COVID-19 Vaccine Acceptance in Sub-Saharan Africa

Findings from the World Bank's High Frequency Phone Surveys on COVID-19

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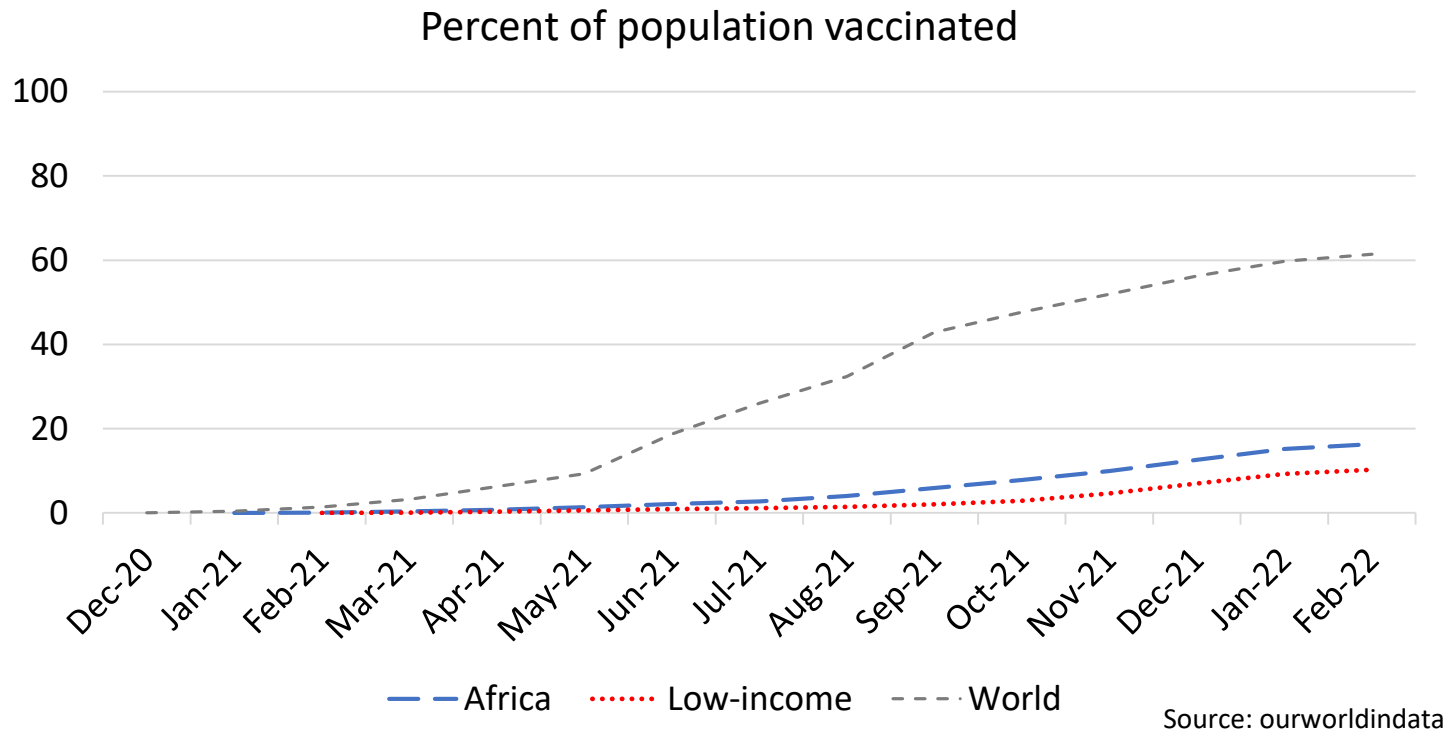
THE WORLD BANK

LSMS
Living Standards Measurement Study

Background

Low-income countries and countries in SSA are falling behind in global vaccination efforts.



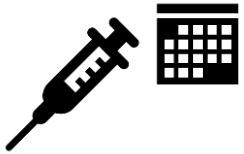
Source: ourworldindata

Supply shortages, global inequalities in distribution vs demand side factors such as vaccine hesitancy

World Bank High Frequency Phone Surveys on COVID-19 (HFPS)

World Bank has supported phone surveys in **72 countries** to monitor the impacts of COVID-19 on households and individuals since May 2020. Based on phone numbers from previous household surveys or random digit dialing.

