MomCare
A digital care bundle for MNCH
RHSC presentation, June 9th, 2021
PharmAccess: a holistic approach

Our vision is to improve access to healthcare for people in Sub-Saharan Africa by using digital technologies

- **Health insurance**: Support states in designing and improving health insurance
- **Quality improvement**: First accredited quality rating system for health facilities in resource-constrained settings
- **Loans**: First impact investing fund that provide loans with technical assistance to health SMEs in Africa
- **Research & Analysis**: Academic research and data science at the core of our programmes

See appendix for a complete overview of all PharmAccess workstreams
The Challenge | Mothers and children dying from preventable causes

Many mothers experience bad outcomes

Example: # of maternal deaths per 100,000 live births

<table>
<thead>
<tr>
<th>Country</th>
<th>Maternal Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kenya</td>
<td>342</td>
</tr>
<tr>
<td>Tanzania</td>
<td>524</td>
</tr>
<tr>
<td>US</td>
<td>19</td>
</tr>
<tr>
<td>NL</td>
<td>5</td>
</tr>
</tbody>
</table>

While research is clear on how to prevent it

Example: Risk of mortality in Kenya 2-4 times higher if appropriate care is not used

<table>
<thead>
<tr>
<th>Care Element</th>
<th>Impact Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 4 visits vs. more</td>
<td>4</td>
</tr>
<tr>
<td>Tetanus vaccine</td>
<td>2</td>
</tr>
<tr>
<td>Skilled ANC</td>
<td>3</td>
</tr>
<tr>
<td>Check up for complications</td>
<td>2</td>
</tr>
</tbody>
</table>

Mary, a 30-year-old, has 2 children
• She enrolled early at 12 weeks, began attending her ANC visits
• She has had no previous pregnancy complications
• She has a stable marriage and currently sells water bottles at the bus stops; all her children are healthy

Susan, 22-year-old, first child
• She enrolled late at 25 weeks, as she wasn’t sure when she should start her clinic visits
• She has so far missed her 2nd visit, and came late for her 3rd visit
• She dropped out of school and is recently married. She does odd jobs, and her husband is a motor taxi driver (boda boda driver)

Tabitha, 16-year-old, first child
• She enrolled late at 34 weeks and was diagnosed with HIV and Malaria
• She is currently a high school student but has not been attending classes due to stigma
• She is estranged from her parents, and currently lives with her grandmother who does not earn an income

Low Risk | Medium Risk | High Risk
Patient perspective | Better outcomes require ‘hardware’ and ‘software’

**A quality health journey based on WHO standards**

Every woman and every child is entitled to quality care

- **Protocols**
  - Standardized WHO evidence based clinical care protocols for a healthy pregnancy, childbirth and postnatal care

- **“Hardware”**
- **“Software”**

- **Experience guidelines**
  - WHO patient centric guidelines to promote a positive experience and improve satisfaction throughout pregnancy, childbirth and postnatal care

- **Experience of care**
  - Motivation to utilize

- **Key clinical elements to manage the risk in pregnancy**

- **Quality elements**
  - Skilled staff, equipment, processes, drug supplies

- **Economic elements**
  - Incentives and financial sustainability

- **Medical & operational prerequisites**
  - **Safecare standards**: a quality assurance method ensuring holistic quality care at the facility
  - **Infrastructure**: availability of key staff, equipment, drugs and skills

- **Behavioural and economic conditions**
  - **Patients**: Entitlement to all the elements of a well managed health journey
  - **Facilities**: Financial protection and full payment for providing complete services

**An enabling environment**
An enabling environment transforms the culture of care and improves outcomes
MomCare | Over the last 2 years, PharmAccess and partners have tested a digital care model, powered by mobile communication

A care bundle:

“A set of interventions that – used together – significantly improves health outcomes”

Key principles of digital development:
- Centered on outcome for the patient
- Starting with a minimum viable product, using a progressive development approach
- Using evidence from data to prioritize
MomCare offers specific frontend tools for all parties involved built on a digital data-driven backend engine.

**Patient tracker for providers**
*Showing treatment information and improvement suggestions over patients*

**Health wallet for patients**
*Showing entitlements and prompting alerts for clinic appointments*

**Dashboards to Payers**
*Reporting on financials, clinics and patients down to individual (anonymized) patient level*
Journey tracking | Transparency on all the elements of the care bundle

1. Track the full journey – across providers – for evidence of all elements of the care bundle (example blood pressure)

- Blood Pressure
- Blood Pressure
- Blood Pressure
- Blood Pressure
- Blood Pressure
- Blood Pressure
- Blood Pressure
- Blood Pressure
- Blood Pressure
- Blood Pressure

2. If elements are missing, use real time data to trigger alarms for both mother, care provider and payer

- ✔
- ✔
- ✗
- ✔
- ✔
- ✔
- ✗
- ✗
- ✔
- ✔

3. Use the platform to engage, provide actionable feedback and do behavioural nudges

- ✗

“Patient XY has not received a blood pressure assessment for the last 2 visits.”

