

Country Highlights: Sustainable Human and Institutional Capacity for Improved Nutrition in Malawi

**Looking Beyond a Decade of Accomplishments in Nutrition
NIL Legacy Event | September 17th, 2021**

Elizabeth Marino-Costello

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Building Nutrition Capacity in Response to National Priorities in Malawi

Sanele Nkomani, *Feed the Future Innovation Lab for Nutrition*



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THE BURDEN OF MALNUTRITION IN MALAWI

Persistent challenges



39.0%

Stunting



1.3%

Wasting



34.4%

Iron deficiency in
WRA

Significant
progress



Little/no
progress

Emerging challenges



9.1%

Obesity



2.4-6%

Diabetes



15.8-32.9%

High blood
pressure



Hospital malnutrition

62-80%



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GAPS IN NUTRITION CAPACITY

Clinical dietetics skills

**Nutrition competencies for
medical graduates**

**Gap in nutrition assessment
tools**

No food composition database

**NCD prevention and management policy and
programming**

Suboptimal hospital care practices

- Absence universal nutrition screening & assessment of hospitalized patients
- Inadequate nutrition support resources



NUTRITION PROFESSIONAL TRAINING

Clinical dietetics skills

- **Dominated by nutritionist training**
 - Lack of uniformity of standards and content of curricula
 - **Inpatient management of disease**
 - **Management of NCDs**
- **Competencies in public health partly align to govt strategic objectives**
- **Improved standardization of training & curricula**
 - Certification by national body & license to practice
- **Strong competencies in clinical management & public health nutrition**
- **Multiskilled cadre to respond to govt strategic objectives**

NUTRITION PROFESSIONAL TRAINING

Review of nutrition content for medical school

Barriers to nutrition care perceived by doctors

- Inadequate nutrition knowledge, education and counselling skills
- Inadequate nutrition education in medical school
- Not enough dietitians to refer to
- Lack of an enabling environment for practices (resources)

Nutrition content in medical education

- What is being taught?
- Who is teaching?
- How it is being taught?
- How is it being assessed?



Recommendation that can be adopted

Mogre et al., 2018

TOOLS FOR NUTRITION PRACTICE

Country specific food composition data



Importance of FCDB

- FCDB in nutritional assessment
 - Individual nutrition assessment
 - Food consumption surveys & other nutrient assessment related research
- FCDB as a basis for nutrition counselling
 - Formulation of FBDG for populations
- FCDB in the planning of clinical and therapeutic nutrition