Soft harmonization of survey instruments for **global comparability** and country specific adjustment



Vaccination questions: Agreement/planning to be vaccinated (when an approved vaccine is available to you).

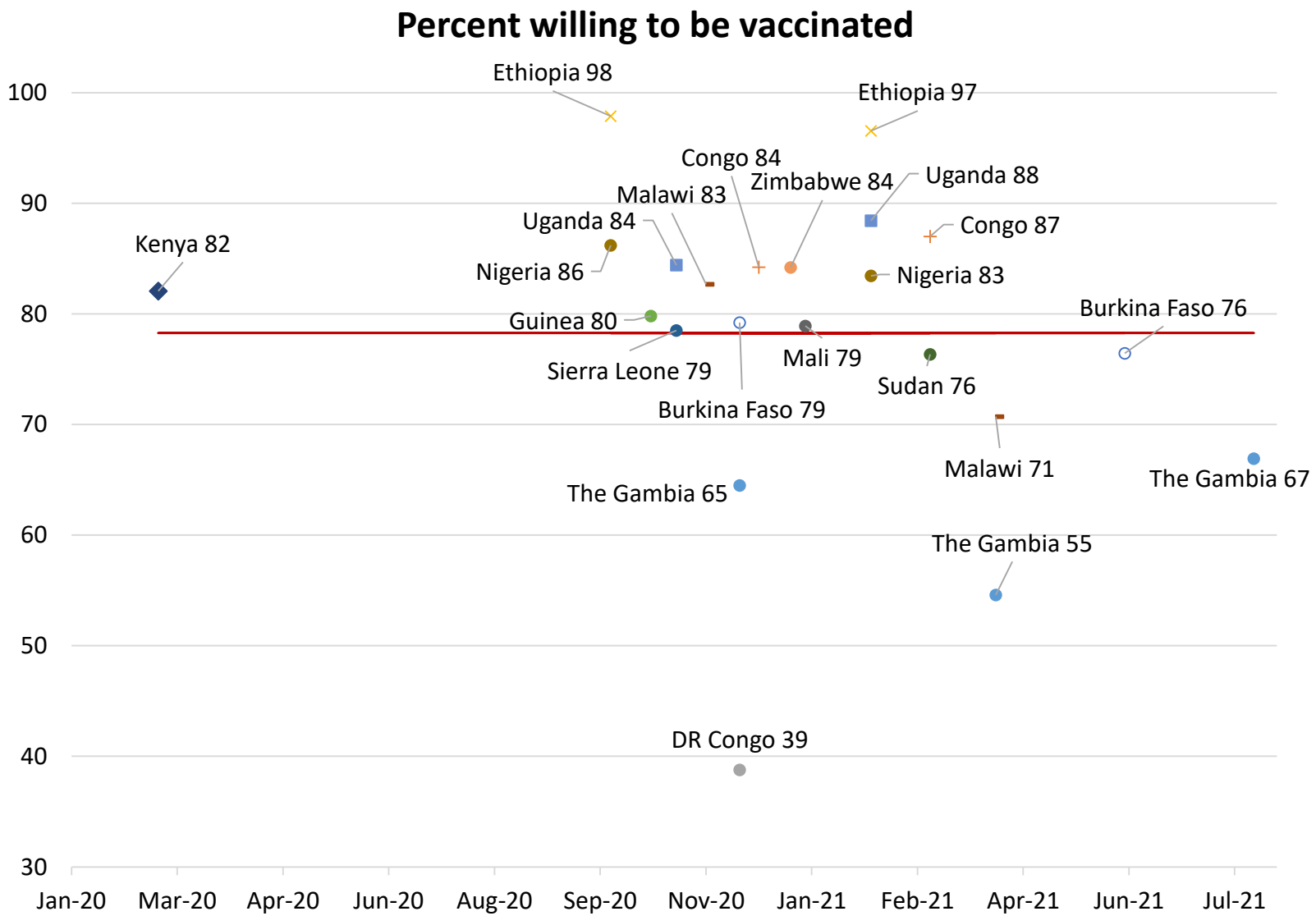
Selected respondents: most knowledgeable household member --> implications for representativeness, re-calibrate survey weights to **attenuate potential biases** (Ambel et al. 2021; Brubaker et al., 2021).

LSMS-ISA Integrated Surveys on Agriculture

In-depth analysis based on subset of LSMS-supported HFPS: Burkina Faso, Ethiopia, Malawi, Mali, Nigeria, Uganda.

