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# Practices and obstacles to Provider-Initiated HIV Testing and Counseling (PITC) by healthcare providers in Côte d'Ivoire.



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## Background

Since 2009, routine Provider Initiated Testing and Counselling (PITC) has been recommended in Côte d'Ivoire to all patients, regardless of their reason for consultation. Despite its implementation, PITC coverage remains low in Cote d'Ivoire. According to 2017 national data, only 15.2% of 12 955 898 consultations conducted nationally were documented with a test proposal, and 75.9% of these proposals resulted in HIV testing. In a country where the HIV prevalence was 2.8% in 2017 and where only 63% of people living with HIV knew their status, it is crucial to understand, from the perspective of healthcare professionals, what factors influence testing proposal practices.

To our knowledge, no studies have documented the obstacles to the practice of PITC at the national level in Côte d'Ivoire. **The objective of this analysis is therefore to describe PITC practices by healthcare professionals and to identify factors associated with this practice.**

## Methods

A cross-sectional telephone survey was conducted in 2018 by telephone among representative samples of midwives, nurses and physicians throughout Côte d'Ivoire.

Healthcare professionals were asked about the number of HIV tests they proposed in consultation during the previous month (none, between 1 and 5, between 6 and 10, between 11 and 20, and 21 or more). Factors associated with the number of HIV tests proposed during the previous month were identified through multivariate ordinal logistic regression models. Associated factors were classified according to three dimensions directly inspired by the conceptual model of work performance of Boudreau et al. : motivation, capability and opportunity. According to this model, motivation is defined as the desire and willingness of professionals to act. Capabilities are defined as the skills, knowledge and abilities necessary to carry out an action in line with the objectives of the health structure. Opportunity refers to situations encountered within the institution that facilitate the execution of actions and their expected effects.

