Maternal and Infant Option B+ Outcomes in Zambézia Province, Mozambique: Retrospective Cohort Analysis (2013-2021)

Final Report

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Objective 4. Retention in care rates (continued)

12-month Retention

Table 9. 12-month retention percentages, overall for entire cohort, and by group, per district, and for all districts, over time.

District	Group	Min	Q1	Median	Q3	Max	Mean	SD
Alto Molócuè	Overall	20	46.5	57.4	73.1	92.3	59.8	17.1
	PW	14.3	42.9	64.7	82.8	100	62.6	22.9
	Non PW	10	53.8	66.7	79.1	95.3	63.8	18.3
	Men	16.7	44	54.1	69.5	91.4	56.2	19.3
Gilé	Overall	27.7	52.9	61.2	70.8	93.9	62.5	15.2
	PW	26.3	52.5	65.8	77	100	65.5	18.3
	Non PW	25	56.4	67.6	76.7	100	66.9	15
	Men	18.2	46.7	56.4	68.4	97.1	57.6	17.3
Gurué	Overall	62.5	79.2	84.9	90.3	97.2	84.2	9.3
	PW	52.9	63.1	83	92	100	79.9	15.9
	Non PW	50	78.1	86.7	95.6	100	84.4	13.4
	Men	72	80.2	89.3	94	100	87.5	8
Ile	Overall	28.7	44.1	53.1	65.8	93.4	55.8	15.5
	PW	11.1	41.4	53.7	67.8	100	55.8	19
	Non PW	25.9	45.6	57.9	72.1	92.6	58.8	17
	Men	21.7	42	52.1	63.2	100	53.3	16.7
Inhassunge	Overall	23.1	49.7	59.7	67.8	93.7	59.9	16.8
	PW	15.8	55.8	70	82.8	100	67.8	19.9
	Non PW	15	50	58.6	69.7	95.3	59.8	18.1
	Men	11.8	40	51.5	64.2	95.2	54.4	18.4
Lugela	Overall	44.7	59.8	63.5	68.9	82.6	64.6	8.4
	PW	38.5	62.4	71.4	79.6	100	71.9	14.1
	Non PW	42.9	58.9	69	74.4	88.5	67.9	11.3
	Men	37	53.6	61.4	65.5	75	58.6	10.6
Maganja da Costa	Overall	26.1	42.9	58	75.8	94.5	59.9	20
	PW	19.4	42.5	63.6	82.7	96.7	62.4	22.4
	Non PW	20.9	49.2	63.6	77.2	92.4	62.5	19.4
	Men	19.7	36.9	52.9	70.6	97.6	55.9	21.4
Milange	Overall	61.3	77.7	83.3	88.1	93.1	81.8	7.9
	PW	61.3	81.7	85.7	90.5	96.6	84.8	8.3
	Non PW	65	77.1	81.7	87.8	94.8	81.6	7.7
	Men	58	75.8	82.2	87.2	90.8	80.1	9.3
Mocuba	Overall	66.7	71.5	76.6	80.9	86.4	76.4	5.8
	PW	70.4	74.3	81.5	85.6	89.9	80.4	6.5
	Non PW	66.2	72.2	75.7	80.6	87.2	76.4	6.1
	Men	61.2	67.8	74.3	78.7	90.4	73.9	7.7
Mocubela	Overall	23.6	44	67.2	74	92.3	61.1	19.7
	PW	18.8	40.5	72.6	84	100	64	24.3
	Non PW	19.5	51	69.3	80	95.2	64.5	19.5
	Men	18.5	44.8	59.5	68.4	91.8	57.1	18.9

Molumbo	Overall	54.7	69.2	85.5	91	95.8	81.4	12.4
	PW	55	71.7	87.8	95.4	100	83.4	15
	Non PW	47.4	72.8	82.2	92.8	97.4	80.5	13.2
	Men	51.9	70.4	85	90.1	100	81.4	12.7
Namacurra	Overall	25.6	49.5	67.4	78	90.3	63.7	17.3
	PW	21	45.5	70.7	85.6	96	64.9	22.6
	Non PW	25	59.2	70.3	79.4	91.3	68.3	13.8
	Men	8	45.1	61.1	74.7	89.9	59.4	17.8
Nicoadala	Overall	54.3	66.4	75.8	86	95.1	76.6	12.5
	PW	63	77.4	84.7	88.9	98.4	83.5	9.1
	Non PW	50.8	65.9	76.3	86.2	95.6	75.9	13.6
	Men	48.2	64.4	71.8	88.3	96.2	74.2	13.9
Pebane	Overall	31.9	56	63.4	70.6	79.6	61.8	12.1
	PW	24.6	57.8	66.7	75.5	93.5	64.9	15.6
	Non PW	31.2	59.2	67.8	73.7	83.5	65.3	12.2
	Men	22.2	50.6	57.3	65.4	77.1	56.8	11.9
Quelimane	Overall	32.8	44	59.1	66.7	83.3	57.6	14
	PW	24.3	41	64.9	77.8	88.8	60.4	19
	Non PW	34.4	47.5	60.8	66.9	85.9	59.3	13.5
	Men	24.3	45.9	56	61.7	79.3	54.8	13
All districts	Overall	20.0	49.7	63.7	76.1	97.2	62.9	17.1
	PW	11.1	48.9	69.2	82.9	100.0	65.9	20.7
	Non PW	10.0	54.6	67.1	78.3	100.0	65.5	17.0
	Men	8.0	46.2	58.7	72.6	100.0	59.3	18.4

Figure 16. Percentage of patients retained at 12-months, for entire cohort, over time. (Dotted line: time point when COVID-19 mitigations were put in place in Mozambique.)

For 12-month retention, similar to 6-month retention trends, there was an observable trend of improvement overall among the entire cohort (see **Figure 16** above), and for all three groups (see **Figure 17** below), across all districts, over the evaluation period. For the 12-month retention indicator, there was slightly more variability (as observed by notable declines and swift recoveries) for all three groups post-COVID-19 mitigation measures going into place.

Figure 17. Percentage of patients retained at 12-months, by group (PW, non-PW, men), over time. (Dotted line: time point when COVID-19 mitigations were put in place in Mozambique.)

Further disaggregating to look at 12-month retention percentages among individuals 15-24 years of age, there was an observable trend of improvement across all three groups, in all districts, over time. Notably, PW in this age group seem to have consistently higher proportion of 12-month retention compared to non-PW and men of the same age group. Men in this age group performed consistently more poorly for this indicator in all districts (see **Figure 18a** below). (Please see **Table S8** in **Appendices** below for 12-month retention percentages among all three groups by age.)

Figure 18a. Percentage of patients retained at 12-months, by group (PW, non-PW, men), among those 15-24 years of age, over time. (Dotted line: time point when COVID-19 mitigations were put in place in Mozambique.)

Looking at 12-month retention percentages among individuals 25-34 years of age (see **Figure 18b** below), there was also an observable trend of improvement across all three groups, in all districts, over time. Notably, the proportions for 12-month retention for the three groups resembled each other much more closely (i.e., had much greater overlap in performance) in this age category than in the other two age categories (see **Figures 18a** (15-24 age category) and **18c** (35-49 age category)).

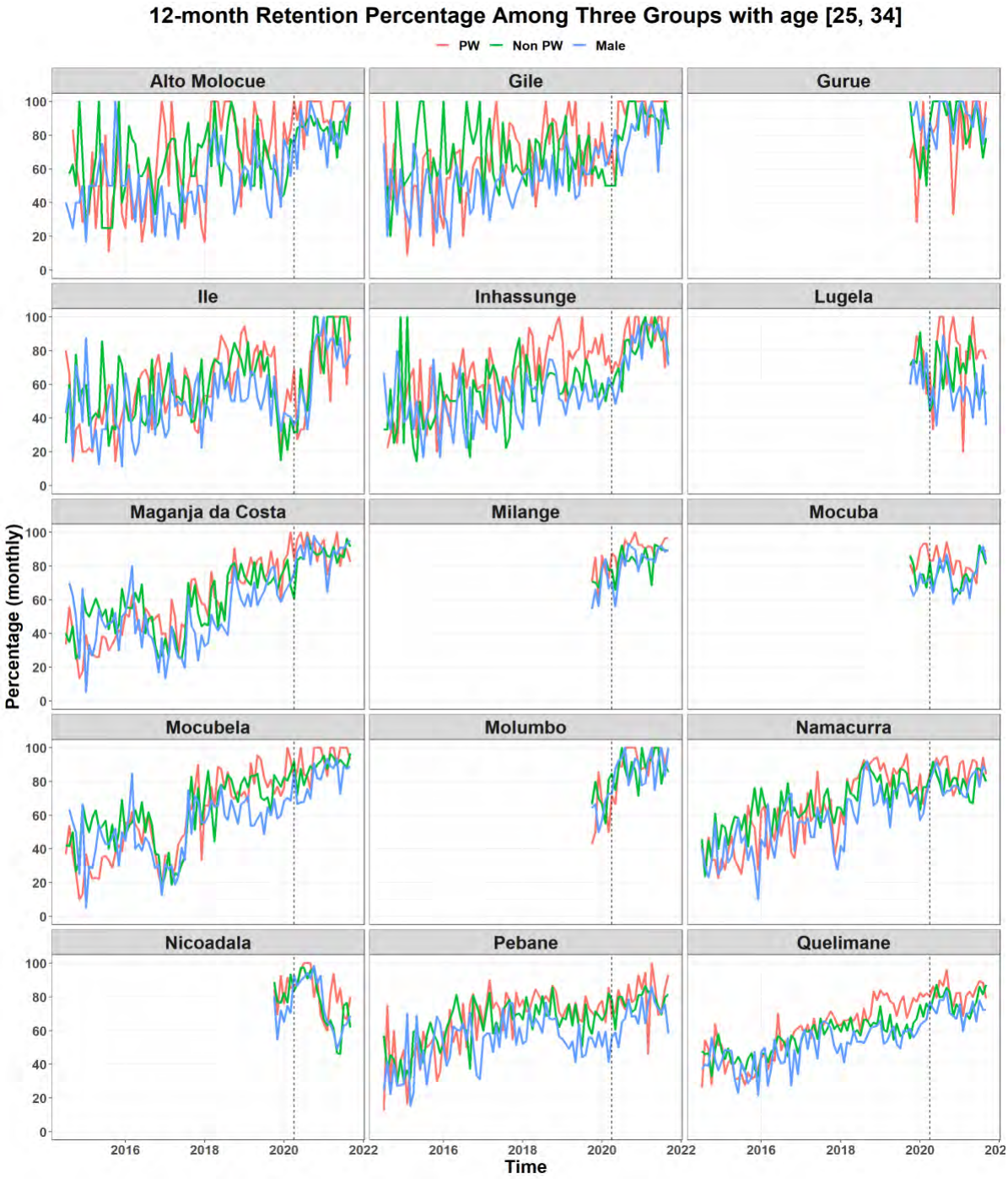

Figure 18b. Percentage of patients retained at 12-months, by group (PW, non-PW, men), among those 25-34 years of age, over time. (Dotted line: time point when COVID-19 mitigations were put in place in Mozambique.)

Looking at 12-month retention percentages among individuals 35-49 years of age, there was a modest trend of improvement seen across all three groups (especially non-PW and men), in all districts, over time. A great deal of variability was seen for all groups, with notably much greater variability seen for PW, potentially related to smaller numbers in this group in this age category (see **Figure 18c** below).

Figure 18c. Percentage of patients retained at 12-months, by group (PW, non-PW, men), among those 35-49 years of age, over time. (Dotted line: time point when COVID-19 mitigations were put in place in Mozambique.)

Model results comparing 12-month retention across groups

Overall, the monthly 12-month retention proportions for each group increased along time (from approximately 30% to 90% for PW, from approximately 35% to 85% for non-PW, and from approximately 35% to 80% for men). The 12-month retention proportions for PW were lower than that for non-PW and

men prior to 2016. Then it exceeded that for men but was still lower than or comparable with that for non-PW till early 2018 and became greater than that for both non-PW and men from the latter half of 2018 through the end of the evaluation period.

From this plot (see **Figure 19** below), it seems there was no obvious trend change for 12-month retention for any of the three groups around the time of COVID-19 outbreak and mitigation measures going into place in Mozambique.

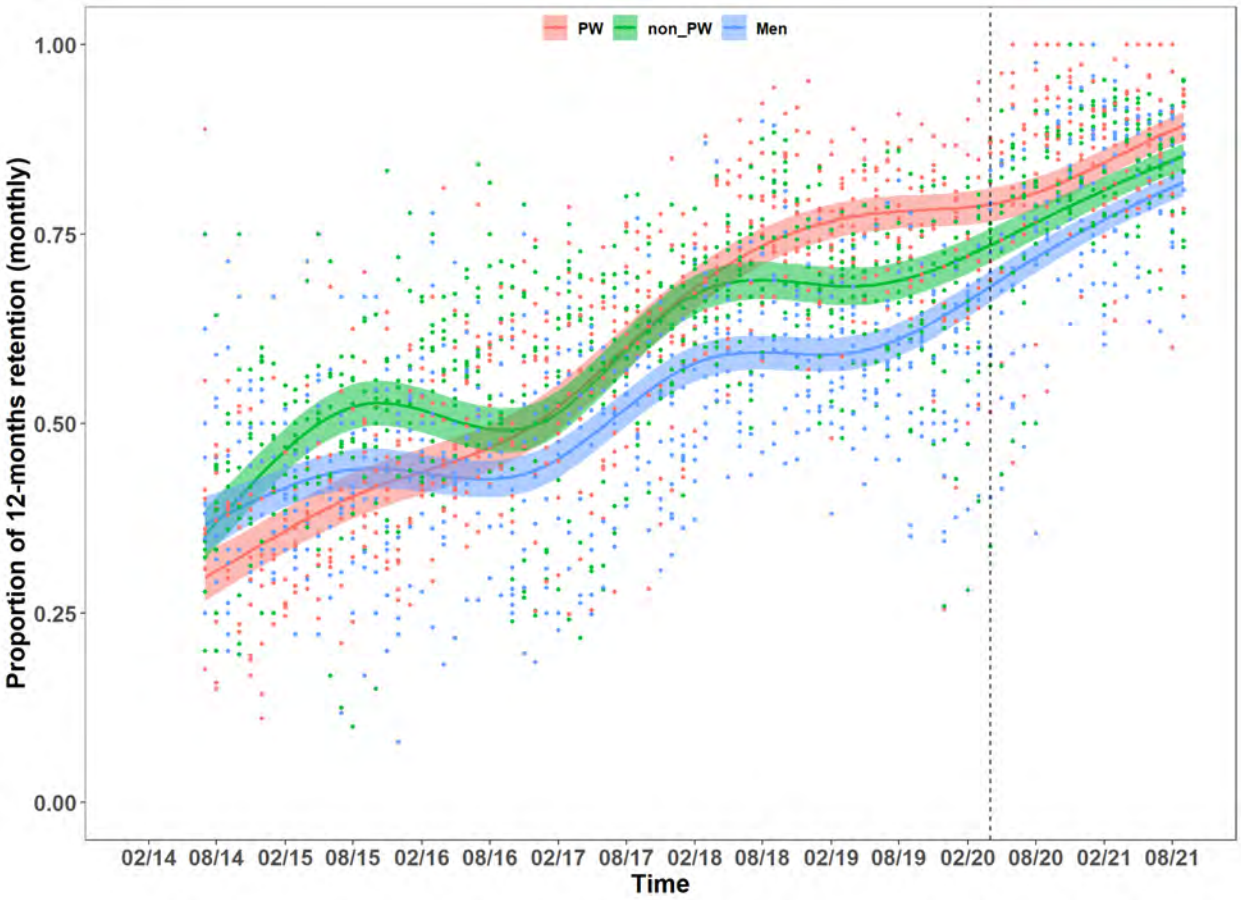

Figure 19. Comparison of 12-month retention proportions among the three groups. (Dotted line: time point when COVID-19 mitigations were put in place in Mozambique.)

We present in **Figures 20a** and **20b** below visual representations (per district) of the relationships between retention outcomes among the entire cohort, specifically for 1-month versus 3-month retention, and 6-month versus 12-month retention (since 1-month and 3-month retention were defined using an internal definition for program reporting, and 6-month and 12-month retention were defined as per MOH definition).

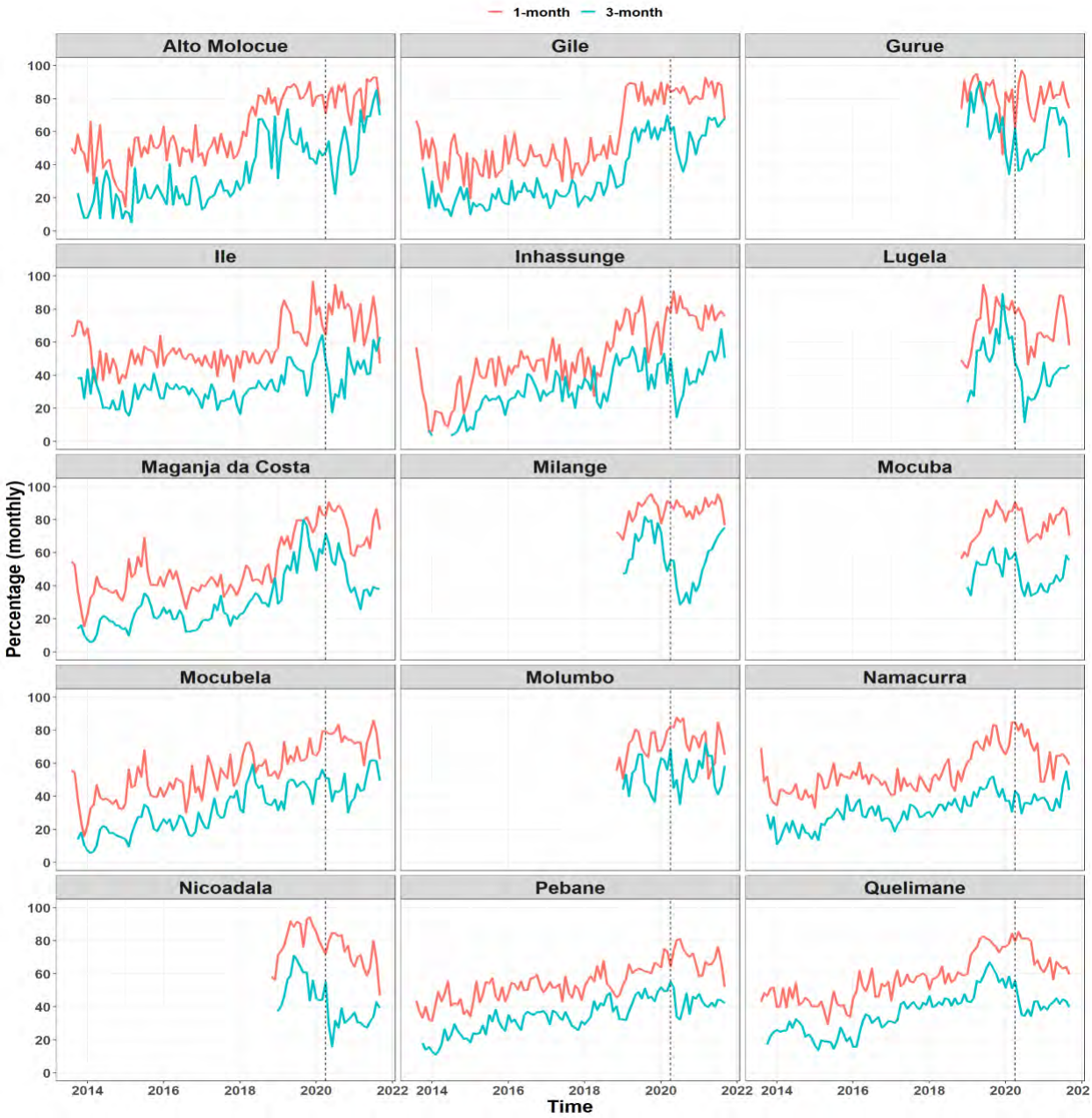

Figure 20a. Relationship between 1-month and 3-month retention percentage, entire cohort, over time: red line represents 1-month percentage, blue line represents 3-month percentage. (Dotted line: time point when COVID-19 mitigations were put in place in Mozambique.)

Figure 20b. Relationship between 6-month and 12-month retention percentage, entire cohort, over time: red line represents 6-month percentage, blue line represents 12-month percentage. (Dotted line: time point when COVID-19 mitigations were put in place in Mozambique.)

Objective 5. Viral suppression rates

Table 10. Proportion of adult patients (with an available VL result) who had viral suppression, overall for entire cohort, and by group, per district over time.

District	Group	Min	Q1	Median	Q3	Max	Mean	SD
Alto Molócuè	Overall	25	59.9	72.6	80.8	89.5	67.4	18.8
	PW	28.6	63.5	74.2	86.4	100	73.6	18.6
	Non PW	40	63.4	77.8	85.4	100	73.8	16.5
	Male	28.6	60	80	88.9	100	72.7	22.7
Gile	Overall	8.3	57.4	68.4	75.7	92.3	62.9	22
	PW	20	42.5	55.9	77.3	100	58.2	21.8
	Non PW	25	61.1	72.5	82.2	100	70.9	19.5
	Male	33.3	70	80	88.9	100	77	19.5
Gurué	Overall	64.5	81.2	85	90	100	84.7	9.4
	PW	50	69.2	83.3	92.3	100	79.9	16.9
	Non PW	57.1	81.8	87.5	100	100	88.6	12.5
	Male	62.5	75	83.3	100	100	85.3	13
Ile	Overall	25	63.6	66.7	76	92.3	65	17.4
	PW	25	50	60	75	100	60.7	18.8
	Non PW	54.5	66.7	77.8	84.3	100	77.3	13.3
	Male	50	62.9	82.6	100	100	79.8	19.8
Inhassunge	Overall	30.8	52.2	69.7	78	100	65.7	18.9
	PW	14.3	50.8	69.7	77.1	87.5	64.5	19.2
	Non PW	40	66.7	77.5	96.4	100	76.7	18.8
	Male	16.7	33.3	71.4	82.5	100	61.9	29.1
Lugela	Overall	44.4	68.3	76.5	80.8	90	73.3	11.6
	PW	33.3	54.5	66.7	72.7	100	63.4	16.9
	Non PW	50	66.7	75	90.9	100	78.1	16.2
	Male	50	75	80	100	100	82.2	15.4
Maganja da Costa	Overall	8	38.1	70.8	78.8	92.2	60.1	26.6
	PW	15.4	47.1	64.7	78.2	89.5	61.2	21.8
	Non PW	6.7	43.8	73.9	86.4	96.7	62.9	29.2
	Male	22.2	39.6	70	86.9	100	63.8	25.1
Milange	Overall	29.4	63.2	84.9	86.5	91.2	73	19.7
	PW	40	71.4	81	89.2	100	77.8	16.3
	Non PW	28.6	55.6	86.4	91.3	100	76.1	22.3
	Male	20	53.1	75	84	94.4	67.6	22.7
Mocuba	Overall	27.8	45	79.5	84.1	87.4	67.3	22.2
	PW	6.7	42.9	76.3	78	83.3	61.5	23.9
	Non PW	14.3	58.3	82.9	86.7	97.1	71.6	23.7
	Male	16.7	50	76.4	85.7	100	68.2	24.8
Mocubela	Overall	8.6	37	72.9	76.7	81.9	56.1	27.2
	PW	20	50	71.4	75	100	64	20.6
	Non PW	11.1	35.6	78.3	84.4	96.6	63.7	30.2
	Male	11.1	43.8	63.6	70.4	78.3	56.2	19.9
Molumbo	Overall	25	86.4	92.3	94.7	100	85.1	19.9
	PW	33.3	86.8	95.4	100	100	90.6	15.3
	Non PW	66.7	88.9	92.3	100	100	91.3	10.6
	Male	33.3	81.7	91.7	100	100	85.8	18.4

Namacurra	Overall	20	48.8	76.2	80.8	88.9	66.2	20.5
	PW	14.3	50	69.2	77.5	100	62.3	25.1
	Non PW	25	55.6	77.1	84.7	89.5	68	21.2
	Male	11.1	55.6	75.9	81.1	100	69	21.1
Nicoadala	Overall	66.7	77.8	80.7	85.4	89.2	80.4	6.1
	PW	51.7	66.7	74.4	81.6	96.6	73.8	12.6
	Non PW	66.7	79.2	84.6	89.1	93	83.8	6.7
	Male	60	76.7	82.1	89.2	93.9	82.1	8.7
Pebane	Overall	11.1	42.1	80.8	83.6	92.5	64.8	28
	PW	46.2	65	75	81.5	86.7	72.1	12.4
	Non PW	11.1	50	79.4	88.2	94.1	67.7	27.5
	Male	20	56.2	80	88.2	100	70.9	27.3
Quelimane	Overall	46.2	68.4	80.2	84	87.3	75	12.9
	PW	21.4	63.9	71.4	73.2	81.2	63.7	17.3
	Non PW	54.5	81.4	85.6	88	95	80.8	12.1
	Male	54.2	74.3	77.8	87.2	91.4	78	10.9
All Districts	Overall	8	62.6	76.9	84.5	100	69.8	21
	PW	6.7	56.2	72.7	81.8	100	68.5	20.4
	Non PW	6.7	66.7	81.8	88.9	100	75.4	21.1
	Male	11.1	62.8	78.3	88.9	100	73.4	21.9

[*NOTE*: As mentioned above, the VS status were determined based on the VL records collected between 3 and 12 months of ART initiation which is a time frame but not a fixed time point. As such, the x-axis for all plots in this section is calendar year/month of ART initiation**,** and the plots represent the monthly aggregated VS status for patients who initiated ART at that month.]

Looking at viral suppression trends among the entire adult cohort over time, there was an observable albeit slow trend of improvement seen for several districts pre-COVID-19 mitigation measures going into place, namely in Gurué, Lugela, Molumbo and Nicoadala. In several other districts an observable albeit slow opposite trend of decline could be seen even prior to COVID-19, namely in Maganja da Costa, Milange, Mocuba, Mocubela, Namacurra and Pebane. There were some potentially COVID-19-related declines in indicator performance seen in almost all districts after April 2020, with the possible exceptions of Gurué and Nicoadala districts. After April 2020, some recovery was seen, particularly in Ile, Lugela and Inhassunge districts, however, some districts continued with a downward trend for viral suppression through the end of the evaluation period (see **Figure 21** below).

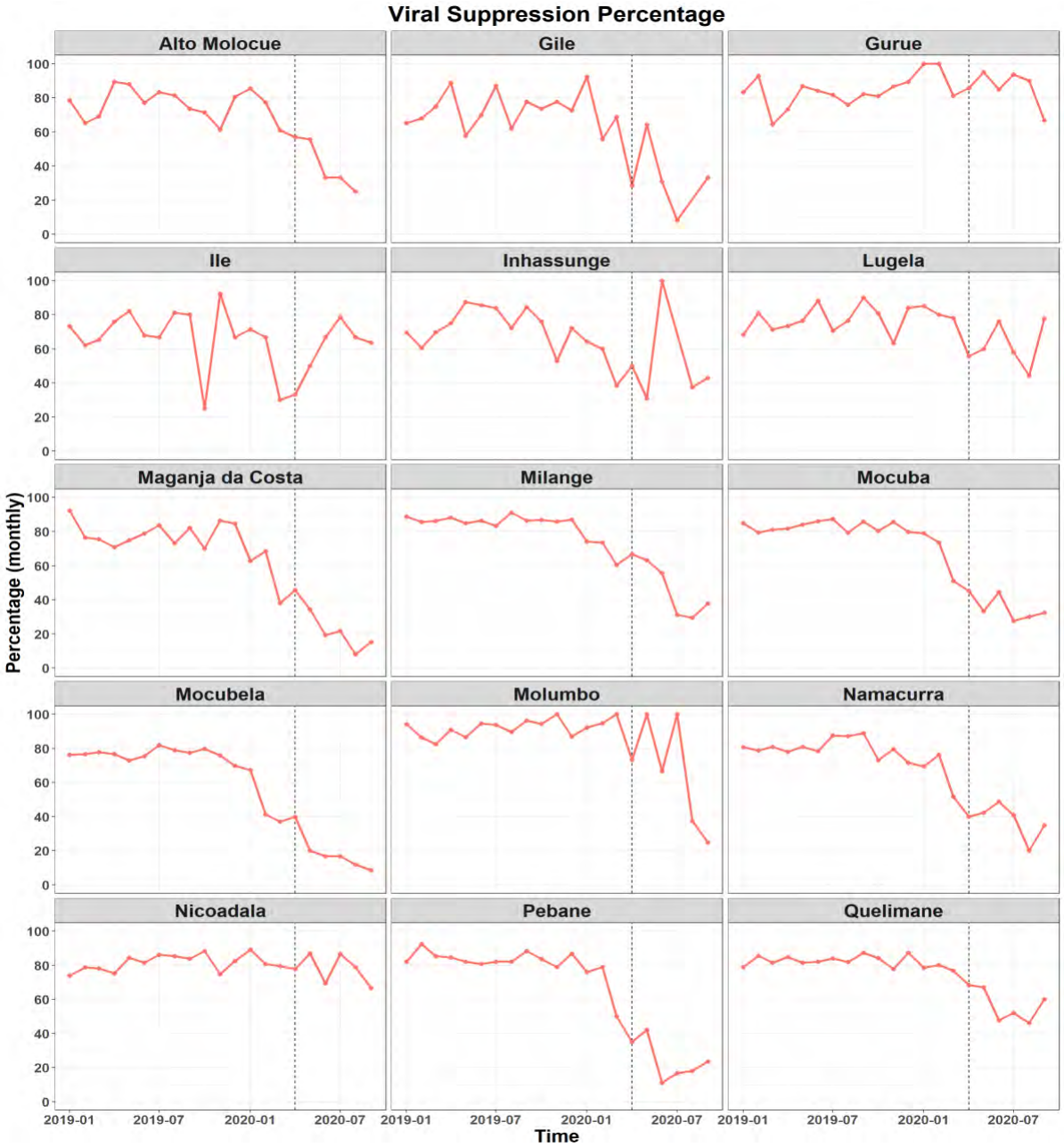

Figure 21. Trends in viral suppression percentages for all adult patients who had an available VL result, over time. (Dotted line: time point when COVID-19 mitigations were put in place in Mozambique.)

