Impact of the COVID-19 pandemic on malaria in pregnancy indicators in Northern Uganda: a Joinpoint regression analysis.

CP412

Francesco Di Gennaro[1],Jerry Ictho[2],Francesco Vladimiro Segala[1], Mariangela L'Episcopia[3] , Giovanni Dall'Oglio[2] , Carlo Severini [3], Peter Lochoro [2], Giovanni Putoto [4], **Annalisa Saracino[1]**.

1.Department of Precision and Regenerative Medicine and Ionian Area, Clinic of Infectious Diseases, University of Bari "Aldo Moro", Bari, Italy 2. Doctors with Africa, CUAMM, Kampala, Uganda 3. Department of Infectious Diseases, Istituto Superiore di Sanità, Rome, Italy. 4. Operational Research Unit, Doctors with Africa CUAMM, Padua, Italy

BACKGROUND

- Pregnancy is both a risk factor for P. falciparum infection and development of severe malaria and. In low- and middle-income countries, COVID-19 pandemic severely impacted health systems, including utilization of maternal services and delivering of intermittent preventive treatment with sulfadoxyne-pirimethamine (SP-IPTp).

- This study aims to assess trends in delivering malaria in pregnancy related healthcare services before and during COVID-19 in Northern Uganda.

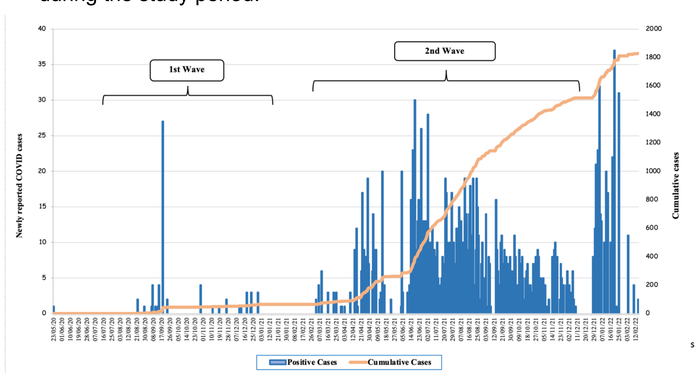
METHODS

- Interrupted time series study comparing pre-COVID-19 (January 2018 to April 2020) and COVID-19 (from May 2020 to December 2021) period.

- Data were sourced from the District Health Information Management System II (DHIMS2) routinely collected indicators. Trends were quantified as annual Average Percentage Changes (APC) by joinpoint regression models.

- This study has been registered on the ClinicalTrials.gov public website on 26th April, 2022 Identifier: NCT05348746.

Figure 1. COVID-19 newly reported cases and cumulative cases during the study period.



COVID-19 epidemic in Oyam district, Uganda had negative effects on the utilization of services for malaria and maternal health by pregnant women.

RESULTS

- As shown in Figure 1, in Oyam district, a total of 1829 COVID cases and 20 deaths were recorded during the study period. First COVID-19 case in Oyam was registered on May the 23rd, 2020, while first COVID-related death was recorded on January the 17th, 2021.

- The study involved 30 health facilities in Northern Uganda – including one hospital – with a population area of 453,700 inhabitants and an estimated number of pregnancies of 22,650 per year.

- During COVID, we found a significant reduction in the number of women accessing to the fourth antenatal care visit and taking at least three doses SP-IPTp. The total number of women receiving Artemether-Lumefantrine for nonsevere malaria or being hospitalized for severe malaria, along with the total number of institutional deliveries and stillbirths followed kept following the trend recorded prior to the pandemic, as showed in figure 3.

CONCLUSION

- The present study shows that, despite the international call for prioritization of maternal and reproductive health service delivery during COVID-19 pandemic, in Uganda, the essential care for malaria in pregnancy was disrupted.

- The reduction is IPTp service utilization, especially IPT-3 could have had far reaching effects on fetal outcomes that this study could not demonstrate

Figure 2. Map of Oyam District, in Northern Uganda, with location of the 30 Health Facilities included in the study

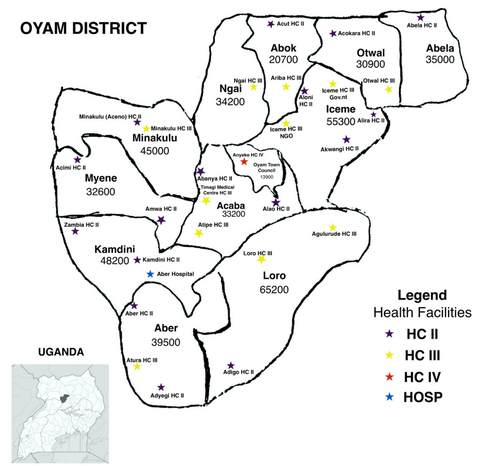


Figure 3. Joinpoint analysis of reproductive health indicators

