Rapid Assessment of COVID-19 Preparedness and Response at Hospitals in Uganda: Mix methods

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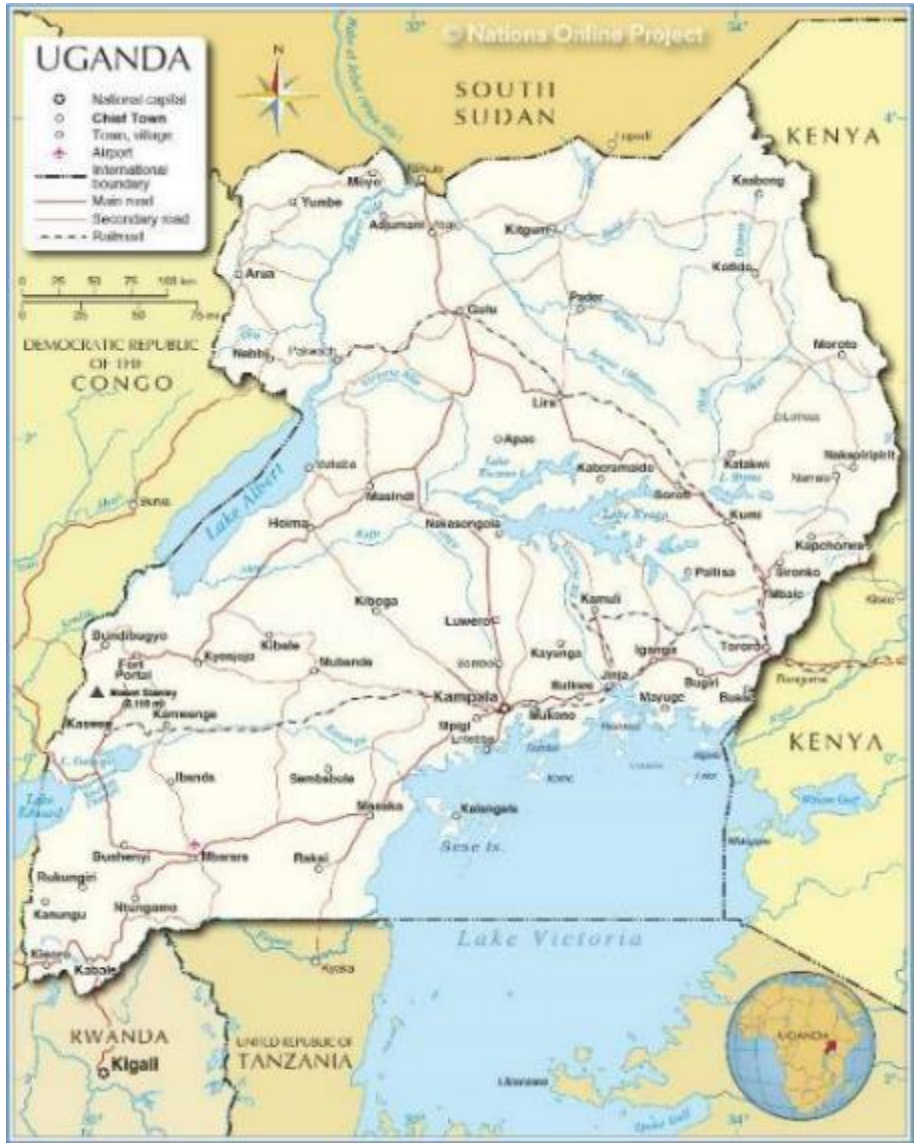
Background and Purpose

- As of October 1, 2022, Uganda had 3,694 COVID-19 positive cases per million population (compared to 171,166 in Japan) and 3,630 cumulative deaths (compared to 45,023 in Japan), both lower than the African average.
- This study aims to illustrate how Uganda's hospitals responded the COVID-19 pandemic in the first two years and to examine factors that kept transmission low in Uganda.

