The CQUIN Learning Network

Centralized Chronic Medicine Dispensing and Distribution
A Public/Private Partnership to Increase Access to HIV/Chronic Medication

Phil Roberts
Project Last Mile

May 22, 2018
ICAP Grand Rounds Webinar
Agenda

• Introduction to Project Last Mile
• CCMDD in South Africa
• Current performance
• Business case
• Conclusion
Project Last Mile – the early idea

Millions of people in Africa lack access to critical medicines. Yet, you can get a Coca-Cola product nearly anywhere in the world.
Project Last Mile – the early idea

WHAT IF
WE ALL CAME TOGETHER
AND SHARED...

DISTRIBUTION EXPERTISE,
MARKETING SKILLS
BUSINESS BEST PRACTICES

TO HELP LIFE - SAVING MEDICINES
GO THE "LAST MILE" TO THOSE
THAT NEED IT MOST?
Since the first pilot in 2010, Project Last Mile has activated programs in 8 out of 10 countries in Africa.

**GHANA** (2011 – 2013)
Pilot created a blueprint for improved uptime of cold chain equipment used for vaccines and introduced the use of market research & segmentation model to improve uptake and adherence for immunizations.

**NIGERIA** (2016 – present)
Tapping into the Coca-Cola ecosystem to help improve uptime and management of vaccine cold chain equipment and save lives of children in Nigeria.

**LIBERIA** (2017 – present)
Leveraging and adapting Coca-Cola best practices in demand planning, distribution optimization, network design, and organizational development. To help build a functioning medical supply chain for the Central Medical Stores.

**TANZANIA** (2010 – present)
Building on six years of partnership to further strengthen distribution and management of medical supply chains in Tanzania.

**SIERRA LEONE** (2017 – recently started)
Leveraging and adapting Coca-Cola best practices in distribution and organizational development to support supply chain strengthening.

**MOZAMBIQUE** (2016 – present)
Applying Coca-Cola best practices in route-to-market and logistics to improve distribution of medicines and health products.

**SOUTH AFRICA** (2016 – present)
Leveraging the Coca-Cola network and route-to-market experience to help revolutionize distribution of chronic medicines for over 2 million people.

**SWAZILAND** (2016 – present)
Leveraging and adapting Coca-Cola best practices in strategic marketing to support increased demand for health services for HIV prevention, especially focused on young women.
Project Last Mile is an innovative Golden Triangle Partnership, bringing together public, private and civil society partners to improve the reach of critical medicines in Africa

<table>
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<tr>
<th>PARTNERSHIP SUMMARY</th>
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<td><strong>Launch</strong></td>
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<td>- Approached in 2009, Piloted 2010-2013, expansion announced June 25, 2014</td>
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<td><strong>Core Objectives</strong></td>
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<td>- Improve availability of life-saving medicines and health services for people in the last mile of the health supply chain</td>
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<td>- Build health systems capacity in supply chain and marketing by sharing the expertise and network of the Coca-Cola system</td>
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<td>- Inspire broader private sector involvement through innovative cross-sector partnerships</td>
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<td><strong>Program Focus – Examples</strong></td>
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<td>- Logistics/Distribution</td>
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<td>- Marketing</td>
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<td>- General Business Skills</td>
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<td>- Talent Management</td>
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<td>- Cold Chain Equipment Maintenance</td>
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<td><strong>Program Goal</strong></td>
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<td>- To improve health systems management and supply chain efficiencies in 10 African countries by 2020</td>
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<td><strong>Progress</strong></td>
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<td>- Programs activated in 8 out of 10 countries to date</td>
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Just like any Coca-Cola product, life-saving medicines should be within reach of every person in Africa
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Background of South African Health Sector

The *changing* epidemiological profile of South Africa has led to an *over extension* of public sector health care facilities.

This has placed enormous *strain* on *available resources* and has contributed towards medicine *shortages* and *challenges* in the *quality of care provided*. 
Background of South African Health Sector

Tuberculosis

South Africa carries the third largest burden of TB, DR-TB and MDR-TB in the world. The incidence of TB has more than tripled in the last 20 years.