125

Number of **Malawian Foods**

- 32 Malawian publications sources
- Theses data from Malawian universities

73

Number of **Malawian Recipes**

316

Total number of foods in
Malawian FCD

63% Malawian data



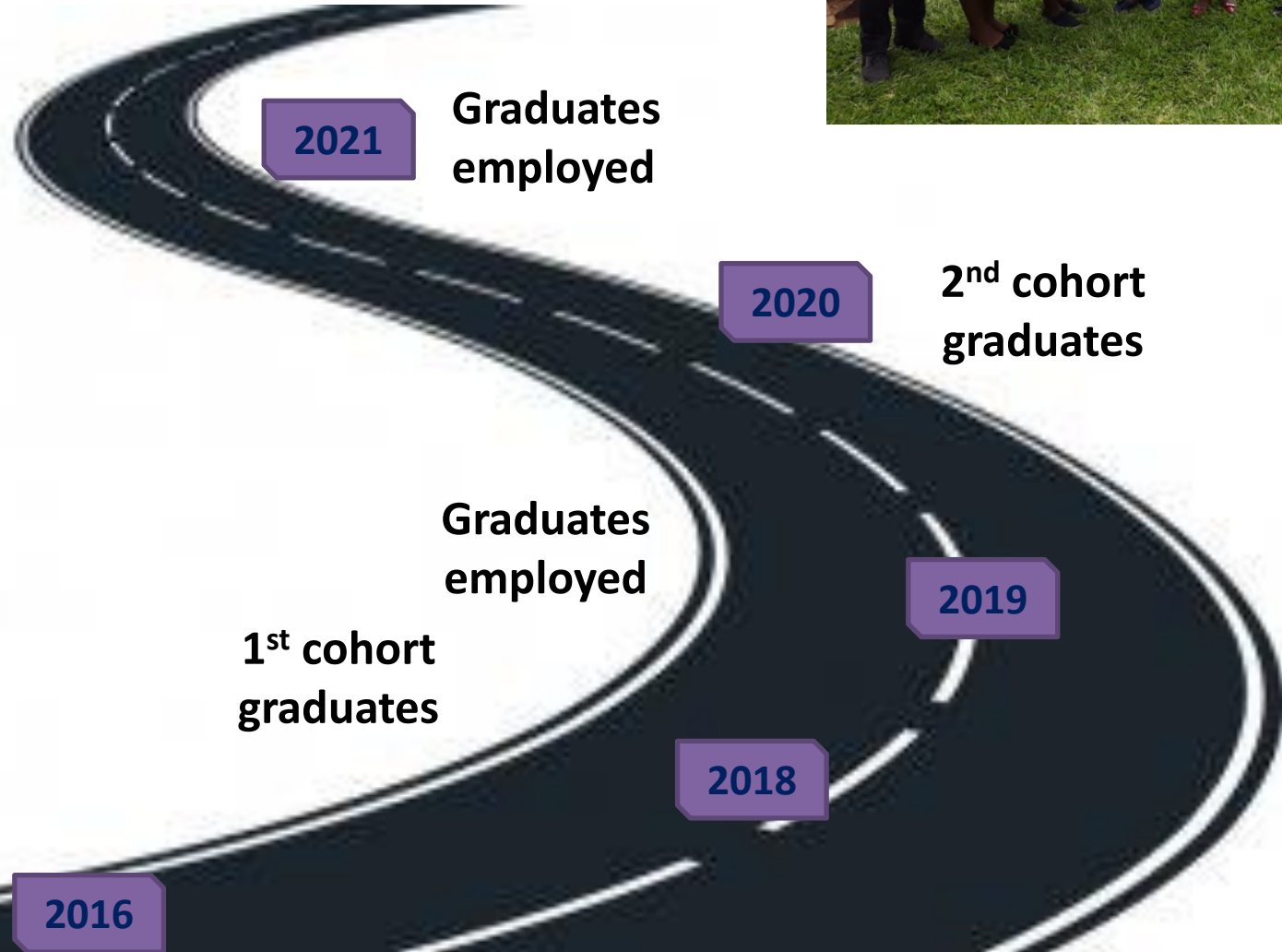
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DIETETICS KEY MILESTONES



