THE SPOTTY BOOK:

NOTES ON

INFECTIOUS DISEASES IN SCHOOLS AND NURSERIES

Public Health England
South West

2016 - 2019

Foreword

This booklet provides general guidance for schoolteachers and others with children in their care on the prevention and control of infectious diseases.

The advice applies to schools and any other care settings e.g. nurseries, playgroups and child-minders. “School” will be used throughout to indicate all these areas; except where otherwise indicated.

We advise a proactive, preventative approach. A policy on when children must be kept away due to illness should be decided by the school. Parents should be made aware of the policy and agree to follow it.

You should consider the following:

1. In general, children who are unwell with infectious diseases must not attend school, although mild snuffles and colds need not necessarily prevent a child attending.
2. If a child becomes ill during care, parents/carers must be contacted and the child taken home if necessary. It is recommended that schools, child-minders, nurseries and playgroups have a record of each child's GP and alternative phone numbers if you are unlikely to be able to get in contact with the parents/carers.
3. Parents should notify the school if their child has an infectious disease.
4. The school should notify parents if a significant risk to other children exists.
5. A child with an infectious disease should be excluded from school until fully recovered and if it is one of the diseases listed in the table (Appendix 4) until the required period has passed.
6. Check that parents understand your rules and accept that they will have to take time off, or make other arrangements for their child's care, if their child is ill.
7. Be aware of children and staff who are more susceptible to infection due to underlying diseases, treatment or pregnancy.
8. If in doubt seek further advice from School Nurse / Health Visitor / GP and Public Health England

Acknowledgements

The first edition of the "Spotty Book" was produced in Plymouth in the 1970s. Since then there have been several editions both in Plymouth and in other counties in the South West. Authors and editors include Paediatricians, Microbiologists, General Practitioners, Nurses and Public Health Physicians. Contributions and comments have been provided by numerous people. This edition provides up to date information, and has been produced for the South West. It ensures that advice is consistent. Local contact names and numbers are provided in Appendix 5 for each county.

Public Health England South West

Public Health England

Richmond Court, Emperor Way, Exeter Business Park, Exeter,

Devon EX1 3QS

Tel 0300 303 8162 (option 1; option 1)

3rd Floor, 2 Rivergate, Temple Quay, Bristol,

Avon BS1 6EH

Tel: 0300 303 8162 (option 2; option 1)

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Notes on infectious diseases in schools

Introduction:

Control of infection among children in schools depends upon:

PREVENTION
EARLY RECOGNITION OF EACH CASE
PROMPT ACTION AND FOLLOW UP

Infections may be:

- Acquired at home or the community and brought into school
- Acquired and spread within school

In addition, members of staff (teachers, classroom assistants, catering, caretaking, clerical etc.) may become infected.

The following guidance provides background information about the most common infections and outlines the appropriate action to be taken to limit their spread. It updates and replaces all previous versions.

The key personnel include:

- Head Teacher/ Principal and Manager
- School Nurse
- Health Visitor (for children in nurseries or play-groups)
- Public Health England (PHE) (communicable disease control)
- General Practitioner
- Consultant Microbiologist

Other stakeholders may be requested to attend any meeting if their input is required e.g. Paediatrician, Environmental Health; Occupational Health.

Prompt communication between each of this will ensure that children and staff are not exposed unnecessarily to infectious diseases and may help to reduce undue anxiety.

1. Childhood immunisation

There is a recommended timetable for routine childhood vaccinations. This timetable has been worked out to give children the best chance of developing immunity against common diseases safely and effectively and the scheduling is timed to minimise the risk of catching these diseases**.** More people than ever received a vaccination against flu as part of the national flu immunisation programme. In addition, children in the first two years of primary school education were offered flu vaccination in all areas which contribute significantly to reducing illness and deaths caused by the influenza virus. There is a roll-out immunisation programme which ensures that more primary school-aged children will continue to receive the vaccine. In 2016 children in year 3 will be eligible to receive the live attenuated vaccine. It is hoped that this will help to increase vaccine uptake rates, particularly among those who are most vulnerable to the effects of flu.

This means that very few cases of vaccine preventable childhood diseases should now occur but until all children are protected in this way; sporadic cases will continue to be seen.
As new information becomes available about any further changes to the schedule for 2017 and 2018 this will be updated in this book.

Current routine immunisation schedule summer 2016

When to immunise	What is given and trade name
Eight weeks old	• DTaP/IPV/Hib (diphtheria, tetanus, pertussis (whooping cough), polio, and *Haemophilus influenzae* type b) - Pediacel or Infanrix • PCV (pneumococcal conjugate vaccine) - Prevenar 13 • Men B (Meningococcal group B disease) - Bexsero • Rotarix (Rotavirus gastroenteritis)- Rotarix by mouth
Twelve weeks old	• DTaP/IPV/Hib - Pediacel or Infanrix IPV Hib • MenC (Meningitis C) - NeisVac-C • Rotarix (rotavirus gastroenteritis) - Rotarix by mouth
Sixteen weeks old	• DTaP/IPV/Hib - Pediacel or Infanrix IPV Hib • MenB (Meningitis B) -Bexsero • PCV (Prevenar 13) -Prevenar 13
One year old	• Hib/MenC booster - Menitorix • PCV booster – Prevenar 13 • MMR (measles, mumps and rubella) - MMR VaxPRO or Priorix • MenB booster-Bexsero
Two to six years old (including children in school years 1 and 2)	• Live attenuated influenza vaccine LAIV – Fluenz Tetra

3 years 4 months	• DTaP/IPV -Infanrix IPV or Repevax • MMR (Check that first dose has been given) – MMR VaxPRO or Priorix
Girls aged 12 to 13 years old	• HPV (Protects against Human Papillomavirus types 16 and 18 and genital warts caused by types 6 and 11)- Gardasil
Fourteen Years old **(School Year 9)**	• Td/IPV (Revaxis) and check MMR status • Men ACWY (Meningococcal groups ACWY disease) -Nimenrix, Menveo

*** If there is no record of immunisation check with Practice Nurse**

Vaccinations for premature babies

Babies who are born early can be at greater risk from infections than babies born on time. This is because their immune systems are less developed and they don't receive as much natural immunity from their mothers.

It's especially important that premature babies get their vaccines on time, from two months after birth, no matter how premature they are.

It may seem very early to give a vaccination to such a tiny baby, but many scientific studies have shown that it's a good time to give them vaccines. Postponing vaccination until they're older leaves them vulnerable to diseases.

2. Hand hygiene

Hand hygiene is essential in preventing the spread of many infections including skin, nose, throat, eye and stomach or bowel infections.

