

**USAID GLOBAL HEALTH
SUPPLY CHAIN PROGRAM**
Procurement and Supply Management

Data triangulation of severe malaria cases to account for artesunate injectable consumption in Migori County Referral Hospital in Kenya

Authors:

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Background:

Treating a severe malaria patient uses between 9 to 15 Injectable Artesunate vials (60mg per vial). Migori County Referral Hospital (MCRH) data showed that during the period July 2019 to June 2020, Injectable Artesunate vial reported consumption ranged between 99 to 179 vials per patient for severe malaria.

Through targeted support from the U.S. President's Malaria Initiative (PMI), GHSC-PSM's local project, Afya Ugavi, supported the MCRH's staff to review and improve their reporting practices for Artesunate Injectable to promote better accountability for the product.

Findings:



Primary reason for the reported over consumption of Artesunate Inj per severe malaria cases identified by the review is the poor documentation of severe malaria cases hence presenting a false Inj Artesunate consumption to patient ratio.

Addressing Discrepancies and Accountability:

Why It Matters?

- **Supply Chain and Patient Care Impact:** Poor documentation leads to poor calculation of re-order quantities which then leads to stockout of life-saving malaria medicines which in turn affects the ability to manage patients accordingly and poor quality of care.
- **Resource Allocation Efficiency and Commodity Accountability:** Accurate data on Inj Artesunate consumption is essential to proper forecasting and supply planning at a national level for efficient resource allocation.

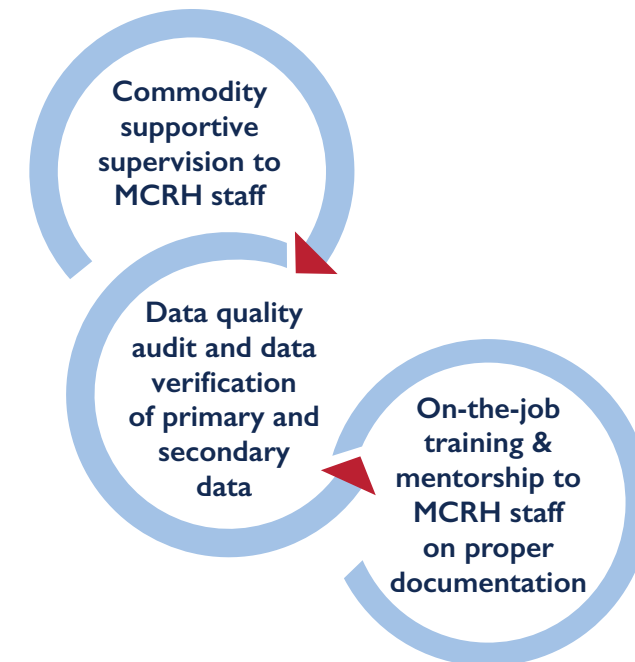
Process Flow:



Root Causes of Poor Documentation:

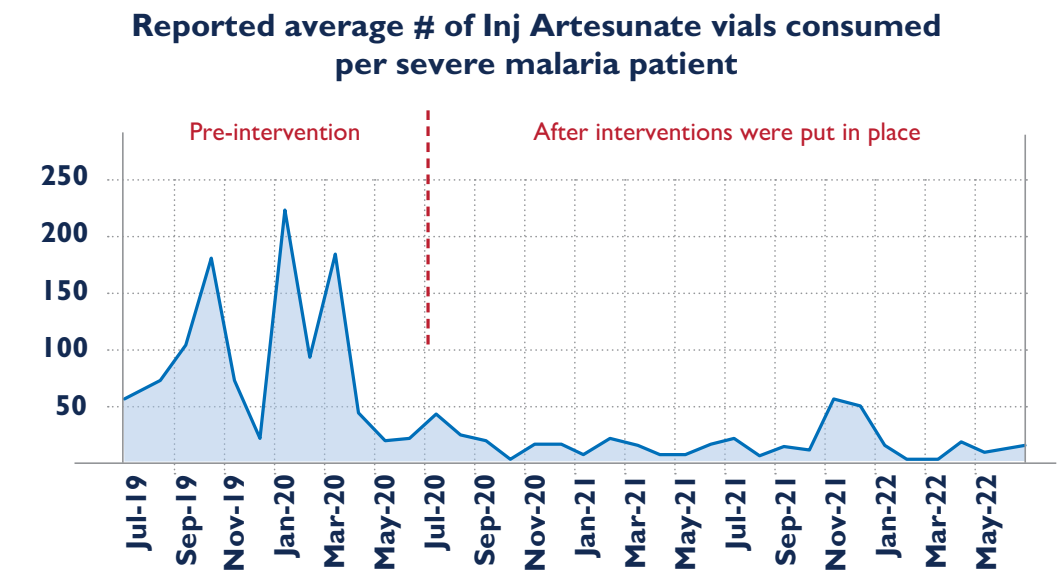
- Inadequate capacity among hospital staff on documenting Inj Artesunate consumption corresponding with severe malaria cases.
- Poor documentation practices such as missing records, errors in data transcription and data aggregation, incomplete reporting.
- Checks on data quality or review of monthly records and reports are not performed adequately; in this case, triangulation of severe malaria case records with logistics data was not done.

Targeted Approaches:



Results:

- The reported rate of IA consumed per patient improved over time - the reported range went from 99-179 vials per patient during the July 2019-June 2020 period, to 18-40 the following year, until it reached the recommended clinical range of 8-14 during the July 2021-June 2022 period.
- Improved documentation of severe malaria cases at MCRH.



Conclusion:

- Proper data documentation affecting reporting of commodities and severe malaria cases remains a challenge across the health system in Kenya and not limited to Migori County Referral Hospital.
- Continuous health supply chain system strengthening interventions such as commodity supportive supervision, data quality audit, and on-the-job training and mentorship remain a cornerstone to ensure that quality consumption and inventory data is generated at the last mile. This improves forecasting and supply planning of life-saving malaria medicines; thereby enabling efficient resource allocation and improved accountability.
- End-to-end visibility of the malaria supply chain positively influences patient outcomes by ensuring uninterrupted supply of medicines for patient management.