High rates of acceptance with cross-country and temporal variation

- Four in five respondents were willing to be vaccinated on average
- Near universal acceptance in Ethiopia and very high rates also in Uganda, Nigeria, the Congo
- Low acceptance rate in DR Congo. The Gambia saw attitudes change significantly. Malawi drop from 83 to 71.
- In other cases, rates remained relatively stable within countries across time
- Caveat: Willingness to be vaccinated does not automatically translate into active demand!

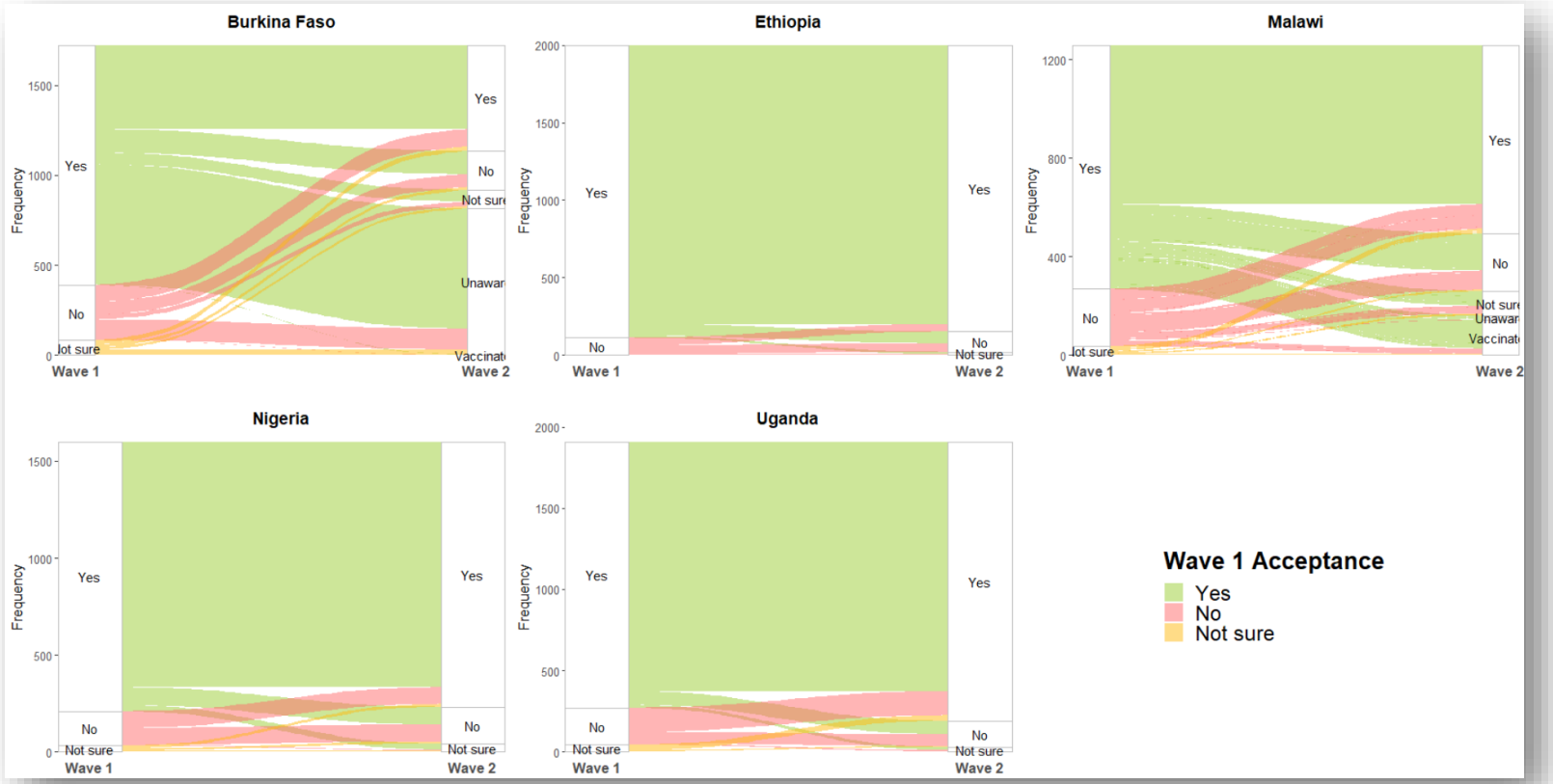


Source: [COVID-19 High Frequency Monitoring Dashboard]

