Oral health care experiences of people living with HIV in Kwazulu-Natal and Western Cape, South Africa

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Abstract

Purpose - The purpose of this paper is to ascertain the oral health experiences of people living with HIV/AIDS in the provinces of Kwazulu-Natal (KZN) and Western Cape (WC) in South Africa. Many studies have reported that people living with HIV have unmet needs for dental care and this study considered the various factors that affect the accessibility and utilisation of dental services as these factors are even more pertinent for the people living with HIV who have increased need for dental care.

Design/methodology/approach – The participants were selected among HIV-positive people attending selected Community Health Centre and regional hospital HIV clinics in KZN and WC provinces. The sample consisted of people living with HIV that were 18 years or older and who had given written, informed consent. The sample (n = 435) comprised mainly of black females in the age group 20-29 years. In total, 347 participants (79.8 per cent) had an oral health problem of which 83 per cent (n = 288) received care.

Findings – Of those that received care, 56.6 per cent (n = 163) of the participants stated that the staff were aware of their HIV status. Almost a third of the participants who received care reported a negative experience at the clinic. If the participant lived in a metropolitan area, the participant was 3.647 times more likely to receive care than if the participant lived in a non-metropolitan area (p < 0.01) If the participant earned R5,000 or less, the participant was 0.106 times less likely to receive care (p = 0.048). If the participant lived 1-5 km from the clinic, the participant was 3.371 times more likely to receive care (p = 0.015).

Research limitations/implications - The results are specific to KZN and WC and cannot be extrapolated with caution to the rest of South Africa. However, to the best of the author's knowledge, there is no other study that has compared differences in the use of oral health care services by people with HIV in South Africa and these results serve as an indication of some the important issues in this regard. Additionally, this study did not have a control group of HIV-negative people which would have enabled one to determine whether certain barriers were unique to people living with HIV.

Practical implications - The study highlighted the barriers to care existing within the current public health system relative to the provision of oral health services for people living with HIV in KZN and WC. It was anticipated that by ascertaining the nature and extent of unmet needs and barriers to dental care for people living with HIV, measures can be put in place to remove or at least reduce the barriers to care and improve the quality of life for people living with HIV/AIDS in South African

Social implications - The high prevalence of oral health problems in people living with HIV makes it imperative for the DOH to make every attempt to remove barriers to oral health care and thereby secure equitable, affordable and accessible oral health care which is acceptable for people living with HIV and accountable to the greater society.

Originality/value - This study emphasises the importance of embracing people that are being discriminated and marginalised by society such as people living with HIV to ensure that they feel a franchised member of society who can take the initiative to be in control of their own health and, with the

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necessary aid from public resources and societal support, join forces to reduce the public health burden and its impact on the socio-economic milieu.

Keywords Health, Workforce development, Inequalities, Diversity in health and social care provision, Oral health care, Unmet needs, Barriers to care

Paper type Research paper

Background

In 2012 about 6.42 million people were estimated to be living with HIV in South Africa, with about 18.8 per cent of the adult population (15-49 years) and about 12.2 per cent of the general population affected (Shisana *et al.*, 2014). Women are disproportionately affected; accounting for approximately 55 per cent of HIV-positive people. Women in the age group 25-29 are the worst affected with prevalence rates of up to 40 per cent. For men, the peak is reached at older ages, with an estimated 10 per cent prevalence among men older than 50 years. HIV prevalence among younger women (< 20 years) seems to be stabilizing, at about 16 per cent for the past three years (Shisana *et al.*, 2014).

Various factors are considered to affect the accessibility and utilisation of dental service in the general population (Lalloo *et al.*, 2004). These factors are even more pertinent for the people living with HIV who have increased need for dental care (Capilouto *et al.*, 1991). Many studies have reported that people living with HIV have unmet needs for dental care (Shapiro *et al.*, 1999; Patton *et al.*, 2003; Turton and Naidoo, 2014). A study similar to the current study concluded that discrimination of people living with HIV is still prevalent and people living with HIV felt that they were being discriminated against because of their HIV status (Turton and Naidoo, 2014). The authors emphasised the importance of embracing people that are being discriminated and marginalised by society such as people living with HIV to ensure that they feel a franchised member of society who can take the initiative to be in control of their own health and, with the necessary aid from public resources and societal support, join forces to reduce the public health burden and its impact on the socio-economic milieu (Turton and Naidoo, 2014).