- ✔

“Patient XY has received all blood pressure assessments”

- ✗

“Dear patient XY, It is time to check how your baby is doing! All expectant mothers should receive an ultrasound. Visit your clinic on Wednesday or Friday within 2 weeks.”
Mobile wallet | A mother is empowered and has clear entitlement to care

Susan, 22-year-old, first child
- Total costs $130
- Pay out Linda Mama $100
- GAP $30

Note: Realistic, but fictional patient profiles (for privacy reasons)
### Operational overview

#### Tanzania

<table>
<thead>
<tr>
<th>Facilities in MomCare</th>
<th>Total Mothers</th>
<th>Facilities in SafeCare</th>
<th>Active Mothers</th>
<th>Facilities with SafeCare score improvement</th>
<th>Mothers with good journey scores</th>
<th>Average MNCH Score</th>
<th>Skilled Deliveries</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>12,513</td>
<td>40</td>
<td>9,321</td>
<td>90%</td>
<td>56%</td>
<td>71%</td>
<td>4,058</td>
</tr>
</tbody>
</table>

#### Kenya

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<thead>
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</thead>
<tbody>
<tr>
<td>19</td>
<td>15,537</td>
<td>18</td>
<td>6,172</td>
<td>69%</td>
<td>44%</td>
<td>78%</td>
<td>6,600</td>
</tr>
</tbody>
</table>
Journeys are improving over time with better adherence.
Reach | % increased medical risk for women attracted to MomCare

% Teenagers
- St Elizabeth Hospital - Chiga
- St Josephs Hospital Nyabondo
- Kombewa County Hospital
- St Monica Hospital - Kisumu
- Masaba Hospital
- Kasarani Maternity & Nursing Home
- Ahmadiyya Muslim Hospital - Shianda
- Mwangaza Ulio na Tumaini Clinic
- Brother Andre Medical Centre
- St. Elizabeth Hospital Mukumu
- Samaritan Medical Services
- St Marys Hospital - Mumias
- Mkunga Maternity and Nursing Home
- Star Hospital Kisumu Annex
- Jahmii Kipawa Medical Centre
- Nightingale Medical Centre - Kondele
- Star Hospital - Kisumu
- Redeemed Gospel Church Health Center

% high risk at enrollment

% diagnosed during journey

% mothers with risks identified (# mothers)
- 618
- 201
- 106
- 258
- 209
- 78
- 167
- 1,066
- 384
- 526
- 132
- 823
- 342
- 70
- 200
- 489
- 98
- 707
Journey tracking | Identifying patterns and looking at drivers

Key drivers seem to be:
- Mother profile
- Availability and timely use of ultrasound
- Distance to clinic

Source: MomCare data; Note: includes first 6,109 journeys that were completed until week 60, only top 15 patterns shown (72% of total); Note1: simplified, Journey score takes content (e.g. tests) into account.
Out of 13,325 finished journeys, 700 received contraceptives (5%), while 2,931 received consultation (22%).

The average gestation week for receiving contraceptives is at week 45, while for consultation is at week 36.

Teenage counselling is usually encountered before the delivery.

*Numerator: number of mothers receiving the item at least once. Denominator: Total finished journeys (13,325) ** Data as per end of May 2021
Teenagers receive the highest % of consultation or contraceptives (66%).

All other age groups have a utilization below 22%.

*Data as per end of May 2021
Mothers visiting health facilities in Nairobi have a higher utilization of contraceptives (10%) compared to Kisumu (3%) or Kakamega (3%).

Mothers visiting health facilities in Kisumu or Kakamega have a higher utilization of consultation (30%, 28%) compared to Nairobi (9%).

*Data as per end of May 2021*
Faith Based Organizations provide in total the least utilization (19%), while Public health facilities provide the most (33%).

Contraceptives are mostly utilized at private facilities (10%).

*Data as per end of May 2021*
Correlation between journey score and status of contraceptive / consultation. Mothers with a high score range are more likely to have received contraceptive / consultation over their journeys.

*Data as per end of May 2021*
MomCare | opportunities to merge SRH services into digital care packages

**Journey tracking**
- Transparency on quality of SRH services
- Behavioral nudges targeted to specific socio-economic, age and health groups
- Analytics & research to understand who uses which services

**Quality support**
- Quality of services in the facility
- Youth friendly services

**Mobile wallet**
- Integration of SRH services into UHC models
- Monitoring of utilization and cost of services

**Clinical**
**Experience**
**Economic**
**Quality & Access**
Thank you
n.spieker@pharmaccess.org