

Guidance on Communicable Disease and Infection Control in Schools and Nurseries

Kent Health Protection Unit

January 2008



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Section 1

Introduction

1. The purpose of this document is to provide advice on communicable diseases and control of infection for all staff working in schools, nurseries, playgroups and other childcare settings in Kent and Medway. It updates and replaces the previous guidance issued in March 2004.
2. Where an unusually high incidence of illness is observed, either within a particular class, school or other childcare establishment, Kent Health Protection Unit (KHPU) should be contacted for advice on 01622 713059. (See Appendix 1).
3. Success in dealing with outbreaks of infectious disease depends upon early recognition and prompt action.
4. A list of children attending/boarding and adults working at the school or other childcare settings should be maintained and regularly updated. The list should record names, addresses, telephone numbers and general practitioners.
5. The vaccination status of pupils and staff should also be recorded.
6. The most important aspect of the prevention and control of infection and communicable diseases is basic hygiene, especially hand washing.
7. Communication between key personnel can ensure that neither children nor staff are exposed to unnecessary risk of infection and can help allay anxieties. These personnel include:
 - Head Teacher or Nursery Manager
 - School Nurse or Health Visitor
 - Consultant in Communicable Disease Control
 - Health Protection Specialist Nurse
 - School Doctor
 - General Practitioner
 - Consultant Microbiologist
 - Environmental Health Officer

Statutory Responsibilities

8. The statutory responsibility for communicable disease control and infections rests with the Consultant in Communicable Disease Control (CCDC) as the Proper Officer of the Local Authority. A list of diseases and exclusion periods may be found in Appendix 2.
9. Dr M Chandrakumar is the Director and CCDC for the Kent Health Protection Unit. He is also Proper Officer for the City Council of Canterbury, the District Councils of Shepway, Dover, Thanet, and Sevenoaks; the Borough Councils of Ashford, Swale, Dartford, Maidstone, Tunbridge Wells, Tonbridge & Malling and Gravesham; and Medway Council (Unitary Authority). (For local authority contact details see Appendix 3).

10. All notifiable communicable diseases (see Appendix 4) should be reported as soon as possible, by the doctor diagnosing the case, to the Director, Kent Health Protection Unit:

Dr M Chandrakumar
Director
Kent Health Protection Unit
Preston Hall
Kent
ME20 7NJ

Tel: 01622 713059
Fax: 01622 791644

11. Other members of the Kent Health Protection Unit are:

- Dr Jeremy Lissamore
Consultant in Communicable Disease Control
- Dr James Sedgwick
Consultant in Communicable Disease Control
- Dr Sharji Geevarghese
Associate Specialist (Port Health)
- Mrs Rita Simmons
Senior Specialist Nurse/ Manager
- Mrs Katie Allen
Health Protection Specialist Nurse
- Mrs Gillian Ashford
Health Protection Specialist Nurse
- Mrs Sheena Fenn
Health Protection Specialist Nurse
- Mrs Sarah Fielder
Health Protection Specialist Nurse
- Mrs Anita Turley
Health Protection Specialist Nurse
- Mrs Catherine Southwood
Health Protection Nurse (Port Health)

12. Any of the above team members can be contacted on **01622 713059** during office hours.

Legal responsibilities

13. All employers have a legal obligation under the Health and Safety at Work Act etc 1974¹ to ensure that all their employees are appropriately trained and proficient in the procedures for working safely. They also have a responsibility to protect voluntary workers or assistants.
14. Employers are required by the Control of Substances Hazardous to Health (COSHH) Regulations 2002 to review every procedure carried out

by their employees which involved contact with a substance potentially hazardous to health including pathogenic micro-organisms.

15. Employers and their employees are also responsible in law to ensure that any person on their premises, are not placed at any avoidable risk as far as is reasonably practicable. This includes, for example, the provision of appropriate protective clothing such as disposable gloves.
16. Employers should ensure that all new members of staff receive adequate supervised induction and practical training in health and safety including infection control procedures. Training programmes should be organised to meet the needs of different staff groups.

ORGANISATION AND MANAGEMENT

Occupational Health

17. In the context of infection control, each organisation should have appropriate standards for the protection of staff through immunisation, training and compliance with health and safety legislation¹. Such standards should apply to all locum staff, volunteers, and to those on short-term contracts.
18. Each new member of staff should complete a pre-employment health questionnaire and give information about previous illness and immunisation against relevant infections (or declining the offer of immunisation).
19. There must be written procedures in place which details action to be taken should a member of staff be injured by a needle or other sharp object potentially contaminated by blood or body fluids.
20. Each organisation should have policies in place to ensure that children are protected from staff with communicable diseases.
21. Such policies should clearly set out the responsibilities of staff members to report episodes of illness to their headteacher or manager. This is particularly important after travel abroad.
22. When necessary, staff may need to be excluded from work until they have recovered or until the results of tests are available. Organisations vary in terms of the vulnerability of children in their care to infection and policies may differ between organisations. Advice should be sought from staff in the Kent Health Protection Unit.

Reporting

23. The following should also be reported promptly by telephone to the, Kent Health Protection Unit.
 - An increased number of absences for the time of year, due to illness of children or staff, whether or not the cause is known.
 - Reports of vomiting and/or diarrhoea occurring in children or staff.
 - Outbreaks of common childhood illnesses. See Section 2 point 83 for a definition of an outbreak.

- The Kent County Council or Medway Unitary Authority, and Ofsted, should be informed of any serious disease or outbreak by the head teacher or nursery manager.

Exclusion from School/Nursery

24. Communicable diseases are common among school and nursery children and the school environment often presents an ideal situation for diseases to spread. Some diseases may present a risk to others, such as pregnant women, and children may need to be excluded. However, many diseases are so trivial that excluding a child from education cannot be justified.
25. There are some general rules about the exclusion of children from school and other childcare settings.
26. Details of a definition of an outbreak may be found in Section 2 point 83.
27. Children who are unwell should be excluded, even if they are not infectious.
28. Children with diarrhoea or vomiting should be excluded unless the diarrhoea is known to be due to a non-infectious cause (e.g. coeliac disease). This rule also applies to staff (including catering staff).
29. Children recovering from diarrhoea or vomiting may return to school when they have been symptom free for **48 hours**.
30. Some children may have illnesses or medical conditions that make them particularly vulnerable to infections, which would be considered minor in most children. Such children include those being treated for cancer, leukaemia, children on high doses of oral steroids and children with conditions, which may seriously reduce their immunity and ability to combat infection. The parents of these children should be warned if there are cases of infectious diseases in the school especially cases of chickenpox, shingles or measles.
31. Children who have been prescribed antibiotics can usually return to school or nursery before they have completed the course, providing they are well. Some communicable diseases require a specific exclusion period. Please refer to Appendix 2 for these exclusion periods.

Section 2

GENERAL HYGIENE PRACTICES

32. Children or members of staff may unknowingly attend school whilst they have an infectious illness or are incubating an infection. In some cases the individual may not even appear to be unwell. For this reason it is essential that the following good hygiene practices are adopted at all times and not just when one or more cases of infectious illness are recognised. This is known as adopting universal or standard infection control precautions.

Universal or Standard Precautions

33. The principle of Universal Infection Control Precautions represents a standard of good hygiene that should be applied as normal practice. These measures are the most important means of protecting children and staff from infection³.
34. Universal precautions include:
- Good hand washing and care of hands.
 - Use of protective clothing (non powdered latex or nitrile gloves and plastic aprons)⁴ when in contact with blood, body fluids or broken skin. Goggles/face protection should be available if a splash to the face is anticipated.
 - Staff should cover existing breaks, cuts or skin lesions with a waterproof dressing whilst at work.
 - Personal hygiene items such as toothbrushes must be kept separate for each child and never shared.
 - Spillages of blood or body fluids should be cleared up promptly and correctly.
 - Safe procedures for the disposal of contaminated waste must be followed.
 - Particular care in handling and disposal of sharps (eg, epi pens) must be exercised.

Hand Washing

35. Hand washing is the single most effective way to control and prevent the spread of infection within the school and nursery environment⁵. Good hand washing practices for staff and children, should be encouraged at all times, but especially:
- After visiting the toilet, changing nappies or assisting children in the toilet
 - After any cleaning procedure
 - After handling soiled clothes
 - After dealing with waste

- Before preparing, serving or eating food
 - After removing gloves
 - After handling, petting or caring for animals
 - When visibly soiled or dirty (eg, after playing in garden)
36. The correct procedure for hand washing is⁵:
- Hands should be washed under warm running water. The use of bowls of water for hand washing should be avoided.
 - Wet the hands before applying soap. Liquid soap in wall-mounted dispenser, or pump operated container should be used. Avoid using bar soap.
 - Rub hands vigorously, ensuring all surfaces of the hands are cleansed. Pay particular attention to the fingertips, between the fingers, thumbs and wrists and the front and back of the palms. Rinse off soap thoroughly.
 - Hands should be dried thoroughly, preferably using disposable paper hand towels from wall mounted dispensers. Communal domestic towels or roller towels should not be used as these increase the risk of cross infection. Where children have their own individual towels, clean towels should be provided daily.
 - The importance of good routine hand washing should be stressed with all children. Young children in nurseries, infant schools or in the care of a childminder, should be supervised and assisted with hand washing after using toilets/potties and before meals or snacks
37. Please see Appendix 5 for pictorial details of good hand washing technique.
38. Staff should care for their hands to prevent dry, cracked skin developing. Such conditions are often caused by a failure to rinse and dry the hands properly. Regular use of hand cream is recommended to help protect the skin.
39. Hand cream should be presented in tubes or a pump dispenser. The use of communal pots or containers should be avoided as bacteria may be introduced and may grow within the pot as many hands are dipped into them. Such communal posts or tubs could be a source of cross infection.
40. Nails must be kept short and clean.