Hypertension

Among 18 to 35 year olds, 20% have hypertension, and this will increase to 30% among 36 to 45 year olds.

Diabetes

12% of people between 18 to 35 year olds have diabetes and 26% among 36 to 45 year olds.

Anti-Retroviral Treatment (ART)

Although SA has the largest ART programme in the world, retention in care rates of ART clients are declining in South Africa.
Current service model: risks

Poor patient experience, high costs for patients
- Long travel times and distances, time off work etc.
- Overcrowded facilities with long queues

Overburdened facilities
- Limited health care provider time with patients
- Administrative burden for facility staff (processing patients, dispensing, patient record management etc.)

Suboptimal stock management
- Space limited for medicine storage, at facility and depot
- Stock holding results in capital being locked

Irrational prescribing & poor treatment adherence
- Limited oversight regarding prescribing in line with standard treatment guidelines
- Poor adherence due to barriers to access (above)
CCMDD Paradigm shift to differentiated service delivery

Traditional Care Model
**Current Situation**
All patients forced through same process

CCMDD Care Model
New Chronic; Sick Patients; Unstable Chronic; Stable Biannual

Source: NDoH Stable Chronic Patient Guidelines; PLM Team

Stable Chronic Facility visits 2 / year PuP collections 4 / year
CCMDD offers a more efficient medicine collection platform

CCMDD improves patient access to medicine through central dispensing & distribution of medicines to patient convenient locations

Source: NDoH Stable Chronic Patient Guidelines; PLM Team
CCMDD: A better service model for stable patients

Vehicle for achieving Universal Health Coverage, 90-90-90 and Test & Treat

Traditional service model = long queues and unproductive waiting times.

CCMDD = no queues and short waiting times. Clinic staff get more time to focus on new patients.
CCMDD Patient benefits

- Stable patients with chronic diseases can choose to enter the CCMDD programme

- Once enrolled, patients collect pre-dispensed medicine parcels from Pick-up-Points (PuPs)

- These PuPs are either external (e.g. private sector service providers such as Clicks, Medirite etc.), or ‘internal’ such as fast-track lanes, adherence clubs etc.

- They return to their home health facility twice a year for repeat script and check up.

More than 2 million Patients Enrolled (March 2018)
CCMDD Benefits

- Improved patient experience and access to treatment
- 43% savings for patients
  saving patients R1.2bn in 2020
- 22% Improvement in patient adherence
  avoiding NDoH up to R3.1bn of costs in 2020
- 2.5m - 3.3m Additional patient capacity
  33 - 43% increase in PHC capacity by March 2021 with 5.5 million CCMDD patients
- 50% Reduction in NDoH cost to treat patients
  NDoH facility visit & medicine supply chain costs (excluding medicines),
  NDoH efficiency gains of up to R4.1bn in 2020

Supports 90Ninety90
In 2020, 4.9m of 5.9m TROA patients enrolled on CCMDD
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South African Patient Universe

Significant opportunity for CCMDD growth exists given the gap to fill for TROA patients and SA stable chronic patient universe

Large opportunity for CCMDD growth:
- In 2017 17% of stable chronic universe served on CCMDD & March 2021 Proposed Target is 43%
- In 2017 50% of TROA patients are on CCMDD

HIV 5.1m = [7.06m x 72% stable]; Hypertension 5.5m = [Prevalence (28.8%) x SA Pop. of >15yrs (38m) x 50% Stable]; Diabetes 1.1m = [Prevalence (7.0%) x SA Population >20yrs (32m) x 50% Stable]. Epilepsy & Asthma <5% of total chronic patients, hence ignored to ensure chronic stable patient universe not over-estimated

There are a growing number of CCMDD patients collecting at external locations

Percentage of Registered CCMDD Patients per collection point

Source: HST weekly CCMDD tracker 19 January 2018; NDoH Guidance; PLM Team
Growth of external PuPs (2016 – 2018)

External PuPs have grown consistently and rapidly over the CCMDD term from April 2016 - March 2018

Excludes 1512 contracted Post Offices
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Value generated from CCMDD benefits (2017/18)

CCMDD delivers significant benefits for patients and NDoH

Rand Billion, 2017

In 2017, CCMDD delivers:

- 43% Patient cost reduction
- 12-16% Increase in PHC facility capacity
- 48% decrease in NDoH cost to serve patients

Note: Indicative figures for 2mln CCMDD patients in 2017; Target CCMDD ratio by Patients by PuP Type.