Looking at viral suppression trends over the evaluation period by group, there was not an observable trend of improvement nor decline seen for any group in any district pre-COVID-19 mitigation measures, with the exceptions of an observable albeit slow trend of improvement seen among PW in Alto Molócuè and Ile districts pre-COVID-19. There were potentially COVID-19-related declines in viral suppression percentages seen across all three groups in almost all districts, with the possible exceptions of Gurué, Ile, Lugela, and Nicoadala districts, and except PW in Alto Molócuè district (see **Figure 22** below).

Figure 22. Trends in viral suppression percentages, by group, over time. (Dotted line: time point when COVID-19 mitigations were put in place in Mozambique.)

Table 11. Proportion of adult patients (with an available VL result) who had VS, by group, by age category, over time.

		15-24 years of age							25-34 years of age							35-49 years of age						
District	**Group**	Min	Q1	Median	Q3	Max	Mean	SD	Min	Q1	Median	Q3	Max	Mean	SD	Min	Q1	Median	Q3	Max	Mean	SD
Alto Molócuè	PW	50	73.2	83.3	100	100	84.4	17.1	33.3	50	66.7	83.3	100	69.2	22.8	100	100	100	100	100	100	0
	Non PW	40	50	66.7	100	100	72.9	23.1	40	68.8	86.6	100	100	80.9	22	40	50	100	100	100	81.8	24.2
	Men	50	62.5	100	100	100	85	24.2	33.3	62.5	80	100	100	76.9	22.1	20	75	91.7	100	100	81.8	24
Gilé	PW	33.3	42.5	61.2	76.7	100	60.5	19.4	33.3	53.5	66.7	100	100	73.1	27.3	66.7	91.7	100	100	100	91.7	16.6
	Non PW	33.3	50	70.8	84.3	100	67.8	23.8	33.3	50	100	100	100	79.7	25.3	50	100	100	100	100	92.1	16.8
	Men	50	66.7	100	100	100	83.1	20.4	50	61.9	79.2	100	100	79.5	20.7	33.3	63.8	100	100	100	83.4	24.6
Gurué	PW	50	75	80	100	100	83.4	16.9	50	66.7	100	100	100	83.2	21.5	100	100	100	100	100	100	0
	Non PW	33.3	77.1	100	100	100	88.5	20	50	80	100	100	100	86.7	19.4	50	100	100	100	100	97.4	11.5
	Men	50	66.7	100	100	100	84.9	21.7	50	75	100	100	100	88.6	16.2	25	79.4	100	100	100	87.1	22.7
Ile	PW	25	50	66.7	85.6	100	68.6	22.7	25	50	66.7	100	100	66.6	25.8	50	83.3	100	100	100	88.1	20.9
	Non PW	40	66.7	100	100	100	84.9	19.8	50	66.7	73.3	100	100	77.5	19.2	25	76.2	100	100	100	86.7	22.2
	Men	50	100	100	100	100	93.8	17.7	33.3	58.4	100	100	100	80.2	27.6	50	80	100	100	100	89.6	16.7
Inhassunge	PW	20	50	73.2	87.5	100	69.6	25.5	33.3	50	66.7	87.5	100	69	23.1	50	87.5	100	100	100	87.5	25
	Non PW	33.3	58.4	100	100	100	80.3	28.7	50	66.7	100	100	100	85.9	20.2	50	77.5	100	100	100	87	20.7
	Men	33.3	54.2	83.3	100	100	76.7	26.3	25	37.5	62.5	100	100	67	30.3	33.3	100	100	100	100	91.7	20.7
Lugela	PW	33.3	50	60	75	100	63.8	21	50	65	81.7	100	100	80.1	20.5	50	50	100	100	100	80	27.4
	Non PW	33.3	50	80	100	100	73.3	27.6	40	78.8	100	100	100	89	19.1	50	100	100	100	100	94.1	14
	Men	100	100	100	100	100	100	0	33.3	75	100	100	100	82.9	22.8	50	66.7	100	100	100	84.6	18.9
Maganja da Costa	PW	44.4	57.1	62.5	80	100	69.6	18.6	33.3	47.2	66.7	80	100	64.6	20.1	50	58.4	66.7	100	100	76.2	23.3
	Non PW	50	61.7	79.2	97.9	100	77.2	19.7	25	48.2	77.5	87.5	100	69.6	25.6	16.7	55	83.3	92	100	72.8	26
	Men	33.3	66.7	100	100	100	82.8	24	25	39.8	75	89.3	100	68.4	26.7	14.3	64.3	81.7	100	100	74.2	30.9
Milange	PW	50	69.2	78.4	89.2	100	78.6	15.7	50	69.7	86.6	100	100	82.8	16.4	50	100	100	100	100	94.4	15
	Non PW	33.3	71.2	90.9	100	100	80.6	24.5	25	65.4	83.3	100	100	78.9	22.2	60	86.2	100	100	100	92	12.1
	Men	25	50	83.3	100	100	74.4	28.6	20	66.7	83.3	88.2	100	72.8	23	33.3	65.2	80	94.4	100	75.1	22.5
Mocuba	PW	8.3	45.5	71.4	81.8	92.9	61.9	26.1	33.3	50	68.6	78.6	94.7	64.9	20.6	50	66.7	100	100	100	82.3	20.9
	Non PW	14.3	63.4	76.9	86	100	71.1	21.6	25	70.8	82.4	91.4	100	76.1	23.5	50	76.7	86.6	92.8	100	80.9	17.8
	Men	33.3	66.7	79.2	100	100	80.1	21.4	50	76.2	84.1	92.8	100	83.6	14	33.3	66.7	80.3	89.2	100	74.1	23
Mocubela	PW	50	58.7	66.7	73.8	100	69.2	16	25	66.1	75	100	100	73.3	26.8	33.3	45.8	87.5	100	100	74	30.7
	Non PW	14.3	48.4	66.7	79.8	100	63.7	23.5	33.3	69.2	85.7	95.4	100	80	19.6	42.9	76.4	100	100	100	85.6	19.5
	Men	16.7	50	66.7	83.3	100	67.3	23.8	20	43.9	66.7	75	100	60.8	23.3	33.3	42.9	66.7	77.8	100	61.4	21.5
Molumbo	PW	50	100	100	100	100	96.3	12.1	50	76.2	100	100	100	87.5	16.4	100	100	100	100	100	100	0
	Non PW	66.7	100	100	100	100	95.6	10.3	50	91.7	100	100	100	92	16.3	50	80	100	100	100	89	15.8
	Men	100	100	100	100	100	100	0	33.3	68.8	92.8	100	100	83	21.5	50	87.5	100	100	100	88.3	19.5
Namacurra	PW	20	53.5	66.7	80	100	64.1	22.7	20	49.2	75	88.5	100	68.5	25.7	50	75	100	100	100	87.8	20
	Non PW	14.3	58.8	72.7	83.3	94.7	67.3	21.8	20	64.6	76.9	83.8	100	71.2	22	28.6	60.8	81.8	87.1	100	72.9	20.4
	Men	25	60	83.3	100	100	77.6	23.4	50	64.3	68.6	83.3	100	71.5	15.3	33.3	69.8	79.3	91.9	100	77.4	19.5
Nicoadala	PW	44.4	60.6	71.4	77.8	100	70.7	13.3	37.5	66.7	80	89.5	100	76.7	17.5	33.3	75	100	100	100	87.8	20.1
	Non PW	46.2	77.8	83.3	92	100	82.3	13.5	63.6	77.8	85	88.2	94.4	83	7.8	50	83.3	88	91.7	100	86	12
	Men	62.5	75	77.8	85.7	100	79.6	12.1	63.6	75	81.2	90.5	100	82.6	10.8	50	80	87.5	88.9	100	83.8	10.4
Pebane	PW	25	66.7	75	88.9	100	73.3	19.3	33.3	70	75	80	100	73.1	17.3	33.3	100	100	100	100	91.7	23.6
	Non PW	16.7	57.5	75	88.2	100	69.4	26	50	75	83.3	91.7	100	80.9	15.5	33.3	83.6	89.4	100	100	87.2	17.1
	Men	50	80.8	92.8	100	100	87.8	15.2	20	45	83.3	91.4	100	71.1	27.9	14.3	81.8	92.3	100	100	82.7	24.7
Quelimane	PW	12.5	61.1	71.4	74.1	80	61.9	20.7	33.3	50	72.2	78.6	81.8	65.1	15.9	50	66.7	80	100	100	79.8	19.8
	Non PW	42.9	73.1	81.2	83.9	100	76.9	13.5	33.3	77.3	88.9	89.7	100	80.5	17	33.3	84.8	91.3	100	100	85.7	19.7
	Men	25	55.6	71.4	92.3	100	72.8	23.1	53.8	75	78.6	84.6	95.2	78.3	11.4	55.6	69.2	81.2	92	100	80.9	13.9
All districts	PW	8.3	58.8	73.6	86.2	100	71.6	21.4	20	52.5	75	92.4	100	73.1	21.9	33.3	75	100	100	100	88	20
	Non PW	14.3	66.7	81.8	100	100	76.4	22.6	20	69.4	85.7	100	100	80.7	20.4	16.7	80	93.3	100	100	85.9	19.1
	Men	16.7	66.7	90.9	100	100	81.3	21.9	20	66.7	80	100	100	76.7	22	14.3	66.7	87.5	100	100	80.7	21.8

Model results comparing viral suppression across groups

From the plot (see **Figure 23** below), the monthly viral suppression proportions for PW (at approximately 75%) were lower than that for non-PW and men throughout the evaluation period, with no apparent trend change for PW prior to COVID-19. The monthly viral suppression proportions for non-PW (at approximately 85%) also did not have an observable trend change prior to COVID-19. Proportions for men were lower than those for non-PW from January 2019 (at approximately 80%) but appeared to gradually increase and by October 2019 had reached the same proportions for non-PW (at 85%).

There were obvious trend changes of decline in viral suppression proportions for all three groups around the time of COVID-19 mitigation measures going into place in Mozambique (beginning just before April 2020 and continuing for the next several months). For PW, the downward trend appeared to continue through the end of the evaluation period; for men and non-PW, this decline appeared to slow by the end of the evaluation period, with proportions for men almost appearing to have a slight rebound at the very end of the evaluation period.

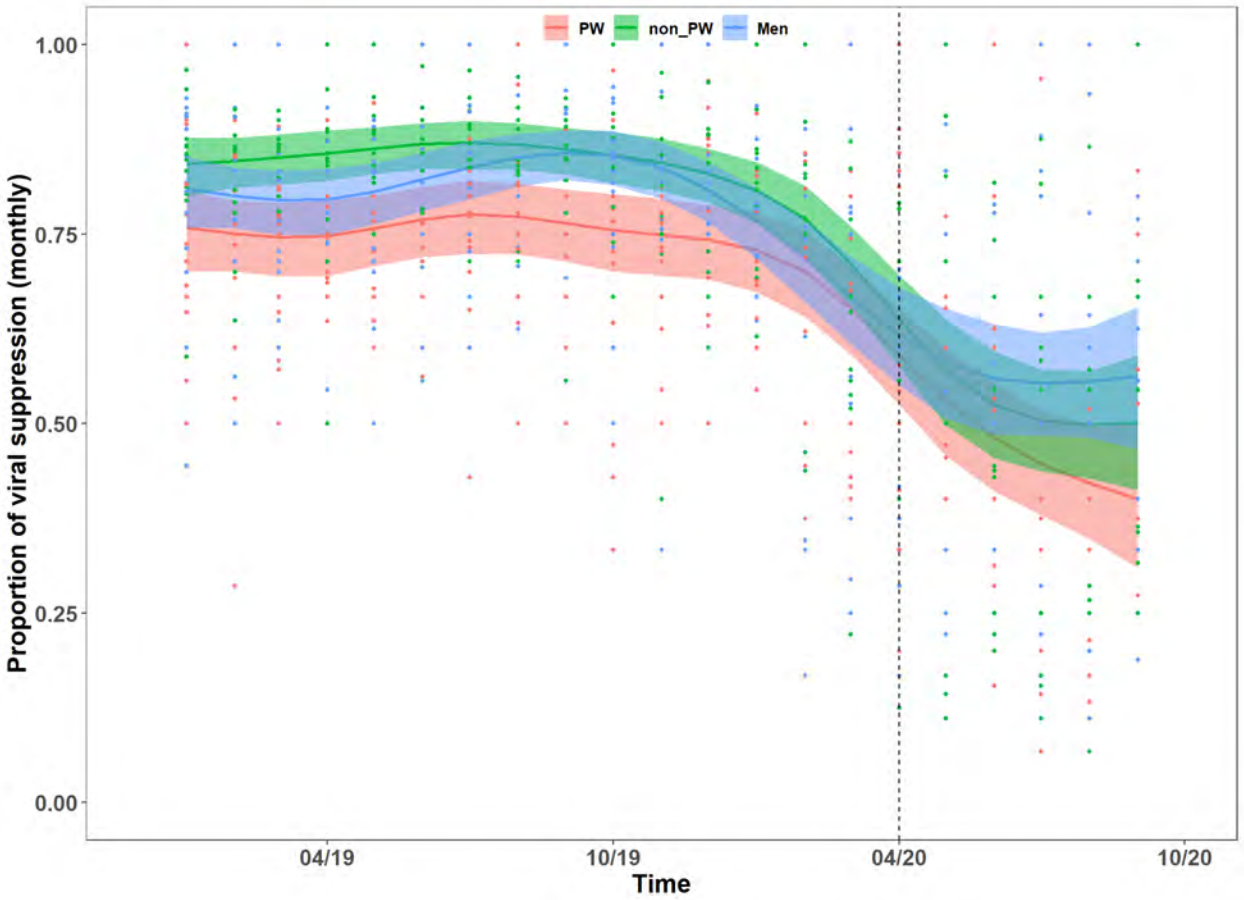

Figure 23. Comparison of viral suppression among the three groups. Raw data points are represented by dots. The fitted values and the 95% confidence intervals from the GLMM are represented by solid lines and shaded ribbons, respectively. Dotted line indicates the time point when COVID-19 mitigations were put in place in Mozambique.

Sub-Analysis: Interruption in treatment (IIT) rates

[*NOTE*: IIT status was determined based on both the ART pick-up data and clinical visit data within a certain time frame but not a fixed time point. As such, the x-axis for all plots in this section is calendar year/month of ART initiation, and the plot represent the monthly aggregated IIT status for patients who initiated ART at that month.]

Table 12. Percentages of patients without an IIT at each of the three-time frames (< 3 months, 3-5 months, and >= 6 months) following ART initiation, for the entire cohort, by group, per district and all districts, over time.

		IIT < 3 months							IIT 3-5 months							IIT >= 6 months						
District	**Group**	Min	Q1	Median	Q3	Max	Mean	SD	Min	Q1	Median	Q3	Max	Mean	SD	Min	Q1	Median	Q3	Max	Mean	SD
Alto Molócuè	PW	20	54	68.4	85.7	100	67.7	21.6	9.1	43.5	57.1	73.7	100	58.1	20	3.6	9.1	19.1	58.3	100	32.5	28.3
	Non PW	16.7	50	67	83.4	100	65.8	20.8	20	45.9	57.1	68.3	100	58.5	16.8	2.2	5.9	10	29.8	77.2	19.6	20.1
	Men	9.1	43.5	62.3	81.6	100	61.6	22.7	14.3	47.2	57.9	68.9	100	58.8	19.3	2.6	5.1	10.8	24.6	71.1	17.8	18.2
Gilé	PW	19.4	56.1	68.7	81.2	100	68.3	17.8	20	43.5	55.6	70.4	94.4	57	19.4	2.2	4.9	14.6	50	90.9	27.7	27.5
	Non PW	10	50	60.9	79	96.2	63.4	19.6	14.3	50	63.2	75	97	62.8	19	3.3	6.3	14.5	56.9	95.7	30	29.5
	Men	20	44.2	56.7	75.2	96.3	59.3	19.5	20	46.7	57.1	77.1	100	60.4	18.6	2.2	8	18.5	54.8	97.4	30.1	27.8
Gurué	PW	42.9	76.9	87.5	91.3	100	82.4	15.1	37.5	63.8	76.9	90.7	100	77	17.4	6.7	22.6	34.5	59.7	91.7	39.4	23.3
	Non PW	53.8	78.6	85.7	92.3	100	83.8	12	59.3	76	80.4	89.2	100	81.7	10.3	10.7	21.4	34.8	47.1	84.8	37.9	20.2
	Men	45.8	78.1	88.9	95	100	84.5	13.7	52.6	71.7	82.6	90.9	100	81.2	13.1	7.1	16.2	30.4	45.7	84	33.9	20.6
Ile	PW	27.8	54.7	68.4	77.8	100	66.3	15.8	10	46.2	55.9	70	100	58.4	18.6	2	3.3	6.6	22.9	77.8	17.6	21.3
	Non PW	31.8	57.6	66.5	76.6	100	67	14.3	35.3	52.2	61.8	71.4	96	62	14.7	1.6	3	7.1	28.6	87.5	21.7	27.1
	Men	35.1	54.1	60.3	74.4	100	63.6	14.7	30.4	50	56.5	66.7	91.3	59.2	14.6	1	3.4	6.1	31.6	90.9	20.3	25.1
Inhassunge	PW	23.8	63.6	72.2	84	100	71.7	17.4	16.7	52.6	63	74.6	93.5	63.6	15.2	2	4.2	11.9	30.5	88.9	21.6	24
	Non PW	10	50	64.6	76.9	96.7	61.9	19.6	20	50	61.9	73	100	62.1	14.6	2.4	8.1	12.8	26.7	89.1	22.1	21.2
	Men	9.1	44.8	56.5	75.8	98.2	57.5	20.2	11.1	47	56.2	68.1	100	57	16.7	2	6.1	9.1	25	81.6	20.3	22.2
Lugela	PW	33.3	60	75	88.2	100	73.5	18.5	25	54.9	63.1	78.6	88.9	63.2	16.2	5.6	17.5	31	50	88.9	38.9	26.5
	Non PW	53.8	66.7	73.9	83.6	96.3	75.5	11.9	43.8	59.1	68.8	77.7	94.7	68	12.2	5.9	22.2	33.3	52.2	75.8	36.4	17.8
	Men	37.5	62.1	72.9	78.1	92.9	70.1	12.9	37.5	50	61.1	66.4	77.8	58.9	11	6.5	15	29	38.9	77.8	30.2	18.4
Maganja da Costa	PW	32.2	57.2	68	82.4	96.2	68.1	16.5	23.3	45.2	57.5	72.5	92.5	59.2	18.3	1.1	2.9	8.4	28.2	92.9	19.5	23.8
	Non PW	15.2	51.3	59.9	79.9	94.5	63	18.4	12	47.5	57	72.3	95.7	58.6	17.5	0.9	2.3	6.5	20.4	81.7	15.6	20
	Men	10.5	46.2	55.8	78.7	98.7	60.3	20.6	14.3	41.4	52.4	66.7	99.1	54.3	18.3	1.6	3.4	6.7	19.1	74.2	15.9	20.1
Milange	PW	63.3	80.2	88.9	92.1	100	85.7	9.6	57.1	71.3	76.5	81.6	93.8	76.1	8.7	9.1	20.3	42.6	68.3	90.7	44	25.9
	Non PW	71.1	80	84.9	89.6	95.3	84.8	6.5	49.1	67.4	73.9	82.1	86.9	73.2	10.1	9.5	17.4	36.2	55.7	89.7	38.9	23.9
	Men	76.8	80.4	84.9	89.2	95.5	85.1	5.4	47.8	65.1	74.7	80.2	91.7	73	11	7.8	17.5	32	54.3	88.2	38.1	24.8
Mocuba	PW	48.6	76.3	80.3	84.7	93.1	79.2	9.8	51.4	69.6	72.3	76.2	87.8	72.6	6.9	8.6	20.3	33.3	52.7	80	37.9	19.8
	Non PW	62.2	71.2	76.9	85.1	90	76.9	8.3	57.8	66.8	69.8	72.4	80.8	69.7	6.2	12.7	21.1	34.8	51.5	74.6	37.1	19.6
	Men	54.8	68.8	76.5	82.6	90.8	76.2	9.2	55.1	63.1	65.8	70	78.2	66.5	6	13	19.3	24.7	42.2	69.9	32.2	18.3
Mocubela	PW	33.3	58.7	71.1	83.4	100	69.4	17.2	20.6	46.3	63.2	73.1	90.6	60.5	17.3	0.9	3.2	11.1	33	93.1	21.9	24.8
	Non PW	14.6	53.6	65.8	80.4	95.5	65.9	17.4	18.5	53.1	62.2	71.8	85.8	61.1	15.4	1.2	4	9.4	31.1	80	20.4	22.5
	Men	7.1	51.5	62.9	76.2	93.9	62.7	17.7	14.3	46.5	59.7	67.1	84	56.9	14.9	1	2.9	7.8	20.3	79.8	17.1	21
Molumbo	PW	52.4	67.8	86.2	100	100	81.7	16.2	34.6	64.4	83.8	98.1	100	78.9	20.2	13.3	30.8	53.3	80	100	54.2	26.5
	Non PW	57.1	78.9	87.1	92.7	100	85.6	10	55.6	74.4	84.3	90.3	100	82.1	11.5	12.5	35.7	45.9	73.9	100	51.8	24
	Men	61.3	75.5	87.1	96.3	100	86.4	11.4	52.4	71.2	81.5	85.8	96.9	77.5	12.1	12.5	28.1	41.9	58.6	89.5	45.2	21.7
Namacurra	PW	38.9	62.3	70.2	77.1	89.7	68.5	11.5	21.8	42.9	54.4	64.4	87.2	54.3	14.6	0.9	2.3	4.2	19.3	96	16.1	22.7
	Non PW	30.6	57.9	64.2	70.9	82.5	63.4	10.6	40	59.4	64.5	68.9	80.7	63.3	8.4	0.6	2.8	7.2	23.7	83.7	16.5	20.6
	Men	25.9	48.6	56.8	66	84	57.2	11.6	30.8	49.2	56.1	62.5	76.1	55.3	9.8	1.1	3	6.5	18.5	71.8	14.6	18
Nicoadala	PW	53.3	77.9	83.7	90	97.6	82.1	11	54.2	65.2	70	74.1	85.7	70.1	7.4	7.6	16.2	32.4	57.9	81.8	37.8	23.9
	Non PW	62.1	70.5	78.2	83	90.6	76.8	7.7	49.6	61.9	67.8	72.4	82.9	66.9	7.6	5.2	11.5	23.2	43.4	77.7	30.4	22.1
	Men	60.3	67.3	77.3	84.4	90.7	76.5	9.5	47.7	55.7	60.6	68	79.7	62.1	8.8	1.8	9.4	17.6	33.3	72.4	24.9	21.2
Pebane	PW	28.3	59.5	69.2	76.6	90	67.1	12.3	23.1	53	60.9	70.4	88	61	13.5	1.3	4	11.2	30.8	80.8	19.5	20.4
	Non PW	32.7	61	67.2	75.8	86.9	66.4	12.2	32.8	59.4	67.1	73.4	85	65.5	11.3	1	4.6	7.2	24.4	79.5	18.3	20.8
	Men	20.7	52.3	61	68	88.6	60.1	12.9	21.4	55.4	61.5	67.8	78.6	60.5	10.9	1.2	4.1	9.3	21.4	68.4	17.4	18.7
Quelimane	PW	34.2	52.3	71.1	82.5	97.6	67.2	18.2	28.6	47.1	64.2	73.1	88.6	60.8	15.5	1.4	3.6	10.1	25.5	88.5	18.5	20.8
	Non PW	36.7	52.6	63.8	72.4	85	62.9	12.7	42.4	59.3	64.9	72.8	82.1	64.9	9.3	0.7	3.6	12	25.4	80.9	18.7	20.2
	Men	28.2	50.9	58.8	71.2	85.7	59.4	13.6	33.3	50.7	60.3	66.3	80.2	59.3	10.3	1.1	5.1	10.4	20.4	75.4	17.2	18.5
All districts	PW	19.4	58.8	72.7	83.3	100	70.6	17	9.1	48.2	62.5	74.4	100	61.6	17.6	0.9	4.7	15.3	40	100	25.6	25.6
	Non PW	10	56.5	68.3	80.2	100	67.4	16.8	12	55.2	65.3	73.9	100	64.1	14.8	0.6	5.6	15.1	36.6	100	24.2	23.9
	Men	7.1	51	63.5	78.6	100	63.9	18.3	11.1	50	60	69.7	100	60.1	15.6	1	5.3	13	33.3	97.4	22.5	22.5

IIT < 3 months after initiating ART

Overall, trends in monthly proportions of patients without an IIT < 3 months among each group increased (see **Figure 24** below). These trends of improvement in IIT < 3 months were more pronounced for PW. While men and non-PW showed proportions that were continuously lower than PW for not experiencing an early (< 3 months) IIT, improvements were seen among both groups from 2019 onward (to the end of the evaluation period).

Figure 24. Percentage of patients without an IIT < 3 months after ART initiation, per district, by group, over time. (Dotted line: time point when COVID-19 mitigations were put in place in Mozambique.)

Table 13. Percentages of patients without an IIT < 3 months after ART initiation, per district, by group, by age category, over time.