Tracking panel individuals

Attitudes mostly stable but evidence that trust can be lost (and gained)

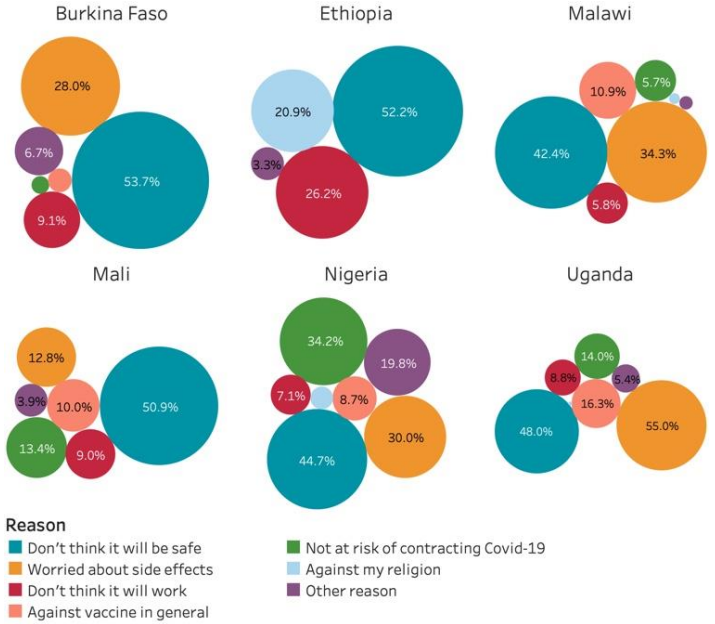
- Tracking individual respondents' attitudes over time reveals some limited switching of vaccine attitudes
- Little switching in Ethiopia (7% of panel indiv.'s) Nigeria (14%) and Uganda (15%)
- Somewhat larger amount of switchers in Burkina Faso (18%) and Malawi (28%)
- Among those changing attitudes, more people switch from accepting the vaccine to being hesitant in Ethiopia (65%), Burkina Faso (61%), Malawi (58%), and Nigeria (55%) whereas the opposite is true in Uganda (36%)
- Suggests that public information and communication campaigns need to be ongoing, trust can be lost (and gained)



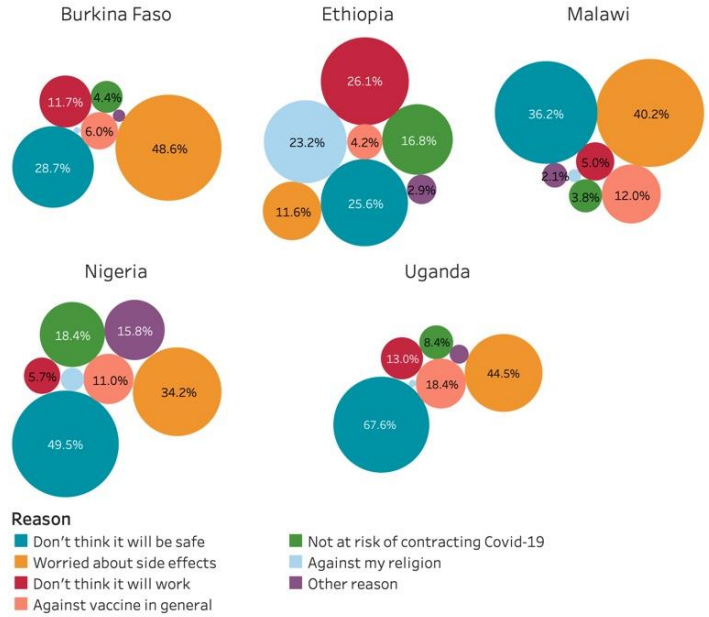
Concerns around safety of vaccines and side effects key reasons for hesitancy

- Concerns over the vaccine's safety and its side effects are the primary reservations
- Doubts regarding their efficacy or the need for vaccination appear secondary although non-negligible in Ethiopia and Nigeria
- Key concerns have remained the same over time although their share varied in some countries
- Public communications and information campaigns should aim to bolster confidence in the safety of vaccines and resolve concerns about adverse side effects

Wave 1



Wave 2



Clusters of hesitancy according to socio-demographic characteristics vary across countries

- Correlates of hesitancy vary across countries

Some indicative patterns include...