Program accredited by
Medical Council of Malawi

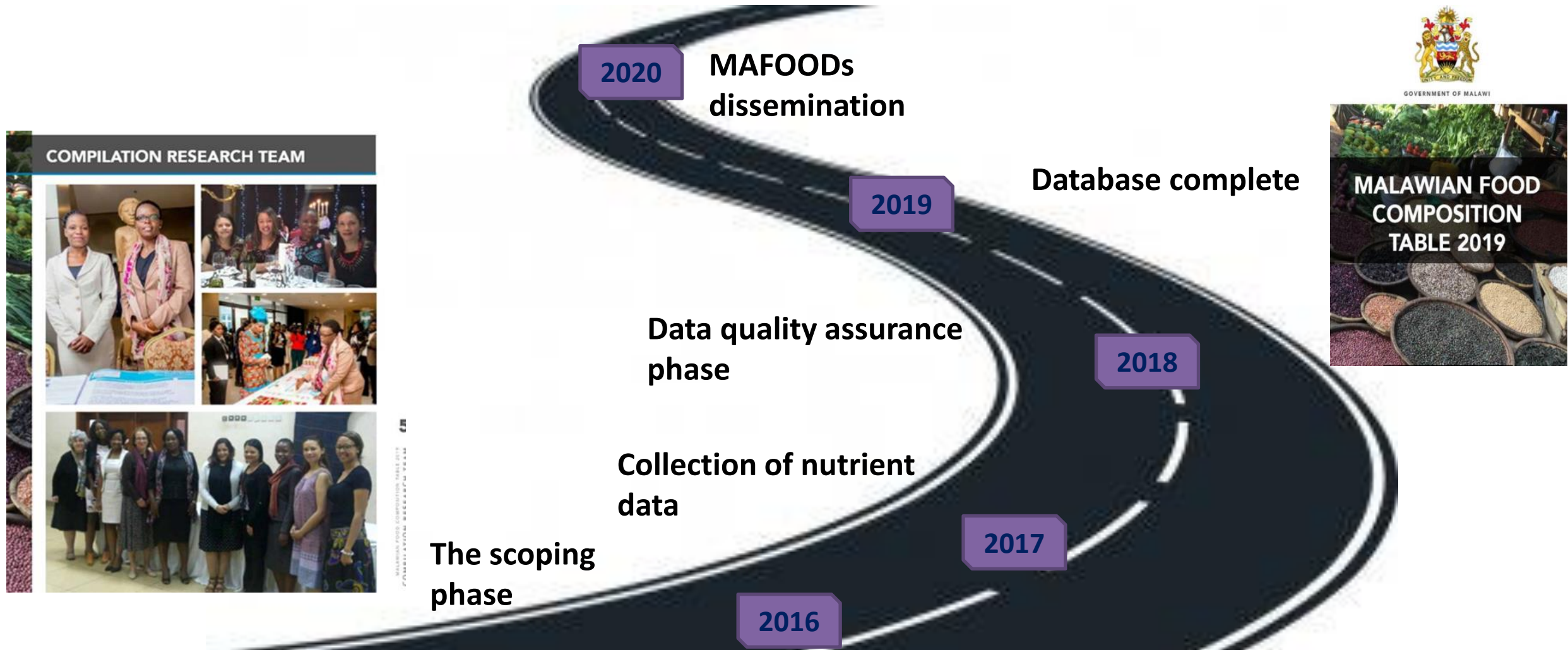




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FOOD COMPOSITION DATABASE KEY MILESTONES





KEY MILESTONES MEDICAL CURRICULUM REVIEW

2021

Completion of survey

2019

Review of curriculum

2018

Development of adaptable framework



ADAPTABLE FRAMEWORK OF STANDARDS FOR NUTRITION IN MEDICAL EDUCATION

All medical students should graduate with the knowledge required to explain how food and nutrition influence health and disease. They should be equipped to recognize nutritional risk, deficit, and excess in their patients. New doctors should be competent in the role of nutrition in prevention and treatment of acute and chronic diseases in order to advise patients about lifestyle strategies for dietary change, in particular as it relates to common conditions such as malnutrition, heart disease, diabetes, and obesity.

BASIC NUTRITION PRINCIPLES AND PRACTICE SKILLS	
NUTRITION FUNDAMENTALS	
	Nutrient Metabolism
	1. Describe the digestion, absorption and metabolism of proteins, fats, and carbohydrates in health and disease
	2. Describe the absorption and functions of essential micronutrients
	3. Recognize deficiency syndromes of vitamins and minerals
	4. Recognize signs and symptoms of vitamin and mineral excess
	5. Differentiate nutrient metabolism in starvation versus response to metabolic stress, infection, or disease
	6. Identify standards for nutrient adequacy
	Energy Regulation and Energy Balance
	1. Describe normal regulation of energy balance and influencing factors
	a. Physiologic
	b. Environmental
	c. Social
NUTRITION ASSESSMENT	
	Anthropometrics
	1. Assess basic anthropometrics
	a. height/length
	b. weight
	c. body mass index
	d. waist circumference (adolescents/adults)
	e. midarm muscle circumference
	f. midarm muscle area