Uganda



Population: 44 million (2019, WB).

GDP per Capita: 2,960 USD (2022, IMF estimate).

Leading causes of death: Malaria, Pneumonia, Injuries.

Long history of tackling with various epidemics: eg. HIV/AIDS in the 1980s, Measles in the 1990s, Hepatitis B in the 2000, Ebola in 2000, 2017, 2018 and 2022, etc.

Method

Part 1: Qualitative study through the thematic analysis by key informant interviews

Part 2: Quantitative study by the hospital statistics

Method

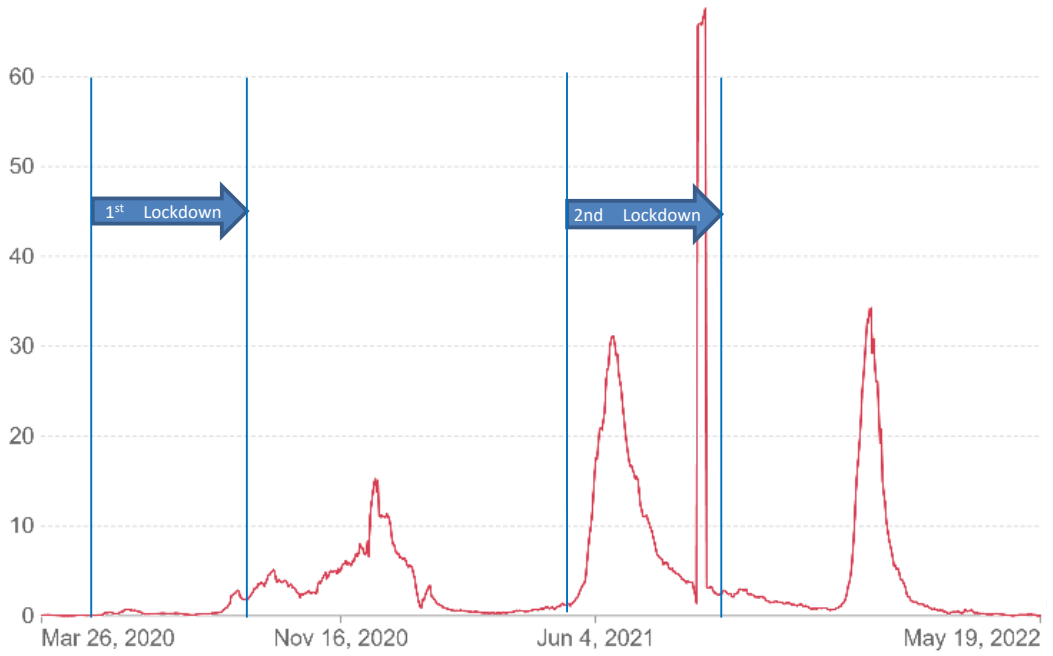
1) Qualitative study

- Key informant interview: key stakeholders, 3 hospital directors, 3 principal nursing officers, 3 departments in charge, and 3 representatives of the district health offices in the target district (12 in total).
- Survey period: March 22- June 30, 2022.
- Ethical approval: Ethical approval obtained from the National Council for Science and Technology (NCST) in Uganda and JICA Ogata RI.

Method

2) Quantitative study

- Hospital statistics: Patients of major departments
- Date period: January 2019 to December 2021 (3 years)
- Five phases:
  - Before 1st lockdown
    （Before March 2020）
  - 1st lockdown
    （April - July 2020）
  - After 1st lockdown
    （August 2020 – May 2021）
  - 2nd lockdown
    （June – July 2021）
  - After 2nd lockdown
    （September – December 2021）



Source: Johns Hopkins University CSSE COVID-19 Data

Target: Four Regional Referral Hospitals (RRHs)

Naguru, 100 beds

Kabale, 335 beds

Lira, 400 beds

Soroti, 267 beds

Kabale RRH

Lira RRH

#4 CTU with staff

#3 Caregivers and Oxygen cylinders

Soroti RRH

#5 Triage tent with student staff

#6 Triage tent with nursing student staff

#7
Ambulances

#9 Board of the Nursing shift

#8 MCH department

Naguru RRH

Results

1) Qualitative study

Results of the KIIs

●12 KIIs

●71 topics in total ●5 categories

Category	No. of topics
IPC measures	18
Service provision/utilization	15
Healthcare workers	15
Hospital governance	13
Community	10
Total	71

IPC measures

Numbers in ( ) indicate the number of RRHs which mentioned the aspect.