- ...higher hesitancy among those with internet access
- ...higher hesitancy among women
- ...higher hesitancy in urban areas (but opposite in Mali)
- ...higher hesitancy among better-off households (pre-COVID consumption data)

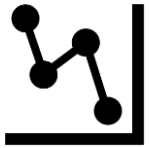
Correlates of hesitancy - marginal effects from multivariate logit regressions (pooled)

	(1)	(2)	(3)	(4)	(5)
Dependent Variable: Vaccine Acceptance Dummy	Burkina Faso	Malawi	Mali	Nigeria	Uganda
Has internet access		-0.0431*		-0.0622***	
		(0.0256)		(0.0208)	
Has Facebook account	-0.0707***	-0.0157		-0.0165	
	(0.0264)	(0.0265)		(0.0217)	
Respondent is male	-0.0290	0.0840***	0.0407	0.107***	0.0188
	(0.0313)	(0.0247)	0.0533	(0.0212)	(0.0183)
Lives in urban area	-0.0972***	-0.0508**	0.0579*	0.00148	-0.0237
	(0.0259)	(0.0248)	0.0337	(0.0195)	(0.0176)
Years of education	-0.00339	-0.00399	-0.0002	-0.00558**	0.00215
	(0.00223)	(0.00273)	0.0035	(0.00283)	(0.00213)
Age group of respondents = 2, 30-59 yrs	0.0382	0.0383	0.0670	-0.0156	-0.0397*
	(0.0398)	(0.0279)	0.0555	(0.0249)	(0.0211)
Age group of respondents = 3, 60+yrs	0.0827*	0.0438	-0.0313	-0.0556	-0.00122
	(0.0497)	(0.0393)	0.0714	(0.0386)	(0.0255)
Household head	0.0434	0.0342	-0.0875	0.00903	-0.0164
	(0.0339)	(0.0287)	0.0594	(0.0279)	(0.0209)
hhsize	0.00117	0.00693	-0.00530	0.000237	0.00717**
	(0.00352)	(0.00484)	0.00431	(0.00461)	(0.00354)
Expenditure quintile = 2	0.0307	-0.0423	0.0579	-0.0522	-0.0290
	(0.0437)	(0.0412)	0.0514	(0.0346)	(0.0243)
Expenditure quintile = 3	-0.0531	-0.0720*	0.0469	-0.0674**	-0.0613**
	(0.0457)	(0.0408)	0.0525	(0.0297)	(0.0239)
Expenditure quintile = 4	-0.0642	-0.0896**	-0.0728	-0.0998***	-0.0859***
	(0.0454)	(0.0396)	0.0599	(0.0277)	(0.0247)
Expenditure quintile = 5	-0.134***	0.0117	-0.1051*	-0.131***	-0.0708***
	(0.0498)	(0.0398)	0.0611	(0.0298)	(0.0261)
Observations	2,750	4,507	1,697	3,330	4,201
Pseudo R2	0.102	0.0251	0.0214	0.0755	0.0244

Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Take aways

Acceptance high overall but some countries report low acceptance: DR Congo 39%.
Need to turn intent into active demand.



Variation in vaccine acceptance over time suggests that high levels of acceptance should not be taken for granted

Need for ongoing information and communications campaigns aimed at resolving safety and side-effects concerns

Need for newer, more detailed information

Need for more data collection

A new phase of LSMS-supported HFPS on COVID-19 in 2022, fielding re-designed module on vaccines

Some things new modules will focus on:

Gauge *active* demand for vaccines and main motivations

Identify key constraints to access vaccines

Study information channels and sources

Look into transmission of vaccine attitudes and intra-household decision making on vaccine uptake

Gauge support for vaccine mandates

Additional Resources

Data

- COVID-19 High Frequency Monitoring Dashboard
- High Frequency Phone Survey (HFPS) collection in the World Bank Microdata Library
- LSMS-ISA household survey collection in the World Bank Microdata Library
- Further information and resources on LSMS-supported High Frequency Phone Survey on the LSMS webpage

Articles and blogs

- Paper on wave 1 vaccine acceptance results published in *BMJ Open*: Kanyanda et al. (2021)
- Methodological papers on bias adjustment in phone survey data: Brubaker et al. (2021); Ambel et al. (2021)
- Viewpoint paper on lessons-learned from the HFPS: Gourlay et al. (2021)
- Blog posts on results from vaccine module for wave 1 and wave 2

Thank you for your attention!

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