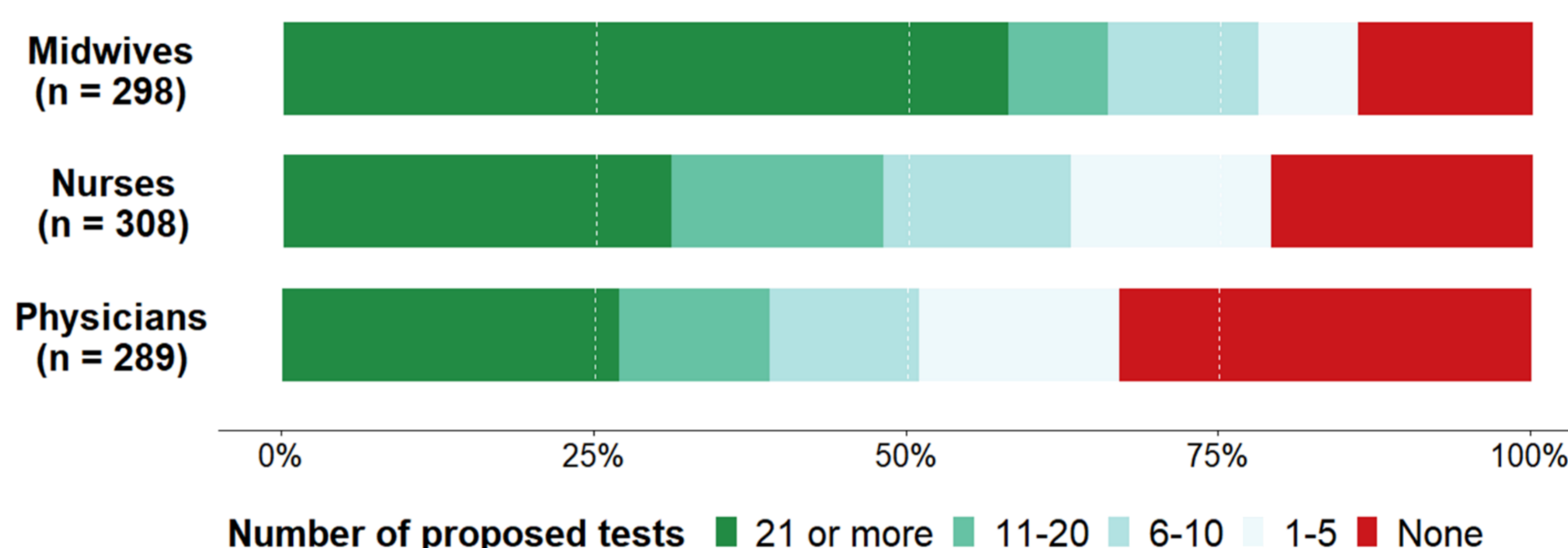
## Results

The number of proposed tests in the previous month differed by the medical profession (Figure 1). Midwives reported a higher number of tests compared to nurses and physicians: 58.4% had proposed 21 tests or more in the previous month compared to 30.8% and 26.6% for nurses and physicians, respectively.

In the multivariate ordinal regression models, factors related to motivation (opinion on the collection of consent for HIV testing) and opportunities (type of health facility and presence of an ARV prescription service in this facility) were significantly associated with the number of proposed tests for midwives (Table 1). The belief that more caution is needed to obtain consent for HIV testing than for other diseases was associated with a lower number of proposed tests (aOR 0.25 [95% confidence interval 0.07-0.73]).

Among nurses, factors related to capabilities and opportunities were significantly associated with the number of proposed tests. Having received specific training on HIV and the presence of community HIV counselors in the main facility were associated with a higher number of proposed tests (aOR 2.01 [1.31-3.09] and aOR 1.75 [1.14-2.70], respectively).

Among physicians, factors related to motivation and opportunities were significantly associated with the number of proposed tests (Figure 4). Knowing a relative living with HIV and the presence of a VTC in the health facility were associated with a higher number of proposed tests (aOR 1.71 [1.01-2.94] and aOR 1.69 [1.01-2.86], respectively).



**Figure 1. Number of proposed tests during the previous month among midwives, nurses and physicians, DOD-CI study, Côte d'Ivoire, 2018 (n=895).**

**Table 1. Ordinal regression model of factors associated with a higher number of proposed tests during the previous month depending on healthcare professionals' motivations, capabilities and opportunities, by profession, Côte d'Ivoire, DOD-CI study, 2018 (n=895).**

	Motivation	Capability	Opportunity
<b>Sages-femmes (n=298)</b>	Belief that <b>HIV testing requires more caution</b> in obtaining consent (ORa 0.25 [0,07-0.73])		<b>Hospital</b> (vs. health center, ORa 2.76 [1,68-4,57]) Presence of <b>ARV prescription service</b> (ORa 2.07 [1.11-3.83])
<b>Infirmier (n=308)</b>		Has received <b>training on HIV</b> (ORa 2.01 [1,31-3.09])	<b>Hospital</b> (vs. health center, ORa 1.68 [1,09-2,60]) Presence of <b>ARV prescription service</b> (ORa 2.15 [1.40-3.31]) Presence of <b>community HIV counselors</b> (ORa 1.75 [1.14-2.70])
<b>Médecin (n=298)</b>	<b>Knows an HIV-infected relative</b> , excluding patients (ORa 1.71 [1,01-2.94])		<b>Hospital</b> (vs. health center, ORa 2.13 [1.13-4.08]) Presence of <b>ARV prescription service</b> (ORa 2.16 [1.28-3.68]) <b>Low number of patient cared/day</b> (<10 vs >19, ORa 2.09 [1.06-4.17]) Presence of <b>voluntary VIH-testing center</b> (ORa 1.69 [1.01-2.86])

## Discussion

Although environment opportunities (such as dedicated staff or services) had an influence on PITC, capabilities and motivations also had an effect of HIV testing proposals, but this effect differed by medical profession.

For midwives, routine integration of the HIV testing proposal as part of standard care appeared to be a key element for systematic HIV testing. However, there are remaining gaps, and the consent process could be simplified and aligned with other screening processes.

For nurses, improving their capabilities, particularly dedicated HIV testing training, can lead to better testing.

For physicians, motivations and perceptions are linked to their PITC practice, suggesting the need for actions to raise their awareness of PITC and clearer recommendations on when to test.