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# Opportunities and Challenges to Emergency Department-Based HIV Testing Services and Self-Testing Programs: A Qualitative Study of Healthcare Providers and Patients in Kenya



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## Introduction

- Young people in Sub-Saharan Africa, especially males, have been insufficiently engaged through HIV Testing Services (HTS).
- In Kenya, younger persons are often treated in emergency departments (EDs) for injuries, where HTS and HIV self-testing (HIVST) can be leveraged.

## Objective

To understand opportunities and barriers for HIV testing and inform program implementation.

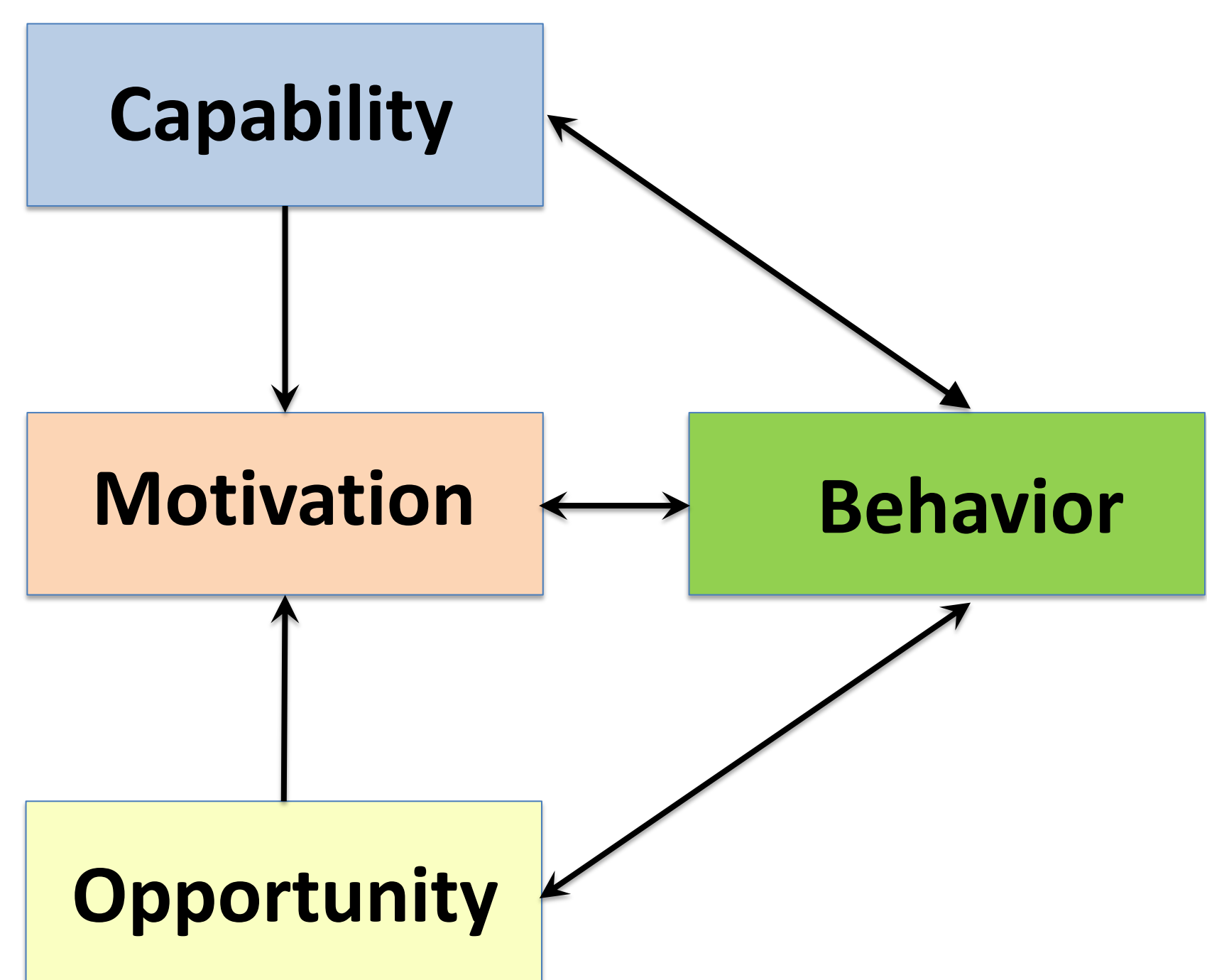
## Methods

- ❖ Between December 2021 and March 2022, 28 in-depth interviews (IDIs) were conducted with 14 male and 14 female patients who had been treated in the Kenyatta National Hospital (KNH) ED, half of whom had been HIV-tested.
- ❖ Six focus-group discussions (FGDs) were conducted with 49 non-patient stakeholders
  - ❖ 18 (36.7%) were nurses, 10 (20.4%) were doctors, 6 (12.2%) were administrators, 15 (30.6%) were counselors
- ❖ All transcripts were double-coded and thematically analyzed using Dedoose software with parallel inductive and deductive coding to capture both *a priori* and emergent themes pertaining to general ED-based HTS and HIVST programming specifically.