South Africa has more people living with HIV/AIDS than any other country worldwide (South African National AIDS Council (SANAC), 2007). Some provinces in South Africa are affected by the HIV/AIDS pandemic more than others and disparities also exist at district level within provinces (SANAC, 2007). National surveillance data indicated that HIV prevalence in KZN has been consistently the highest nationally at about 39.1 per cent, in contrast the WC province shows a prevalence of 13.1 per cent which is the lowest nationally, while the national prevalence was about 29.1 per cent (SANAC, 2007; Office of the Premier, 2007).

Barriers to health care are obstacles within the health care system that prevent vulnerable populations from receiving health care they need, or predisposes them to get inferior health care compared to other patient populations. Barriers to care lead to disturbing racial, ethnic and geographic disparities in health status and clinical outcomes. It was anticipated that by ascertaining the nature and extent of unmet needs and barriers to dental care for people living with HIV, measures can be put in place to remove or at least reduce the barriers to care and improve the quality of life for people living with HIV/AIDS in South African communities.

Literature review

Many studies have documented the dental care experiences of people living with HIV/AIDS (Turton and Naidoo, 2014; Jacobsen et al., 1989; Robinson and Croucher, 1993; Terry et al., 1994). One of the earliest studies by Jacobson et al. (1989) investigated the dental care experiences of HIV-infected men in Chicago (Jacobsen et al., 1989). The authors reported that many people living with HIV feared being denied access to the dental service and thus visited dentists less often than they did before they learned of their HIV-positive status (Jacobsen et al., 1989). Petrou and Dooley (1996) looked at community service needs of people living with HIV in

London and found a high level of unmet needs for a wide range of community services, in particular for basic services such as medical and dental care, social work and nursing (Petrou and Dooley, 1996). In a survey to ascertain whether or not dental needs of people living with HIV were being met in New Zealand, Terry et al. (1994) found that 70 per cent of the participants felt that their needs had not been met (Terry et al., 1994). A study by Rudolph and Ogunbodede (1999) to determine the knowledge, attitude and practice of oral health care workers in public clinics in South Africa towards HIV/AIDS, reported that the vast majority of the respondents expressed a need for additional education on HIV/AIDS (Rudolph and Ogunbodede, 1999).

Variations in care were found in people living with HIV in the USA especially in minority groups, compared with whites (Shapiro et al., 1999; Dobalian et al., 2003; Shiboski et al., 1999; Heslin et al., 2001). Shapiro et al. (1999) reported substandard care in the medically uninsured when compared to the medically insured, women compared with men and other risk groups compared with gay men and lesbian women (Shapiro et al., 1999). Utilisation of dental care services was significantly more likely among the socio-economically advantaged groups (which occurs more frequently in those categorised as "whites"), the medically insured, employed with a high education, high income and gay or bisexual men (Shetty, 2004). Similar trends are observed for medical and dental care in South Africa where health care delivery to poor people dependant on public services, non-whites and people living in rural communities is inferior compared to the more affluent counterparts (Lalloo et al., 2004).

Even though the treatment and management of HIV-associated diseases has improved since 1990, there is no evidence to show that dental access or utilisation has changed during the same period (Heslin *et al.*, 2001; Mascarenhas and Smith, 2000). Inadequate use of dental services by people living with HIV was found to be associated with unemployment, perceptions of low income, perceptions of poor health and concerns for problems other than HIV infection (Shiboski *et al.*, 1999). This is a common trend in most countries including South Africa where homeless, low income earners, unemployed and less educated people have a lack of disposable income and medical cover thus making it difficult for them to access health care (Söderlund and Hansl, 2000).

Aim

To investigate the barriers to oral health care for people living with HIV in KwaZulu-Natal (KZN) and the Western Cape (WC).

Objectives

- 1. To determine the dental care experiences of people living with HIV in KZN and the WC:
 - how prevalent is the need for oral health care?
 - how was this health care need met?
 - its impact on the ability to secure care.
- 2. To make recommendations to improve the accessibility and acceptability of the provision of oral health care for people living with HIV.

Methodology

This study was a survey among HIV-positive people attending selected Community Health Centre (CHC) and regional hospital HIV clinics in KZN and WC provinces. The sample consisted of people living with HIV that were 18 years or older and who had given written, informed consent.

