

Observed time to HIV treatment initiation in the era of same-day initiation in Malawi, South Africa, and Zambia

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BACKGROUND

- Since 2017 global guidelines have recommended “same-day initiation” (SDI) of antiretroviral treatment (ART) for patients considered ready for treatment on the day of HIV diagnosis.
- In clinical trials of SDI, most improvement came from reducing loss to follow up between testing HIV positive and initiating ART.
- Some observational studies report that patients actually starting ART on the same day have higher loss to follow up during the first year after initiation, but these studies compare outcomes of SDI patients to outcomes among those who started later, ignoring patients who never started ART at all.
- Many countries in sub-Saharan Africa have incorporated a SDI option into national guidelines, but uptake of SDI is not well documented.
- Time intervals from HIV diagnosis or first HIV-related healthcare interaction to initiation of ART are not routinely reported.
- We estimated average time to ART initiation for all patients eligible for initiation at 12 public healthcare facilities in Malawi, 5 in South Africa, and 12 in Zambia.

METHODS

- Sequentially enrolled patients who were eligible to start ART between January 2018 and June 2019
- Reviewed their medical records from the point of HIV treatment eligibility (HIV diagnosis or first HIV-related interaction with the clinic) to the earlier of treatment initiation or 6 months.
- Estimated the proportion of patients initiating ART at their original healthcare facilities on the same day or within 7, 14, 30, or 180 days of baseline, stratified by country and gender.

In 2018-2019, uptake of same-day ART initiation was very high in Zambia (91%) and Malawi (87%) but more modest in South Africa (57%)

RESULTS

- Enrolled 850 patients in Malawi, 535 in South Africa, and 1,990 in Zambia (Table 1).
- Proportions offered and accepting same-day ART initiation were (Table 2):
 - 87% Malawi
 - 57% South Africa
 - 91% Zambia
- In Malawi, most patients who did not receive SDI had also not initiated ART ≤6 months.
- In South Africa, an additional 13% of patients initiated ≤1 week, but 22% had no record of initiation ≤6 months. Among those who did initiate within 6 months in Zambia, nearly all started ≤1 week.
- There were no major differences by gender.

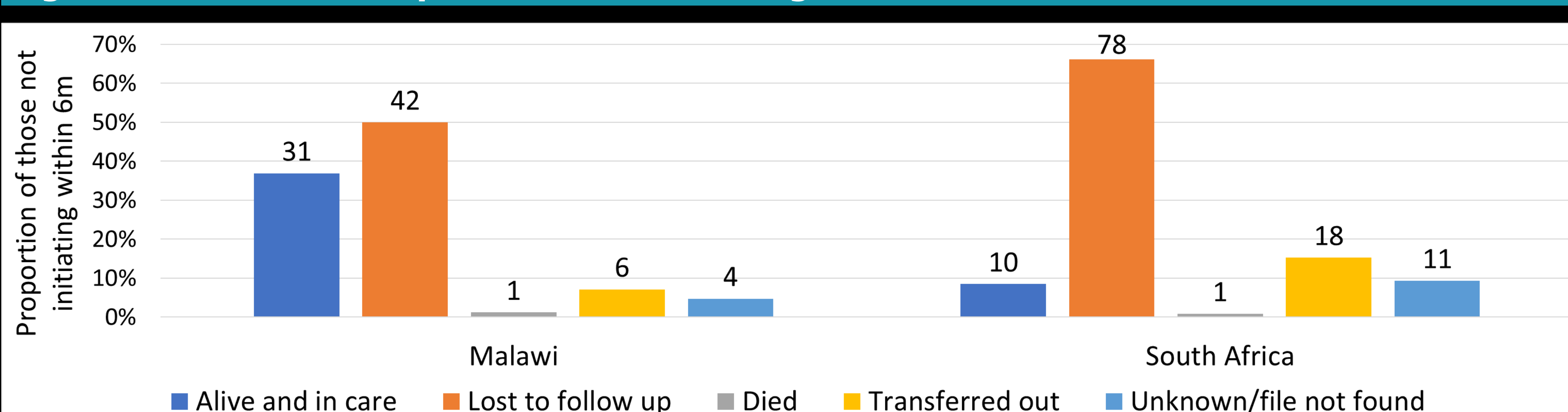
Table 1. Characteristics of study sites and population

Characteristic	Malawi	South Africa	Zambia
Study sites (n)	12 in Blantyre, Chiradzulu, and Lilongwe Districts	5 in Ehlanzeni and King Cetshwayo Districts	12 in Central and Lusaka Provinces
Setting (% rural v urban)	58%	50%	33%
Participants (n)	850	535	1990
Participants % female	51%	58%	51%
Participants age groups			
18-29	32%	33%	33%
30-39	36%	41%	39%
40-49	20%	18%	20%
50+	10%	8%	8%
Missing	2%	0%	0%

Table 2. Mean time to ART initiation after HIV diagnosis or first HIV-related clinic visit, in days

Time to ART initiation after HIV diagnosis or first HIV-related clinic visit (n, %)	Malawi (n=850)			South Africa (n=535)			Zambia (n=1,990)		
	Total (n=850)	Male (n=412)	Female (n=438)	Total (n=535)	Male (n=233)	Female (n=302)	Total (n=1990)	Male (n=973)	Female (n=1017)
0 days (same-day)	739 (86.9%)	363 (88.1%)	376 (85.8%)	304 (56.8%)	131 (56.2%)	173 (57.3%)	1,818 (91.4%)	886 (91.1%)	932 (91.6%)
7 days	14 (1.6%)	7 (1.7%)	7 (1.6%)	69 (12.9%)	33 (14.2%)	36 (11.9%)	96 (4.8%)	57 (5.9%)	39 (3.8%)
14 days	4 (0.5%)	2 (0.5%)	2 (0.5%)	12 (2.2%)	3 (1.3%)	9 (3.0%)	34 (1.7%)	12 (1.2%)	22 (2.2%)
30 days	5 (0.6%)	2 (0.5%)	3 (0.7%)	17 (3.2%)	11 (4.7%)	6 (2.0%)	14 (0.7%)	8 (0.8%)	6 (0.6%)
31 days to 6 months	4 (0.5%)	3 (0.7%)	1 (0.2%)	15 (2.8%)	4 (1.7%)	11 (3.6%)	25 (1.3%)	8 (0.8%)	17 (1.7%)
Did not initiate ≤6 months	84 (9.9%)	35 (8.5%)	49 (11.2%)	118 (22.1%)	51 (21.9%)	67 (22.2%)	3 (0.2%)	2 (0.2%)	1 (0.1%)

Figure 1. Outcomes of patients not initiating ART ≤ 6 months in Malawi and S. Africa



CONCLUSIONS

- Uptake of same-day ART initiation is widespread in Malawi and nearly universal in Zambia but is considerably less common in South Africa.
- SDI is valuable for reducing pre-initiation loss to follow up, but we estimate that 10-15% of patients may require more time to address clinical or personal barriers.
- Limitations of this study include pre-COVID-19 data that do not reflect pandemic adaptations, inability to account for silent transfers, and potentially missing data for Zambia, leading to inflated estimates of SDI.
- South Africa may be able to increase overall ART coverage by reducing numbers of patients who do not initiate ≤6 months.