		15-24 years of age							25-34 years of age							35-49 years of age						
District	**Group**	Min	Q1	Median	Q3	Max	Mean	SD	Min	Q1	Median	Q3	Max	Mean	SD	Min	Q1	Median	Q3	Max	Mean	SD
Alto Molócuè	PW	10	51.3	66.7	87.5	100	67.8	24	12.5	50	75	100	100	70.6	26.1	40	66.7	100	100	100	83.9	21.1
	Non PW	14.3	50	66.7	78.6	100	62	22.1	12.5	55.6	73.1	90.7	100	70.6	22.6	10	50	80	100	100	73.5	24.8
	Men	18.2	50	71.4	100	100	71	25.5	14.3	42.9	60	83.8	100	62.8	24.4	14.3	50	71.4	83.8	100	66.9	22.6
Gilé	PW	20.8	54.6	68.3	81.6	100	68.2	18.5	16.7	52.8	69.6	87.5	100	69.1	21.9	25	66.7	100	100	100	82.1	23.2
	Non PW	14.3	44.4	62.5	84.3	100	62.8	24.2	20	50	66.7	83.3	100	65.9	21.9	16.7	50	66.7	85.7	100	67.7	22.1
	Men	9.1	39.2	59.1	80	100	58.4	25.4	16.7	42.6	60	76.7	100	59.3	21.6	16.7	50	66.7	83.3	100	66.5	21.4
Gurué	PW	33.3	72.7	85.7	93.3	100	81.4	17	40	66.7	100	100	100	82.6	21.4	100	100	100	100	100	100	0
	Non PW	42.9	73.7	87.5	94.4	100	83	15.1	20	76.9	90	100	100	82.9	20.2	50	83.3	85.7	100	100	87.5	13.7
	Men	25	74.1	100	100	100	85.7	20	33.3	76.7	86.7	92.3	100	82.8	16.1	55.6	80	90	100	100	86.7	14.2
Ile	PW	26.7	57.4	66.7	80	100	67.7	18.1	22.2	50	66.7	77.8	100	65.1	19.7	33.3	60	100	100	100	79	24.2
	Non PW	23.1	54.5	66.7	77.3	100	64	17.9	25	57.5	68.6	78.1	100	68.2	18.5	25	57.1	71.4	87.8	100	71.9	20
	Men	10	45.1	56.4	80.8	100	62	24.9	25	50	60.9	78.3	100	63	19.6	14.3	54.2	66.7	77.5	100	67.3	18.3
Inhassunge	PW	27.3	60	72.8	86	100	72.2	18.8	14.3	58.2	73.2	86.7	100	71.1	20.8	25	60	100	100	100	80.7	23.8
	Non PW	20	50	65.2	80	100	64	20.3	9.1	47.1	64.2	78.8	100	61.9	21.9	12.5	57.1	68.8	83.3	100	67.5	21.2
	Men	12.5	40	55	75	100	56.2	22.1	16.7	42.6	60	72.6	96.6	59.5	19.9	12.5	44.4	62.5	81.8	100	62	23.1
Lugela	PW	33.3	60	81.2	89.5	100	75.6	19.1	40	66.7	80	93.3	100	78.7	16.7	25	50	100	100	100	81.7	27.5
	Non PW	36.4	66.7	72.7	85.7	100	72.7	16.6	42.9	64.3	72.7	88.9	100	75.2	14.9	28.6	70	81.2	90.9	100	79.7	18.2
	Men	12.5	50	61.2	78.3	100	60.6	21.4	27.3	61.5	66.7	80	100	70.2	15.2	33.3	62.5	77.3	85.7	100	74.3	17.6
Maganja da Costa	PW	32	52.4	67.4	83.3	100	67.6	17.3	33.3	53.7	70	81.9	100	68	17.8	12.5	50	66.7	100	100	69.5	25.1
	Non PW	14.3	45.5	57.3	80	97.3	59.9	20.9	20	51.4	60.6	78.6	97.5	63.2	18.8	20	54.5	67.1	81.1	97.1	66.4	17.6
	Men	16.7	41.5	56.8	75.7	100	58.8	21.7	12	45.6	56.4	82.2	98.1	61.8	21.1	20	48.7	60	80	100	62.9	19.8
Milange	PW	46.7	81	89.3	96.8	100	86.4	13.1	60	80	87.5	93.3	100	85.4	11.1	50	74.4	86.6	100	100	85.6	15.2
	Non PW	61.8	78.6	84.5	89.3	97.1	82.8	8.7	69.2	80	86	91.7	97	84.9	8.2	66.7	81.8	87	93.5	100	86.9	7.8
	Men	63.2	79.4	86.2	90.5	100	85.6	8.5	71.3	80	87.1	90	95.9	85.4	6.4	71.9	79.6	85.7	89.1	96.3	84.7	6.8
Mocuba	PW	42.9	76.6	81.8	85	95.7	79.2	10.6	33.3	70.8	85	88.9	97.3	78.5	15.8	50	66.7	100	100	100	84.2	18
	Non PW	56.5	67.4	75	83.3	93.4	74.7	9.8	57.9	70.9	77.8	84.8	89.7	77.4	8.9	57.9	70.7	80	87.9	100	79.1	10.8
	Men	38.1	62.5	71.4	82.1	100	70.3	16.1	58.8	70.5	79.6	84.7	94.6	77.1	9.2	55.6	71	77.9	83.3	97	77.7	9.2
Mocubela	PW	32	60.8	73	83.5	100	70.2	17.8	30	55.6	69.2	85.9	100	69.4	19.5	11.1	52.5	75	100	100	71.9	24.8
	Non PW	12.5	50	64.2	79.5	100	63.3	18.4	21.4	52.5	68.4	82.8	96.6	67	18.2	20	57.5	68.3	83.3	100	68.5	18
	Men	16.7	52	62.5	75	94.6	62.7	18.4	22.2	50	63.6	76.9	95.7	62.6	17.3	16.7	57.3	68.8	80.3	95.8	67.2	18.2
Molumbo	PW	50	68	87.5	100	100	83.2	18.9	33.3	66.7	84.5	100	100	79.8	20.1	33.3	75	100	100	100	86.4	23.4
	Non PW	37.5	76.9	86.7	92.3	100	82.6	16.2	33.3	80	87.5	94.1	100	83.8	16.1	53.8	80	92.3	100	100	89.2	12.5
	Men	50	74.1	91.2	100	100	85	17.7	55.6	78.6	88.9	93.8	100	85.7	12.7	44.4	75	92.3	100	100	87.7	15.2
Namacurra	PW	38.3	62.6	69.1	76.9	95.6	68.6	12	35	58.8	68.8	78.7	100	68.1	13.5	11.1	55.6	74.2	87.5	100	71.2	22.7
	Non PW	17.6	49.7	59.7	66.8	87.5	57.4	14.3	22.7	58.1	65.8	72.7	84.4	63.7	12.6	27.3	63.8	70.3	76.9	89.5	69.1	11.8
	Men	16.7	41.5	53.1	63.1	79.3	51.7	15.1	20	50	57.6	66.7	86.4	58.3	12.3	18.2	53.9	62.7	70.8	88.9	61.3	13
Nicoadala	PW	48.1	77.8	84.4	89.8	96.4	81	11.8	57.1	79.2	86.7	92.7	100	85	11.7	50	66.7	100	100	100	83.9	19.7
	Non PW	53.7	67	73.6	81	93	73.1	9.9	62.7	72.7	78.3	84.4	91.9	78.2	7.5	56.1	75.7	82.4	87.2	100	81.3	9.2
	Men	51.5	60.7	74.1	83.3	100	73.5	12.9	62.3	69.6	76.8	85.4	91.5	77	9.4	56.9	69.8	77.8	86.5	93.8	78.1	10.2
Pebane	PW	28.1	57.8	72.5	76.8	93.3	68.1	13.2	11.1	58.2	66.7	75.2	100	66.2	15.2	16.7	50	66.7	85.7	100	66.3	25.5
	Non PW	15.4	55.7	64	74.1	91.5	64.1	14	23.5	54.9	67.2	74.6	89.2	65	14.2	35.3	60.5	73.5	81.7	96.2	71.6	14.1
	Men	16.7	47.1	57.1	66.7	92	57.4	15.2	12.5	51.4	60.4	67.7	86.1	59.2	13.8	15.4	55.3	66.3	73.5	97.1	64.3	14.6
Quelimane	PW	28.8	51	67.7	83.2	97.6	66.5	19	22.9	53.7	71.9	83.6	97.2	68.2	18.9	7.7	58.3	72.7	100	100	71.9	24.8
	Non PW	29	48.8	59	70	86.4	58.8	14.2	30.8	54.7	64.1	74	89.2	63.4	13.6	34.5	57.3	70.1	76	95.9	67.3	13
	Men	12.5	39.5	54.4	67.9	82	53.1	17.9	25.5	50	59.8	71.2	83.8	59.6	14.5	27.9	55.1	63.9	72.8	91.6	63	13.6
All districts	PW	10	58.8	72.7	84.6	100	70.9	18.2	11.1	57.9	71.4	86.4	100	70.9	19.7	7.7	58.3	80	100	100	76.3	24.2
	Non PW	12.5	52.1	66.7	79.7	100	64.9	19.1	9.1	56.2	69.2	82.4	100	68.2	18.6	10	60	73.8	85.7	100	72	18.5
	Men	9.1	46.2	61.5	80	100	62.2	22.1	12	50	64.6	79.7	100	64.3	19.2	12.5	55.6	68.8	81.8	100	67.8	19

NOTE: Please see **Appendix 2 Supplemental Results** for **Figures S13a, S13b**, and **S13c** representing trends in proportions without an IIT < 3 months after ART initiation, among all three groups and by age categories.

Model results comparing proportions experiencing an IIT < 3 months across groups

Overall, during the evaluation period, monthly proportion of IIT within 3 months of ART initiation for each group decreased from approximately 55% to 20%.

Trends of decreasing proportion of IIT by 3 months were more pronounced for PW. Men and non-PW had consistently higher proportions of early IIT than PW, especially from 2015 to 2019, however, improvements for these two groups were seen from late 2019 on. Notably, proportions of IIT by 3 months for all three groups appeared to converge and approached ~20% in early 2020, at the start of COVID-19 mitigation measures, but differences were reemerging, with men having slightly higher proportion by the end of the evaluation period (see **Figure 25** below).

Looking at the time span around April 2020 when the COVID-19 mitigation measures were put in place in Mozambique, it appears COVID-19 did not have noticeable effect on the IIT < 3 months for any of the three groups, as there was no obvious change of trend for each group.

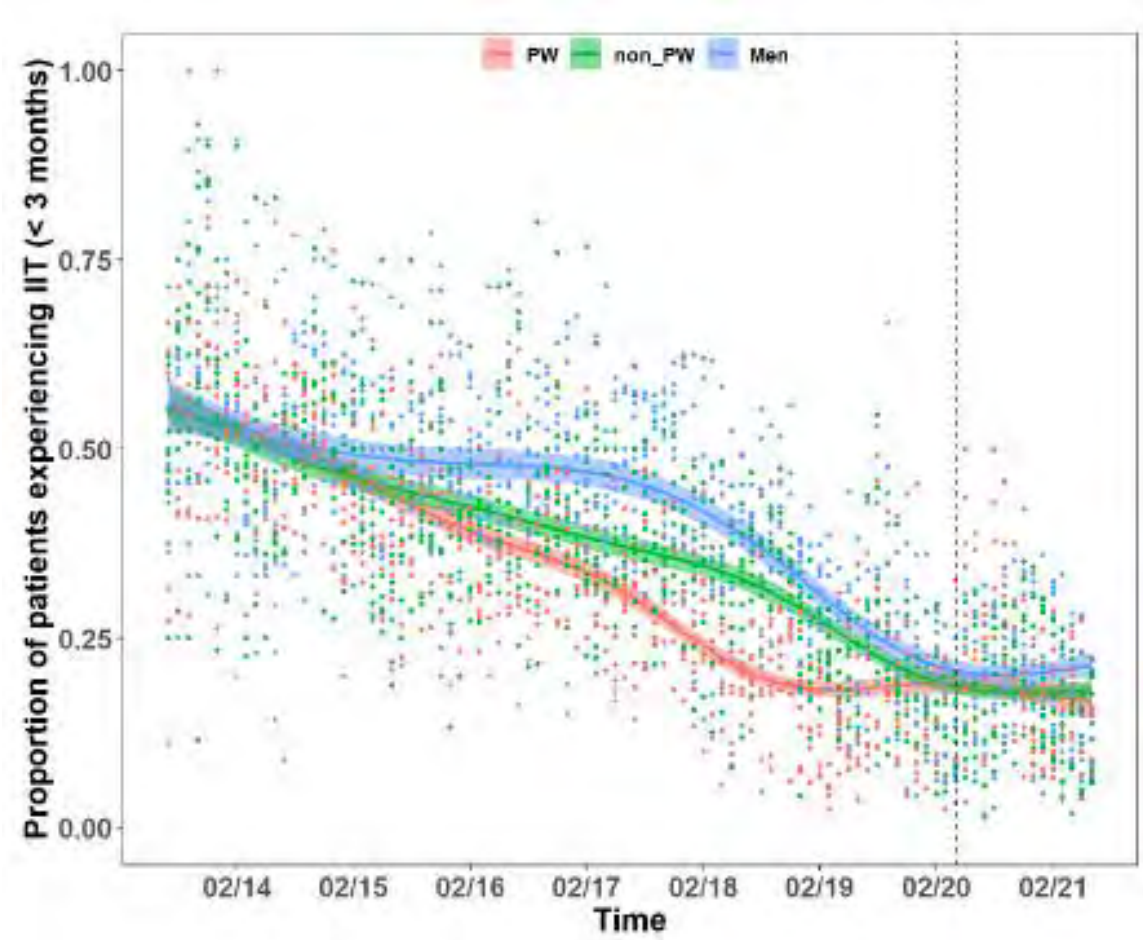

Figure 25. Trends in proportions of patients experiencing an IIT < 3 months, all groups, over time. (Dotted line: time point when COVID-19 mitigations were put in place in Mozambique.)

IIT 3-5 months after initiating ART

Monthly proportions of patients who did not experience an IIT within 3-5 months of ART initiation for all groups increased from 2013 – 2021 (see **Figure 26** below), with some variations seen among the groups.

Figure 26. Percentage of patients without an IIT 3-5 months after ART initiation, per district, by group, over time. (Dotted line: time point when COVID-19 mitigations were put in place in Mozambique.)

Table 14. Percentages of patients without an IIT 3-5 months after ART initiation, per district, by group, by age category, over time.

		15-24 years of age							25-34 years of age							35-49 years of age						
District	**Group**	Min	Q1	Median	Q3	Max	Mean	SD	Min	Q1	Median	Q3	Max	Mean	SD	Min	Q1	Median	Q3	Max	Mean	SD
Alto Molócuè	PW	11.1	42.9	55.6	73.2	100	56.8	23.5	16.7	45.5	66.7	83.3	100	63.4	24.3	33.3	62.5	100	100	100	83.9	24.9
	Non PW	25	48.6	57.4	71.4	100	58.3	19.3	20	50	60	79.3	100	63	21.1	14.3	50	66.7	83.3	100	66.5	22.5
	Men	14.3	50	62.5	100	100	66.3	25.2	16.7	43.4	58.3	73.3	100	59	21.5	9.1	51.1	69.6	85.7	100	68.9	22
Gilé	PW	13	41.7	55.6	75	100	56	20.8	12.5	45.8	60	80	100	62.2	23.6	25	50	90	100	100	74.6	28
	Non PW	14.3	50	62.5	80	100	62.5	22.6	14.3	50	66.7	84.5	100	67.9	23	20	50	72.7	92.1	100	71.8	22.5
	Men	14.3	50	60	80	100	62.1	22.5	14.3	42.9	65.2	81	100	62.3	23.8	16.7	50	60	77.1	100	63.7	19
Gurué	PW	20	66.7	82.6	90.7	100	77.4	20.4	45.5	57.8	80.3	100	100	78.9	21.3	50	100	100	100	100	93.3	17.6
	Non PW	45.5	71.7	78.9	86.6	100	77.7	13.3	37.5	74.5	87.8	98.5	100	83.6	16.8	33.3	76.2	85.7	100	100	84.2	18.3
	Men	33.3	71.4	100	100	100	83.8	19.4	50	77.1	84.6	98.6	100	82.8	16.5	50	75	80	90	100	80.2	14.9
Ile	PW	14.3	45.6	56.5	72.6	100	59	20.1	12.5	40.9	62.5	80	100	61.2	24.2	25	50	75	100	100	73.4	26.3
	Non PW	16.7	42.9	58	71.4	100	58.6	18.8	12.5	50	60	71.4	100	59.9	20.5	20	60	75	85.7	100	72.8	18.7
	Men	16.7	41	53.3	91.7	100	60.2	27.3	20	42.9	57.1	71.1	100	58.3	18.6	16.7	50	62.5	75.8	100	64.7	20
Inhassunge	PW	16.7	50	66.7	75	100	64.6	19	11.1	50	64.3	76.8	100	63.3	20.1	20	50	75	100	100	75.1	24.9
	Non PW	16.7	42.9	61.5	75	100	61.6	22.3	16.7	50	65.5	78	100	64.2	19.4	25	60	69.2	83.3	100	69.3	17.5
	Men	16.7	46.7	58.5	78.3	100	61.6	22.1	16.7	44.6	61	70.7	100	58.8	18	20	50	62.5	75.9	100	63.5	20.1
Lugela	PW	14.3	50	62.5	74.6	92.9	60.6	19.3	33.3	43.3	60	85.7	100	64.7	24.2	33.3	100	100	100	100	91.7	21.4
	Non PW	11.1	50	65.7	83.3	100	67	22	16.7	57.1	68	77.8	100	65.4	19.9	33.3	60	80	85.7	100	73.6	18.3
	Men	20	33.3	50	60	100	50.3	21.4	25	50	58.5	69.2	100	59.8	15.3	40	51.1	65.7	71.1	100	63.6	14.3
Maganja da Costa	PW	16.7	44.7	57.6	73.9	96.2	59.7	19.6	9.1	45.5	58.3	72.7	95.7	58.4	19.3	14.3	40	64.6	75.7	100	61.3	23.8
	Non PW	11.1	42.9	53.5	68.4	97.6	55.4	18.5	10	47.4	59.5	73.6	100	59.9	19.3	16.7	50	60	75	100	61.4	18.2
	Men	14.3	40	50	71.4	100	55	21.8	14.3	37.5	50	69.5	100	53.8	20.6	15.8	45.4	56.2	66.7	100	57.2	17.6
Milange	PW	50	65.8	77.2	82.2	90.5	74.9	10.9	58.3	69.6	77.3	84.3	100	76.7	9.7	25	75	81.7	89.7	100	79.8	17
	Non PW	44	59.8	71.6	80.5	88.1	69.6	12.7	38.6	67.4	72.8	79.6	88.2	72	11.1	63.6	71.2	80.6	86.8	95.5	79	9.8
	Men	37.5	58.9	71.1	81.3	100	70.5	16.2	50.9	65.8	74	81.2	95.2	73.4	11.4	44.4	66.2	74.2	81.3	94.7	74	11.2
Mocuba	PW	47.6	67.4	70.9	75.9	85.7	71.3	7.6	57.1	68.1	73.8	81.1	89.7	74.4	8.6	33.3	63.8	82.8	100	100	77.8	23.6
	Non PW	40	58.9	66.7	71.7	85.7	65.6	9.9	61.5	66	71.8	76.2	81.2	71.7	5.9	51.6	66.5	74.4	78.8	92.6	72.8	9.6
	Men	40	54.3	63.6	70.6	90.6	63	11.5	44.7	58.8	65.1	70.5	85.7	64.5	9.1	53.8	65.6	71.3	74.9	90.3	70.4	8.5
Mocubela	PW	18.2	50	62.5	74.2	94.1	61.1	17.9	19	48.1	60.8	75	100	60.8	20	16.7	40	60	80	100	61.4	25
	Non PW	20	48	58.8	69.4	91.9	58.5	16.2	20	51.9	62.9	76.9	96.4	62.7	17.2	14.3	52.9	65.2	76.9	100	63.4	18
	Men	16.7	42.6	59.1	66.7	100	55.7	18.3	20	46.2	59	69.5	100	57.9	16.5	20	50	59.6	69.4	91.7	59.6	17
Molumbo	PW	10	60	80	100	100	74.1	27.8	20	61.7	89.4	100	100	79.1	24.5	33.3	100	100	100	100	92.1	20.2
	Non PW	42.9	66.7	78.9	88.1	100	76	16.5	42.9	77.7	84.4	91.5	100	81.8	15.4	50	80.4	88.2	100	100	86.7	14
	Men	20	50	75	90	100	73.1	22.6	36.4	64.4	80.4	88.1	100	76.6	17.3	14.3	67.5	87.5	94	100	80.6	19.5
Namacurra	PW	21.8	41.5	52.3	61.1	82.9	52.5	14.6	21.2	42.9	58.3	66.7	100	56.4	17.1	12.5	50	60	81.7	100	63	24.6
	Non PW	12.5	50	58	65.9	84	57.7	12.1	34.4	58.1	65.5	71.4	85	63.8	11.1	30	62.9	68.6	75.4	87.5	67.4	11.9
	Men	20	42.9	50	57	100	49.6	14.5	16.7	47.7	57.1	64.3	80	55.2	13.6	25	52.3	61.4	68.8	85	60.5	12.1
Nicoadala	PW	48.4	62.2	68.8	72.2	84.6	68	8.3	36.4	64.8	72.3	81	92.9	72.3	12.3	33.3	66.7	75	100	100	78.5	21
	Non PW	44.4	56.8	64	68.8	81.7	62.3	9.7	48.9	62	65.6	76.8	89.2	68.3	9.8	52.2	65.2	72.8	78	89.7	72.2	9.5
	Men	40	52.6	62.9	66.7	78.3	61.7	10.4	45.9	52.3	57.4	70.3	78.2	60.8	10.3	40.7	57	64	72	85.7	64.5	10.6
Pebane	PW	20	50	59.2	71.6	92.9	59.9	15.7	18.2	53.8	64.2	72.9	89.5	62.6	13.9	25	50	66.7	100	100	72.6	23
	Non PW	18.5	56.2	66.7	72.7	87.5	63.4	13.8	30	57.1	66.7	72.3	92.3	64.6	13.2	16.7	63.6	69.7	78.1	96.3	69.3	14.8
	Men	16.7	50	61	69.9	100	60.6	16.7	20	51	62.5	69.7	82.6	60.2	12.6	28.6	56.1	64.3	70.8	87.5	63.2	12.2
Quelimane	PW	27.4	43.6	62.1	72.2	87.5	59.2	17.2	23.1	54.3	65.1	74.2	88.6	62.8	15	25	50	71.4	90	100	70.9	22.9
	Non PW	31.7	54.5	62.2	68.9	84.8	61.3	12	38.7	58	64.7	71.6	81.9	64	10.2	39.3	62.9	73.1	78.6	92.7	70.1	11.8
	Men	9.1	46.1	55.4	64.3	88.9	54.4	15.8	23.5	52.2	60	67.9	80.4	58.9	11.9	26.3	56	65	70.9	83.5	62.4	12
All districts	PW	10	47.6	61.3	75	100	60.9	19.4	9.1	50	64.3	77.8	100	63.6	20.4	12.5	50	75	100	100	71.9	25.3
	Non PW	11.1	50	62.5	72.7	100	61.5	17.7	10	53.8	66.7	76.9	100	65.2	17.8	14.3	59.4	71.4	81.5	100	69.8	17.8
	Men	9.1	46.7	58.1	72.2	100	59.7	21	14.3	48.6	60	71.8	100	60.3	18.1	9.1	52.9	64.3	75	100	64.3	17.3

NOTE: Please see **Appendix 2 Supplemental Results** for **Figures S14a, S14b**, **S14c** representing trends in proportions without an IIT 3-5 months after ART initiation, among all three groups, by age categories.

Model results comparing proportions experiencing an IIT 3-5 months across groups

Overall, the monthly IIT 3-5 months proportions for each group decreased along time over the evaluation period (see **Figure 27** below). Monthly proportions decreased from approximately 65% to 19% for PW, from approximately 51% to 20% for non-PW, and from approximately 56% to 24% for men.

Greater variation was seen among groups for IIT at 3-5 months: higher proportion of PW experienced an IIT 3-5 months from 2013 to early 2016, while non-PW and men had approximately biennial (every 2 years) increases in IIT 3-5 months from 2013 to 2018. After 2018, IIT 3-5 months trends consistently decreased for all groups.

It seems that COVID-19 mitigation measures did not have noticeable effect on the proportion of IIT 3-5 months for any group, as there was no obvious change of trend for each group.

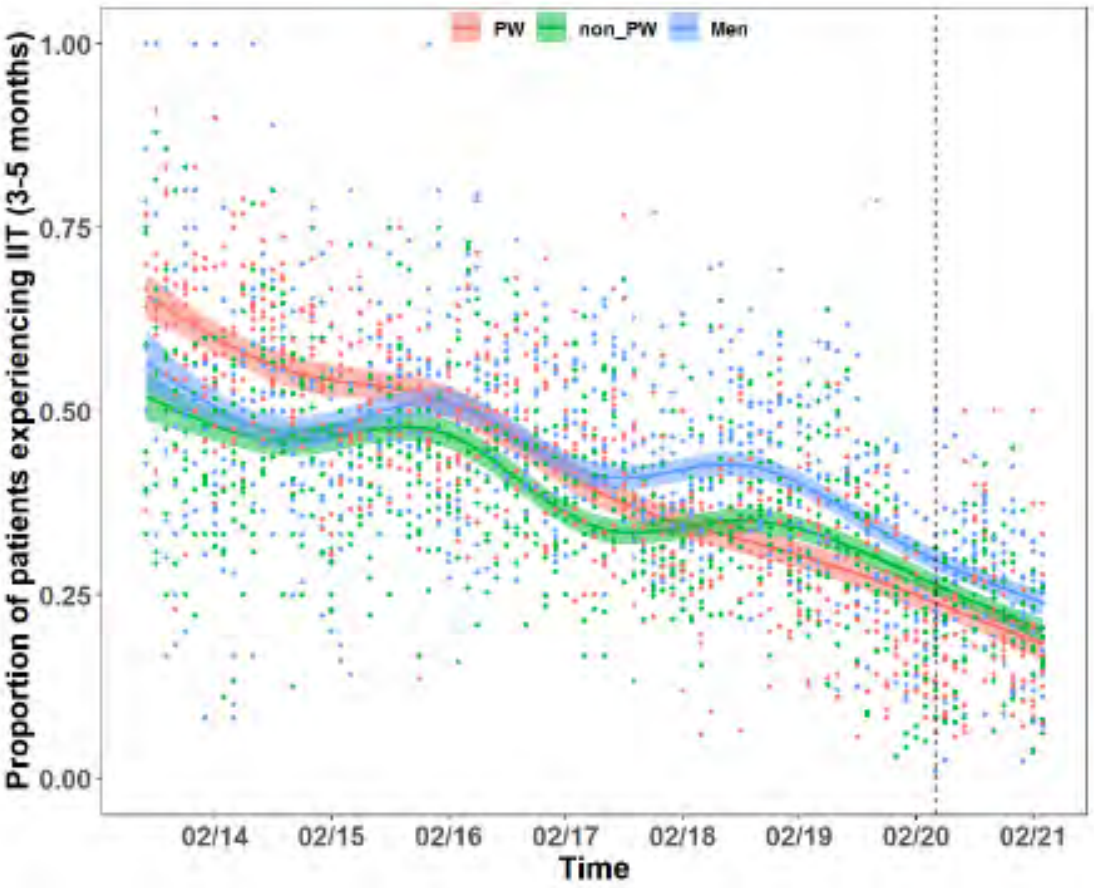

Figure 27. Trends in proportions of patients experiencing an IIT 3-5 months, all groups, over time. (Dotted line: time point when COVID-19 mitigations were put in place in Mozambique.)

IIT >= 6 months after initiating ART

Monthly proportions of patients who did not experience an IIT by 6 or more months after ART initiation for all groups increased from 2013 to 2021 (see **Figure 28** below), with some variations seen among the groups.

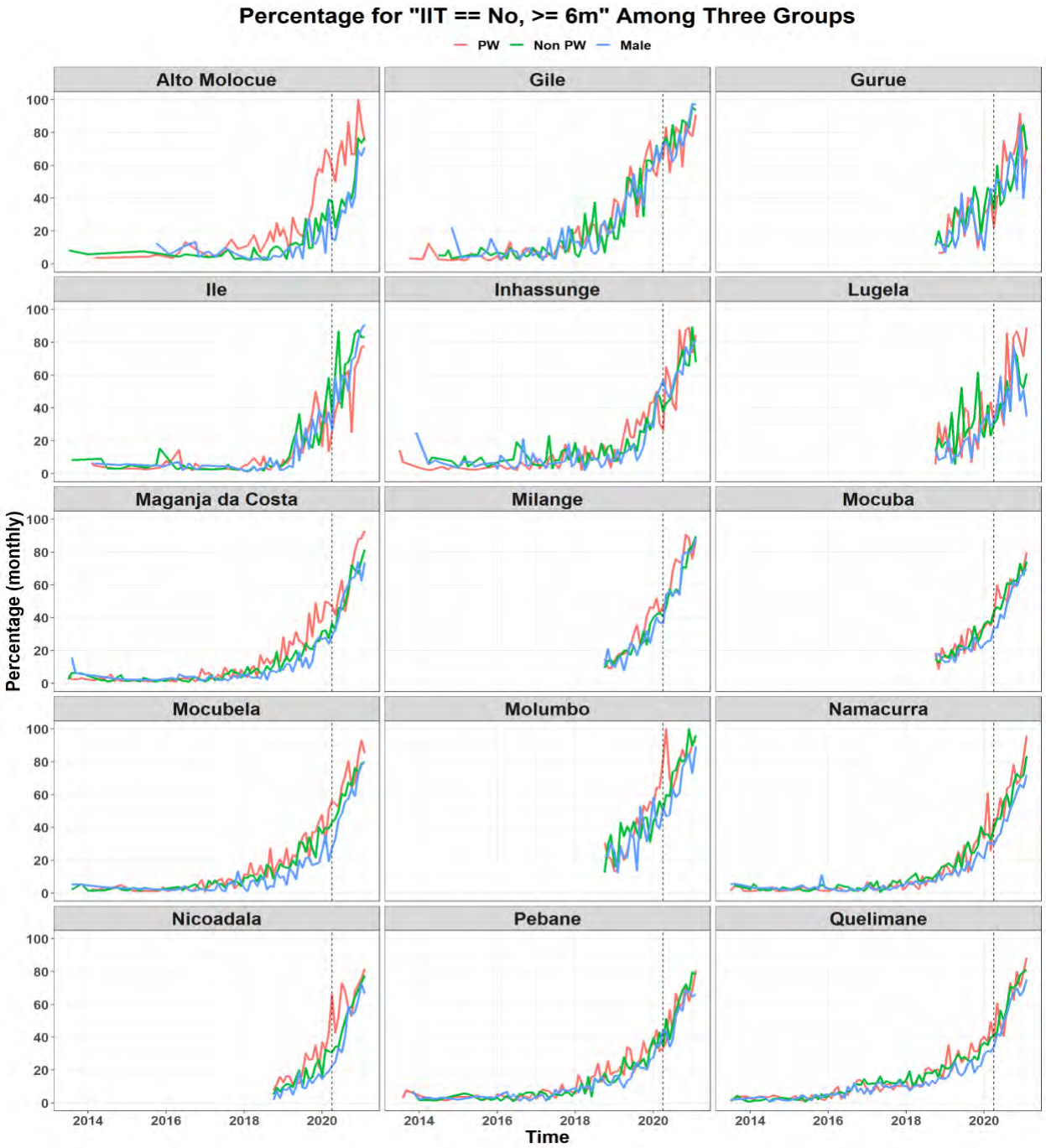

Figure 28. Percentage of patients without an IIT >= 6 months after ART initiation, per district, by group, over time. (Dotted line: time point when COVID-19 mitigations were put in place in Mozambique.)

Table 15. Percentages of patients without an IIT >= 6 months after ART initiation, per district, by group, by age category, over time.

