

# Addressing Malnutrition in Southeast Asia: Priorities and Opportunities Embraced by the Lao- American Nutrition Institute (LANI)



Diane Stadler, PhD, RD, LD & Joanna Cummings, MS, RD  
Graduate Programs in Human Nutrition  
OHSU Global, SE Asia Initiative

## The Children of Sticky Rice

*“To make duck soup, I set I pot of water on the fire and then go to the pond where the ducks are eating. I pick the best duck and put it under my arm and bring it back to the fire. Now the water in the pot is boiling and I add lemon grass, tamarind leaves, bamboo shoots and whatever vegetables I picked from the garden. and put into the pot, I chop up the duck and add it to the pot and then soup is ready to eat, with sticky rice. We eat until sticky rice is gone.”*



A young Hmong woman in juxtaposition of plenty amidst poverty, and ease amidst great difficulties.

# The Lao consume more sticky rice *per capita* than anywhere else in the world

- Sticky rice is used as a utensil at each meal, provides sustenance and plays an important role in cementing social relations and linking the Lao with the spirit world.
- However, under certain conditions (crop loss, extreme poverty or flooding during the rainy season) and at certain times (late pregnancy and the early postpartum period) sticky rice may be the only food available or permitted due to long standing traditions and food taboos.





- Although unintentional, this dependence on sticky rice is associated with severe acute malnutrition, perpetuation of chronic malnutrition, and risk of overt vitamin and mineral deficiencies.
- The short and long-term consequences of malnutrition that result from poor dietary diversity and food insecurity is especially concerning for high risk groups such as infants and young children, women during pregnancy, and the elderly.
- Deficiency in vitamins and minerals, such as thiamine, is deadly in infants, young children and new mothers.

***“We will eat anything with wings except airplanes and anything with legs except tables and chairs, and everything else in between.”***

- Immense diversity and complexity of food practices
- Overwhelming reliance upon the land for resources, and a daily necessity of searching for food or tending to rice that involves all members of the household.
- In remote villages edible plants (shoots, mushrooms, nuts, berries) and small animals (frog, fish, lizards, insects, birds, squirrels, wild boar) make up 50% of their diet.
- The lack of food prohibitions and inhibitions allows for limitless options; constrained only by what people cannot grow, catch or gather and by seasonal availability.



