

Assessing the Infection Prevention and Control Program During the COVID-19 Era in the Health Facilities Participating in the COVIV (COVID/HIV) National Study in Mozambique

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Background

- The COVID-19 pandemic has had an important impact on healthcare services globally and in Mozambique.
- Between June 2021 and June 2023, a cohort study ("COVid19-hIV") was implemented in four provinces in Mozambique, evaluating the COVID-19 pandemic's impact on people living with HIV, healthcare workers and on the healthcare system.
- The study included assessments of health facility (HF) fidelity to the national infection prevention and control (IPC) program and preparedness for future COVID-19 outbreaks.
- The present analysis describes the results of the IPC assessment rounds (R) in three out of the four participating provinces (**Figure 1**).

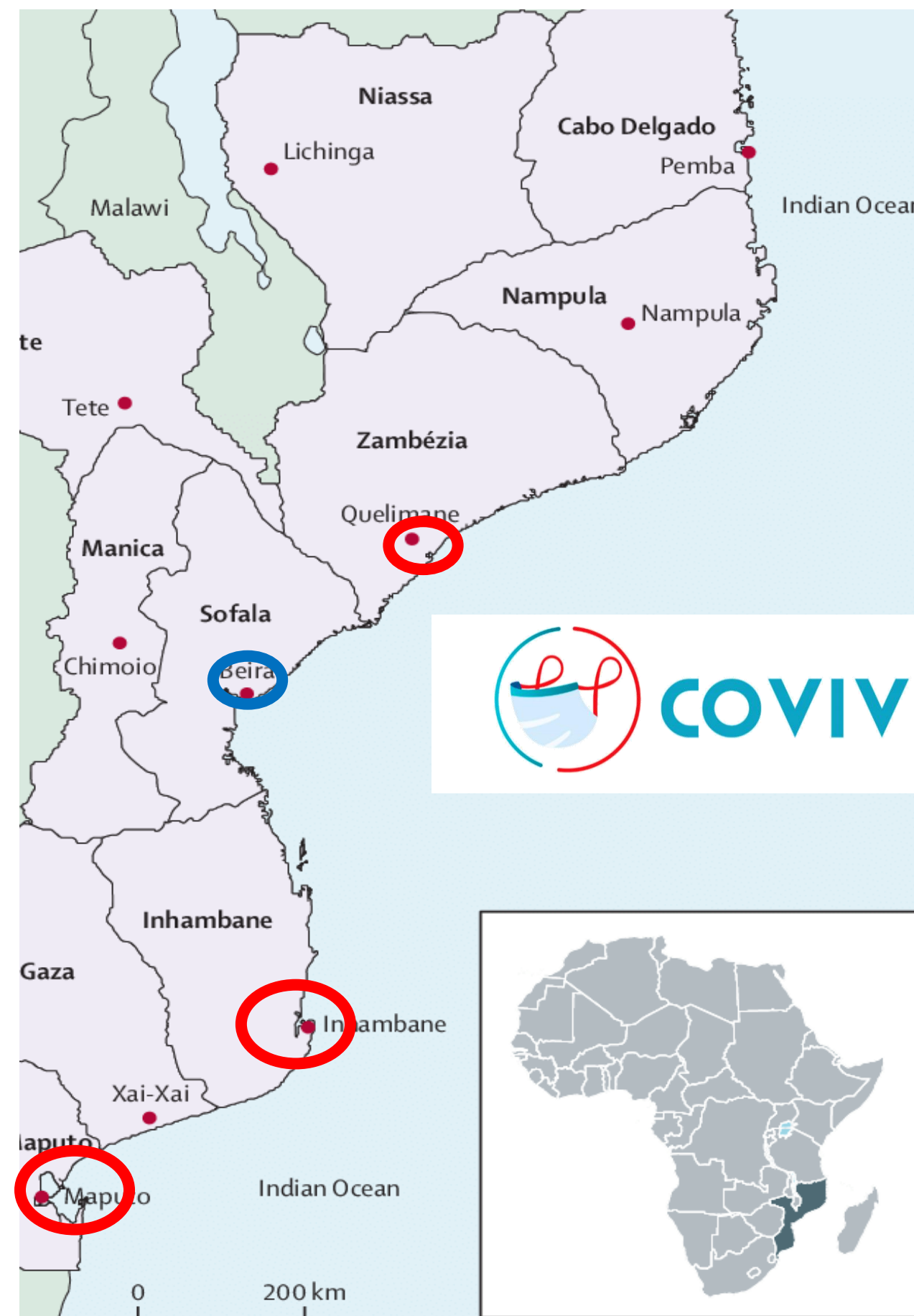


Figure 1: Study locations (red: with serial IPC assessments; blue: without serial IPC assessments).

Methods

- Serial assessments (with intervals of two to eight months) between August 2021 and November 2022.
- Three urban HF, one in each of the three selected provinces (Maputo City, Inhambane, Zambézia).
- The assessment tool, adapted from a Ministry of Health (MOH)-approved checklist, included 12 IPC standards covering four key areas: general aspects, aspects per service, COVID prevention measures, and material and waste management.
- Items of each key area were graded according to the proportion of standards met (the minimum score recommended by the MOH was 80%).
- Descriptive analysis (of proportion scores) was performed using Microsoft Excel.

Results

- In total, 11 assessment rounds were completed. Adherence to IPC/COVID-19 standards ranged between 61.7% to 86.4%, with the highest score in the Inhambane HF and the lowest in the Zambézia HF (**Figure 2**).
- All sites showed improvement from baseline to study completion, except those in Zambézia Province, due to human resource constraints (lack of staff training on COVID-19 prevention) and administrative-related constraints (lack of posters on prevention measures in the HF) (**Table 1**).
- Nevertheless, we noted in Maputo City a decrease in the proportion of IPC standards met in R2 due to lack of personal protective equipment (PPE) for waste management (**Table 1**).
- Improvement between the first and last rounds was primarily seen in the following assessment components: compliance with prevention measures among healthcare staff and management measures such as making available PPE, hygiene supplies, sterilization of used materials, infectious waste management, and preparedness to manage persons with COVID-19.

