Strong systems to ensure availability and appropriate use of medicines at the community level: What does this mean?

Jane Briggs
Institutionalizing Community Health Conference
Johannesburg
March 27, 2017
Outline

• Why medicines and commodities are important
• A pharmaceutical system and what strengthening it means
• The importance of a strong pharmaceutical system for the community
• Describe examples of pharmaceutical systems strengthening (PSS) interventions relevant to the community
Why Worry about Medicines?

• Affordable quality medicines and other health commodities are essential for disease prevention, treatment, and control
• Medicines account for large proportions of total health expenditure and out-of-pocket health care expenditures
• Limited availability of essential medicines in the public and private sectors
• Medicines may be unaffordable for the poor
• Medicines may not be easily accessible, especially in rural areas
• Services may not consider cultural or personal preferences
What is a Pharmaceutical System?

All structures, people, resources, processes, and their interactions within the broader health system that aim to ensure equitable and timely access to safe, effective, quality pharmaceutical products and related services that promote their appropriate and cost-effective use to improve health outcomes.

Hafner et al HPP 2016
Why Do Community Health Services Need Strong Pharmaceutical Systems?

• Access to and appropriate use of affordable medicines is essential for improving primary health care

• Health system has extended to include community level where we need a continuous uninterrupted supply of quality medicines at affordable prices

• Additional challenges at community level

• Community health workers need to be prepared to respond in an emergency/crisis situation when health services may be overwhelmed
Why do I need to apply a pharmaceutical systems strengthening approach if all I need to do is ensure products are available at the community level?
Governance: Policy, Laws, Regulatory Systems

- Registration of a medicine helps to ensure quality, efficacy, and safety at all levels including community

Improving registration in Democratic Republic of Congo

- Problem: Unclear and inefficient process, delays in registration
- Process: National registration committee was established & procedures were documented

![Graph showing % of NEML items with registered products, with Baseline 2011 at around 40% and Current 2016 at around 80%](chart_image)
## Information: Data for Decision Making

- Data on availability and consumption needed for decision making at all levels, including the community

### Mali Logistics Management Information System (LMIS)

<table>
<thead>
<tr>
<th>Problem</th>
<th>Process</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stock-outs</td>
<td>Redesign LMIS</td>
<td>Increased reporting rate from health centers: 8% to 96%</td>
</tr>
<tr>
<td>Poor data collection and reporting</td>
<td>Tools and SOPs for CHWs</td>
<td>Increased availability of tracer medicines at health centers: 34% to 69%</td>
</tr>
<tr>
<td>Lack of community data in LMIS</td>
<td>Training and supervision</td>
<td></td>
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<td></td>
<td>Health centers consolidated community data</td>
<td></td>
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<td></td>
<td>Dashboard</td>
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</table>
Service Delivery

Pharmaceutical services are key to improve use of medicines, e.g. prescribing, dispensing and administering medicines.

Improving use of amoxicillin in Democratic Republic of Congo

- Problem: new product (amoxicillin DT), poor knowledge of dosage, counseling often not given on how to administer
- Process: Job aids for dispensers and dispensing envelopes piloted

![Graph showing adherence of caregivers](image)

- Used envelope
- Envelope helped them
- Gave correct number of tablets
- Felt confident
- Wanted to continue using the envelopes
Financing: Costing Exercises for Planning and Resource Mobilization - Burundi

• Problem: How to expand CCM pilot and what resources were required
• Process: Costing exercises, planning strategy
• Result: Funds leveraged from Global Fund and others for expansion of CCM

Projected Costs for iCCM (USD)

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
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<tbody>
<tr>
<td>Total annual cost</td>
<td>1,121,952</td>
<td>1,540,847</td>
<td>2,525,733</td>
<td>3,759,724</td>
<td>5,247,137</td>
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<tr>
<td>Average recurrent cost per child per year</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>6</td>
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<tr>
<td>Average recurrent cost per CHW per year</td>
<td>528</td>
<td>571</td>
<td>661</td>
<td>762</td>
<td>876</td>
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<tr>
<td>Start-up cost per CHW</td>
<td>321</td>
<td>143</td>
<td>176</td>
<td>205</td>
<td>202</td>
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</table>
Conclusion

To ensure appropriate access and use of medicines in the community and ensure health outcomes, we need strong systems.

