Surrey and Sussex Health Protection Unit

Control of communicable disease in schools and nurseries

June 2006

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1 Local details

Contact names and addresses for Surrey are included in appendix I, which starts on page 28.

This page is for schools to add their local contact numbers, so that they can be located more quickly and easily in a crisis.

1.1 Surrey and Sussex Health Protection Unit

For advice on issues concerning communicable disease control (e.g. whether a child should be excluded from school or a case of meningococcal disease) please contact Surrey office of the Surrey and Sussex Health Protection Unit (the HPU). (The HPU in Surrey used to be the 'Surrey Communicable Disease Control Service', SCDCS):

Surrey & Sussex HPU
Cedar Court
Guildford Rd
Leatherhead
Surrey
KT22 9RX

Tel 01372 227331
Fax 01372 227373
http://www.bigfoot.com/~scdcs

Outside office hours please call 0870 238 5156, and ask for the doctor who is on call for public health. (You will need to say where the school or nursery concerned is, so that the correct team can contact you).

1.2 Community health clinics.

For other health advice, please call your local community health clinic:

Phone: .....

School nurse: .....

1.3 Environmental health

The school's local authority environmental health department is:

Local authority: .....

Phone: .....

1.4 Accident and emergency department

The nearest Accident and emergency department is: .....

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4 Introduction

Infectious diseases can be a major cause of illness among children, and can affect a child's schooling by causing absenteeism. They may, in turn, affect other children and staff; and can prevent parents'/carers' ability to work, especially where both parents/carers work. The information in this document is intended for use by school doctors, school nurses, health visitors, and teachers in schools and nurseries.

There are two methods of getting advice and support about infections diseases:

Food poisoning: seek advice from the Environmental Health Department of the relevant local authority See also section 10 on page 14 for more information about food poisoning.

Other diseases: contact the appropriate office of the Surrey and Sussex Health Protection Unit (the HPU).

In a boarding school, teachers should liaise with the school nurse or doctor.

We also recommend that all schools and nurseries should acquire a copy of the "Guidance on infection control in schools and nurseries",[1] which can be obtained from:

Department of Health
PO Box 777
London SE1 6XH
Fax 01623 724524

We concur with this national advice with two minor caveats:

- Children with diarrhoea and vomiting should be excluded until they have been back to normal for 48 hours (rather than the 24 hours in the national guidance).
- Verrucas/plantar warts. Verruca socks (for swimming and/or PE) are not recommended by the HPU. Children should be encouraged to swim and do PE, even if they have a verruca.

5 Exclusion from school or nursery

A sick child should not go to school or nursery. Children should return to school or nursery when they are better, unless they pose a risk of infection to others. The child's parents/carers should inform the school or nursery of the diagnosis, and agree the exclusion period.

(The above refers to what doctors call "acute" illness – illness of recent onset, and short duration. This does not apply to long term or "chronic" illnesses: every effort should be made to accommodate children with chronic illnesses in schools.)

This document gives some guidance on the control of the commoner and more important infections encountered in school or nursery. It is not intended to act as a guide to diagnosis. This should only be undertaken by an appropriately qualified health professional. Whenever there is any doubt about the management of a particular illness, advice should be sought from an appropriate source. In the case of general health issues, this may be the school nurse, or the school doctor. If the advice concerns preventing the spread of a communicable disease the most appropriate source of advice will be the HPU.

On occasions the decision to exclude a child may depend on the findings of a physical examination or intrusive questioning. This should not be taken to imply that it is necessarily appropriate for school staff to examine the child. In most instances it will be more appropriate to question the child's parent/guardian. If ever it is necessary to examine a child in school, this should only be done by a suitably qualified and indemnified person, and the child protection procedures issued by Surrey County Council must be followed.

For guidance on exclusion periods for specific conditions, please see appendix II on page 50.

6 Immunisation

Immunisation offers protection against some infectious diseases. Parents/carers should be encouraged to have their children immunised according to the recommended schedule (see Table 1).[2] [3] (The schedule is subject to constant revision. Up-to-date information is posted at www.immunisation.nhs.uk.) Future changes could include the introduction into the routine schedule of vaccines to prevent: the strains of human papillomavirus which are responsible for causing most cases of cervical cancer; hepatitis B; chicken pox (and its more serious complication, shingles); influenza; rotavirus…

Table 1: Schedule for routine childhood immunisations.

Vaccine*	Dose	Age	Notes
DTaP/IPV/Hib, Meningococcus group C**	1st dose 2nd dose 3rd dose	2 months) 3 months) 4 months)	Primary course
MMR	1st dose	12-15 months	
dTaP/IPV or DTaP/IPV	Pre-school booster	3-5 years	Three years after primary course
MMR	Second dose	3-5 years	Three years after primary course
BCG	Single dose	Infancy or later, to targeted groups only	
Td/IPV	2nd booster	13-18 years	10 years after first booster

Children should therefore have received the following vaccines:	
By (age)	Vaccines
6 months	3 doses of DTaP/IPV/Hib, and meningococcus group C**. BCG for targeted groups.
15 months	MMR
School entry	dTaP/IPV or DTaP/IPV (fourth dose of these components); 2nd MMR
Between 10 and 14 years	BCG is no longer given routinely to this age group. There is a possibility that other vaccines might be given to this age group in the future.
Before leaving school	Td/IPV (fifth dose of these components)

* aP = acellular Pertussis
BCG = Bacillus Calmette-Guérin (for Tuberculosis)
D or d = Diphtheria (higher dose D for children; lower dose d for adults)
Hib = Haemophilus influenzae type b
IPV = inactivated polio virus (which is now used instead of the oral, live-virus vaccine)
MMR = Measles, Mumps, and Rubella
T = Tetanus

** Three doses of meningococcus group C vaccine are required if the course is before the age of 5 months, but only one dose is required if given after the first birthday, and only two doses are required if the course is started at or after 5 months of age.

