

CONTROL OF INFECTION IN OPHTHALMIC PRACTICE

RISK REDUCTION PRINCIPLES

CONSIDERATIONS

• Consider ALL patients and staff a potential infection risk.

- Staff and patients should wash hands with soap before commencing any examination.
- Wash hands with soap before and after every clinical procedure, even if gloves are worn.
- Staff and patients with any broken skin, however small, must wear an occlusive dressing.
- Staff with any known or suspected infection should not have direct patient contact.

PEOPLE

• Wear heavy duty gloves for any cleaning procedures.

- Clear up any spillages of blood or other body fluids immediately. Cover with bleach and leave for 15 minutes, wipe with disposable paper tissue or cloth. Wash the surface with a clean cloth, detergent and water. Burn all cleaning tissue and cloths.
- Burn or bury soiled materials and other waste.
- Soiled linen – soak first, dispose of the water carefully, and boil the linen before (gloved) hand-washing.

ENVIRONMENT

• Used needles and other sharps – dispose of immediately into a puncture-resistant container. Make sure plenty are available in all areas where needles are used.

- **Never** re-sheath a disposable needle! One-third of needle stick injuries are reported to occur during re-sheathing.
- If a needle stick injury occurs – remove the glove and instrument from the surgical field. (See below re: procedure following a needle stick injury).
- Applanation tonometer prisms (**tips only**), diagnostic contact lenses, A-scan probes, occluders and pin-holes should be wiped with disposable paper tissue after each use. Store in sodium hypochlorite 1%, in a non-metallic pot, for 10 minutes, rinse in sterile water and dry before re-use.
- Slit lamp – chin rest, head rim, handgrips and table top should be washed with detergent and water between each patient examination.

EQUIPMENT

SURGICAL INSTRUMENTS & DECONTAMINATION PROCEDURES

- Loaded needle holders – lie point down on trolley and table tops.
- Pass sharp instruments to colleagues with verbal warning and eye contact communication.
- Sharp instruments should not project beyond the surface edge.
- Ensure surgical instruments are thoroughly cleaned before being passed for sterilization or disinfection.
- Choose the appropriate sterilization or disinfection method for the specific instrument.
- Emphasize care of instruments and sterilization and disinfection procedures in training programmes.

• Critically review work practices regularly.

- Include control of infection policies in training programmes.
- Implement and emphasize strict adherence to universal control of infection policies.
- Teach correct hand-washing technique and display a written procedure in all relevant areas (see below).

• Eye drops and ointments – provide individual containers for each patient.

• Eye dressings – following removal, dispose of immediately, by burning.

• Eye shields – if removed from a knowingly infected patient, **never** re-use.

• Pathological specimens – dispose of needles and blades used to obtain corneal and conjunctival material into ‘sharps’ container.

• Wear rubber boots to protect feet in the operating theatre. Feet are particularly at risk of injury from puncture wounds caused by dropped instruments. **Never** allow sandals to be worn in the operating theatre.

• Wear a plastic or rubber apron **under** sterile gowns if large amounts of blood spillage is expected.

• Wear eye protection and face masks in the operating theatre.

• Wear gloves on both hands for all invasive procedures and when in contact with broken skin, mucous membranes, blood and body fluids.

CLINICAL PRACTICE & SAFETY ISSUES

<p>IN THE EVENT OF A NEEDLE STICK INJURY</p> <ul style="list-style-type: none"> • Allow the wound to bleed freely for a few minutes. • Wash with soap and water. • Cover with a sterile dressing. • If known, note the details of the person on whom the needle was used and, if possible, check their HIV status. • Report the incident to the person-in-charge. • The injured person should be examined by a medical practitioner and referred for treatment if HIV transmission is a confirmed risk. 	<p>HAND-WASHING TECHNIQUE</p> <ul style="list-style-type: none"> • Wet hands with clean, preferably running, water. • Apply soap or cleanser. • Rub palm to palm. • Rub back of left hand over right palm. • Rub back of right hand over left palm. • Rub palm to palm with fingers interlaced. • Rub backs of fingers on opposing palms with fingers interlocked. • Rub around right thumb with left palm. • Rub around left thumb with right palm. • Rub around fingers of right hand with palm of left hand. • Rub around fingers of left hand with palm of right hand. • Rinse off soap with clean, preferably running water and dry well.
<p>REMEMBER!</p> <p>Control of infection principles must be applied in each and every situation and not only when infection hosts are known or suspected.</p> <p>The risk of HIV transmission after a single needle stick injury or broken skin or mucous membrane contact with HIV infected blood, is less than 0.5%. HIV remains the <u>least</u> likely occupational infection to be transmitted but still causes the most anxiety. Health care workers may become complacent about other serious and more likely risks.</p> <p>The prion diseases, e.g., Creutzfeldt Jakob Disease (CJD), are also giving genuine cause for concern. CJD is resistant to most sterilization methods. The only guaranteed measures to prevent CJD cross-infection is the use of sterile, single-use disposable instruments.</p> <p>REFERENCES / FURTHER READING</p> <ul style="list-style-type: none"> • <i>Ocular Infection: Investigation and Treatment in Practice</i> – D Seal, A Bron & J Hay. Martin Dunitz, London • <i>Ophthalmic Operating Theatre Practice – A Manual for Developing Countries</i>, I Cox & S Stevens. ICEH 2002 • <i>Journal of Community Eye Health</i> – S Stevens, I Cox; Vol.9,36-42 1996 – R Seevoodhary, S Stevens; Vol.12, 25-28 1999 – I Cox, S Stevens; Vol. 13, 40-41, 2000 • <i>Occupational Medicine: State of the Art Reviews</i> Vol. 4, Special Issue 1989, Philadelphia, Hanley & Belfus, Inc. • <i>Risks of HIV infection to Patients and Health Care Personnel</i> – P H Gerst, J J Fildes, P G Rosario, J B Schorr; <i>Critical Care Medicine</i> Vol.18, No.12, 1440-48, 1990 • <i>Occupational HIV Infection and Health Care Workers in the Tropics</i> – H Veecken, J Verbeek, H Houtweling, F Cobalens; <i>Tropical Doctor</i> Vol.21, 28-31, 1991 • <i>Creutzfeldt Jakob Disease and the Eye</i> - B Weller & J Ironside; <i>Ophthalmic Nursing Journal</i> Vol.6, Issue 1, 2002 • <i>MRSA: An Infection Control Overview</i> – D Rayner; <i>Nursing Standard</i> Vol.17, No.4, 47-54, 2003 • <i>The Epidemiology and Control of Hepatitis C Infection</i> – U Gungabissoon; <i>Nursing Times</i> Vol.99, No.31,24-25, 2003 • <i>Best Infection Control Practices for Intradermal, Subcutaneous and Intramuscular Needle Infections</i> – Y Huttin et al; <i>Bulletin of the WHO</i> Vol.81, No.7, 491-500, 2003 • <i>Handwashing: The Fundamental Infection Control Principle</i> – R Horton; <i>British Journal of Nursing</i> Vol.4, No.16, 926-933, 1995 • <i>Standard Principles for Preventing Hospital Acquired Infections</i> – H Loveday; <i>Nursing Times</i> Vol.97, No.13, 36-39, 2001 <p>Sue Stevens, Ophthalmic Resource Coordinator/ Nurse Advisor, International Resource Centre, International Centre for Eye Health London School of Hygiene & Tropical Medicine, Keppel Street, London WC1E 7HT</p>	