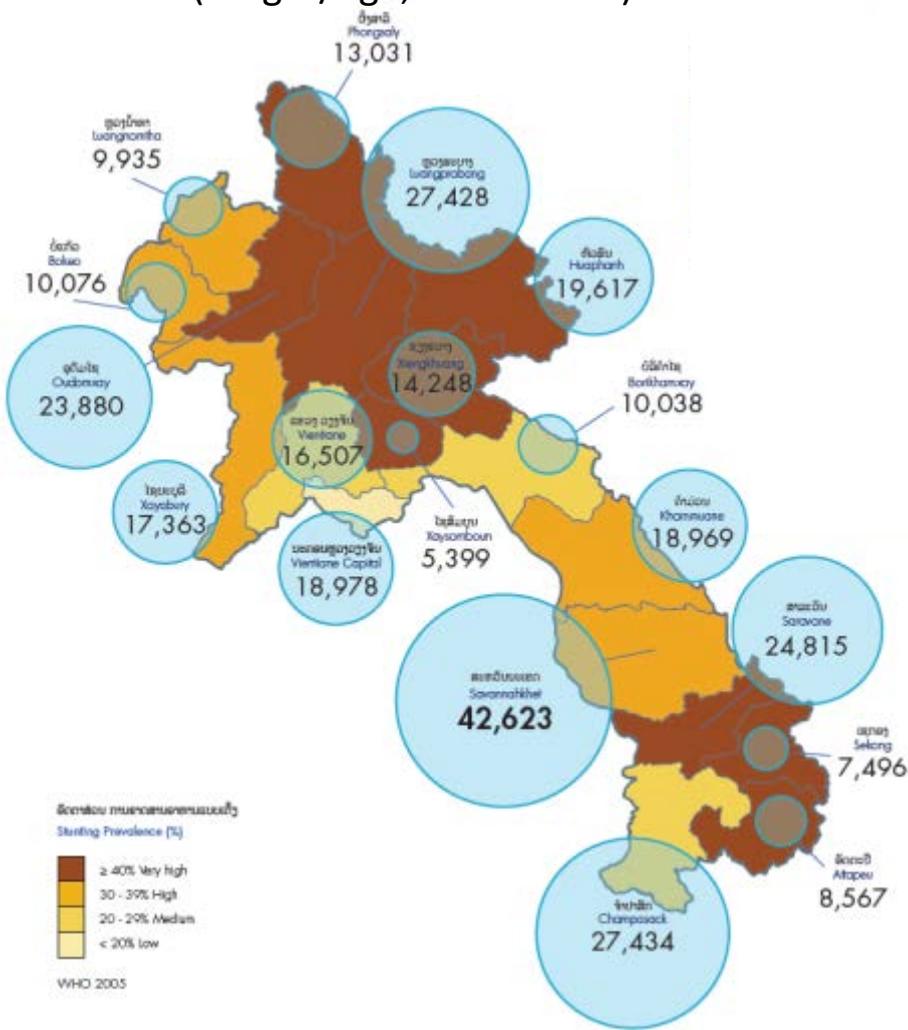
# The double burden of malnutrition

- As in western countries, malnutrition in Lao PDR also manifests in older children and adults who are overweight, less physically active, and who are at higher risk of chronic diseases due to malnutrition experienced prenatally or as a young child.
- Chronic disease is on the rise in Lao PDR while malnutrition remains endemic.



# Stunting Prevalence (%)

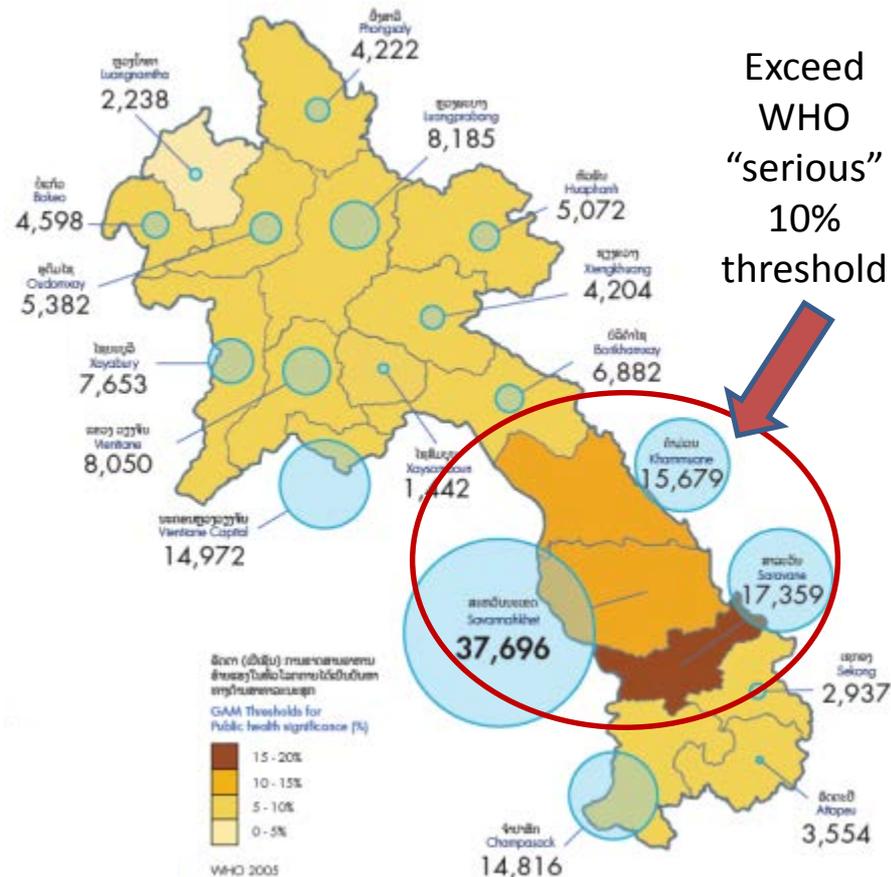
(Height/Age; z-score ≤ -2)