7 Outbreak surveillance

If two or more cases of a communicable disease (other than colds or “flu”) occur in a school or nursery over a short period of time, this might be considered to be an “outbreak”. Early telephone reporting of possible outbreaks is recommended, so that advice on control measures can be given. Reports should be made to the HPU, or to the relevant environmental health department if the disease could be food-borne.

The school or nursery may record communicable diseases and send regular infection reports to the Consultant in Communicable Disease Control (CCDC) to assist in the early detection of outbreaks.

8 School and nursery hygiene

Staff should encourage children to learn basic principles of good hygiene. One of the most important is hand washing.

Box 1: Hand-washing

- Hand washing is an important method for controlling the spread of infections, especially those that cause diarrhoea and vomiting.
- Always wash hands after using the toilet and before eating or handling foods, using warm running water and a mild, preferably liquid, soap. It is not necessary to use "antibacterial" soap.
- Always wash hands after handling animals such as on farm visits and pets at home.[4] (See also section 11 on page 15.)
- Rub hands together vigorously until a soapy lather appears and continue for at least 15 seconds, ensuring all surfaces of the hand are covered.
- Rinse hands together under warm running water and dry hands with a hand dryer or clean towel (preferably paper). Ideally hot air dryers should not be used.

Other measures that will help prevent transmission of infection include:

a) Keep infectious skin lesions clean and covered where practicable.
b) Cough and sneeze into handkerchiefs or tissues. (Disposable gloves are not necessary when wiping a child's nose. Older children should be given, or encouraged to carry, a tissue and encouraged to blow their own nose and dispose of the tissue appropriately. Hands should be washed as soon as is practicable after nose-blowing.)
c) Ventilate school classrooms well.
d) Ensure that toilets have wash hand basins and soap dispensers, and that they are cleaned daily.
e) Provide disposable towels for hand drying.
f) Provide closed waste bins containing sealable bags for paper waste, and ensure that they are regularly changed. Bins with foot-pedal operated lids are preferable.

9 Pre-employment screening for staff

9.1 Tuberculosis

All staff working with nursery and school children should be assessed for their risk of tuberculosis before they start work. This may be done using a medical questionnaire, with a medical examination for those identified at higher risk.[5]

9.2 Rubella

Women of childbearing age should check with their GP that they are immune to the rubella (german measles) virus. Those who are not immune should be immunised.[2] [3] [6] The vaccine should not be given during pregnancy.

If a woman who is not immune to rubella is exposed to this infection in early pregnancy her baby can be affected. If a woman who may be pregnant comes into contact with rubella she should inform her GP promptly.

9.3 Polio

The oral polio vaccine used in the routine vaccination schedule (see Table 1 on page 8) is excreted in the stool. It may occasionally revert to "wild-type" as it passes through the gut, and become capable of causing disease in others. For this reason all staff working with children aged less than 5 should be fully immunised against polio.[2 3]

9.4 Hepatitis B vaccination

Hepatitis B vaccine is not recommended for routine school or nursery contacts of an infected child.

Hepatitis B vaccine is, however, recommended for staff involved in the care of children with severe learning disability or challenging behaviour; and for such children, if they live in institutional accommodation.[2 3]

9.5 Female staff in schools

Some infections, if caught by a pregnant woman, can pose a danger to her unborn baby.

9.5.1 Chickenpox:

Chickenpox can affect the pregnancy if a woman has not previously had the disease. If a pregnant woman is exposed early in pregnancy (the first 20 weeks) or very late in pregnancy (the last three weeks before birth) she should promptly consult her GP and whoever is giving her ante-natal care. A blood test can show if she is immune.

Shingles is caused by a re-activation of the virus that causes chicken pox. The virus is shed in the fluid from the blisters. Somebody with shingles may shed the virus for a week after the appearance of the blistering rash. But respiratory secretions (e.g. coughing) do not spread the virus, so it is very much less infectious. It would be reasonable to allow a child to school if the rash is not weeping, and can easily be covered. The child should be excluded from activities that cannot be performed while the rash is covered.

9.5.2 German measles (rubella)

If a woman who is not immune to rubella is exposed to this infection in early pregnancy her baby can be affected. If a woman who may be pregnant comes into contact with rubella she should inform her GP promptly.[6]

Women of childbearing age should check with their GP that they are immune to the rubella (german measles) virus. Those who are not immune should be immunised.[2 3] The vaccine should not be given during pregnancy.

9.5.3 Slapped cheek syndrome.

9.5.3.1 Women who should consider having blood tests for Parvovirus B19.

The following women should see their GP, midwife or obstetrician to consider having blood tests:[6-9]

Women who, while in the first 20 weeks of pregnancy -

- have been in close contact with a case (defined as living in a household setting with a case; sharing a meal with a case; or being in the same room as a case for over an hour) OR
- work (in contact with children) in a school or nursery where there is an outbreak of slapped cheek syndrome (defined as two or more cases in the same class or year group, or three or more cases in the school or nursery, with onset separated by less than three weeks).

