Key Pathways to Accelerating Sustainable Quality Care of Severe Wasting at Scale

A systems perspective to the sustainable delivery of care: Moving from an intervention towards a systems approach

Scaling up Care for Children with Severe Wasting in South Asia

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Challenges for scaling up care of severe wasting

High burden, high caseload, low coverage, etc.
→ Unmet need, limited resources, weak health system

How to improve sustainable quality care at scale?
→ Different pathways to explore simultaneously
→ One pathway: Apply a systems approach to understand the complexity of the health system
Moving from an intervention approach towards a systems approach:

- The complex health system
- A systems approach—what, why and how
- Lessons from studying ‘integration’ of severe wasting care with a systems lens: Nepal case study
- Lessons for designing ‘integrated care at scale’ with a systems approach
Spotlight on understanding the health system

... to improve integration, scale-up and sustainability of severe wasting care

by taking into consideration what exists in a given context:

Structures, institutions and capacities; gaps and missed opportunities; enabling and hindering factors; large variety of health actors; different delivery platforms; different levels of the health system; values, norms and behaviours; multiple sectors; public and private sectors, etc.
Complexity and the health system

Simple – Complicated – Complex – Chaos
(Macq, 2017)
A health system is a ‘complex adaptive system’

Diversity, connectedness, interdependence, learning

- Elements in the system interact, adapt, learn from experience, self-organise and behave unpredictably
- Health actors interact with system functions and induce change (not always predictably)
- The environment influences and is influenced by the system (dynamic equilibrium) (the context matters)
- Cause-effect relationships are non-linear

(WHO 2009; Bossyns et al. 2016)
Non-linear cause-effect relationships in complex systems

Emergent behaviour (Paina et al. 2011)
Different types of knowledge

- Unpredictable, Chaotic
- Complex
- Unpredictable behaviour of health actors and contexts

- Predictable, tacit
- Complicated

- Predictable, formalised, standardised
- Simple

Primary healthcare, multisectoral nutrition interventions

Obstetric surgery

Emergency response to an earthquake, flooding

Treatment guidelines (EBM)

(Macq, 2017)
Applying systems thinking

• Looks beyond simple cause and effect (opens the black box of how and why an intervention produces an outcome)
• Looks at the system as a whole rather than the pieces (system-wide effect)
• Considers the dynamics of the health system: Interactions, unintended consequences, circular cause and effect relations (feedback loops), time delays, adaptive learning
  → Improve sustainable changes

(WHO, 2009)
Why apply systems thinking?

- **Predict better**: Learn to work with uncertainties, anticipate unintended consequences (deal with doubt, reflect, allow trial and error)

- **Gain insights** into the dynamics of a system and drivers of human behaviour (accumulate knowledge from different perspectives)

- Understand how to **manage and maintain structural changes**

- **Learn together** by doing, systematic learning from experience (accept that there is no magic bullet or blueprint)

\[ \rightarrow \text{Continuously learn and adapt actions to what has been learned} \]
\[ \rightarrow \text{Create leadership skills for } \textit{adaptive management} \]
Example of a systems perspective (A)

Health system support

versus

Health systems strengthening
Health system support vs. health system strengthening (1)

**Inputs**

- Wasting interventions

**Health system support**

**Disease-specific interventions**

**Outcome**

- Wasting improved

**Goal**

- Improved nutritional status
Health system support vs. health system strengthening (2)

**Inputs**
- Wasting interventions
- Health system interventions
- Wasting interventions

**Health system support**
- Wasting improved

**Goal**
- Improved nutritional status

**Health system strengthening**
- Health system strengthened
  - (Wasting improved)

**Goal**
- Improved health, care, cost
How to apply systems thinking

A range of methods and tools help understand the system dynamics of an intervention (system-wide effects and interactions).

Commonly used tools that describe the system:
- 5 Whys, SWOT analysis, mind mapping, fishbone diagram, stakeholder mapping, action mapping, TOC

Advanced tools that uncover system dynamics:
- Rich pictures, iceberg analysis, behaviour-over-time graph, causal loop diagram, stock-and-flow diagram, agent-based modelling (computer simulations)

(Peters et al., 2010)
Example: Study feedback

(Bossyns et al., 2016)
Example: Tool to study feedback

Causal loop diagram

Case management of severe wasting with limited scale and unsustainable

Severe wasting-specific support

Unintended consequences
Applying a systems approach to understand integration of severe wasting care into the national health system