Toilet facilities must have:

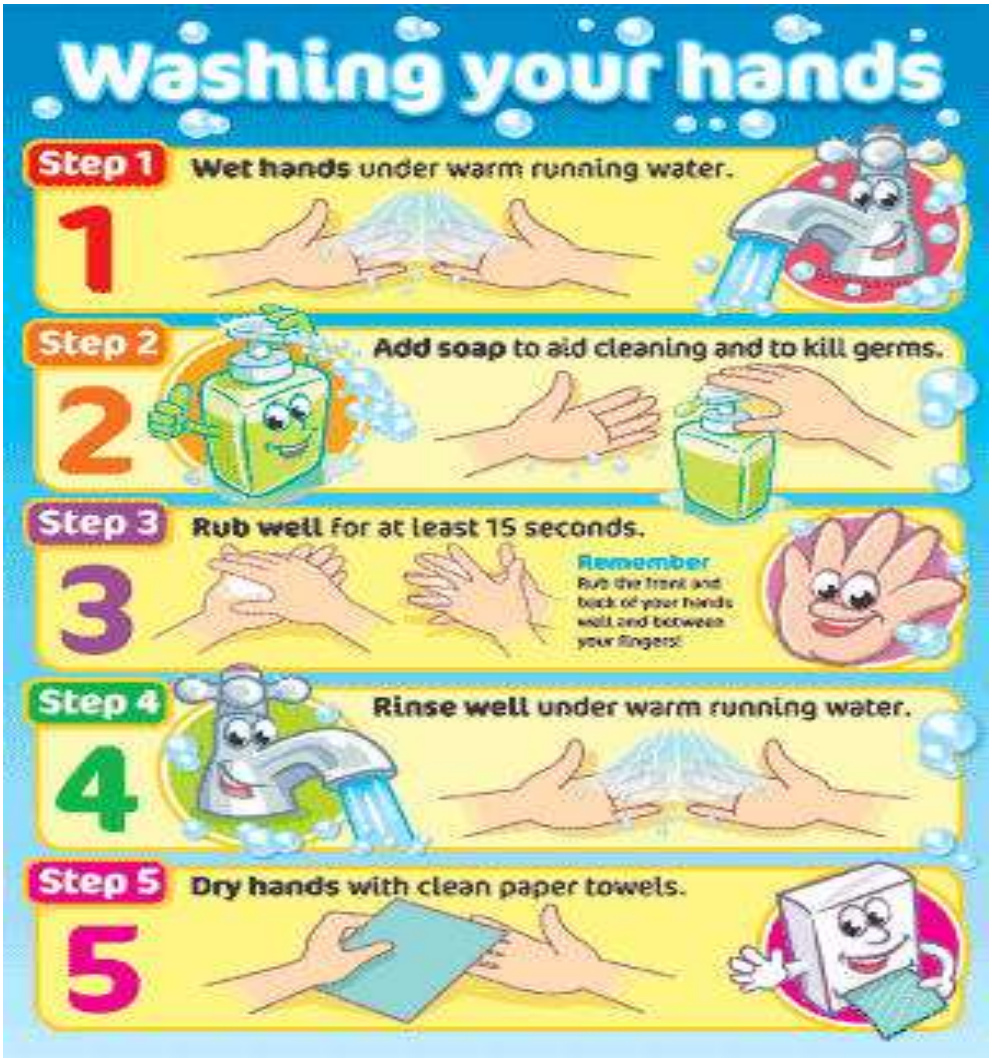
- Wall mounted soap dispensers
- Water that is hot (preferably a mixer tap which can take the water to a safe temperature)
- Paper towels
- Foot action pedal bins

*Bars of soap and hand towels are not acceptable.

Hand washing with warm water and liquid soap is recommended as follows:

- if hands are visibly soiled
- immediately after hands have been contaminated with respiratory secretions, blood, faeces, urine or other body fluid
- after changing a nappy
- before serving food
- after going to the toilet
- after handling animals

Hand Washing Posters –Cut and Paste or Photocopy


Washing your hands
Step 1
Wet hands under warm running water.
1
Step 2
Add soap to aid cleaning and to kill germs.
2
Step 3
Rub well for at least 15 seconds.
3
Remember
Rub the front and back of your hands well and between your fingers!
Step 4
Rinse well under warm running water.
4
Step 5
Dry hands with clean paper towels.
5

NHS
Wet
Soap
Wash
Rinse
Dry
Stop germs spreading.
The power is in your hands.
Have you washed your germs away? Wash your hands.

3. Cleaning, disinfection and suitable facilities

The cleanliness of any environment is important to support infection prevention and control and ensures that the building/ unit can be used with confidence. Cleaning staff play an important role in improving the quality of the surroundings. A clean (free from dust, dirt and grease) and dry environment poses little or no threat of infection to healthy adults and children.

Cleaning with detergent and water is normally all that is needed as it removes the majority of germs that can cause disease. Disinfection reduces the number of germs still further and can be carried out after adequate cleaning has been done when there is a particular risk of infection. There are many disinfectants that are safe to use around children and pets, e.g. Milton. Check the label and make sure that it states that it can kill both viral and bacterial infections. For example when there is an outbreak of diarrhoea and vomiting or influenza-type symptoms.

The first thing to consider is that there is no legislative requirement to operate a colour-coded cleaning regime. However, it is generally considered good practice to adopt such a scheme when cleaning commercial premises and stops equipment being used in different areas e.g. toilet and then used in a kitchen.

As a result, and given the importance afforded to infection control, the cleaning industry has developed a widely used colour-coding system for all relevant cleaning equipment which should be used in the areas as identified by the various colours.

There are four colours and these are

BLUE	Generally used when cleaning areas that are considered to present a low risk of infection. All equipment can be used to clean classrooms/offices/reception areas etc.
GREEN	All kitchen areas within the school/nursery should use green equipment. However; toilets/storerooms/locker rooms and changing areas should still use the relevant colours in areas that are not food preparation areas
RED	This is for **high risk** areas in relation to the spread of infection, such as toilets/washrooms/showers. Including all fixtures and fittings
YELLOW	Should be used in washroom areas for cleaning all fixtures and fittings and surfaces that are not considered critical in terms of infection. These include worktops/ doors/pipework/towel dispensers/sink and basins

Toilet areas: Toilets in schools and nurseries should be of the correct size for the children. Small children have to slide forward to get off adult size toilets which may result in the seat becoming smeared with urine or faeces.

Areas to clean daily and when visibly dirty – remember that areas to clean are much lower than adult hand height:

- Toilet seats
- Flush handles
- Wash hand basins and taps
- Lower part of doors
- Toilet door handles must be cleaned at least daily and when visibly dirty. Standard detergent and warm water is ideal for cleaning and dry thoroughly

Nappy changing: The area must have:

- Access to a wash basin and running water; ideally it should be situated in the toilet area
- Foot operated pedal bin
- Gloves and aprons-ideally these should be wall mounted out of the reach of children
- The area must be situated well away from food preparation, serving and eating areas
- The changing mat must be free from any cuts to the material and should be waterproof and easy to clean between children
- Clean with detergent and water and then dry thoroughly between children

Soiled clothes: Items of clothing that may become soiled should not be swilled out or left in soak (faecal material can become airborne and can be the cause of contamination on surfaces). Care should be taken to wipe away any faecal matter with wipes/toilet paper and the soiled article placed in a plastic bag and sent home.

All staff when changing children must wear appropriate PPE when dealing with soiled nappy/pants and wash hands after the procedure.

Potties: Potties can be emptied in a sluice area (if possible) or down the toilet. It should then be washed with detergent and hot water, rinsed and dried. The use of scrubbing brushes is not encouraged as they can damage the surface and add to the risk of infection. Better to buy economy potties and change them regularly if there is a need.

4. Dealing with spills of body fluids.

It is advisable for a spillage kit to be on hand for prompt action, it should be kept in an area that all staff know how to find it, preferably not in a locked room. It doesn't have to be costly and the kit can be made up at the school.