		15-24 years of age							25-34 years of age							35-49 years of age						
District	**Group**	Min	Q1	Median	Q3	Max	Mean	SD	Min	Q1	Median	Q3	Max	Mean	SD	Min	Q1	Median	Q3	Max	Mean	SD
Alto Molócuè	PW	5.3	13.4	25	56.9	100	36.8	27.1	10	16.7	40	71.4	100	45.7	31.1	25	50	66.7	100	100	72.8	28.3
	Non PW	3.8	13.5	24.5	41.2	71.4	29.1	19.7	4.5	11.9	16.4	37.6	87.5	27.1	22.1	11.1	16.7	25	37.5	81.8	31.7	19.4
	Men	10	20	25	50	100	37.6	25	3.4	7.9	13.3	30.1	71.9	21	19.3	6.2	14.6	22.2	41.5	75	30	19.9
Gilé	PW	2.9	6.7	15.4	53.9	88.9	29.5	28	6.2	14.3	25.9	66.7	100	39.8	29.8	20	33.3	50	100	100	66.1	34
	Non PW	8.3	14.3	36.4	62	100	41	28.5	9.1	14.3	33.3	66.7	100	40.6	29.3	7.7	17.8	38	74.5	100	45.5	32.1
	Men	7.1	11.1	30	55.6	100	35.8	27.3	4	8.9	22	53.2	100	33.5	28.4	7.1	18.8	38.5	63	100	42.1	28.1
Gurué	PW	9.1	20.6	34.8	55.3	85.7	39	22.6	18.2	37.5	50	66.7	100	54	25.6	100	100	100	100	100	100	0
	Non PW	5.9	22.2	33.3	48.1	69.2	35.7	19.1	9.1	21.1	36.4	53.1	92.3	41.8	25.8	14.3	35.7	50	66.7	100	51.4	26.2
	Men	11.1	18.4	33.3	50	80	36.3	21.1	7.7	16.3	26.1	52.5	88.9	36.6	24.8	8.3	25	41.7	57.1	91.7	40.3	21.7
Ile	PW	2.9	5	7.7	37.5	100	23.1	27	5.6	11.1	16.7	33.3	100	29.8	27.4	14.3	23.3	50	87.5	100	53.2	35.2
	Non PW	2.6	8.2	17.8	51.4	100	29.7	28.3	2	6.2	14.3	50	100	29.3	29.8	3.6	16.7	25	62.5	100	39	31.9
	Men	5.3	16.7	25	58.4	100	38.6	32.3	2.2	7.7	14.3	35.9	100	25.1	25.2	2.9	8	20	50	100	31.4	28.2
Inhassunge	PW	3.6	6.2	15.4	37.5	100	27.2	26.5	4.5	7.7	18.2	40	100	26.6	25.2	20	25	50	50	100	52.1	29.9
	Non PW	8.3	14.9	21.1	41	100	30.4	23	3.8	9.5	20	40	90.9	27.2	22.4	5	14.3	20	44.9	80	29	20.8
	Men	6.2	10.5	20	50	100	31.3	27	2.8	7.8	12.5	40.4	82.6	23.5	22.7	3.2	12.3	17	46	87.5	28.8	23.5
Lugela	PW	7.7	13.4	30	50	87.5	35.2	24.7	10	26.1	50	75	100	53.3	31.4	33.3	50	75	100	100	72.2	31
	Non PW	10.5	18.2	33.3	47.8	100	37.1	23.9	11.1	27.3	42.9	55.6	66.7	41.8	17.1	12.5	33.3	40	63.3	85.7	46.1	21.7
	Men	12.5	25	31	47.5	100	35.8	21.2	8.3	14.3	27.3	38.2	77.8	29.4	17.3	8.3	21.1	33.3	50	88.9	36.9	22.3
Maganja da Costa	PW	2.6	5.2	13.2	38.2	100	24.9	26.2	2.2	5.8	12.3	37.7	90	23.7	24.5	9.1	16.7	42.9	58.5	100	42.1	25
	Non PW	2.9	6.5	13.6	26	84.2	21.3	21.8	2.2	4.5	9	23.5	80	18.6	20.5	2.9	7.2	15.5	31.8	89.3	23.8	22
	Men	4.8	12.7	29.6	50	91.7	34.7	25.5	1.9	5.4	8	22.4	70.4	17.8	19.9	2.9	6.7	10.6	26.7	80	20.8	20.5
Milange	PW	6.9	20	38.5	53.6	94.1	42.1	27.2	10.7	22.7	40	66.7	94.7	45.9	26.7	9.1	25	40	65	100	45.9	28
	Non PW	6.7	18.8	37.7	55.9	87.8	39.2	23.6	5.9	14.7	34.7	54.2	91.1	36.4	24.7	4.8	23.1	32.3	57.4	93.9	41.4	25.2
	Men	3.4	14.5	22.2	62.8	88	36.1	28.3	2.9	19	31	50	87.5	36.2	24.9	3.2	25	36	57.7	89.1	42.1	24.9
Mocuba	PW	9.1	17	30.4	54.5	77.4	36.4	21.2	9.4	28.6	37.5	53.8	86.4	40.8	19.1	11.1	25	41.6	54.2	100	46.4	27.3
	Non PW	5.9	15.7	27.3	36.8	73.1	30.6	20.5	10.6	20	34.5	52.8	73.9	37.8	19.3	14.3	27.6	45.1	65.2	83.3	45.5	20.6
	Men	2.5	14.3	25	35.7	76	27.6	18.5	8.6	17.6	22	38.6	68.6	29.8	18	14	20.4	28.6	51.6	79.6	37.7	20.5
Mocubela	PW	1.8	5.3	12.5	37.5	93.3	24.3	24.9	2.4	6.2	13.6	44.2	93.3	26.8	27.4	8.3	22.5	50	87.5	100	50.4	34
	Non PW	2.8	6.3	10.7	32.4	84.2	21.5	21.5	1.9	5.2	12.1	35.2	85	23.1	24.3	2.4	8.2	20	42.9	94.1	28.5	24.4
	Men	3.4	5.9	12.9	34.6	76.9	21.8	21	2.1	6	12.5	31.1	83	22.2	22.6	2.8	6.4	16.7	29.1	100	24.2	23.4
Molumbo	PW	12.5	27.3	50	81.8	100	55.6	29.9	11.1	35.4	58.3	77.5	100	59.9	28.6	25	50	66.7	100	100	67.6	27.1
	Non PW	5.6	28	40	66.7	100	48.8	27.2	6.2	35.7	50	75	100	53.8	26.7	8.3	40	53.8	64.3	100	54.9	25.2
	Men	16.7	33.3	40	66.7	83.3	47.1	20.5	4.2	30.2	37.5	61.5	90	43.8	23.2	10	33.3	55.6	70	100	54	25.2
Namacurra	PW	1.4	2.9	5.6	20.7	100	17.4	23.4	1.8	4.4	9.3	29.4	93.3	21.1	24.8	11.1	17.1	33.3	55	100	41.6	27.6
	Non PW	1.7	5	10	25.6	81.4	18.4	19.4	1.4	4.7	8.9	26	84.4	19.8	22.4	1.6	5.3	15.2	32.4	86.2	23.9	23.8
	Men	1.8	4.8	10	27.1	65.5	18.3	17.8	1.4	4.1	7.2	22.5	70.5	16.9	19	2.1	6.8	13.9	28.3	87	21.6	20.4
Nicoadala	PW	2	14.1	35.6	51.6	81.2	36.6	24	8	15.4	34.5	58.3	100	39.2	25.7	10	33.3	50	100	100	59.3	33.3
	Non PW	1.9	9.5	21.8	38.5	80.4	27.5	21.8	4.4	13.5	22.2	42.6	77.6	30.4	22.7	2.5	14.8	29.5	56.7	88	35.9	24.1
	Men	2.4	9.4	16.7	31.9	85	23.4	20.6	3.6	9.8	16.8	36	67.6	25.1	20.2	5.9	13.4	19.7	41.4	94.7	29.9	25
Pebane	PW	1.6	6.6	13.9	30.4	80	22.1	21.2	3	7.1	17.6	36.4	83.3	22.9	20	9.1	25	33.3	67.5	100	46.4	30.8
	Non PW	2.2	5.7	11.1	25.4	75	19.3	19.3	3.1	6.9	17.6	33.6	88.9	24.3	22.8	3.6	5.7	15.8	38.1	90	25.5	24.1
	Men	2.6	7.8	13	28.3	71.4	19.9	17.6	2.1	6.4	12.5	22.5	81.2	19.7	20	3	7.1	16	32.9	76.9	22.9	19.9
Quelimane	PW	1.2	4.7	10.3	25.2	84.6	18.1	19.9	1.8	6.8	13.1	32.7	95.5	22.6	22.3	4	14.3	23.1	60	100	35.8	29.7
	Non PW	2	5.4	9.4	20	80	17.4	19.3	1.4	4.8	13.1	26.3	85.5	20	20.7	2.2	8.8	18.6	36.6	86	26.1	22.6
	Men	2.3	5.7	9.1	17.6	82.1	17.2	18.7	1.8	7.2	11.5	22.8	77.8	18.5	18.3	1.9	9.5	15.1	29.9	77.6	23	19.8
All districts	PW	1.2	6.7	18.2	42.9	100	27.9	26.2	1.8	9.5	21.4	50	100	32.5	28	4	25	50	75	100	50	31.5
	Non PW	1.7	8.7	18.2	40	100	27.2	23.8	1.4	8.6	20	42.6	100	28.7	25.2	1.6	12.2	25	50	100	33.6	26.1
	Men	1.8	9.1	20	44.4	100	28.4	24.1	1.4	7.5	15.5	37.2	100	24.9	22.8	1.9	10.7	21.4	47.4	100	30.3	24.3

NOTE: Please see **Appendix 2 Supplemental Results** for **Figures S15a, S15b**, **S15c** representing trends in proportions without an IIT >= 6 months after ART initiation, among all three groups, by age categories.

Model results comparing proportions experiencing an IIT >= 6 months across groups

Overall, the monthly IIT >= 6 months proportions for each group were always greater than 90% before March 2018, then proportions for each group had a rapid downward trend starting in 2019 and arrived at approximately 20-25% for each group by the end of the evaluation period (see **Figure 29** below).

It seems that COVID-19 mitigation measures did not have noticeable effect on the proportion of IIT >= 6 months for any group, as there was no obvious change of trend for any group.

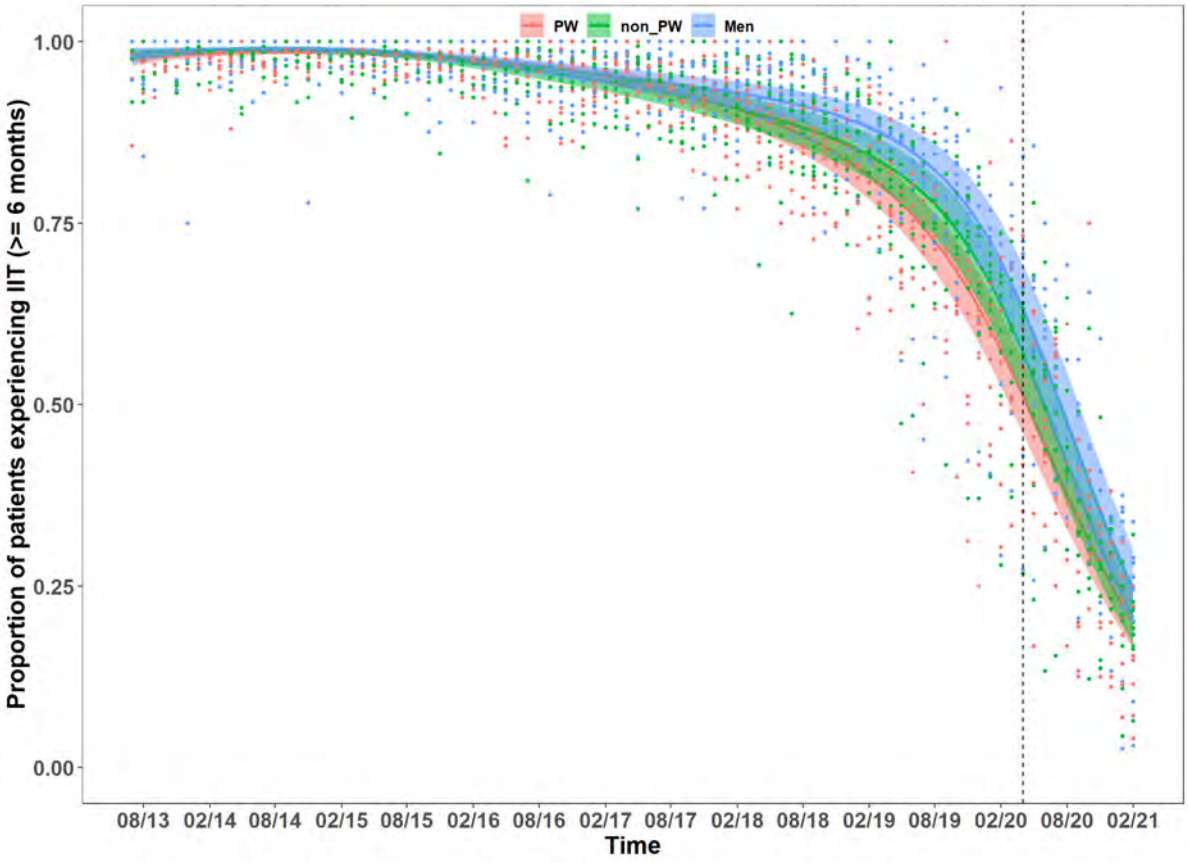

Figure 29. Trends in proportions of patients experiencing an IIT >= 6 months, all groups, over time. (Dotted line: time point when COVID-19 mitigations were put in place in Mozambique.)

Sub-analysis: Assessing for changes in MCH outcomes trends following COVID-19 restrictions

HEI EID Testing Coverage (< 2 and < 9 months of age)

Table 16. Proportions for HEI EID testing coverage at < 2 months and < 9 months of age pre- and post-COVID-19 mitigation measures in place, by district.

		< 2 months of age							< 9 months of age						
District	**Group**	Min	Q1	Median	Q3	Max	Mean	SD	Min	Q1	Median	Q3	Max	Mean	SD
Alto Molócuè	Pre_COVID-19	0.357	0.525	0.714	0.771	0.915	0.657	0.168	0.443	0.595	0.833	0.911	1	0.765	0.186
	Post_COVID-19	0.617	0.78	0.951	1	1	0.881	0.131	0.702	0.857	0.976	1	1	0.921	0.099
	All	0.357	0.704	0.778	0.951	1	0.773	0.186	0.443	0.776	0.893	1	1	0.846	0.165
Gilé	Pre_COVID-19	0.426	0.569	0.625	0.914	1	0.686	0.202	0.471	0.632	0.756	1	1	0.773	0.196
	Post_COVID-19	0.636	0.726	0.918	0.983	1	0.871	0.136	0.754	0.878	0.985	1	1	0.929	0.096
	All	0.426	0.635	0.851	0.948	1	0.782	0.192	0.471	0.754	0.911	1	1	0.854	0.169
Gurué	Pre_COVID-19	0.405	0.513	0.563	0.625	0.662	0.552	0.083	0.446	0.582	0.71	0.828	0.859	0.691	0.146
	Post_COVID-19	0.351	0.617	0.871	1	1	0.767	0.239	0.459	0.702	1	1	1	0.853	0.194
	All	0.351	0.541	0.625	0.871	1	0.664	0.209	0.446	0.636	0.828	1	1	0.775	0.188
Ile	Pre_COVID-19	0.426	0.52	0.585	0.715	0.804	0.61	0.13	0.426	0.623	0.655	0.814	0.893	0.696	0.139
	Post_COVID-19	0.448	0.739	0.959	1	1	0.842	0.192	0.552	0.83	1	1	1	0.902	0.156
	All	0.426	0.556	0.739	0.959	1	0.73	0.2	0.426	0.627	0.83	1	1	0.803	0.179
Inhassunge	Pre_COVID-19	0.62	0.752	0.82	0.93	1	0.837	0.12	0.646	0.795	0.853	1	1	0.876	0.117
	Post_COVID-19	0.575	0.756	0.819	1	1	0.857	0.139	0.603	0.787	0.861	1	1	0.868	0.133
	All	0.575	0.754	0.819	0.987	1	0.847	0.128	0.603	0.788	0.861	1	1	0.872	0.123
Lugela	Pre_COVID-19	0.431	0.491	0.597	0.688	0.738	0.593	0.104	0.5	0.654	0.757	0.878	1	0.758	0.163
	Post_COVID-19	0.5	0.723	1	1	1	0.864	0.191	0.548	0.766	1	1	1	0.892	0.165
	All	0.431	0.574	0.692	1	1	0.734	0.206	0.5	0.699	0.863	1	1	0.828	0.174
Maganja da Costa	Pre_COVID-19	0.588	0.84	0.956	1	1	0.893	0.145	0.788	0.946	1	1	1	0.956	0.078
	Post_COVID-19	0.65	0.93	1	1	1	0.941	0.103	0.847	1	1	1	1	0.985	0.043
	All	0.588	0.865	1	1	1	0.918	0.125	0.788	1	1	1	1	0.971	0.063
Milange	Pre_COVID-19	0.429	0.636	0.763	0.974	1	0.781	0.201	0.604	0.699	0.902	0.996	1	0.851	0.159
	Post_COVID-19	0.754	0.932	0.989	1	1	0.957	0.071	0.772	0.939	1	1	1	0.962	0.066
	All	0.429	0.754	0.966	1	1	0.873	0.17	0.604	0.838	0.975	1	1	0.908	0.13
Mocuba	Pre_COVID-19	0.567	0.726	0.76	0.793	0.881	0.758	0.08	0.678	0.865	0.888	0.925	0.98	0.883	0.078
	Post_COVID-19	0.576	0.687	0.827	0.922	1	0.809	0.142	0.667	0.768	0.924	1	1	0.886	0.12
	All	0.567	0.714	0.782	0.844	1	0.785	0.117	0.667	0.841	0.89	0.979	1	0.885	0.1
Mocubela	Pre_COVID-19	0.793	0.987	1	1	1	0.97	0.065	0.939	1	1	1	1	0.995	0.018
	Post_COVID-19	0.697	1	1	1	1	0.963	0.087	0.725	1	1	1	1	0.975	0.076
	All	0.697	0.989	1	1	1	0.966	0.076	0.725	1	1	1	1	0.985	0.056
Molumbo	Pre_COVID-19	0.327	0.581	0.605	0.765	1	0.665	0.19	0.531	0.725	0.772	0.917	1	0.802	0.144
	Post_COVID-19	0.667	0.889	1	1	1	0.917	0.135	0.783	1	1	1	1	0.964	0.074
	All	0.327	0.615	0.767	1	1	0.796	0.205	0.531	0.778	0.93	1	1	0.886	0.138
Namacurra	Pre_COVID-19	0.631	0.735	0.826	0.915	1	0.826	0.132	0.684	0.785	0.893	0.966	1	0.869	0.12
	Post_COVID-19	0.772	0.85	0.921	1	1	0.918	0.088	0.848	0.92	1	1	1	0.954	0.059
	All	0.631	0.783	0.877	1	1	0.874	0.118	0.684	0.852	0.944	1	1	0.913	0.101
Nicoadala	Pre_COVID-19	0.671	0.844	0.982	1	1	0.921	0.112	0.75	0.938	1	1	1	0.953	0.082
	Post_COVID-19	0.723	0.802	0.841	0.993	1	0.873	0.107	0.778	0.913	0.979	1	1	0.946	0.076
	All	0.671	0.806	0.939	1	1	0.896	0.11	0.75	0.913	1	1	1	0.949	0.078
Pebane	Pre_COVID-19	0.513	0.696	0.809	0.869	0.987	0.781	0.141	0.577	0.773	0.913	1	1	0.862	0.146
	Post_COVID-19	0.638	0.803	0.838	1	1	0.862	0.124	0.674	0.911	0.945	1	1	0.924	0.102
	All	0.513	0.716	0.838	0.947	1	0.823	0.136	0.577	0.823	0.933	1	1	0.895	0.127
Quelimane	Pre_COVID-19	0.673	0.707	0.746	0.851	0.996	0.79	0.107	0.711	0.773	0.804	0.919	1	0.844	0.103
	Post_COVID-19	0.798	0.862	0.877	1	1	0.905	0.075	0.831	0.886	0.915	1	1	0.924	0.063
	All	0.673	0.751	0.862	0.93	1	0.85	0.107	0.711	0.813	0.898	0.966	1	0.886	0.092

In the pre-COVID-19 period, the proportion of HEI EID < 2 months has no significant change. But in the post-COVID-19 period, the proportion increases along time, with the odds of HEI less than 2 months being diagnosed increases about 4.1% every month (OR 1.041 [0.736-1.470], p=0.824). The odds increase to ~1.7 times (OR 1.723 [1.218-2.439], p=0.002) (compared to an assumptive odds at this time if there is no COVID-19) immediately after COVID-19 mitigation measures started, and this instantaneous change is statistically significant. Overall, the trends of the proportion of HEI EID testing coverage by 2 months is different in the pre- and post-COVID-19 periods (see **Figure 30a** below) because of a statistically significant *Time*COVID-19* interaction term (OR 1.046 [1.031-1.061], p<0.001).

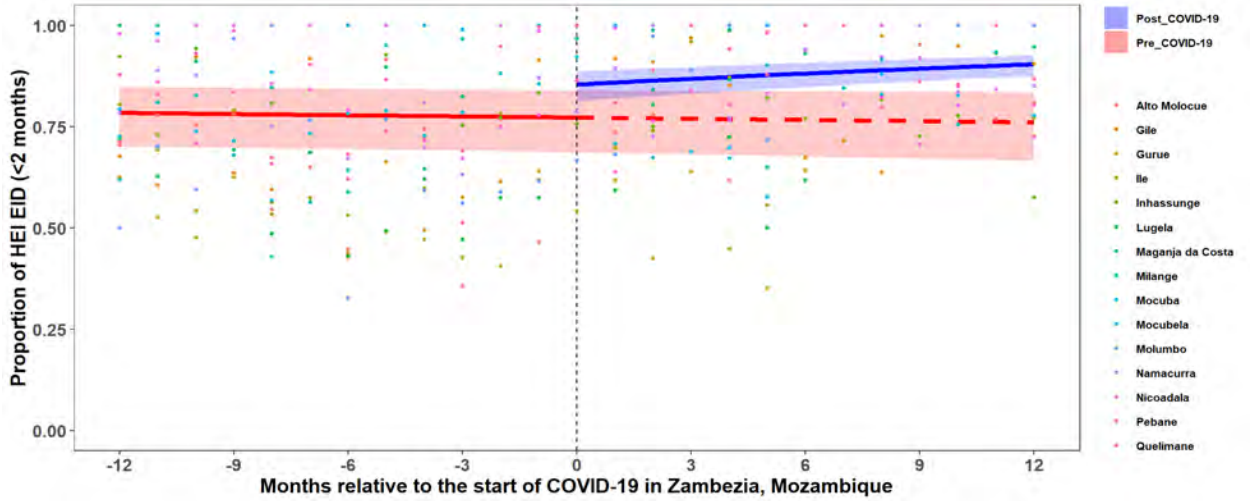

Figure 30a. Comparisons for HEI EID testing coverage by 2 months of age pre- and post-COVID-19 mitigation measures starting (as represented by dotted line).

In the pre-COVID-19 period, the proportion of HEI with EID testing coverage by 9 months significantly decrease, with the odds of HEI less than 9 months being tested decreasing about 4.4% every month. But in the post-COVID-19 period, the odds increase about 4.7% every month (OR 1.047 [0.682-1.610], p=0.832). The odds increase to ~1.9 times (OR 1.94 [1.26-2.98], p=0.003) (compared to an assumptive odd at this time if there is no COVID-19) immediately after COVID-19 started (April 2020), and this instantaneous change is statistically significant. Overall, the trend of the proportion of HEI EID testing coverage by 9 months is different in the pre- and post-COVID-19 periods (see **Figure 30b** below) because of a statistically significant *Time*COVID-19* interaction term (OR 1.095 [1.076-1.115], p<0.001).

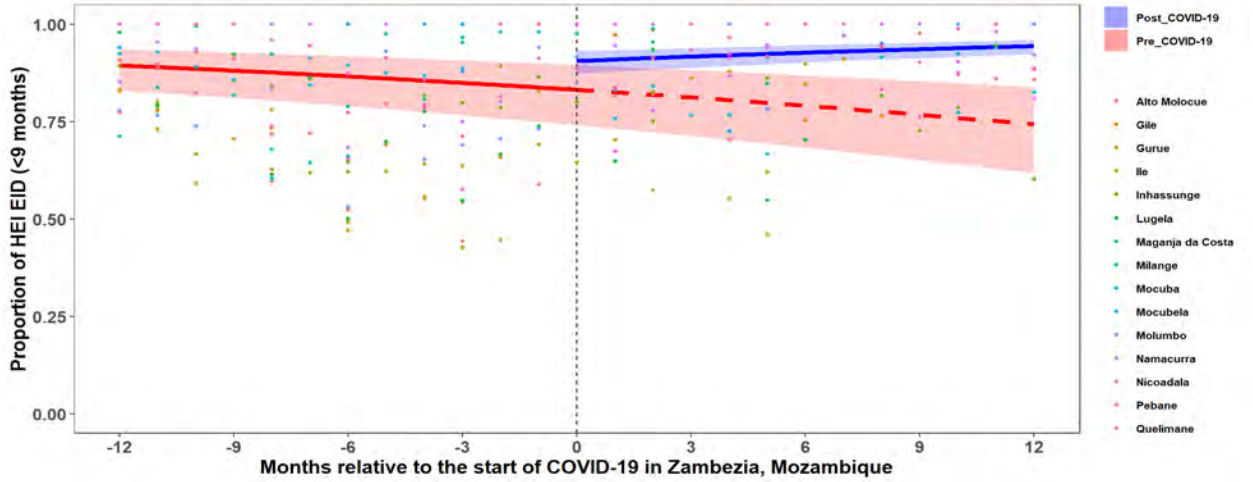

Figure 30b. Comparisons for HEI EID testing coverage by 9 months of age pre- and post-COVID-19 mitigation measures starting (as represented by dotted line).

HEI DNA PCR Positivity (< 2 and < 9 months of age)

Table 17. Proportions for HEI DNA PCR positivity at < 2 months and < 9 months of age pre- and post-COVID-19 mitigation measures in place, by district.

		< 2 months of age							< 9 months of age						
District	**Group**	Min	Q1	Median	Q3	Max	Mean	SD	Min	Q1	Median	Q3	Max	Mean	SD
Alto Molócuè	Pre_COVID-19	0	0	0.048	0.066	0.115	0.045	0.039	0	0.043	0.06	0.076	0.143	0.063	0.044
	Post_COVID-19	0	0	0.038	0.05	0.111	0.033	0.033	0	0.031	0.038	0.05	0.105	0.042	0.034
	All	0	0	0.042	0.056	0.115	0.039	0.036	0	0.032	0.045	0.069	0.143	0.052	0.04
Gilé	Pre_COVID-19	0.04	0.064	0.083	0.153	0.348	0.12	0.09	0.04	0.066	0.103	0.15	0.375	0.127	0.093
	Post_COVID-19	0	0.033	0.056	0.063	0.086	0.046	0.029	0	0.051	0.079	0.088	0.111	0.067	0.033
	All	0	0.05	0.063	0.086	0.348	0.082	0.075	0	0.057	0.083	0.111	0.375	0.096	0.074
Gurué	Pre_COVID-19	0	0	0.032	0.066	0.086	0.033	0.033	0	0.028	0.058	0.064	0.091	0.049	0.029
	Post_COVID-19	0	0	0.026	0.038	0.074	0.024	0.027	0	0	0.023	0.05	0.091	0.03	0.033
	All	0	0	0.027	0.054	0.086	0.028	0.03	0	0	0.047	0.062	0.091	0.039	0.032
Ile	Pre_COVID-19	0	0.029	0.084	0.12	0.158	0.078	0.056	0	0.044	0.078	0.124	0.238	0.085	0.068
	Post_COVID-19	0	0.036	0.059	0.083	0.125	0.059	0.035	0.019	0.033	0.059	0.102	0.185	0.074	0.053
	All	0	0.032	0.062	0.094	0.158	0.068	0.046	0	0.033	0.067	0.114	0.238	0.079	0.06
Inhassunge	Pre_COVID-19	0.016	0.03	0.048	0.062	0.083	0.047	0.023	0.015	0.034	0.062	0.089	0.123	0.06	0.034
	Post_COVID-19	0	0	0.034	0.062	0.078	0.035	0.03	0	0.015	0.042	0.063	0.078	0.039	0.029
	All	0	0.018	0.038	0.062	0.083	0.041	0.027	0	0.018	0.056	0.071	0.123	0.049	0.033
Lugela	Pre_COVID-19	0	0.044	0.06	0.146	0.25	0.099	0.076	0	0.047	0.073	0.157	0.243	0.101	0.074
	Post_COVID-19	0	0.031	0.045	0.071	0.227	0.06	0.059	0	0.038	0.059	0.1	0.179	0.071	0.054
	All	0	0.038	0.057	0.107	0.25	0.079	0.069	0	0.04	0.061	0.121	0.243	0.085	0.065
Maganja da Costa	Pre_COVID-19	0.01	0.02	0.047	0.071	0.16	0.056	0.045	0.022	0.041	0.052	0.091	0.136	0.064	0.035
	Post_COVID-19	0	0.024	0.038	0.056	0.124	0.042	0.03	0.015	0.048	0.057	0.073	0.109	0.057	0.025
	All	0	0.02	0.04	0.057	0.16	0.049	0.038	0.015	0.044	0.056	0.073	0.136	0.06	0.03
Milange	Pre_COVID-19	0	0.018	0.028	0.039	0.065	0.029	0.02	0	0.022	0.03	0.057	0.072	0.037	0.023
	Post_COVID-19	0	0.01	0.015	0.016	0.027	0.013	0.007	0	0.011	0.016	0.021	0.039	0.016	0.01
	All	0	0.01	0.016	0.027	0.065	0.021	0.017	0	0.015	0.021	0.031	0.072	0.026	0.02
Mocuba	Pre_COVID-19	0.025	0.038	0.046	0.051	0.072	0.046	0.014	0.037	0.05	0.064	0.07	0.094	0.061	0.016
	Post_COVID-19	0.012	0.027	0.049	0.056	0.071	0.043	0.019	0.011	0.051	0.06	0.076	0.094	0.059	0.023
	All	0.012	0.036	0.046	0.056	0.072	0.044	0.017	0.011	0.051	0.062	0.07	0.094	0.06	0.02
Mocubela	Pre_COVID-19	0.009	0.016	0.02	0.031	0.082	0.027	0.02	0.009	0.02	0.03	0.046	0.106	0.038	0.027
	Post_COVID-19	0	0.021	0.033	0.047	0.069	0.032	0.02	0.01	0.029	0.045	0.053	0.078	0.042	0.021
	All	0	0.016	0.024	0.044	0.082	0.03	0.02	0.009	0.024	0.033	0.051	0.106	0.04	0.024
Molumbo	Pre_COVID-19	0	0	0	0.049	0.25	0.039	0.072	0	0.04	0.046	0.072	0.2	0.064	0.051
	Post_COVID-19	0	0	0.026	0.048	0.077	0.025	0.027	0	0	0.026	0.049	0.115	0.031	0.035
	All	0	0	0	0.048	0.25	0.032	0.053	0	0.024	0.04	0.065	0.2	0.047	0.046
Namacurra	Pre_COVID-19	0.015	0.041	0.056	0.067	0.097	0.055	0.024	0.014	0.048	0.064	0.086	0.097	0.062	0.026
	Post_COVID-19	0.006	0.017	0.025	0.03	0.056	0.025	0.014	0.011	0.024	0.028	0.034	0.073	0.033	0.017
	All	0.006	0.023	0.03	0.056	0.097	0.04	0.025	0.011	0.027	0.037	0.065	0.097	0.047	0.026
Nicoadala	Pre_COVID-19	0.007	0.031	0.041	0.06	0.074	0.044	0.019	0.014	0.035	0.052	0.062	0.109	0.053	0.024
	Post_COVID-19	0.015	0.026	0.037	0.048	0.058	0.036	0.014	0.02	0.031	0.041	0.052	0.06	0.04	0.013
	All	0.007	0.026	0.04	0.052	0.074	0.039	0.017	0.014	0.035	0.047	0.053	0.109	0.046	0.02
Pebane	Pre_COVID-19	0.008	0.044	0.049	0.063	0.111	0.052	0.025	0.026	0.046	0.061	0.074	0.101	0.062	0.021
	Post_COVID-19	0	0.025	0.03	0.036	0.098	0.032	0.023	0.011	0.035	0.039	0.048	0.103	0.041	0.023
	All	0	0.026	0.038	0.05	0.111	0.042	0.026	0.011	0.037	0.048	0.064	0.103	0.051	0.024
Quelimane	Pre_COVID-19	0.016	0.029	0.034	0.039	0.051	0.035	0.01	0.03	0.035	0.04	0.049	0.058	0.042	0.01
	Post_COVID-19	0	0.02	0.024	0.03	0.05	0.024	0.012	0.004	0.022	0.028	0.029	0.049	0.027	0.012
	All	0	0.022	0.03	0.035	0.051	0.029	0.012	0.004	0.028	0.034	0.042	0.058	0.034	0.013

The proportion of HEI less than 2 months tested positive decreases along time with statistical significance, the odds of being positive decreases about 2.9% every month (OR 0.971 [0.956-0.986], p<0.001). The odds decrease slightly to 97.8% (OR 0.978 [0.76-1.26], p=0.861) (compared to an assumptive odds at this time if there is no COVID-19) immediately after COVID-19 mitigation measures started, however, this instantaneous change is not statistically significant. Overall, the trend of the proportion of HEI with DNA PCR positive results by 2 months is the same in the pre- and post-COVID-19 periods (see **Figure 31a** below).

