



# THE CENTRAL AFRICAN JOURNAL OF MEDICINE

Vol. 58, Nos. 9/12

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September/December 2012

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# The role of dental practitioners in Provider Initiated HIV Counseling and Testing (PITC) for patients attending dental practices in Harare, Zimbabwe

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## Abstract

**Objective:** To assess the role of Zimbabwean dental practitioners in Provider Initiated HIV Counseling and Testing (PITC).

**Design:** A cross-sectional analytic study was conducted. A structured interviewer administered questionnaire was used to collect data from participants.

**Setting:** Harare private and public dental practices.

**Subjects:** Forty dental practitioners practicing in Harare and two hundred and ninety three patients attending dental practices in Harare were interviewed.

**Main Outcome Measures:** Dental practitioners' practices on HIV counseling and testing for dental patients, acceptability of HIV testing in dental settings and missed opportunities for HIV counseling and testing in dental settings were assessed.

**Results and Conclusion:** Half of the dental practitioners (20) interviewed reported offering HIV counseling to dental patients during their clinical duties. The majority 62% only referred their patients for HIV testing when they presented with oral manifestations of HIV infection. Seventy three percent (29) of practitioners interviewed were not aware of the Ministry of Health and Child Welfare guidelines on HIV counseling and testing. Eighty seven percent (255) of dental patients in this study reported not being counseled nor referred for HIV counseling and testing by their dental practitioner during their dental visits. More than a third (36.5%) of the dental patients experienced repeated missed opportunities for accessing HIV counseling and testing in health settings. The minimal that the dentists may need to be involved with in PITC is counseling their patients and improve referral for care. There is need for continued medical education for dentists on issues related to new HIV interventions or protocols such as PITC.

*Cent Afr J Med 2012;58(1/4) 39-43*

## Introduction

The Ministry of Health and Child Welfare, Zimbabwe introduced voluntary counseling and testing (VCT) in 1999 and the HIV counseling and testing services have since expanded to include provider initiated testing and counseling (PITC) as recommended by the Centers for Disease Control (CDC).<sup>1,2</sup> There should be routine offering of HIV testing and mandatory screening for HIV and diagnostic HIV testing unless the patient opt outs, in hospital locations such as emergency departments where persons who do not otherwise access HIV testing seek health care services.<sup>3</sup> Thus it is imperative that health care workers who have initial contact with the patient are equipped with HIV testing and counseling skills so as to limit the referral of patients from one provider to another within the same

health facility.<sup>2,4</sup>

Based on the benefits of early diagnosis of HIV infection, health care providers should assume a much more active role in promoting HIV testing.<sup>5</sup> Regular dental care offers an opportunity to serve many at risk individuals who are not tested. Significant proportions (70%) of patients who attend dental clinics have little or no contact with other clinical settings likely to offer HIV testing.<sup>6</sup> Routine opt out screening for HIV infection should become an element in standard dental examination, along with X-rays, charting for caries and periodontal disease, and a head and neck examination.<sup>7</sup>

Though dental clinicians were not expressly mentioned in the CDC recommendations for HIV testing, in dental settings offering HIV counseling services provides an unprecedented opportunity for dental practices in reshaping the vital role of dentistry

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in public health.<sup>6</sup>

In practice patients presenting with oral health conditions in public and private dental institutions in Zimbabwe usually present directly to dental departments without prior contact with other health personnel. This set up makes dental personnel the only health providers to offer services such as initiation of HIV testing and counseling to patients attending the dental practices. The role played by dental practitioners in provider initiated HIV testing and counseling had not been assessed in Zimbabwe. The extent to which missed opportunities for HIV counseling and testing occur among dental patients in dental settings in Zimbabwe was not known.

