

# A clinical audit of provider-initiated HIV counselling and testing in a gynaecological ward of a district hospital in KwaZulu-Natal, South Africa

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**Background.** Early initiation of antiretroviral therapy reduces transmission of HIV and prolongs life. Expansion of HIV testing is therefore pivotal in overcoming the HIV pandemic. Provider-initiated counselling and testing (PICT) at first clinical contact is one way of increasing the number of individuals tested. Our impression is that not all patients admitted to a general gynaecological ward are offered PICT.

**Objective.** To assess whether patients admitted to a gynaecological ward in a district-level hospital in KwaZulu-Natal, South Africa, are being offered PICT.

**Methods.** We conducted a retrospective chart review over an 8-month period. Patients who had a hospital stay of  $\leq 3$  days were enrolled. The case records were reviewed and relevant data, including demographic information and whether the patients were offered HIV testing, were recorded.

**Results.** Of 1 014 patients, 451 reported that they had been tested previously; 98 (21.7%) of these were HIV-infected. There were therefore 916 patients (563 not tested previously and 353 who reported that they had tested negatively previously) who should have been offered PICT. Of these, 157 (17.1%) were offered it; 116 (73.9%) accepted and 41 declined. Forty-five (38.8%) tested positive.

**Conclusion.** A large number of patients who stayed for  $\leq 3$  days in a gynaecology ward of a district-level hospital were not offered PICT. However, the high rate of HIV infection in those who accepted the offer of testing strengthens the case for PICT.

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The HIV pandemic is in its 4th decade, yet only one-third of the population in countries with the greatest burden of this disease is reported to have been tested.<sup>[1]</sup> Expansion of HIV testing to the total population of a country is pivotal to overcoming the HIV pandemic, as it has been reported that early initiation of highly active antiretroviral therapy (HAART) not only reduces transmission but also prolongs life.<sup>[2,3]</sup> Furthermore, the reduction of mother-to-child transmission of HIV to  $<3\%$  in South Africa is mainly due to increasing numbers of antenatal attendees agreeing to provider-initiated counselling and testing (PICT), dual therapy for prevention of mother-to-child transmission, and HAART if required.<sup>[4]</sup>

A recent systematic review and a number of observational studies<sup>[5-7]</sup> report that PICT in low- and middle-income countries (LMICs) has increased HIV testing rates. Most of these studies on increased HIV testing have been carried out in antenatal clinics, tuberculosis centres and sexually transmitted disease clinics. There are few data on whether PICT has been integrated into routine care provided by health facilities catering for the general population.

Our impression is that PICT is patchy at best in a gynaecological ward in a district hospital in KwaZulu-Natal, South Africa. We therefore carried out an audit of PICT among women admitted to the ward.

## Methods

A retrospective chart review was performed of all patients admitted to the gynaecological ward who stayed for a period of  $\leq 3$  days over an 8-month period between 1 October 2011 and 31 May 2012. The charts of individual patients were reviewed immediately after discharge, and relevant data such as demographic information and whether the patient was offered HIV testing were recorded in a structured format. Institutional ethics (BREC 196/12) and hospital regulatory permission was obtained. The data were analysed using simple descriptive statistics.

The general policy at the study site is to offer PICT to all women admitted to the gynaecology ward. In this model of HIV testing, all healthcare workers are encouraged to initiate the counselling and testing process by suggesting the need for a test. The patient can opt out if she desires. Detailed counselling is provided once the HIV result is known, and referral to a dedicated HIV clinic is arranged. Patients who have been tested previously and state that they had a negative result are offered re-testing. The rapid HIV test used is the First Response (Premier Medical Corp Ltd, India). If the patient tests positive, a second HIV rapid test, the Determine (Alere Medical, Co. Ltd, Japan), is used as a confirmatory test. If both rapid tests are positive, the result is regarded as confirmation of the presence of HIV infection. If the second test is negative, a laboratory enzyme-linked immunosorbent assay is performed to confirm the result.

All healthcare professionals were expected to document whether testing was offered, and if it was, whether the patient agreed to testing. The result of the rapid HIV test was also documented in the patient's hospital records. Healthcare professionals were also told to record whether a patient declined testing. The nursing staff kept a separate register of all patients who had an HIV test. CD4<sup>+</sup> counts were not obtained immediately, but patients were referred to a HIV clinic with appropriate information. At the time of the study, the CD4<sup>+</sup> count evaluation took 3 - 5 days to be processed, and some patients were discharged from hospital before their results became available.

All HIV-positive patients were clinically staged, and those who were clinically stage III and IV (World Health Organization staging) had further counselling, the relevant HIV investigations, appropriate referral and clinical management. All HIV-positive patients irrespective of clinical stage were referred to dedicated HIV clinics.

The district hospital is in an urban setting in the Durban metropolitan area and is mainly attended by lower socio-economic population groups. The overall HIV prevalence among antenatal women aged 15 - 49 years in KwaZulu-Natal is estimated at 39.5%.<sup>[8]</sup> Patients who stayed in the ward for >3 days were excluded from the audit because we believed that the longer the duration of hospital stay, the greater the chances were of PICT being initiated.