- Pharmaceutical system is part of the overall health system
- Consider all components of the pharmaceutical system, not just logistics
- Study the linkages between the components
- Many diverse stakeholders who need to be involved
  - Program people
  - Finance people
  - Pharmaceuticals people
- Consider sustainable strengthening over supporting
Thank you!

Jane Briggs
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System Strengthening to Promote Commodity Availability and Use at Community Level:
The Experience of Ethiopia

March 27, 2017

Paul Dowling,
JSI Ethiopia

Representing USAID Ethiopia partners:
USAID DELIVER PROJECT & AIDSFree (JSI); SIAPS (MSH) and PQM (USP)
Outline

• Background: Health Extension program
• Integrated Pharmaceutical Logistics System in Ethiopia
• Supply Chain at community level
• Assuring quality of medicines and services
• Funding and coordination
• Lessons learned
The Health Extension Program (HEP)

- In 2005 only 40% of the population lived within 10km of a health facility
- Shortages of trained providers: most preferring to live and work in urban areas
- In 2003, GOE launched HEP to reach mainly poor, & rural populations with basic preventive and curative services
Rapid Growth in Service Delivery.....
Commodities Managed at community level

- Currently Health Extension Workers manage about 52 items (17 service packages) including:
  - Contraceptives
  - Vaccines
  - Antibiotics
  - Anti-malarials
  - De-wormers
  - Analgesics
  - Test Kits (HIV, malaria)
  - Nutrition – ORS, RUTF, Vit. A etc.
  - Misc. supplies – gloves, cotton wool, syringes, etc.
Expansion of Services & Commodities Offered

Number of Items Managed

- 2002: 7
- 2004: 47
- 2006: 49
- 2008: 52
- 2010: 52
- 2012: 52
- 2014: 52
- 2016: 52
- 2018: 52
How has USAID support for health systems strengthening – and specifically pharmaceutical & supply chain management contributed to improving availability and use of commodities in the Health Extension Program?
Integrated Pharmaceutical Logistics System (IPLS)

- Pre 2009: ad-hoc, non standardized systems, multiple program-based supply chains; unsustainable & inefficient
- Government led strategy to develop an integrated system
  - 2006: Master Plan for SC finalized, including creation of PFSA (Federal Supply Chain agency)
  - 2009 IPLS begins implementation (design took c. 2 years)
  - 2010: Health Post resupply component of IPLS begins
  - Gradually, program items have been integrated into overall IPLS
    - 2012: FP added
    - 2014: EPI added
    - 2015: malaria added
    - MCH items still not completely integrated
Public Sector Supply Chain (IPLS)

PFSA Center

PFSA Hubs (17)

Health Facilities (c. 3400)

Health Posts (c. 16,000)

Woredas (c. 800)

UNICEF

Partners (NGOs)

Delivery

Pick up
Supply Chain at the Community Level

- Monthly resupply from Health Center – but HEWs collect during routine visits
- Bin cards (paper) kept for each item
- Storage is mix of mainly local solutions (shelves, cabinets)
- There are a number of job-aids and guides printed in local language
Logistics Management Information System at Community Level

- Paper system: monthly reports from HPs to Health Centers (HCs)
- Standardized forms, printed centrally and distributed by PFSA to HCs
- Combined Report & Order
- HCs include HP requirements in bimonthly report to PFSA
- Apart from limited pilots (mobile), no automation of logistics data collection
- **Data Visibility**: Real time data for Center & Hubs, bimonthly static data from HCs, no visibility (disaggregated) for HPs
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<tr>
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<td>Mekelle Hub</td>
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<td>11,106,800</td>
<td>38,000</td>
<td>0</td>
<td>2,500</td>
<td>540</td>
</tr>
</tbody>
</table>
## Capacity Building for Supply Chain

### Situation 2010: Tens of thousands of HEWs with little or no formal commodity training

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate</td>
<td>Train woreda supervisors to mentor HEWS in SC</td>
<td>2,931 trained between 2011-16</td>
</tr>
<tr>
<td>Medium</td>
<td>Opportunities for catch up training during Integrated Refresher Training</td>
<td>Limited success- programs protect their time</td>
</tr>
<tr>
<td>Long</td>
<td>Institutionalize SC as part of curriculum for new HEWs</td>
<td>Module developed, formally included in curriculum: c. 5,000 new HEWs trained (2016)</td>
</tr>
</tbody>
</table>
Commodity Availability – Index score by program