9.5.3.2 Information about the illness

Slapped cheek syndrome is caused by a virus called Parvovirus B19. Also known as *"erythema infectiosum"* or "fifth disease", it is a common childhood disease, and has become more common recently. It is a mild disease in children, causing a slapped cheek appearance.

A child with Parvovirus B19 infection is contagious during the incubation period. During this time there is no rash or other sign that the child has an infection. The incubation period can last between 4 and 20 days. The rash occurs only after the child stops being contagious (unless they also have a rare complication). As the illness is usually only diagnosed after the rash has appeared, there is seldom any reason to exclude children with the condition from school.

About 60% of us contract the condition as children, and this gives us life-long immunity to future episodes. People with immunity cannot catch the virus again. Working with children aged under 10, or having children of this age in your own home, makes it a little more likely that you will become immune to this condition.

If a woman catches the virus while pregnant, the baby may also catch the virus. If a woman becomes infected before the first 20 weeks of pregnancy there is an increased risk of miscarriage of about 10%. Nothing can be done to prevent miscarriages due to Parvovirus B19 infection.

Rarely Parvovirus B19 infection may make the baby anaemic, which can cause a condition known as *hydrops fetalis*. Women who become infected between 9 and 20 weeks of pregnancy have a 3% risk of *hydrops fetalis*. This can cause a stillbirth. It can, however, be diagnosed from ultrasound scans, and treatment may prevent a stillbirth.

As most adult women are already immune to Parvovirus B19, fewer than 1% of women who are exposed to the virus between 9 and 20 weeks of pregnancy will develop *hydrops fetalis*.[6 8 9]

There is little point in excluding pregnant women from work, even if there is an outbreak of Parvovirus, as they are as likely to contract the disease in the community as in the workplace.

10 Vulnerable children

Some children have medical conditions that make them especially vulnerable to infections that would rarely be serious in most children.

- Schools should be aware of any children who have suppressed immunity. The most common type of immunosuppression in childhood is a child under active treatment for leukaemia or other cancers, and children on high doses of steroids by mouth. HIV, and some very rare diseases, may also lower immunity. Parents/carers and the school health services should notify schools of such children.
- These children are especially vulnerable to chickenpox and measles. If a vulnerable child is exposed to either of these the parents/carers should be informed promptly so that they can seek further medical advice as necessary.

11 Animals

11.1 Animals in school (permanently or visiting)

Animals may carry infections, especially gastroenteritis, and guidelines for protecting the health and safety of the children should be followed.

- Animal quarters should be kept clean. All waste should be disposed of regularly. Litter boxes should not be accessible to children.
- Particular care should be taken with reptiles as all species can carry salmonella.

11.2 Precautions for school visits to farms

- Check that the farm is well managed and that the grounds and public areas are as clean as possible. Note that manure, slurry and sick animals present a particular risk of infection and animals must be prohibited from any outdoor picnic areas.
- Check that the farm has washing facilities adequate and accessible for the age of the children visiting, with running water, soap (preferably liquid), and disposable towels or hot air dryers. Any drinking water taps should be appropriately designated in a suitable area.
- Explain to pupils that they cannot be allowed to eat or drink anything, including crisps, sweets, chewing gum etc., while touring the farm, or put their fingers in the mouth, because of the risk of infection.
- If children feed or touch farm animals, warn them not to place their faces against the animals, or to taste the animal feed.
- Ensure all pupils wash and dry their hands thoroughly after contact with animals, and particularly before eating and drinking.
- Meal-breaks or snacks should be taken well away from areas where animals are kept, and pupils warned not to eat anything that may have fallen to the ground.
- Any crops produced on the farm should be thoroughly washed in water before consumption.
- Ensure pupils do not consume unpasteurised produce, for example milk or cheese.
- Ensure all children wash their hands thoroughly before departure and ensure that footwear is as free as possible from faecal material.

Detailed advice about school trips is available from the Department for Education and Skills (DfES) – see, for example, “Health and Safety of Pupils on Educational Visits” (available at http://www.dfes.gov.uk/h_s_ev/hspv.pdf).[4]

12 Food poisoning and dysentery in schools

Notify suspected outbreaks of food poisoning to the environmental health department of the local authority immediately. (If you have any difficulty doing this, notify the HPU.) Prompt reporting will help us initiate investigation and control measures.

Emphasise hand washing during an outbreak, and when affected children return to school.

12.1 Food hygiene

The local authority's environmental health department will inspect all school catering facilities and procedures from time to time.

All catering staff – and any teachers who prepare or serve food – should receive instruction in basic food hygiene, and may require formal training. Local authorities can advise on the level of supervision, instruction, and/or training required.

Staff should not handle food or drink if they are suffering from:

- Infectious skin lesions.
- Diarrhoea, vomiting, or other foodborne disease (unless an infectious cause has been ruled out). If a food-handler has jaundice or diarrhoea, seek the advice of the local environmental health department or the HPU.
- Coughs and sneezes.

Staff should cover broken skin with waterproof dressings, and wear disposable gloves if appropriate.

