropriate for patient’s ethnicity
  - Practice on all hospital wards including: PICU, NICU, ICU, Burns, Abdominal Surgery, Pediatric, HIV/AIDS, Post-surgical and outpatient diabetes clinic

Our pilot cohort is comprised of:
Three physician/nurse teams from the following hospitals:
- Oudomxay (Provincial Hospital)
- Mahosot (Vientiane Capital Hospital)
- Sethithrath (Vientiane Capital Hospital)

Community Outreach:
- Cooked traditional porridge (khao piek) and prepared soy milk for patients and caregivers on the pediatric ward of Mahosot Hospital
- Caregivers assisted with meal preparation and learned the nutritional value of foods and how to cook a nutritious meal

Nutrition Education and Promotion:
- Students prepared lecture material, developed hands-on learning activities and taught adolescent and college-aged men and women during a half-day nutrition conference
- Students will participate in a national nutrition symposium with scientific poster session and oral presentations

Curriculum Development:
- A needs assessment was used to identify educational priorities
- Educational priorities were aligned to the Sustainable Development Goals
- Content built on current educational programs in Lao, including non-governmental organization (NGO) curriculum in nutrition
- A team-based learning model (Physician/Nurse from same hospital) was recognized as the most culturally appropriate style of learning
- The initial 6-month pilot program includes > 1000 hours of didactic education, clinical skills development, nutrition counseling and behavior change training, instructional skills development, community outreach and program development, English as a second language, and professional skills development

Mid-term Focus Group Results:
- Consensus that the material they are learning is important and agreed they feel they can make a positive impact with this knowledge
- Desire to improve their teaching skills and ensure they are providing evidence backed recommendations
- Identified a need for nutritional supplements within the hospitals
- Requested a “Pocket Guide” with summary tables, calculations, and clinical “pearls” to use as reference

Continuing Education for Graduates:
- Present patients and discuss nutrition interventions during weekly “TeleNutrition” video conference calls
- Teach classes for future cohorts, to solidify nutrition knowledge and enhance presentation skills
- Mentor future students through nutrition rounds, nutrition-focused physical exam sessions, by prescribing medical nutrition therapy and conducting nutrition education for patients and care-givers

Special acknowledgement to:
Dr. Ratthiphone Ou, National Nutrition Center of Lao, Dr. Somchay Souksavanh, MD, Mahosot Hospital, Dr. Sengcharn Kounsavane, MD, National Institute of Public Health, Dr. Chandavone Phouay, MD, Department of Health and Hygiene Promotion