* Public Health Sector (NDoH) net value available to be repurposed: R1.5bn (includes R0.5bn Fees Paid to Service Providers & External PuPs:
**Public Health Sector (NDoH) cost avoidance: R1.1bn
Source: NDoH Actuals 2017; Available research; PLM Team

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CCMDD Business Case

**Patient Improved Experience & Cost Savings**

**NDoH**
- Increased Facility Capacity (Decongestion)
- Facility Efficiency Gains
- Increase in Medicine Supply Chain Cost
- Increased Adherence

**Community Benefits**

**Summary of Total Benefits**
Business Case: Patient Savings

Annual CCMDD Net Benefit to Patients & Public Health Sector for 2017/18

Rand Billion, 2017

0.9m-1.2m additional patients treated in current facility infrastructure & staff

0.3

NDoH Facility Efficiency Gains*

1.3

(-0.1)

NDoH Medicine Supply Chain Costs*

1.1

0.0

Adherence (NDoH**)

2.5

Socio Economics

Net Benefits

Note: Indicative figures for 2mln CCMDD patients in 2017; Target CCMDD ratio by Patients by PuP Type.

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Patient benefit methodology

Evaluate costs that patients incur:

- On CCMDD program
- Not on CCMDD program

Type of patient costs to evaluate:

- Transport costs
- Loss of income
- Substitute labour

Source: PLM Team; NDoH Guidance
**Business Case: Patient Savings**

**Chronic Stable Patient Inputs**

2017

- **No. of PHC facility visits per patient per year**
  - Non-CCMDD, SFLA, AC: 6
  - External PuP: 2

- **Patient cost per visit to PHC facility**
  - R54.94*

2 Million CCMDD patients

- 60% at External PuP = 1,2 Million Patients

- 1,2M x R54.94 x 4 visits saved

- R0,26bn saved by Patients

**Annual Patient Cost to Visit a Facility**

2017, Rand per year per patient

- **330**
  - Non-CCMDD, SFLA, AC Cost

- **110**
  - External PuP Cost

**67% reduction in a patient cost to collect medicine at external PuPs per year**

**Patient Savings R0.26bn in 2017**

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*2005 & 2007 costs inflated to 2017 based on CPI; Average: Urban, Prei-Urban, Rural used as proxy for all patients

Source: Rosen, Kethihapie & De Silva 2005; Rosen, Kethihapie Sanne & De Silva 2007; PLM Team; Stats SA Aug 2017
Replicable sustainable solution

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Recommendation

Accelerate CCMDD roll-out due to:
- Massive positive impact
- Support to achieve 90-90-90 targets in 2020

Encourage existing CCMDD patients collecting at Facilities to shift to External PuP & Adherence Clubs

Ensure a CCMDD District Support Partner is in place in every District to assist with implementation

Source: NDoH Guidance; PLM team
Next steps

Develop communication plan to share positive impact CCMDD has for patients & NDoH
- DoH various levels & all stakeholders

Proactively engage & align on:
- CCMDD Benefits
- Targets: including contribution to other programs: e.g. 90-90-90
- Budgeting & re-allocation of funds to enable CCMDD roll out
- Overlap with other programs (e.g., CCMDD patient data for 90-90-90)

Develop CCMDD implementation plan with right structures in place at National, Provincial & District level
- Functional
- Top management support

Create list (check box) of support / input required from various audiences to set up implementation for success
Thank You