Malnutrition in all its forms: policy integration and systems thinking

Boyd Swinburn
Professor of Population Nutrition and Global Health
School of Population Health
University of Auckland
and
Alfred Deakin Professor
Global Obesity Centre
Deakin University

Food Thinkers Seminar,
City University of London, London, Sept 2017
Obesity and undernutrition

SDG 2 ‘By 2030, end all forms of malnutrition’

Obesity
Stunting
Micronutrient deficiencies

Other SDGs
Obesity and undernutrition

Sources: UNICEF, World Bank and WHO 2016 and Institute for Health Metrics and Evaluation 2014, respectively.
Obesity + Undernutrition being joined as ‘Malnutrition in all its forms’

- Framing in SDGs, Decade of Action on Nutrition etc
- Co-occurrence of stunting and overweight, especially in LMICs
- Under 5s in 36 LMICs
  - ~3% had BOTH stunting and overweight
  - ~10% of stunted children were also overweight
  - Greater co-occurrence in MICs

Tzioumis E et al Publ Health Nutr 2016
Underlying drivers of improved nutrition status
Undernutrition as the greatest health impact of climate change at +4 deg C

IPCC Human Health: Impacts, Adaptation, and Co-Benefits, 2014
Syndemics

- >2 diseases (epidemics)
  - Cluster in time or place
  - Interact with each other
  - Common societal forces as drivers
- Mainly: HIV + drugs + violence
  - Individual interactions

- Obesity + undernutrition + climate change as a syndemic
  - Climate change as an epidemic
  - Interactions at individual & population level
  - Provides a potential collective narrative of common societal origins

Mendenhall E. Lancet 2017; 389:889
Double/triple duty actions: analyses on existing recommended actions

- Malnutrition in all its forms – many recommendations
- PA environments – some recommendations
- Climate change – IPCC makes evidence statements only
- Obvious double/triple duty actions
  - **Building & transport design** – health/env impact assessments
  - **Trade agreements** – preserve food policy space
  - **Conflicts of interest** – management & transparency
  - **Agriculture research** – shift to diversified, sustainable crops
  - **Peri-urban agricultural lands** – protection from development
  - **Agriculture policies** – nutrition & environment purposes
  - **Nutrition education/dietary GLs** – health, social, env aspects
Specific nutrition recommendations (n=190):
(How many are double/triple duty actions, where do they fit in the system, how strong are their leverage points?)

- Production systems 13
- Processing and distribution 6
- Storage, exchange & distribution 4
- Retail, marketing & advertising 10
- Food information 10
- Food promotion 5
- Food access 7
- Food affordability 2
- Food composition 5
- Creating consumer demand 20
- Governance 2
- Conflicts of interest 2
- Accountability 25
- Capacity Development 11
- Investments & funding 12
- Policies 11
- Social equity 11
- Trade agreements 2
- Sector engagement 10
- Data and information 25
Policy resistance

1. Government reluctance
   - Ideology
   - Regulatory chill

2. Industry push back
   - Corporate political activities

3. Insufficient public demand for policies
   - Quiet support vs public demand
Systems approaches for creating integration of thinking, understanding of causes, and identifying solutions

• Considering the whole as well as the parts
• Connections, networks, interdependence
• Rules and boundaries
• Dynamics:
  – Feedback loops, delays, non-linear effects, tipping points
• Complexity, adaptability, self-organising
• Patterns and emergence
Group Model Building

- Uses system dynamics to develop a causal map/diagram
- Community driven participatory research—core modeling team
- Start with ‘Changes over time’ with ‘Hopes and fears’
Example: Portland Victoria

Cost of exercise (club fees & equipment)
Time for exercise
Quality of role models
Availability of active transport
Quality of food sources
Access to fresh produce
Sugar addiction (people consuming lots of sugar)
Lack of ownership/responsibility for self
Distribution of fast food outlets
Food knowledge and cooking skills
Technology use
Expectation for kids to be elite (Sports)

Time to cook
Available/disposable income
Access to fast food
Available time
Self confidence/worth
Time management effectiveness
Hormones in food
Disempowering policies
Meaningful connections
Number of single parent families
Quantity of food eaten
Social inclusion
Safety within the community
Summary

• Nutrition silos need to be joined up to address the underlying systemic causes of malnutrition in all its forms
• Nutrition needs to join with other silos (eg agriculture, treasury, education, business) to achieve policy coherence
• Strategies for integrating thinking and action
  – High level framing (eg nutrition-sensitive agriculture policies, SDGs)
  – Analysing specific actions for double (triple) duty solutions
  – Linear frameworks for understanding the layers of determinants
  – Concepts such as syndemics
  – Systems approaches such as group model building with stakeholders
• Policy integration needs the right framing, examples/stories, high level commitment, and stakeholder pressure