13 Blood-borne infections

Rarely, infection with hepatitis B virus (HBV), hepatitis C virus (HCV) or human immunodeficiency virus (HIV) can be transmitted in blood, body fluids, and tissue. This is extremely unlikely in normal social contact, and these viruses will only penetrate open cuts and wounds or mucous membranes (such as the mouth or eyes).

Cuts and skin lesions should be covered with waterproof dressings, and disposable gloves worn prior to contact with blood or body fluids.

Infected children need not be excluded from schools and nurseries in normal circumstances. If a child's behaviour (e.g. biting and scratching) causes concern, the risk of transmission should be assessed on an individual basis. This assessment should involve an informed health care worker (e.g. school nurse, infection control nurse, community paediatrician) and care planned accordingly, or advice sought from the HPU.

13.1 Infection control measures for accidents involving bleeding/body fluids

13.1.1 General

1. Follow normal first aid procedures and wash hands after contact.
2. Spills of body fluids (blood, faeces, nasal and eye discharges, saliva and vomit) must be cleaned up immediately.
3. Wear disposable gloves. Be careful not to get any of the fluid you are cleaning up in your eyes, nose, mouth, or any open sores you may have.
4. Clean and disinfect any surfaces on which body fluids have been spilled. An effective disinfectant solution is household bleach diluted 1 in 10, but it must be used carefully. Bleach must not contact skin. More detailed information on the use of bleach is included in the Surrey Community Infection Control Policy.
5. Discard contaminated material in a plastic bag along with the disposable gloves. The bag must be securely sealed and disposed of according to local guidance, as agreed with the local environmental health department.
6. Mops used to clean up body fluids should be cleaned in a sink used solely for cleaning equipment (not a kitchen sink), rinsed with a disinfectant solution and dried.
7. Ensure contaminated clothing is hot laundered (minimum 60ºC) after an initial sluice in cold water.
8. Record and report the incident.
9. Never share items that are potentially contaminated with blood or body fluids. For example, if a sponge or cloth is used to mop blood from a child – at as sports event, perhaps – it must be disposed of in a plastic bag. It must never be returned to the bucket of clean water or used on another child.

13.1.2 If child has suspected blood-borne infection

As above, and seek medical advice.

13.2 Hepatitis B vaccination

Hepatitis B vaccine is not recommended for routine school or nursery contacts of an infected child.

Hepatitis B vaccine is, however, recommended for staff involved in the care of children with severe learning disability or challenging behaviour; and for such children, if they live in institutional accommodation.

14 Head lice

Head lice are parasitic insects called *Pediculus humanus capitis*. They only live on the heads of people.

The "Stafford Group" of the Public Health Medicine Environment Group has produced a report on head lice, and this is the basis of much of the policy adopted by the HPU. (Extracts from it are included in see section 9, starting on page 20) Further good information on head lice is available from the Public Health Laboratory Service Web Site (see page 57).

14.1 The scale of the problem.

Head lice are not a serious health problem in this country. They rarely, if ever, cause physical health problems other than itching of the scalp. Adverse health effects mainly derive not from the lice themselves, but from the human perception of them:

- excessive public and professional reactions lead to an inflated perception of prevalence, to unnecessary, inappropriate, or ineffective action, and to a great deal of unwarranted anxiety and distress.
- these actions and reactions in themselves cause problems, especially from the misuse and overuse of treatments.

This does not mean that they are not common; but we should not over-react to them.

14.2 Management of head lice

14.2.1 Early diagnosis and treatment

Head lice are common; particularly in primary school aged children, who tend to put their heads together with other children frequently. Early identification and treatment of head lice will minimise their spread. Children of primary school aged should probably have their heads checked for head lice at least weekly, especially if their friends are known to be infected. Information on how to do this is included in the Stafford Group document – see section 0 on page 24.

14.2.2 Treatments known to be effective.

It is essential that head lice are correctly diagnosed. This can only be done by identifying a living, moving louse. No treatment should be instituted unless this has been done.

The only treatments that were proven to be effective were lotions containing chemicals from the following three main groups: pyrethroids; malathion; and carbaryl[1]. Shampoos should not be used. The lotions do not reliably kill eggs, so they must be reapplied 7 days after the first treatment to kill newly hatched lice before they are old enough to lay eggs.

[1] Since the Stafford Report was published a new treatment – Dimeticone – has been shown to be effective.

Treatment failure is usually due to misdiagnosis, or to failure to apply the product correctly, or to reapply the lotion 7 days after the first application. Rarely treatment will fail despite being used correctly. In this situation it may be appropriate to use a different chemical lotion – but ideally only after treatment failure has been confirmed by somebody who has been trained to identify head lice.

Recent and current research suggests that "bug-busting" may be almost as effective as the treatments described above, but it requires a great deal of motivation on the part of the family to do it properly. Some novel treatments are also being investigated.

14.2.3 Role of the school nursing services.

Routine scalp checks by school nurses ("the nit nurse") have been shown to be ineffective, and withdrawn. It would not be worthwhile re-introducing them.

The Stafford Group did recommend that school nurses may have a part to play in the management of head lice. But this may be a relatively low priority for this hard-pressed service.

14.3 Extracts from the Stafford Document

The "Stafford Group" of the Public Health Medicine Environment Group has produced detailed information on the control of head lice. The full report, "Head Lice: a report for Consultants in Communicable Disease Control" is available on the internet via http://www.fam-english.demon.co.uk/phmeghl2.htm. This web site also lists other sources of information on head lice.