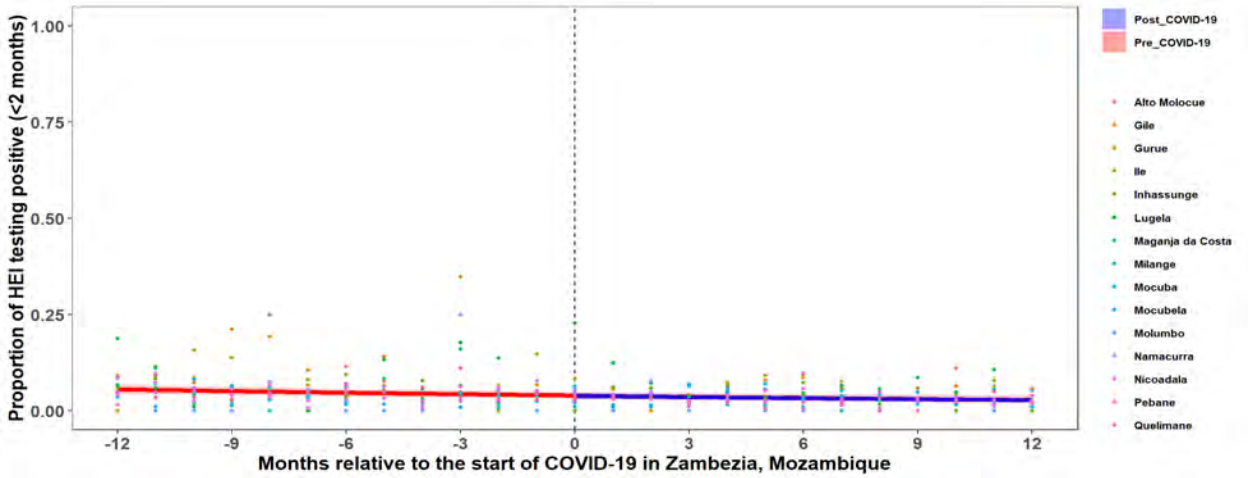

Figure 31a. Comparisons for HEI with DNA PCR positive results by 2 months of age pre- and post-COVID-19 mitigation measures starting (as represented by dotted line).

The proportion of HEI less than 9 months tested positive decreases along time with statistical significance, the odds of being positive decreases about 2.7% every month (OR 0.973 [0.96-0.986], p<0.001). The odds decrease a bit to 98.3% (OR 0.983 [0.792-1.22], p=0.876) (compared to an assumptive odd at this time if there is no COVID-19) immediately after COVID-19 started, however, this instantaneous change is not statistically significant. Overall, the trend of the proportion of HEI with DNA PCR positive results by 9 months is the same in the pre- and post-COVID-19 periods (see **Figure 31b** below).

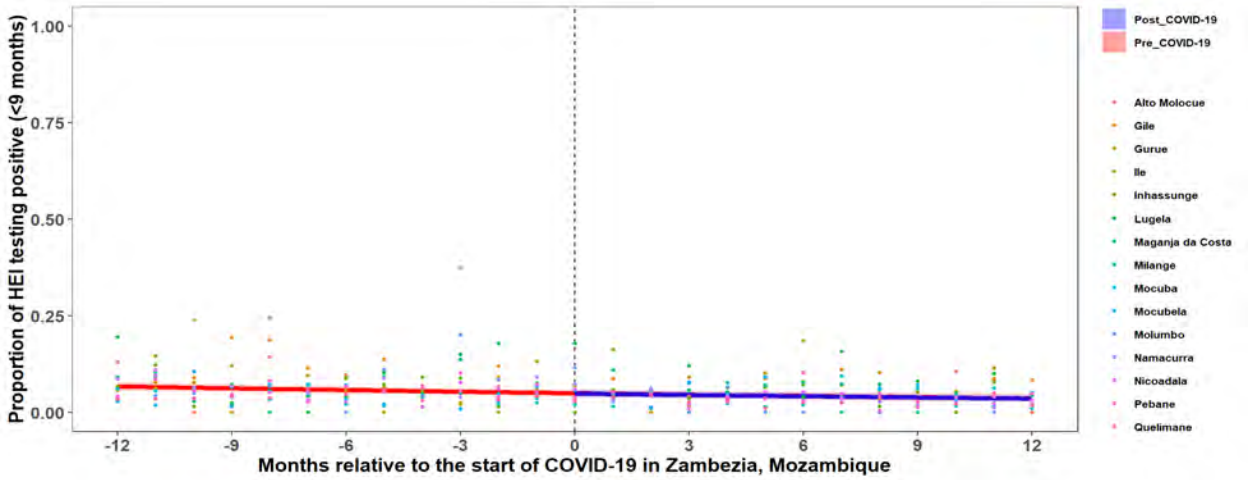

Figure 31b. Comparisons for HEI EID testing coverage by 9 months of age pre- and post-COVID-19 mitigation measures starting (as represented by dotted line).

Retention in care among PW

Table 18. Proportions for retention at 1- and 3-months among PW pre- and post-COVID-19 mitigation measures in place, by district.

		1-month Retention							3-month Retention						
District	**Group**	Min	Q1	Median	Q3	Max	Mean	SD	Min	Q1	Median	Q3	Max	Mean	SD
Alto Molócuè	Pre_COVID-19	0.667	0.867	0.9	0.925	1	0.878	0.089	0.278	0.507	0.6	0.737	0.833	0.598	0.171
	Post_COVID-19	0.545	0.75	0.765	0.929	1	0.789	0.141	0.118	0.188	0.4	0.522	0.714	0.385	0.181
	All	0.545	0.75	0.889	0.929	1	0.832	0.125	0.118	0.375	0.522	0.6	0.833	0.487	0.204
Gilé	Pre_COVID-19	0.737	0.795	0.815	0.944	1	0.855	0.098	0.412	0.592	0.643	0.717	0.818	0.637	0.123
	Post_COVID-19	0.462	0.778	0.824	0.923	0.952	0.815	0.133	0.235	0.375	0.435	0.579	0.714	0.459	0.146
	All	0.462	0.778	0.815	0.929	1	0.834	0.117	0.235	0.421	0.579	0.652	0.818	0.545	0.161
Gurué	Pre_COVID-19	0.714	0.827	0.904	0.945	1	0.884	0.093	0.462	0.594	0.659	0.712	0.842	0.651	0.122
	Post_COVID-19	0.636	0.778	0.857	0.875	1	0.823	0.111	0.333	0.417	0.467	0.667	1	0.567	0.221
	All	0.636	0.8	0.875	0.941	1	0.852	0.105	0.333	0.462	0.619	0.7	1	0.607	0.182
Ile	Pre_COVID-19	0.615	0.687	0.783	0.892	1	0.796	0.134	0.265	0.375	0.54	0.586	1	0.522	0.194
	Post_COVID-19	0.333	0.591	0.778	0.882	1	0.718	0.212	0.083	0.286	0.5	0.652	0.875	0.462	0.241
	All	0.333	0.65	0.778	0.889	1	0.755	0.18	0.083	0.356	0.516	0.605	1	0.492	0.216
Inhassunge	Pre_COVID-19	0.579	0.632	0.752	0.812	0.958	0.748	0.117	0.367	0.489	0.625	0.701	0.867	0.61	0.162
	Post_COVID-19	0.556	0.722	0.8	0.81	0.909	0.774	0.094	0.067	0.2	0.364	0.462	0.5	0.318	0.158
	All	0.556	0.706	0.773	0.81	0.958	0.762	0.104	0.067	0.364	0.462	0.619	0.867	0.458	0.216
Lugela	Pre_COVID-19	0.714	0.755	0.808	0.883	0.923	0.815	0.08	0.353	0.603	0.714	0.77	0.85	0.673	0.14
	Post_COVID-19	0.444	0.556	0.75	0.842	0.923	0.712	0.174	0.1	0.25	0.316	0.412	0.615	0.341	0.13
	All	0.444	0.714	0.783	0.862	0.923	0.762	0.144	0.1	0.316	0.5	0.714	0.85	0.5	0.215
Maganja da Costa	Pre_COVID-19	0.667	0.706	0.767	0.856	0.909	0.778	0.09	0.434	0.503	0.584	0.705	0.85	0.609	0.144
	Post_COVID-19	0.571	0.714	0.822	0.851	0.918	0.78	0.11	0.244	0.442	0.5	0.529	0.688	0.483	0.107
	All	0.571	0.714	0.787	0.851	0.918	0.779	0.099	0.244	0.465	0.51	0.597	0.85	0.543	0.139
Milange	Pre_COVID-19	0.833	0.885	0.923	0.94	1	0.918	0.047	0.552	0.685	0.729	0.821	0.897	0.734	0.109
	Post_COVID-19	0.8	0.852	0.881	0.912	0.929	0.879	0.039	0.263	0.444	0.545	0.66	0.755	0.547	0.144
	All	0.8	0.87	0.906	0.929	1	0.898	0.047	0.263	0.545	0.66	0.739	0.897	0.637	0.158
Mocuba	Pre_COVID-19	0.712	0.8	0.849	0.889	0.926	0.836	0.068	0.575	0.591	0.603	0.635	0.69	0.617	0.039
	Post_COVID-19	0.676	0.812	0.825	0.87	0.91	0.825	0.066	0.194	0.41	0.534	0.568	0.738	0.494	0.14
	All	0.676	0.805	0.825	0.888	0.926	0.83	0.066	0.194	0.534	0.583	0.607	0.738	0.553	0.12
Mocubela	Pre_COVID-19	0.583	0.635	0.71	0.776	0.845	0.713	0.086	0.405	0.536	0.566	0.618	0.708	0.574	0.084
	Post_COVID-19	0.595	0.774	0.879	0.889	0.9	0.815	0.105	0.176	0.435	0.5	0.581	0.676	0.485	0.137
	All	0.583	0.676	0.774	0.879	0.9	0.766	0.108	0.176	0.455	0.538	0.614	0.708	0.528	0.121
Molumbo	Pre_COVID-19	0.533	0.589	0.649	0.732	0.81	0.657	0.089	0.296	0.327	0.42	0.52	0.667	0.438	0.122
	Post_COVID-19	0.444	0.833	0.889	0.923	1	0.866	0.143	0.071	0.5	0.727	0.778	1	0.644	0.257
	All	0.444	0.647	0.8	0.889	1	0.765	0.159	0.071	0.368	0.519	0.727	1	0.545	0.226
Namacurra	Pre_COVID-19	0.658	0.667	0.765	0.788	0.841	0.741	0.072	0.296	0.401	0.476	0.538	0.618	0.475	0.098
	Post_COVID-19	0.547	0.696	0.75	0.778	0.873	0.727	0.095	0.255	0.348	0.404	0.465	0.574	0.402	0.091
	All	0.547	0.667	0.75	0.786	0.873	0.734	0.083	0.255	0.377	0.431	0.491	0.618	0.437	0.1
Nicoadala	Pre_COVID-19	0.754	0.867	0.905	0.916	0.985	0.882	0.068	0.475	0.57	0.607	0.713	0.812	0.634	0.109
	Post_COVID-19	0.611	0.714	0.763	0.853	0.886	0.773	0.085	0.129	0.353	0.38	0.44	0.647	0.395	0.125
	All	0.611	0.758	0.853	0.902	0.985	0.825	0.094	0.129	0.38	0.485	0.619	0.812	0.51	0.167
Pebane	Pre_COVID-19	0.536	0.648	0.659	0.675	0.771	0.661	0.063	0.367	0.443	0.49	0.519	0.542	0.475	0.057
	Post_COVID-19	0.574	0.641	0.689	0.786	0.909	0.709	0.097	0.176	0.389	0.476	0.511	0.571	0.432	0.127
	All	0.536	0.641	0.667	0.727	0.909	0.686	0.085	0.176	0.404	0.481	0.519	0.571	0.452	0.1
Quelimane	Pre_COVID-19	0.753	0.811	0.835	0.847	0.967	0.837	0.056	0.627	0.654	0.677	0.702	0.74	0.681	0.036
	Post_COVID-19	0.75	0.785	0.849	0.877	0.934	0.834	0.06	0.23	0.458	0.528	0.625	0.711	0.506	0.155
	All	0.75	0.792	0.836	0.852	0.967	0.835	0.057	0.23	0.528	0.649	0.684	0.74	0.59	0.143

In the pre-COVID-19 period, the proportion of retained PW at 1-month has no significant change. However, in the post-COVID-19 period, the proportion decreases along time, with the odds of PW being retained at 1-month decreases about 5.9% every month (OR 0.941 [0.717-1.236], p=0.665). The odds increase to 1.365 times (OR 1.365 [1.033-1.803], p=0.029) (compared to an assumptive odd at this time if there is no COVID-19) immediately after COVID-19 mitigation measures began (April 2020), and this instantaneous change is statistically significant. Overall, the trend of the 1-month retention is different in the pre- and post-COVID-19 periods (see **Figure 32a** below) because of a statistically significant *Time*COVID-19* interaction term (OR 0.948 [0.927-0.970], p<0.001).

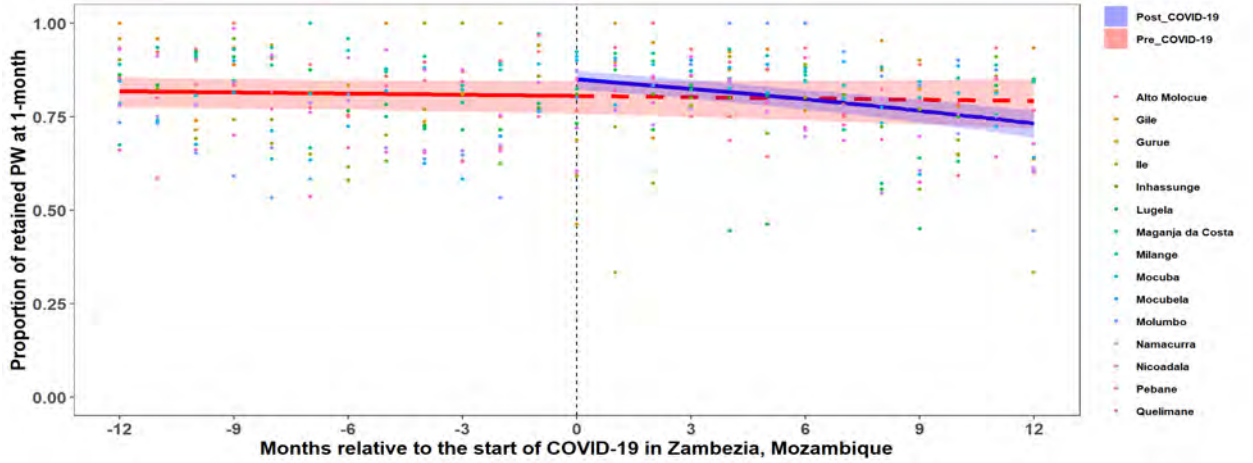

Figure 32a. Comparisons for 1-month retention among PW pre- and post-COVID-19 mitigation measures (as represented by dotted line).

In the pre-COVID-19 period, the proportion of retained PW at 3-months decreases along time, with the odds of PW being retained at 3-months decreases about 3.5% every month (OR 0.965 [0.953–0.978], p<0.001). Immediately after COVID-19 mitigation measures started (April 2020), the odds decreased to 56.6% (OR 0.566 [0.435–0.735], p<0.001) (compared to an assumptive odd at this time if there is no COVID-19), and this instantaneous change was statistically significant. However, in the post-COVID-19 period, the proportion increases along time, with the odds increase about 3.9% every month (OR 1.039 [0.803–1.345], p=0.769). Overall, 3-month retention trend is different in the pre- and post-COVID-19 periods, though the proportions of PW retained at 3-months in the post-COVID-19 period were only slightly lower in general and reapproaching the proportions seen in the pre-COVID-19 period (see **Figure 32b** below) because of a statistically significant *Time*COVID-19* interaction term (OR 1.077 [1.058-1.097], p<0.001).

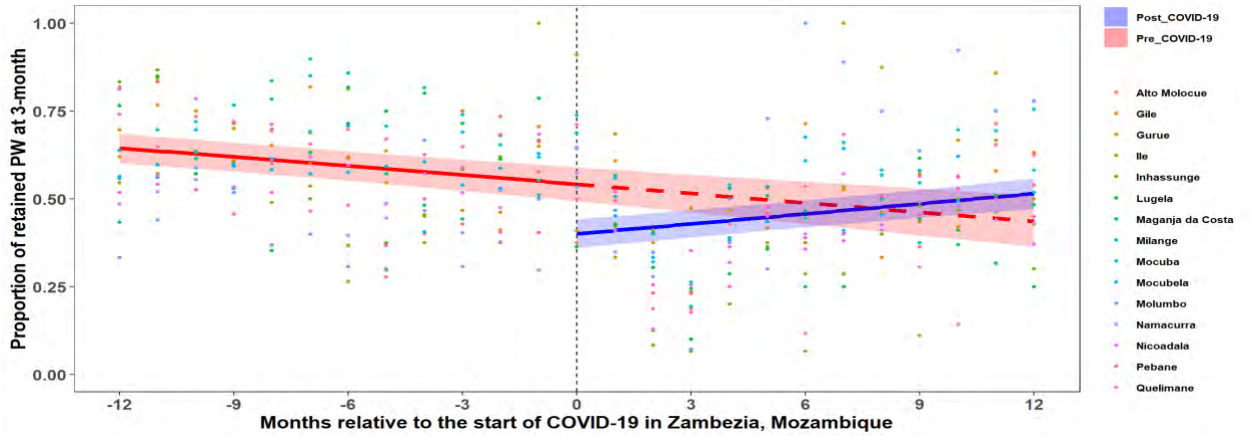

Figure 32b. Comparisons for 3-month retention among PW pre- and post-COVID-19 mitigation measures (as represented by dotted line).

Table 19. Proportions for retention at 6- and 12-months among PW pre- and post-COVID-19 mitigation measures in place, by district.

		6-month Retention							12-month Retention						
District	**Group**	Min	Q1	Median	Q3	Max	Mean	SD	Min	Q1	Median	Q3	Max	Mean	SD
Alto Molócuè	Pre_COVID-19	0.667	0.857	0.905	0.937	1	0.888	0.093	0.429	0.681	0.756	0.816	0.889	0.724	0.141
	Post_COVID-19	0.857	0.933	1	1	1	0.965	0.051	0.762	0.857	0.917	1	1	0.913	0.074
	All	0.667	0.882	0.933	1	1	0.928	0.082	0.429	0.762	0.857	0.917	1	0.823	0.146
Gilé	Pre_COVID-19	0.684	0.837	0.869	0.933	1	0.872	0.094	0.633	0.671	0.724	0.764	0.833	0.72	0.064
	Post_COVID-19	0.875	0.923	0.955	1	1	0.954	0.046	0.579	0.774	0.867	0.941	1	0.859	0.119
	All	0.684	0.875	0.929	1	1	0.914	0.083	0.579	0.703	0.772	0.867	1	0.792	0.118
Gurué	Pre_COVID-19	0.667	0.782	0.907	0.919	0.944	0.857	0.09	0.529	0.62	0.666	0.83	0.909	0.71	0.151
	Post_COVID-19	0.727	0.857	0.923	1	1	0.915	0.082	0.565	0.6	0.786	0.952	1	0.795	0.164
	All	0.667	0.846	0.909	0.944	1	0.887	0.089	0.529	0.607	0.778	0.892	1	0.768	0.161
Ile	Pre_COVID-19	0.448	0.702	0.812	0.882	0.944	0.773	0.153	0.255	0.519	0.675	0.732	0.833	0.62	0.176
	Post_COVID-19	0.667	0.889	0.909	1	1	0.901	0.115	0.432	0.515	0.636	0.8	1	0.663	0.188
	All	0.448	0.788	0.889	0.944	1	0.84	0.147	0.255	0.515	0.661	0.789	1	0.643	0.18
Inhassunge	Pre_COVID-19	0.696	0.826	0.909	0.959	1	0.888	0.101	0.652	0.746	0.781	0.817	0.879	0.777	0.063
	Post_COVID-19	0.824	0.941	1	1	1	0.964	0.057	0.69	0.788	0.882	0.923	1	0.862	0.094
	All	0.696	0.903	0.95	1	1	0.927	0.088	0.652	0.75	0.815	0.882	1	0.821	0.091
Lugela	Pre_COVID-19	0.632	0.688	0.769	0.889	1	0.788	0.129	0.6	0.649	0.732	0.844	0.905	0.745	0.124
	Post_COVID-19	0.5	0.789	0.857	0.917	1	0.839	0.127	0.385	0.591	0.714	0.759	0.909	0.684	0.133
	All	0.5	0.706	0.833	0.909	1	0.815	0.128	0.385	0.616	0.714	0.776	0.909	0.703	0.13
Maganja da Costa	Pre_COVID-19	0.826	0.871	0.897	0.947	1	0.907	0.055	0.636	0.782	0.81	0.837	0.95	0.809	0.078
	Post_COVID-19	0.878	0.956	0.976	1	1	0.966	0.037	0.81	0.894	0.902	0.929	0.967	0.906	0.042
	All	0.826	0.893	0.956	0.979	1	0.938	0.054	0.636	0.81	0.875	0.915	0.967	0.86	0.078
Milange	Pre_COVID-19	0.667	0.868	0.9	0.911	0.945	0.875	0.076	0.613	0.742	0.774	0.787	0.857	0.757	0.081
	Post_COVID-19	0.907	0.948	0.958	0.98	1	0.957	0.027	0.732	0.835	0.873	0.904	0.958	0.87	0.057
	All	0.667	0.901	0.93	0.958	1	0.918	0.069	0.613	0.783	0.857	0.896	0.958	0.834	0.083
Mocuba	Pre_COVID-19	0.718	0.861	0.885	0.922	0.97	0.883	0.065	0.745	0.81	0.843	0.872	0.888	0.833	0.054
	Post_COVID-19	0.78	0.804	0.897	0.905	0.962	0.876	0.066	0.704	0.714	0.806	0.855	0.899	0.8	0.071
	All	0.718	0.857	0.895	0.921	0.97	0.88	0.065	0.704	0.76	0.829	0.864	0.899	0.81	0.067
Mocubela	Pre_COVID-19	0.829	0.852	0.893	0.956	0.964	0.898	0.051	0.714	0.786	0.841	0.857	0.927	0.825	0.065
	Post_COVID-19	0.929	0.957	0.968	1	1	0.975	0.025	0.786	0.842	0.938	0.974	1	0.912	0.075
	All	0.829	0.895	0.957	0.968	1	0.938	0.056	0.714	0.829	0.854	0.938	1	0.87	0.082
Molumbo	Pre_COVID-19	0.5	0.708	0.77	0.817	0.889	0.748	0.116	0.55	0.593	0.631	0.675	0.727	0.635	0.065
	Post_COVID-19	0.882	1	1	1	1	0.977	0.045	0.63	0.808	0.909	0.944	1	0.87	0.104
	All	0.5	0.778	0.889	1	1	0.867	0.144	0.55	0.662	0.808	0.936	1	0.796	0.145
Namacurra	Pre_COVID-19	0.794	0.815	0.848	0.899	0.963	0.859	0.057	0.707	0.783	0.827	0.871	0.908	0.817	0.065
	Post_COVID-19	0.796	0.844	0.87	0.926	0.982	0.887	0.057	0.75	0.857	0.878	0.891	0.952	0.871	0.054
	All	0.794	0.835	0.867	0.922	0.982	0.874	0.057	0.707	0.807	0.87	0.882	0.952	0.845	0.064
Nicoadala	Pre_COVID-19	0.8	0.886	0.915	0.942	1	0.911	0.057	0.733	0.786	0.818	0.846	0.894	0.816	0.056
	Post_COVID-19	0.831	0.855	0.9	0.947	0.986	0.906	0.054	0.63	0.846	0.857	0.952	0.984	0.866	0.106
	All	0.8	0.864	0.913	0.947	1	0.908	0.054	0.63	0.818	0.852	0.903	0.984	0.85	0.095
Pebane	Pre_COVID-19	0.604	0.742	0.768	0.806	0.85	0.762	0.063	0.634	0.639	0.659	0.694	0.787	0.678	0.05
	Post_COVID-19	0.74	0.85	0.918	0.935	0.95	0.886	0.061	0.604	0.714	0.811	0.875	0.935	0.8	0.104
	All	0.604	0.762	0.819	0.918	0.95	0.826	0.088	0.604	0.658	0.702	0.811	0.935	0.742	0.102
Quelimane	Pre_COVID-19	0.8	0.843	0.86	0.893	0.94	0.866	0.041	0.663	0.708	0.742	0.766	0.825	0.74	0.051
	Post_COVID-19	0.819	0.887	0.921	0.936	0.988	0.913	0.047	0.747	0.782	0.821	0.872	0.888	0.825	0.051
	All	0.8	0.852	0.889	0.928	0.988	0.89	0.05	0.663	0.744	0.78	0.825	0.888	0.784	0.066

In the pre-COVID-19 period, the proportion of retained PW at 6-month increases along time, with the odds of PW being retained at 6-month increases about 5.4% every month (OR 1.054 [1.035–1.073], p<0.001). Right after COVID-19 began, there was an unexpected 2-fold increase in odds (OR 2.157 [1.501–3.100], p<0.001) (compared to an assumptive odd at this time if there is no COVID-19), and this instantaneous change is statistically significant. In the post-COVID-19 period, the proportion decreases along time, with the odds decreases about 4.6% (OR 0.954 [0.668–1.362], p=0.796) every month. Overall, the trend of the 6-month retention is different in the pre- and post-COVID-19 periods (see **Figure 33a** below) because of a statistically significant *Time*COVID-19* interaction term (OR 0.905 [0.879-0.933], p<0.001). Although the odds decreased within-pandemic, 6-m retention proportion remained higher than the pre-pandemic period.

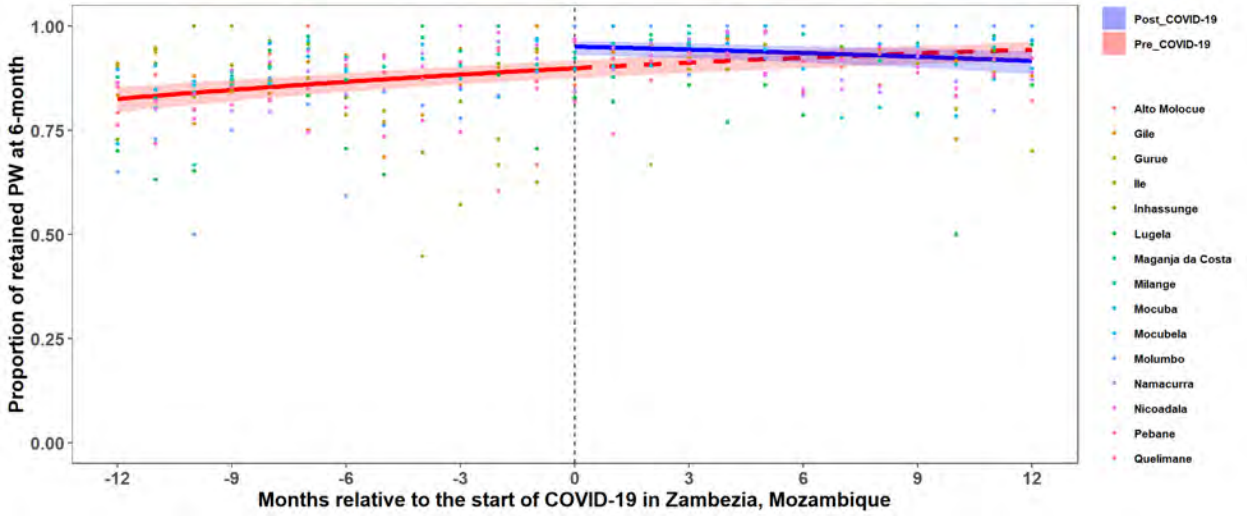

Figure 33a. Comparisons for 6-month retention among PW pre- and post-COVID-19 mitigation measures (as represented by dotted line).

In both the pre- and post-COVID-19 periods, the proportion of retained PW at 12-month has no significant change, since the odds (of PW being retained at 12-month) is nearly same every month (OR 0.998 [0.987-1.009], p=0.718). Immediately after COVID-19 started, the odds increase to 1.67 times (OR 1.657 [1.296-2.119], p<0.001) (compared to an assumptive odd at this time if there is no COVID-19), and this instantaneous change is statistically significant. Overall, the trend of the 12-month retention is the same in the pre- and post-COVID-19 periods (see **Figure 33b** below) since there is no statistically significant *Time*COVID-19* interaction or trend over time.