Suggestions for the kit:

- Coloured plastic bucket – clearly labelled "Spillage Kit"
- Kitchen roll or similar paper to place on spillage
- Plastic bag
- Apron and Gloves
- Spillage granules – not compulsory, but can speed up the cleaning process

Whose responsibility?

Ensure that school guidelines state a plan of action as to who does what after the initial first aid measures:

- Should staff continue to clear the spillage

Or

- Should the caretaker take over as they will be the most experienced person to know how to deal with cleaning materials and disinfectants?

Staff should be aware that it is the responsibility of everyone to try to minimise the risk to others by ensuring first aid measures are used.

- Cordon off the affected area.
- Cover the spillage with absorbent paper (kitchen roll/paper hand towels). Germs can become airborne in vomit and diarrhoea. By placing absorbent paper on top this will minimise the germs rising into the air.
- Inform school caretaker/cleaner as soon as possible.
- Wear Personal Protective Equipment (PPE) Apron and Gloves when dealing with spillages.
- Clean up the spillage, remove the paper towels, double bag the spillage and place in the plastic bag in the waste bin
- Clean area carefully with warm soapy water, using either disposable cloths or wipes.
- Clean the underside and legs of desks/tables/chairs in the affected area
- Consider disinfecting the dry clean surface with either disinfectant wipes or by using an appropriate disinfectant that states that it will kill bacteria and viral infections.
- Always ensure that the equipment used is cleaned afterwards.

- **Mop Heads** – if disposable, place in a plastic bag and put into the waste bin. If washable, place into a washing machine and follow the washing instructions and thoroughly dry.

- **Buckets** – clean with detergent and water and then use a disinfectant and thoroughly dry.

- **After use** - PPE must be removed and disposed of into the foot operated bin.

Always wash your hands after dealing with spillages.

Carpeted areas:

- Where a spillage has occurred in a carpeted area, treat according to the type of spillage outlined above.
- Contact school caretaker/deal with as necessary by staff as soon as possible in order that the carpet can be domestically cleaned using carpet suction cleaner after the spillage has been treated.
- Remember disinfectants that are chlorine based disinfectants may bleach carpet

5. Management of cuts/abrasions and spills of blood.

There is a very small risk of infection with certain blood-borne viruses (Hepatitis B / C and HIV) to staff and children when bleeding occurs during an accident or a sport injury.

If precautions are taken then the risk is minimised:

- Gloves must be worn when in contact with **any** accident or injury (washing grazes, dressing wounds, cleaning up blood after an incident) and wear a disposable plastic apron if possible.
- Carefully clean the wound under running water if possible or use a disposable container with water and wipes. Dab carefully dry.
- Children and adults should have all exposed cuts and grazes covered with waterproof plasters.
- If there is a spillage of blood or body fluids, use the guidance above
- If someone suffers a bite, scratch or puncture injury that may have introduced someone else's blood or experiences a splash of blood to the eye, area of broken skin or mouth - rinse well with water and seek medical advice.

6. Guidelines on farm and countryside visits

Visiting a farm / centre is an enjoyable and educational experience for many people, particularly children. However, such visits can never be free from all risks. Farm animals, even those that look clean and healthy, carry infections that can be harmful to people. The bacterial infection Escherichia coli O157 (known as E.coli 0157) is a particular health risk, especially for children under five, as they are more vulnerable to this infection and more likely to develop serious illness once infected. It should be assumed that all cattle, sheep, goats and deer are carrying this infection.

E. coli 0157 produces poisons (toxins) that can survive outside of the body; by touching animals, fences, surfaces around the farm, or being in contact with animal droppings this can lead to gastrointestinal infection. Bacteria can accidentally pass from your hands / gloves to your mouth.

This is the most common mode of infection – eating food that has become contaminated with the bacteria. It only takes a small number of bacteria to cause infection. Washing your hand thoroughly with soap and water immediately after you have had contact with animals will reduce the risk of infection.

What to do when visiting a farm

Team Leader:

- Contact the farm prior to the visit and confirm with the management that they have adequate hand washing facilities around the area being visited **or** Contact local Environmental Health for advice on farms with the best facilities
- Ensure that they have running tap water, pump action soap and paper towels
- Is there a cordoned off area for picnics away from the animals that has handwashing facilities
- Take wet wipes with you to deal with any visible dirt on hands as a quick first aid measure until the child can wash their hands

The simple rules listed below will help to keep you and your children safe when visiting open farms as many farm animals, particularly cattle, carry bacteria in their stomach and in their faeces which can cause severe stomach pain and diarrhoea. Pregnant women need to take particular care and specifically should avoid contact with sheep / lambs and their droppings.

- Do not put hands on faces or fingers in mouths while petting animals or walking round the farm
- Do not kiss farm animals or allow children to put their faces close to animals
- Do not eat or drink while touching animals or walking round the farm: This includes not eating sweets, crisps or chewing gum.
- Do not eat anything that has fallen on the floor.
- Do not use gels or wipes instead of washing hands with soap and water. Gels and wipes cannot remove viruses or bacteria when the hands are soiled, however; as a 'first aid' measure use if necessary and then ensure that the person is able to wash their hands as soon as possible (gels and wipes can wipe away the dirt/contamination, but the affected area may still be contaminated with bugs and these can only be killed by using detergent and water). Gels or wipes can then be used after hand washing to give further protection if necessary).

It is important that you wash your hands thoroughly with soap and water:

- After you have touched animals, fences or other surfaces in animal areas
- Before eating or drinking
- After removing dirty shoes or boots that have been worn on the farm or garden
- Do supervise children closely to ensure that they wash their hands thoroughly.
- Do eat and drink in picnic areas or cafes only.

If you or anyone in your group has sickness or diarrhoea within two weeks of visiting a farm, contact your GP as soon as possible. If you or anyone in your group, particularly a young child, has bloody diarrhoea, seek immediate emergency medical attention.
Children under five should not attend school/nursery/group childcare until they have been free of sickness or diarrhoea for **48 hours**. Some infections require further tests to ensure that they are free from infection before they can return to school.
Parents should confirm with their health professional whether it is safe for them to return before the child returns to school or nursery

7.

Deciding to get a resident school pet

Caring for animals requires dedication and commitment - this is an important lesson for the children, so careful planning is necessary before introducing resident animals into schools. Children and staff must recognise that there is a small risk of transmission of bugs from animals to humans and strict guidelines about washing hands before handling the animal –to stop us giving the animal any bugs, and washing hands again after putting the animal back in the cage – to stop any bugs being transmitted via hands to us.

Animals should be assessed by a veterinary surgeon for health, temperament and behaviour prior to being introduced to the school.

Careful research must be undertaken into the requirements of any species being considered as a pet. Each school should develop a written policy on animals in school and an individual care plan for each resident animal.

Ensure animals' living quarters are kept clean and away from food areas. Waste should be disposed of regularly, and litter boxes not accessible to children. Children should not play with animals unsupervised

Ensure children wash their hands after putting the pets back into their cages.

Reptiles are not suitable as pets in schools and nurseries, as all species carry salmonella

8. Common Childhood Diseases

1. Chickenpox and Shingles

What is it?