Protective Clothing

Gloves

41. Protective clothing is required when dealing with incidents where contact with body fluid is anticipated.
42. Gloves provide a barrier and help protect staff and children from cross infection. However they are not an alternative to good hand washing practices.

43. Gloves should be single use disposable, non-powdered latex or nitrile. Clear polythene or plastic gloves are highly permeable to bacteria and often split during use⁴. Therefore they should not be used. Hands must be washed after gloves are removed.
44. Gloves must be worn for direct contact with blood, faeces, urine and other body fluids. Gloves must also be worn when changing nappies, dressing wounds or when touching broken areas of skin^{1,4}.

Aprons

45. Disposable plastic aprons provide an effective barrier and should be used as follows
 - When changing nappies
 - Whenever there is likely to be a splash
 - When cleaning contaminated equipment
 - When handling used linen

Masks and overshoes

46. The wearing of masks and overshoes is not necessary in the school or nursery setting.

Broken Skin

47. Cuts and abrasions on hands must be covered with a waterproof plaster whilst at work to provide protection for themselves and others.

Personal Hygiene Items

48. It is important that personal hygiene items that can become contaminated with body fluids should not be shared i.e. towels, face flannels, toothbrushes. Wherever possible single use disposable items such as wet wipes should be used.

Nappy Changing/Changing of Incontinence Pads

49. Many schools now admit children with special needs and there may be occasions when incontinence pads/nappies have to be changed.
50. It is important that universal precautions are applied when in contact with blood and body fluids, including urine and faeces. All changing mats must be cleaned with hot water and detergent and dried thoroughly between use.

Waste Management

51. The Health and Safety at Work Act 1974¹ and the Control of Substances Hazardous to Health (COSHH) Regulations 2002² lay down a Duty of Care for employers this includes a requirement to undertake a thorough risk assessment to ensure adequate arrangements are made for the safe disposal of waste.

52. On 16th July 2005 the Hazardous Waste (England and Wales) Regulations 2005 and List of waste (England) Regulations 2005 came into force replacing the Special Waste Regulations 1996. The HTM 07-01 Safe management of healthcare waste was published in January 2007.⁶
53. Waste producers are required to keep a written description of the waste, which must accompany the waste as it is moved from the point of production to the final point of disposal.
54. These regulations are enforced by the Environment Agency. There are legal penalties and fines for non adherence.
55. Waste is classified as hazardous and non hazardous waste⁶.
56. Hazardous waste is essentially waste, which may pose a hazard to handlers. This includes waste, which may pose a known or potential risk of infection. Such waste must be placed in an orange bag for collection⁶.
57. Waste containing non infectious bodily fluids, such as urine or nappies, is capable of causing offence and therefore is required to be appropriately packaged to alert the waste management chain of the contents. Such waste must be classified as offensive/hygienic waste and be placed in a yellow/black bag for disposal as non hazardous waste. Only quantities of less than 7kg in any waste collection interval may be placed in the black bag waste stream⁶. Schools and nurseries should contact their local council for advice.

General Cleaning and Disinfection

58. Crockery and cutlery should be washed in hot water with washing up liquid, or in a dishwasher at 60°C setting. Air-drying is recommended⁷.
59. All toilets should have adequate stocks of toilet tissue, liquid soap and disposable paper hand towels to ensure that pupils and staff are able to practice good hygiene.
60. Normal cleaning methods using a detergent solution and hot water is adequate for most surfaces, furniture and fixtures. It is important that a documented regular cleaning programme is agreed and followed by all staff. Cleaning should be undertaken in a planned, methodical manner and the cleaning schedule should include all equipment, fixtures and fittings. It should specify the method and frequency of cleaning and the equipment to be used and how it is to be decontaminated.
61. Toilet seats, flush handles, wash hand basin taps and toilet door handles should be cleaned, regularly. The use of disposable cloths is recommended⁷. Standard school/nursery cleaning arrangements should include these practices.
62. If a child with diarrhoea has used a toilet, all surfaces in the toilet that may have been touched by the child should, ideally, be disinfected with a diluted sodium hypochlorite solution (bleach) then cleaned with hot water or detergent⁷. (See Appendix 6 for dilution chart).
63. Any area that has been contaminated with blood or body fluids should be disinfected with the correct dilution of sodium hypochlorite solution

(bleach) then cleaned with hot water and detergent. (See Appendix 6).

64. Ideally schools and nurseries should operate a colour coding system for cleaning materials. All cleaning materials and equipment such as cloths, mops and buckets should be colour coded⁸. (See appendix 9).

Laundry

65. The risk of contracting an infection from handling used linen is low³. However clothing or linen contaminated with blood or body fluids must be handled with care and placed in a laundry bag for storage and transportation for laundry. Ideally linen, such as sheets or blankets, should be sent to a commercial laundry for decontamination. Single use disposable items should be used as much as possible.

Female Hygiene

66. Appropriate bins should be provided for female staff and students to dispose of sanitary pads. Girls should be given privacy and adequate facilities to wash their hands after changing sanitary protection.

Sand/Water/Playdough

67. Children are often involved in play activities involving sand, playdough, baking and water play. Such equipment may be an ideal vehicle to spread infection. Good standards of hygiene is essential during such activities, children should always wash their hands prior to and following these activities.
68. During an outbreak of diarrhoea and vomiting, these activities should cease until the outbreak has been over for 48 hours. Sand and playdough should be changed if contaminated with blood or body fluids.
69. It is advisable to have a system in place to ensure that water play tanks are drained after use. The tanks should be washed with a detergent solution and dried. Sand and playdough should be discarded and replenished regularly or immediately if contaminated.

Chemical Disinfections

70. The routine use of chemical disinfectant agents is not recommended for floors, furniture or fixtures as they can be damaging to the surface. Disinfectants are hazardous substances and employers are legally required to carry out a risk assessment on their use in order to comply with the Control of Substances Hazardous to Health (COSHH) Regulations 1992. The manufacturer's guidance on the product label must always be followed. The school or nursery environment should be kept clean, dry and well ventilated. (See Appendix 5 for strengths of sodium hypochlorite solution.)
71. All cleaning chemicals should be stored in their original containers, which should be carefully labelled. They must be stored in a locked cupboard and used only in accordance with the manufacturers' instructions. The COSHH Regulations should be adhered to and data sheets must be available². (See Appendix 7 for A to Z of cleaning advice.)

Clearing up Spillages of Blood and other Body Fluids

72. Many carriers of blood borne infections will be unaware of their condition and so the only sensible approach is to take adequate precautions in all cases to minimise cross infection risks.
73. The following precautions should be taken by staff when dealing with spillage of blood and body fluids,
 - To avoid any possibility of infection being spread to others (including HIV, hepatitis B and C). Spillages of vomit, urine and excreta should be cleaned away immediately using a detergent and hot water solution. Disposable paper towels or cloths should be used.
 - Accidents involving blood or the spillage of blood should be cleared up as quickly as possible.
 - People should be kept away from the spillage until it has been effectively dealt with.
 - The person carrying out the cleaning should ensure that all cuts or abrasions on their skin are fully covered with waterproof plasters. They should wear either disposable latex/nitrile gloves or waterproof household rubber gloves.
 - Small spills or splashes on the floor or other hard surfaces should be cleaned with detergent and hot water.
 - Large blood spills should be covered with absorbent paper and then soaked in a solution of sodium hypochlorite (bleach) (1 in 10 dilution) or sodium dichloroisocrylate (NADCC) granules solution for 2-3 minutes. Alternately, small commercial spill kits are available which contain the necessary equipment for cleaning up and disinfecting spillages of blood.
 - The paper and spillage area should then be cleared and the area washed with detergent and water and wiped dry.
 - The spillage, paper, disposable gloves and any other materials used should be disposed of by placing in a plastic bag which should be sealed and placed in the offensive/hygienic waste stream.

Bites, Mucosal Splashes and Sharps and Needlestick Injuries

Sharps

74. All sharps, including syringes, needles, epi pens and other sharp objects contaminated with blood or other body fluids must be disposed of into a sharps container which conforms to British Standard 7320 and/or UN3291 immediately after use⁶.
75. The sharps box must be correctly colour coded to accommodate the type of sharps disposed.
76. To avoid the risks associated from overfilling, sharps containers need to be removed when three-quarters full, sealed and labelled with point of source.