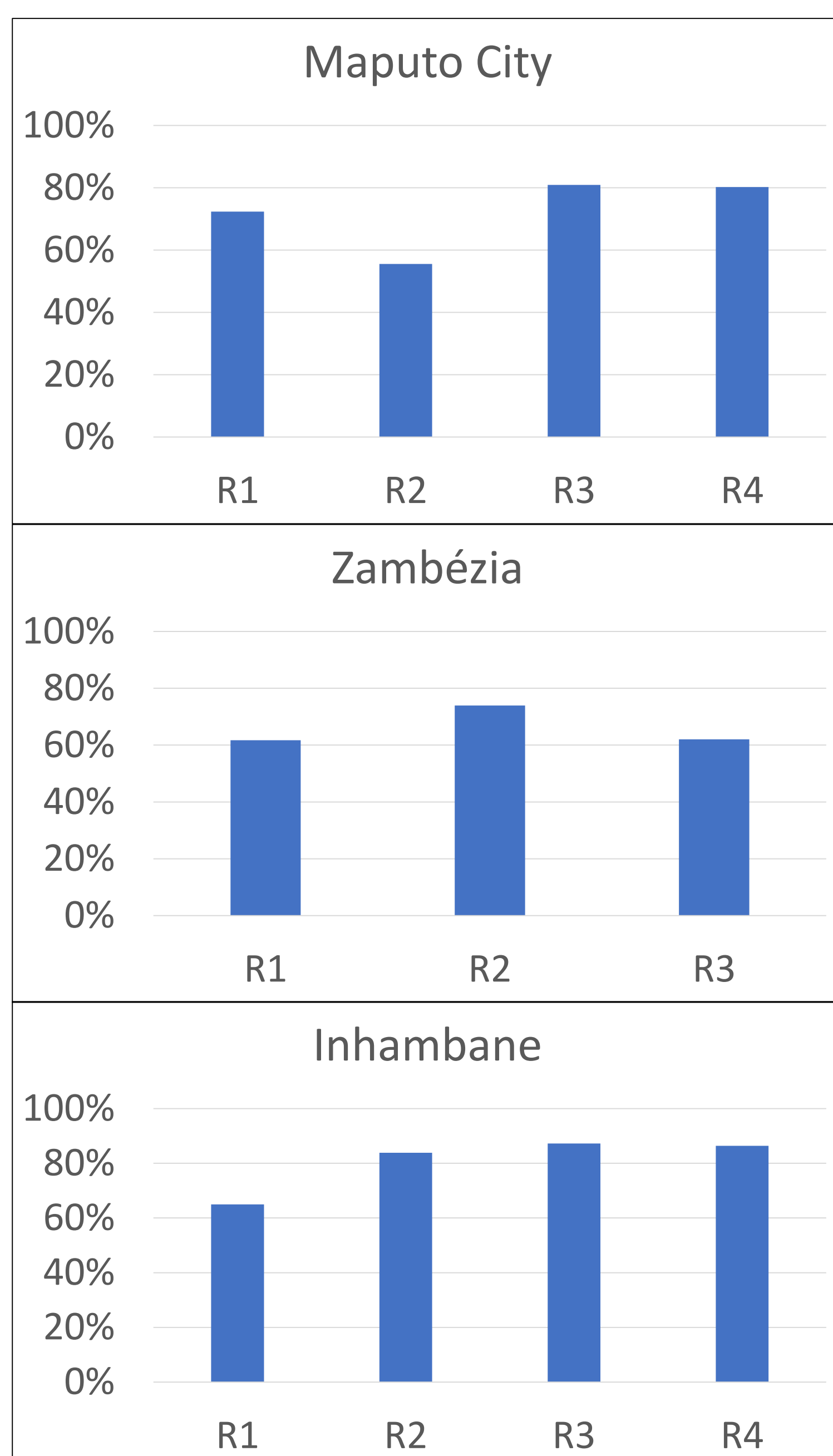


Figure 2: IPC assessment results per round (R=Round).

Conclusions

- Improvement in adherence to national IPC/COVID-19 guidelines was observed in almost all facilities participating in the COVIV study, with some reaching the minimal recommended score over the evaluation period, suggesting an effort by the healthcare system to more successfully implement IPC guidelines including pandemic-related preparedness.
- However, the varying levels of improvement observed among health facilities indicate a need for site-specific monitoring and support for IPC implementation guidelines.

Table 1. IPC assessment results per included health facilities in participating provinces.

IPC standards	Maputo City		Zambézia		Inhambane	
	Baseline (R1)	Completion (R4)	Baseline (R1)	Completion (R3)	Baseline (R1)	Completion (R4)
General Aspects						
Human Resources (24 items)	83.3%	100%	95.8%	16.7%	87.5%	95.8%
Management (16 items)	63.6%	84.6%	68.8%	75%	75%	93.8%
Administrative aspects (18 items)	33.3%	33.3%	50%	33.3%	88.9%	100%
Environmental measures (9 items)	33.3%	100%	33.3%	33.3%	88.9%	100%
COVID-19 prevention measures						
COVID-19 outbreak preparedness (5 items)	100%	100%	40%	100%	40%	100%
Aspects per service area						
Outpatient clinic (5 items)	80%	80%	60%	60%	100%	100%
Inpatient ward (5 items)	60%	80%	60%	60%	0%	0%
Laboratory (10 items)	100%	90%	90%	80%	90%	90%
Material and waste management						
Removing PPE (3 items)	100%	66.7%	0%	0%	66.7%	100%
Management of hospital linen (7 items)	100%	71.4%	100%	100%	57.1%	100%
Material processing and sterilization (7 items)	28.6%	85.7%	71.4%	100%	28.6%	71.4%
Waste management (7 items)	85.7%	71.4%	71.4%	85.7%	57.1%	85.7%
Average	72.3%	80.3%	61.7%	62%	65%	86.4%

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