

**REVIEW OF CURRENT INFECTION CONTROL PROCEDURES**

**P.A. Main**

**COMMUNITY DENTAL HEALTH SERVICES RESEARCH UNIT**

**QUALITY ASSURANCE  
REPORT NO. 5**

**1993**

The Community Dental Health Services Research Unit (CDHSRU) is a joint project of the Faculty of Dentistry, University of Toronto and the Dental Division, North York Public Health Department. It is supported by a grant from the Ontario Ministry of Health (#04170).

The opinions expressed in the report are those of the authors and no official endorsement by the Ontario Ministry of Health is intended or should be inferred.

## Background

In the current climate where everyone is so aware of AIDS, transmission of infection and its prevention have become areas that require continual attention. In a public program such as the North York Public Health Community Dental Programs, there is need to stay abreast of all recommendations in relation to communicable disease control, and to have in place policies and procedures that give current direction for all staff. The changing understanding of the nature of both HIV and HBV make it important to review regularly, and to put in place appropriate changes. Since the Department has a Communicable Diseases Division, input from that division is important.

## Standards and policies

The Infection Control in Institutions Manual for the Public Health Department has a section, "Department policies and procedures" that contains the standards for infection control in institutions, the objective being the reduction of morbidity and mortality associated with communicable diseases in institutional settings. To carry out our mandate in these settings the Department must have appropriate policies and procedures in place for its own staff. The Department through the Communicable Disease Division will ensure that its policies and procedures are based on valid research and current, accepted standards.

The Department has the corporate responsibility to:

- act in accordance with provincial occupational health and safety legislation,
- provide information, instruction and supervision to employees regarding infection control,
- ensure policies and procedures on infection control are in place and observed,
- ensure policies and procedures on infection control are compatible with those recognised by the provincial licensing authority(RCDS),
- ensure that protective equipment and devices are provided as required or recommended in policies and procedures,
- take every precaution reasonable in the circumstances for the protection of employees.

Employees have responsibility for:

- working in compliance with Department policies and procedures for infection control,
- using or wearing equipment, protective devices or clothing provided,
- reporting to the supervisor the lack of, or defect in, any protective equipment or sterilizing agent of which he/she is aware,
- reporting to the supervisor any unanticipated or accidental exposure to a case of a designated communicable disease or contaminated blood,
- being aware of recommendations of the National Advisory Committee on Immunization in regard to personal immunization status.

The Department supports the following definitions.

**Universal Precautions** are measures intended to prevent transmission of blood-borne pathogens. Because of the high incidence of asymptomatic compared to symptomatic carriers of HIV and HBV, universal precautions are applicable to all patients and all blood specimens. They do not eliminate the need for other disease-specific precautions, including transmission of non-blood-borne pathogens.

**Sterilization** involves the use of physical or chemical agents to destroy viable bacteria, viruses and spores. Sporicidal action is the most reliable indication of effectiveness of a sterilizing agent.

**Disinfection** involves elimination of pathogenic and non-pathogenic bacteria and viruses but will not destroy spores.

### Occupational Exposure to Communicable Diseases

#### **Policy**

All staff shall be aware of and adhere to policies, procedures and guidelines regarding occupational exposure to infections.

Universal precautions shall be observed by staff who are in contact with blood or blood-contaminated body fluids during the course of clinical procedures.

All incidents involving unanticipated or accidental exposure of staff to cases of designated communicable diseases or to the infectious agents of these diseases shall be reported to the supervisor as soon as possible. Policies and procedures for Workman's Compensation Board reports shall be followed if relevant.

If protective equipment or other supplies are unavailable or defective the staff member shall inform the supervisor immediately.

The Department supports the City of North York policy on AIDS in the workplace.

Procedures regarding personal protection against agents of communicable disease in the workplace shall be included in staff manuals for clinical programs.

## Procedures

- 1 Procedures for the risk of nosocomial transmission of HIV, HBV and other blood-borne pathogens can be minimized if the staff,
  - a take care to prevent injury when handling needles and other sharp instruments;
  - b do not resheath needles;
  - c do not remove used needles from syringes by hand;
  - d do not bend, break or otherwise manipulate used needles by hand;
  - e dispose of used needles by placing them in an approved puncture resistant containers which should be located at the site of needle use;
  - f immediately and thoroughly wash hands and other skin surfaces that are contaminated with blood.
  
- 2 All accidental puncture wounds must be reported to the supervisor immediately.
  
- 3 In the public health setting:
  - a universal precautions apply to all exposures involving blood or body fluids contaminated with blood;
  - b universal precautions do not apply to faeces, nasal secretions, sputum, breast milk, sweat, tears, urine and vomitus unless they contain visible blood;
  - c universal precautions do not apply to saliva except for staff in the Community Dental Program, where blood contamination is common;
  - d disposable gloves shall be worn by staff potentially exposed to blood;
  - e universal precautions supplement but do not replace established infection control measures such as handwashing.

## Immunization

It is likely that professional staff joining the Department will have had a primary series of immunization against polio, tetanus, diphtheria, measles, mumps and rubella. However immunization against these diseases is recommended for all staff, with booster doses in accordance with the National Advisory Committee on Immunization schedule for adults. Staff members who have never been immunized are advised to consult their family doctors.

At the time of commencing employment with the Department, and periodically thereafter, staff will be provided with general information about immunization and tuberculin testing, if applicable.