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COLLABORATORS IN SUCCESS

Core Partners: Malawi



Key Collaborators



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Lessons Learned in Multistakeholder Nutrition Capacity Building in Malawi

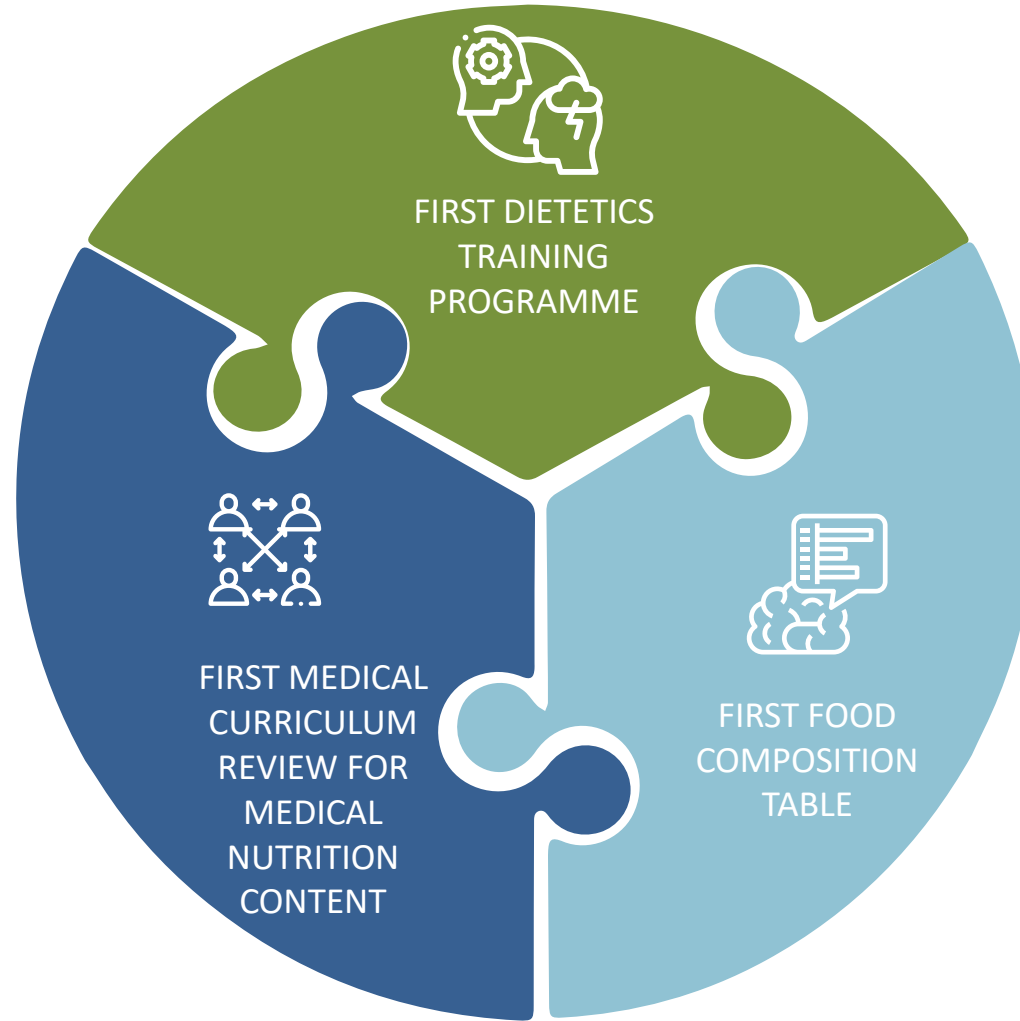


Dr. Bernadette Chimera-Khombe, *Kamuzu University of Health Sciences*



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STAKEHOLDER ENGAGEMENT



Government delegates at Grootteschuur hospital, Capetown; understanding clinical nutrition support



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President Lazarus Chakwera at the FCD booth during the scaling up nutrition 3.0 launch.