(The remaining text in this section is taken directly, unedited except for text in square brackets, from the Stafford Group document.)

- Schools must remember that most lice are caught in the family and the local community, not in the classroom.
- "Nitty Norah" head checks will not help, but the School Nurse can advise and support parents/carers to check their own families.
- "Alert" letters should not be sent out. These can cause an "outbreak" of imaginary lice.
- Children who may have lice should not be excluded from school; if they do have lice, they will probably have been there for weeks already. The School Nurse can help the parents/carers to make sure whether there really are lice there, and how to get rid of them if they are.
- The school should give information on lice for parents/carers and staff including regular detection combing and how to do it. This should be on a regular basis, not just when there is thought to be an "outbreak", and should be done with the School Nurses.
- Talks for parents/carers by the School Nurse can be helpful.

14.3.1 Notes and guidance for school nurses

(Or other responsible school health officer)

14.3.1.1 General

- Please read [this] Statement carefully. It is your professional duty to ensure that you are fully informed and up to date with current scientific knowledge and practice.
- Health professionals should make sure that they are able to identify a louse at all stages of its development. It helps to have a magnifying glass to hand.
- Parents/carers and staff should be made aware that head lice are only transmitted by direct, prolonged, head-to-head contact.

14.3.1.2 Specific

- Do not undertake routine head inspections as a screening procedure. Detection combing should be done by parents/carers, but it is important that you give them proper information, advice and support. This should be in accordance with the Statement.
- Do especially always adhere to the following principles of control:
  - definite diagnosis; a living, moving louse found by detection combing
  - listing and examination of contacts by the family
  - simultaneous thorough and adequate treatment of all cases
  - repeat of the treatment after seven days
- Do make a professional assessment of reported cases of head louse infection of any child in the school. If the report is from the child's parent, make sure that the parents/carers are provided with information, advice and support. If the report is from a teacher, for example that the child is scratching continuously or that a moving louse has been seen on the head, it may be necessary to examine the child to establish a diagnosis. If your knowledge of the parents-/carers is good, it may be sufficient to make contact with them to ensure that they know how to undertake detection combing and what to do if there are head lice present.
- Do not diagnose head louse infection unless you yourself have found a living, moving louse, or you have physical evidence from the parents/carers; ask them to stick one of the lice on a piece of paper with clear sticky tape and bring it in to you or one of their other health advisors.
- Do not recommend the head teacher to send out "alert letters" to other parents-/carers. In fact, encouragement should be given not to do so.
- Do yourself understand and teach your families and school staff that the correct use of insecticidal lotions is the scientifically confirmed way to treat head louse infections.
- Do not ever recommend treatment unless a louse has been clearly identified (as described above). If you do recommend treatment, ensure that it is done adequately for the case and infected contacts.

- Do make every effort to discourage unnecessary or inappropriate treatment with insecticides.
- Do not assume that “reinfections” or “treatment failures” are truly infections. Make sure that a louse is found or produced.
- Do not ever recommend retreatment without first of all establishing that living, moving lice are still present after two applications of lotion seven days apart and after a full professional assessment as to the ways in which the family may not have complied carefully with the first attempt.
- Do resist the temptation to agree with parents’/carers’ suggestions that a first course of treatment has failed, that “it must be a resistant strain”, and that a further course of treatment should be given. This may be an easier approach in a busy schedule, but is not in the best interests of the family. There is no substitute for a proper professional assessment.
- Do be prepared to do a domiciliary visit if that is the most tactful and effective way of dealing with a family problem, especially for a “problem family”. You have the professional skills and training to educate, persuade, inform, guide and support them.
- Do not recommend or support any mass action, including wet combing campaigns.
- Do not support the use of electronic combs, repellent sprays, or chemical agents not specifically licensed for the treatment of head louse infections.
- Do play an active part in providing regular accurate information about head lice to parents/carers and staff. This should be done in conjunction with your local Consultant in Communicable Disease Control and the head teacher, and should preferably be integrated into a package along with information on other health issues.
- Do not wait until there is a perceived major outbreak and corresponding agitation in the school. A regular educational programme rather than a reactive “campaign” is more sensible.

14.3.2 Notes and guidance for head teachers

14.3.2.1 General

- Please read [this] Statement carefully. You may worsen the problem in your school if you are under the same misapprehensions as many of your parents-/carers.
- Head louse infection is not primarily a problem of schools but of the wider community. The school cannot solve it, but the school can help the local community to deal with it.
- Head lice are only transmitted by direct, prolonged, head-to-head contact.
- Transmission of lice within the classroom is relatively rare. When it does occur, it is usually from a “best friend”.
- Head lice will not be eradicated in the foreseeable future, but a sensible, informed approach, based on fact not mythology, will help to limit the problem.
- At any one time, most schools will have a few children who have active infection with head lice. This is often between 0% and 5%, rarely more.
- The perception by parents/carers and staff, however, is often that there is a serious “outbreak” with many of the children infected. This is hardly ever the case.
- The “outbreak” is often an outbreak of agitation and alarm, not of louse infection. A societal problem not a public health problem.