Positive

- ✓ IPC teams or IPC response persons were assigned before the COVID-19 emergence (4).
- ✓ Various guidelines and repeated training for various staff have been provided by MOH/WHO (4).
- ✓ From the beginning, rapid tests were available (4). The PCR test lab became available in summer of 2021 (4).
- ✓ Surveillance though the village health teams (VHTs) and the COVID Task Force at various levels were very effective (2).
- ✓ Daily COVID-19 case reports were shared with the DHOs and submitted to the MOH (4).

Negative

- ✓ At the beginning PCR materials and some of the PPE were facing shortage (2).

Service provision/Utilization

Positive

- ✓ Despite the strict lockdowns, MCH, delivery and cesarian section have been not affected (3).

Negative

- ✓ The number of clients of vaccination for children, pediatric, and outpatients declined due to lockdown (3).
- ✓ Delay of mother's access to RRHs or home-delivery led to the increased number of maternal and infant mortality (2).

Healthcare workers

Positive

- ✓ MOH sent supplemental staff to the RRHs (4) through the health personnel bank for medical professions.
- ✓ At the second wave, the healthcare workers become confident to deal with COVID-19 responses (1). No healthcare workers left their jobs (3).

Negative

- ✓ In the second lockdown, most staff were infected by COVID-19 (3).

Hospital governance

Positive

- ✓Immediate ward conversion from Mental health unit to COVID-19 treatment unit according to the MOH instruction (4).
- ✓Participatory cross-sectional decision making (1).

Negative

- ✓No external supervision provided (1).

Community

Positive

- ✓ In September 2020, the government revitalized nation taskforce mechanism, named COVID-19 taskforce (2).
- ✓ Surveillance, triage, various health education and sensitization in collaboration with the DHOs and the VHTs (CHWs) (4).

Negative

- ✓ Sometime, security people controlled community people too much (eg, keeping people stay-home or wearing masks) (2).

➡**At the end,**

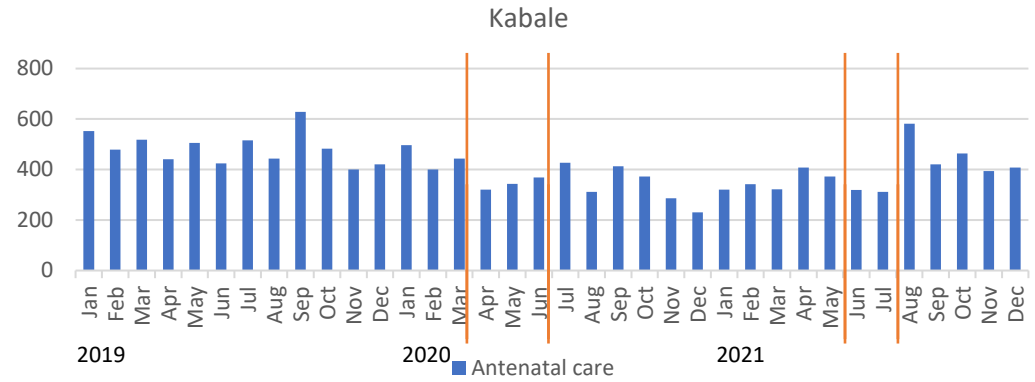
"The ultimate challenge of COVID-19 responses in hospitals is the lack of financial resources, personnel, and medical equipment/supplies. In other words, the same challenges that existed prior to COVID-19. "(Lira RRH director).