Case studies in Burkina Faso and Nepal:

• Aim
• Methods
• Results
• Learning
Nepal case study: Steps of the inquiry

- Strategy
- Policy analysis
- Stakeholders analysis
- Health system capacity or readiness
- Dimensions of integration
- Extent of integration
- Factors influencing the integration process
- System dynamics of integration
- Scenario testing
Nepal: Extent of integration

<table>
<thead>
<tr>
<th>Routine managerial and organisational activities</th>
<th>Extent of Integration</th>
<th>National level</th>
<th>Bardia District</th>
<th>Kapilvastu District</th>
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</thead>
<tbody>
<tr>
<td>Managerial leadership</td>
<td></td>
<td>Full</td>
<td>Full</td>
<td>Full</td>
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<tr>
<td>Translating policies and strategic plans into action plans</td>
<td></td>
<td>NA</td>
<td>Full</td>
<td>Partial</td>
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<tr>
<td>Annual review and reflection</td>
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<td>Partial</td>
<td>NA</td>
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<tr>
<td>Resource mapping</td>
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<td>Full</td>
<td>NA</td>
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<tr>
<td>Regulating adherence to guidelines</td>
<td></td>
<td>Full</td>
<td>Partial</td>
<td>Full</td>
</tr>
<tr>
<td>Coordinating technical and financial partners</td>
<td></td>
<td>Full</td>
<td>Full</td>
<td>NA</td>
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<tr>
<td>Promoting social participation (planning, implementing and monitoring)</td>
<td></td>
<td>Full</td>
<td>Full</td>
<td>Full</td>
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<tr>
<td>Planning for contingencies (e.g., buffer stocks)</td>
<td></td>
<td>Full</td>
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<tr>
<td><strong>Financing</strong></td>
<td></td>
<td>Partial</td>
<td>Partial</td>
<td>Partial</td>
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<tr>
<td>Allocating and managing the health budget</td>
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<td>Partial</td>
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<tr>
<td>Mobilising additional resources</td>
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<td>Full</td>
<td>Full</td>
<td>Full</td>
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<tr>
<td><strong>Information</strong></td>
<td></td>
<td>Full</td>
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<td>Full</td>
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<tr>
<td>Managing the HMIS (monitoring, recording, reporting)</td>
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<td>No</td>
<td>Full</td>
<td>NA</td>
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<tr>
<td>Sharing information for use and feedback to stakeholders (including local government and communities)</td>
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<td>Full</td>
<td>Full</td>
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<tr>
<td>Managing, overseeing, participating in population surveys (e.g., surveys and assessments)</td>
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<td>Partial</td>
<td>Full</td>
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<tr>
<td><strong>Workforce</strong></td>
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<td>Full</td>
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<tr>
<td>Managing adequate skilled professionals and promoting equitable distribution of health workers</td>
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<td>Partial</td>
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<tr>
<td>Training health workers in clinical care and health facility management</td>
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<td>Conducting supportive supervision</td>
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<td>Providing training materials and/or job aids</td>
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<tr>
<td>Providing job descriptions and appraisal system</td>
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<tr>
<td>Creating career development opportunities to reduce attrition and improve motivation</td>
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<td><strong>Supplies</strong></td>
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<tr>
<td>Infrastructure</td>
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<td>Supply chain management:</td>
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<td>Partial</td>
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<td>Use and expiry</td>
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<td>NA</td>
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<tr>
<td>Storage and stock</td>
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<td>NA</td>
<td>Full</td>
<td>NA</td>
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<tr>
<td>Quality control</td>
<td></td>
<td>NA</td>
<td>Full</td>
<td>NA</td>
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<tr>
<td>Transportation to health facilities</td>
<td></td>
<td>NA</td>
<td>Full</td>
<td>NA</td>
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<tr>
<td>Managing buffer stocks for contingencies</td>
<td></td>
<td>NA</td>
<td>Full</td>
<td>NA</td>
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<tr>
<td><strong>Service delivery</strong></td>
<td></td>
<td>Full</td>
<td>Full</td>
<td>NA</td>
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<tr>
<td>Providing operational support to facility-based services</td>
<td></td>
<td>Full</td>
<td>Full</td>
<td>NA</td>
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<tr>
<td>Organising health outreach and campaigns</td>
<td></td>
<td>Full</td>
<td>Full</td>
<td>NA</td>
</tr>
<tr>
<td>Organising community-based primary care activities</td>
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<td>Full</td>
<td>NA</td>
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<tr>
<td>Organising referral systems</td>
<td></td>
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<td>NA</td>
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<tr>
<td>Ensuring quality</td>
<td></td>
<td>/</td>
<td>NA</td>
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<tr>
<td>/ = not considered; NA = Not available.</td>
<td></td>
<td>/</td>
<td>Full</td>
<td>NA</td>
</tr>
</tbody>
</table>