48%	→	44%	→	36%	→	34%
2006		2011		2015		2020

# Wasting Prevalence (%)

(Weight/Height; z-score ≤ -2)



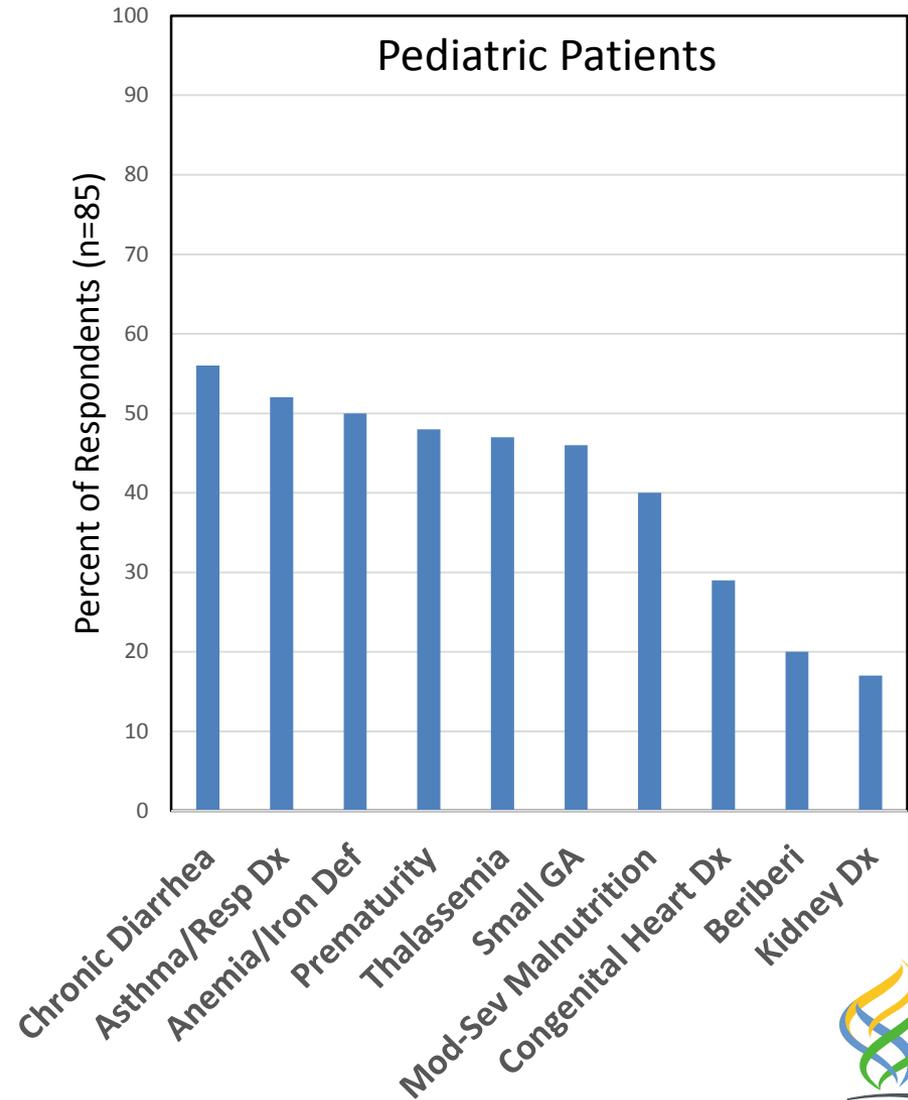
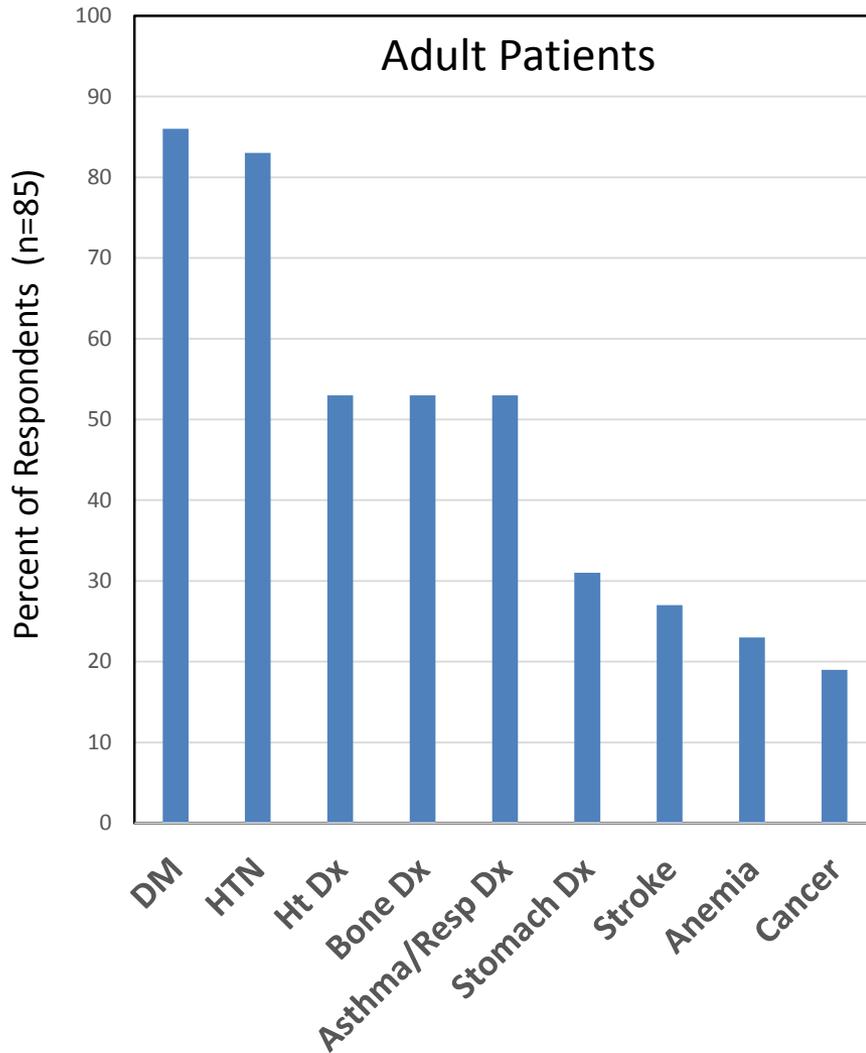
7%	→	6%	→	9%	→	<5%
2006		2011		2015		2020

Lao Statistics Bureau, 2015 population census; annual population growth estimate (1.5%); % of total population as children under 5 (14.06%)

LCAAS, 2015: prevalence of CU5 GAM, stunting, underweight, overweight

For estimating SAM caseload refer to : [http://www.cmamforum.org/Pool/Resources/caseloadCMAM-June-2012\[1\].pdf](http://www.cmamforum.org/Pool/Resources/caseloadCMAM-June-2012[1].pdf)