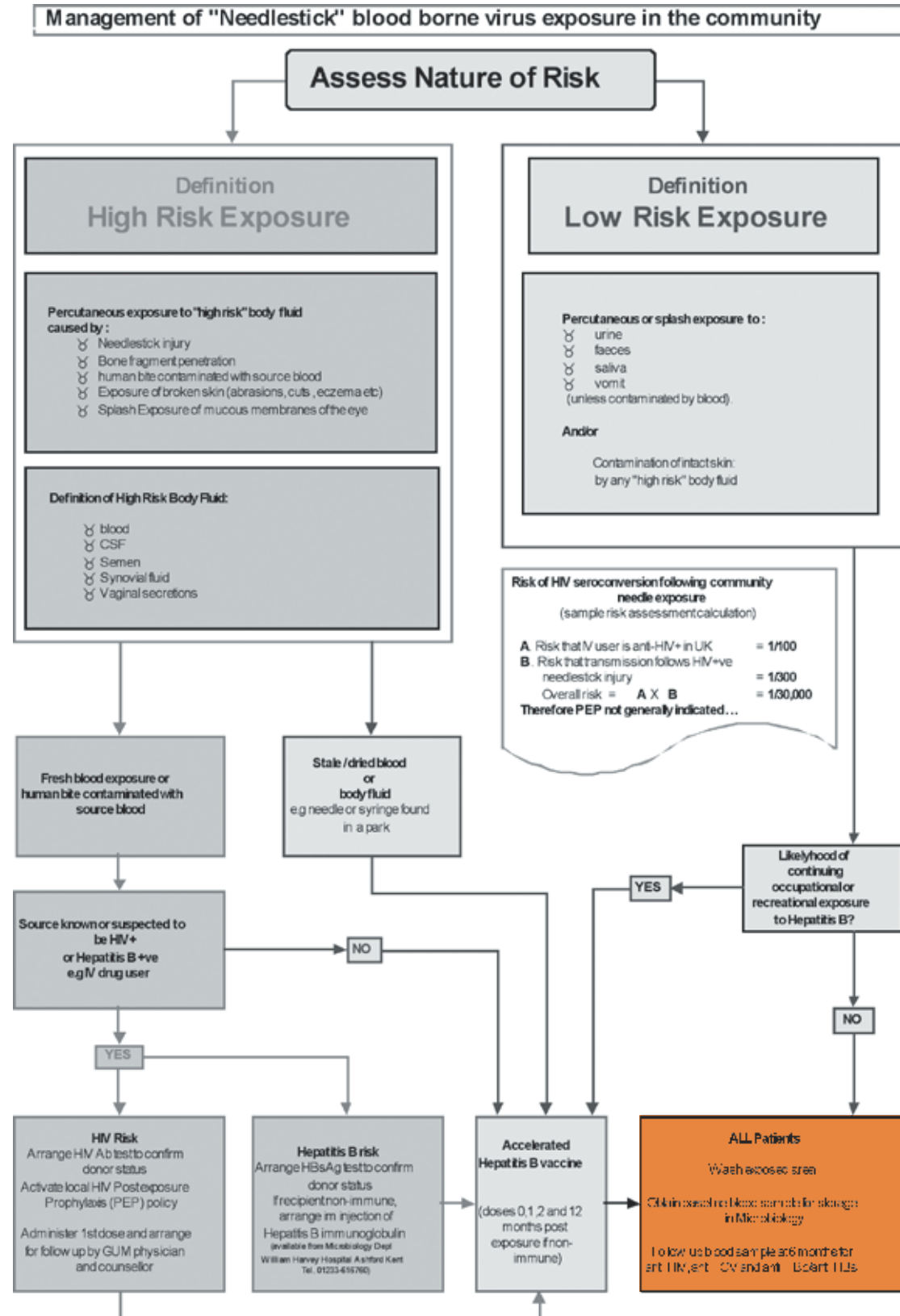
77. Sharps boxes in use should be kept out of reach of children and visitors. Ideally they should be stored at shoulder height. They must not be stored on the floor. Wall or trolley brackets are available free of charge from the manufacturers.
78. Sharps should be disposed of at the point of use, directly into an approved container.
79. Needles should never be re-sheathed, bent or broken.

Action to be Taken in the Event of Bites, Needlestick Injuries or splashes of Blood/Body Fluids

80. All bites, needlestick injuries or splashes with blood or body fluids must be taken seriously.

Immediate action

- Encourage bleeding by gentle squeezing.
 - Wash the site of the injury thoroughly with soap and water.
 - Cover with a waterproof plaster.
 - For mucous membranes, irrigate the contaminated area thoroughly with 0.9% saline or water.
 - Inform the person in charge immediately, who should determine the following:
 - Is the source of the sharp (needle) or splash known?
 - If known, is the person (donor) known to be a carrier of a blood borne virus?
 - Is the donor known to be in a high-risk group (e.g. IV drug abuser, Hepatitis B carrier, HIV positive)
81. The injured person should then seek advice and possible vaccination from the local Accident and Emergency department where a risk assessment will be undertaken.
 82. The incident should be recorded on the appropriate incident notification form.
 83. For further information on bites, needlestick injuries or splashes to mucosa, please refer to the Kent Health Protection Unit policy entitled: Guidelines for Needlestick Injury, January 2004. Copies of this policy can be obtained by calling the Unit on 01622 713059



First Aid Involving Body Fluids

84. The risk of infection from undertaking first aid care is extremely small and can be eliminated by taking proper precautions, there should be no hesitation in taking immediate first aid action even if there is a considerable loss of blood or the person requires resuscitation.
85. Before allowing blood or other body fluids to come into contact with the skin, care should be taken to ensure that any open cuts or abrasions are covered with a waterproof plaster. Disposable latex or nitrile gloves are recommended to be worn in all cases.
86. After use, the gloves and materials used to clean wounds and mop up spillages should be disposed of by placing them in a plastic bag, which should be sealed and placed in the offensive/hygienic waste stream.
87. After giving first aid involving body fluids, the first aider's hands should always be washed.
88. In an emergency, resuscitation should not be withheld. Delays in commencing resuscitation could lead to death or irreversible damage through lack of oxygen. It should be stressed that there are no known instances where HIV or hepatitis B infection have been spread in this way. Special airways to avoid the need for mouth to mouth resuscitation should only be used by persons appropriately trained.
89. At sports events, disposable tissues or wipes should be used to clean wounds. If a sponge is used to mop up blood it must, never be returned to the bucket of water or used on another child. Each sponge must be discarded into a plastic bag after use and placed in the offensive/hygienic waste stream.
90. First aid boxes should be kept in a readily accessible position and should be regularly checked and restocked.

Reporting an Outbreak or Suspected Outbreak of Infection

91. An outbreak is defined as having two or more children or staff with infections, caused by the same bacteria or virus at the same time. However a single case of a rare or serious disease such as E. coli 0157 may also necessitate a similar response to an outbreak.
92. Children at a nursery or school could be particularly susceptible to food borne infections and may suffer more serious consequences than older members of the community.
93. Outbreaks of viral illness including diarrhoea and childhood diseases can spread rapidly through school and nursery settings where children may not wash their hands correctly.
94. Head teachers and nursery managers should report any suspected or confirmed outbreaks to the Kent Health Protection Unit (01622 713059) as soon as possible. Ofsted should also be informed (020 7421 6800).
95. The Kent Health Protection Unit will advise on exclusion and control measures and provide schools and nurseries with information needed in such situations.

Food Hygiene

96. Good hygiene in the preparation of food, combined with effective cleaning of food preparation areas, is very important in ensuring the safe delivery of food to children.
97. Children participating in baking or home economics must follow the same guidance as food handlers.
98. Policies and procedures in relation to the preparation and handling of food should be in place and all staff should be familiar with and adhere to good standards.
99. Kitchen sinks should not be used for any other purpose but for cleaning of kitchen equipment.
100. A separate hand wash basin is required. Bar soap and cloth towels may harbour micro-organisms and should be avoided. Liquid soap and disposable paper towels in wall mounted dispensers must be used.
101. Food handlers should be aware of their statutory obligations under the Food Safety (General Food Hygiene) Regulations 20049.
102. Staff must not handle food if suffering from the following:
 - Skin infections.
 - Infected wounds, or sores.
 - Diarrhoea and/or vomiting.

Section 3

SIGNS AND SYMPTOMS OF COMMON COMMUNICABLE DISEASES

103. This section details the signs and symptoms of common communicable diseases. See Appendix 2 for any exclusion criteria for schools and nurseries.

Chickenpox and Shingles

104. Chickenpox and shingles are caused by the same virus (varicella-zoster virus). Chickenpox may start with a headache and a temperature, but the rash itself may be the first sign of illness. The rash appears as small red “pimples”, usually starting on the back, chest and stomach and spreading to the face, scalp, arms and elsewhere. Within a few hours the “pimples” become blisters, which begin to dry and crust within about 2 hours. The rash appears in a succession of crops over 3-5 days.
105. Chickenpox is spread from person to person by contact with the blisters or by airborne droplets. It is highly infectious for one or two days before the rash appears and for not more than five days after the appearance of the first spots. The incubation period is 14 to 21 days.
106. Shingles is a reactivation of the virus, which lies dormant in the nerve endings and is less infectious than chickenpox.
107. Although chickenpox is usually a mild disease in healthy children, it can be extremely serious, or even fatal, in those children whose immune systems are suppressed, eg, children suffering from leukaemia or those who have had a transplant. It is therefore important to advise the parents of these children if there is a case of chickenpox or shingles within the school or nursery.
108. Pregnant women who are not sure whether they have had chickenpox should seek medical advice as soon as possible after contact with a confirmed case to check antibody status.
109. Those who have had chickenpox and come into contact with a person with shingles are not at risk of acquiring the disease as they will be immune.
110. Staff or children with chickenpox must stay away from the nursery or school for at least five days from the onset of the rash. There is no need to stay away until the lesions are healed.

Shingles

111. The virus that causes chickenpox and shingles lies dormant in nerve endings. Shingles is a reactivation of the disease from the nerve endings. A person does not ‘catch’ shingles.
112. People who have not had chickenpox, but have come into direct contact with the fluid from the vesicles of someone with shingles, may be at increased risk of acquiring chickenpox.
113. Children should only be excluded if the Shingles lesions are weeping and can not be covered. An information leaflet is available from Kent Health Protection Unit.

Conjunctivitis

114. This is an infection of the outer structures of the eye and the inside of the eyelid, which may be caused by several different organisms, including bacteria and viruses. The first signs of infection are excessive watering, redness of the white of the eye and irritation, followed by swelling and possible discharge of pus.
115. Although it often gets better by itself, eye drops or ointment may be used. The infection can be spread between people by direct contact and in circumstances where an outbreak is reported or spread within the school is evident, it may be necessary to recommend exclusion of affected children until they recover. Children under the age of five are most often affected. Outbreaks should be reported to the Kent Health Protection Unit.

Fifth Disease (Slapped Cheek Syndrome, Parvovirus)

116. This is a mild viral disease due to parvovirus B19, spread by respiratory droplets. It initially appears as a flu-like illness followed by a red rash on the face giving a “slapped cheek” appearance. The rash may also involve the legs and torso. Some people (especially adults) may have mild joint pains, which can be severe. Individuals with this infection are infectious during the week prior to the onset of the rash.
117. By the time the “slapped cheek” rash appears most patients are no longer infectious and excluding children with the rash serves no useful purpose.
118. Pregnant women should try to avoid contact with affected children. They must seek medical advice from their GP or midwife and an antibody test may be performed if they are in contact. If a case of fifth disease is diagnosed, the Kent Health Protection Unit should be contacted for advice. (See Appendix 1).