- ❖ The results were then mapped onto the Capability-Opportunity-Motivation-Behavior (COM-B) Model for behavior change

## Acknowledgements

We thank the personnel and participants who took part in this study.

## Methods: COM-B Model



Michie, van Stralen, & West 2011

## Results: Participant Characteristics

Descriptive Characteristics of FGD Study Sample (n=49)

Demographics	n (%)
<b>Sex</b>	
Male	26 (53.1%)
Female	24 (49.9%)
<b>Age (years)</b>	
<b>Profession</b>	
Nurse	18 (36.7%)
Doctor	10 (20.4%)
VCT Counselor	15 (30.6%)
Administrator	6 (12.2%)
<b>Location</b>	
ED	11 (22.4%)
ED Nursing	21 (42.9%)
VCT ED	7 (14.3%)
VCT Other	11 (22.5%)
<b>Focus Group</b>	
FGD 1	7 (14.3%)
FGD 2	8 (16.3%)
FGD 3	10 (20.4%)
FGD 4	10 (20.4%)
FGD 5	8 (16.3%)
FGD 6	6 (12.2%)

Descriptive Characteristics of IDI Study Sample (n=28)

Demographics	n (%)
<b>Sex</b>	
Male	14 (50.0%)
Female	14 (50.0%)
<b>Testing in KNH ED</b>	
Tested	14 (50.0%)
Not Tested	14 (50.0%)
<b>Age Category</b>	
<= 25 Years	9 (32.1%)
>25 Years	19 (67.9%)
<b>Relationship Status</b>	
Married / In a relationship	14 (50.0%)
Single	11 (39.3%)
Divorced / Widowed	2 (7.1%)
Wishes not to disclose	1 (3.6%)
<b>Highest Educational Attainment</b>	
Primary schooling or less	8 (28.6%)
Secondary schooling	12 (42.9%)
Diploma / Certificate	5 (17.9%)
Bachelor's level or higher	3 (10.7%)
<b>Has a Primary Care Provider</b>	
No	16 (50.0%)
Yes	16 (50.0%)