A cross-sectional study utilising a self-administered questionnaire and semi-structured interviews were utilised. Descriptive statistics were derived from demographic and socio-economic data and a binary logistic regression was performed to determine variables associated with not obtaining care for those who had experienced an oral health problem.

Study population and sampling

The study population was people living with HIV attending HIV clinics at randomly selected urban and rural clinic sites in the WC and KZN, South Africa. Individuals attending these randomly selected HIV and Voluntary Counselling and Testing clinics located at CHCs and regional hospitals in both provinces were approached and offered the opportunity to anonymously participate in the study. Non-probability sampling was employed to select the sites where participants were enrolled using convenience sampling and a sample size of 150 participants per province was adequate for this study. However, when logistical problems were encountered (lack of room space or staff support) and in the event that these problems could not be circumvented, the target was foregone and more patients were recruited from another site within the same province.

Sample size

Calculation of the sample size required, using the estimates of the variance ($\sigma^2 = \pm 5$) which was available from similar studies, established that 15 participants per site would be adequate given a 95 per cent confidence interval and a standard deviation of 10 (derived from similar studies); however, where possible, more participants were enrolled based on availability.

Inclusion criteria

The participants had to be a person 18 years or older living with HIV and willing to give written consent to be part of this study. Informed consent was obtained in writing from the participants in the language that they chose. Participation in this study was entirely voluntary and the participants were allowed to withdraw from the study at any time should they wish to do so. Anonymity was achieved by not using the participant's names on the questionnaire and the questionnaire was recorded as a serial number.

Data analysis. All questionnaires data were categorised, coded and then entered into the computer. The data was analysed using Excel, a spreadsheet package and SPSS, a statistical software package. Analyses included simple descriptive statistics in the form of frequency distributions and means comparing the two provincial cohorts and summarizing the entire study population.

The independent *t*-test was used to determine correlation between the scale variables (age and duration status known) of the provincial cohorts and the significant relationships were reported. The Mann-Whitney test was used to determine the correlation between the nominal and the ordinal variables of the provincial cohorts and similarly, significant relationships were reported.

To determine the influence of a host of factors on the outcome variable "Did you get care or not?" a binary logistic regression model was employed. This technique was selected because it reports the effect of any given variable on the outcome of the dependent variable taking the effect of all the other variables in the model into account as well.

Limitations. The results are specific to KZN and WC and cannot be extrapolated with caution to the rest of South Africa. However, to the best of the author's knowledge, there is no other study that has compared differences in the use of oral health care services by people with HIV in South Africa and these results serve as an indication of some the important issues in this regard.

Additionally, this study did not have a control group of HIV-negative people which would have enabled one to determine whether certain barriers were unique to people living with HIV.

Results

The sample (n = 435) comprised mainly of black females in the age group 20-29 years. In all, 347 participants (79.8 per cent) had an oral health problem of which 83 per cent (n = 288) received care. Of those that received care, 56.6 per cent (n = 163) of the participants stated that the staff were aware of their HIV status. Almost a third of the participants who received care reported a negative experience at the clinic.

Oral health problems among participants

Figure 1 shows that 86.53 per cent of the KZN respondents and 71.05 per cent of the WC respondents had an oral health problem (Table I).

In the KZN cohort, 89.10 per cent of the females experienced oral health problems while 82.02 per cent of the males experienced oral health problems. In total, 86.53 per cent of the KZN respondents had an oral health problem vs 71.05 per cent of the WC respondents. In the WC cohort, 73.64 per cent of females and 65.57 per cent of all males experienced oral health problems.

A total of 71.05 per cent of respondents had been afflicted with an oral health problem. The participants from the WC cohort reported 15.48 per cent less oral health problems than the KZN cohort. The percentage of respondents afflicted with oral health problems in the WC is also much lower than the overall percentage for the entire study population. This difference was statistically significant (Z = -3.981, p < 0.01).

Figure 1 is a visual comparison of whether the participants with oral health problems got care. 288 participants got care ($N_{KZN} = 181$, $N_{WC} = 107$) of the total 347 participants who had oral health problems (Table II).