Chickenpox and shingles are caused by the same virus which causes an itchy rash starting with flat red spots that become raised and filled with fluid. Chickenpox is usually a mild childhood illness but there is a risk of complications in people who have a weakened immune system.

What are the symptoms?

Chickenpox usually begins with the onset of a slight fever, feeling generally unwell for a couple of days before the spots appear.

The spots can appear everywhere, they usually begin on the scalp/face and back, but they can be seen inside the mouth and genitalia. It is rarely seen on the palms of the hands and soles of the feet. The rash is very itchy. The spots leave scarring if they are scratched and become infected.

The spots look flat and red; these later become raised and filled with fluid. Most children become free from chickenpox in less than two weeks.

Is it infectious?

Chickenpox is spread from person to person; the virus is shed from the nose or throat as droplets or by direct contact. The fluid inside the spot is infectious. Chickenpox is highly infectious during its early stages from 1 - 2 days before until 5 days after spots first appear.

What is the incubation period?

The incubation period of chickenpox is between 13 and 17 days after contact with the infected person. The following groups of people should seek advice from their GP if they are exposed to chickenpox and do not remember if they have been previously infected with the virus:

- Pregnant women
- Babies whose mothers developed chickenpox in the first 28 days of their life
- People who are immunosuppressed (e.g. people having large doses of oral steroids;

  Or receiving chemotherapy for cancer / leukaemia / HIV related illness)

Although chickenpox is a mild disease in normal healthy children, it can be serious in children whose immune systems are impaired in any way such as children on treatment for leukaemia or children who have had a transplant. Many of these children may be immune to chickenpox or may have had the vaccine and so are protected, but it is important to let their parents know if there is a case of chickenpox in school as they can then take action, if necessary (this would usually mean an injection of protective antibody from the doctor).

What is the treatment?

The most common treatment for chickenpox is aimed at relieving the symptoms:

- Discuss with a pharmacist for the most effective itch-relieving products
- Ice lollies may help to reduce a fever
- Paracetamol can be given according to the age of the child. Aspirin must **not** be given to children under 16yrs old
- Nails should be kept short to prevent damaging the skin from scratching
- Wear loose, cool clothes and keep the room temperature cool as this may help to reduce itching

Are there any complications?

The majority of people affected by chickenpox suffer no long-term effects:

- There is an increased risk that you could develop shingles later in life due to the virus remaining dormant in the body and reactivating
- Bacterial infections can arise if the blistered areas become contaminated with bacteria
- Very occasionally chickenpox infection causes pneumonia, which presents as a persistent high fever and a severe dry cough
- Very rarely it can lead to a condition called encephalitis. This is an inflammation of the brain which can occur between 7 days and 10 days after the onset of the rash Encephalitis is **very rare,** and would present with symptoms of drowsiness, headache, neck stiffness, dislike of bright lights and possibly convulsions

How can I stop chickenpox spreading to others?

- By keeping your child at home until **5 days** after the first appearance of the rash
- It is important that you stay off work and at home until you're no longer infectious, which is until the last blister has burst and crusted over. This usually happens **5 or 6 days** after the rash begins.
- By avoiding contact with people who have not had chickenpox previously and those who are immunosuppressed
- Encouraging person to cough into a tissue which is then thrown away
- Following good basic hygiene measures including hand washing and not sharing towels.

Do I need to visit my Doctor?

If your child has chickenpox with the symptoms as described in this booklet there is no requirement to routinely visit your general practitioner. Chickenpox is a self-limiting illness for most children and most will be completely better within a two week period. Taking the child to a busy doctor’s surgery increases the risk of further spread of the virus, and there is no magical treatment other than that available at your local pharmacy to relieve symptoms. It is worth recording that a child has had chickenpox on their immunisation record sheet.

What is shingles, and how is it different from chicken pox?

Shingles, also known as zoster or herpes zoster, is a painful skin rash caused by the same virus responsible for chicken pox: the varicella zoster virus. Even if you had chicken pox in the past, you can still contract shingles. That's because the chicken-pox virus remains in the body, lying dormant in the roots of nerves, and can reactivate many years later. It's not clear why the virus reawakens; in some people it never does; but researchers believe that the virus is triggered as the immune system weakens with age or in conditions of stress. The majority of cases of shingles are in men and women ages 60 and older, but children can also become affected.

Shingles is less contagious than chicken pox and **cannot** be passed from person to person. However, the varicella zoster virus can be spread from a person with shingles to someone who has never had chicken pox. The person might develop chicken pox, but not shingles.

2. Conjunctivitis

What is it?

Conjunctivitis also known as "pink eye" is inflammation of the thin layer of tissue that covers the front of the eye (the conjunctiva) It is a very common self-limiting condition that can be caused by a bacterial or a viral infection (infective conjunctivitis). Conjunctivitis can also be caused by allergic reaction to substances such as pollen and dust or when the eye is exposed to irritants including chlorinated water and shampoo.

What are the symptoms?

Symptoms of conjunctivitis are:

- swelling and watering of the eyes,
- burning sensation,
- feeling of grit in the eye
- itchy eyes in the case of allergic conjunctivitis
- The white of the eye may appear red or pink, and there may be a discharge, which causes the eyelids to stick together, making them difficult to open.
- Light might cause pain in the eye and increase the watery discharge.

Is it infectious?

Yes, conjunctivitis is usually spread from person to person by coming in contact with the discharge from the eye.

Should I keep my child at home?

- Public Health England advises that you do not need to stay away from work or school if you or your child has conjunctivitis, unless you are feeling particularly unwell.
- Inform the school; it is essential that staff are aware of a child is suffering from conjunctivitis. Spread of infection can be from contaminated objects such as toys, crayons or surfaces they touch providing the opportunity for the infection to spread to the next child having contact with the object. Staff can then take preventative action to reduce the risk of further transmission including:
    - ensuring that the affected child uses paper towels or has a dedicated hand towel which must be washed / changed daily
    - Does not share flannels
    - Discourages close facial contact between infected and non-infected children
    - Hand washing will help to minimise the spread of the infection. Wash hands before treating the eye, and again afterwards.

If there are a number of cases of conjunctivitis at one school or nursery, you may be advised to keep your child away from the school until their infection has cleared up.

Generally, adults who work in close contact with others, or share equipment such as phones and computers, should not return to work until the discharge has cleared up.

What is the incubation period?
This is variable depending on the cause, usually:
1-3 days for bacteria
1-12 days viruses - longer for certain eye infections in small babies.

When is it infectious?
Usually from the time symptoms appear until they have resolved. Some patients with viral infections may be infectious for up to **14 days** after symptoms start

What can I do to help my child?

- Conjunctivitis often doesn't require treatment as the symptoms usually clear up within a couple of weeks. If treatment is necessary, the type of treatment will depend on the cause. In severe cases, antibiotic eye drops can be used to clear the infection.
- Irritant conjunctivitis will clear up as soon as whatever is causing it is removed.
- Allergic conjunctivitis can usually be treated with anti-allergy medications such as antihistamines. If possible, avoid the substance that triggered the allergy.

Washing your hands regularly and avoiding sharing pillows or towels will help prevent it spreading.