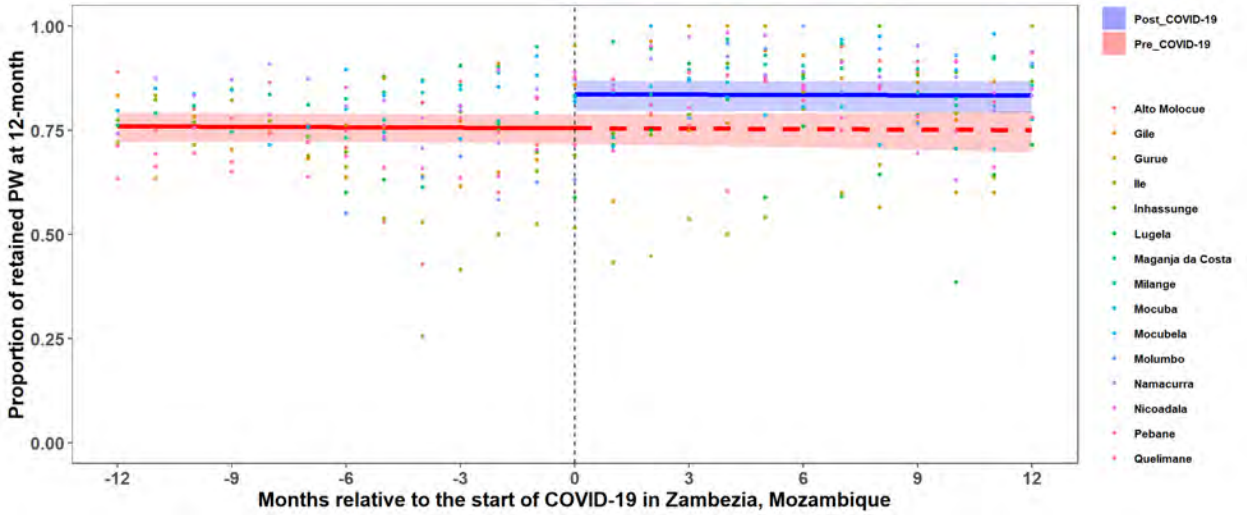

Figure 33b. Comparisons for 12-month retention among PW pre- and post-COVID-19 mitigation measures (as represented by dotted line).

5. Discussion and Conclusions

Our analysis led to several interesting findings related to the inquiries set out with this program evaluation. First, trends for ART coverage among PW improved over time in Zambézia Province, almost always nearing 100% in all districts from 2018 onward. This positive finding is consistent with many studies in SSA, especially early research from Malawi, which have found significant increases in ART coverage among PW with the implementation of Option B+.[19-21] Optimizing maternal ART coverage remains one of the critical "pillars" in preventing vertical transmission, and the WHO released updated guidance in 2021 outlining that ≥95% ART coverage among PW living with HIV is required for validation, or confirmation that a country meets the criteria necessary for achieving the elimination of vertical transmission.[22] These trends in Zambézia suggest that since 2018, programming in the province is consistently meeting and often surpassing this crucial target.

A second key finding is that trends for HEI EID testing by 2 months and 9 months also improved in Zambézia Province over time. These positive results are consistent with recently published studies looking at maternal and infant outcomes relative to evolving national guidelines ending in the adoption of Option B+, one in Uganda assessing outcomes over the period 2008 to 2017, and in Kenya from the period of 2007 to 2013, both of which also identified significant improvements in HEI EID testing over time.[23, 24]

Third, we found that trends for HEI EID testing positive by 2 months and 9 months improved (that is, positivity rates decreased) over time in Zambézia Province. Several studies in other SSA countries assessing the early impact of PMTCT Option B+ on MTCT have similarly shown consistent declines over time in vertical transmission rates with Option B+ implementation.[19, 20] However, as positivity rates in these sites were generally quite low across the period of interest, it may be that further changes and/or improvements would have been very subtle and difficult to detect across the evaluation period. With recent advances in the country (and Zambézia Province specifically) in the scale up of point-of-care testing for EID, greater improvements in EID may also include greater uptake, expediency for results and timeliness of initiating ART among infants who do seroconvert.[25, 26]

Fourth, trends in all retention outcomes (1-, 3-, 6-, and 12-months) showed improvement over time in Zambézia Province, with monthly proportions for all adult groups increasing over time. Early retention proportions were seemingly impacted by the start of the COVID-19 pandemic; however, these apparent trends were not seen for 6- and 12-month retention. PW seemingly had the greatest improvements in early retention (1- and 3-month) outcomes over time, despite having more variability in monthly proportions for 1-month retention in the 35-49 years of age category; for 3-month retention younger men (15-24 years of age) had the greatest variability. Compared to other adults, PW had lower 6-month retention before 2015 and lower 12-month retention before 2016, but from 2017 onward, these two retention rates continued higher than other adults. At the early stages of Option B+ implementation in Mozambique, retention to care among PW enrolled in PMTCT Option B+ services was relatively poor and despite improvements, has continued to be a

critical challenge to the success of strategy implementation as well as to improving maternal and infant outcomes, a situation seen in other SSA countries as well.[21, 27-29] Looking at our findings showing improving retention outcomes among PW over the years, acknowledgement must be made to the many innovative strategies to provide client-centered adherence support and tackle barriers to staying retained in PMTCT care in Zambézia Province. Chief among them has been the integration of mother-child services provision, and the implementation of the Mentor Mothers program starting in 2017, which have both been associated with improved retention in PMTCT services, and the latter with higher VS among pregnant and postpartum women.[30, 31]

Fifth, there were no apparent trend changes in proportions of PW or non-PW with viral suppression between early 2019 and early 2020, though there was a modest trend of improvement seen in proportions of men with VS over that time. However, VS proportions among all three groups appeared to be negatively impacted by the initiation of COVID-19 mitigation measures. Notably, there was a great deal of variability seen for monthly VS proportions across all age categories. Recent study from Kenya found that older age was associated with time to viral suppression for post-partum women,[32] and our findings that older aged (35-49 years of age) PW had higher proportions for VS over time seem to support this observation. These findings highlight the need for interventions tailored to the needs of each specific group, not only to promote optimal health for individuals, but also, among PW, for improving infant outcomes, as SSA studies have found that non-suppressed VL among mothers was associated with greater risk for adverse outcome(s), not solely vertical transmission, but also infant death or becoming loss-to-follow-up).[33]

Next, trend analysis showed prominent decrease in treatment interruptions in Zambézia Province for all groups. Men and non-PW had overall slightly higher proportions of IIT, with significant improvements among these groups after T&S was introduced, while the established Option B+ strategy showed continued positive effect. Though trends are reassuring on early retention, continued efforts are needed to ensure sustained effect.

At the outset of this evaluation, we had hypothesized that: i) maternal and infant outcomes would improve over time with PMTCT Option B+ program expansion and maturation, and ii) with the evolution of ART initiation guidelines, any disparities in HIV outcomes between PW and non-PW and men would at first be prominent but would diminish over time. Taken all together, these findings collectively suggest that the original hypotheses were on the right track, such that maternal and infant outcomes did improve over time with program maturation, and that disparities between PW and age-matched adults were more prominent at the start of Option B+ programming but were observed to diminish over time.

While tremendous gains and improvements in maternal and infant outcomes are apparent in Zambézia Province, to continue to work toward the 95-95-95 UNAIDS goals, it will be necessary to keep attention and innovation focusing on addressing the known barriers to accessing and staying retained in PMTCT services. As differentiated models of service delivery continue to be piloted and scaled up, further implementation science research is needed looking at uptake and

impact of DMC tailored for the needs of the mother-infant dyad in the PMTCT cascade. Previous findings support the use of and ongoing research with continuous quality improvement (CQI) interventions, as well as multi-pronged approaches to address structural-, clinical-, and individual-level barriers that persist for PMTCT service delivery and success.[30, 32, 34-37]

Further, in performing an additional sub-analysis and treating the start of COVID-19 pandemic and mitigation measures as an interruption, we investigated the trends in maternal and infant HIV outcomes prior to and during COVID-19 pandemic and mitigation measures being in place, given the reasonable suspicion that outcomes could have been negatively impacted by COVID-19. The findings of our analysis suggest that in Zambézia Province, COVID-19 pandemic and associated restrictions did not negatively affect ART coverage among PW, HEI EID testing coverage by < 2 or < 9 months of age, HEI PCR positivity by < 2 or < 9 months of age, or 12-month retention among PW. This points to the resilience and strength of the PMTCT program (as led by the MOH and supported by FGH) in this province despite the challenges from COVID-19.

The findings do suggest, however, that COVID-19 pandemic and associated restrictions did, to some degree, negatively affect early (1-, 3-, and 6-month) retention indicators among PW. That the COVID-19 pandemic may have had an exacerbating role on barriers to retention in care for HIV prevention or treatment services among pregnant women has been found in other SSA countries.[38-40] One 2021 study in Uganda found that pregnant and lactating women reported additional obstacles during the COVID-19 pandemic period for staying engaged and retained in HIV care related to challenges with transport or loss of income (structural barriers), fear of contracting COVID-19 or reduced ARV adherence due to food insecurity (clinical barriers), and fear of unintended HIV status disclosure (psychosocial barriers).[41]

Despite the transient reductions in early retention among PW, overall, rapid expansion of DMC including 3MDD for PW, introduced in response to COVID-19 pandemic, appeared to have a favorable impact on maternal and child outcomes. This is in line with other evidence suggesting that rapid adaptation by PEPFAR-supported programs in SSA, including Mozambique, in response to COVID-19 (via alternate service delivery models and client-centered interventions) played a significant role in HIV programs' abilities to recover and mitigate COVID-19 impact on patient outcomes.[42]

We acknowledge strengths and limitations within this evaluation. We feel a major strength of these findings relates to the breadth of data that were included in this evaluation, in terms of the extended period of more than five years of program data for several of the outcomes of interest, and the large sample – with regard to the high number of supported health facilities included and the size of the adult and infant populations included – with which we could assess adult and infant outcomes in this period.

We recognize one limitation for this evaluation that, programmatically-speaking, we are unable to assess outcomes for women that are not receiving ANC services at HF during pregnancy or post-partum. For those that may have come to HF for ANC, these findings show that outcomes are overall positive and have been improving over time. Still, it is not possible to know the real number of women not coming to the HF for ANC, nor is it possible to assess their outcomes. In a future analysis, the number (i.e., volume) of patients seeking ANC care could be assessed to compare trends. Additionally, we could include the data of any subsequent pregnancy(ies), as result may be better/different than a woman's first pregnancy, hypothesizing that the woman may then have experience (e.g., either with PMTCT services, or experiencing having a child with a positive HIV result, etc.) and having experience may help improve outcomes in the subsequent pregnancy(ies).

We also acknowledge the additional limitation that the VL results may not reflect the real situation since there were very few VL data in the extracted dataset. Early in the evaluation period, VL collection was less routine, and even defining VL results as within 3-12 months of ART initiation runs the risk that many patients would not have had a VL collected by that point, which may point to why these VS results are not consistent with the rest of the outcomes results. In future analysis, we plan to reanalyze the VL suppression data including data from the last 3 years (2020-2023) due to the fact that routine VL testing was taken to scale in mid-late 2019, with VL coverage significantly improving from early 2020 and onward; we anticipate that we would have more complete and representative VL suppression data for this important VS outcome.

Recommendations

Prevention of mother-to-child HIV transmission is an essential pillar of the comprehensive HIV response and a principal goal of the PEPFAR initiative. Considerable progress has been made towards the path of eliminating vertical transmission of HIV. It will be critical for Mozambique and countries within the region to continually track, adapt, and reflexively develop and implement data-driven innovative interventions (i.e., novel DMCs, etc.) in order to not lose essential ground in terms of excellent progress to date, because it is not if but when the next series of natural disasters and/or emerging infectious disease outbreak/pandemic will occur.

As our findings point to observable improvements in PTMCT outcomes across the >5 years of FGH support to these districts, we recommend for multi-pronged strategies to improve the coverage of PMTCT-related health services in the region. To maintain continual improvements going forward, we recommend sustained support of all PMTCT programs in Zambézia province, including but not limited to the Mentor Mothers program, preventive and tracing visits for adult women and children living with HIV, and the availability of patient-tailored medication dissemination model options, particularly to improve maternal retention between pregnancies.

6. Dissemination plan

This concept was developed in collaboration with the MOH, and this evaluation was a collaborative partnership between the MOH, the CDC, the provincial health directorate (DPS-Zambézia), and VUMC/FGH investigators. VUMC/FGH, who has led the analysis for this evaluation, will share English and Portuguese versions of this evaluation findings report (once approved by CDC-MZ Associate Director for Science (ADS)) with provincial- and national-level MOH authorities as well all interested stakeholders.

For the purposes of wider dissemination, two abstracts presenting portions of these findings were submitted and accepted for presentation at two conferences

i. "*Favorable Outcomes of Option B+ Strategy Despite COVID-19 Restrictions: Retrospective Cohort Study in Zambézia Province, Mozambique (2019-2021)*": *INTEREST 2023* (Maputo, 9-12 May 2023) (#663), and *IAS 2023* (Brisbane, 23-26 July, 2023) (TUPEE24)

ii. "*Trends in Interruptions in Treatment Among Men, Pregnant Women and Non-Pregnant Women: Retrospective Cohort Study in Zambézia Province, Mozambique (2013-2021)*": *INTEREST 2023* Maputo, 9-12 May 2023 (#235), and *IAS 2023* (Brisbane, 23-26 July, 2023) (EPC0488)

7. Appendices

Appendix 1: Evaluation Settings

Table S1. List of all health facilities included in this evaluation.

District	HF	In DHIS	In OpenMRS	In Both
Alto Molócuè	CS Bonifácio Gruveta	1	1	1
Alto Molócuè	CS Caiaia	1	0	0
Alto Molócuè	CS Chapala	1	0	0
Alto Molócuè	CS Cololo	1	0	0
Alto Molócuè	CS Ecole	1	0	0
Alto Molócuè	CS Malua	1	0	0
Alto Molócuè	CS Moiua	1	0	0
Alto Molócuè	CS Mutala	1	0	0
Alto Molócuè	CS Nacuacua	1	0	0
Alto Molócuè	CS Nauela	1	1	1
Alto Molócuè	CS Nimala	1	0	0
Alto Molócuè	CS Nivava	1	0	0
Alto Molócuè	CS Novanana	1	0	0
Alto Molócuè	HR Alto Molocué	1	1	1
Gile	CS Alto Ligonha	1	1	1
Gile	CS Intxotxa	1	1	1
Gile	CS Kayane	1	1	1
Gile	CS Mamala	1	1	1
Gile	CS Moneia	1	1	1
Gile	CS Muiane	1	1	1
Gile	CS Mutequela	1	0	0
Gile	CS Namuaca	1	1	1
Gile	CS Pury	1	1	1
Gile	CS Uape	1	1	1
Gile	HD Gilé	1	1	1
Gurué	CS Gurue	1	1	1
Gurué	CS Invinha	1	0	0
Gurué	CS Lioma	1	1	1
Gurué	CS Macuarro	1	0	0
Gurué	CS Mapuagiua	1	0	0
Gurué	CS Muagiua	1	0	0
Gurué	CS Ruace	1	0	0
Gurué	CS Serra	1	0	0
Gurué	CS Tetete	1	0	0
Gurué	CS UP 10	1	0	0
Gurué	CS UP 4	1	0	0
Gurué	PS Nintulo	1	0	0

Ile	**CS Chiraco**	**0**	**1**	**0**
Ile	**CS Curruane**	**1**	**1**	**1**
Ile	**CS Ile**	**1**	**1**	**1**
Ile	**CS Jajo**	**0**	**1**	**0**
Ile	**CS Marropino**	**0**	**1**	**0**
Ile	**CS Massira**	**1**	**1**	**1**
Ile	**CS Morrua**	**0**	**1**	**0**
Ile	**CS Mucuaba**	**1**	**1**	**1**
Ile	**CS Mugulama**	**1**	**1**	**1**
Ile	**CS Mulequela**	**1**	**1**	**1**
Ile	**CS Mulevala**	**0**	**1**	**0**
Ile	**CS Namanda**	**1**	**1**	**1**
Ile	**CS Niboia**	**1**	**1**	**1**
Ile	**CS Phalane**	**1**	**1**	**1**
Ile	**CS Socone**	**1**	**1**	**1**
Ile	**CS Tebo**	**0**	**1**	**0**
Ile	**CS Ualasse**	**1**	**1**	**1**
Inhassunge	**CS Bingagira**	**1**	**1**	**1**
Inhassunge	**CS Cherimane**	**1**	**1**	**1**
Inhassunge	**CS Gonhane**	**1**	**1**	**1**
Inhassunge	**CS Ilova**	**1**	**0**	**0**
Inhassunge	**CS Inhassunge**	**1**	**1**	**1**
Inhassunge	**CS Olinda**	**1**	**1**	**1**
Inhassunge	**CS Palane-Mucula**	**1**	**1**	**1**
Lugela	**CS Erurune**	**1**	**0**	**0**
Lugela	**CS Limbue**	**1**	**0**	**0**
Lugela	**CS Lugela**	**1**	**1**	**1**
Lugela	**CS Mubanama**	**1**	**0**	**0**
Lugela	**CS Mulide**	**1**	**1**	**1**
Lugela	**CS Mungulune**	**1**	**0**	**0**
Lugela	**CS Munhamade**	**1**	**1**	**1**
Lugela	**CS Namagoa**	**1**	**1**	**1**
Lugela	**CS Puthine**	**1**	**0**	**0**
Lugela	**CS Tacuane**	**1**	**1**	**1**
Lugela	**PS Nigau**	**0**	**1**	**0**
Lugela	**PS Putine**	**0**	**1**	**0**
Maganja da Costa	**CS Alto Mutola**	**1**	**1**	**1**
Maganja da Costa	**CS Cabuir**	**1**	**1**	**1**
Maganja da Costa	**CS Cariua**	**1**	**1**	**1**
Maganja da Costa	**CS Gurai**	**0**	**1**	**0**
Maganja da Costa	**CS Mabala**	**1**	**1**	**1**
Maganja da Costa	**CS Maganja da Costa**	**1**	**1**	**1**
Maganja da Costa	**CS Mapira**	**1**	**1**	**1**
Maganja da Costa	**CS Missal**	**0**	**1**	**0**
Maganja da Costa	**CS Mocubela**	**0**	**1**	**0**
Maganja da Costa	**CS Moneia**	**1**	**1**	**1**
Maganja da Costa	**CS Muloa**	**1**	**1**	**1**
Maganja da Costa	**CS Muzo**	**1**	**1**	**1**
Maganja da Costa	**CS Naico**	**0**	**1**	**0**
Maganja da Costa	**CS Namurumo**	**1**	**1**	**1**
Maganja da Costa	**CS Nante**	**1**	**1**	**1**
Maganja da Costa	**CS Tapata**	**0**	**1**	**0**

Maganja da Costa	**CS Vila Valdez**	**1**	**1**	**1**
Milange	**CS Carico**	**1**	**1**	**1**
Milange	**CS Chitambo**	**1**	**1**	**1**
Milange	**CS Dachudua**	**1**	**1**	**1**
Milange	**CS Dulanha**	**1**	**1**	**1**
Milange	**CS Gurgunha**	**1**	**1**	**1**
Milange	**CS Liciro**	**1**	**1**	**1**
Milange	**CS Majaua**	**1**	**1**	**1**
Milange	**CS Milange**	**1**	**1**	**1**
Milange	**CS Mongue**	**1**	**1**	**1**
Milange	**CS Muanhambo**	**1**	**1**	**1**
Milange	**CS Nambuzi**	**1**	**1**	**1**
Milange	**CS Sabelua**	**1**	**1**	**1**
Milange	**CS Tengua**	**1**	**1**	**1**
Milange	**CS Vulalo**	**1**	**1**	**1**
Milange	**HR Milange**	**0**	**1**	**0**
Mocuba	**CS 16 de Junho**	**1**	**1**	**1**
Mocuba	**CS Chimbua**	**1**	**1**	**1**
Mocuba	**CS Intome**	**1**	**1**	**1**
Mocuba	**CS Magogodo**	**1**	**1**	**1**
Mocuba	**CS Mataia**	**1**	**1**	**1**
Mocuba	**CS Mocuba**	**1**	**1**	**1**
Mocuba	**CS Mocuba Sisal**	**1**	**1**	**1**
Mocuba	**CS Muanaco**	**1**	**1**	**1**
Mocuba	**CS Mugeba**	**1**	**1**	**1**
Mocuba	**CS Muloi**	**1**	**1**	**1**
Mocuba	**CS Namabida**	**1**	**1**	**1**
Mocuba	**CS Namagoa**	**1**	**1**	**1**
Mocuba	**CS Namanjavira**	**1**	**1**	**1**
Mocuba	**CS Nhaluanda**	**1**	**1**	**1**
Mocuba	**CS Padre Usera**	**1**	**1**	**1**
Mocuba	**CS Pedreira**	**1**	**1**	**1**
Mocuba	**CS Samora Machel**	**1**	**1**	**1**
Mocuba	**HD Mocuba**	**0**	**1**	**0**
Mocuba	**PS Alto Benfica**	**1**	**1**	**1**
Mocuba	**PS Caiave**	**1**	**1**	**1**
Mocuba	**PS Muaquiua**	**1**	**1**	**1**
Mocuba	**PS Munhiba**	**1**	**1**	**1**
Mocubela	**CS Alto Mutola**	**0**	**1**	**0**
Mocubela	**CS Bajone**	**1**	**1**	**1**
Mocubela	**CS Cariua**	**0**	**1**	**0**
Mocubela	**CS Gurai**	**1**	**1**	**1**
Mocubela	**CS Ilha Idugo**	**1**	**1**	**1**
Mocubela	**CS Mabala**	**0**	**1**	**0**
Mocubela	**CS Maganja da Costa**	**0**	**1**	**0**
Mocubela	**CS Maneia**	**1**	**1**	**1**
Mocubela	**CS Mapira**	**0**	**1**	**0**
Mocubela	**CS Missal**	**1**	**1**	**1**
Mocubela	**CS Mocubela**	**1**	**1**	**1**
Mocubela	**CS Naico**	**1**	**1**	**1**
Mocubela	**CS Nante**	**0**	**1**	**0**
Mocubela	**CS Tapata**	**1**	**1**	**1**

Molumbo	**CS Corromana**	**1**	**1**	**1**
Molumbo	**CS Malua**	**1**	**0**	**0**
Molumbo	**CS Molumbo**	**1**	**1**	**1**
Molumbo	**CS Namucumua**	**1**	**1**	**1**
Molumbo	**CS Nantuto**	**1**	**0**	**0**
Namacurra	**CS Furquia**	**1**	**1**	**1**
Namacurra	**CS Macuse**	**1**	**1**	**1**
Namacurra	**CS Malei**	**1**	**1**	**1**
Namacurra	**CS Mbaua**	**1**	**1**	**1**
Namacurra	**CS Mixixine**	**1**	**1**	**1**
Namacurra	**CS Muceliua**	**1**	**1**	**1**
Namacurra	**CS Muebele**	**1**	**1**	**1**
Namacurra	**CS Mugubia**	**1**	**1**	**1**
Namacurra	**CS Mutange**	**1**	**1**	**1**
Namacurra	**CS Naciaia**	**1**	**0**	**0**
Namacurra	**CS Namacurra**	**1**	**1**	**1**
Nicoadala	**CS Amoro**	**1**	**1**	**1**
Nicoadala	**CS Domela**	**0**	**1**	**0**
Nicoadala	**CS Ilalane**	**1**	**1**	**1**
Nicoadala	**CS Licuare**	**1**	**1**	**1**
Nicoadala	**CS Namacata**	**1**	**1**	**1**
Nicoadala	**CS Nicoadala**	**1**	**1**	**1**
Nicoadala	**CS Quinta Girassol**	**1**	**1**	**1**
Pebane	**CS 7 Abril**	**1**	**1**	**1**
Pebane	**CS Alto Maganha**	**1**	**1**	**1**
Pebane	**CS Impaca**	**1**	**1**	**1**
Pebane	**CS Magiga**	**1**	**1**	**1**
Pebane	**CS Malema**	**1**	**1**	**1**
Pebane	**CS Mihecue**	**1**	**1**	**1**
Pebane	**CS Mulela**	**1**	**1**	**1**
Pebane	**CS Muligode**	**1**	**1**	**1**
Pebane	**CS Naburi**	**1**	**1**	**1**
Pebane	**CS Pebane**	**1**	**1**	**1**
Pebane	**CS Pele-Pele**	**1**	**1**	**1**
Pebane	**CS Tomea**	**1**	**1**	**1**
Pebane	**CS Txalalane**	**1**	**1**	**1**
Quelimane	**Cidade de Quelimane**	**0**	**1**	**0**
Quelimane	**CS 17 de Setembro**	**1**	**0**	**0**
Quelimane	**CS 24 de Julho**	**1**	**1**	**1**
Quelimane	**CS 4 de Dezembro**	**1**	**1**	**1**
Quelimane	**CS Chabeco**	**1**	**1**	**1**
Quelimane	**CS Coalane**	**1**	**1**	**1**
Quelimane	**CS Icidua**	**1**	**1**	**1**
Quelimane	**CS Inhangulue**	**1**	**1**	**1**
Quelimane	**CS Ionge**	**1**	**1**	**1**
Quelimane	**CS Lugela Sede**	**0**	**1**	**0**
Quelimane	**CS Madal**	**1**	**1**	**1**
Quelimane	**CS Malanha**	**1**	**0**	**0**
Quelimane	**CS Maquivale Rio**	**1**	**1**	**1**
Quelimane	**CS Maquivale Sede**	**1**	**1**	**1**
Quelimane	**CS Marrongane**	**1**	**1**	**1**
Quelimane	**CS Micajune**	**1**	**1**	**1**

Quelimane	**CS Namuinho**	**1**	**1**	**1**
Quelimane	**CS Sangariveira**	**1**	**1**	**1**
Quelimane	**CS Varela**	**1**	**1**	**1**
Quelimane	**CS Zalala**	**1**	**0**	**0**
Quelimane	**EP Provincial da Zambezia**	**0**	**1**	**0**
Quelimane	**EP Provincial de Maputo**	**0**	**1**	**0**
Quelimane	**HP Quelimane**	**0**	**1**	**0**
	TOTALS	**173**	**166**	**139**

Appendix 2: Supplemental results (tables and figures)

Supplemental results related to Objective 1: ART coverage for all PW

Table S2. Absolute number of PW living with HIV who received ART within ANC, over time.

District	Receipt of ART	Min	Q1	Median	Q3	Max	Mean	SD	Start Time	Months
Alto Molócuè	Previously on ART	13	24	30	37	48	30	8	2015-10	72
	Newly started in ANC	6	13	22	28	41	21	9	2015-10	72
	Previously and newly	27	41	56	62	77	52	12	2015-10	72
Gilé	Previously on ART	12	30	42	52	75	41	15	2015-10	72
	Newly started in ANC	5	19	24	34	44	25	10	2015-10	72
	Previously and newly	35	56	66	74	101	66	14	2015-10	72
Gurué	Previously on ART	18	28	34	37	57	34	8	2018-10	36
	Newly started in ANC	4	9	12	23	37	16	9	2018-10	36
	Previously and newly	30	39	46	63	78	50	14	2018-10	36
Ile	Previously on ART	10	22	26	34	50	27	10	2015-10	72
	Newly started in ANC	1	12	18	23	42	19	8	2015-10	72
	Previously and newly	23	36	46	56	75	46	13	2015-10	72
Inhassunge	Previously on ART	12	32	46	57	87	45	17	2015-10	72
	Newly started in ANC	6	18	22	31	52	24	10	2015-10	72
	Previously and newly	34	58	70	78	105	69	14	2015-10	72
Lugela	Previously on ART	15	25	30	35	47	31	7	2018-10	36
	Newly started in ANC	8	12	17	24	39	19	8	2018-10	36
	Previously and newly	27	42	48	55	73	50	12	2018-10	36
Maganja da Costa	Previously on ART	16	42	60	75	107	59	23	2015-10	72
	Newly started in ANC	17	32	45	55	92	45	16	2015-10	72
	Previously and newly	66	89	102	116	146	104	19	2015-10	72
Milange	Previously on ART	64	79	90	97	119	89	14	2018-10	36
	Newly started in ANC	26	39	48	60	85	49	14	2018-10	36
	Previously and newly	111	120	130	155	182	138	20	2018-10	36
Mocuba	Previously on ART	91	129	142	156	185	142	21	2018-10	36
	Newly started in ANC	39	51	63	74	110	64	17	2018-10	36
	Previously and newly	157	185	206	228	289	206	29	2018-10	36
Mocubela	Previously on ART	6	33	56	79	131	57	30	2015-10	72
	Newly started in ANC	16	25	32	39	67	34	12	2015-10	72
	Previously and newly	30	77	88	108	157	91	27	2015-10	72
Molumbo	Previously on ART	12	18	20	24	32	21	5	2018-10	36
	Newly started in ANC	7	12	14	20	30	16	6	2018-10	36
	Previously and newly	24	30	36	42	52	37	8	2018-10	36
Namacurra	Previously on ART	25	66	110	130	186	102	40	2015-10	72
	Newly started in ANC	26	56	74	94	123	73	24	2015-10	72
	Previously and newly	96	154	178	199	247	175	33	2015-10	72
Nicoadala	Previously on ART	71	89	114	136	159	114	25	2018-10	36
	Newly started in ANC	23	35	42	54	87	46	16	2018-10	36
	Previously and newly	105	146	158	177	222	160	24	2018-10	36
Pebane	Previously on ART	16	65	100	136	187	101	42	2015-10	72
	Newly started in ANC	23	40	50	60	92	51	16	2015-10	72
	Previously and newly	59	121	158	183	225	153	37	2015-10	72
Quelimane	Previously on ART	112	174	202	219	266	195	36	2016-10	60
	Newly started in ANC	45	74	100	140	222	110	44	2016-10	60
	Previously and newly	236	276	305	326	382	305	36	2016-10	60

Note: "Previously on ART" = ART experienced. "Newly started in ANC" = ART naïve prior to recent starting of ART. "Previously and newly" = all PW included in analysis.