German Measles (Rubella)

119. Rubella is now a very rare disease in school age children. The symptoms of are mild. The rash is usually the first sign, although there may be mild catarrh, headache or vomiting. The rash takes the form of small pink spots all over the body. There may be a slight fever or some tenderness in the neck, armpits or groin and there may be joint pains. The rash lasts for only one or two days and the spots remain distinct, unlike measles.
120. Female staff or mothers who are pregnant when a case occurs should consult their General Practitioner or antenatal clinic (regardless of their immune status) so that an antibody test can be performed if necessary.
121. Rubella spreads by contact with droplets from the respiratory system of infected individuals. The incubation period is 14-23 days. The child is infectious for one week before the rash appears until one week after its onset.

122. Children or staff with rubella should be excluded for five days from when the rash first appears. If a case of rubella is suspected or diagnosed, contact Kent Health Protection Unit for further advice.

Glandular Fever

123. Although it can occur in young children, this viral disease is much more common in adolescents. It usually takes the form of a sore throat with swollen glands in the neck.
124. Full recovery may take some weeks, during which time the person may feel very tired and unwell. There is no treatment. Glandular fever is less infectious than other childhood infections, therefore the child should only be kept away if feeling unwell.

Hand, Foot and Mouth Disease

125. This is a mild disease caused by the coxsackie virus. A fever is common, with ulcers in the mouth and a red, raised rash on the hands and feet, which then develops into small blisters.
126. The incubation period is three to seven days.
127. This disease is spread by respiratory droplets or by the faecal-oral route.
128. Articles, such as tissues, contaminated with discharge from the nose and throat may be infectious. As this particular virus can also live in the bowel, it is important that cases and carers exercise good personal hygiene, especially hand washing.
129. As this is a mild disease and is most infectious before the blisters appear, it is not necessary for children to be excluded from school unless they are unwell.
130. If an outbreak is identified please contact the Kent Health Protection Unit for advice.
131. N.B. This illness is not the same as Foot and Mouth disease in animals.

Hepatitis A (Yellow Jaundice, Infectious Hepatitis)

132. Hepatitis A is an acute infection affecting the liver. It is spread from person to person by the faecal-oral route. It is often a mild illness, particularly in children.
133. Contaminated food and water may be a source of infection. The risk of infection can be reduced by careful attention to personal hygiene and hand washing.
134. The incubation period is 15 to 50 days (average 28). Individuals become non-infectious one week after onset of symptoms.
135. The symptoms vary and can range from no symptoms to nausea, vomiting and jaundice. Asymptomatic disease is common in children, with the severity increasing with age.
136. Good personal hygiene, especially with hand washing, is essential to prevent the spread of infection. Young children may need to be reminded and be assisted with hand hygiene.

137. Hepatitis A vaccine is available and may be recommended for household contacts of a case. Some people in high risk groups or occupations and travellers to areas of high incidence may also require vaccination. Hepatitis A vaccine is not routinely recommended for school/nursery workers.
138. An affected individual may need to be excluded from school or nursery. The Kent Health Protection Unit must be contacted for advice. Suspected or confirmed cases should be reported promptly to the Kent Health Protection Unit.

MRSA

139. This guidance is based on two reports produced by a combined Working Party of the Hospital Infection Society and the British Society for Antimicrobial Chemotherapy
140. MRSA stands for methicillin resistant Staphylococcus aureus. Staphylococcus aureus is a type of bacteria (germ) which can be found in healthy people. It can be carried harmlessly in the nose or on the skin of 30-40% of the healthy population. It is the commonest cause of minor skin infections.
141. MRSA may be spread by direct contact. Hand washing and the use of standard universal precautions will prevent spread.
142. MRSA poses no particular risk in community settings including schools and boarding schools. Fit healthy people going about their daily lives are much less susceptible to infection with MRSA than hospital in-patients/clients so people with MRSA do not present a risk to the community at large.
143. People colonised with MRSA should lead a normal life and safely socialise with other people. There are no contraindications for attendance at school.
144. MRSA poses no threat to healthy people, including babies, children and pregnant women. Therefore, a staff member caring for a child with MRSA is at no personal risk, nor is there any risk to their family and household contacts.
145. When administering any care, all healthcare or teaching staff must follow universal infection control precautions and hand washing procedures.
146. There is no need for a person with MRSA to be excluded from school if they are well.

Measles

147. Measles is an acute and highly infectious disease, which can be serious. The illness starts with what appears at first to be an ordinary cold with sore eyes, sneezing, coughing and a runny nose. These symptoms are accompanied by a fever. They are usually present for about four days before the rash appears and during this period the child is very infectious. If the child is unwell with a rash they should be kept away from school or nursery for five days from the onset of the rash.

148. The rash develops about three to four days after the onset of symptoms, as pink spots, which appear first on the face and behind the ears and then spread over the body and limbs. In a day or two these spots merge into larger, raised, blotchy areas and their colour changes to a darker red.
149. Spread is by respiratory droplets or direct contact with nasal or throat secretions. Parents of children who are immuno-suppressed should be informed of cases occurring in school and advised to seek medical help. The incubation period is eight to 13 days, usually about ten days.
150. If a case of measles is diagnosed, the Kent Health Protection Unit must be informed and will advise on specific management and vaccination. Cases should be excluded from school or nursery for five days from the onset of the rash.

Mumps

151. This is a viral infection causing fever and swelling of the salivary glands. The first symptoms are usually a raised temperature and general malaise.
152. Following this, there is a stiffness or pain in the jaws or neck, then the glands in the cheeks and the angle of the jaw swell up and are painful. The swelling may be confined to one side or affect both sides.
153. Mumps has become less common since the introduction of the MMR immunisation. This was previously an important cause of meningitis in children.
154. It is spread by direct contact with saliva and droplets. The incubation or period is two to three weeks (average 18 days). Cases are infectious for up to a week before facial swelling until nine days after.
155. If a case of mumps is diagnosed, contact Kent Health Protection Unit for further advice about management and vaccination. Cases should be excluded for five days from the onset of swelling.

Scarlet Fever

156. This illness is caused by certain strains of streptococcal bacteria. This is usually a mild disease, starting with fever a sore throat, followed by a rash, which does not affect the face, but there is flushing of the cheeks.
157. Spread is by person to person via respiratory droplets. The infection can be treated with antibiotics. An affected child should stay away for 5 days from the start of antibiotics. The incubation period is short, usually one to three days.

Whooping Cough (Pertussis)

158. This is a bacterial infection, which is preventable by vaccination. The early stages, which may last a week or so, can be very like a heavy cold with a temperature and persistent cough. The cough becomes worse and usually the characteristic “whoop” develops. Coughing spasms are frequently worse at night and may be associated with vomiting.

159. The incubation period is 2-3 weeks with an average of 18 days. The whole illness may last several months. Antibiotics rarely affect the course of the illness but may reduce the period of infectiousness. This disease can cause serious complications in very young children.
160. The disease is most infectious in the early weeks before the typical “whoop” develops. It is spread by contact with respiratory droplet.
161. Children should stay off school for five days from commencing antibiotic treatment or 21 days if no treatment is given.
162. If a case is diagnosed in a school or nursery, contact Kent Health Protection Unit for advice. (See Appendix 1).

Section 4

LESS COMMON COMMUNICABLE DISEASES

Hepatitis B

163. Hepatitis B is rare in young children in the United Kingdom. People infected with the hepatitis B virus may become unwell with jaundice and fever, or more commonly, may show no signs of the infection. A small percentage of people remain infectious and are known as carriers.
164. The infection is blood borne and is spread most commonly by blood to blood contact, sexual contact with an infected person, sharing a contaminated needle, by receiving blood from an infected person or sometimes from an infected mother to her baby.
165. Hepatitis B infection is not transmitted by casual person to person contact and the risk of transmission within a school or nursery environment is remote. An infected person who is a carrier of the disease may continue to attend school or nursery and should be treated the same way as other pupils and staff. Advice on dealing with blood is outlined in Section 2. Correct use of Universal Precautions will prevent transmission of infection from an infected child.
166. A vaccine is available and recommended for certain recognised groups of people who may have an increased risk of hepatitis B infection. School staff would not be considered to be at particular risk of infection. However, staff concerned about their individual risk should discuss it with their occupational health department or general practitioner.

HIV/AIDS

167. Acquired immune deficiency syndrome (AIDS) is caused by infection with the human immunodeficiency virus (HIV). HIV is mostly spread by blood to blood contact, sexual contact with an infected person, by sharing a contaminated needle or by receiving blood from an infected person. The latter is extremely unlikely to occur now, in this country, as all blood is carefully screened. If a pregnant woman is infected, she may pass the infection to her unborn child.
168. You cannot catch HIV from working in a school or nursery with an infected person. Shaking hands, hugging, sharing cups, swimming in pools or using public toilets are not risk factors.
169. There is no risk to other children or staff from an HIV infected person attending school provided sensible good hygiene practices are in place and universal precautions are correctly used.
170. For advice on exposure to blood and body fluids see Section 2.

Meningitis

171. Meningitis is inflammation of the meninges, the membrane covering the brain. It can be caused by bacteria, viruses or any micro organism. Bacterial meningitis is less common but usually more serious than viral

meningitis and needs urgent treatment with antibiotics. Viral meningitis is not helped by antibiotics, but is usually a mild infection and the person is not an infection risk to others.