## Materials and Methods

A cross-sectional analytic study was conducted. A structured interviewer administered questionnaire was used to gather data. Medical records review for patients was done to determine the presence of triggers for offering HIV testing. The outcomes assessed were missed opportunities for HIV counseling and testing in dental settings. A Missed opportunity was defined as a self reported dental attendance that did not include HIV counseling and testing. In our study we assessed missed opportunities during latest previous dental visits, hospital or health facility visit and during the 'current' dental visit during the study period. Independent variables assessed were demographic factors, socioeconomic status, clinical status, previous hospital visits, pattern of dental visits, previous HIV testing and counseling experiences, willingness by dental patients to get HIV test in dental practices and practitioners' operating procedures for HIV counseling testing.

All public dental practices in Harare were included in the study. Individually owned private dental practices were randomly selected. 293 dental patients attending dental practices during the study period, who consented to participate, were enrolled in the study. Dental practitioners practicing in public institutions in Harare found on duty during the study period who consented to be interviewed were purposively enrolled in the study. A sample of fifty private practitioners practicing in Harare was randomly selected using the lotus method from the Zimbabwe Dental Association register. Private dental practitioner who consented to be interviewed we enrolled in the study.

Permission to conduct the study was sought from the Director Oral Health Services, Zimbabwe and ethical assessment and approval was obtained through the Joint Research and Ethics Committee of University of Zimbabwe (JREC). Written informed consent was sought from participants and confidentiality was be ensured by making the questionnaires anonymous. Confidentiality was maintained throughout the study.

## Results

### *Dental practitioners' practices on HIV counseling and testing for dental patients.*

Forty dental practitioners consented to participating in the study. Thirty five percent (14) of the practitioners worked in the public dental practices, 27, 5% (11) worked in the private dental practices and 37, 5% (15) worked in both private and public practices.

Knowledge of Dental Practitioners on the recommended guidelines for HIV counseling and testing in Zimbabwe was poor. Seventy three percent (29) of dental practitioners were not aware of the Ministry of Health and Child Welfare guidelines on HIV counseling and testing (Table I).

*Table I: Summary of dental practitioners' responses on the recommended HIV testing and counseling approaches in Zimbabwe health facilities.*

HIV counseling and testing approach Reported by practitioners	Frequency	Percentage
Provider initiated counseling and testing	4	10
Voluntary testing and counseling	1	2.5
Testing for pregnant women only	6	15
Do not know the recommended approach	29	72.5

Half of the dental practitioners (20) interviewed reported that they offered HIV counseling for their dental patients during their clinical duties. The pattern of counseling varied, with 13 of the 20 practitioners doing so at times, 2 dentists reported always doing so during clinical duties. On assessing the practices of practitioners regarding testing of HIV, 85% (34) of the dental practitioners reported they referred patients for HIV testing. Sixty two percent (21) of the practitioners who reported that they referred their patients for HIV testing, did so if a patient presented with oral manifestations of HIV infection, 29% (10) dental practitioners referred patients for HIV testing after assessing the clinical appearance of patient and only one practitioner reported the need to know the patient's HIV status in patient management as the criteria they used to refer patients for HIV testing.

Despite the poor referral practices with regards to HIV testing, most of the practitioners (97,5% (39) reported that they are willing to participate in HIV counseling and testing of their dental patients and most of the dental practitioners 95% (38) reported that it is of importance in clinical practice for dentists to be involved in HIV counseling and testing for their patients.

Fifty five percent (22) of the practitioners had never been trained in HIV counseling and testing. The majority (7 participants out of 18) of those who had received training had been trained in HIV counseling and testing through workshops and one practitioner had an on job training HIV counseling and testing. Seventy five percent (30) of the participants reported that they were not adequately trained in HIV care and

management.

**The prevalence of missed opportunities for offering HIV counseling and testing to dental patients.**

Two hundred and ninety three dental patients were interviewed. During the study period eighty seven percent (255) of participants were not counseled nor referred for HIV counseling and testing by their dental practitioner during their dental visit.