Data Source: L10K
Supply Chain Challenges

- Despite significant efforts and improvements challenges remain:
  - No provision for delivery of commodities to HPs
  - Low use of standardized forms – 55% had monthly report & request form; 40% had bin cards (2015)
  - Storage conditions need improvements: in 2015, 29% had “suitable” storage conditions (versus 63% of HCs)
  - Medicine availability at HP level < than at higher levels
Pharmaceutical Regulatory Systems

• Pre 2009:
  – Fragmented medicine regulation; no clear demarcation of responsibilities
  – Weak medicine safety monitoring
  – Lengthy & ineffective medicine registration process,
  – Weak QA systems; lack of quality management & law enforcement

• 2009: Federal Medicine & Healthcare Administration & Control Authority (FMHACA) established
Medicine Quality

• Healthcare & Facility Standards developed and adopted

• Support to FMHACA for improved regulatory systems for medicines
  – Establishment, equipping, capacity building and ISO accreditation of national QC laboratory
  – Strengthening post marketing surveillance and medicine inspection
  – 2016 Automation of medicine registration
  – Policy and systems support for item naming (bar code track and trace)
Pharmacovigilance

- Strengthening of Adverse Drug Event (ADE) monitoring center
- Development of automated Pharmacovigilance Data Management System (PVDMS)
- Revision of ADE reporting form to include product quality defects enabled the tracking of counterfeit & substandard medicines.

- recall of 22 products including amoxicillin powder for suspension and paracetamol syrup
Funding & Coordination for Pharmaceutical systems

• Support managed by Systems Strengthening team at USAID Ethiopia

• Multiple USAID funding streams leveraged:
  – PEPFAR
  – Presidents Malaria Initiative (PMI)
  – Health and Populations Funds (MCH and FP)

• CDC funds

• Also coordination with other GOE funding sources,
  – e.g. Global Fund and GAVI (commodities & infrastructure support)
  – MDG multidonor basket funds (commodities)
Lessons Learned

• HSS means support for – pharmaceutical mgmt., SC mgmt., financing, health services, HMIS etc.
• Combine “quick fixes” with long term systems strengthening
• Systems strengthening is: People + Processes + Technology
  – Corollary: Technology will not fix broken processes (in fact it may make them worse)
• Increasing use of data is usually harder than increasing data availability
Use of information: Malawi’s experience on scaling up and expanding cStock to manage commodities at the community level

Humphreys K. Nsona
IMCI Unit-
Malawi MoH
Introduction

• Integrated Community case management introduced in Malawi in 2008
  – Managed by Community Health Workers (called Health Surveillance Assistants)
  – Paid cadre of workers, live and work in hard-to-reach areas (>5km from health center)
  – HSAs are trained to treat children under 5 years for malaria, pneumonia and diarrhea and provide family planning to women
  – Supervised under the District Health Management Team, HSAs provide services through 3700+ village clinics nationwide

• HSAs manage up to 17 products that they store in a drug box in their home
• HSAs collect medicines from the nearest health center
What prompted the use of C stock? What was the problem?

- Poor availability of medicines
- Lack of visibility of HSA logistics data due to low reporting rates and poor movement of data
- Weak linkages between community and health facilities
- HSAs would travel long distances to collect products only to return empty handed
## Key Outcomes – To Improve Availability

### Key Quantitative Baseline Assessment Data
- 27% of HSAs who manage health products had four CCM tracer medicines in stock on day of visit
- 43% HSAs submitting reports that contain logistics data to HC
- 29% of HCs reported passing HSA information to higher levels

### Key Quantitative Endline Assessment Data
- 80% of HSAs had four CCM tracer medicines visible throughout the supply chain period
- 86% of HSAs were able to compile and send reports that contain logistics data
- 85% of HSAs were able to pass information to higher levels

94% of HSAs surveyed had basic GSM mobile phones (Personal)
An approach to provide real-time, actionable HSA logistics data for managers, stakeholders to coordinate, plan and identify solutions to better meet customer needs in a timely manner.

- Improve resupply procedures and visibility into HSA stock levels
- Empower SC managers at all levels of the supply chain with HSA logistics data
- Improve coordination among stakeholders
- Create and promote a culture of data driven decision making
Core Features of Enhanced Management Approach

**cStock**
A mobile health application effective in improving community logistics data visibility at all levels by providing data on a web-based dashboard

**District Product Availability Team (DPAT)**
A team with a shared goal & performance targets that uses data to monitor and strengthen the supply chain
District, Zonal and Central staff access HSA logistics data via dashboard.

