



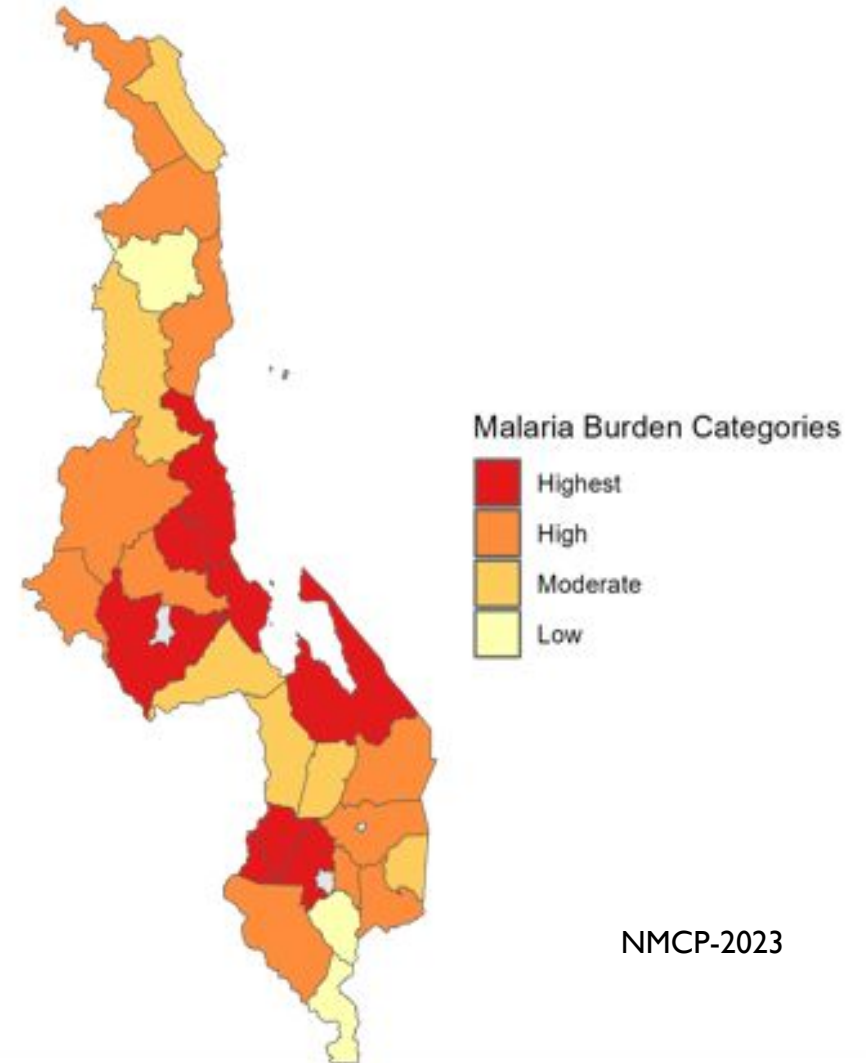
Optimizing Last-Mile Delivery through the Integration of Malaria Commodities Distribution in Malawi