172. Bacterial meningitis is most commonly due to meningococci, Haemophilus influenzae type b (Hib) or pneumococci. Hib meningitis has become rare since the Hib vaccine was introduced into the routine childhood immunisation programme in 1992. Routine vaccination against meningitis C and pneumococcal disease has been introduced into the routine vaccination schedule.
173. Cases of meningitis in a school or nursery are often a cause of concern for parents and staff. Wherever a case occurs in a school or nursery the head teacher or member of staff should contact Kent Health Protection Unit for advice. (See Appendix 1). Letters and information leaflets will be provided for parents and staff members. It may also be necessary to hold a public meeting for parents at the school or nursery concerned.
174. The meningococcal bacteria are commonly carried at the back of the nose and throat in around 15-20% of the population without causing illness¹⁰. Spread is by droplets from the nose and mouth. The risk of passing on meningococci is associated with prolonged, close contact. This most often occurs amongst a family at home, or with intimate (wet) kissing.
175. In the early stages symptoms can be similar to flu. Later symptoms may include severe headaches, fever, vomiting, drowsiness, dislike of bright light and neck stiffness.
176. Some bacteria that cause meningitis (particularly meningococci) can also cause septicaemia (blood poisoning). Septicaemia occurs when the bacteria enter the body from the throat and multiply in the blood. Septicaemia can develop quickly. A rash appears under the skin and can resemble small red purple spots or bruises. This rash may blanch under pressure (fade), then become non-blanching after a short time. If a glass is pressed firmly against the rash it will remain visible through the glass. This is called the glass test.
177. If meningitis is suspected medical help should be obtained urgently or the child taken to the nearest hospital A&E department for assessment. Symptoms may not appear in order, some may not appear at all.
178. Antibiotics may be given to those contacts who stayed overnight in the same household or who 'wet kissed' the person with the meningitis in the week before onset of illness.
179. Work colleagues of cases or children in the same class or attending school/nursery with a case are rarely at increased risk of acquiring the disease and would not usually require antibiotics¹⁰.
180. A policy on meningitis is available from the Kent Health Protection Unit. (See Appendix 1). A leaflet is available from the Kent Health Protection Unit. Information may also be obtained from the National Meningitis Trust on 0845 6000 800 or the Meningitis Research Foundation on 080 8800 3344.

Tuberculosis

181. Tuberculosis (TB) is an infection caused by the bacterium *Mycobacterium tuberculosis*. This disease is much less widespread in this country than it used to be but new cases continue to occur. Tuberculosis may affect any part of the body, but is most commonly found in the lungs (pulmonary TB).
182. Early symptoms of pulmonary TB are non specific and include tiredness, loss of weight and fever. When the illness is established the symptoms include, fever and night sweats, cough, weight loss and sometimes spitting blood when coughing.
183. TB is usually spread by inhaling droplets from the nose or mouth of an infected person, ie coughing, sneezing or spitting. However, transmission of TB usually requires prolonged periods of very close contact (ie, weeks or months).
184. Transmission from children to adults is extremely rare, but adults may infect children. A child with tuberculosis is therefore unlikely to be a risk to others. Close contacts of a case of tuberculosis may need to be screened by a chest clinic and those found to be positive will be treated and excluded from school until they are non-infectious.
185. The BCG vaccination to protect against tuberculosis is not routinely given at school. Babies born in the UK who have specific risk factors are offered BCG vaccination at birth. Only children who have specific risk factors for TB will be offered the vaccination. The school nurse will identify these children and refer them to the local chest clinic for advice.
186. Modern treatments for TB are very effective. Treatment usually consists of a course of several antibiotics, continued for at least six months.
187. If a person (staff or child) at school or nursery develops TB, the Kent Health Protection Unit would undertake a risk assessment. Screening for those who may be at risk from the disease may need to be undertaken by a Chest Clinic, five to six weeks after exposure.
188. Depending on the results of screening, some people who are not immune may be offered a BCG vaccine, others may need an X-ray or antibiotic treatment¹¹.

Section 5

SKIN INFECTIONS

Impetigo

189. Impetigo is a skin infection usually caused by the staphylococcus or streptococcus bacteria. It usually affects the face particularly around the nose and mouth, causing redness, which then develops into blisters and weeping lesions, eventually forming crusts. There may also be a fever. Antibiotic treatment is recommended.
190. Young children are more likely to be affected. Impetigo is infectious whilst the spots are wet and discharging pus and fluid. The incubation period is around 4-10 days. It is spread by direct contact.
191. Children can return to school once they are well and the lesions are dry, crusted and healed.
192. If an outbreak occurs, the Kent Health Protection Unit will advise the school/nursery concerned and additional information in the form of letters may be distributed if necessary. A leaflet is available from Kent Health Protection Unit.

Cold Sores

193. This viral infection, caused by herpes simplex virus, is generally of no significance but can cause severe illness in children with immunosuppression or severe eczema. Cold sores are more common around the lips, starting with a burning sensation and developing into blisters, which crust and heal over in about seven days. It is spread by close contact and sharing personal items such as face towels.
194. It is not necessary for an affected child to stay away from school or nursery unless the infection is severe.

Molluscum Contagiosum

195. Molluscum contagiosum is a viral skin disease in which small pale, pearly, raised spots may occur anywhere on the body except the palms and soles.
196. It is mildly infectious and transmitted by direct person to person contact with the lesions. The incubation period is about one month, but may be up to six months.
197. There is no need for an infected person to stay off school, but direct contact with the lesions should be avoided if possible. Contact sports should be avoided unless the lesions remain covered. Hand washing and the use of universal precautions, in certain settings, will help prevent spread.
198. The lesions usually disappear after a few months but may persist, in which case a doctor can remove them.
199. A leaflet is available from Kent Health Protection Unit. (See Appendix 1).

Ringworm

200. Ringworm (tinea) is an infection of the skin, which can be caused by several different fungi. These infections are usually subdivided according to the site where they occur.
- Ringworm of the scalp – Tinea capitis
 - Ringworm of the nails – Tinea unguium
 - Ringworm of the feet – Tinea pedis (Athlete's Foot)
 - Ringworm of the body – Tinea corporis
201. Ringworm is usually spread by direct contact or by contaminated personal items such as towels, articles of clothing and combs/brushes. It can also be spread via contaminated floors or benches in a gymnasium or communal changing areas. Infected animals may also be a source of ringworm.
202. Control of spread can be helped by regular washing of communal changing areas with detergent, hosing down and drying. Towels must not be shared and should be laundered in a hot wash.
203. Sharing of hairbrushes and combs and items of clothing such as socks and shoes should be avoided.
204. Treatment is recommended for all types of ringworm, but is especially important for ringworm of the scalp.

Verrucae (Plantar Warts)

205. Verrucae are warts occurring on the feet resulting from a viral infection of the skin. They can occur anywhere on the foot, but are usually found on the sole or heels. They vary in size from a tiny pinhead up to half an inch in diameter. They are roughened in appearance and are painful to touch or squeeze.
206. Covering the verruca with a waterproof plaster during barefoot activities is advisable. Spread can be via direct contact with the lesions, or indirectly, via contact with contaminated floors. Verrucae usually resolve spontaneously as the person's immune system produces antibodies to the virus. However this can take between three months to a year or more.
207. Pupils with plantar warts need not be excluded from physical education, swimming or other barefoot activities, provided the following measures are adopted:
- Suitable soft shoes should be worn for physical education activities.
 - A verrucae slipper (sock) should be worn at all times when walking around the swimming pool area or when using school showers.

Section 6

GASTROINTESTINAL INFECTIONS

Introduction

208. All cases of gastroenteritis should be regarded as infectious, although many infective and non-infective agents may cause diarrhoea and vomiting.
209. Pupils or members of staff who have symptoms of diarrhoea and vomiting should be excluded from school until that person has been symptom free for 48 hours¹².
210. All cases should be cared for using enteric precautions, these include:
- Thorough hand washing using the technique described in Section 2. For pictorial handwashing technique see appendix 5.
 - Use protective clothing, particularly gloves and aprons, when dealing with excretions.
 - Toilet seats, flush handles, taps, door handles etc should be cleaned daily with hot water and detergent.
 - Everyone should be instructed on how to maintain good personal hygiene and handwashing techniques especially in the hygienic preparation of food.
211. There are many different bacteria or viruses, which may cause gastrointestinal disease. The following are the most common:-

Norovirus (Norwalk-Like Virus, Small Round Structured Virus, SRSV)

212. Novovirus generally causes mild illness, however, it can spread rapidly, particularly in schools, nurseries and institutions.
213. Outbreaks of norovirus may occur throughout the year, but are often more common in the winter months. Only humans are affected.
214. Symptoms include abdominal cramps, nausea, vomiting and diarrhoea. Symptoms may be mild and last from 12 to 60 hours.
215. The incubation period ranges from 4 to 77 hours.
216. Spread is by the faecal-oral route. Infected food handlers may contaminate food during preparation. Vomiting nearby can also contaminate food and the environment . The infection is also spread from person to person by droplets.
217. People remain infectious until 48 hours after resolution of symptoms.
218. It is essential that vomit is cleared up promptly using the appropriate decontamination technique (See paragraph 64 & 65). The use of saw dust alone for decontamination will not prevent spread.
219. Staff and children must be excluded from school or nursery until they have been symptom free for 48 hours.

220. If large numbers of children or staff are affected contact Kent Health Protection Unit for advice (See Appendix 1)

Rotavirus

221. Rotavirus infection is the commonest causes of childhood diarrhoea occurring most frequently in children under five and during the winter months.
222. Rotavirus infection is most common in children under five years and occurs more often in winter time.
223. Signs and symptoms include sudden onset of diarrhoea and vomiting often with mild fever. Occasionally there may be blood in the stools.
224. The incubation period is one to three days.
225. Person to person spread is by faecal-oral route or via respiratory secretions. Outbreaks may occur in schools or nursery settings when the environment may become contaminated.
226. Personal hygiene is essential to prevent spread. Symptomatic individuals must be excluded from school or nursery until 48 hours after the symptoms have resolved.

