

Blood pressure self-monitoring is feasible and acceptable for adults with HIV and hypertension in the Kingdom of Eswatini.

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Background

Eswatini has the world's highest adult HIV prevalence (27%) and a substantial burden of cardiovascular disease. A 2017 study found that, among people living with HIV (PLWH) receiving antiretroviral therapy (ART) at an urban hospital, 25% of those > 40 years and 42% of those > 60 years had hypertension (HTN). This presents a challenge to Ministry of Health priorities to provide ART in less-intensive differentiated service delivery models (DSDM), with fewer visits to health facilities. This proof-of-concept study assessed the feasibility and acceptability of a blood pressure self-monitoring (BPSM) package for people with HIV and HTN.

Methods

The BPSM package included use of a wrist-worn BP monitor and ongoing contact with a study nurse via text messaging. 26 PLHIV > 40 years on ART with a documented history of HTN were enrolled and completed a baseline questionnaire and training in the use of the BP monitor. Participants (ppts) texted their BP results to study staff 2-3 times per week and staff followed up with ppts with high BP via phone. Ppts returned for a follow-up visit at 2 weeks and a final visit and exit interview at 12 weeks.

Results

In the exit interview, 26/26 of ppts reported confidence in their ability to use the BP monitor and 25/26 were "very satisfied" with the BPSM package. Ppts completed 99% of expected text messages and 98% of texts were concordant with the recorded BP measurements. Of the ppts on BP medication, all said the BPSM package made them more likely to take the medication as directed; all 26 ppts said the package improved their ART adherence. All felt the package could improve their health; 11/26 said it could help "to a great extent" and 15/26 said "to a very great extent."

Exit Interview Quotes

- "The advantage that I have seen is that... it is knowing the state of my BP... and being able to go and see a doctor as soon as possible when my BP is high."
- "Yes there is because you would save costs of taking the long distance to the hospital to check the BP when at a certain time... you suspect that you could be sick."
- "The good thing about it is that you always remind yourself that you constantly have to measure yourself at the assigned time and the assigned days."

Table 1: Participant Characteristics (n=26)

	n (%)*
Sex	
Male	10 (38%)
Female	16 (62%)
Age	
40-49	6 (23%)
50-59	17 (65%)
60-69	2 (8%)
70+	1 (4%)
Years since HIV diagnosis	
3-5 years	3 (12%)
>5 years	23 (88%)
Years since HTN diagnosis	
1-2 years	3 (12%)
2-3 years	13 (50%)
3-5 years	4 (15%)
>5 years	6 (23%)
Years since HTN diagnosis	
Yes	12 (46%)
No	14 (54%)
Frequency of missed ART dose, week prior to enrollment	
None	20 (77%)
Once	4 (15%)
Twice	2 (8%)
Frequency of missed BP medication dose, week prior to enrollment	n=12
None	8 (67%)
Once	3 (25%)
Twice	1 (8%)
Self-reported most recent BP result prior to enrollment	
Normal	17 (65%)
High	9 (35%)

*Percentages are rounded to the nearest whole number

Figure 1: Communication flow between participants in the community and the study nurse in the health facility