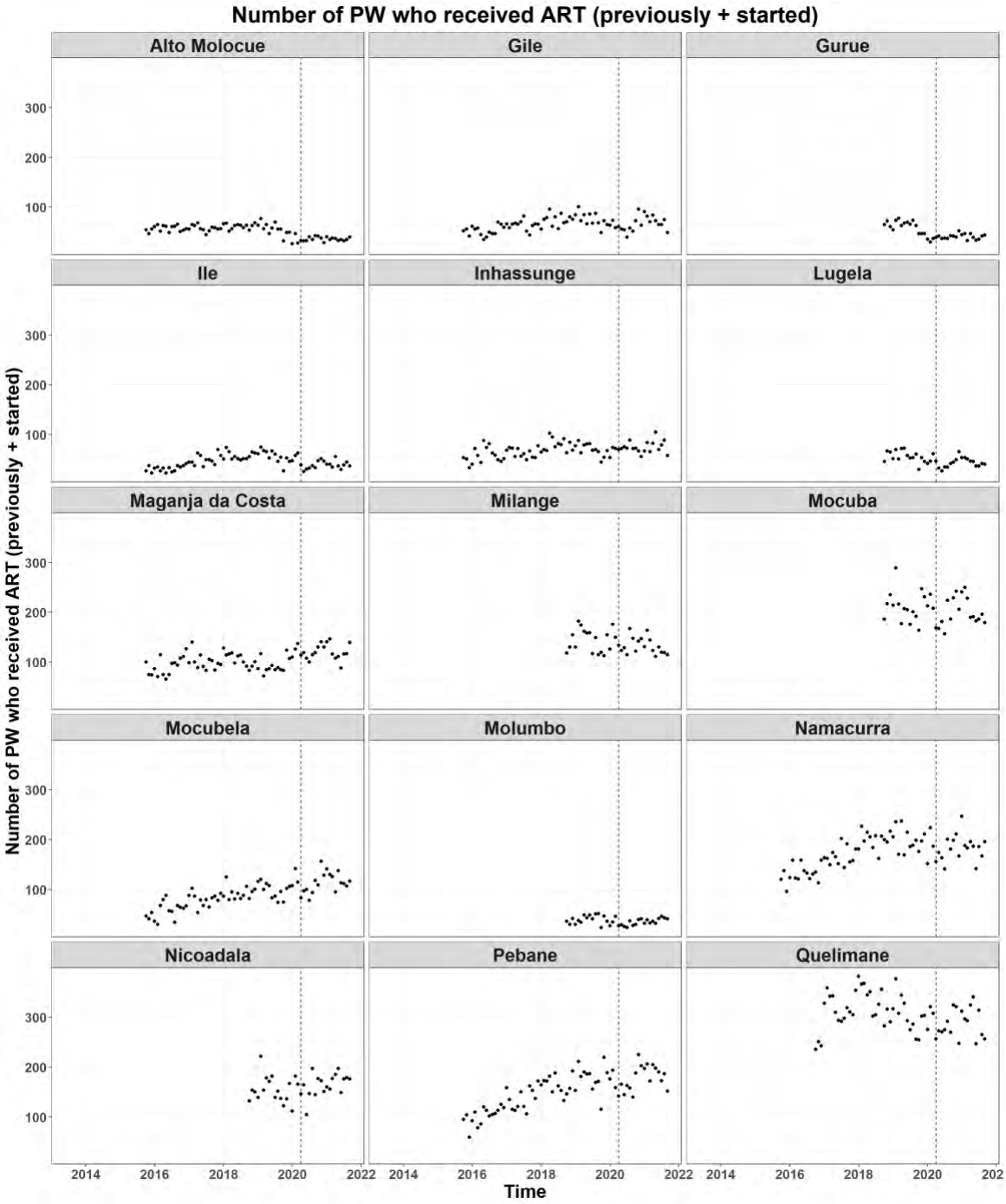

Figure S1. Number of PW who received ART in ANC (previously on ART and newly started in ANC), over time. (Dotted line: time point when COVID-19 mitigations were put in place in Mozambique.)

Supplemental results related to Objective 2: EID coverage for all HEI

Table S3. Number of PCR tests performed for HEI, by 2 months and 9 months of age, over time.

District	PCR test [a, b]	Min	Q1	Median	Q3	Max	Mean	SD	Start Time	Months
Alto Molócuè	< 2 months	11	29	35	41	57	35	10	2015-10	72
	< 9 months	14	37	45	54	76	46	12	2015-10	72
Gilé	< 2 months	11	27	43	54	75	42	17	2015-10	72
	< 9 months	26	44	56	65	87	55	14	2015-10	72
Gurué	< 2 months	13	30	38	41	57	36	10	2018-10	36
	< 9 months	17	36	46	53	71	45	12	2018-10	36
Ile	< 2 months	5	21	30	39	54	30	12	2015-10	72
	< 9 months	10	32	40	47	61	39	11	2015-10	72
Inhassunge	< 2 months	20	40	54	65	98	53	17	2015-10	72
	< 9 months	33	53	62	74	103	64	15	2015-10	72
Lugela	< 2 months	18	31	35	42	54	36	8	2018-10	36
	< 9 months	25	37	44	51	68	45	9	2018-10	36
Maganja da Costa	< 2 months	24	54	82	104	149	81	33	2015-10	72
	< 9 months	51	83	102	121	159	104	27	2015-10	72
Milange	< 2 months	72	90	128	152	183	125	35	2018-10	36
	< 9 months	84	109	130	155	184	133	29	2018-10	36
Mocuba	< 2 months	91	144	159	178	217	159	28	2018-10	36
	< 9 months	127	170	186	201	242	184	24	2018-10	36
Mocubela	< 2 months	5	46	88	110	142	78	40	2015-10	72
	< 9 months	17	79	108	120	155	96	34	2015-10	72
Molumbo	< 2 months	16	24	30	35	46	30	8	2018-10	36
	< 9 months	22	30	35	40	51	35	7	2018-10	36
Namacurra	< 2 months	3	80	139	173	250	131	57	2015-10	72
	< 9 months	4	133	160	187	270	161	44	2015-10	72
Nicoadala	< 2 months	87	128	138	147	205	141	25	2018-10	36
	< 9 months	105	147	156	174	221	160	26	2018-10	36
Pebane	< 2 months	12	70	122	142	205	109	44	2015-10	72
	< 9 months	38	114	148	165	221	140	36	2015-10	72
Quelimane	< 2 months	98	202	240	274	316	230	52	2016-10	60
	< 9 months	182	245	272	288	322	265	35	2016-10	60

[a] There is no monthly "Number of PCR tested (<2 months)" in current DHIS data. Assuming that all collected PCR samples were tested, "Number of PCR collected (<2 months)" may be a good proxy for estimating HEI EID coverage for children less than 2 months.
[b] There is monthly "Number of PCR tested (<9 months)" in current DHIS data and was used directly to reflect the HEI EID coverage for children less than 9 months.

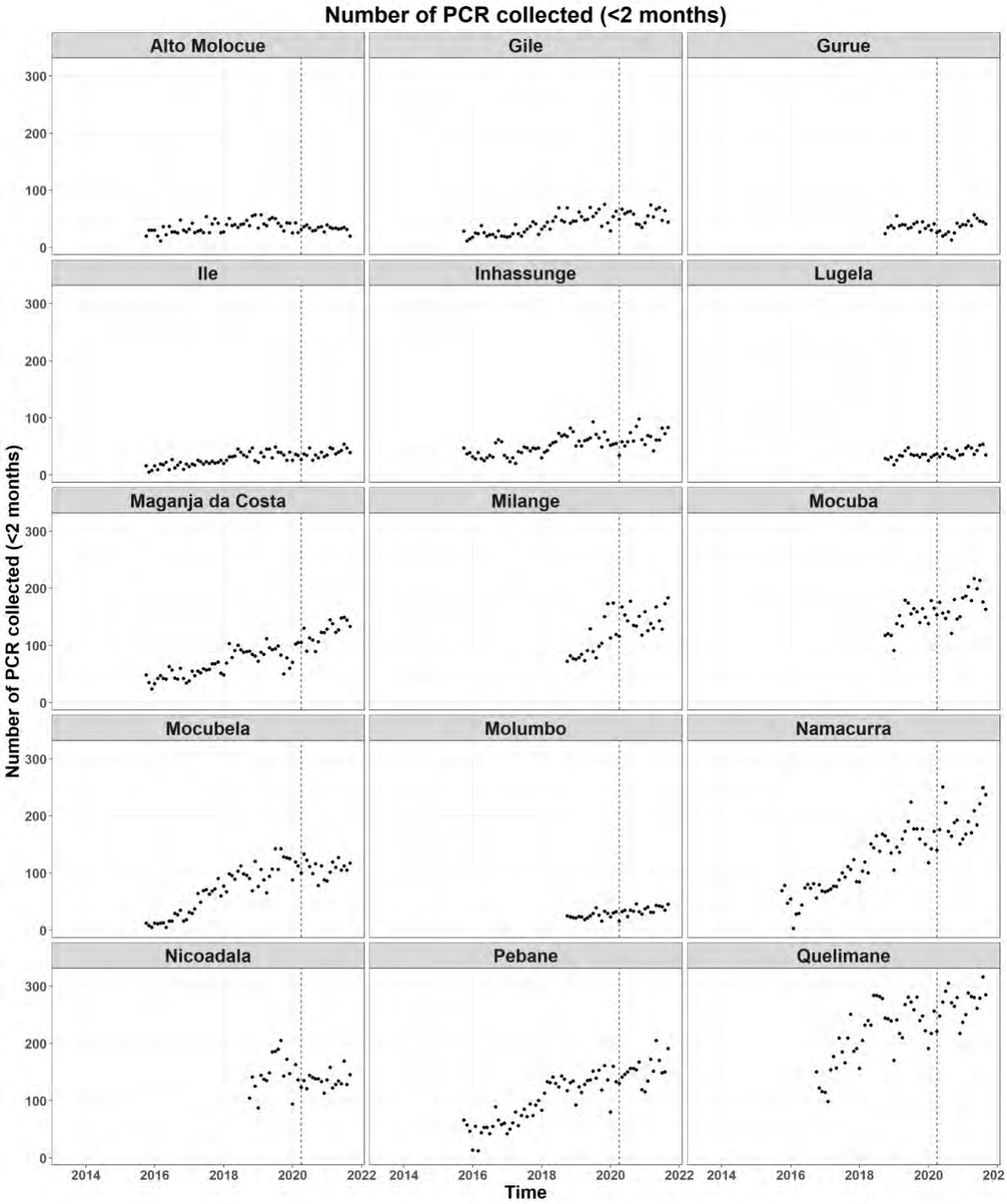

Figure S2a. Number of HEI who had a PCR test collected by < 2 months of age, over time. (Dotted line: time point when COVID-19 mitigations were put in place in Mozambique.)

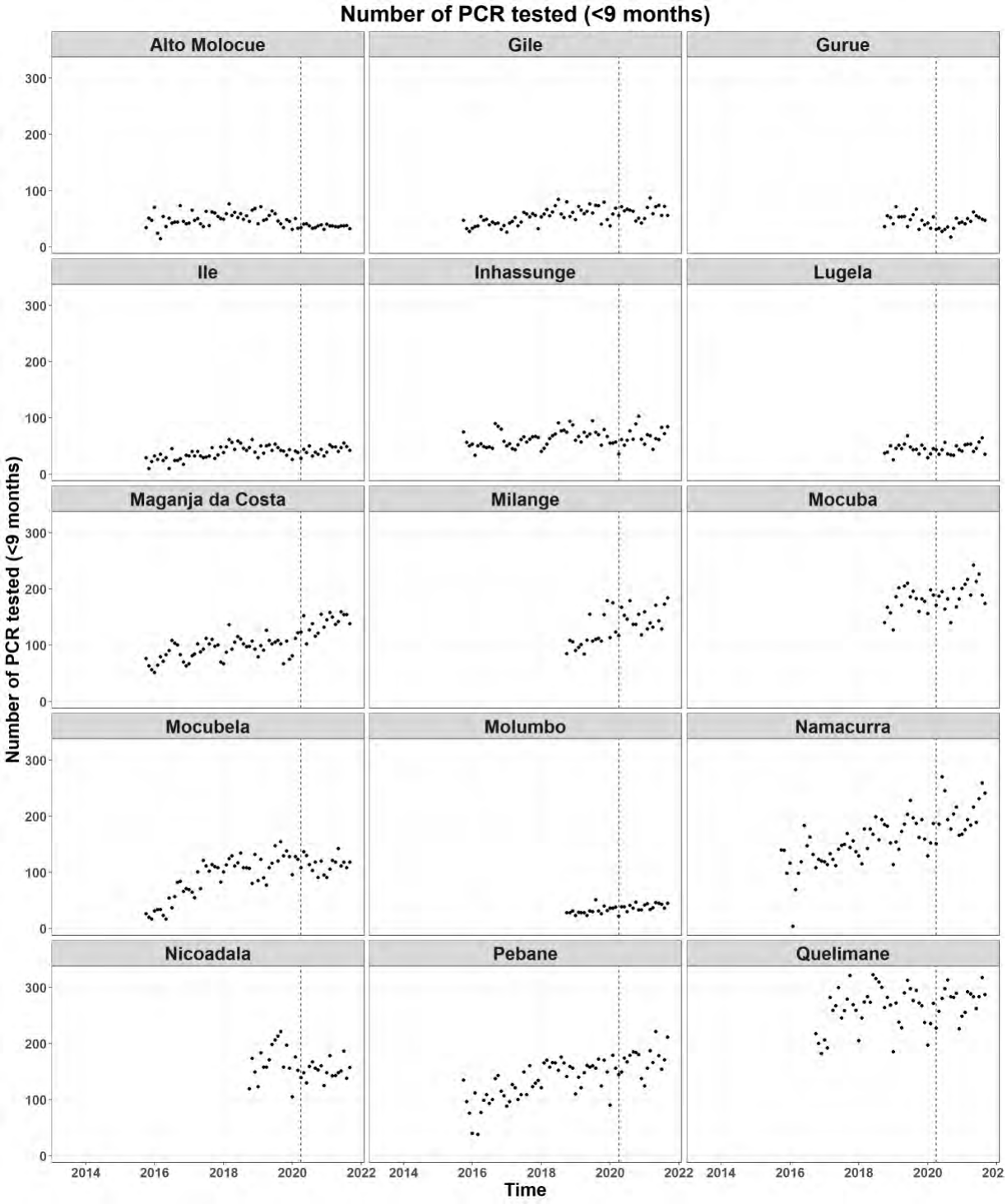

Figure S2b. Number of HEI who had a PCR test collected by < 9 months of age, over time. (Dotted line: time point when COVID-19 mitigations were put in place in Mozambique.)

Supplemental results related to Objective 3: HEI PCR positivity rate

Table S4. Number of HEI testing positive via HIV DNA PCR, by 2 months and 9 months of age, over time.

District	Positive PCR	Min	Q1	Median	Q3	Max	Mean	SD	Start Time	Months
Alto Molócuè	< 2 months	0	0	1	2	7	2	1	2015-10	71
	< 9 months	0	1	2	4	12	3	3	2015-10	71
Gilé	< 2 months	0	1	3	4	9	3	3	2015-10	69
	< 9 months	0	2	4	7	24	5	4	2015-10	69
Gurué	< 2 months	0	0	1	2	4	1	1	2018-10	36
	< 9 months	0	0	2	3	7	2	2	2018-10	36
Ile	< 2 months	0	1	2	3	6	2	2	2015-11	68
	< 9 months	0	1	3	5	10	3	2	2015-11	68
Inhassunge	< 2 months	0	1	2	4	8	3	2	2015-10	72
	< 9 months	0	2	4	6	18	5	4	2015-10	72
Lugela	< 2 months	0	1	2	3	6	2	2	2018-10	36
	< 9 months	0	1	2	4	9	3	2	2018-10	36
Maganja da Costa	< 2 months	0	2	4	6	12	4	3	2015-10	70
	< 9 months	1	5	7	10	29	8	5	2015-10	70
Milange	< 2 months	0	1	2	2	6	2	1	2018-10	36
	< 9 months	0	2	2	4	7	3	2	2018-10	36
Mocuba	< 2 months	2	4	6	7	11	6	3	2018-10	36
	< 9 months	2	7	9	12	19	9	4	2018-10	36
Mocubela	< 2 months	0	1	2	4	7	3	2	2015-10	69
	< 9 months	0	2	5	6	16	5	3	2015-10	69
Molumbo	< 2 months	0	0	0	1	3	1	1	2018-10	36
	< 9 months	0	0	1	2	4	1	1	2018-10	36
Namacurra	< 2 months	1	4	7	12	33	8	6	2015-10	71
	< 9 months	2	6	11	16	51	13	10	2015-10	71
Nicoadala	< 2 months	0	3	5	7	12	5	3	2018-10	36
	< 9 months	2	5	6	9	19	8	4	2018-10	36
Pebane	< 2 months	0	2	5	8	26	5	4	2015-10	72
	< 9 months	0	5	8	14	30	9	6	2015-10	72
Quelimane	< 2 months	0	5	6	8	23	7	4	2016-10	60
	< 9 months	1	7	10	14	57	12	9	2016-10	60

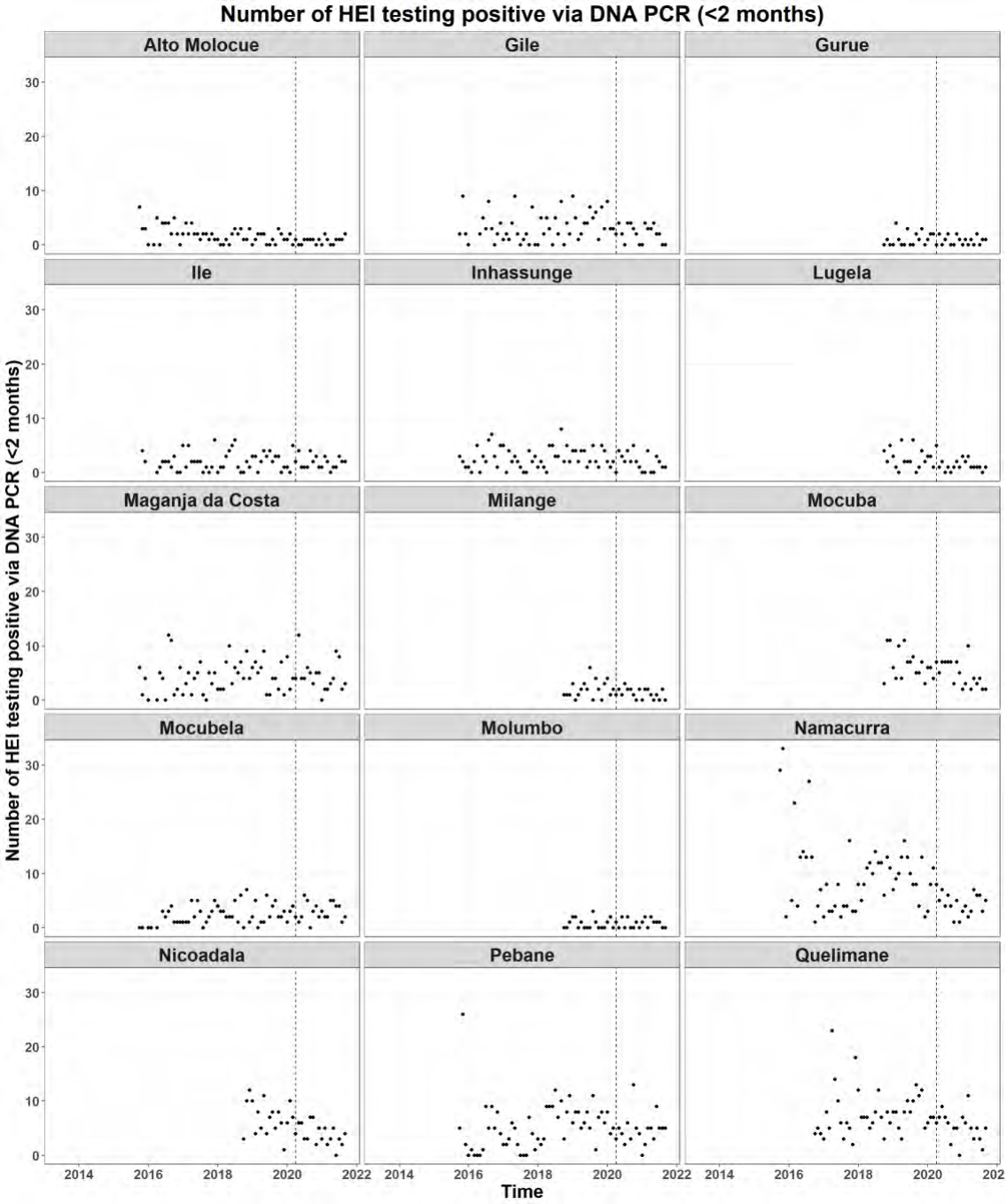

Figure S3a. Number of HEI testing HIV-positive (via DNA PCR) by < 2 months of age, over time. (Dotted line: time point when COVID-19 mitigations were put in place in Mozambique.)

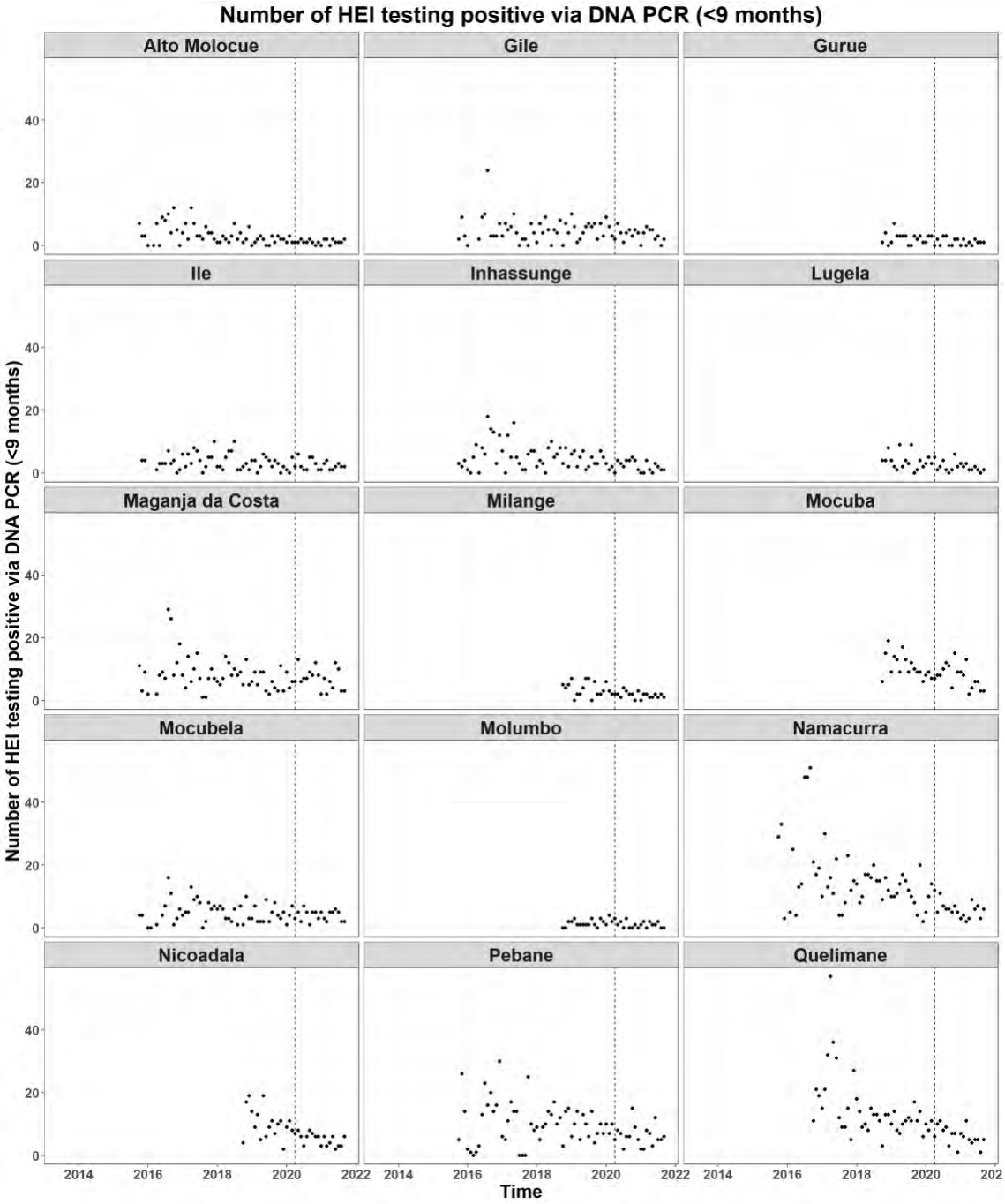

Figure S3b. Number of HEI testing HIV-positive (via DNA PCR) by < 9 months of age, over time. (Dotted line: time point when COVID-19 mitigations were put in place in Mozambique.)

Supplemental results related to Objective 4: Retention

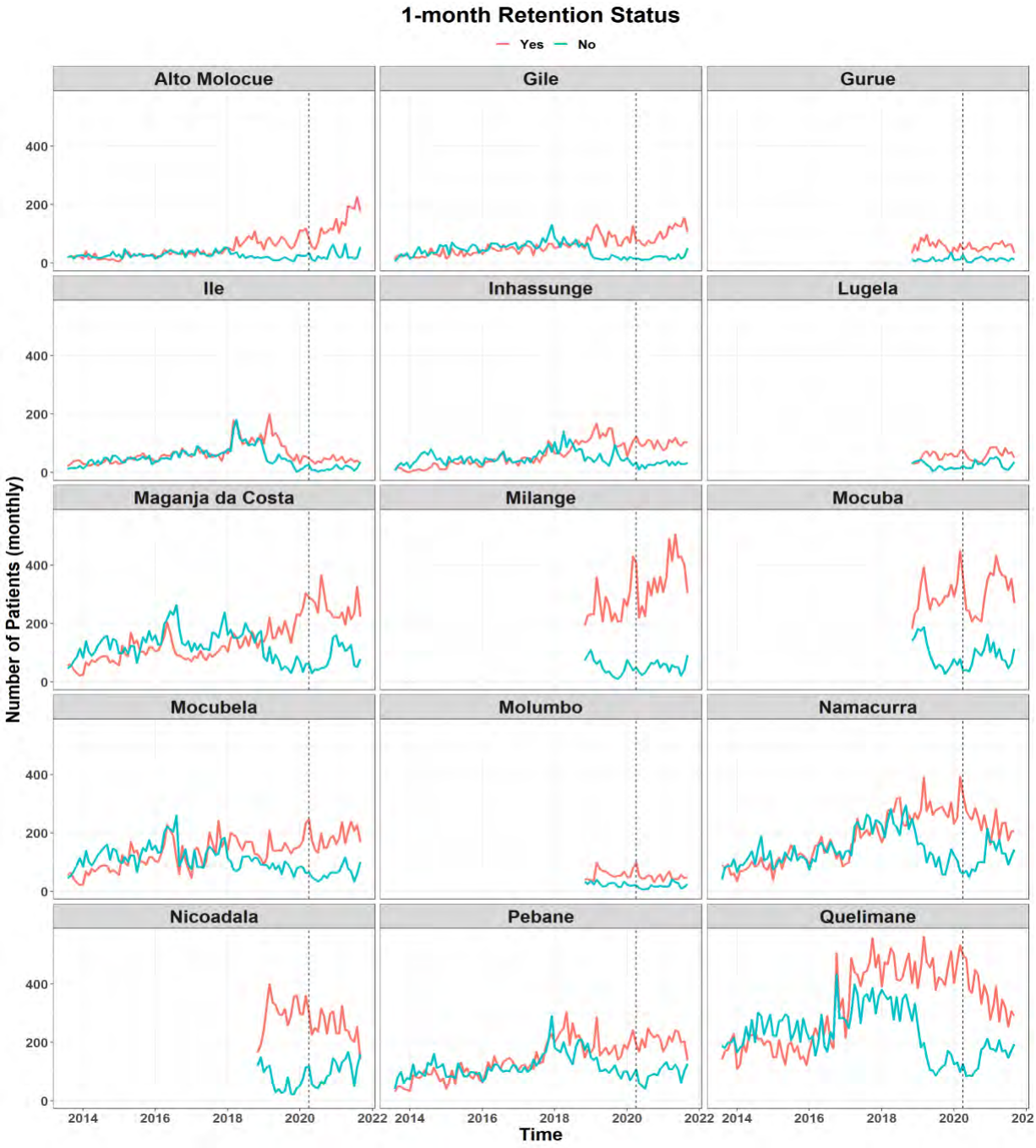

Figure S4. Number of patients with 1-month retention status, entire cohort, over time: red line indicates those who were retained at 1-month, blue line represents those who were not retained at 1-month. (Dotted line: time point when COVID-19 mitigations were put in place in Mozambique.)

Table S5. Percentages at 1-month retention, by group, stratified by age category, over time.