Vaccines are available without charge.

Hepatitis B vaccine is provided free of charge by the Department for staff designated as being at high risk of exposure in the course of their work. For part time staff, working elsewhere, the cost is shared. Staff should consult their division director regarding administration procedures.

While it is recommended that health care personnel, particularly those in contact with vulnerable elderly patients, receive influenza vaccine annually, free vaccine is not available.

### **Procedures: Community Dental Division**

- 1 Protective equipment, devices and clothing made available to the staff must be used in all situations requiring same.
  - a **Equipment**

**Handpieces** must be sterilized after each patient and cleaned and lubricated as per the manufacturer's guidelines, prior and post sterilization,

**Instruments** must be sterilized in appropriate quantities or groups in autoclave bags. all instruments shall be stored in these bags sterile until required to be used;

**Autoclaves** shall be used to sterilize all heat resistant instruments and supplies. The process indicator tape shall be used routinely. Regular biological testing will be undertaken for all autoclaves.
  - b **Devices**

**Masks and glasses** shall be worn by all providers. Patients will be appropriately draped, and be provided with protective glasses.

- c **Clothing**  
**Uniforms** will be provided to all clinical dental staff, as follows, three(3) the first year of employment, thereafter two(2) each subsequent year, permitting adequate numbers of uniforms to ensure a clean uniform daily. Uniforms should be laundered in a moderately high temperature wash cycle. The design of the uniform shall comply with recommendations from CDC Atlanta(short sleeves, washable)
  
- 2 **Personal Hygiene**  
The Department will include hand washing instruction in orientation for all staff, especially those in clinical patient contact.
  - a Hand washing should be a routine of 15 second wash between patients, and use of 2 consecutive 15 second washes followed by a high alcohol preparation at the beginning of the day.
  - b Wash hands and other skin surfaces immediately after removing gloves, and after each patient. A microbial soap is provided for this purpose.
  - c Keep finger nails short, do not wear nail polish since it acts as a reservoir for bacteria, and wash thoroughly around and under nails.
  - d Do not wear jewellery when treating patients.
  
- 3 **Staff patient interaction**
  - a **Screening and Surveying by the Hygienist**  
Screening examinations in school or institutional settings do not require gloving, unless the hygienist has a lesion or wound on her hands. However thorough hand washing and a "no touch" technique should be used, ie routine screening: no gloves; ministry survey:gloves to be worn, since essential contact is necessary.
  - b **Dental Procedures**  
Universal precautions apply. All personnel must wear uniform gowns, gloves, glasses and masks.  
Potentially infective patients should be seen at the end of the day.  
All instruments must be autoclaved. All hard surfaces shall be disinfected with a disinfectant(Asepti-phene).
  
- 4 **Disposal of Waste**  
All wastes must be correctly categorised and disposed of appropriately. Sharps must be disposed of into a puncture resistant container.



### Purpose

To ensure that the policies and procedures as described and as included in the Community Dental Division Policy and Procedure Manual meet accepted and current standards of Infection Control.

### Method

A review of the policies and procedures as outlined above to assess whether these meet current CDC and CDA/ODA standards for infection control. In addition the infection control standards of RCDS and the recently published MDA standards were reviewed. The clinic manuals of both the University of Western Ontario and the University of Toronto were also reviewed.

The only recent controversy which may impact on these standards is that of the infected professional. The Royal College of Dental Surgeons of Ontario (R.C.D.S.) released a policy and information document in the April, 1992 edition of Dispatch, which states that "A practitioner should inform the Royal College of Dental Surgeons of Ontario, when a physical or mental disease/condition has affected, or may affect over time, his or her ability to practise safely."

The college does not support mandatory testing nor does it require practitioners to inform their patients. The College's policy requires the infected/affected practitioner to take part in a compulsory program in which a Review Panel is set up to deal specifically and confidentially with the infected/affected practitioner. This Panel will advise the practitioner about altering his/her practice

habits. Ultimately the Panel will assist the infected/affected practitioner in determining when, if ever, it is appropriate in the interest of the public, for that individual to leave dental practice due to his/her disability.

This literature review and its guidelines were reviewed by two panels. An internal (staff) panel, consisting of three dentists and one hygienist, all of whom work in North York's school-based dental program, initially reviewed the critical appraisal of the literature and the recommended guidelines. Concerns and recommendations of the internal panel were discussed with members of the CDHSRU and necessary changes were made to accommodate those providing the dental services. The document was then reviewed by an external panel of experts consisting of a representative of the Royal College of Dental Surgeons (the 1991-93 President), a representative of the Ontario Dental Association (the 1992-93 President), an epidemiologist, an ethicist, a paedodontist, a general practitioner, and a member of the internal panel. Concerns and recommendations of the external panel were discussed with members of the CDHSRU and any recommended changes were made. The literature review and its respective guidelines were then finalized after approval by both the internal and external panels.

### Findings

Current literature supports the infection control policies and procedures in place. As information on infection control changes, the standards, policies and procedures should be reviewed and amended as required.

### Conclusions

The existing standards, policies and procedures meet or exceed current standards of care and comply with literature and current best practice.

### Recommendations

The existing standards for infection control be maintained and that staff compliance with all components be monitored.

Biological monitoring of autoclaves should be a standard procedure.

References available upon request.