01

Stakeholder commitment

Continuous engagement and sensitization.

Stakeholder capacity building.



Jonathan Misolo RD at Kamuzu Central ICU- 27 new post at tertiary hospital level



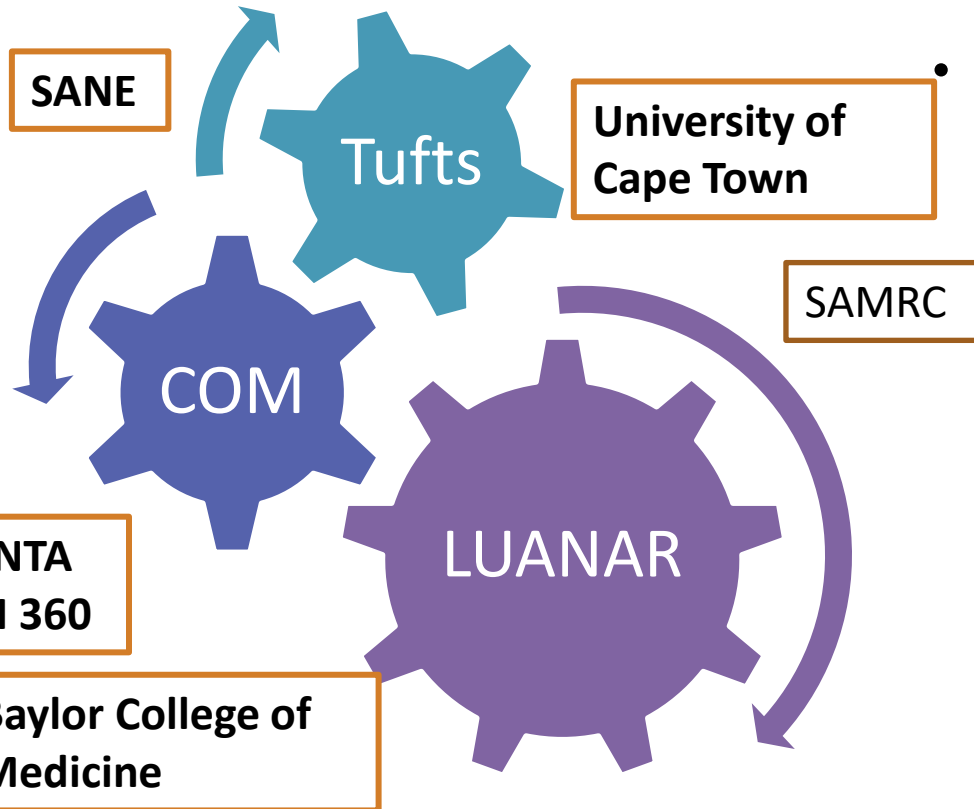
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LEVERAGING STRENGTHS OF LOCAL, REGIONAL AND GLOBAL PARTNERSHIPS



• The Core partnership

- ✓ Community/public nutrition from LUANAR
- ✓ Biomedical sciences and clinical experience from COM
- ✓ Dietetics, leadership and coordination from Tufts.
- ✓ South Africa Medical Research council for technical expertise in FCD development.