Campylobacter

227. Campylobacter is a bacteria found worldwide in the gastrointestinal tract of birds and mammals.
228. Transmission from animals to man occurs predominantly via the ingestion of contaminated food or water. The most common vehicle of transmission is undercooked poultry.
229. Severity of campylobacter infection may range from being mild in 25% of cases, to severe disease, which may include colitis.
230. Symptoms include diarrhoea, abdominal pain, fever, malaise and nausea. Most cases of campylobacter settle after two to three days.
231. If a child or member of staff is suffering from campylobacter they should be excluded from work or school/nursery until 48 hours after stools have returned to normal.

Salmonella

232. Salmonella is the second most common reported cause of gastro intestinal disease in England and Wales.
233. Most cases are sporadic. However, outbreaks may occur in families, institutions or may be associated with social functions.
234. The severity of illness varies. In most cases, stools are loose, but do not contain blood or mucus. Diarrhoea may last for three to seven days and may be accompanied by fever, abdominal pain and headache. The incubation period ranges from six hours to three days.
235. Salmonella infection is acquired by ingestion of the organism. In most

cases this is through consumption of contaminated foods, such as undercooked poultry, meat or raw eggs. Children must not sample uncooked food containing raw egg. This includes uncooked cake mix.

236. Cross contamination (between raw and cooked food) is a particular problem and good hygienic practices are essential.
237. Salmonella may also be transmitted from person to person and is spread via the faecal-oral route.
238. Other cases may be as a result of handling animals or exotic pets such as lizards and snakes.
239. If there is a suspected case of salmonella in a school/nursery enteric precautions must be used (See point 202). The Kent Health Protection Unit should be contacted for advice. (See Appendix 1)

Escherichia coli 0157 (E. coli 0157).

240. There are many strains of E. coli associated with gastroenteritis. Most do not cause serious illness. However some strains which produce particular toxins do. The most common of these toxin producing strains is E. coli 0157
241. The natural reservoir of E. coli 0157 is the gastrointestinal tract of animals, particularly cattle. It may also be found in sheep, goats, deer, horses and domestic animals, especially those on farms
242. Humans can be infected via contaminated food, direct contact with animals or farm visits, faecal-oral route, spread from person to person in families or institutions.
243. Symptoms include diarrhoea, often with blood and severe abdominal pain. Haemolytic uraemic syndrome (HUS) leading to renal failure and anaemia may result from the infection.
244. The incubation period ranges from one to nine days. HUS may follow after a further five to ten days.
245. Prevention includes the application of good hygienic practices within the kitchen, including separation of raw and cooked food.
246. Enteric precautions must be followed. See paragraph 202.
247. Care is advised if visiting a farm. Children must wash their hands after contact with animals. They must not eat or put pens/pencils in their mouths whilst on the visit. (See advice given for farm visits in Section 10).
248. Affected young children should be excluded from school and nurseries until symptoms have resolved and two stool samples are clear of infection. Contact the Kent Health Protection Unit for advice. (See Appendix 1).

Cryptosporidium

249. Cryptosporidium is a parasitic infection, which causes self limiting diarrhoea.
250. Cryptosporidium can be found in a wide variety of animals including cattle,

sheep, goats, horses, pigs, cats, dogs and rodents. Transmission occurs by the faecal-oral route and is mainly spread by animals to humans. It can also be spread from person to person from infected people within the family setting. Swimming pools may also be a source of cross infection.

251. The incubation period is usually seven to ten days, symptoms include abdominal cramps, loss of weight, anorexia, nausea, offensive smelly stools. Headache, fever and vomiting may occur in a number of cases.
252. The infectious period commences at onset of symptoms and may continue for several weeks after resolution.
253. Children must not use swimming pools for two weeks after the infection has resolved.
254. Prevention includes: hand washing after contact with faeces, nappies, or animals; and the application of good hygiene when visiting farms. (See advice given for farm visits in Section 10).

Shigella

255. Shigella infection is caused by a bacteria and is primarily seen in young children.
256. Man is the only reservoir of the infection. Transmission is by the faecal-oral route.
257. The incubation period is 12 to 96 hours. The infectious period is primarily during the diarrhoeal illness but the organism may be excreted for up to four weeks.
258. Prevention involves adopting adequate personal hygiene especially hand washing, and regular environmental cleaning to prevent spread
259. Cases should be excluded from school and nurseries until symptom free for 48 hours. In some cases children may be excluded until negative samples are taken. The Kent Health Protection Unit should be contacted for advice. (See Appendix 1).

Giardia Lamblia

260. Giardia lamblia is a parasitic infection contracted mostly from contaminated water. Symptoms include diarrhoea, loss of appetite and abdominal pain, but many infected people may not show any symptoms at all.
261. The infection is spread by the faecal-oral route, therefore good basic hygiene is essential.
262. The most commonly affected age group is children under five.

Section 7

PARASITES

Head Lice

263. Head lice are ectoparasites, which live on the head. They are small, flat and wingless, measuring approximately two to three millimetres in length. Lice live close to the head where the surface is warm.
264. The female lays her eggs as close to the scalp as possible in order to ensure that they are at the optimum temperature for incubation. The eggs are glued to the hair strand and hatch within seven to ten days. The empty egg cases are called nits and can not be easily removed from the hair.
265. Lice are only spread by direct head to head contact. They do not jump, fly or hop. When checking for lice within a family, examine the hair, by combing damp hair with a fine toothcomb, working in small sections until all the head has been covered. Pay particular attention to the nape of the neck, behind the ears and hair close to the scalp.

Treatment of Head Lice

266. Treatment should only be carried out if live lice are seen. The eggs and empty egg cases (nits) will remain stuck to the hair even if all the lice are killed. There is no need to treat a whole family or school prophylactically if head lice are found on one person.
267. Hair should be free from chlorine, hair gels, mousse hairspray or conditioners as this may prevent the treatment from working fully. The treatment should be applied to clean dry hair, please refer to the Kent Health Protection Unit Headlice Policy for more details.

Preventing Re-infection

268. Prevention of recurrence is based mainly on identifying and treating close contacts. Relatives and other contacts of the family who may be unsuspecting carriers must be checked to prevent passing the infection back to treated individuals.
269. Individuals and families should be encouraged and advised to positively look for the source of the infection. Children must have their heads checked for live lice on a regular basis.
270. Children about five years of age become sensitised and therefore start reacting to lice. Likewise adults become de-sensitised and fail to have a response to the infection. These individuals can be a constant source of infection and re-infection in families and the community.
271. Most children will have been infected for up to four months prior to detection in school, therefore, it is not necessary to exclude an infected child from school as spread may have already occurred.
272. A policy on head lice management and an information leaflet is available from Kent Health Protection Unit. (See Appendix 1).

Scabies

273. Scabies is caused by a tiny mite known as *Sarcoptes scabiei*. It is the size of a pin head and burrows under the skin and lays eggs. The mites produce faecal pellets, from which an allergen is diffused into the deeper layers of the skin then the bloodstream causing the rash and symptoms of scabies.
274. As with other allergies of this type, symptoms are delayed because the body takes a few weeks to mount a response. The rash usually appears four to six weeks after infection.
275. During the incubation period the person may be infectious before the signs and symptoms have appeared. Therefore spread can be difficult to contain and contact tracing is required where there is prolonged skin to skin contact.
276. The appearance, severity of the symptoms and their precise nature are influenced by the immune status of the individuals.

Transmission of Scabies

277. Scabies is spread by prolonged skin to skin contact, for long enough for the mites to crawl from one person to another.
278. Scabies mites dry out rapidly away from the human body and are therefore not viable in the environment or on soft furnishings.

Treatment of Scabies

279. Scabies remains infectious until treated, however, it is essential that all close/family contacts are treated at the same time as it must be assumed that they might be incubating the disease.
280. The treatment must be applied to cool dry skin. Do not apply immediately after a hot bath as there is evidence that this may increase absorption into the blood, and remove it from the skin, the main site where action is required.
281. It is essential that the whole area from the neck down is treated (ie, except the head), paying particular attention to the finger webs, toes, under the fingernails, soles of the feet and around the buttocks.
282. Someone else may need to apply treatment to the centre of the back to ensure no part of the area is missed.
283. The treatment must be left on for 8 to 24 hours, depending on the preparation used. The leaflet in the preparation must be followed.
284. If any part of the body is washed during the treatment time, the cream/ lotion must be reapplied otherwise treatment will be incomplete.
285. Children under two years of age, the elderly and immunocompromised should be treated under medical supervision.
286. Those people with symptoms should receive two treatments, seven days apart. Only one treatment is required for contacts who are asymptomatic.

- 287. Persons are non-infectious immediately after treatment and can resume normal life. However, itching may persist for some weeks after a successful treatment. This is because the body is still mounting a response to the dead mites. Therefore, children or staff can return to school after treatment.
- 288. If an outbreak is identified advice should be sought from the Kent Health Protection Unit (See Appendix 1).
- 289. A leaflet is available from the Kent Health Protection Unit (See Appendix 1)

Threadworm

- 290. These are harmless minute parasites (pinworm), which live in the bowel for a short time. They mainly affect young children but anyone of any age can contract the disease.
- 291. The symptoms are itching of the skin around the anus, which can then become broken and infected, as a result of repeated scratching. Occasionally people can have the infection without any symptoms.
- 292. Spread is from person to person by the faecal-oral route. Underwear, nightwear and bedding may become contaminated with worm eggs and can act as a source of infection to others.
- 293. Treatment is advisable. The whole family should be treated.
- 294. Hand washing, good personal hygiene and keeping nails short will help reduce person to person spread. There is no need to exclude affected children from school or nursery.
- 295. A leaflet is available form the Kent Health Protection Unit (See Appendix 1).

