

ASSESSMENT AND RESPONSE OF ARTESUNATE INJECTABLES USE IN ETHIOPIA

BELETE AYALNEH¹, MERESSA W GABRIEL¹, REGASA BAYISA², FIKADU DEME¹, FIKRESLASSIE ALEMU¹, GETACHEW AYALEW¹, WORKINEH GETAHUN¹, DANIEL TADDESSE¹, TESFAYE SEIFU¹, EDMEALEM EJIGU¹

¹Global Health Supply Chain-Procurement and Supply Management (GHSC-PSM);²Ethiopia Ministry of Health (MOH)

Is severe malaria being treated per guidelines?

- Malaria is a major public health problem affecting about 60% of the Ethiopian population. Each year, nearly 2 million individuals are infected with malaria; of which around two percent are severe malaria.
- Artesunate is an artemisinin derivative used for the treatment of severe malaria.
- Ethiopia's national malaria treatment guidelines (NMTG) recommends artesunate injectable only for treatment of severe malaria cases. When used irrationally, availability can decrease, wastage can increase, and malaria parasites can become drug resistant.
- Around January 2018, GHSC-PSM observed that some public hospitals in Ethiopia were requesting up to five-folds more than the usual amount of artesunate injectables.

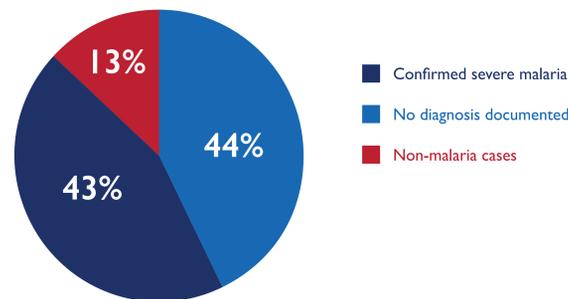
What did we do?

To understand the reasons behind the higher-than-usual requests, GHSC-PSM worked with MOH to conduct a rapid assessment and response (RAR) and root cause analysis (RCA) in three hospitals with the highest artesunate consumption in the Tigray region of Ethiopia.

- For the RAR:* Evaluated the use of artesunate injectables by comparing the actual prescribing practice in 271 medical charts against the recommendations in the NMTG for artesunate 60mg injectable.
- For the RCA:* Conducted seven key informant interviews with physicians, pharmacists and laboratory technologists to identify reasons for non-adherence to treatment guidelines in the use of artesunate injectables.

What did we find?

Percentage of severe malaria among patients treated with artesunate injectables (N=271)



Analysis of the findings from RCA revealed multiple factors as reasons for non-adherence to treatment guidelines in the use of artesunate injectables:

Patient-related factors:

- Resistance to oral medication due to the misconception that injections are more effective than tablets.

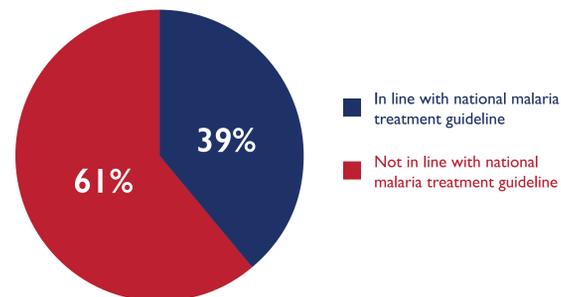
Physician-related factors:

- Lack of confidence in laboratory results
- knowledge gaps related to treatment guidelines.
- High workloads limited health care providers' ability to follow procedure in diagnosing and treating malaria patients.

System-related factors:

- Weak monitoring and evaluation methods and processes for medicine use.

Percentage of artesunate prescriptions (N=271)



Measures taken

- As a result of the analysis, the Ministry of Health issued a letter to regional health bureaus to reinforce proper prescribing practice and directed the bureaus to continuously monitor the use of artesunate and other medicines at health facilities.
- Prescribers were also trained on the current malaria treatment guideline.

From Problem to Solution

OBSERVATION
–High requests for artesunate injectables

ANALYSIS
–RAR
–RCA

FINDINGS
–Irrational prescribing of artesunate injectables

MEASURES
–Enforce rational use and monitoring
–Training

References

- FMOH. National malaria strategic plan (2017-2020), 2017, Addis Ababa, Ethiopia.
- FMOH. National malaria guidelines, 4th edition, 2018, Addis Ababa, Ethiopia.
- WHO. Guidelines for the treatment of malaria, 3rd edition, 2015, Geneva, Switzerland.