Do I need to visit my Doctor?
Often the infection will clear up on its own, however, if the symptoms persist or get worse, see your GP. In some cases the doctor may take a swab of the eye. This will be sent to a laboratory to be tested and help identify the cause of the conjunctivitis.

Newborn babies

- Contact your GP straight away if you think your baby may have infective conjunctivitis (also called neonatal conjunctivitis).
- If this is not possible, call **NHS 111** or your local out-of-hours service. Your GP will examine your baby closely to see if they have sticky eyes or infective conjunctivitis.

- **ANY NEWBORN BABY WITH INFECTIVE CONJUNCTIVITIS MUST BE REFERRED TO AN EYE SPECIALIST STRAIGHT AWAY FOR TREATMENT.**

3. Glandular Fever

What is Glandular Fever?
Glandular fever is an illness caused by a virus.
It is a worldwide disease which can affect both sexes. It mostly affects young adults aged 15 - 26 years in the UK.

What is the incubation period?
Incubation is thought to be usually around 4 - 8 weeks.

How long does the illness last?
The illness lasts 2 - 3 weeks but can be up to 6 weeks and is characterised by:

- Swollen glands
- Fever and sometimes a rash.
- Occasionally patients become jaundiced (turn yellow).

Young children tend to suffer mild symptoms which are often difficult to recognise.

How is it diagnosed?

By a blood test.

Is there any effective treatment?

There is no specific treatment and almost everyone will eventually make a good recovery.

How is Glandular Fever spread?
Spread is by saliva, usually through kissing or being in close contact with a carrier. Small children can be infected by chewing toys contaminated with the viruses. When the acute infection is over the virus can stay in the saliva for a year or more and about a fifth of those affected may have it for much longer than this.

Although it can occur in young children, this condition is much more common in adolescents. It usually takes the form of a sore throat with swollen glands in the neck. Full recovery may take some weeks, during which time the person may feel very washed out. This is not a very infectious disease except with close contact (known as “kissing disease”) and the child should only be kept away if feeling unwell.

How can spread be prevented?
Prevention is by using hygiene measures including hand washing and thorough cleaning of articles which may be contaminated with saliva.

4. Hand Foot and Mouth disease

What is Hand, Foot and Mouth Disease?
Hand, foot and mouth disease is a viral illness. The causative virus is quite different from that of Foot and Mouth disease, a disease of animals.

What is the incubation period?
The incubation period (this is from exposure to a case to development of the first signs and symptoms of the disease) is three to five days.

It is communicable immediately before and during the acute stage of the illness, and perhaps longer as the virus may be present in the faeces for weeks.

What are the symptoms?
The onset of the disease generally presents as:

- Fever
- Malaise
- Sore mouth
- Development of a rash.
- Mouth lesions appear on the inside surfaces of the cheeks, gums and on the sides of the tongue.
- Raised pink spots that develop into blisters, which may persist for seven to ten days, can also occur as a rash, especially on the palms, fingers, soles and occasionally on the buttocks.

Is it infectious?
The disease is self-limiting and more common in summer and early autumn, mainly in children under ten years of age, but adult cases are not unusual. The disease frequently occurs in outbreaks in groups of children, in a nursery school for example.

The virus is spread by direct contact with nasal and throat secretions or faeces of the infected person. The virus can also be transmitted by aerosol spread such as:

- coughing and sneezing.
- hands contaminated from secretions which, if not washed thoroughly, may transmit infection.

What is the incubation period?
The incubation period is 3 – 5 days. The person will remain infectious during the acute illness and while the virus remains in the faeces. Infection generally leads to immunity.

What is the treatment?
There is no specific treatment for the infection. **Viral infections do not respond to antibiotics.**

The viral illness is mild and with time all symptoms will clear up. Therefore it is better to treat the symptoms.
The following advice may help to relieve the symptoms:

- Keep the child cool;
- Give plenty of fluids;
- Cold foods such as ice cream or yoghurt may be preferred;
- Give Paracetamol at the dose recommended for the child's age on the box or by the pharmacist. Aspirin must not be given to children under 16 years old.

How do I stop it from spreading?

Children should be kept away from school/nursery whilst unwell. However, there is no need to keep a child away from school/nursery until the last blister has disappeared providing he/she is otherwise well.

A good standard of hand, personal and food hygiene should be maintained and care when handling articles contaminated with respiratory secretions or faeces, such as:

- Handkerchiefs, tissues, nappies etc., should be encouraged.
- Hands should be washed after contact with any of the above.

These, of course, are measures which should be encouraged at all times to prevent this and many other infections.

There is a slight risk to pregnant women, and they may wish to avoid close contact with a child during the course of their work activities. Pregnant women who develop any symptoms of rashes during pregnancy should seek advice from their general practitioner or midwife.

Do I need to visit my Doctor?

This is a self-limiting illness and there are no effective treatments for this virus. Treating the symptoms will help and the illness will run its course. Should the person develop the rare additional symptoms of high fever, headache, stiff neck, or back pain or other complications then they need to see a doctor urgently.

5. **Headlice**

What are head lice?

Head lice are parasitic insects and only live on the heads of people. There are three forms of head lice**:**

- **Nits** are head lice eggs. The oval, yellowy white eggs are hard to see and may be confused with dandruff. They attach themselves to the hair shaft and take about a week to hatch. The eggs remain after hatching and many nits are empty egg cases.
- **Nymphs** hatch from the nits. The baby lice look like the adults, but are smaller. They take about 7 days to mature to adults and feed on blood to survive.
- **Adults** are about the size of a sesame seed. They have six legs and are tan to greyish-white. The legs have hook-like claws to hold onto the hair with. Adults can live up to 30 days and feed on blood.

Who catches head lice?

- **Anyone** can catch head lice, but preschool children, primary school children and their families are most at risk.

How do you catch head lice?

- Head lice are transmitted through direct, prolonged head-to-head contact with an infested person. This is especially common during play or sport at school and with close contacts at home.
- Transmission is possible through infected clothes, combs, brushes or towels, but extremely unlikely. The lifespan of a louse is very short once detached from the hair so fumigation is not necessary.

Head lice cannot jump, hop or swim.

Head lice are not associated with poor hygiene; they are not selective and do not have a preference for clean or dirty hair.

Is it infectious?

The rate of transmission is low.

How serious are head lice?

Head lice are not a serious health problem. Head lice rarely cause anything more than an itchy scalp

Can you prevent head lice?

- Head lice is a mild disease. Some schools used to have routine screening, followed by the exclusion of those affected. This was found to be a waste of time. It was also ineffective in preventing spread.
- The best way to stop infection is for people to learn how to check their heads and their children's heads for lice.
- Good hair care only helps to control lice in as much as it will help to spot and treat lice early.

Should a child with head lice be kept off school?

No! The DfE/DH guidelines for infection control in schools and nurseries state that there is no need for a child who has head lice to stay away from school. One reason for this is that if a child does have lice, he or she will have had them at school for several weeks before diagnosis.
Letters notifying other parents of cases have not been found to curtail spread but often provoke itching and anxiety as a psychological response.

How can you treat someone with head lice?