14.3.2.2 Specific

- Do have a written protocol on the management of the head louse problem, based on the Statement and this Appendix. If possible, agree a protocol for your area in consultation with the Local Education Authority, the local Consultant in Communicable Disease Control, Infection Control Nurses, the School Nurses, and, if appropriate, your colleagues in other schools.
- Do make sure that your school nurse is informed in confidence of cases of head louse infection. The school nurse will assess the individual report and may decide to make confidential contact with the parents/carers to offer information, advice and support.
- Do keep individual reports confidential, and encourage your staff to do likewise.
- Do collaborate with your school nurse in providing educational information to your parents/carers and children about head lice, but do not wait until there is a perceived “outbreak”. Send out information on a regular basis, preferably as part of a package dealing with other issues.
- Do consider asking your school nurse to arrange a talk to parents/carers at the school if they are very concerned. Be present yourself and encourage your staff to attend; they are just as likely to be misinformed about head lice as the parents/carers. You may prefer to arrange a separate talk for the staff.
- Do ensure, with the school nurse, that your parents/carers are given regular reliable information, including instructions on proper diagnosis by detection

combing, the avoidance of unnecessary or inappropriate treatments, and the thorough and adequate treatment of definitely confirmed infections and their contacts using an insecticidal lotion.

- Do advise concerned parents/carers to seek the professional advice of the school nurse, the family practice, or the local pharmacist.

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- Do not send out an “alert letter” to other parents/carers.
- Do not exclude children who have, or are thought to have, head lice.
- Do not recommend or support any mass action, including wet combing campaigns.
- Do not agree with angry parents/carers that routine head inspections should be reintroduced. They were never effective.
- Do not refer parents/carers directly to the Consultant in Communicable Disease Control. The appropriate clinical advisors are the school nurse, the local pharmacist, the health visitor, and the general practitioner.
- Do not take, or support, actions simply “to be seen to be doing something” (such as sending out “alert letters”).

14.3.3 Have you got head lice? - notes for families

14.3.3.1 Detection combing - how to do it

You need; plastic detection comb (from the chemist)
good lighting
ordinary comb

- Wash the hair well, then dry it with a towel. The hair should be damp, not dripping.
- Make sure there is good light. Daylight is best.
- Comb the hair with an ordinary comb.
- Start with the teeth of the detection comb touching the skin of the scalp at the top of the head. Draw the comb carefully towards the edge of the hair.
- Look carefully at the teeth of the comb in good light.
- Do this over and over again from the top of the head to the edge of the hair in all directions, working round the head.
- Do this for several minutes. It takes 10 to 15 minutes to do it properly for each head.
- If there are head lice, you will find one or more lice on the teeth of the comb.
- Head lice are little insects with moving legs. They are often not much bigger than a pin head, but may be as big as a sesame seed (the seeds on burger buns).
- Clean the comb under the tap. A nail brush helps to do this.

- If you find something and aren't sure what it is, stick it on a piece of paper with clear sticky tape and show it to your school nurse or family doctor. There can be other things in the hair which are not lice.

Notes

- You can buy a plastic detection comb from the chemist.
- If you need help and advice, ask your local chemist, health visitor, school nurse, or family doctor.
- Don't treat unless you are sure that you have found a living, moving louse

15 Meningitis and meningococcal disease

Meningitis means inflammation of the membranes that over the brain and spinal cord. More detailed information is included in the HPU's "Guidance on the management of meningococcal disease in Surrey". This is available from our web site (www.bigfoot.com/~scdcs).

15.1 Viral meningitis

Viral meningitis is more common than the bacterial form, but generally less serious - although it can be very debilitating. Many different viruses can cause it. Antibiotics cannot help viral meningitis.

In mild cases of viral meningitis, people would not even go to their doctor. However, as the symptoms are similar to the bacterial form, someone with a severe case of viral meningitis will need to be admitted to hospital for test to find out which form they are suffering from.

With viral meningitis the child is unwell for a short time, a full recovery is usually made, and no action needs to be taken with regard to the community. There may be short to medium term after effects such as headache, difficulty concentrating, and irritability.

15.2 Meningococcal disease

Information about meningococcal disease is included in the advice sheet in appendix III on page 55. The HPU has a policy for the control of meningococcal disease, which is posted at its will be posted at the web site (http://www.bigfoot.com/~scdcs) when it has been finalised.

When the HPU is notified of a case of meningococcal disease in a child who attends a school or nursery, it will advise the school or nursery of any action that is required.

Schools and nurseries who are notified by a parent of a case of meningitis, and who have not already heard from the HPU, should contact the service. The HPU will be able to check on the diagnosis, and give appropriate support and advice.

15.2.1 Contacts of a case of meningococcal disease

The HPU, with clinicians looking after the case, will draw up a list of close contacts and assess whether they need any treatment. All contacts will be made aware of the symptoms and signs that should alert them to seek medical advice (see appendix III on page 55). Schools and nurseries are encouraged to discuss with the HPU whether to send out a letter to parents/carers to reassure and inform them. Schools and nurseries may also distribute appropriate leaflets from the meningitis charities (see page 46). All staff should be aware of the case, and the information issued to parents/carers.

16 Scabies

A child who has scabies can return to school as soon he or she has been properly treated. Treatment should include all the persons in the household.

The symptoms of a scabies infection are the result of an allergic response to the scabies mite and its products.

Scabies causes itching, and a symmetric rash that may include spots, small lumps and blisters. The itching is at its worst when the body is warm, for example after exercise or in a warm bed or bath.