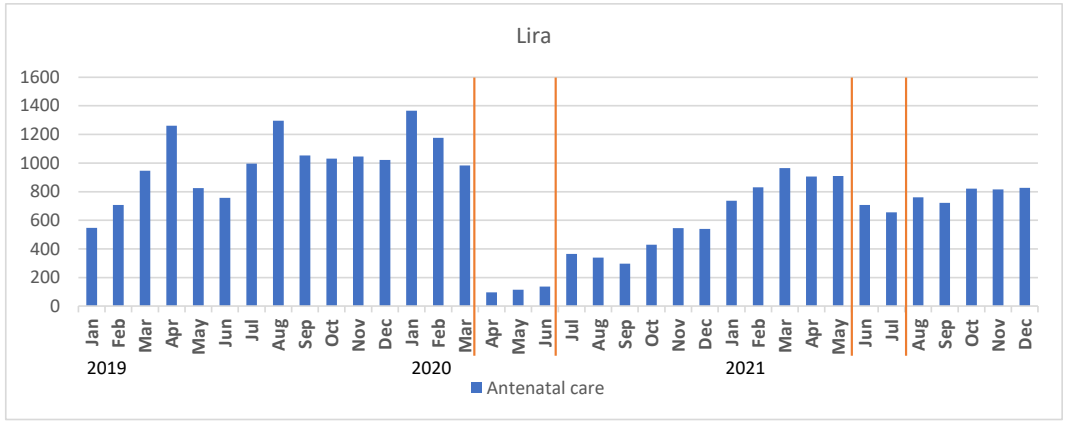
Results

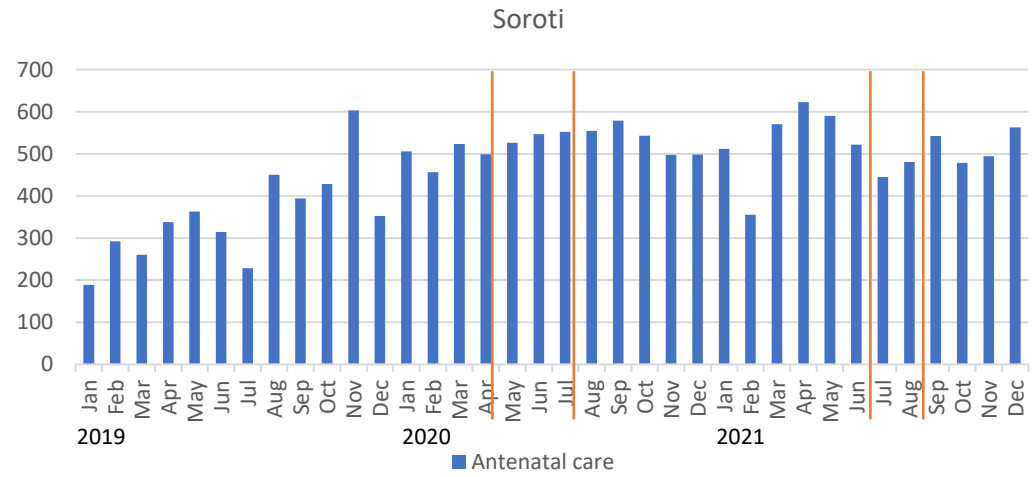
2) Quantitative study

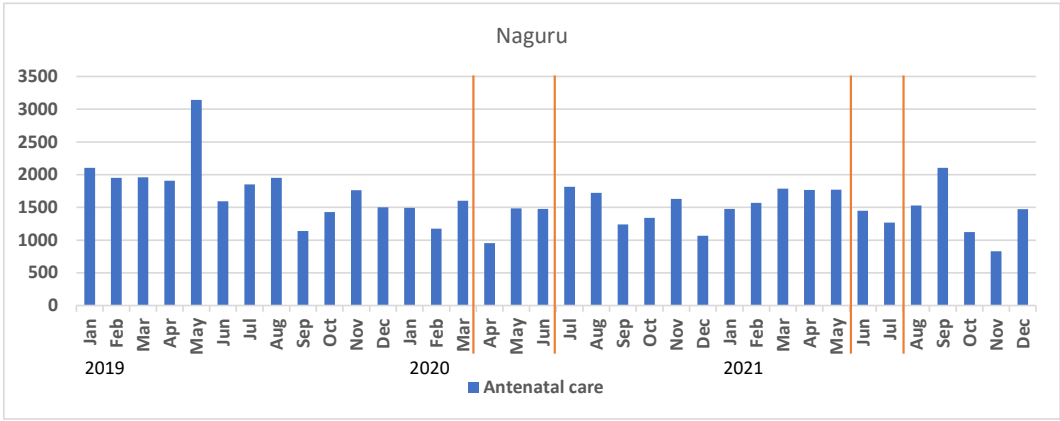
Trends in numbers of patients at 4 RRHs (2019 - 2021)