		15-24 years of age							25-34 years of age							35-49 years of age						
District	Group	Min	Q1	Median	Q3	Max	Mean	SD	Min	Q1	Median	Q3	Max	Mean	SD	Min	Q1	Median	Q3	Max	Mean	SD
Alto Molócuè	PW	14.3	50	64.3	83.3	100	64.2	23.7	11.1	50	66.7	86.2	100	66.7	24.4	33.3	50	100	100	100	83.3	24.7
	Non PW	12.5	50	65.3	79.8	100	60.6	23.2	20	54.8	73	86.7	100	69.8	20.5	22.2	50	66.7	90.9	100	69.7	22.9
	Men	25	50	66.7	100	100	67.6	25.5	20	45.7	68	82.8	100	64.6	23.1	14.3	45.5	66.7	85.2	100	64.5	23.2
Gilé	PW	16.1	42.2	60	79.3	100	61.2	22.7	7.7	42.9	60	81.7	100	61.4	24.7	25	50	75	100	100	74.5	26.7
	Non PW	16.7	36	50	84.2	100	58.3	25.4	15.4	45.8	60.8	82.4	100	62.5	23.5	8.3	50	66.7	87	100	65.4	24.2
	Men	6.2	25	50	79.2	100	53.1	29.3	8.3	33.3	44.4	82.6	100	54.3	27.6	14.3	36.7	58.5	83.1	100	59.8	25
Gurué	PW	54.5	76.4	88.9	100	100	86.5	13.9	50	70.8	85.7	100	100	84.5	16.6	100	100	100	100	100	100	0
	Non PW	44.4	68.3	82.4	90.8	100	78.8	17	28.6	72.7	86.7	100	100	82.4	18.4	33.3	71.4	83.3	100	100	82.7	18.5
	Men	33.3	70.8	85.7	100	100	80.5	20.9	23.1	72.1	83.3	92.3	100	80.7	15.7	44.4	70.7	87.5	100	100	83.8	16.4
Ile	PW	9.1	47.4	60	71.4	100	60	19.6	12.5	46.7	55.6	66.7	100	59.2	21.3	20	47.5	66.7	100	100	67.9	29
	Non PW	14.3	41.9	58.3	71.4	100	58.1	20.1	14.3	44.5	54.1	71.4	100	58.4	20.8	12.5	50	61.5	77.4	100	63	19
	Men	14.3	35.2	60	94	100	61.8	27.7	22.2	46.2	56.7	73.3	100	59.2	20.1	14.3	47.7	60	75	100	60.4	19.4
Inhassunge	PW	4.8	43.6	63.6	76.7	100	60.2	23.7	7.7	33.3	57.1	77.8	100	55.4	25.4	16.7	50	66.7	100	100	70	28.4
	Non PW	12.5	35.8	55.6	75	100	56.3	22.3	11.1	33.3	52.8	71.2	100	53.2	23.1	14.3	48.5	60	76.7	100	60.3	21.5
	Men	11.1	35.3	50	68.8	100	54	22.1	10	40	52.5	72.3	95.2	54.1	20.6	12.5	33.3	55.9	75.5	100	56.1	23.7
Lugela	PW	36.4	66.7	76.9	85.2	100	74.4	16.2	20	63.4	75	100	100	77.4	21.4	50	81.2	100	100	100	88.7	19.5
	Non PW	10	57.7	69.2	82.6	100	68.2	21.5	20	60.5	69.2	83.3	100	68.4	21.2	33.3	57.1	70	80	100	68.8	17.2
	Men	25	48.6	69.1	88.9	100	67.7	24	9.1	58.7	72.7	84.7	100	69.4	21.9	20	62	71.4	86.6	100	71.1	19.5
Maganja da Costa	PW	23.1	43.9	55.1	72.8	95.7	58.2	18.6	8	37.1	48.6	72.1	95.7	54.2	21.2	11.1	37.5	50	75	100	57.5	24.3
	Non PW	15.4	35.7	47.2	66.7	92.1	51.2	20.2	11.1	36.4	47.1	67.5	98.3	51.2	20.1	8.3	39.4	50.6	66.7	94.6	53.3	19
	Men	5.9	33.3	48	66.7	100	51.2	22	6.2	38.9	50	72	93.3	52.9	21.2	10	38.5	50	68.2	95.3	53.6	21.4
Milange	PW	56.4	85.4	89.5	94.4	100	88.2	9.7	65.6	84.9	88.5	94.1	100	88.5	7.4	33.3	75	85.7	100	100	84	16.2
	Non PW	62.1	79.4	85.1	89.8	96.8	83.9	8.5	60.9	78.1	85.4	91.4	96.9	83.8	9.1	55.2	77.1	84.9	90.2	97.2	83.3	10.7
	Men	68.8	82.8	89.3	91.6	100	87.3	8.4	59	83.7	86.1	91	97.7	86	7.8	63	82.3	88.5	91.3	97.3	85.6	8.8
Mocuba	PW	59.1	75.2	81.6	87.7	96.6	80.6	9.2	53.3	74.3	83.3	88.3	100	79.7	11.8	33.3	66.7	77.5	100	100	79.7	18.5
	Non PW	45.2	64.9	80.5	83.9	88.7	74.5	12.2	57.1	65.3	81.1	85	92	76.4	11	51.5	70.7	79.5	87.6	93.9	78.2	10.5
	Men	43.2	60.2	72.7	85.4	100	72.5	16.1	53	69.2	77.4	84.7	95.1	76.6	11.3	57.4	69.8	77.6	85.9	100	77.7	10.3
Mocubela	PW	23.7	47.5	61.8	74.2	100	60.7	18.4	8.7	41.5	53.2	66.7	100	54.8	20.8	9.1	48.6	58.5	83.3	100	63.4	25.9
	Non PW	14.3	42.7	52.2	66.5	88.4	53.8	16.8	16.7	43.5	56.9	67.5	84.6	55.1	16.4	9.1	45.3	55.8	70	94.4	57.3	18.1
	Men	14.3	41.7	57.1	67.9	100	56.1	17.3	14.3	41.8	51.4	64.4	83.7	52.9	16.5	16.7	48.5	58.8	69.7	91.7	57.6	16.8
Molumbo	PW	40	65.2	75	94.4	100	76.9	17.5	33.3	60	77.8	100	100	76.1	22.2	33.3	50	87.5	100	100	77.6	24.4
	Non PW	16.7	57.7	70	80	100	68.3	20.4	40	61.2	70	82.6	100	70.7	17.2	33.3	61.2	75	86.6	100	73.2	19.1
	Men	33.3	57.8	71.3	88.6	100	72.8	20.2	40	58.3	71.4	83.3	100	71.9	16.5	40	59.8	71.4	83.3	100	72.1	16.2
Namacurra	PW	29.6	49.1	59	68.8	96.9	59.8	14.5	16	41.4	53.8	66	94.1	53.5	16.8	11.1	37.5	50	71.4	100	55.2	24.1
	Non PW	20	42.8	52.3	62.1	87.8	53.5	15.7	30.6	47.9	54.8	66.7	91	56.3	13.2	14.3	50	58	68.8	88.1	59.1	14.6
	Men	16.7	37.5	46.3	61.2	93.5	49.2	18	25	42.4	52	63.5	90.7	54	15.2	11.1	45.8	59.2	67.3	92.6	56.3	17
Nicoadala	PW	56.5	71.8	82.4	89.7	97.2	80.3	11	33.3	75.6	82.1	90.8	100	81.4	12.6	25	66.7	100	100	100	83.5	23.2
	Non PW	44.4	63.4	72.9	84.1	95.5	73.5	12.9	34.5	71.5	78.6	87.6	95.4	77.1	14.2	40	72.3	80	86.6	95.6	77.3	12.8
	Men	48.6	60	72.4	83.7	93.9	72.6	13.6	50.9	68.6	75	84.3	98.1	75.8	13.1	37.9	68.3	76.7	86	97	76.1	13.4
Pebane	PW	27.6	48.9	58	65.6	95.2	57.2	14.4	15.4	44.4	57.7	70	88.9	56.7	16.6	12.5	33.3	50	73.2	100	55.3	26.6
	Non PW	9.1	44.9	53.8	66.2	88.9	54.4	14.7	26.7	46.5	56.1	63.4	87.5	55.4	12.6	20	52	63.2	70.3	89.3	60.8	14.4
	Men	15	36.7	47.1	61.3	91.3	48.8	17.9	24	45.5	52	60.4	81.4	52	13.2	18.2	43.8	56.2	67.6	85	55.7	14.6
Quelimane	PW	21.3	41.7	63.6	79.2	95.8	60.9	20.4	12.8	45	63.2	76.9	97.4	61.3	19	14.3	39.4	71.4	83.9	100	64.1	26.6
	Non PW	31.1	43.2	54.8	64.7	85.1	55.7	14.6	31	50	56.4	70.4	92.4	59.3	14.2	27.6	57.3	63.8	71	92.3	63.7	12.7
	Men	16.7	37.7	47.2	64.4	87	49.9	18	25.6	46.8	54	66.9	84.7	56.3	14.3	28.6	48.6	58.7	66.9	90	58.4	13.9

Figure S5. Number of patients with 3-month retention status, entire cohort, over time: red line indicates those who were retained at 3-months, blue line represents those who were not retained at 3-months. (Dotted line: time point when COVID-19 mitigations were put in place in Mozambique.)

Table S6. Percentages at 3-month retention, by group (PW, non-PW, men), stratified by age category, over time.

		15-24 years of age							25-34 years of age							35-49 years of age						
District	Group	Min	Q1	Median	Q3	Max	Mean	SD	Min	Q1	Median	Q3	Max	Mean	SD	Min	Q1	Median	Q3	Max	Mean	SD
Alto Molócuè	PW	5.3	17.6	33.3	50	83.3	35.4	21.7	12.5	30	41.7	66.7	100	47.4	23.6	20	50	80	100	100	73.5	28.3
	Non PW	10	25	35.4	52.8	100	40.1	19.8	9.1	33.3	43.8	57.8	100	45.5	22.5	9.1	33.3	50	69.8	100	53.3	24.5
	Men	15.4	33.3	50	60	100	48.5	22	6.7	16.7	36.4	56.2	91.7	38.9	22.5	7.1	33.3	50	65.2	100	48.1	21.5
Gilé	PW	3.2	19.2	33.3	47.1	84.6	35.6	20.7	7.7	21.1	33.3	53.3	100	39.9	22.7	20	36.6	50	100	100	66	30.6
	Non PW	7.1	18	35.2	59.4	100	38.8	23.7	7.7	23.1	35.7	50	100	39.5	20.8	11.1	25	42.9	66.7	100	46.9	24.6
	Men	5	14.3	26.7	50	85.7	33.1	21.5	5	16.7	28.6	52.2	100	35.4	22.4	6.7	25	34.3	54.5	100	40.7	22.3
Gurué	PW	22.2	37.5	58.3	77.8	100	59.2	21.3	25	50	66.7	80	100	67.6	21	50	100	100	100	100	95.8	14.4
	Non PW	22.2	42.6	58.5	71.4	100	57.3	19.5	25	46.1	63.4	80.4	100	64.8	24	16.7	50	66.7	83.3	100	67.3	20.3
	Men	25	50	60	77.5	100	64.6	22.7	11.1	42.9	63.6	73.3	100	59.8	22.2	25	40	55.6	80	100	59.3	24
Ile	PW	7.1	22.9	33.3	50	100	37.5	19.5	8.3	22.2	33.3	53.3	100	37.9	22.9	12.5	33.3	50	66.7	100	56.2	27.5
	Non PW	5.3	22.2	29.6	44.2	85.7	34.2	17.2	7.7	23.2	34.3	42.9	100	35	17.1	9.1	33.3	43.3	52.8	100	43.8	18.6
	Men	6.7	21.2	33.3	50	100	40.7	25.8	5.3	20	29.7	40.9	85.7	31.7	14.1	9.1	27.2	33.3	50	100	38	17.5
Inhassunge	PW	4.5	25.9	39.4	53.3	86.7	40.1	20.6	5.3	25	33.3	52.4	100	38.9	21.6	14.3	33.3	50	80	100	57	29.3
	Non PW	10	25	37.5	46.6	100	38.7	18.4	8.3	22.7	35	50	78.6	36.2	16.2	10	27.5	40	50	100	40	16
	Men	6.7	20	32.2	45.1	100	33.8	17.4	10	24.3	30.8	41.7	68.2	32.9	13	9.1	20	32.1	50	80	35.7	16.9
Lugela	PW	16.7	33.3	44.4	65	83.3	49	19.5	16.7	35.6	53.5	75	100	55.1	24.5	33.3	50	50	75	100	63.9	23.4
	Non PW	9.1	31.9	46	60.6	83.3	45.8	20.6	9.1	29.9	40	58	100	44.3	22.1	20	40	50	66.7	100	54.3	21
	Men	12.5	25	31.6	55.3	100	39.6	22.9	7.7	31	40	50	91.7	41.8	18.3	11.1	37.5	47.8	62.5	92.3	47.7	20.2
Maganja da Costa	PW	3.7	21.7	32.1	50	90	36.3	19.1	3.6	17.8	28.6	43.8	87.1	32.7	19.1	8.3	25	36.4	50	100	39.5	22.2
	Non PW	4.3	15.4	26.9	42.1	87	31.2	18.3	3.4	18.8	26.4	38.7	74.4	31	18.1	5	20.4	29.7	42.4	75	33.6	17.5
	Men	5.3	16.5	30.2	44.5	79.2	33.2	19.7	5.1	16	26.5	42.4	86	31.5	19.4	5	18.8	30.8	41.8	84	33.3	18.2
Milange	PW	25.8	53.1	64.1	71.4	96	62.7	16.1	25.6	50	60.9	73.7	86.4	61.9	16	25	50	60	80	100	63.9	21.5
	Non PW	21.7	42.9	53.5	66.2	81.2	54.7	16.6	23.1	46.2	55.1	68.4	83.3	56.1	16.5	20.5	47.9	61.8	68.8	95.1	57.6	19.3
	Men	15	40	55.9	67.4	87.5	55.1	18.3	22.4	37.5	58.2	68.9	82.1	55.3	17.8	18.9	45.9	55	68.8	88.2	56.4	17.2
Mocuba	PW	20.9	48.5	53.3	61.8	76	52.5	12.9	18.8	46.7	60	67.7	76	56.4	14.8	18.2	50	50	60	100	55.1	17.2
	Non PW	24.4	37	44.1	50.9	58.1	43.5	10.2	24.1	40	46.3	56	67.2	46.7	10.8	26.3	41.4	46.7	60	71.9	50.6	12.1
	Men	15.4	29.4	35.7	47.4	65.2	38.2	12.4	14.9	37.5	42.9	54.3	64.9	44.6	11	27.3	38.2	50.9	55.4	63.8	47.5	9.8
Mocubela	PW	3.6	23.9	36	53.5	81.8	39.1	18.7	6.5	20.1	32.7	53	81.8	36	20	8.3	25	45.3	66.7	100	49.5	28.8
	Non PW	5.6	21.3	32.3	43.4	67.9	32.8	16.3	3.2	22.9	34.9	46.9	71.4	34.4	16.7	6.2	22	36.8	50	73.3	37.2	17.5
	Men	6.7	21.8	29.2	40	72.7	31.5	13.5	9.1	18.6	33.9	40	66.1	31.4	13.8	7.7	25.9	35.6	47.7	69.6	36.6	14.2
Molumbo	PW	15.4	33.3	60	75	100	59.1	28.5	16.7	38.8	50	63.4	100	51.7	20.9	42.9	50	83.3	100	100	77.4	24.1
	Non PW	14.3	39.4	55	65.2	75	51.8	16.5	11.1	40	54.5	61.1	90	52.3	17.9	30	42.9	55.6	75	100	58.2	19.2
	Men	16.7	33.3	50	61.9	100	50.1	22.5	23.1	36.4	46.7	62.5	92.9	49.6	18.4	27.3	50	62.5	66.7	100	61.1	16.6
Namacurra	PW	7.2	22.8	33	43.8	65.5	33.9	14.2	6.2	19.9	32.5	40.5	75	31.9	15.1	9.1	23.6	33.3	50	100	37.4	20.8
	Non PW	3.8	23.3	30.2	37.5	53.3	30.6	10.7	4.8	26.1	33.8	40.1	65.4	33.5	10.9	5	32	41.1	50	67.2	40.4	12.5
	Men	9.1	17.6	23.1	33.3	50	25.5	9.7	5.3	23.2	29.9	38.8	54.4	30.4	10.7	10	25	34.9	41	64.3	33.6	11.6
Nicoadala	PW	8	42.9	50	62.1	86.2	51.6	17.1	14.7	41.7	50	62.5	85.7	51.7	16.1	20	33.3	50	66.7	100	54.1	24.5
	Non PW	18.3	26.7	33.3	48.8	65.3	37.4	13.6	16.9	33.8	39.6	56	77.2	44.4	15.3	17.6	34.1	43.5	52.3	77.8	45.3	16.2
	Men	12.5	22.7	31.2	47.4	68	35.4	16.8	18.3	31	39.1	46.1	72.9	40.6	14.3	7.3	30.4	38	52.6	64.5	40.3	14.5
Pebane	PW	6.7	23.4	33.8	45.9	68	35.4	14.1	6.2	26.5	36.7	50	73.3	36.7	15.6	12.5	25	50	60	100	48.8	27
	Non PW	6.2	27.9	37	43.7	63.5	36.1	11.9	11.8	28.6	37.5	45.5	62.2	37.2	11.5	9.1	32.1	40	49.2	72.4	40.1	12.6
	Men	7.7	22.2	30	39	66.7	31.5	13.3	7.7	25	32.1	40	55.3	32.3	11.2	11.1	27.1	34.9	48	69	37	13.2
Quelimane	PW	8.2	20.2	43.8	57.2	79.5	40.8	20.9	7.3	25	41.4	59.5	81.4	41.9	20	10	26.8	50	64.6	100	50.3	25.2
	Non PW	10.4	25.7	33.8	42	63.3	34.4	12.7	15.5	30.8	36.5	45.7	70.7	37.9	12.3	8.3	32.5	44	51.9	81	43.5	13.9
	Men	4.2	20.2	28.2	39.7	68.2	29.5	14.1	5.3	24.9	34.5	40.7	61.9	33.3	12.6	8.9	29.8	35.7	44.3	68.6	36.6	11.8

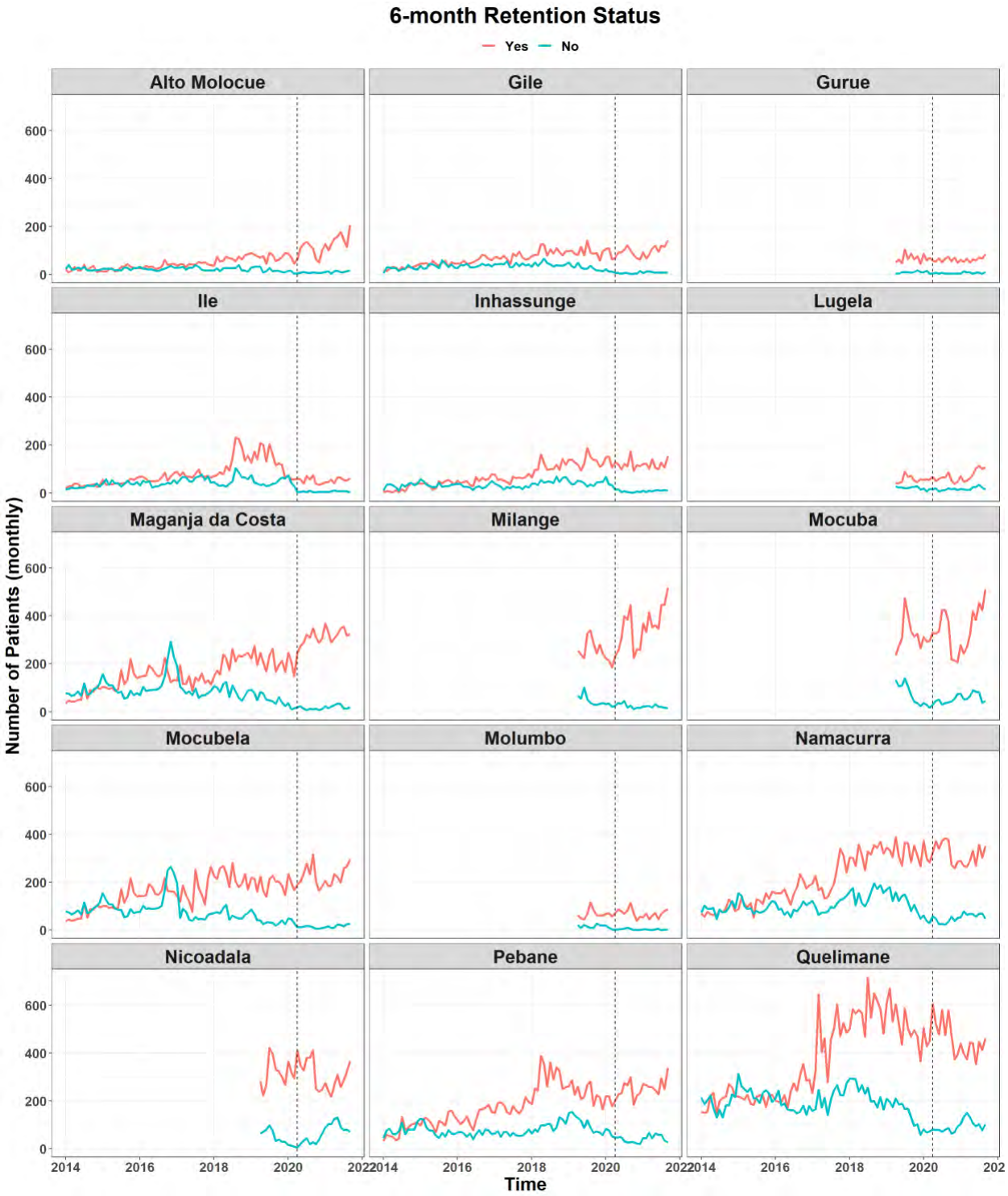

Figure S6. Number of patients with 6-month retention status, entire cohort, over time: red line indicates those who were retained at 6-months, blue line represents those who were not retained at 6-months. (Dotted line: time point when COVID-19 mitigations were put in place in Mozambique.)

Table S7. Percentages at 6-month retention, by group (PW, non-PW, men), stratified by age category, over time.

		15-24 years of age							25-34 years of age							35-49 years of age						
District	Group	Min	Q1	Median	Q3	Max	Mean	SD	Min	Q1	Median	Q3	Max	Mean	SD	Min	Q1	Median	Q3	Max	Mean	SD
Alto Molócuè	PW	11.8	51.7	71	91.9	100	70	23.3	10	58.5	78.6	100	100	75.4	23.6	50	100	100	100	100	92	17.1
	Non PW	16.7	50	70.7	88.7	100	69.7	22.8	14.3	62.9	78.9	91.6	100	75.4	20.4	25	66.7	83.3	100	100	78.2	20.6
	Men	16.7	60	83.3	100	100	76.3	25	16.7	50	64.7	86.7	100	66.5	21.6	25	57.8	80	90.2	100	74.6	20
Gilé	PW	29.2	56.5	73.1	89.3	100	72.3	18.5	20	62.5	80.9	100	100	76.4	21.1	25	66.7	100	100	100	83.3	24.1
	Non PW	16.7	54.2	66.7	88.9	100	68.7	21.7	33.3	60	75	90	100	74.6	19.5	28.6	66.7	80	94.7	100	79.2	17.1
	Men	16.7	50	64.6	85.7	100	65	23.7	20	53.8	66.7	84.7	100	67.7	20.6	33.3	55.4	70.6	88.9	100	71.9	19.2
Gurué	PW	54.5	86.2	93.1	100	100	91.2	11.6	50	76.2	100	100	100	88.4	15.6	50	100	100	100	100	97.2	11.8
	Non PW	72.7	86.2	89.8	100	100	90	9	75	88.3	93.8	100	100	93	8.1	71.4	83.3	100	100	100	91.8	10.7
	Men	66.7	100	100	100	100	96.3	8.9	71.4	88.9	92	100	100	92.6	7.2	50	77.8	92	100	100	87.8	14.2
Ile	PW	14.3	51.8	66.7	85.7	100	68.3	20.3	20	54.5	70	87.5	100	69.4	22.3	25	58.5	100	100	100	78.5	25.3
	Non PW	12.5	50	64.3	81.8	100	65.3	20.6	20	62.5	73.7	87.5	100	73	20.1	33.3	66.7	76.9	90.9	100	77.1	17.4
	Men	11.1	46.1	62.5	87.7	100	64.9	26	22.2	50	60	75	100	64	19.6	25	55.6	69.4	82.8	100	69.6	18.5
Inhassunge	PW	8.3	62.8	80.6	91.5	100	75.7	21.3	11.1	66.7	81.2	92.9	100	76.6	21.7	25	66.7	100	100	100	84.5	20.9
	Non PW	14.3	43.8	66.7	90	100	66.4	24.4	14.3	60	73.9	88.9	100	69.8	21.5	20	68.9	83.3	92.4	100	78.3	20.2
	Men	11.1	50	64.3	80.8	100	64.8	22.2	12.5	47.7	63.8	80.9	100	63.7	22.1	16.7	50	71.4	83.3	100	66.3	22.9
Lugela	PW	42.9	72.7	83.3	87.5	100	80	13.9	33.3	75	87.5	100	100	83.5	18.2	25	87.5	100	100	100	84.9	27.6
	Non PW	40	70.3	80	87.2	100	78.7	14.6	57.1	75	80.9	90.4	100	82.1	11.1	50	80	83.3	90.6	100	82.7	13.8
	Men	25	57.1	66.7	83.3	100	67.9	21.6	40	55.6	71	82.9	88.9	69.1	14.6	50	70	79.3	86.4	100	77.6	12.8
Maganja da Costa	PW	27.9	51.3	75.6	90.9	100	71.7	22.8	21.7	56.4	75.9	90.3	100	72.6	21.3	22.2	52.2	80	100	100	74.5	25
	Non PW	14.3	54.4	66.7	84.4	100	66.4	22.1	21.7	54.8	69.6	82.1	100	68.9	19.6	27.8	65.9	75.9	86.5	100	74	17.6
	Men	14.3	49.4	64.1	85.7	100	64.2	24.4	12.5	50	66.7	83.1	100	66.3	21.7	22.2	56.7	69.6	83.9	100	68.9	19.8
Milange	PW	68.6	90.8	95.5	96.9	100	93.1	7.2	62.5	90.6	94.4	96.2	100	92.1	8.3	71.4	83.9	91.7	100	100	91.2	9.7
	Non PW	53.2	84.8	88.6	96.2	100	88.6	9.7	76.7	87.6	91.8	94.2	100	90.6	6.2	72.5	87.9	92.6	96.3	100	90.6	7.3
	Men	63.6	85	92.3	96.4	100	90.2	8.3	70.5	84.4	91.6	95.5	98.6	89.8	7.6	72.7	87.1	91	93.9	100	90.3	5.8
Mocuba	PW	69.4	86.7	89.7	92.3	97.6	88.4	6.3	69.6	84.8	89.7	93.3	100	88.4	7.7	33.3	68.8	93.8	100	100	84.4	19
	Non PW	58.7	77.8	84.4	90.1	96.7	82.5	9.9	64.7	79.2	85.8	91.8	98	84.7	8.6	64.5	79.6	88.4	92	98.1	86	8.7
	Men	54.5	75.2	83.6	89.7	100	81.6	11.8	60	74.8	83.1	91.3	95.1	81.9	10.1	55.6	78.6	86.8	90.8	95	83.8	9.2
Mocubela	PW	29.3	52.2	80	92.7	100	73.2	22.9	17.4	52.6	80	89.5	100	72.6	22.3	20	50	75	100	100	72.4	26.1
	Non PW	12.5	57.6	72.1	83.2	97.6	69.2	18.8	25	62.5	76.9	87.5	100	73.6	18.6	27.7	67.6	80.6	89.5	100	76.5	17.9
	Men	16.7	53.5	67.8	84.8	100	67.3	21.9	12.5	56	70.8	85.7	100	69.1	19.9	22.2	60.5	73.6	84.3	100	71.2	19.2
Molumbo	PW	38.5	83.3	100	100	100	87.9	18.3	50	74.4	100	100	100	88.6	15.6	33.3	100	100	100	100	89.5	21.4
	Non PW	50	80.8	100	100	100	87.3	16.9	75	87.5	92.9	100	100	92	7.7	66.7	80.8	96.9	100	100	90.6	11.4
	Men	50	83.3	100	100	100	88.1	16.6	53.8	82.9	92.3	100	100	88.8	14	55.6	88.9	91.6	100	100	91.2	10.6
Namacurra	PW	33.3	59	73.3	83.3	100	69.6	17.1	22.2	59.5	77.2	84	100	71.9	18	14.3	60	80.6	100	100	75.6	24.3
	Non PW	15.4	53.5	60.8	74.4	93.7	63	16.9	35	63.1	71.4	82.9	96	71.7	13.4	38.9	68.2	78.3	85	100	76.6	12.7
	Men	9.1	45.4	60	71.4	100	59.1	18.3	30	54.5	60.9	78.8	94.8	63.7	16.8	36.4	59.1	67	77.4	100	67.8	14.9
Nicoadala	PW	78.1	85	90.7	95.4	100	90.3	6.4	69.6	86	92.8	96	100	90.6	8.2	50	100	100	100	100	93	15.2
	Non PW	54.3	73.5	83.3	92.3	98.6	81.5	12.8	58.6	79.8	87.9	91.6	100	85.1	9.3	73.5	82.8	89.2	94.7	100	88.6	7.8
	Men	46.7	70.7	82.1	94.7	100	81.3	14.9	63.9	71.1	82.7	92.4	100	81.9	11.4	62.5	77.9	86	93.6	100	84.4	10.5
Pebane	PW	35.6	58.9	73.5	82.9	100	70.8	16.1	12.5	65.5	76.7	86.4	100	74.4	17.4	20	66.7	77.8	100	100	76	22.2
	Non PW	15.4	60.9	71.4	79.2	95.7	69.2	16	14.3	65.4	75.6	83.3	95.6	72.9	15.3	28.6	72.7	81.5	88.7	100	79.6	13.5
	Men	20	51.4	63.6	71.6	91.7	61.1	17.8	27.8	56	66.7	72.6	94.6	64.6	14.6	20	61	72.7	78.3	95.5	68.4	15.6
Quelimane	PW	25.7	50	75	85.3	97.6	68.2	20.4	27.8	54.8	76.6	87.3	100	71.9	18.9	15.4	62.5	87.5	100	100	79	23.8
	Non PW	28.4	52.7	64	75.3	93.3	64.1	15.6	41.8	57.9	69.9	76.5	89	68.5	12.1	45.5	63.6	76.9	84.2	94.8	74	11.9
	Men	25	44.8	60.5	73.8	90.7	59.5	17.2	33.9	53.3	66.7	75.6	91.2	64.4	14.2	37.5	58.3	67.7	75.9	92.3	67.6	12.9