The earliest sign is a “burrow”, which looks like a short, wavy, dirty line. Most burrows are destroyed because of the intense itching. They can best be seen on the finger webs, the palm side of the wrist, and the front of the elbow. They may also be seen under the breasts and armpits and around the navel.

The scabies rash can be widespread and affect almost any part of the body. In infants the rash may cover most of the body.

As the rash is due to an allergic reaction its distribution is not related to the location of the mites and burrows. That is why the whole body must be treated.

The most important factor in making a diagnosis of scabies is clinical suspicion, based on the combination of severe itching, a rash, and presence of itching in family members and/or close contacts.

If a school or nursery suspects that one of the children has scabies, they should ask for him or her to be seen by a GP to confirm the diagnosis and prescribe treatment.

Two careful and thorough applications of scabicide one week apart are recommended.

If an outbreak of scabies is suspected, the HPU should be contacted for advice.

17 Appendix I: Exclusion Periods

The following information is based on a poster issued by Department of Health, Department for Education and Employment, and Public Health Laboratory Service. Copies of the poster can be obtained from Department of Health, PO Box 410, Wetherby LS23 7LN, fax 01937 845381. All schools and nurseries should obtain a copy.

Staff who are ill should also stay away from school, using the same criteria as for children.

Table 2: Exclusion period for illnesses causing rashes and skin complaints

Condition	Recommended period to be kept away from school or nursery (once well, or as stated)	Comments
Athletes foot	None	
Chickenpox	For five days from onset of rash	It is not necessary to wait until spots have healed or crusted. (Important: see "Pre-employment screening for staff" on page 11, and "Vulnerable children" on page 14.)
Cold sores (Herpes simplex virus)	None	Many healthy children and adults excrete this virus at some time without having a "sore".
German measles (rubella)	For five days from onset of rash	The child is most infectious before the diagnosis is made and most children should be immune due to immunisation so that exclusion after the rash appears will prevent very few cases. (Important: see "Pre-employment screening for staff" on page 11.)
Hand, foot and mouth disease	None	Usually a mild disease not justifying time off school.
Impetigo	Until lesions are crusted or healed	Antibiotic treatment by mouth may speed healing. If lesions can reliably be kept covered exclusion may be shortened.
Measles	Five days from onset of rash	Measles is now rare in the UK. (Important: see "Vulnerable children" on page 14.)
Molluscum contagiosum	None	A mild condition.
Ringworm (Tinea)	None	Proper treatment by the GP is important. Scalp ringworm needs treatment with an antifungal by mouth.

Condition	Recommended period to be kept away from school or nursery (once well, or as stated)	Comments
Roseola	None	A mild illness, usually caught from well persons
Scabies	Until treated	Outbreaks have occasionally occurred in schools and nurseries. Child can return as soon as properly treated. Treatment should include all the persons in the household.
Scarlet fever	Five days from commencing antibiotics	Treatment recommended for the infected child.
Shingles	See notes.	Exclude only if the rash is weeping, and cannot easily be covered. Excluded from activities that cannot be performed while the rash is covered.
Slapped cheek or Fifth disease (*Parvovirus*).	None	(Important: see "Pre-employment screening for staff" on page 11.) Exclusion is ineffective as nearly all transmission occurs before the child becomes unwell.
Warts and verrucas	None	Affected children may go swimming. Verruca socks are NOT recommended.

Table 3: Exclusion period for illnesses causing diarrhoea and/or vomiting

Condition	Recommended period to be kept away from school or nursery (once child is well, or as stated)	Comments
Diarrhoea and/or vomiting (with or without a specified diagnosis)	Until diarrhoea and vomiting has settled (neither for the previous 48 hours)	Usually there will be no specific diagnosis and for most conditions there is no specific treatment. A longer period of exclusion may be appropriate for children under age 5 and older children unable to maintain good personal hygiene.
E. coli and Haemolytic Uraemic Syndrome	Depends on the type of E. coli. Seek further advice from the HPU	
Giardiasis	Until diarrhoea has settled (none for the previous 24 hours)	There is a specific antibiotic treatment
Salmonella	Until diarrhoea and vomiting has settled (neither for the previous 48 hours)	If the child is under 5 years or unable to maintain good personal hygiene seek advice from the HPU
Shigella (bacillary dysentery)	Until diarrhoea has settled (none for the previous 48 hours)	If the child is under 5 years or unable to maintain good personal hygiene seek advice from the HPU
(See also “Box 1: Hand-washing” on page 10.)		

Table 4: Exclusion period for respiratory illnesses

Condition	Recommended period to be kept away from school or nursery (once child is well, or as stated)	Comments
“Flu” (influenza)	None	Flu is most infectious for a brief period before the onset of symptoms.
Tuberculosis	the HPU will advise on action	Generally requires quite prolonged, close contact for spread. Not usually spread from children.
Whooping cough (pertussis)	Five days from commencement of antibiotic treatment	Treatment (usually with erythromycin) is usually recommended though non-infectious coughing may continue for many weeks.