Percentage of respondents who had oral health problems per provincial cohort Did you have an oral health problem? Count of 18 100 Use/NotUse 90 86.53% Prov ■ 0 - KZN 80 ■ 0 - WC 71.05% 70 60 50 40 28.95% 30 20 13.47% 10 0 Did have oral problem Did not have oral problem 18

Table I Gender dis	tribution	of respor	ndents who	had ora	l health p	problems p	er provincial		
	Province								
	KZN				WC				
	Male	Female	KZN total	Male	Female	WC total	Grand total		
Oral health problem	(%)	(%)	(%)	(%)	(%)	(%)	(%)		
Did have oral problem Did not have oral	82.02	89.10	86.53	65.57	73.64	71.05	79.77		
problem	17.98	10.90	13.47	34.43	26.36	28.95	20.23		
Grand total	100.00	100.00	100.00	100.00	100.00	100.00	100.00		

Table II Did the partici	pants with oral health p	roblems get care? N = 3	347				
Did have an oral health problem Province							
Did you get care?	KZN (%)	WC (%)	Grand total (%)				
Did get care Did not get care Grand total	85.38 14.62 100.00	79.26 20.74 100.00	83.00 17.00 100.00				
Note: $n = 347$	100.00	100.00	100.00				

Did they get care?

Of the participants who experienced oral health problems, 85.38 per cent of the KZN participants and 79.26 per cent of the WC participants got care. This represents 83 per cent of the total study group. Although the WC cohort got less care than the KZN cohort, the difference in the KZN and WC cohorts were not statistically significant (Z = -1.477, p = 0.144).

Participants who did not receive care

Participants were allowed to choose more than one response when determining what the reasons were for not receiving care if they had experienced an oral health problem. The responses were counted and percentages were calculated by using the total number of responses as denominator (Table III).

Binary logistic regression

The factors influencing whether one got care or not were entered into a binary logistic regression to compute which factors had a statistically significant effect on the dependent variable "Did you get care or not?"

The following nominal and ordinal variables were entered into the model:

- living a non-metro vs metro area;
- gender;

Table III Question – what were the reasons for you not getting care?								
	Province KZN WC		WC					
Response	n	%	n	%	Grand total	Percentage of total responses		
I was too ill to look for dental treatment	5	6.67	0	0.00	5	4.55		
The service was not available in my area	11	14.67	2	5.71	13	11.82		
I did not know where to get the service	11	14.67	2	5.71	13	11.82		
The place where the service is offered is too far	10	13.33	2	5.71	12	10.91		
I had no money for the transport	13	17.33	7	20.00	20	18.18		
I had no money to pay for service	10	13.33	7	20.00	17	15.45		
I had to wait too long for the service	4	5.33	4	11.43	8	7.27		
I feared what the dentist and staff might think about me being HIV positive	1	1.33	6	17.14	7	6.36		
I feared being discriminated against by the dentist and staff	2	2.67	3	8.57	5	4.55		
I feared loss of confidentiality about my HIV status	3	4.00	0	0.00	3	2.73		
I feared the dentist and staff might tell other people about my HIV status	0	0.00	2	5.71	2	1.82		
I did not feel welcome where the service was offered	3	4.00	0	0.00	3	2.73		
I did not have any problems	2	2.67	0	0.00	2	1.82		
Another reason	0	0.00	0	0.00	0	0.00		
Grand total	75	-	35	-	110	-		

- marital status;
- educational level;
- moved recently;
- distance to service;
- transport;
- working in the past year; and
- income level.

The results of this model are found in Table IV. The relationships which were significant are highlighted in this table.

Figure 2 is a visual illustration of the respondents reasons for not obtaining care in KZN and WC.

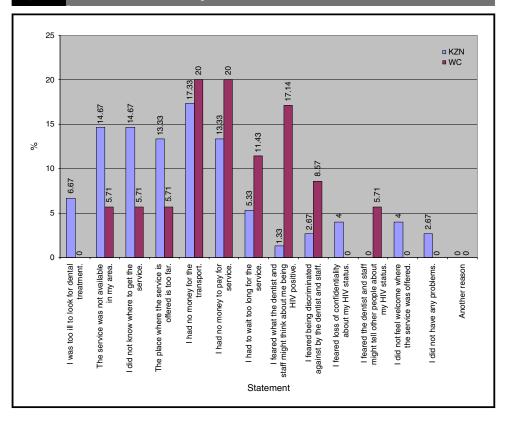
Discussion

Of those that did not receive care, there were disparate reasons between the provincial cohorts. In KZN, the reasons for not receiving care related mostly to the service being unavailable or too far or the individual lacking money to pay for transport and for the service;

