Infection Prevention and Control Lapses:

Frequently Asked Questions about District Health Unit Investigations

Attention: Physicians, Emergency Departments, Infection Control Practitioners, Nurse Practitioners, Walk-In Clinics/Urgent Care Clinics, Family Health Teams, Dentists, Central LHIN, NSM LHIN, Neighbouring Health Units

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An investigation by the Simcoe-Muskoka District Health Unit (SMDHU) of a dental practice identified what it considered to be lapses in infection prevention and control which justified publicly advising the patients of the practice to be tested for HIV, HBV and HCV. This resulted in a number of health professionals questioning why such actions were taken and how the investigation was conducted. On February 27th the SMDHU responded to these concerns by issuing a fact sheet using a question and answer format. This provided an exclusively public health appreciation of the investigation. To restore balance, a similar format has been prepared from a dental perspective.

Q. In the early 1990s was a Florida dental practice responsible for the transmission of HIV to patients?

A. No. A major 1992 US General Accounting Office investigation ruled out transmissions by contaminated instruments and could find no other substantive reasons to support transmission via dental treatment or by the dentist. A later investigation using details supplied through the Freedom of Information Act, showed that the Centers for Disease Control had ignored pre-existing medical conditions in the affected patients as the likely cause of HIV/AIDS and not dental treatment. This investigation determined that dental treatment was an implausible explanation for supposed transmission and that any public health policies should not be based on that assumption. In the 28 years following the Florida case no dentist or dental practice has been implicated in the transmission of HIV. During the same period, comprehensive worldwide investigations have been unable to definitively link dental instruments to the transmission of HIV, HBV and HCV.

Q. Has the SMDHU evidence that HIV, HBV and HCV have been transmitted by contaminated instruments?

A. No. SMDHU and Public Health Ontario have not responded to enquiries asking for such evidence.

Q. Are HIV, HBV and HCV readily deactivated?

A. Yes. According to the standards adopted by SMDHU, enveloped viruses such as HIV, HBV and HCV are destroyed by low level disinfectants. The involved dental practice was not lax in subjecting instruments to physical cleaning and disinfection. Therefore, prior to being subjected

to further decontaminating procedures HIV, HBV and HCV were already inactive and non-pathogenic.

Q. The inspection identified failures to properly use biological indicators, chemical monitors and sterilization audits. If performed as recommended, do these procedures guarantee sterility?

A. No. Sterility is a state in which there is a complete absence of all viable microorganisms. The listed procedures are simply assurances that specific decontaminating activities have been performed, but they do not guarantee sterility. Therefore, failure to properly perform these "check box" procedures does not mean that instruments have been inadequately decontaminated commensurate with their intended use.

Q. Is the mouth sterile?

A. No. The mouth is always contaminated by microorganisms fortunately of a low level pathogenicity. If this were not so, common social activities such as speaking, eating and kissing would be hazardous. In their common usage dental instruments are exposed to the same microorganisms as are knives, forks, spoons, cups and plates.

Q. Did SMDHU initiate the investigation because a patient of the practice had a transmissible infection?

A. No. The involved practitioner believes that the complaint against his practice was of a personal nature.

Q. Did the SMDHU investigation identify an infection prevention and control lapse in the practice?

A. No. According to provincial guidelines, an infection prevention and control lapse exists only when there are reasonable and probable grounds to justify that deviations from a recommended procedure has or might result in an infectious disease transmission. SMDHU were unaware of a transmissible infection occurring in the practice. SMDHU should have been aware of the absence of epidemiologic studies linking dental instruments to disease transmission. SMDHU would have known that low level disinfectants deactivate the viruses of concern. Although, the practice did not execute some decontaminating procedures as recommended, there were, for the reasons noted, no reasonable and probable grounds to suggest that the specific errors would result in the transmission of HIV, HBV and HCV. Therefore, while the practice did exhibit infractions in suggested procedures, they were of a significance which did not justify a lapse in infection prevention and control.

Q. Prior to notifying the public, did SMDHU quantify the risk of transmission of infectious diseases from a dental practice?

A. No. SMDHU has not responded to enquiries as to what level of risk it accepts as being a significant health hazard. The US government deems that a risk of less than 1 in a million presents no significant health risk. The lack of studies relating dental instruments to disease

transmission has allowed district health units to adopt a cavalier attitude towards the assessment of a risk level. However, investigations of contaminated ENT endoscopes, which are worst case scenarios for dental instruments, have shown that the risk of acquiring HIV is 7 in 10 trillion, of acquiring HBV is 2-4 in 1 billion, and that the risk of acquiring HCV is somewhere between the figures for HIV and HBV. These are the risk ratios for grossly contaminated complex instruments which are difficult to decontaminate. While the level of risk can never be zero, these results demonstrate that the risk levels of dental instruments transmitting HIV, HBV and HCV are so infinitesimally low that biological and chemical indicators plus sterilizer monitoring would fail a cost/benefit analysis.

Q. Did the SMDHU investigative team include a person familiar with dental practice?

A. No. Each dental practice is unique. Instruments and devices used in a specific manner in one practice might be used for entirely different purposes in another. An inspector needs to respect these differences and have a willingness to be flexible in applying recommendations commensurate with the nature of the practice and the treatment being performed.

Q. Was the SMDHU justified in instructing patients of the practice to be tested for HIV, HBV and HCV?

A. No. The infractions in recommended decontamination procedures were not sufficient to warrant such actions. In consideration of all of the above, the SMDHU investigation should have determined that, while some errors in recommended protocols occurred, they were not of a nature to endanger the public. SMDHU should have complimented the practitioner for promptly attending to the perceived deficiencies, and then deemed the inspection to have been satisfactorily performed. By its failure to adopt such actions the SMDHU has caused the dentists, staff and patients of the practice unnecessary worry, anxiety and stress.

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