Table 5: Exclusion period for other illnesses

Condition	Recommended period to be kept away from school or nursery (once child is well, or as stated)	Comments
Conjunctivitis	None	If an outbreak occurs consult the HPU
Glandular fever (infectious mononucleosis)	None	
Head lice (nits)	None	Treatment is only recommended where live lice have definitely been seen (see section 0 “Head lice”, on page 19).
Hepatitis A	See comments	There is no justification for exclusion of well older children with good hygiene who will have been much more infectious prior to the diagnosis. Exclusion is justified for five days from the onset of jaundice or stools going pale for the under fives or where hygiene is poor.
Meningococcal meningitis/-septicaemia	the HPU will give specific advice on any action needed	There is no reason to exclude from school siblings and other close contacts of a case. (See also section 0 on page 26.)
Meningitis not due to meningococcal infection	None	Once the child is well infection risk is minimal
Mumps	Five days from onset of swollen glands	The child is most infectious before the diagnosis is made and most children should be immune due to immunisation.
Threadworms	None	Transmission is uncommon in schools, but treatment is recommended for the child and family
Tonsillitis	None	There are many causes, but most cases are due to viruses and do not need an antibiotic. For one cause, streptococcal infection, antibiotic treatment is recommended.

Condition	Recommended period to be kept away from school or nursery (once child is well, or as stated)	Comments
HIV/AIDS	HIV is not infectious through casual contact. There have been no recorded cases of spread within a school or nursery. (See section 0, “Blood-borne infections”, on page 17.)	
Hepatitis B and C	Although more infectious than HIV, hepatitis B and C have only rarely been spread within a school setting. Universal precautions will minimise any possible danger of spread of both hepatitis B and C. (See section 0, “Blood-borne infections”, on page 17.)	

18 Appendix III: Meningococcal Disease

18.1 Example of an advice sheet about meningococcal disease

About meningococcal meningitis and septicaemia.

Meningitis means inflammation of the membrane covering the brain and spinal cord. Various bacteria and viruses can cause meningitis. Meningococcal septicaemia is a type of blood poisoning caused by meningococcus – one of the bacteria that can cause meningitis.

Disease caused by the meningococcus (“meningococcal disease”) is uncommon, but often serious. The germs are common, and live naturally in the back of the nose and throat. People of any age can carry these germs without becoming ill. It is only rarely that they overcome the body’s defences and cause meningitis or septicaemia. If diagnosed and treated quickly most people make a full recovery.

Bacteria are spread between people by close prolonged contact. They cannot live outside the body for long, and cannot be picked up from cutlery, cups, sharing drinks, water supplies, swimming pools, or buildings.

Antibiotics are prescribed for immediate family members or very close (“kissing”) contacts who, during the 7 days before the person became ill, were in prolonged contact with the case. Other contacts, such as school classmates and school staff, or work colleagues, are only very rarely at risk, and do not normally need antibiotics. Antibiotics given to those who do not really need them may do more harm than good, by eradicating protective bacteria in the throat.

If illness is caused by a vaccine-preventable strain, then vaccine is usually offered to the same people as are offered antibiotics, if they have not had the vaccine previously, to give them longer-term immunity. By winter 2000 this vaccine should have been offered to everybody born since August 1981. But there is no vaccine available to protect against the UK’s commonest strain of meningococcus.

It is wise to be aware of the symptoms and to call your own doctor immediately for advice if you are worried, or go straight to the nearest casualty department as early treatment is vital. Recognising the disease is not always easy, as the symptoms are similar to flu or a hangover. Things to look out for are: High temperature; Nausea or vomiting; Neck stiffness; Dislike of bright lights; Drowsiness or confusion; Joint pains.

Sometimes a rash may appear. This starts out as red spots or blotches, and may become purplish. As the disease progresses the rash may stop fading when pressed with a glass object.

The Meningitis Research Foundation run an excellent, 24-hour, freephone helpline: 0808 800 3344. If you have any queries that they cannot answer, please contact the HPU.

Small quantities of leaflets may also be obtained from the HPU.

19 Appendix IV: Parvovirus B19: calculation of risks.

(See section 9.5.3 on page 12 for more information about Parvovirus B19 infection.)

Assume that, in the first half of pregnancy: (i) 60% of pregnant women are already immune to the virus; (ii) there is a 50% chance of becoming infected if exposed and non-immune; (iii) foetal hydrops develops in 3% of those infected between 9 and 20 weeks of pregnancy; and (iv) the excess risk of miscarriage in those infected before 20 weeks of pregnancy is 10%.

The probability of hydrops developing when a woman who is of unknown Parvovirus B19 immune status, and is exposed to the virus between 9 and 20 weeks of pregnancy, is therefore:

$$0.4 \times 0.5 \times 0.03 = 0.006 \text{ or } 0.6\%.$$

Similarly, the excess risk of miscarriage in such a woman (in the first 20 weeks of pregnancy) is:

$$0.4 \times 0.1 = 0.04 \text{ or } 4\%.$$

20 Appendix V: References

20.1 Other useful resources

20.1.1 Web sites

Location	URL
Surrey & Sussex Health Protection Unit (Surrey Office) (Includes links to information specifically for schools).	www.bigfoot.com/~scdcs
Head lice information	http://www.fam-english.demon.co.uk/phmeghl2.htm
Health Protection Agency head lice page	http://www.phls.co.uk/advice/wfhheadlice.htm
"Wired for Health" Factsheets for Schools	www.wiredforhealth.gov.uk
Department of Health and Human Services. The ABCs of safe and healthy child care. A Handbook for Child Care Providers. 1996. U.S. Public Health Service. Centers for Disease Control and Prevention.	www.cdc.gov/ncidod/hip/abc/abc1.pdf

20.1.2 References from the text

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