TARGETED RESPONSE TO NATIONAL NEEDS



Comprehensive scoping



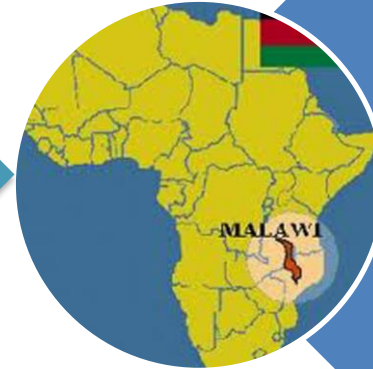
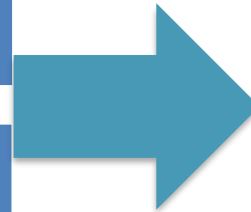
Nutrition and health policy/strategic plan analysis



Needs assessment



Early and sustained engagement with government and other stakeholders



Program responds directly to the Malawi skills gap

- Increase in human capacity for clinical nutrition
- Improved the enabling environment for nutrition
- Generation of tools and evidence for evidence-based practice



MEDICAL CURRICULUM REVIEW LESSONS

Necessity for standards for nutrition gaps in medical practice.

Gap in application of nutrition knowledge

Establish a nutrition curriculum committee or task force.



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FOOD COMPOSITION DATABASE (FCD)

01

Quality data and missing data

Data quality workshops.

Matching and borrowing.

Food composition table modules in universities



GOVERNMENT OF MALAWI



02

Discovered local capacity

Possibility of compiling the FCD using locally generated data.

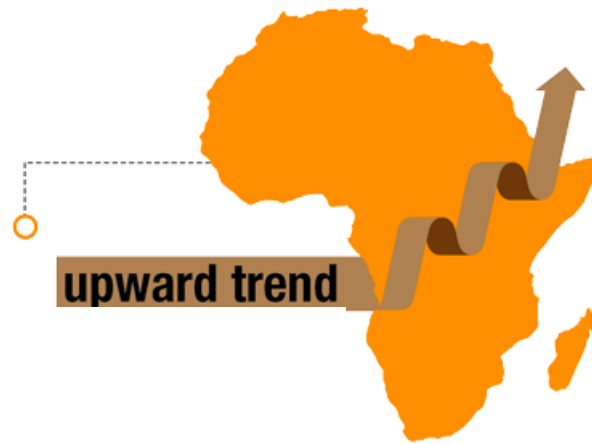


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Sustainable Impact in Building Nutrition Capacity in Malawi: What the Future Holds



Dr. Alexander Kalimbira, *Lilongwe University of Agriculture and Natural Resources*