## Results

Over the 8-month study period, 1 019 patients were admitted to the ward and stayed for ≤3 days; 1 014 case files were evaluated (5 files were missing). The mean age of all patients (±standard deviation (SD)) was 23.4 (±6.3) years (range 18 - 54). The majority (65%) were in the 18 - 29-year age group. The mean parity was 1.08 (±1.05) (range 0 - 4) and the median 2. The mean hospital stay was 2.35 (±0.48) days (range 2 - 3).

### HIV counselling and testing

Of the 1 014 case files audited, 451 (44.4%) had documented evidence of patients reporting that they had been tested previously. Fig. 1 shows that 916 patients should have been offered PICT (353 who had previously tested negative and 563 who had not had HIV testing). Of these, 157 (17.1%) were offered PICT and 116 (73.9%

of those who were offered) accepted; 45 of these (38.8%) tested positive (Fig. 1).

Table 1 shows details of HIV testing in relation to the various clinical diagnoses recorded in the files. Miscarriages were the commonest indication for admission. This group comprised 599 (59.1%) of all admissions, and HIV testing was offered to 107 (17.9%) of these patients. Thirty-three patients with Bartholin's abscesses should have been offered testing, but only one was offered it (Table 1).

## Discussion

Of 1 014 gynaecological patients with acute admissions of ≤3 days, 451 had been tested for HIV previously and 98 (21.7%) were HIV-positive (Fig. 1). This prevalence of HIV positivity is lower than in the National HIV Antenatal Prevalence Survey,<sup>[8]</sup> where the average figure for pregnant women is approximately 29%. A total of 916 women (90.3%) had not had an HIV test performed.

In our audit, only 157 (17.1%) of these 916 patients, who should have been offered HIV testing, were offered it. This confirms our observation that PICT is not being properly implemented in settings in which women present with acute gynaecological disorders and there is a rapid turnover of patients due to the shortage of hospital beds and possibly lack of trained staff and counsellors. There is also high staff turnover, so ongoing training on standard clinical guidelines may be lacking.

The above operational issues concerning PICT should be taken into account if we are to test more individuals for HIV and start treating those who are positive as early as possible. One reason why so many patients were not offered testing may be that the date of the previous HIV test was not established when patients stated that they had been tested. These could be regarded as missed opportunities for retesting, especially for high-risk patients such as those with a diagnosis of pelvic inflammatory disease, Bartholin's abscess and cervical cancer. More importantly, it would seem that healthcare workers do not understand the PICT model. In this model, doctors or nurses can suggest to the patient that he/she has a test, and instead of a detailed consent form being worked through and signed, a note in the file indicating that that HIV testing has been suggested and agreed to is sufficient. The healthcare worker then performs the test and the detailed counselling is arranged. The counsellor can then perform this time-consuming but important part of the PICT process. It appears that healthcare workers are not fully informed about this procedure, and are distancing themselves from this responsibility and placing too much emphasis on the counsellors. Integration of the process into routine healthcare and disseminating information to all healthcare workers is essential if we are to increase the numbers of people who have HIV screening and testing.

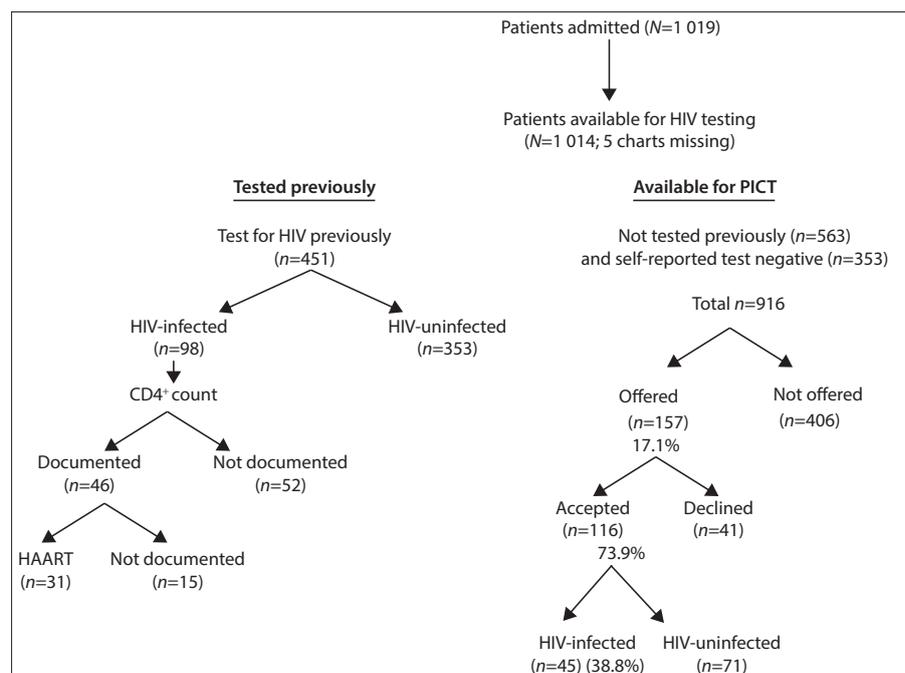


Fig. 1. Flow diagram showing the outcomes of HIV testing (PICT = provider-initiated counselling and testing; HAART = highly active antiretroviral therapy).