Antenatal care



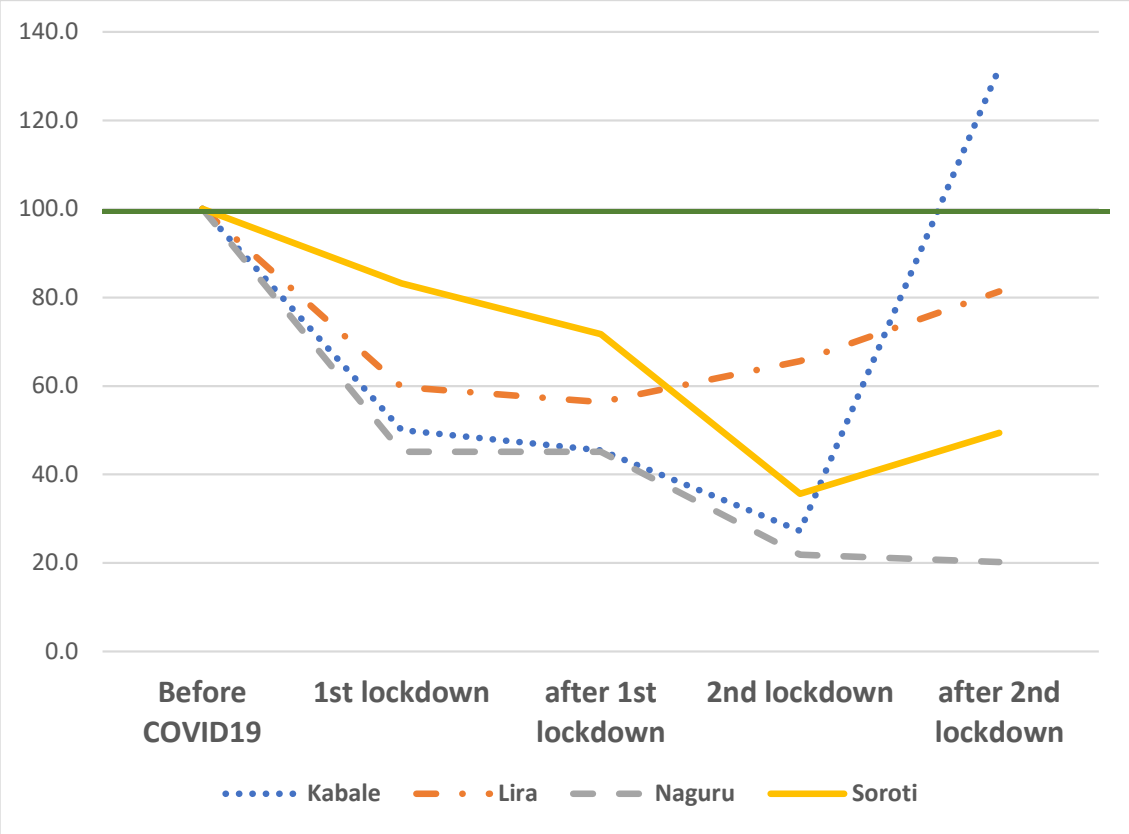




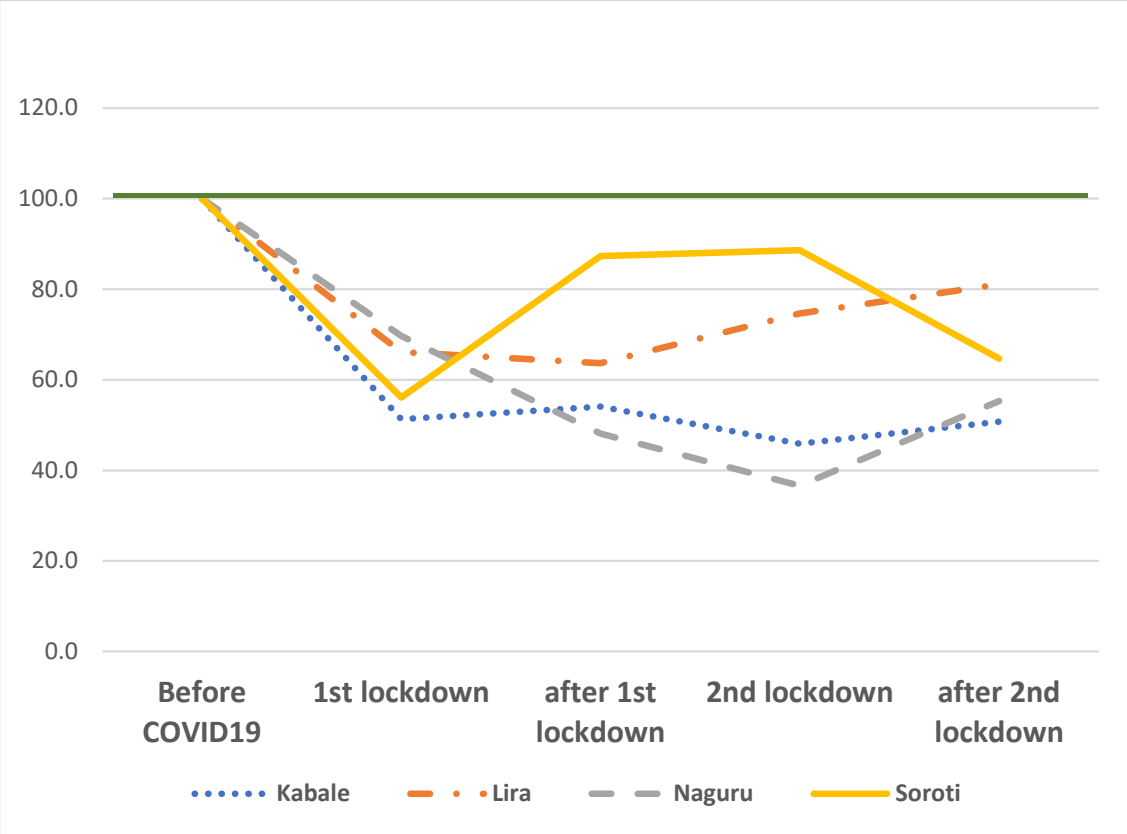


Comparison with before COVID19 and other 4 phases

Malaria Test



HIV Test



Conclusion

- ✓ The four RRHs contributed to mitigate the spread of corona infection and sustain the regular healthcare service provision by utilizing existing resources in the hospitals and community under the leadership of the government, despite the constraints of various resources.
- ✓ However, the nationwide strict lockdown had a significant impact on access to regular health services other than COVID-19, especially at the first lockdown.
- ✓ Further studies are needed on the balance between strict prevention measures and ensuring the continuity of essential health services.

Thank you for your attention!