More than half (58.4% (171) dental patients had also visited a health facility a year or less duration prior to our study. Fifty eight percent (99 out of 171) of participants reported not being offered testing during

hospital or clinic visits a year prior to study period. On further assessing the missed chances for HIV testing and counseling 93.9 % (93) of the patients (99) who were not offered counseling in health facilities prior to the study period were also not counseled nor referred for HIV counseling and testing by their dental practitioners during their interaction with the dental practitioner during the period of our study. This translates to more than a third (36.5%) of the dental patients experiencing repeated incidences of missed opportunities for accessing HIV counseling and testing in a year (Table II).

**Table II: Summary of missed opportunities of HIV testing for dental patients attending Harare dental practices.**

Variable	Missed opportunity for HIV Counseling And testing by dentist YES: (N=255)%	Missed opportunity for HIV counseling and testing by dentist NO: (N=38)%	Odds Ratio (C:I)
Not counseled nor tested during hospital visit ≤12 months Prior study Period			
YES	93 (36,5)	6 (15,8)	2.58 (0.99-7.15)
NO	162 (63,5)	32 (84,2)	

The pattern of counseling and referral for HIV testing among dental patients varied with the socio-

demographic characteristics (Table III).

**Table III: Socio-demographic characteristics of dental patients enrolled in the study.**

Variable	Total N=293 (%)	Missed HIV counseling or testing		p value
		Yes [n(%)]	No [n(%)]	
<b>Age in years:</b>				
≤15	4 (1.37)	4 (100.0)	0 (0)	<b>0.011</b>
>15≤30	100 (34.1)	90 (90.0)	10 (10)	
>30≤45	106 (36.2)	88 (83.0)	18 (17.0)	
>45	83 (28.3)	73 (88.1)	10 (12.3)	
<b>Gender:</b>				
Female	162 (55.3)	138 (85.2)	24 (14.8)	<b>0.296</b>
Male	131 (44.7)	117 (89.3)	14 (10.7)	
<b>Employment Status:</b>				
Unemployed	26 (8.87)	23 (88.5)	3 (11.5)	<b>0.372</b>
Formal employment	123 (41.9)	110 (89.4)	13 (10.5)	
Formal employment	134 (45.7)	112 (83.6)	22 (16.4)	
<b>Race:</b>				
Black	285 (97.3)	251 (88.1)	34 (11.9)	<b>0.004</b>
White	7	3	4	
Other races	1	1	0	
<b>Level of Education:</b>				
Primary	48 (16.4)	45 (93.7)	3 (6.25)	<b>0.234</b>
Secondary	178 (60.8)	154 (86.5)	24 (13.5)	
Tertiary	67 (22.9)	56 (83.6)	11 (16.4)	

Failure to offer HIV counseling nor referral for HIV testing by dental practitioners was not influenced by

the patient's clinical presentation or the reason for dental visit (Table IV).

*Table IV: Dental care related determinants for missed opportunities for HIV counseling and testing for dental patients by dental practitioners practicing in Harare.*

Variable	Total (N=293)%	Missed HIV counseling or testing		p value
		Yes n%	No n%	
<b>Presenting complaint:</b>				
Toothache	158 (53.9)	136 (86.1)	22 (13.9)	0.672
Gum disease	24 (8.2)	20 (83.3)	4 (16.7)	
Check up and review	61 (20.8)	53 (86.9)	8 (13.1)	
Other complaints	50 (17.1)	46 (92)	4 (8)	
<b>Dental procedure:</b>				
Extraction	113 (38.6)	96 (85)	17 (15)	0.311
Surgical	26 (8.9)	25	1	
Restorations	27 (9.2)	22	5	
Other procedures	114 (38.9)	109 (87.9)	15 (12.1)	
<b>Pattern of dental attendance:</b>				
Dental visit less than once	229 (78.1)	201 (87.8)	28 (12.2)	0.474
More than one	64 (21.9)	54 (84.4)	10 (15.6)	

The majority 81, 9% (240) patients reported their willingness to get counseled or to get tested during a dental visit in the dental clinic or practice. The 46 (15, 7%) participants who were not willing to get tested gave the reasons summarized in Table V.

