


# Mobile phone ownership is not a barrier to uptake of community-based ART and viral suppression

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**Background**

- Community-based delivery of antiretroviral therapy (ART) increases viral suppression and often requires tracking and tracing of clients living with HIV to coordinate care.
- Mobile phones are an effective method for communicating with clients and facilitates counseling and coordination of care.



Scan to see the published trial results, Barnabas et al, Lancet Global Health, 2020

**Research Question**

Does the ownership of a mobile phone increase access to community-based ART and thus increase viral suppression?

**Methods**

- Delivery Optimization of Antiretroviral Therapy (DO ART) Study in South Africa and Uganda evaluated community-based delivery of ART compared to clinic-based care.
- During enrollment people living with HIV reported mobile phone ownership and provided their phone number.
- Care was coordinated using mobile phones, when one was available, but mobile phone ownership or access was not a requirement for study participation.
- At study exit (12 months) plasma HIV viral load was determined using the bioMérieux NucliSens assay.
- These data were used to measure the prevalence of mobile phone ownership and to calculate relative risks of ownership and HIV treatment outcomes using a modified Poisson regression for binary outcomes with robust standard errors, adjusting for within household correlation.

**Results**

- Of 1,531 participants, most (84%) owned a mobile phone.
- Women were 9% more likely to have access to a mobile phone than men when controlling for age (95% CI: 4 - 14).

Table 1: Rate of secure mobile phone access, by participant characteristics

	Characteristics	n / N	percent
Gender	Male	569/706	(81%)
	Female	720/823	(87%)
Age category	18 - 29	462/550	(84%)
	30 - 49	732/857	(85%)
	> 49	95/122	(78%)
Exit viral load	Detectable	363/443	(82%)
	Suppressed	870/1014	(86%)
	Unknown	56/72	(78%)


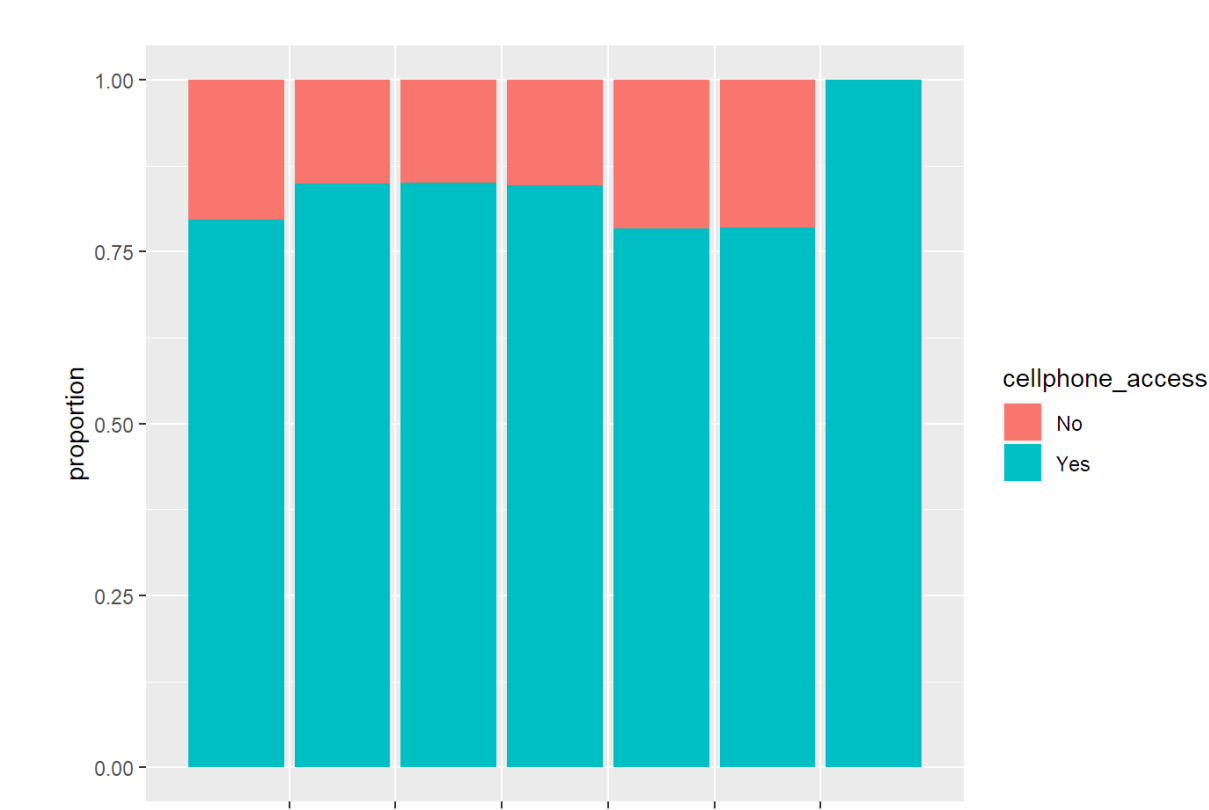
**Results continued**

Figure 1: Rate of secure mobile phone access, by participant characteristics

Figure 3: Examples of common phones used by participants Hisense U961, Samsung J7, Huawei Y3 LITE

- There was no significant association between age and mobile phone access (adjusting for gender).
- There was no significant association between mobile phone ownership and viral load suppression at study exit a(RR: 1.09, 95% CI: 0.98 – 1.21, p = 0.11), adjusting for age and gender.

Table 2: Relative risk (RR) of suppressed viral load at exit

	RR (Confidence interval)	p
Has Mobile Phone Access	1.08 (0.98-1.21)	0.12
Gender Female	1.10 (1.03-1.19)	0.005
Age category 30 – 49	0.96 (0.89-1.03)	0.24
Age category > 49	1.08 (0.96-1.21)	0.19

**Discussion**

- Mobile phone ownership is now almost ubiquitous, although smart phone uptake is still slower in study communities.
- We found no association between viral suppression and mobile phone ownership in the context of high rates of mobile phone ownership in a community-based ART project in South Africa.
- Owning a mobile phone may not be a requirement to access community-based ART delivery programs and realize the health benefits of decentralized services.
- Given that more women than men had mobile phones, mHealth programs requiring access to a mobile phone may unintentionally exclude men.

**Conclusion**

Mobile phone ownership was not associated with viral suppression in a community-based ART project in South Africa.

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