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National
Priorities

Gaps

Activities

Outputs

Impacts

Prevention and
management of
overnutrition and
nutrition-related
NCDs

Nutrition
education, social
mobilization, and
positive behavior
change

Creating an
enabling
environment for
nutrition

Lack of skilled
dietitians

Unknown
nutrition
competencies of
medical graduates

Lack of nutrition
content in
preservice medical
education

Lack of country-
specific nutrient
availability of foods

Postgraduate
Dietetics
Training

Medical
Nutrition
Education
Review

Food
Composition
Table

Dietetics
professional
practice

Strengthened
multidisciplinary
practice

MDs better
equipped to
manage nutrition
problems

FCD data to
drive research
and targeted
programming

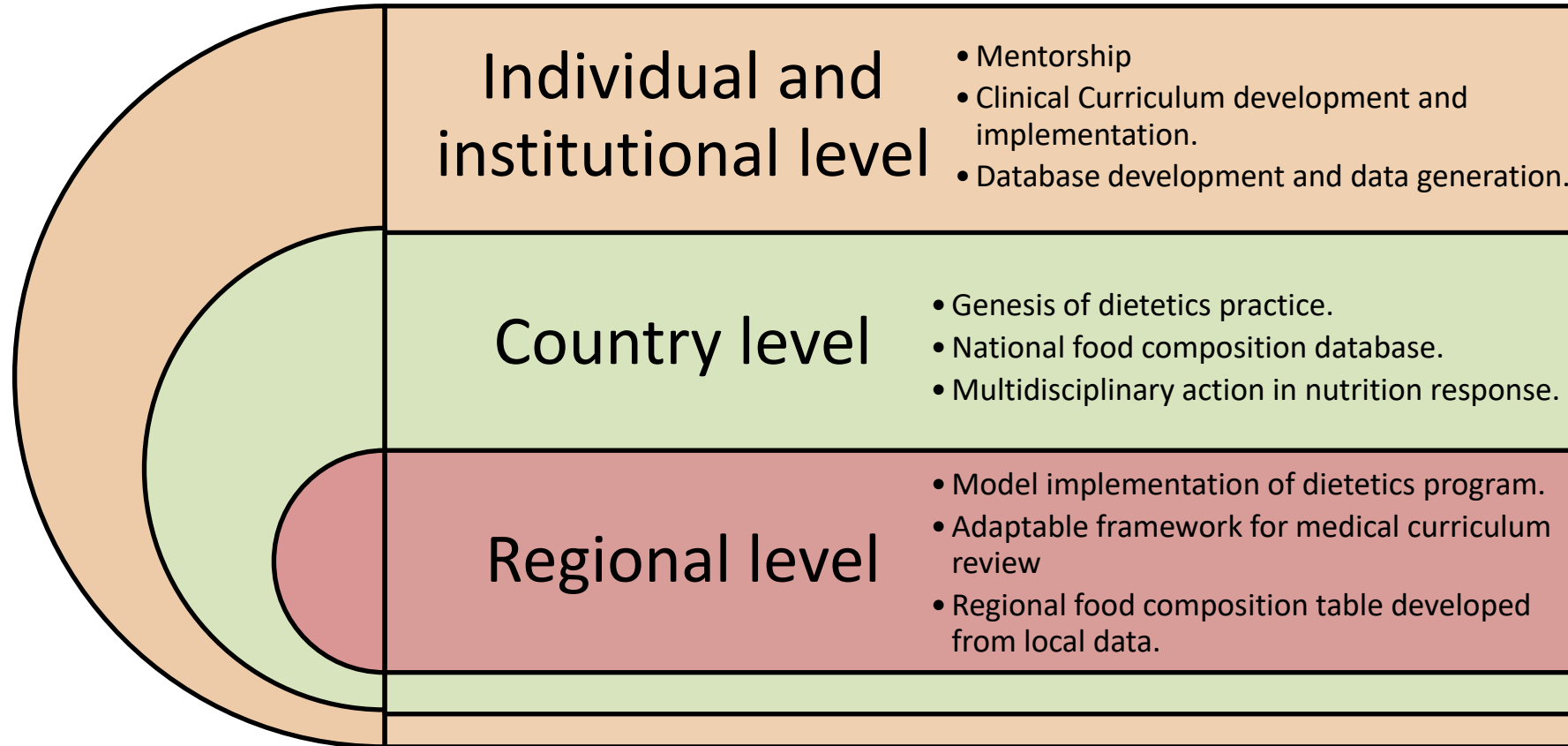
Increase in
human capacity
for clinical
nutrition

Improved the
enabling
environment for
nutrition

Generation of
tools and
evidence for
evidence-based
practice



STRENGTHENING HUMAN CAPACITY





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My overall feeling is honor, and I am very excited to be one the pioneers of this program in Malawi. I feel extremely happy to be a dietitian trained in Malawi, because to me I feel the best dietitian for Malawians is a Malawian dietitian, trained in Malawi, and who can understand what Malawians want for their health.

