Transforming Access & Delivery of Essential Medicines: Lessons from the Riders for Health Program in Gambia

Lesley Sept & Sonali Rammohan
Based on work by Hau L. Lee and Riders for Health
What is a Health Delivery Supply Chain?

• Health supply chains focus on the delivery of commodities (essential drugs, medical supplies) & preventive/medical services (e.g. immunizations, medical care) to patients

• Important components/functions of health supply chains:
  • Procurement (e.g. buying drugs and supplies)
  • Production & Operations (e.g. making supplies, organizational capacity to deliver health interventions)
  • Distribution (e.g. getting supplies and services to patients)
  • Customers = patients
Improving Coordination of Material, Information, and Financial Flows Can Strengthen Health Supply Chains

From a health access/delivery perspective:

<table>
<thead>
<tr>
<th>Material Flows</th>
<th>Refers to the delivery of materials (e.g. drugs, condoms, malaria nets, literature, test results) and people (e.g. nurses, doctors) from one place to another</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Flows</td>
<td>Refers to knowing where fleet/people resources are, the status of the fleet, the needs of the villages, etc.</td>
</tr>
<tr>
<td>Financial Flows</td>
<td>Financial flows are the ways to finance resources, as well as the payment terms and conditions for services rendered</td>
</tr>
</tbody>
</table>

• Easier said than done--especially in emerging economies
Challenging to Coordinate these Flows in Emerging Economies

- Transport networks (such as roads, rails networks, rivers) are lacking and/or poorly developed
Challenging to Coordinate these Flows in Emerging Economies

• Transport conveyances (such as trucks, container ships, rail cars, etc.) are often not useable

• Information flows poorly

• Economic means are scarce
Riders for Health: An Innovative Health Delivery Model that’s been able to Improve Coordination of these Flows

• Riders for Health (Riders) is a social enterprise focused on providing reliable and cost-efficient transportation solutions to health workers who are reaching out to rural communities in Sub-Saharan Africa

• Transport Resource Management (TRM) is flagship program
  • Train health care workers/drivers how to properly use & maintain vehicles
  • Calculate charges for vehicle running costs on cost-per-kilometer basis
  • Carry out regularly scheduled servicing at established outreach points

• Introduced leasing model called Transport Resource Management (TAM) in 2009
  • Same services as TRM, but Riders purchases/leases the vehicles
## Comparison of TRM vs. TAM Programs

<table>
<thead>
<tr>
<th>Service Provided</th>
<th>TRM</th>
<th>TAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Train Health Care Workers to Properly Use/Maintain Vehicles</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Calculate Vehicle Running Costs on CPK Basis</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Carry out Regularly Scheduled Servicing at Outreach Points</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Provide Health Outreach Workers with Vehicles</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Provide Health Centers with Vehicles</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Ensure Cost to Lease is Accurately Included in CPK</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
First full implementation of TAM occurred in Gambia

• Very small country in West Africa (population 1.6 million)
• Site of first Riders program. Good track-record with MoH.
• Gambia TAM program shows potential for Rider’s delivery model to improve financial, material, and information flows
Financial Flows – How They Usually Work

<table>
<thead>
<tr>
<th>Costs of Transportation</th>
<th>Who Pays?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle/motorcycle, maintenance, fuel</td>
<td>Govt, donors ($ or vehicles)</td>
</tr>
</tbody>
</table>

**Problem:** “lumpy” budgeting for finance ministries

- Vehicles are big expenses every few years
- Maintenance and fuel can get shortchanged, grounding vehicles to a halt
- If vehicles donated, incentive to run them as long as possible, even past economic life. Can be a waste of money.
How Riders Improved Financial Flows in the Gambia

<table>
<thead>
<tr>
<th>Costs of Transportation</th>
<th>Who Pays?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle, maintenance, fuel, TRAINING</td>
<td>• Riders took Nigerian bank loan to buy fleet</td>
</tr>
<tr>
<td></td>
<td>• Skoll Foundation underwrote loan to de-risk</td>
</tr>
<tr>
<td></td>
<td>• Government pays “cpk” to Riders</td>
</tr>
</tbody>
</table>

- **Advantages:**
  - Smoother budgeting
  - “cpk” helps build reserve fund so Riders saves $ for buying own fleet
  - In ~10 years, Riders can self-finance its fleet – NO LOAN

- **Challenges:**
  - Govt. or donors still need to pay the cpk
  - A risk that govt. will default on contract and not pay Riders. Then Skoll Foundation would have to pay off the loan
Bad Road Conditions in Gambia can make it Difficult to Deliver Materials (e.g. drugs, supplies)
Riders Smoothed Material Flows by Selecting Transport Mode Ideally Suited for these Conditions ...
Use of Motorbikes for Health Delivery is Not New, but Preventative Maintenance on Outreach Basis is
Hub-and-Spokes Model & Standardization of Vehicles also Helped Improve Delivery of Materials

• Gained leverage by relying on a hub-and-spokes model
  • Centralized: Purchase of motorcycles/inventory parts & training of health workers and mechanics
  • Kept local: Replacement of parts/oil changes & maintenance of parts to health workers in the region