## Results: Application of the COM-B Model of Behavior Change to ED-HIVST Acceptability

COM-B Component	Themes	Illustrative Quotes		Intervention Functions	Behavior Change Techniques
		ED Performed HIV Testing	HIVST Programming		
Physical Capability	Resource Access Personnel Availability	"The best time to get tested at the A&E—they may not deal with the HIV first, but your emergency first, then test you later. But for one who is not very sick, they can get tested first" (020, Female, >25, Not Tested)	"The kits are usually 25 per month [...] I don't know the financial implication of flooding the A&E with ora-quick self-test kits" (Doctor)	Education Environmental Restructuring Enablement	Shaping Knowledge Feedback & Monitoring Antecedent
		"If you only have ten patients in casualty, that will be a very good opportunity because we're not under pressure" (Nurse)	"Casualty works with the PITC room, so when the self-kits are introduced, it will not be a big issue when their office is locked, especially during the weekend. It will increase coverage despite them not being around" (Nurse)		
Psychological Capability	Perceived Importance	Accidents happen when people are drunk, carelessly driving, and this is a population that we target. [...] When we assess risk, they are high risk and never been tested, and this a good opportunity to test" (Counselor).	"The reason is because, is self-stigma, fear of unknown, when you say and you're fearing to test, either you're stigmatized by [inaudible] and you are saying, "I can't get tested, it can turn out positive", so that self-stigma is the major issue of why many people don't go for the test" (Administrator)	Training Environmental Restructuring	Identity Self-belief Social Support
		"Before treatment, I was in pain, so HIV testing would not be important to me. Maybe if I was admitted, I would be tested" (007, Female, <=25, Tested)	"Imagine telling the doctor on yourself that you are positive, like "doctor, I am positive" that is impossible. Like I don't have the courage" (009, Male, <=25, Not Tested)		
Social Opportunity	Prior testing experiences Drive for testing services	"Let me say I was always scared of the results. I remember the first time I was so scared I even left the room first and came back later for the results. It wasn't a good experience, it was very scary" (018, Female, >25, Not Tested)	"I haven't used [a self-test kit] and I have not even seen it in the hospital" (001, Female, <=25, Tested)	Modeling Incentivization	Social Support Comparison of Behavior Identity
		"I think as Kenyans we've aah we've adapted the culture of being reactive rather than proactive, so you find that we tend to embrace the testing when something has happened, so, in case of needle stick injuries, incase when it's too late that's when you get to know the case status of the patient rather than doing it as a preventive measure" (Nurse)	"I think when distributing the kits, you also create a rapport with the patient so form there you reassure them of confidentiality and during follow up chances are very high that they will comply" (Doctor)		
Physical Opportunity	Time allocation Resource Availability	"I think it's good after you are received. They take all tests, including your HIV test, so that when they start treating you, they know all the problems you have" (018, Female, >25, Not Tested)	"If you had 10 patients on the queue and five have HIV self-tests kit, then you only have five to deal with physically... So, I also feel it reduces the workload" (Counselor)	Enablement Environmental Restructuring	Goal and Planning Repetition Antecedent
		"Referrals are supposed to come from the doctors, some will bring, and some may not bring to us. So, it is our mandate to look for the patients in whichever way it means" (Counselor)	"It's a good idea since someone can do it even from the washroom, do your test and get your result. If it's positive you can go back to the person that gave you and share the results. [...] No one will even care that you are taking a test" (021, Female, <=25, Not Tested)		
Automatic Motivation	Feelings about testing services & self-testing Misconceptions and assumptions about testing & results	"From the surgical side, if a patient comes with a femur fracture, then you start telling them you want to do a test on them most are bound to become very violent, and their status doesn't change anything." (Doctor)	"If they find themselves positive, they think there is no one who can guide them, and commit suicide" (001, Female, <=25, Not Tested)	Enablement Modeling	Social Support Self-belief Associations
Reflective Motivation	Agency in deciding what kind of test to pursue and how/when/why Education and discussions with providers to overcome perceived barriers	"Us men are hard to convince to get tested because we think we are well and is not the case. When you go to the hospital, you find someone to teach you and get you tested" (012, Male, >25, Tested)	"We must continue applying new approaches and strategies. We're learning more capturing people who would otherwise would not access the services. Innovation is really encouraged." (Administrator)	Education Persuasion	Shaping Knowledge Antecedent Associations

## Results

- ❖ Patients and providers agreed that ED-HTS are facilitated by friendly staff, patient education, high perceived HIV risk, and confidentiality.
- ❖ However, ED-HTS is limited by burdens on staff, resources, time, and space, as well as severity of patient injuries limiting ability to consent to or prioritize HIV testing.
- ❖ These limitations provide opportunities for ED-HIVST: particularly the ability to test at a comfortable time and place, especially when provided alongside sufficient HIV and testing education, contact with healthcare providers, and psychosocial support.
- ❖ Barriers for ED-HIVST included patients' concerns about HIVST accuracy and mental health impacts of a positive test, as well providers' concerns for loss to follow up and inability to complete confirmatory testing.

## Limitations

- ❖ Assessed attitudes, not uptake
- ❖ Population already engaged with HTS
- ❖ Did not meet recruitment goals for females who had been tested
- ❖ 2 patient interviews conducted over telephone

## Conclusion

- ❖ ED stakeholders are receptive to HTS and HIVST, and patients desire ED-HTS inclusive of HIVST programming.
- ❖ Interventions based on the COM-B model could better address challenges to ED-HIVST, such as adjusting the ED patient flow process to increase the accessibility of HTS.