**Table 1. PICT in relation to clinical diagnoses**

Diagnosis	N	Tested for HIV previously			Total not tested for HIV, n	PICT			
		Positive, n	Negative, n	Not tested for HIV previously, n		Offered, n	Accepted, n	Declined, n	Not offered, n (% of total not tested)
Miscarriages									
Incomplete	355	25	77	253	330	66	66	-	264 (80.0)
Inevitable	64	8	16	40	56	18	12	6	38 (67.9)
Complete	84	12	19	53	72	3	-	3	69 (95.8)
Threatened	81	9	16	56	72	8	4	4	64 (88.9)
Septic	15	-	2	13	15	12	10	2	3 (20.0)
Ectopic pregnancy	86	-	34	52	86	11	2	9	75 (87.2)
HMB	42	4	26	12	38	5	-	5	33 (86.8)
Wound sepsis	13	2	11	-	11	-	-	-	11 (100.0)
Cancer									
Cervix	37	6	23	8	31	5	2	3	26 (83.9)
Endometrium	3	0	3	-	3	-	-	-	3 (100.0)
Bartholin's abscess	38	5	7	26	33	1	0	1	32 (97.0)
Fibroid uterus	23	1	13	9	22	1	1	-	21 (95.4)
PID	124	26	62	36	98	26	18	8	72 (73.4)
Others	49	0	44	5	49	1	1	-	48 (98.0)
Total	1 014	98	353	563	916	157	116	41	759 (82.9)

PICT = provider-initiated counselling and testing; HMB = heavy menstrual bleeding; PID = pelvic inflammatory disease.

The study subjects spent an average of 2 days in hospital, and most of them were young and had uncomplicated miscarriages. Only 20% of the patients with incomplete miscarriages and 12.8% of those with ectopic pregnancies were offered testing (Table 1). It is our impression that in an urban setting, patients with a diagnosis of miscarriage ask to be discharged from hospital as soon as possible. Delays in counselling and testing before discharge from hospital may have been a reason why so few were offered PICT, although it is possible that PICT was offered but not recorded in the hospital notes. This is one of the limitations of this retrospective audit. We only included women who stayed in hospital for  $\leq 3$  days (an arbitrary figure) because we wanted to overcome any biases resulting from the fact that patients who stay in hospital for longer periods may have a greater chance of being offered HIV testing.

Other operational issues such as privacy and confidentiality may have played a role in healthcare workers not offering PICT. Obermeyer and Osborn<sup>[9]</sup> reported that nurses noted a lack of private space as a major constraint to discussions before and after HIV testing. Reports have also indicated the lack of private rooms for maintaining privacy and confidentiality as probable obstacles to PICT.<sup>[10,11]</sup> These resources were certainly lacking at the study site.

Wanyenze *et al.*,<sup>[12]</sup> in a study performed in Uganda, reported that before implementation of PICT only 20% of the patients discharged from a medical ward had received HIV testing, but after the initiation of PICT 98% agreed to a test and 81% were tested for the first time. The HIV prevalence was 25%. We did not have baseline data, but before the recommendation of PICT, an audit of HIV testing among women seeking termination of pregnancy at our study site showed low rates of HIV testing.<sup>[13]</sup> Monitoring and evaluation of PICT in general wards, continuing training of all

healthcare workers and counsellors, provision of staff and sufficient privacy are essential if we are to increase the number of people tested at the point of healthcare contact.

In our study, 73.9% of those who were offered PICT accepted testing. This is a reasonably high figure in a setting of acute gynaecological emergencies. More importantly, 38.8% were HIV-infected. Although this is a 'select' group that would be expected to have a higher prevalence than that in the general population (17.8%), the figure emphasises the need for PICT at all clinical contacts in public sector health facilities.<sup>[8]</sup>

Defaulting from return visits is common in LMICs. Painter *et al.*<sup>[14]</sup> reported that 72% of their patients accepted HIV testing, but only 45% returned to collect their results. Rapid HIV testing in the ward would overcome this problem. It could be argued that additional staff would probably be required for this, but we must remember that doctors and nurses have the knowledge and skills to assist in the initial counselling and testing. Much of the in-depth, time-consuming counselling can be done by the trained counsellors. These operational issues require urgent attention.

Although, as stated above, the 73.9% response rate to PICT in our study suggests a high level of acceptability, other studies have revealed that patients may feel forced into HIV testing, or feel compelled to agree to it.<sup>[15,16]</sup> Our study did not take these factors into account, and further investigations in general wards with rapid patient turnover are required. Patients may feel compelled to agree to testing if they want to be discharged from hospital as soon as possible.

## Conclusion

If the operational issues mentioned above are attended to, widespread implementation of PICT may be able to deliver the

large-scale increase in HIV testing and counselling that is required to initiate early treatment and decrease HIV transmission at a population level.

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