A diagnosis of head lice can only be made if a living, moving louse is found.
"Wet combing method": Head lice may be cleared over a 2 week period, as follows:

- Wash the hair in the normal way, with an ordinary shampoo;
- Using lots of conditioner, and while the hair is very wet, comb through the hair from the roots to the ends with a fine metal comb. Make sure the teeth of the comb slot into the hair at the roots of every stroke;
- Clear the comb of lice between each stroke;
- Repeat this routine every 3 days for 2 weeks, so that any lice emerging from eggs are removed before they mature and spread.
- Close contacts of patients living in the same house are usually checked and treated if they have head lice.

Using lotions:

- Only those with live lice should be treated.
- Lotions are preferable to shampoos. These can be bought from the chemist or obtained on prescription.
- It is important that the instructions on the bottle are followed very carefully and that all the family and close contacts are checked and treated, if necessary.
- Asthmatics and those with skin problems such as eczema should use water based products, or Lyclear.
- Pregnant and breast feeding mothers and children under 6 months should be treated under medical supervision.

Treatment:
Should be started on the same day, but the child does not have to be sent home from school.

Head Lice: Evidence-Based Guidelines Based On The Stafford Report [external PDF] by Public Health Medicine Environmental Group (PHMEG)

Further advice:
Seek advice from your school nurse. Leaflets are available from your nurse, or from the Public Health England website: www.gov.uk/phe

6. Hepatitis or Jaundice

What is hepatitis?

The word *hepatitis* simply means an inflammation of the liver without pinpointing a specific cause. Hepatitis is most commonly caused by one of three viruses: Hepatitis A, B, C or glandular fever)

Hepatitis A

Hepatitis A (also called infectious hepatitis) is a common form of hepatitis in children. It's caused by the hepatitis A virus (HAV), found in the stool (faeces/poo) of infected people.

What are the symptoms?

- Loss of appetite
- Feeling 'off colour'
- Some children may become jaundiced, others do not
- Children are often asymptomatic

Hepatitis A can remain in the stool for 3-10 months after the initial illness, especially in younger babies and children.

Is it infectious?

Yes, it is spread usually by the faecal-oral route from infected people. Other members of the household, nursery/school contacts may become infected by poor hand hygiene and poor cleaning of the toilet and surrounding areas

How can the infection be prevented?

- Hand washing is essential
- Using own towel
- Toilet / Door handle / light switches cleaned regularly
- Wearing gloves and apron when changing nappies or soiled clothing. Ensure that the nappy is disposed into a bag and placed into a foot operated bin

  Take extra care, particularly when drinking and swimming, in areas of the world where sanitation is poor and water quality is uncertain.
- Never eat shellfish from waters contaminated by sewage.
- Remind everyone in your family / house to **wash their hands** thoroughly after using the toilet and before eating.

What is the treatment?

If there are more than two cases in a school, this would be treated as an outbreak,

PHE must be informed, who will assess the risk to others

Can you still come to school if you are symptomatic?

No. You must not attend school whilst you still infected.

- Enteric precautions must remain in place for **7 days after** the onset of jaundice. If no sign of jaundice, precautions should stay in place for **10 days after** the onset of symptoms.
- Exclude all cases that pose an increased risk of spreading the infection, PHE will advise on this. They should not return for **7 days after** the onset of symptoms
- Household and sexual contacts must be excluded for **7 days after** the onset of jaundice.

Hepatitis B and C

May be blood borne (Hepatitis B is also sexually transmitted). There is no risk to others, as long as blood spills are dealt with appropriately (See Section 4.Dealing with spillages).

Children considered being at increased risk:

- Children born in high prevalence countries
- Children who are part of communities with links to high prevalence countries or
- known to be at higher risk
- Children with parents or grandparents born in high prevalence countries

What can be done to prevent infections?

It is important to understand that we may not be aware of someone who is infected and as long as simple infection control measures are in place at all times it will help to prevent infection.

- Remind everyone to wash their hands thoroughly after using the toilet and eating
- Do not use anyone else's toothbrushes / nail cutters / razor or nail scissors
- Ensure that any spillage of body fluid is dealt with using disposable gloves and that hands are washed after their removal
- Sanitary items must be disposed of in an appropriate container

What can the school do to help?

Because contaminated needles and syringes are a major source of hepatitis infection, it's wise to encourage drug awareness programs in your community and schools. Explain to children frankly and often about the dangers of drug use. It's also important to encourage safe sex for teens to protect them from hepatitis infection through sexual contact.

Vaccination is useful for staff of childcare facilities or schools where they may be at risk of exposure e.g. biting, scratching.

Unfortunately, there's no vaccine for hepatitis C — studies indicate that it may not be possible because the virus doesn't cause the kind of response needed for a vaccine to be successful.

7. Impetigo

Impetigo is a common and highly contagious skin infection that causes sores and blisters. It's not usually serious and often improves within a week of treatment. It is quite common in young children aged four years or under, but it can affect any age group. Outbreaks can occur in nurseries and schools. The infection is more common in the summer months.

What causes impetigo?

Impetigo is caused by bacteria infecting the outer layers of skin.

The bacteria can infect the skin in two main ways:

- through a break in otherwise healthy skin, such as a cut, insect bite or other injury
- through skin damaged by another underlying skin condition, such as scabies or eczema

Once someone is infected with the bacteria, the infection can be spread easily through close contact, such as through direct physical contact, or by sharing towels or flannels.

Is it infectious?

Yes! Impetigo is highly infectious whilst the sores are producing pus. It is spread by having contact with the lesions. Impetigo can affect people of any age, but it tends to affect children more often than adults.

What are the symptoms?

The face is the most common area to be affected, but other parts of the body can also become infected. At first small blisters develop, which then burst to leave a small scabby patch of skin. These crusted lesions are often yellow in colour. They can be itchy and spread in small clusters to surrounding skin.

What is the Incubation Period?

The incubation period is usually **4 -10 days**

How impetigo is treated?

This is **not** an emergency but it is advisable to see your GP. The doctor will probably prescribe a course of antibiotics. This may be medication or it might be a topical cream to apply to the affected areas, usually depending on the severity of the infection. The doctor may take a swab, particularly if it doesn’t respond to treatment.

Impetigo usually gets better without treatment in around two to three weeks, but treatment is often recommended because it can reduce the length of the illness to around **7 to 10 days** and can lower the risk of the infection being spread to others.

During treatment, it's important to take precautions to minimise the risk of impetigo spreading to other people or other areas of the body, by:

- not touching the sores whenever possible
- washing your hands regularly
- not sharing flannels, sheets or towels
- staying away from work, school, nursery or playgroup until the sores have dried up or treatment has been continuing for at least 48 hours

Most people are no longer contagious after **48 hours** of treatment or once their sores have dried and healed.

Potential complications

Impetigo is rarely serious, but in some cases the infection can spread to other areas of the body and cause problems such as cellulitis and scarlet fever.

In very rare cases, impetigo may lead to some scarring, particularly if you scratch at the blisters, crusts or sores.

8. Infectious Diarrhoea and Vomiting (Gastroenteritis)

This may be due to a number of causes including:

Bacteria	Campylobacter Salmonella Shigella (bacillary dysentery) E. coli 0157
Viruses	Rotavirus Small round structured viruses (e.g. Norwalk or Winter Vomiting Disease)
Parasites	Cryptosporidium Giardia

Is it Infectious?