# Most Common Chronic Medical Conditions Among Adult and Pediatric Patients





**Welcome  
to the  
Lao-American  
Nutrition Institute!**

Vientiane, Lao PDR

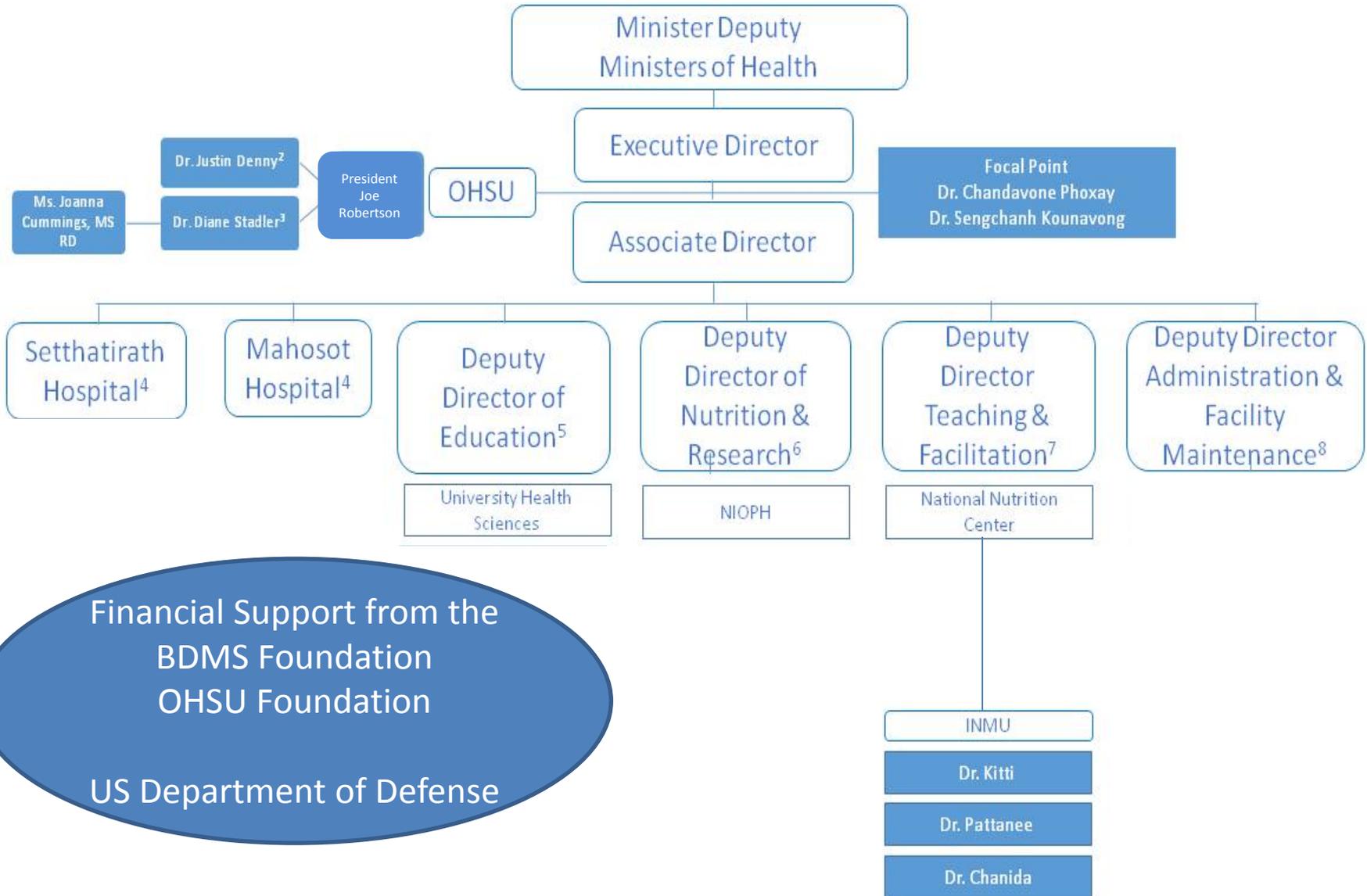


# Mission of the Lao-American Nutrition Institute