Section 8

UNCOMMON COMMUNICABLE DISEASES

Diphtheria

296. This is extremely uncommon in this country. Diphtheria is a bacterial infection of the tonsils, nose and throat, which can produce swelling and affect breathing. Spread is by direct contact with a case or carrier or by droplet spread. Routine childhood immunisation is recommended to prevent the disease.

Poliomyelitis

297. This disease has been eliminated from most countries of the world following a coordinated immunisation campaign. Cases may be brought in from abroad amongst unimmunised populations. Polio is an acute illness, which damages the nervous system. It is spread by close contact with an infected person, or by the faecal-oral route. Routine childhood immunisation is recommended to prevent the disease.

Typhoid and Paratyphoid

298. These infections are rare in the UK, but may be contracted whilst overseas. The bacteria are transmitted by food and water contaminated by faeces or urine of patients and carriers. Other sources of infection are food items taken from contaminated soil and water. Person to person spread is possible within a household via the faecal-oral route.
299. The Kent Health Protection Unit will advise on specific cases and action required. (See Appendix 1).

Section 9

IMMUNISATION

300. Many of the diseases, which have been an important cause of childhood illness, disability and death, are now preventable through immunisation. As a consequence of immunisation programmes the number of cases for these diseases have decreased, almost to the point of eradication within this country.

301. It is however important to maintain the high levels of immunisation we have achieved within Kent to prevent these diseases reappearing.

302. Table 1 details the routine childhood immunisation schedule.

Table 1: Immunisation Schedule (Correct at the time of publication)

* Hib is included in the pre school booster from 10 September 2007 until March 2009.

Disease	2 months	3 months	4 months	12 months	13 months	3-5yrs (Pre school booster)	13-18yrs (School leaving)
Diphtheria	X	X	X			X	X
Tetanus	X	X	X			X	X
Whooping Cough (Pertussis)	X	X	X			X	
Haemophilus influenzae (Hib)	X	X	X			X*	
Meningococcal Group C (Men C)		X	X				
Polio	X	X	X			X	X
Pneumococcal (PCV)	X		X		X		
Hib/MenC				X			
Measles/Mumps/Rubella					X	X	

Section 10

FARMS, FARM VISITS AND PETS

Introduction

303. Staff and children should be aware of the risk of transmission of infection, either by direct or indirect contact with animals.
304. Potential hazards include contact with animal foodstuffs, raw milk, animal faeces, slurry, untreated water and putting fingers in animals mouths.
305. Infection may be acquired by eating contaminated material, or by sucking fingers that have become contaminated.
306. Pregnant staff or visitors should be advised of the risks of contact with farm animals and pets and should seek advice from their midwife or GP.

Preparation Prior to Farm Visits

307. Ensure that the farm is well managed, that the grounds and public areas are as clean as possible and that suitable first aid arrangements are in force. Animals should be kept away from any outdoor picnic areas.
308. Check that the farm has suitable hand washing facilities, appropriately signposted, with running hot and cold water, soap and disposable towels or hot air hand dryers.
309. Staff must ensure that there are an appropriate number of adults to supervise the children.
310. Explain to the children that, because of the risk of infection, they should not eat or drink anything including crisps, sweets or chewing gum whilst touring the farm. They must not bite fingernails or put anything in their mouth (such as pens/pencils) whilst the visit is in progress due to the risk of infection from hand-mouth contact.
311. Check that any cuts and grazes are covered with waterproof dressings.

During the Visit

312. Children must wear enclosed footwear, no open-toed sandals.
313. If the children come into contact with the animals, i.e. stroking or feeding, they should not place their faces against the animals or put their fingers in their own mouths afterwards.
314. After contact with the animals, and especially before eating and drinking, ensure that the children have washed and dried their hands thoroughly.
315. Meal breaks and snacks should be taken in a designated area well away from areas where animals are kept. Remind the children not to eat any food that has fallen on the ground.
316. Staff must ensure that the children do not consume any unpasteurised product, i.e. milk, cheese or eat any animal foodstuffs.

317. Manure and slurry present a high infection risk and children should be warned strongly against touching them. If they do, ensure that they thoroughly wash and dry their hands immediately.
318. Sick or distressed animals must not be approached under any circumstances.

After the Visit

319. Ensure all the staff and children thoroughly wash and dry their hands before leaving the farm.
320. Try and ensure that all footwear is as free as possible from any faecal material.

School Farms and Pets

321. The employers ie the school or nursery, must have procedures in place to identify hazards and assess and control risks.
322. Any risk assessment must be a living document and reflect any changes in the work done, any new equipment used or new work activity.
323. Any person visiting or working on the farm on a regular basis must undergo an induction, which includes advising of any risks or infection control precautions required.
324. Any risk groups, including pregnant women, should be advised of any infection risk relating to contact with animals before the contact takes place.
325. There must be first aid protocols in place for the management of animal bites and allergies.
326. All cuts must be covered with a waterproof dressing prior to any contact with animals.
327. Animals who are sick must be segregated and assigned a veterinary surgeon. Sick animals should be kept in an area where there is minimal contact with others.
328. If there is an outbreak of infection in the animals, advice should be sought from the veterinary surgeon and the Health Protection Agency.
329. It is essential that good handwashing is practised after every contact with animals.
330. Animal waste and soiled animal bedding must be disposed of as offensive/ hygienic waste.

Section 11

SWIMMING AND HYDROTHERAPY POOLS

Management

331. Swimming and hydrotherapy pools require precise control and monitoring. There must be effective communication between staff, microbiologists and engineers.
332. Problems reported by bathers must be taken seriously. Many infections may be associated with the water. These include *Pseudomonas aeruginosa*, *Cryptosporidium* and *Legionella* are well documented water borne infections. Poolside infections of the feet are also common.
333. The day to day management of the pool must be a designated responsibility. This person must have extensive training in health and safety, emergency and resuscitation procedures.
334. There must be procedures in place for emergency evacuation of the pool and management of chemical spills.
335. The pool water must be tested to monitor the presence of indicator organisms before it is used for the first time, after repairs, if a contamination has been noticed or if there has been a change to the pool regime
336. The pool water must be tested for microorganisms, monthly by an accredited company.
337. There must be a written policy in place advising on the action to take if there is an unsatisfactory microbiological test result.
338. Correct protective clothing must be available for operator protection when handling pool water and chemicals.
339. The pH level must be tested 3 times per day and must be within the agreed operating range for that pool.
340. Annual maintenance of the pool tiles, grouting and sand bed must be undertaken and documented.

Pool Hygiene

341. Any person diagnosed with a communicable disease must not use the pool. Specific advice may be sought from the Kent Health Protection Unit.
342. All persons using the pool should be screened for medical contraindications. Staff suffering from heart, circulatory or skin conditions or those who may be immunosuppressed should seek medical advice before using the pool.
343. The dry area (changing rooms) and wet area (poolside) should be clearly demarcated. Outdoor clothing must not be worn poolside. Staff must wear designated shoes or overshoes.
344. All pool users must shower and use a footbath before using the pool.

345. Handwashing facilities must be available for use in changing areas. Handwash basins must have liquid soap and paper hand towels in a wall mounted container.
346. The pool should have a documented cleaning regime
347. The walls ceiling and floor in the shower area must be clean and free from mould.
348. The wet and dry areas must be free from mould and be included in a regular cleaning regime.
349. All floats and buoyancy aids must be visibly clean, mould free, stored dry and included in a regular cleaning regime.
350. Every effort must be made to prevent faecal contamination of the pool. This should include screening users for recent diarrhoea. There must be documented procedures in place for action in the event of a faecal contamination with formed and unformed stool.

Section 12

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Appendix 1

CONTACT NUMBERS FOR THE KENT HEALTH PROTECTION UNIT

Dr Mathi Chandrakumar	Director
Dr Jeremy Lissamore	Consultant in Communicable Disease Control
Dr James Sedgwick	Consultant in Communicable Disease Control
Mrs Rita Simmons	Senior Specialist Nurse / Manager
Mrs Katie Allen	Health Protection Specialist Nurse
Mrs Gillian Ashford	Health Protection Specialist Nurse
Mrs Sheena Fenn	Health Protection Specialist Nurse
Mrs Sarah Fielder	Health Protection Specialist Nurse
Mrs Anita Turley	Health Protection Specialist Nurse
Mrs Catherine Southwood	Health Protection Specialist Nurse (Port Health)

All staff may be contacted on: 01622 713059 during office hours.

Public Health On-Call specialists can be contacted for urgent matters, out-of-hours, through the switchboard of all the acute hospitals in Kent

Appendix 2

Incubation Period, Communicability and Suggested Exclusion Criteria for Communicable Diseases

Disease	Incubation period (days)	Infectious Period	Minimum Period of Exclusion	To be reported	Important to seek medical advice
			Cases (subject to clinical recovery)	Contacts	
Bacillary (Shigella)	1-7 Dysentery	Whilst organism	On advice of KHPU, usually when present in stool 48 hours	Yes	Yes
Chickenpox	14-21	From 1 day before to 5 days after appearance of rash	5 days from onset of rash for Chickenpox	No	Only if pregnant or immunocompromised
Cold Sores	2-12	Whilst sores weeping	None	No	No
Conjunctivitis	5-12	From just before to 14 days after onset	None usually. Where there are several cases, exclusion might be necessary. Check with KHPU	No	If an outbreak or cluster occurs consult the Kent HPU.
Cryptosporidiosis	3-11	Variable, usually while diarrhoea present	On advice of KHPU, usually 48 hrs after symptom free, i.e. formed stools Should not swim for 2 weeks after symptom free.	Yes	Yes
Diphtheria	2-5	Whilst the organism is present in nose and throat	Until advised by KHPU	Yes	Yes
E. coli O157	2-8	Variable, usually while diarrhoea present	On advice of KHPU Older children, usually 48 hrs after symptom free, i.e. formed stools	Yes	Yes
Fifth Disease (Slapped Cheek)	4-20	For the 7 days before the rash appears	Until clinically well with no fever. Presence of rash does not usually indicate infectivity	No	Only if pregnant
Food Poisoning & Diarrhoea (inc Salmonella)	Varies	Varies according to disease	On advice of KHPU, usually 48 hrs after symptom free, i.e. formed stools	Yes	Yes