Yes! Anyone with gastroenteritis should be regarded as **very** infectious and must be kept away from school until the diarrhoea and vomiting have stopped for at least **48 hours.** Infectious diarrhoea and vomiting (D & V) is usually spread through the faecal oral route (i.e. not washing hands after going to

the toilet), either by hand to hand contact, on toys, or indirectly through food or water. Viruses may also be spread through the air in droplets after vomiting or when coughing or sneezing.

If symptoms start at school:

- Isolate away from other students
- Ensure that a dedicated toilet is nearby and should only be used by symptomatic students / staff
- All lever/light switches, handles must be washed regularly whilst they are still at school with detergent and water and then disinfected with a bleach solution. When they have been collected, the toilet should be thoroughly cleaned as above.
- Send home as soon as possible.
- Siblings who are asymptomatic can remain in school

What are the symptoms?

- vomiting,
- diarrhoea and abdominal pain
- fever
- headache

The symptoms may occur singly or in combination. The illness usually lasts only a short time and requires no specific treatment, however; should blood be present in the faeces/diarrhoea, or a child appears particularly unwell, a doctor should be consulted as soon as possible.

How can it be prevented?

- Strict attention to personal hygiene is important to reduce the spread of the disease, wash hands after going to the toilet and before eating food
- If possible designate one toilet for anyone who is symptomatic
- Paper towels must be used
- Use liquid soap
- Toilet must be cleaned after use with a hypochlorite solution (bleach solution)
- Clean door handles, flush handle and light switches – remember little ones hold onto a different parts of the toilet and doors than an adult, check under the rim of the toilet seat
- Pets or farm animals may be a source (see 6.Guidelines on Farm and Country Visits pg.10)
- Wash hands after taking off wellington boots / playing in the garden/playground

Action check list for all schools:

Single case of diarrhoea/vomiting in a student or staff	Exclude from school until **48 hours** after vomiting and/or diarrhoea has settled.

Greater than expected rate of absenteeism due to diarrhoea / vomiting	**Contact:** • PHE • School nurse • The school must inform Department of Education

- Exclude cases for **48 hours** after symptoms have ceased.
- Ensure staff and students are aware of the importance of hand washing after using the toilet and before eating.
- Check toilets for the availability of toilet paper, warm water, liquid soap and paper towels.

Bars of soap and cloth towels must not be used at any time.

- Ensure caretaker is aware of possible outbreak and increase frequency of cleaning in toilet areas with detergent and then a bleach solution
- Ensure thorough cleaning of sanitary facilities including toilet seats/ underneath the seats, handles and lavatory door handles with detergent and water and then wiped with dilute hypochlorite (bleach) solution (follow the manufacturer's instructions)
- Supervise hand washing in affected classes under 6 years.
- Discontinue cookery lessons and communal play with sand, dough and water.
- Toys should be washed weekly and when visibly dirty.

During an outbreak, hard toys should be washed at least daily, dried and then disinfected with a hypochlorite solution such as Milton.

Consider removing soft toys that cannot be cleaned /washed during outbreak.

- Commence an outbreak form logging any symptomatic staff / students on the form provided (appendix 3)
- Log areas of the school where there has been evidence of staff/student being symptmatic

In the event of an outbreak PHE will inform:

- Microbiology
- Environmental Health (EHO)
- GPs
- Public health teams in local authorities

PHE will give support on:

- Infection prevention
- Cleaning /disinfection
- Exclusion
- Getting samples of faeces / vomit from affected students and staff
- Commencing the outbreak form (appendix 3) to ensure accurate logging of cases

An outbreak committee may be convened if necessary, with representation from school staff to advice on the investigation and control of illness.

Public Schools

Public schools must ensure that students are sent home or go to stay with their guardians. Staying in the boarding houses may infect other students and house parents. PHE will discuss this with head teacher / medical staff.

Further infection control precautions will be addressed at the time of an incident. However; it is important that the house parents and medical staff:

- Isolate symptomatic students (medical centre / single bedroom, unless more than one student with the same symptoms)
- Dedicated bathroom to be used only by those who are symptomatic
- Wash any soiled laundry / clothes separately on a wash that is stated by the wash label
- Ensure appropriate gloves and aprons are worn when any hands on care is given

- Hand washing is paramount during an outbreak
- Consider the access to a bathroom near to the dining room, hands should be cleaned before a meal – if a bathroom is not close by, the alternative would be to have wall mounted hand gels at every entrance. This may have to be attended by staff members when introduced, but as a 'duty of care' it is important for this to become a part of partaking of a meal

9. Influenza

What is influenza?

Influenza is an infectious respiratory illness caused by infection with an influenza virus. Not everyone who becomes infected gets sick but for those that do, it is usually more severe than a simple cold though the illness can be mild.
More severe illness is associated with the elderly, very young and those with other chronic medical conditions like chest or heart disease and diabetes.

However, severe infections can occur in people who are fit and well of any age group.

What are the symptoms of influenza?

The most common symptoms of influenza are an abrupt onset of:

- Fever
- shivering
- headache
- muscle ache
- dry cough

People can confuse influenza with a heavy cold. Unfortunately some people call even a simple cold 'a touch of flu'. However, influenza is usually a more severe illness than the common cold.

For most people influenza infection is just an unpleasant illness, but for some it can lead to illnesses that are more serious. Common complications of influenza are bronchitis and pneumonia due to bacterial infections on top of the infection with the influenza virus.

How serious is influenza?

- Most people recover completely from influenza in a matter of days or a week. For others, for example, the elderly, those with other illnesses (such as chest or heart disease, or diabetes) and newborn babies, influenza can be a serious illness.

- Serious illness from influenza is usually not due to the flu itself, but to secondary bacterial infections causing lung infections (bronchitis and pneumonia) or to a worsening of underlying chronic medical condition such as heart disease.

What are the symptoms of the common cold and how do they differ from simple (uncomplicated) Influenza?

Cold symptoms are limited to the nose and throat with runny nose, sneezing, watery eyes, throat irritation and headache. The symptoms usually occur gradually and only rarely cause a high fever or body aches. In those with chronic respiratory conditions e.g. people with asthma they can make those conditions worse for a few days.

Symptom	Common Cold	Influenza with symptoms
Fever	Uncommon and then low (under 38°)	Common and often a high fever (over 38°)
Aching muscles – body	Rare	Common
General malaise and lack of energy	Rare	Common
Headache	Common	Common
Running nose	Almost always	Common but a minor feature
Sneezing	Almost always	Common but a minor feature
Watery eyes	Common	A minor feature
Throat irritation	Almost always	A minor feature
Coughing	Common	Common

What type of viruses cause influenza?

There are three main types of influenza virus known as A, B and C. Only influenza types A and B are important in human disease. Influenza B usually produces less severe illness than Influenza A.

Is it infectious?

Among viruses that infect humans influenza is moderately infectious. On average, an infectious person will infect another one to two non-immune people.

How is it spread?

The viruses are mostly passed on in one of two ways:

- Firstly by people breathing in the larger droplets coming from infectious people coughing or sneezing. If the infected person doesn't cover his or her mouth and nose people within a range of three meters can be infected. That is why it's so important that a person covers his or her mouth and nose (preferably with a disposable tissue) when he or she sneezes. Smaller droplets and 'aerosols' seem to be less liable to carry the virus. Because only the larger droplets are infectious it is generally only people close to an infectious person who are at risk.
- Influenza infection can also be spread by direct contact of the mucous membranes of the nose, mouth and throat with virus, for example from the hands of infectious people who have rubbed their noses. That is why hand-washing and proper use of disposable handkerchiefs (*respiratory hygiene*) is important.