Presenter: Fikadu Batu, GHSC-PSM



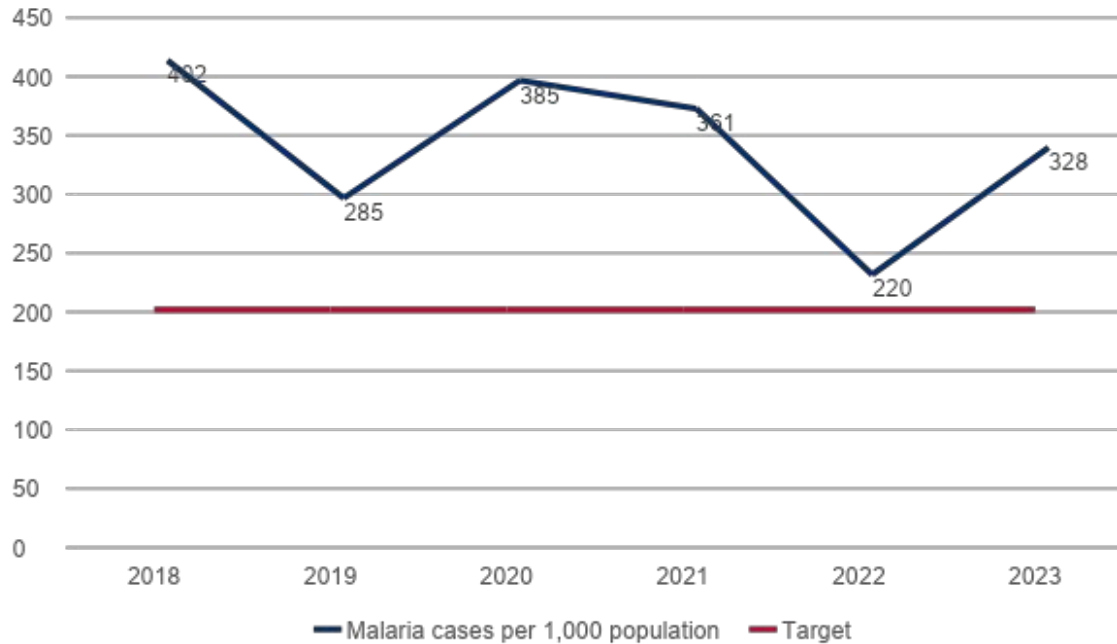
Overview of malaria in Malawi

Malaria cases and deaths	<p>2023: 6.49M cases and 1,670 deaths</p> <p>2024 (Jan-June): 5.98M cases and 2,760 deaths</p>
Malaria incidence	<p>2023: 328 cases per 1,000 population (49% ↑ from 2022)</p>
Outpatient visits and hospitalizations due to malaria	<p>2023: 25% of outpatient visits, 10% of hospitalizations</p>
Malaria mortality rate	<p>2018: 17 per 100,000</p> <p>2023: 8 per 100,000</p>