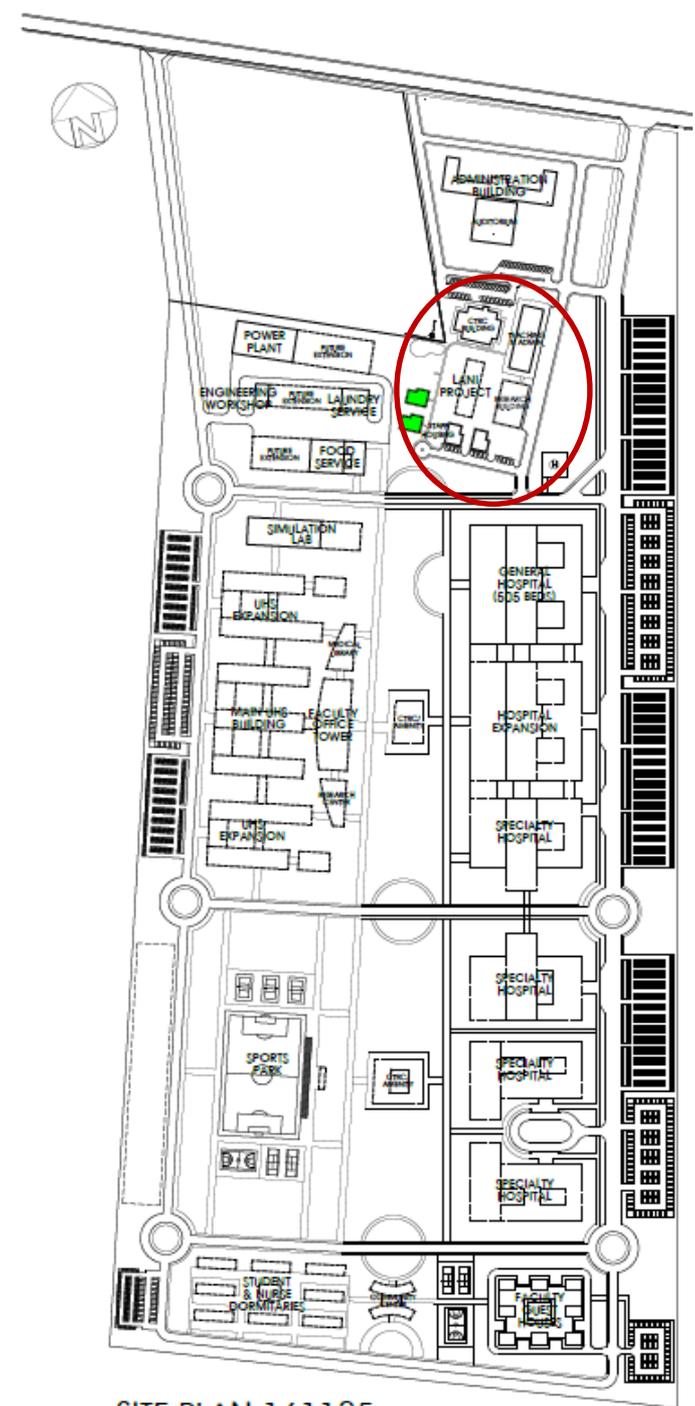
- To build capacity and initiate new approaches to improve the state of nutrition for all Lao people.
- To develop international academic relationships and exchanges.
- To support collaborative research activities.



