QUALITY MANAGEMENT IMPROVEMENT APPROACH (QMIA) in RWANDA

Kenneth Kahumuza, GHSC-PSM

Adeline Nzamukosha, Ministry of Health

Gaston Kazeneza, Rwanda Medical Supply Ltd
**Background**

- Rwanda’s health supply chain is an integrated system coordinated by the Ministry of Health (MOH)
- The central medical store, Rwanda Medical Supply (RMS Ltd.) and its regional warehouses manage a large portion of Rwanda’s supply chain
- Private sector is also involved (including the Bureau des Formations Médicales Agréées du RWANDA (BUFMAR) central store, pharmaceutical conglomerate Medical and Allied Service Solutions (MEDIASOL), and private pharmaceutical wholesalers) to ensure procurement and distribution of health commodities to the public
- Rwandans receive health products at service delivery points (SDPs) including public and private hospitals, health centers, health posts, community health workers.
Flow of health products and information
Introduction

- Positive health outcomes are highly dependent on how well the health supply chain functions.

- Since 2017, GHSC-PSM has partnered with the MOH to strengthen Rwanda’s system for building capacity among supply chain staff to the last mile - this is done through the Quality Management Improvement Approach (QMIA).

- Capacity building, mentorship and measurement of performance improvements are conducted during each QMIA visit (conducted annually) to ensure sustainability of a coordinated and integrated supply chain for health commodities.
QMIA Objectives

• Ensure an uninterrupted supply of health commodities at both RMS branches and SDPs
• Encourage proper working environment and empower staff
  – Staff feel motivated to improve services to patients/customers
  – Staff are willing to innovate and act in an atmosphere of trust and respect
• Share experiential knowledge and solutions across facilities
• Use measurements and data to back decisions
  – Spot trends (e.g., understock, staff turnover) and correct these trends before major problems result
  – Identify root causes and what can be done to prevent them from happening again
• Building staff capacity and institutionalize supervision (e.g., quality checks, feedback loops, performance monitoring), so that facilities will conduct these activities long-term
QMIA Stakeholders

- MOH
- Rwanda Biomedical Center (RBC)
- RMS Ltd
- BUFMAR
- MEDIASOL
- GHSC-PSM
- USAID
- UNFPA
- Hospitals
- Health Centers
- Community Health Workers
Methodology – QMIA Orientation & Implementation

– At MOH behest, GHSC-PSM orients QMIA teams composed of various supply chain partner staff (MOH, GHSC-PSM, RMS HQ and branches, RBC and BUFMAR)
  
  • Describe how QMIA site visits and data collection are conducted
  • Explain new “supportive supervision” approach core to QMIA
  • Disseminate QMIA site visit plan and tools

– MOH and project-developed supportive supervision tool is used to collect data and guide how issues spotted during the visits can be addressed

– QMIA team informs facilities before site visit so they are prepared

– QMIA visits are conducted at all HFs and RMS branches in the country

– Following site visits, the QMIA team delivers tailored training based on the identified performance gaps
## QMIA list of tracer products by health program

| HIV tracer | Tenofivir/Lamivudine/Dolutegravir 600/300/300mg 30 Tabs or 90 Tabs  
| First used second line adult ARV (Atazanavir/Ritonavir 300/100mg 30 Tabs)  
| Most used first line pediatric ARV (Abacavir/Lamivudine 120/60mg 60 Tabs)  
| First RTK ((Alere HIV Ag/Ab Combo 100 test)  
| ORAQUICK HIV SELF-TEST KIT |
| Malaria tracer | ACT (ALu) First Presentation: ARTE 20MG+LUME 120MG DISP TAB (1X6) B/30  
| ACT (ALu) Third Presentation: ARTE 20MG + LUME 120MG TAB (3X6) B/30  
| ACT (ALu) Fourth Presentation: ARTE 20MG + LUME 120MG TAB (4X6) B/30  
| Rapid diagnostic tests: MALARIA RAPID DIAGNOSTICS Ag P.f/Pan 30T |
| Family planning tracer | Injectable Contraceptive (1. Medroxyprogesterone Acetate 150 mg Vial, Intramuscular+Syringue 1ml 25/B) Depo provera)  
| 2 rod implants (Levonorgestrel 75mg/rod, 2rod Implant+Inserter) _Jadelle  
| Combined Oral Contraceptive (Levonorgestrel/Ethinyl Estradiol 150/30 mcg + Fe 75 mg, 28 Tablets/Cycle) _Microgynon  
| Copper-bearing intrauterine devices (IUD) |
| Maternal, child and community health tracer | Oxytocin (10 IU injectable)  
| MgSO4 (50% injectable)  
| Zinc 10mg dispersible tablet (alone)  
| ORS (alone) |
| TB tracer | ETHAMBUTOL 100 MG TABLET  
| RIFA 150MG+ISO 75MG+PYR 150MG+ETH 275MG TAB B/672  
| RIFAMP 75+ISONIAZID 50+ PYRAZINAMID150/84  
| RIFAMPI 150MG + ISONIAZ 75MG TAB B/672 |
## More tracer products (by program)