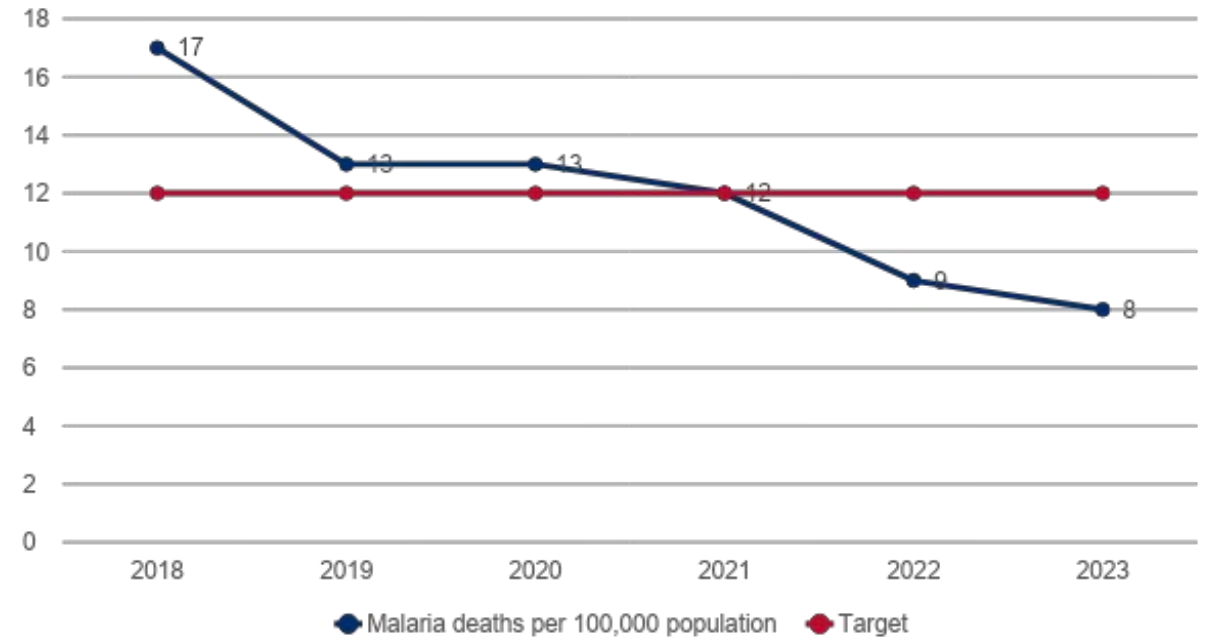


Overview of malaria in Malawi... (Cont'd)