*Table V: Summary of reasons given by dental patients for being unwilling to get tested in a dental practices.*

Reason given	Frequency (%) N=46
Need to seek authority for that	3 (6.5)
May cause divorce	1 (2.2)
Not the dentist's duty	3 (6.5)
Not comfortable with the arrangement	16 (34.8)
Not necessary	15 (32.6)
Reason not indicated	8 (17.4)

However ninety five percent of the patients (277) reported that it is of importance for dental practitioners to offer HIV counseling and testing services to patients or refer for these services during dental visits.

## Discussion

Patients attending dental practices in Zimbabwe are experiencing missed opportunities for HIV counseling and testing as recommended by the PITC programme. These missed opportunities in dental practices are higher (87.5%) than the experiences in other hospital settings; literature reports that in other hospital setting such as emergency departments they range from 42 % to 76.1 %.<sup>5, 9-10</sup> Failure to address HIV diagnosis was shown to be influenced by the hospital department of contact. In this study it failure by dentist to address the issue of the patients' HIV status is suggestive of the fact that they are only attending to the patients' complaint without assessing other health issues. Though it has been documented as wrong to demand dentists to perform HIV testing in practices, in programmes where patients received this service it has been observed to

have shown great benefits to the patients.<sup>20</sup>

Only 29% of the dentists reported that they referred patients for HIV testing if they presented with oral manifestations of HIV thus there is a potential of not addressing HIV testing in asymptomatic patients. In a UK study clinicians were observed not to think of testing no documenting considering HIV testing even when triggers are present.<sup>13</sup> However through some programs on HIV testing in dental setting it is understood that a significant population during a year accesses dental care and does not access medical care leading to missed opportunities to screen patients for diseases among them HIV.<sup>20</sup> The minimal that the dentists may need to be involved with is counseling their patients and improve referral for care, this should be possible as the majority of dental practitioners reported being willing to take part in HIV testing and counseling.

Failure to offer to offer HIV testing or counseling to patients by dentists in our setting was not influenced by the patients' gender and the level of education as reported by other studies.<sup>9</sup> There is a possibility that the lack of set systems to facilitate HIV counseling and referral for HIV attending dental practices may explain this observation.<sup>13</sup> The lack of structures discourages the practitioners from offering HIV testing or counseling, in our study this observation is supported by the unwillingness by dental patients (46%) to get tested in dental settings. The majority of those unwilling reported they were not comfortable to get tested nor counseled in dental practice. However in USA 76% of dental patients were reported to be willing to get an oral based HIV rapid test in dental practices.<sup>19</sup>

Though half of the dental practitioners reported offering HIV counseling and testing, the poor level of knowledge on the recommended approach of PITC is suggestive of lack of participation of dental professionals in HIV care and management. This observation supports the findings from a Nigerian study where Nigerian dentists involvement in HIV clinic education was reported to be low (21.8%).<sup>18</sup> This low involvement is apparent despite the fact that the

significance of HIV testing and counseling to the dental profession since dentists maybe the first health care providers to observe the symptoms suggestive of HIV infection.<sup>19</sup> Lack of training in HIV management and care through on job training, workshop training or seminar for dentists in Zimbabwe compounds the low participation by dentists in HIV management and care for patients. Considering that more than a third of dentists interviewed have practiced for long lack of training increases the likelihood of them not offering the services to their patients.

### Conclusion

There is low involvement of dental practitioners in provider initiated HIV testing and counseling in Zimbabwe resulting in dental patients losing opportunities for HIV testing. There is need for continued medical education for dentists on issues related to new HIV interventions or protocols such as PITC.

### Acknowledgements

We would like to thank the Oral Health Services department, MOHCW for granting permission to conduct this study. We would also like to express our gratitude to our study participants.

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