<table>
<thead>
<tr>
<th>Essential medicines tracer</th>
<th>LIDOCAINE 2% 30ml INJECTION</th>
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<tbody>
<tr>
<td></td>
<td>CAPTOPRIL 25mg or 50mg Tablet</td>
</tr>
<tr>
<td></td>
<td>METFORMIN 500 MG TABLET</td>
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<tr>
<td></td>
<td>CEFTRIAXONE 1G INJECTION</td>
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<tr>
<td></td>
<td>SURGICAL GLOVES 7.5/8</td>
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<tr>
<td></td>
<td>POLYGLACTIN 910 0 90cm PR PLUS 40mm 1/2C</td>
</tr>
<tr>
<td></td>
<td>HYDROCHLOROTHIAZIDE 25MG TABLET</td>
</tr>
<tr>
<td></td>
<td>PHENOBARBITAL 100MG TABLET</td>
</tr>
<tr>
<td></td>
<td>AMLODIPINE 10MG TABLET B/100</td>
</tr>
<tr>
<td></td>
<td>INSULINE LENTE 100UI/ML INJECTION</td>
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</table>

<table>
<thead>
<tr>
<th>Lab tracer</th>
<th>M2000 HIV-1 QUANTITATIVE AMPLIFICATION REAGENT KIT</th>
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<tbody>
<tr>
<td></td>
<td>COBAS 4800, HIV-1 CE-IVD, 120 TESTS</td>
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<tr>
<td></td>
<td>RPR KIT 150TESTS</td>
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</table>
RESULTS AND REFLECTIONS
Supply Chain Indicators – Performance and Trends
RMS Branches – key performance indicators (KPIs)

- Product Availability: FY22 82%, FY23 87%
- Inventory Accuracy: FY22 75%, FY23 92%
- Order fill rate: FY22 69%, FY23 72%
- Expiration rate: FY22 2%, FY23 3%
- Stock according to plan: FY22 49%, FY23 61%
- Updated stock card: FY22 49%, FY23 49%
- On time Delivery: FY22 83%, FY23 50%
- Order completeness: FY22 66%, FY23 81%
- Performance (%)
  - FY22
  - FY23

Performance ranges from 0% to 100%.
Health Center KPIs

<table>
<thead>
<tr>
<th>KPI</th>
<th>FY22</th>
<th>FY23</th>
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<tbody>
<tr>
<td>Product Availability</td>
<td>84%</td>
<td>87%</td>
</tr>
<tr>
<td>Inventory Accuracy</td>
<td>66%</td>
<td>80%</td>
</tr>
<tr>
<td>Order fill rate</td>
<td>83%</td>
<td>85%</td>
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<tr>
<td>Expiration rate</td>
<td>6%</td>
<td>1%</td>
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<tr>
<td>Stock according to plan</td>
<td>63%</td>
<td>73%</td>
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<tr>
<td>Updated stock card</td>
<td>57%</td>
<td>73%</td>
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<tr>
<td>Accuracy of e-LMIS Consumption data</td>
<td>51%</td>
<td>66%</td>
</tr>
<tr>
<td>On time Delivery</td>
<td>87%</td>
<td>87%</td>
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<tr>
<td>Order completeness</td>
<td>90%</td>
<td>90%</td>
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<tr>
<td>Invoicing Generated</td>
<td>82%</td>
<td>77%</td>
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</tbody>
</table>
Hospital KPIs

Performance (%)

- **Product Availability**: 54% (FY22), 87% (FY23)
- **Inventory Accuracy**: 47% (FY22), 76% (FY23)
- **Order fill rate**: 53% (FY22), 80% (FY23)
- **Expiration rate**: 4% (FY22), 1% (FY23)
- **Stock according to plan**: 44% (FY22), 63% (FY23)
- **Updated stock card**: 47% (FY22), 73% (FY23)
- **Accuracy of e-LMIS Consumption data**: 41% (FY22), 51% (FY23)
- **On time Delivery**: 51% (FY22), 77% (FY23)
- **Order completeness**: 55% (FY22), 55% (FY23)
- **Invoicing Generated**: 55% (FY22), 74% (FY23)
Rwanda Supply Chain Challenges

• QMIA visits have identified performance improvement barriers:
  ✓ High staff turnover at SDPs, especially at last mile facilities
  ✓ Understaffed health facilities, necessitating store managers to engage in other services’ duties (e.g., consultations), thus minimizing their time dedicated to supply chain activities
  ✓ Lack of infrastructure at health facilities and RMS branches (e.g., small warehouses and storage rooms, lack of laptops, limited internet access)

• Each of the identified challenges is referred to the relevant institution best positioned to address it. The QMIA teams have ongoing discussions with the institutions to ensure challenges are addressed.
Thank you

Murakoze