# Lao American Nutrition Institute Partnership



# Proposed Campus of the Lao-American Nutrition Institute with anticipated completion October 2018



Funded by the US Department of Defense as part of a Global Health Diplomacy Initiative

SITE PLAN 161125

# President Obama visits Lao

September 2016

Additional Funding for  
UXO clearance

LANI

November 2016

Groundbreaking Ceremony



- Joanna Cummings, MS, RD, Coordinator and Instructor, LANI, Vientiane, Lao PDR
- Sara Schwanke Khilji, MD OHSU Global Director of Interprofessional Education Bangkok, Thailand

## Hospital-based Clinical Nutrition & Dietetics

Effective communication

Conduct nutritional assessments

Nutrition Diagnosis and Interventions

Apply knowledge of nutrient metabolism

Counseling skills

Teach and Mentor

Implementation, Monitor, Evaluate



## Community-based Nutrition Program Management

Conduct a needs assessment

Design and administer surveys

Assess food security status

Identify resources

Use statistical analysis

Behavioral change counseling

Work with governmental sectors



# The Clinical Nutrition & Dietetics Track

- Graduate Certificate degree that can transition into a Diploma and possibly a Masters degree
- Continuous intensive 6 month training program with didactic, clinical skills labs, clinical rounds & case studies, research projects
- First cohort: 2 representatives from 3 central hospitals
  - Mahasot                      Setthathirat                      Oudomxay
- “Train the Trainer” model
  - Graduates become instructors/trainers/mentors/preceptors for future cohorts of students
  - Host to health professional exchange students from OHSU
  - 1<sup>st</sup> two dietetic intern/nutrition graduate students received travel awards for the Summer 2017

# Ideal Candidate Characteristics

- Bachelor's degree, agriculture, education
- At least 2 years of medical/healthcare experience
- Passed entrance examination and interviews
- Current position in central, provincial, or district level hospital or health centers
- Currently enrolled in or graduated with a science or healthcare related undergraduate degree
- Strong interpersonal skills
- Not over age of 45 years
- Proficiency of English language

# Clinical Nutrition Program Timeline

## Timeline

Lao-American Nutrition Institute

### Clinical Nutrition & Dietetics Mentor Didactic Coursework

February – May 2017

Core Courses	Credit Hours	Instruction Hours	February		March				April				May					
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Fundamentals of Nutrition	2	30	■															
Nutrition throughout the Lifecycle	2	30			■													
Nutrition in Health & Disease	1	15					■											
Nutrition Assessment	1	15				■												
Food Safety, Security & Sanitation	1	15	■															
Routine to Research	1	15	■															
Clinical Experience	1	15	■															

Specialized Advanced Courses	Credit Hours	Instruction Hours	February					March				April				May			
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Maternal & Infant Nutrition	1	15						■											
Pediatric Nutrition	1	15										■							
Medical Nutrition Therapy I	1	15										■							
Medical Nutrition Therapy II	1	15														■			
Behavior Change Counseling	1	15																	

Clinical Application at Hospital	Credit Hours	Instruction Hours	June					July			
			17	18	19	20	21	22	23	24	
Case studies	0	10	■								

### 7 August 2017

Graduation Ceremony for Clinical Nutrition mentors and Opening Ceremony for Nutrition Program Manager mentors

**Start Date: 6 February**

**End Date: 31 July**

# Our 1<sup>st</sup> cohort of students



Classes started February 6, 2017

# Our LANI faculty



# Children of Lao



# There is an underlying current of transition and innovation evolving at a rapid pace in Lao

*“As a little girl I watched my mother cook chicken. She would pluck it and then chop its head off and put it in the pot. Now that I am an adult and have my own home, I invited her over for dinner one evening. She watched as I prepared chicken for dinner. I plucked it and chopped its head off and put it in the pot.*



*My mother said, ‘Why did you cut the head off the chicken?’ I responded, ‘because this is the way you taught me mother’ and my mother cackled in laughter. She said ‘I only cut the head off the chicken because it would not fit in the pot. You have different pots and larger pots, you can do things differently.’”*





**Diane Stadler, PhD, RD, LD**  
**Graduate Programs in Human Nutrition**  
**Oregon Health & Science University**  
**[stadlerd@ohsu.edu](mailto:stadlerd@ohsu.edu)**