Trends Malaria Incidence in Malawi:2018-2023

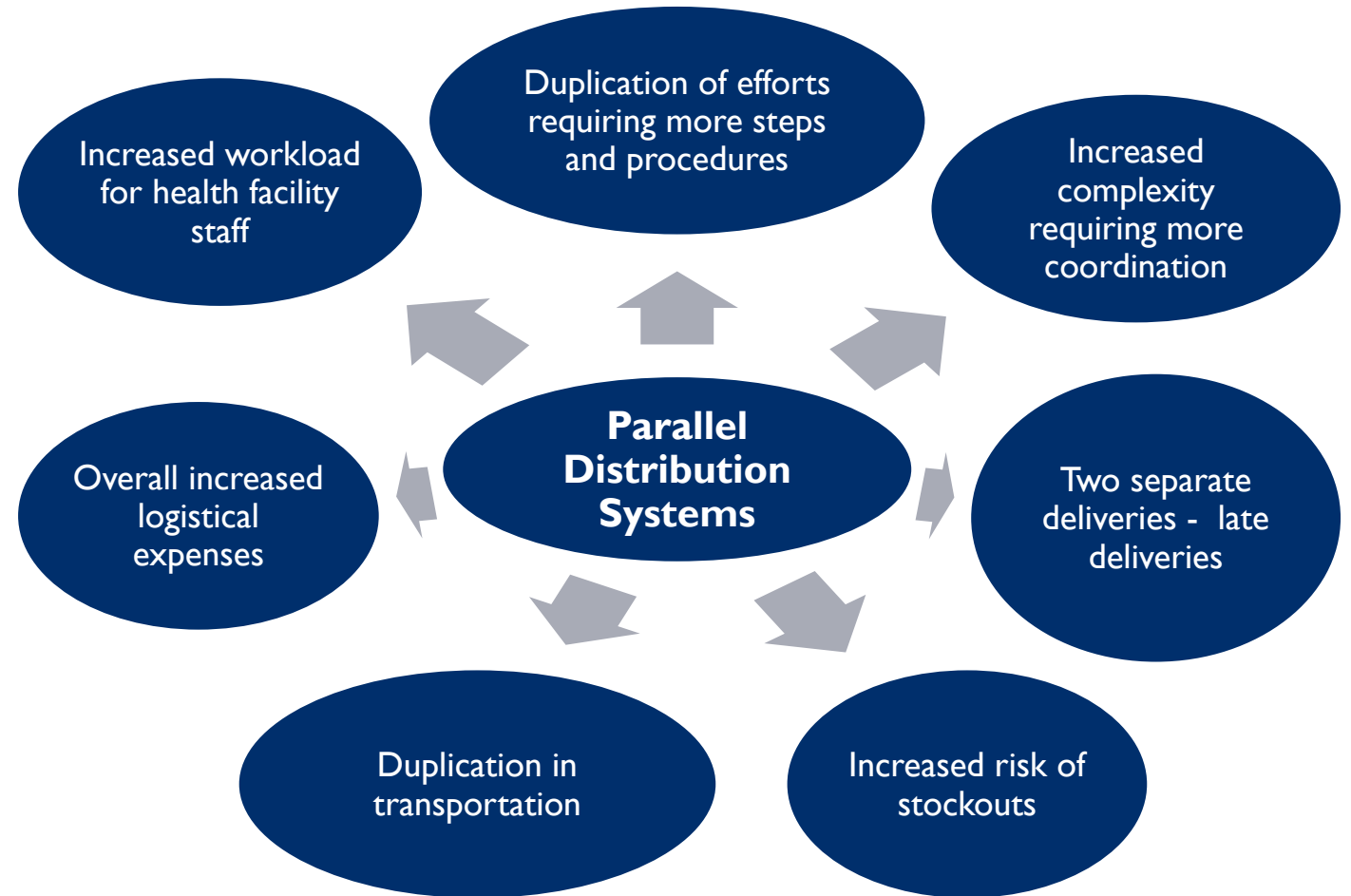


Trends of Malaria Mortality Rate in Malawi: 2018-2023



Malaria commodities distribution challenges

- Primarily funded by the U.S. President's Malaria Initiative (PMI) and the Global Fund (GF)
- Commodities from the two sources were warehoused and distributed separately
- Separate distribution systems created significant logistical challenges



Integration of distribution systems

Stakeholder Engagement and Agreement:

The National Malaria Control Program (**NMCP**), USAID Global Health Supply Chain Program-Procurement and Supply Management (**GHSC-PSM**) project, and the Ministry of Health-Project Implementation Unit (**MOH-PIU**) collaborated to address distribution inefficiencies.

MoU Signed
in 2022:

Formalized the **launch of the integrated distribution** mechanism.

Visibility and
Coordination:

Improved visibility of **warehouse inventory** and **distribution schedules** for better planning and coordination.

Alternating
Distribution:

The distribution of commodities alternated **every other month** between the two service providers, reducing operational overlap.

Streamlined
Delivery:

The integrated process helped **streamline delivery**

Key Results of Integration

Reduced Inefficiencies

- Duplication in planning and documentation at NMCP eliminated.

Reduced Delivery Frequency

- Deliveries cut from 18 to 12 per year (12 to 6 for PMI), lowering costs and staff workload.

Improved inventory visibility

- Enhanced coordination of distribution and inventory tracking.

Reduced workload at facility

- Integrated deliveries and simplified documentation reduced staff workload.

Key Metrics

- 30% reduction in distribution costs (\$133,000 annual savings for PMI alone).
- Maintained low stockout rates (<1% for first-line treatments)