Table IV Results of binary logistic regression							
	В	SE	Wald	df	Sig.	Exp(B)	
Step 1 ^a							
CENTER_r_or_u(1)	1.294	0.351	13.573	1	0.000	3.647	
Q2_Gender(1)	-0.843	0.370	5.200	1	0.023	0.430	
Q3_Mar_status			3.005	4	0.557		
Q3_Mar_status(1)	0.540	0.396	1.861	1	0.173	1.715	
Q3_Mar_status(2)	-0.083	0.892	0.009	1	0.926	0.921	
Q3_Mar_status(3)	-0.175	1.158	0.023	1	0.880	0.839	
Q3_Mar_status(4)	0.740	0.614	1.450	1	0.229	2.095	
Q5_Edu			6.142	3	0.105		
Q5_Edu(1)	1.418	1.140	1.548	1	0.213	4.130	
Q5_Edu(2)	1.150	1.137	1.023	1	0.312	3.157	
Q5_Edu(3)	-1.320	1.638	0.649	1	0.420	0.267	
Q7_Moved(1)	-1.128	0.365	9.568	1	0.002	0.324	
Q10_Dist_to_service			6.821	3	0.078		
Q10_Dist_to_service(1)	1.215	0.499	5.933	1	0.015	3.371	
Q10_Dist_to_service(2)	0.879	0.479	3.360	1	0.067	2.408	
Q10_Dist_to_service(3)	0.291	0.573	0.258	1	0.611	1.338	
Q12_TRANSPORT			0.450	3	0.930		
Q12_TRANSPORT(1)	0.112	0.404	0.076	1	0.782	1.118	
Q12_TRANSPORT(2)	-19.456	11,569.312	0.000	1	0.999	0.000	
Q12_TRANSPORT(3)	0.568	0.847	0.450	1	0.502	1.764	
Q13_WORKING			8.054	3	0.045		
Q13_WORKING(1)	0.055	0.504	0.012	1	0.914	1.056	
Q13_WORKING(2)	-0.677	0.520	1.693	1	0.193	0.508	
Q13_WORKING(3)	-2.232	0.877	6.476	1	0.011	0.107	
Q14_INCOME			4.479	5	0.483		
Q14_INCOME(1)	-0.504	0.508	0.983	1	0.322	0.604	
Q14_INCOME(2)	-2.245	1.138	3.896	1	0.048	0.106	
Q14_INCOME(3)	-20.806	10,527.403	0.000	1	0.998	0.000	
Q14_INCOME(4)	0.334	1.429	0.055	1	0.815	1.396	
Q14_INCOME(5)	-21.441	40,192.970	0.000	1	1.000	0.000	
Constant	-2.344	1.186	3.905	1	0.048	0.096	

Notes: Variables in the equation. ^aVariable(s) entered on step 1: CENTER_r_or_u, Q2_Gender, Q3_Mar_status, Q5_Edu, Q7_Moved, Q10_Dist_to_service, Q12_TRANSPORT, Q13_WORKING, Q14_INCOME

Figure 2 Reasons for not obtaining care in KZN and WC



while in WC, participants had no money to pay for transport and for the service, but were mostly concerned about fears of discrimination, stigmatisation and loss of confidentiality. If the participant lived in a metropolitan area, the participant was 3.647 times more likely to receive care than if the participant lived in a non-metropolitan area (p < 0.01); if the participant had not moved recently into the area where the participant was currently residing, the participant was 0.324 times less likely to receive care compared to someone who had moved recently (p = 0.002); if the participant lived 1-5 km from the clinic, the participant was 3.371 times more likely to receive care (p = 0.015); if the participant had been working part-time for the past year, the participant was 0.107 times less likely to receive care (p = 0.011) and if the participant earned R5,000 or less, the participant was 0.106 times less likely to receive care (p = 0.048).

Unmet needs

In this study, 347 participants had experienced oral health problems – this represents 79.8 per cent of the sample and is consistent with the very high prevalence of oral health problems in people living with HIV/AIDS (Turton and Naidoo, 2014; SANAC, 2007). The majority reported that they were treated for the problem.

In KZN, the majority of the responses related to concerns about the service:

- 1. the service was not available in their area;
- 2. they did not know where to get the service; and
- 3. the place where the service was offered is too far.

