HIV screening and testing in the dental setting

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Worldwide, there are approximately 34 million people living with HIV/AIDS. Globally, 2.3 million people are newly infected annually. Within the US alone, the Centers for Disease Control and Prevention (CDC) estimates that 1.14 million persons aged 15 and older are living with HIV/AIDS, of which 287,000 (18.1 per cent) are unaware of their infection.2

Between 40,000 and 50,000 Americans are newly infected annually, a number that has remained relatively stable over the past decade.2 Studies demonstrate that persons substantially reduce sexual behaviours that might transmit HIV once they are aware of their HIV-positive status.3

With the objective of facilitating HIV screening in order to bring more persons into care and to reduce transmissions ultimately, the CDC released its report titled “Revised recommendations for HIV testing of adults, adolescents, and pregnant women in health-care settings”. These 2006 recommendations eliminated two major obstacles to rapid HIV testing: the need for written HIV testing consents separate from general medical consents, and the need for providing prevention counselling as a part of the testing process.4

Most recently, the 2012 US Preventive Services Task Force—a medical panel of experts operating under the US Department of Health and Human Services—upgraded HIV testing for all adolescents and adults aged 15 to 65 to an A rating, which is granted to services with the highest strength of evidence and magnitude of net benefit.4,5 This rating is critical in the context of the Patient Protection and Affordable Care Act, which requires health insurers to cover preventive services that have an A recommendation.6

Despite revised recommendations endorsing routine HIV testing across all health-care settings, the actual implementation of routine HIV screening by health-care providers has been slow. Within the academic and AIDS research communities, the dental setting has been discussed as a promising site for rapid HIV test implementation and as a new modality to address this public health concern. While the dental setting is not specifically mentioned by the CDC, many leaders in the dental profession have postulated that the oral health profession is an underutilized resource setting for the delivery of HIV testing and screening.7

The majority of patients would accept HIV screening as part of their dental examination. (Credit: Photo Lucky Business)

Given the very nature and premise of saliva and oral-fluid sampling, the inclusion of rapid oral HIV diagnostic screening in the standard dental examination is a logical extension of routine oral health care in the US.8,9 In 2004, the US Food and Drug Administration approved OraQuick, a 20-minute HIV diagnostic test utilizing oral fluids with reported sensitivity and specificity values greater than 95 per cent and 99 per cent, respectively.8,9

There have been unexplained clusters of false positive results (i.e., lower specificity) reported by the CDC in several urban centres arising from rapid testing with oral fluids; for this reason, every positive rapid HIV test result is considered a preliminary screening result and must be confirmed by either Western blot or immunofluorescence assay testing.10,11

Still, since the oral-fluid collection process only necessitates a simple swab of the oral mucosa—as opposed to venipuncture—it is regarded as a less-invasive screening method and has therefore demonstrated high rates of acceptability.12,13

While the link between oral-fluid sampling and the dental profession is obvious, it remains inconclusive whether the dental profession is willing to accept HIV screening as an additional responsibility. Noted limitations to offering HIV screening and testing in the dental setting include lack of counselling skills, time constraints, low patient acceptance, lack of training, financial reimbursement, privacy and confidentiality concerns, along with issues related to scope of practice under state dental practice acts.14,15,16

The malignant interpretation of the dentist’s role in HIV screening and testing offers an opportunity to explore the general role of the oral health provider in promoting screening for other systemic diseases. Collaboration between oral health providers and other members of the primary care team is already evident in clinical practice: studies show that dentists are offering medical screening tests and referring patients for definitive diagnosis and treatment of chronic illnesses, such as hypertension, diabetes, and oral cancer.17,18 In fact, this concept is highlighted through public policy by the Department of Human and Health Services’ Healthy People 2020 oral health initiative, which includes the objective (OH-14.3) to “increase the proportion of people who were tested or referred for glycemic control from a dentist or dental hygienist in the past year.”19

Enthusiasm for incorporating medical innovations into dental practices has been documented.20 A 2012 qualitative study of dental professionals in an urban university dental clinic found that the majority viewed rapid oral HIV testing as an area of great promise for the expanding infection.21–23

In order to assess the frequency with which high-risk individuals who had not been tested in other clinical settings visited dental offices, a cross-sectional analysis of the 2005 National Health Interview Survey24 was conducted and published in 2010. According to an array of measures, more than 70 per cent of adults reporting HIV risk and who had never been tested were in regular contact with an oral health provider.11

These findings suggest that the dental office may be an untapped health-care setting for convenient rapid HIV screening/testing for at-risk and/or asymptomatic HIV-infected individuals at a given time.21,22 Successful, widespread implementation of rapid HIV screening will likely rely on an understanding of patient attitudes, perceptions and willingness to be screened.

Contrary to the belief that patients may not accept an HIV test in a dental setting as suggested in previous studies,23 further investigations have revealed that patients are actually accepting of this site but in some instances prefer the dental environment as suggested in previous studies.24 In fact, some individuals prefer the dental environment as suggested in previous studies.25 These findings revealed that among those patients who responded a large majority (77 per cent) reported a willingness to take the HIV test during their dental visit.
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Furthermore, when asked from whom out of a given list of health professionals they would most prefer to receive an HIV test, the majority reported indifference (62 per cent), while the next most common response was “my dentist” (37 per cent).

A 2012 New York University qualitative study of patients’ attitudes on HIV testing in the dental setting revealed a very similar outcome: 74 per cent indicated that they would accept HIV screening as part of their dental examination, with some citing specific benefits such as convenience. This is critical in light of past studies citing the need for an additional clinic appointment, the logistics and anxiety associated with waiting for test results, and a return visit to the clinic as common barriers to testing. Willingness of dentists and patients to accept rapid HIV testing in the dental setting has been demonstrated in these previous studies.

However, additional factors influencing dentists’ practice and actual implementation of rapid HIV testing are their knowledge of HIV/AIDS and awareness of current public policy. A 2012 national survey sponsored by the National Institute of Dental and Craniofacial Research of the National Institutes of Health was conducted and distributed to a representative sample of 2,500 dentists to assess their knowledge, attitudes, beliefs and willingness regarding the possibility of offering routine rapid HIV testing in the dental-care setting.

Dentists’ limited awareness of the innovations in HIV testing technology and current national policies was evident by the very first question, as less than one-third (32.3 per cent) had even heard of rapid HIV testing before completing the survey. Only 13.8 per cent of respondents were aware of the 2006 CDC revised recommendations for HIV testing in health-care settings. Lack of appropriate knowledge about HIV testing was a common barrier (64.5 per cent), and less than half (60.5 per cent) felt that their clinical knowledge of HIV/AIDS was good or excellent.

With the advent of diagnostic technologies that are timely, reliable and minimally complex, the means to screen patients for HIV rapidly is increasingly becoming the norm. However, despite growing numbers of persons living with HIV/AIDS and no appreciable declines in the number of new infections annually, dentists remain reluctant to incorporate rapid HIV screening and testing into their standard examinations and practices. In order to promote and incorporate widespread rapid HIV screening in the dental setting, focused educational policies for oral health-care providers and their patients will need to be implemented.

The oral health workforce shares a common patient goal with the primary medical care community: health promotion and disease prevention. It is also at a crossroad. One path will continue to emphasise and prioritise technical expertise; the other will go beyond traditional boundaries with an emphasis on impacting public health in ways presently unrealised. The path chosen will ultimately define the profession for the immediate future.

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