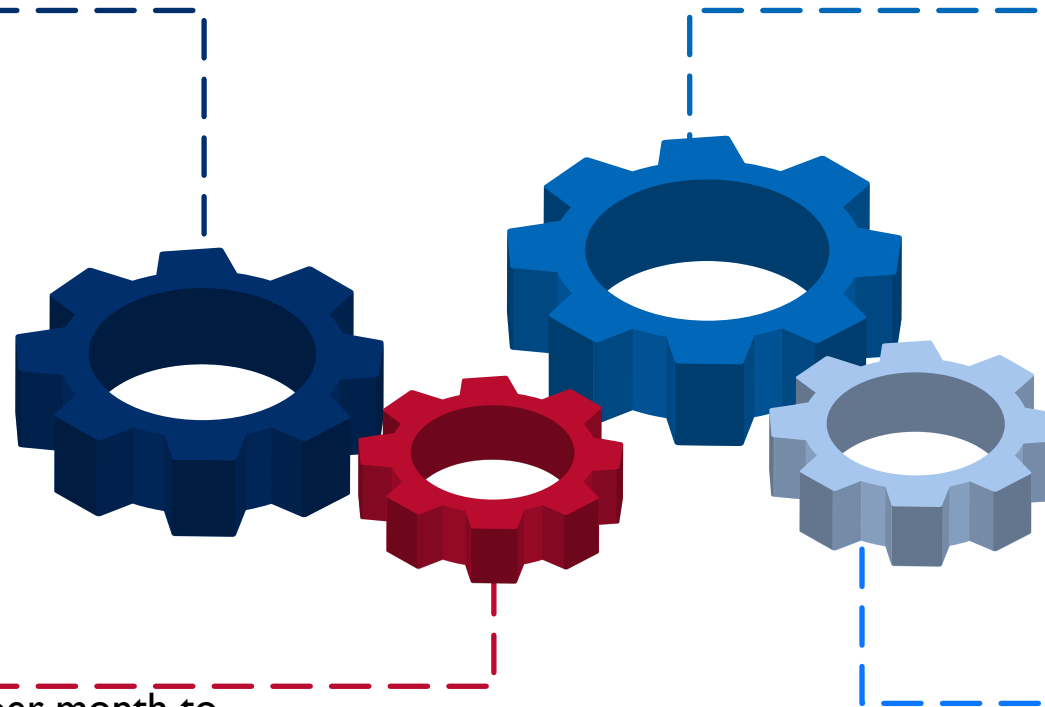
Lessons learned - enabling factors

Significant Cost Savings:

- A **30% reduction in costs** achieved through streamlining operations and eliminating redundancies.
- **Stakeholder coordination** was key in driving these financial efficiencies.

Reduced Workload and Increased Efficiency:

- Deliveries reduced from two per month to one, easing the burden on health facility staff.
- Streamlined documentation further simplified inventory recording, enhancing overall efficiency.



Enhanced Operational Transparency:

- Improved **visibility of inventory** and **distribution schedules** enabled better decision-making.
- **Accurate data** is crucial for optimizing the supply chain and ensuring consistent supply.

Optimized last-mile delivery:

- An integrated system optimized last-mile delivery.
- Valuable insights for similar contexts, especially to optimize limited resources and ensure commodity availability at service delivery points.

Key challenges and considerations for replication of the model

Coordination Between Stakeholders

Aligning the priorities and processes of multiple stakeholders, such as PMI, Global Fund, NMCP, and GHSC-PSM, required significant effort.

Ongoing communication and a shared vision were essential, reinforced by the signing of MoU to formalize roles and responsibilities.

Data and Inventory Management

Ensuring inventory visibility across different stakeholders' warehouses was challenging, especially without physical integration

Regular data sharing between stakeholders is critical for ensuring timely inventory visibility, which improves coordination and distribution efficiency

Operational Delays and Expiry Risks

Receiving bulk stock allocations from other partner; repacking and preparing orders for delivery requires time and additional effort.

Efficient stock tracking prioritizes early-to-expire products, reducing expiry risks and ensuring timely deliveries.

Next steps

1. **Sustaining the Integrated Model:** Continue collaboration between stakeholders to ensure long-term sustainability.
2. **Ongoing Monitoring:** Regular tracking of cost savings, operational efficiency, and stockout rates to assess the integrated system's long-term impact.
3. **Future Scale-Up:**
 - Explore opportunities to replicate this integrated approach in other health programs.
 - Formalize the integrated distribution model by incorporating it into national health logistics frameworks to ensure adaptability for future funders or partners.
 - Consider benchmarking against industry best practices to continuously improve the model, with a focus on integrating warehousing and distribution for optimal efficiency in the future.
4. **Sharing Lessons Learned:** Share key lessons from Malawi's experience to help improve supply chain resilience and optimize last-mile delivery in similar settings.



Thank you.

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The USAID Global Health Supply Chain Program-Procurement and Supply Management (GHSC-PSM) project is funded under USAID Contract No.AID-OAA-I-15-0004. GHSC-PSM connects technical solutions and proven commercial processes to promote efficient and cost-effective health supply chains worldwide. Our goal is to ensure uninterrupted supplies of health commodities to save lives and create a healthier future for all. The project purchases and delivers health commodities, offers comprehensive technical assistance to strengthen national supply chain systems, and provides global supply chain leadership. For more information, visit ghsupplychain.org.

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