• Standardized vehicles, encouraging MoH to use a few motorcycle models
Information Flow Trickled Before Riders b/c No Formal Vehicle Fleet Management System in Place

• Vehicle Fleet Management System before Riders:

<table>
<thead>
<tr>
<th>DATE</th>
<th>PURPOSE</th>
<th>JOURNEYS</th>
<th>FROM</th>
<th>TO</th>
<th>Driver's Name</th>
<th>Authorizing Officer</th>
<th>SPEED</th>
<th>Kilometres Run</th>
<th>Fuel Rec'd</th>
<th>Const. No.</th>
<th>Service Record</th>
</tr>
</thead>
</table>
| 1/12/09 | Demo | Nakatg | Andheri West | 7346 | 7377 | 21Km
| 4/12/09 | Demo | Nakatg | Andheri West | 7377 | 7675 | 26.75 | 77.00
| 5/12/09 | Demo | Nakatg | Andheri West | 7700 | 7748 | 27.00 | 77.48
| 1/11/09 | Demo | Vasantnagar | Borivali | 7798 | 8535 | 25 | 8535
| 21/2/09 | Taken for Service | Parel | Bombay HDZ | 85 | 8535 | 8565
| 31/1/09 | Returned from HDZ | Parel | Bombay HDZ | 8565 | 8497 | 29.35 | 8497
| 25/1/09 | Filled up | Vismaya | Andheri West | 8595 | 8735 | 208.90 | 8735
| 5/1/09 | Returned to HDZ | Parel | Bombay HDZ | 7895 | 8497 | 258.90 | 8497

STANFORD GLOBAL SUPPLY CHAIN MANAGEMENT FORUM
SOCIALLY & ENVIRONMENTALLY RESPONSIBLE (SER) SUPPLY CHAINS PROGRAM
Riders Improved Information Flows by Introducing Simple Paper-Based Vehicle Fleet Management System

• Started to collect data on inventory usage, maintenance scheduled, and health worker trip reports, etc.
• Data ensures maintenance done at right time with right parts & cpk accurately calculated
Improving Access & Delivery of Essential Medicines
Lessons Learned from Riders Program

• Apply established SCM best practices when you can
  • Is preventative maintenance system in place?
  • Able leverage a hub-and-spokes model?
  • Possible to standardize?

• Develop innovative practices when can’t; Riders points to a few:
  • Use advanced technologies when you can, but do not overlook the power of simple solutions
    • In extreme conditions organizations are often starting from ground-zero
    • Introduction of simple solutions, like a basic IT system or transport mode, can have an enormous impact
Improving Access & Delivery of Essential Medicines
Lessons Learned from Riders Program

• Create an extended supply chain network, developing substantive partnership with a diverse set of stakeholders (NGOs, governmental, and donor organizations)
  • Hard b/c need to create “win” for each stakeholder, carefully aligning incentives
  • Necessary since not possible for any one organization to create efficient delivery system on their own
• Adopt longer-term approach in order to develop sustainable delivery models
  • Fastest way to improve delivery/access=have outside organization set-up and manage the system
  • Problem is: leaves no local infrastructure in place to sustain the delivery system
Improving Access & Delivery of Essential Medicines Lessons Learned from Riders Program

• Analyze the ENTIRE supply chain & determine where delivery bottle-necks are
  • Riders is likely to improve transport (the distribution/logistics piece), but know from field visits that lack of health care workers (operational piece) may limit programmatic impact

• Integrated approach, where target bottlenecks at various points throughout supply chain in parallel, is ideal
  • Not done often because hard to fund & implement
Improving Access & Delivery of Essential Medicines
Lessons Learned from Riders Program

• Understand how $, material, and information flows are being coordinated
  • Improving coordination of these flows was key to Riders success in the Gambia
    • Able to do this because, after being in Gambia for several years, Riders understood flows are linked to each other
  • Closer examination of flows may help with current efforts to scale-up their operations...
Discussion
Riders at a Crossroad

• Riders received Lrg. Gates Foundation grant to scale-up in 2009 (initial focus is Zambia)
• Slower process than anticipated
• It’s been difficult to coordinate $, material, info. flows
  • MoH sees from pilot programs that Riders can improve health delivery (material flows), but need proof of cost effectiveness to justify funding
  • In order to get proof need decent health and logistics (i.e. information flows)
    • Health data is bad, but logistics data is non-existent
    • Required creating/implementing a logistics data collection system (costly and time consuming)
Discussion
Riders at a Crossroad

• If provide “proof” still need to contend with financial flow issues
  • Lack funds to purchase vehicles & pay for set-up
  • As mentioned earlier, MoH financial flow experiences frequent disruptions, making it difficult to pay cpk charges on regular basis
  • Vehicle donation practices provide financial disincentive to move towards TAM model
    • Perceived as less risky to request one-time vehicle donation versus funding maintenance each year

• For class discussion: Given these challenges, how can Riders expand their operations on a large-scale? Strategies for improving the coordination of these flows?