Disease	Incubation period (days)	Infectious Period	Minimum Period of Exclusion	From Pregnant women should seek advice	To be reported	Important to seek medical advice
German Measles (Rubella)	14-21	5 days after onset of rash	5 days from onset of rash	From Pregnant women should seek advice	Yes	Only if pregnant
Glandular Fever	30-50	May be some months, but spread only by very close contact	None	None	No	Yes
Hand, Foot & Mouth Disease	3-5	2-3 days before to weeks after onset	Until well. Presence of rash does not usually indicate infectivity	None	No	No
Head Lice	7-21	While live lice are present	None	None	No	No
Hepatitis A	15-50	From 2 weeks before to 1 week after onset of jaundice	Consult with Kent HPU Exclusion may be necessary	None	Yes	Yes
Impetigo	4-10	While lesions are moist	Until treatment is established and the lesions are crusted and dry. Check with KHPU	None	Yes	Yes
Measles	8-15	From a few days before to 5 days after onset of rash	5 days after onset of rash	None	Yes	Yes
Meningococcal Meningitis or Septicaemia	2-10	Whilst organism is present in nasopharynx	Until clinical recovery	None	Yes	Yes
Molluscum Contagiosum	7-180	Unknown	None	None	No	No
MRSA	Varies	Whilst infection is present	None if clinically well	None	No	No
Mumps	14-21	From 5 days before onset of symptoms to subsidence of swelling	5 days after the onset of swelling	None	Yes	Yes
Poliomyelitis	3-21	Whilst virus is present in stools	On advice of KHPU	On advice of KHPU	Yes	Yes
Ringworm (Tinea)	3-21	While infection is present	Until treatment started	None	No	Yes
Scabies	1-42	While infection is present	Until treated	None	No	Yes
Shingles		Whilst vesicles are weeping	If rash is weeping and cannot be covered.	Pregnant women and immunocompromised should seek advice if not had chickenpox	No	Only if pregnant or immunocompromised

Disease	Incubation period (days)	Infectious Period	Minimum Period of Exclusion (Cases (subject to clinical recovery))	Contacts	To be reported	Important to seek medical advice
Streptococcal Infection (inc Scarlet Fever & some Tonsillitis)	2-5	Whilst organism is present in nasopharynx	Exclude for 5 days after starting antibiotics	None	Yes	Yes
Threadworm	14-42	While infection is present	None	None	No	Yes
Tuberculosis	Varies	Whilst organism is present in sputum. Usually not infectious after 2 weeks of treatment	On advice of KHPU and until declared non infectious	On advice of KHPU	Yes	Yes
Typhoid & Paratyphoid	7-21	Whilst organism present in stools or urine	On advice of KHPU	On advice of KHPU	Yes	Yes
Verruca	60-90	While infection is present	None	None	No	No
Whooping Cough (Pertussis)	7-10	From 7 days after exposure to 21 days after onset of cough	If treated with antibiotics, 5 days after start of treatment or 21 days from onset of cough if not treated	KHPU will follow up contacts as necessary	Yes	Yes

Appendix 3

LOCAL AUTHORITY TELEPHONE NUMBERS

Environmental Health Departments in Kent

Ashford Borough Council – 01233 637311

Canterbury City Council – 01227 862000

Dartford Borough Council – 01322 343434

Dover District Council – 01304 821199

Gravesham Borough Council – 01474 337598

Maidstone Borough Council – 01622 602000

Medway Council (Unitary Authority) – 01634 333549

Sevenoaks District Council – 01732 227000

Shepway District Council – 01303 850388

Swale Borough Council – 01795 424341

Thanet District Council – 01843 225511

Tonbridge and Malling Borough Council – 01732 844522

Tunbridge Wells Borough Council – 01892 526121

Appendix 4

NOTIFIABLE DISEASES IN ENGLAND AND WALES

(Including the date each was made notifiable)

Under the Public Health (Control of Disease) Act 1984

Cholera	1889
Food Poisoning	1949
Plague	1900
Relapsing Fever	1889
Smallpox	1889
Typhus	1889

Under the Public Health (Infectious Diseases) Regulations 1988

Acute Encephalitis	1918
Acute Poliomyelitis	1912
Anthrax	1960
Diphtheria	1889
Dysentery (amoebia or bacillary)	1919
Leprosy	1951
Leptospirosis	1968
Malaria	1919
Measles	1840
Meningitis	1968
Meningococcal Septicaemia (without meningitis)	1988
Mumps	1988
Ophthalmia Neonatorum	1914
Paratyphoid Fever	1889
Rabies	1976
Rubella	1988
Scarlet Fever	1889
Tetanus	1968
Tuberculosis	1912

Guidance on Communicable Disease and Infection Control in Schools and Nurseries

Typhoid Fever	1889
Viral Haemorrhagic Fever	1976
Viral Hepatitis	1968
Whooping Cough	1940
Yellow Fever	1968

Notification of the diseases listed above should be made, by the doctor, to:

Dr M Chandrakumar
Director, KHPU
Preston Hall
Aylesford
Kent
ME20 7NJ
Tel: 01622 713059
Fax: 01622 791644

Appendix 5

HAND WASHING

Six-step decontamination technique

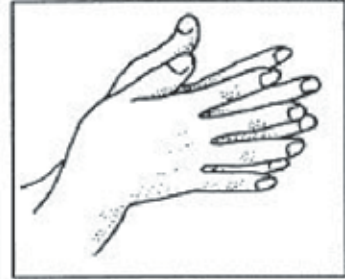
Handwashing



1. Rub palm to palm



2. Palm to palm, fingers interlaced



3. Right palm over left dorsum and left palm over right dorsum



4. Backs of fingers to opposing palms with fingers interlocked



5. Rotational rubbing of right thumb clasped in left palm and vice versa



6. Rotational rubbing back and forwards with clasped fingers of right hand in left palm and vice versa

Appendix 6

USES OF SODIUM HYPOCHLORITE (STRENGTHS OF SOLUTION)

Guidance on the use of sodium hypochlorite and the recommended strengths are showing below:

Use	Dilution of of Stock Solution	% of Hypochlorite	Available Chlorine ppm
Blood spills	1 in 10	1.0	10,000
Environmental disinfection hard surfaces and baths	1 in 100	0.1	1,000
Infant feeding utensils, catering surfaces and equipment.	1 in 800	0.0125	125

It is important to follow the manufacturer's instructions when using chemical disinfectants.

Undiluted commercial hypochlorite (bleach) solutions contain approximately 10% (100,000ppm) available chlorine.

Appendix 7

A-Z OF CLEANING METHODS

Equipment	Preferred Method / Recommendation
Blankets and Bedding	Wash in a washing machine on at least 40°C setting and tumble dry.
Bowls store inverted.	Clean hot water and detergent, dry thoroughly and
Bowls (Vomit)	Use disposable if possible. Reusable vomit bowls should be washed using hot water and detergent, dried, then stored inverted.
Carpets (Should be washable, waterproof back with joints sealed)	Vacuum daily, clean by hot water extraction periodically. For contaminated spills see Section 2.
Changing Mats	Clean with hot water and detergent, then dry thoroughly.
Crockery and Cutlery	Preferably machine wash in a dishwasher. If no machine is available use hot water and detergent with a final rinse in clean hot water, then air dry.
Fans	Disconnect. Damp dust with detergent and dry. Specialist engineers should inspect internal works
Jugs and Glasses	Preferably machine wash in a dishwasher. If no machine is available use hot water and detergent with a final rinse in clean hot water, then air dry.
Liquidisers	Separate jugs from base. Wash in hot water and detergent and dry thoroughly.
Mattresses	Wash with hot water and detergent and dry thoroughly.
Nail brushes	Avoid using or use disposable.
Pillows	Wash with hot water and detergent and dry thoroughly.
Potties	Wash with hot water and detergent. Dry and store inverted.
Telephones	Wipe occasionally with detergent wipes.
Thermometers	Tympanic – use single use sheath – clean handle with detergent wipe. Oral – use disposable, single use.
Toilet seats and raised seats	Wash with hot water and detergent and dry.
Toys – hard plastic	Wash with hot water and detergent and dry.
Toys – fabric	Wash regularly or immediately if contaminated in a washing machine on at least 40°C wash.

Appendix 8

LIST OF LEAFLETS AVAILABLE

The Kent Health Protection Unit have the following information leaflets available:
Telephone 01622 713059

Campylobacter
Chickenpox & Shingles
Clostridium Difficile
Cryptosporidiosis
Dysentery
E. coli O157
Gastroenteritis
Giardiasis
Hand Foot & Mouth Disease
Hepatitis A
Hepatitis B
Hygiene for Schools and Nurseries
Impetigo
Legionella
Measles
Meningococcal Disease
Molluscum Contagiosum
MRSA
Mumps
Parvovirus (Slapped Cheek)
Personal & Domestic Hygiene
Pertussis (Whooping Cough)
Psittacosis
PVL
Ringworm
Rubella
Salmonella
SARS
Scabies
Scarlet Fever
Streptococcal Infection
Threadworm
Tuberculosis
Verrucae

Notes

Appendix 9

NATIONAL COLOUR CODING SCHEME FOR CLEANING

<p>RED</p> <p>Bathrooms, washrooms, showers, toilets, basins and bathroom floors</p>	<p>BLUE</p> <p>General areas including departments, offices and public areas</p>
<p>GREEN</p> <p>Catering areas, kitchen areas and food service areas</p>	<p>YELLOW</p> <p>Isolation areas, blood or body fluids</p>

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Kent
ME20 7NJ

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