**Health Center** supplies the HSA based on SMS message.

**HSA** sends SMS with SOH each month.

The database calculates - MOS and resupply quantities, reporting rates, number and duration of stock outs, displays on dashboard.
National Scale up - Evolution

2008
iCCM Introduced

2010 cStock introduced 6 districts (iCCM Products)

2011 Expanded to 16 districts

2012 Nationwide scale up, (Family planning products)

2016 EPI products included on cStock

- cStock adapted and taken up by MoH within a year after pilot
  - Partner buy-in
    - World Health Organization – 10 districts
    - USAID – SSDI – 15 districts
    - Global Fund
- Capacity Building
  - Training of Trainers
  - District focal persons
  - District Product availability teams
- All (3700+) Functional HSAs
Progress and current status

1. **HSA level/Community:**
   - 80% HSAs report stock on hand, low stocks, and/or stock out
   - Receiving notification on products ready at facility
   - Reporting product receipts or transfers to cStock
   - Source of automatic reminder to send reports (nags)

2. **Facility Level:**
   - Receiving HSAs’ product orders from cStock
   - Tracking tool for non-reporting HSAs for follow up
   - Informing HSAs on product availability at facility
   - Facilitating targeted supervision to HSAs

**District Level:**
- Monitoring product availability at HSAs’ level
- Identification of stock outs/low stocked HSAs
- Facilitates well targeted problem solving around re-stocking and supportive supervision
- Gives more effective control/management of CCM program performance
- Identification of best performers as a starting point for lessons learning on good practices
Sustainability

- Operationalized through District Health Management Teams structures (District Health systems)
  - DPAT – MoH Focal persons
  - HPAT – MoH Health centre staff
- Commodities resupplied from Health Facilities
- Central level administrator roles (IMCI Unit – MoH led)
  - Follow up
  - Supervision
  - Mentorship
### Sustainability

#### Enhanced Management (EM)

| DPAT/HPAT Meetings | Performance Plan | • District Program Coordinators  
|---------------------|------------------|-----------------------------|
| Quarterly District Meetings with District staff and CHW supervisors | • Supply chain performance indicators and targets  
| Monthly HC Meetings with HC and CHWs | • cStock data and resupply worksheets used to track performance  
| Topics discussed include | • Formal recognition system to drive SC performance  
| - Performance plans & recognition | • Management diaries used to track issues and actions taken  
| - Reporting timeliness and completeness |  
| - Stock management, expiries & overstocks, and product availability |  

**DPATs have proven to be an important complement to cStock. DPATs “demand” updated data that cStock “supplies,” motivating CHWs to continue reporting.**

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**cStock Data**

- Enhanced Management (EM)
<table>
<thead>
<tr>
<th>Lessons learnt/ Observed</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Improved timely reporting of product data from HSAs to facility level supervisors</td>
</tr>
<tr>
<td>• Improved communication between HSAs and their re-supply point</td>
</tr>
<tr>
<td>• Improved district visibility into community level product data, and any potential problem areas (stock outs, etc) for intervention</td>
</tr>
<tr>
<td>• Eliminated headache of HF In-Charge calculating re-supply quantities – better use of health centre staff (clinician) time for clinical duties</td>
</tr>
<tr>
<td>• Improved evidence-based targeted supportive supervision and prioritization of staff time in a resource limited setting</td>
</tr>
<tr>
<td>• Improved Community medicines system’s performance monitoring at various levels, and more effective identification of system bottlenecks by level for intervention</td>
</tr>
<tr>
<td>• cStock has provided Districts an effective tool to better manage medicines at community level</td>
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</tbody>
</table>
The Village Clinic
Structures built by community to support Community Health services
Acknowledgements

• The Bill & Melinda Gates Foundation
• SC4CCM Project implemented by JSI Research and Training Institute
• WHO, Save the Children, SSDI Project, IWG (mHealth Alliance/UN Foundation)
• District Health Management teams
Questions for discussion

1. What are some of the challenges in your pharmaceutical system, that affect availability, appropriate use or safety of commodities at the community level?

2. What interventions have you implemented to strengthen the system and with what success?

3. What ideas have you had from listening to the presentations today that could apply to your setting?

4. What support do you need to strengthen the pharmaceutical system to assure availability and appropriate use of quality commodities at the community level?
Institutionalizing Community Health Conference
27-30 March 2017 | Johannesburg, South Africa

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