Humphrey Chatenga RD

1st cohort graduate



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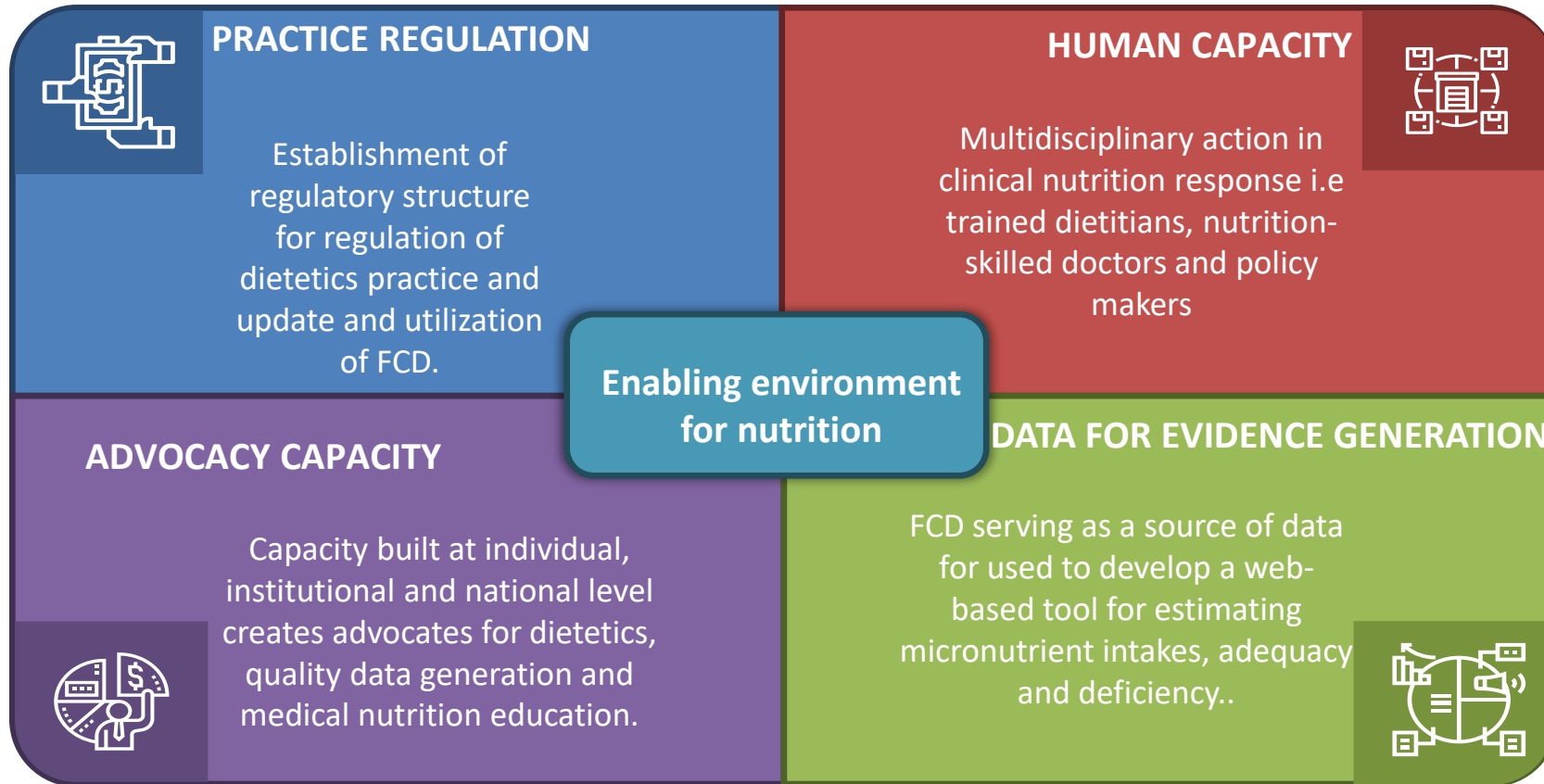
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IMPROVING THE ENABLING ENVIRONMENT FOR NUTRITION



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FUTURE DIRECTIONS

- **Africa's opportunity to;**
 - Continue building dietetic capacity-regional/local using available resources.
 - Draw lessons from Malawi and begin to create networks for further capacity building.
- **Malawi's opportunity to;**
 - Invest in local stewards to sustain and grow these initiatives
 - Development of interventions to respond to medical nutrition education gaps.
 - Provide mentorship to regional institutions.