In contrast, only 28.56 per cent of responses in WC related to the service of which almost half were concerns about having to wait too long for the service. In KZN and WC, respectively, 30.66

and 40 per cent of responses related to the expenses tied to obtaining care, half of which were related to transport. The issues of discrimination, stigmatisation and loss of confidentiality were also raised. These results draw a striking picture of the disparities in service delivery across the provinces (Shisana et al., 2014; Turton and Naidoo, 2014; SANAC, 2007). In KZN, there is a greater need for the wider distribution of services. Patients often have to travel great distances to obtain care at centres that treat patients from a wide drainage area, creating highly stressed institutions due to the pressure to meet the demands for care. In the WC, there is an established network of services, but the demand on these services is high and the services are not equally distributed throughout the province, although the centres are more readily accessible via public transport (Shisana et al., 2014; Turton and Naidoo, 2014; SANAC, 2007). Although it was attempted to recruit participants from centres distributed throughout an equal ratio of urban to rural CHC's in this study, it was also found that more KZN participants, although attending CHC's in urban areas, had travelled from rural areas. This also explains the concerns about having to travel far to services.

Obtaining care is dependent on access to information about where the care can be sought. The number of respondents who stated that they did not know where to obtain the required service was almost three times more in KZN than in the WC, most likely because services were not available in their immediate surroundings. Similar findings were reported by Shiboski *et al.* (1999) in a study performed in the USA and emphasises that a lack of access to information is an important barrier to obtaining care (Shiboski *et al.*, 1999).

The results of this study indicated that a very high number of the participants who experienced an oral health problem received care, and the majority of these individuals who obtained care had received service in the public sector, although the latter observation is expected due to the nature of the study sampling. The current health system performs well in rendering care to people living with HIV. This is in contrast to studies of other authors such as Robinson and Croucher (1993), Petrou and Dooley (1996) in the UK, Patton et al. (2003), Shiboski et al. (1999) in the USA and Terry et al. (1994) in New Zealand who reported substantial figures of unmet needs for people living with HIV (Robinson and Croucher, 1993; Terry et al., 1994; Petrou and Dooley, 1996; Shiboski et al., 1999; Patton et al., 2003). However, 17 per cent reported that they did not receive care and it is important to investigate why these individuals are marginalised and remain undetected within the public health system. Such an endeavour underscores the aim of the DOH to provide affordable, accessible, acceptable and equitable health care for all members of society (National Consultative Health Forum, 2006; Cullinan, 2006; National Department of Health, 2007).

Conclusion

People living with HIV still have unmet needs and experience barriers to oral health care. Marginalised groups such as women, the unemployed, low income earners and people in non-metro regions have difficulty accessing oral health care. Discrimination and stigmatisation also pose barriers to accessing oral health care. Specific strategies will need to be incorporated in the broader oral health care strategy to improve the status quo.

The lack of oral health services in non-metropolitan areas, lack of funds for user fees and transportation costs impede the ability of non-metropolitan persons living with HIV from accessing oral health care and this indicates the need to improve and expand oral health services for non-metropolitan people living with HIV. However, most South African families live in poverty and are dependent on the public health system. Often these institutions are overcrowded and not user-friendly.

The study highlighted the barriers to care existing within the current public health system relative to the provision of oral health services for people living with HIV in KZN and WC. The high prevalence of oral health problems in people living with HIV makes it imperative for the DOH to make every attempt to remove barriers to oral health care and thereby secure equitable, affordable and accessible oral health care which is acceptable for people living with HIV and accountable to our greater society.

Recommendations

There is a need to expand the scope of the oral health service and suggestions include the introduction of national/social health insurance, the education of staff within the public health sector to abolish discrimination, the introduction of dental services as part of routine HIV clinic care, advocacy for oral health and an integrated health policy and strategy that enhances the capacity of existing HIV clinic staff to detect and effectively treat the oral manifestation of HIV.

The expansion and wider distribution of the oral health service network is indicated to enhance access to care and it would be prudent to incorporate the training of all health care workers on the early detection and management of oral manifestations of HIV into such a strategy. Suggestions include the incorporation of a home-based care community component within the broad oral health strategy to enhance acceptability, affordability and accessibility of the service.

The provincial Department of Health may consider developing provider accountability for service delivery by educating and enabling staff to monitor processes with regards to HIV/AIDS services to ensure that the staff is competent and equipped to carry out the obligations of their daily routines without violating the rights and dignity of those living with HIV.

The programmes and strategies of the National Department of Health ought to include co-operative arrangements across disciplines, programmes and sectors in order to address the unmet oral health care needs of people living with HIV.

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