Social mobilisation

Awareness raising
Mass media
Community meetings
FCHV mobilisation
Mother group meetings

/ = not considered; NA = Not available.
Nepal: Factors influencing integration

### Health system characteristics
- Leadership in governance +
- Adapted policy and guidelines +
- Advocacy +
- HMIS SAM indicators +
- Delayed complex budget release –
- Evidence-based decisions +
- Essential drugs list misses RUTF –
- District budget restrictions by top-down planning –
- Diversified cadre +
- Introduction IMNCI learning +
- High turnover staff –
- Insufficient supply access –
- Incomplete scale-up –
- District supply management gap –
- Leadership (supportive structure) DHO for implementation +
- Policy implementation +
- Leadership in coordinated service delivery +
- Limited financial resources for implementation –

### Intervention
- Insufficient supplies –
- Supportive supervision gap –
- Good HF structure +
- Trained HWs +
- Focal point ownership gap –
- Demand gap –
- Difficult geographic access –
- Diversified cadre +
- Introduction IMNCI learning +
- High turnover staff –
- Insufficient supply access –
- Incomplete scale-up –

### Adoption system
- Openness to policy change +
- Knowledge & skills limitation –
- Pre-service education gap –
- Technical knowledge, roles, & social context gap –
- Coordination and communication skills +/-
- Problem solving gap –
- Cultural openness to change gap –
- Appraisal system gap –
- Incentive to help community +
- Over-burden FCHVs –
- FCHVs skills gap –
- Under-burden HW in SHC –

### Problem
- Understanding SAM –
- Information on SAM incidence & determinants –

### Broader context
- Global and national initiatives (SUN, REACH, SDG) +
- Earthquake emergency response +
- Political stability –
- NPC leadership in the MSNP +

### Problem
- Understanding SAM –
- Information on SAM incidence & determinants –

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- Global and national initiatives (SUN, REACH, SDG) +
- Earthquake emergency response +
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- NPC leadership in the MSNP +
Nepal: System dynamics

Causal loop diagram
Scenarios Nepal:
- Improved competencies of female volunteers
- **Discontinued financial support**
- **Strengthened multisectoral strategy**
- Increased scale

**Key interventions:**
- Strengthen leadership for decision-making by improving competencies in systems approach
Lessons on the integration of severe wasting care, e.g.:
- Health and nutrition programmes were vertically managed but this did not block integration
- Comprehensive child healthcare was the intuitive aim – IMCI
- Weak competencies and partnerships – missed opportunities
- Financial unsustainability was not being addressed

Lessons on the integration inquiry method
- Participatory approaches harvested perceptions and increased insights
- Step-wise ‘learning together by doing’ explored SW integration and complexity
- Both the outcome and the process of building the causal loop analysis were instructive and eye-opening
Nepal: Summary of recommendations

→ Include integration in scale up strategies informed by local capacities and needs

→ Strengthen the understanding of integration and learn together to identify and use opportunities for continuous improvements

→ Strengthen leadership at all levels to learn a systems approach and foster adaptive management
Lessons for scale-up of sustainable SW interventions

**Intervention approach**
- Issues remain with scale-up and sustainability—because of financial, technical and institutional capacity constraints
  - Is this because we are missing many opportunities?
  - Is this because the broader health system in which we work did not (yet) make the needed structural changes to absorb nutrition interventions?

**Opportunities of a systems approach**
- Identifies opportunities for synergies, but also foresees or detects unintended consequences (=foster structural, sustainable changes)
- Strengthens leadership capacities to embrace complexity and allows continuously learning and adapting (= bottom-up leadership)
- Enables learning together to foresee and adapt to changes (= adaptive management)
Take home message … of a systems approach

Understanding the local health system will inform decisions/actions that address identified bottlenecks and will foster the integration and scale-up of severe wasting care bottom-up (➔ plan for incremental structural changes with a long term systems perspective)

Strengthening the position of severe wasting care in primary healthcare by an informed strategy for achieving comprehensive, integrated child-centred healthcare (➔ plan for comprehensive child healthcare with a systems perspective)