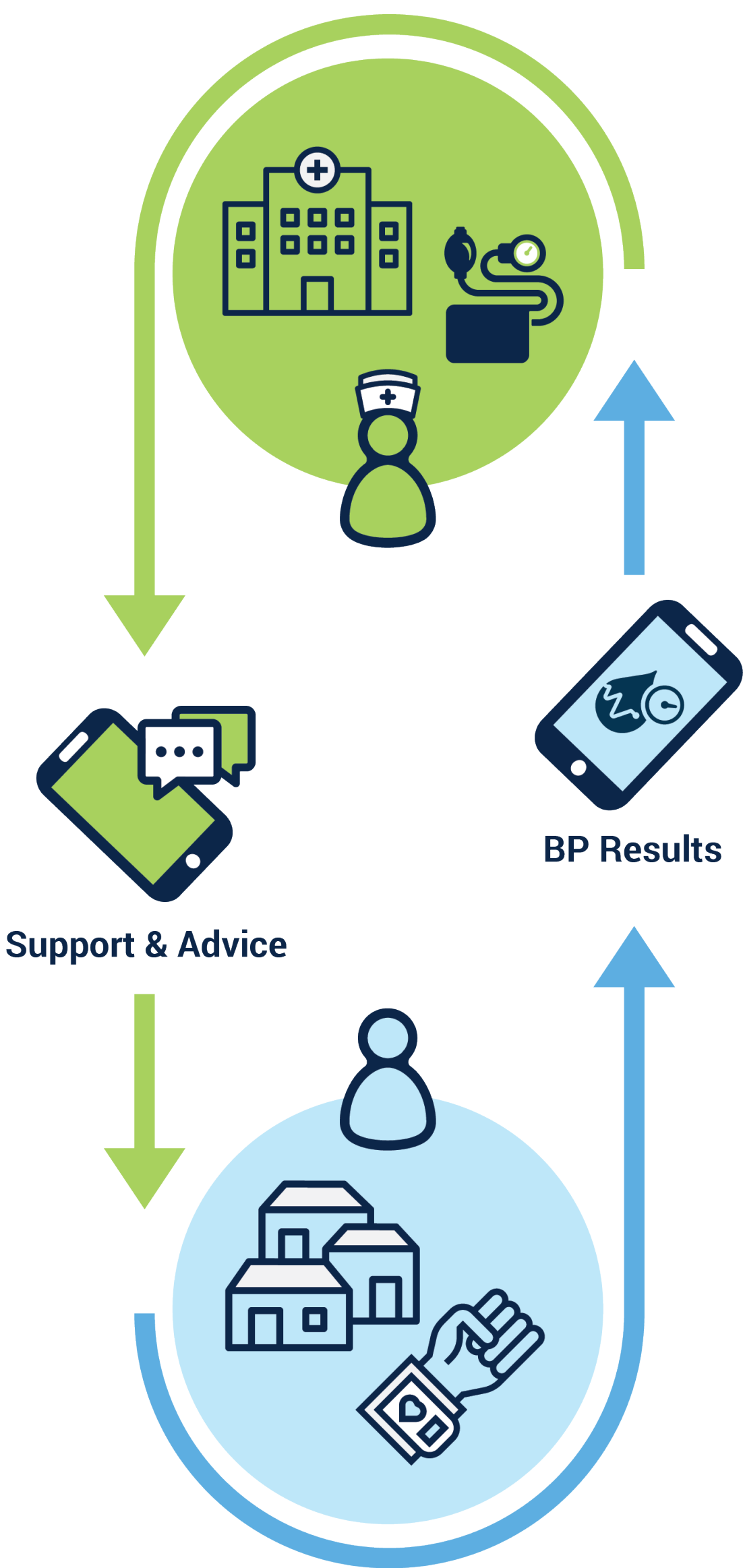
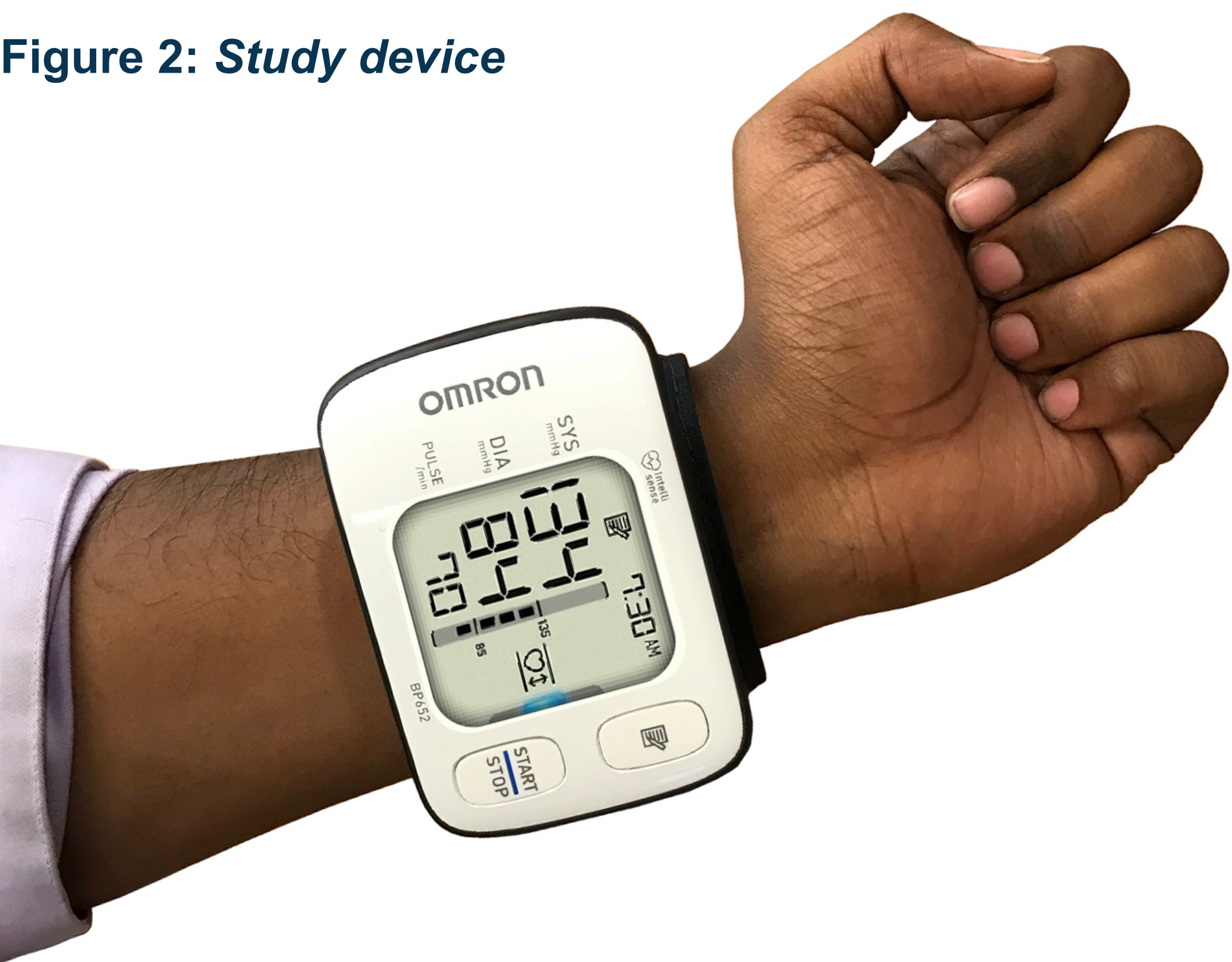


Figure 2: Study device



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