What is the incubation period?

- Usually about **2-3 days**- Longer or shorter intervals are also sometimes seen and the range is said to be one to **7 days.**

When is a person with influenza infectious to others?

- The infectious period varies a bit from person to person but in an adult with 'flu they can pass on the infection from the day before their symptoms appear and remain potentially infectious for **3-4 days.**
- Children are similar but they can remain infectious for up to **7 days** after onset.

The risk to others is not constant throughout and may vary according to individual factors.

How can you reduce the risk of influenza transmission in schools?

- Keep children and staff away from school / nursery while ill
- Cover your mouth and nose with a tissue when coughing or sneezing
- Dispose of used/dirty tissues in a plastic bag and then into a bin
- Wash hands frequently with liquid soap and water and dry thoroughly on disposable paper towels.
- Avoid touching surfaces (such as door handles) and then the face.
- Ensure hands are washed prior to eating food.
- Ensure more frequent environmental cleaning of hard surfaces, door handles and frames and light switches.
- Provide liquid hand soap and paper towels to ensure good hand hygiene by children and staff.

This should all be routine practice whether or not there is an outbreak.

How soon should a student /staff be back at school after influenza?

- Influenza is most infectious from about **1 day** before symptoms start until about **3 days** later. A child should return once the fever settles and they are well enough.

What is the treatment?

- Most people with the 'flu need no special treatment. Influenza is caused by a virus so antibiotics do not help unless there is a complication. Occasionally, a special 'antiviral' medicine will be given
- It is best to stay at home while feeling ill; this also reduces the chance of spreading the infection to others.
- If you are unwell, you should rest and drink lots of fluids to prevent dehydration. Paracetamol can be given to reduce the fever; aspirin must **NOT** be given to children
- Children with other medical conditions, who have flu, should be taken to their general practitioner or phone the surgery for advise

In the event of a suspected outbreak at school:

The school should inform:

- **PHE**
- **Local education authority**

In the event of an outbreak PHE will inform:

- Microbiology
- Environmental Health (EHO)

- GPs
- Public health teams in local authorities

PHE will give advice on:

- Infection Prevention
- Cleaning /disinfection
- Exclusion
- Taking swabs (nose/throat) from affected students. Usually staff should see their their own GP
- Commencing the outbreak form(appendix 3) to ensure accurate logging of cases

An outbreak committee may be convened if necessary, with representation from school staff to advice on the investigation and control of illness.

Public Schools

Public schools must ensure that students are sent home or go to stay with their guardians. Staying in the boarding houses may infect other students and house parents. PHE will discuss this with the Principle /medical staff.

Further Infection Control precautions will be addressed at the time of an incident. However; it is important that the house parents and medical staff:

- Isolate symptomatic students (medical centre / single bedroom)
- Hand washing is paramount during an outbreak

The Principle/ Nursery manager should inform:

- PHE
- Local Education Authority.

During an outbreak the PHE will contact the school regularly to collect information about new cases. Please ensure that the information is documented on the outbreak form (Appendix 3) and is easily located.

10. Measles

What is Measles?

Measles is a highly infectious viral illness that can be very unpleasant and can sometimes lead to serious complications. The success of the MMR vaccine means that cases of measles are uncommon in the UK. However, the number of cases has risen in recent years and there have been some high-profile outbreaks.

For example, between November 2012 and July 2013 there was a measles outbreak in and around Swansea, during which more than 1,200 cases were reported.

Why did this happen?

It is thought that the rise in the number of cases of measles is largely due to parents not getting their child vaccinated with the MMR vaccine, probably due to speculation linking MMR to autism.

Publicity in 1998 highlighted a report claiming a link between the MMR jab and autism. However, numerous studies that were undertaken to investigate this claim found no link between the MMR vaccine and autism.

What are the symptoms?

The initial symptoms of measles usually appear around **10 days** after you become infected and disappear about 7**-10 days** later.

The initial symptoms can include:

- cold-like symptoms – such as a runny nose, watery eyes, swollen eyelids and sneezing
- conjunctivitis/red eyes and sensitivity to light
- a high temperature (fever), which may peak at around 40°C (104°F)
- tiredness, irritability and a general lack of energy,
- lack of appetite
- aches and pains
- dry harsh cough
- Small white spots usually develop inside the mouth a day or so later. (Koplik spots).These can persist for several days.
- Diarrhoea and/or vomiting are common.
- A red blotchy rash normally develops about **3-4 days** after the first symptoms. It usually starts on the head and neck, and spreads down the body. It takes 2-3 days to cover most of the body. The rash often turns a brownish colour and gradually fades over a few days.
- Children are usually quite unwell and miserable for **3-5 days**. After this, the fever tends to ease, and then the rash fades. The other symptoms gradually ease and go.

Most children are better within **7-10 days**. An irritating cough may persist for several days after other symptoms have gone.

Is it infectious?

Yes! Measles is a highly infectious

What is the incubation?

The incubation period is about ten days (ranging between seven and 18 days).

How is measles diagnosed?

Your doctor will usually be able to diagnose measles from the combination of your symptoms, especially the characteristic rash and the small spots inside your mouth.

A saliva test is usually done to confirm the diagnosis.

What is the treatment for measles?

There is no specific medicine that kills the measles virus. Treatment aims to ease symptoms until the body's immune system clears the infection. For most cases, rest and simple measures to reduce a fever are all that are needed for a full recovery. Symptoms will usually disappear within 7-10 days.

The following measures are often useful:

- Children should drink as much as possible to prevent dehydration. Ice-lollies are a useful way of giving extra fluid and keeping cool.
- Paracetamol or ibuprofen can be taken to ease fever and aches and pains. You should keep the child cool (but not cold). Do not use Aspirin.
- Gently clean away any crustiness from the eyelids and lashes using cotton wool soaked in water; Close curtains or dim lights to help reduce any light sensitivity.
- Antibiotics **do not** kill the measles virus and so are not normally given. They may be prescribed if a complication develops, such as a secondary bacterial ear infection or secondary bacterial pneumonia.
- Cough remedies have little benefit on any cough, but may sooth an irritated throat

Are there any complications?

The main serious complications to look out for are:

- Drowsiness.
- Dehydration. This may be developing if the child drinks little, passes little urine, has a dry mouth and tongue or becomes drowsy.
- Breathing difficulties.
- Convulsion (fit).

Visit your nearest accident and emergency (A&E) department or call 999 for an ambulance if you or your child develops any of these symptoms as they may be a sign of a serious bacterial infection requiring admission to hospital and treatment with antibiotics.

How do I stop it from spreading?

If you or your child has the condition, you should avoid work or school for at least four days from when you first developed the measles rash.

You should also try to avoid contact with people who are more vulnerable to the infection, such as young children and pregnant women.

How do you prevent measles?

The best way to avoid catching measles is to have the measles, mumps and rubella (MMR) vaccine.

If you are not sure whether you were vaccinated in the past, having the MMR vaccine again will not cause you any harm.

Do I need to see my doctor?

Most children recover. It is unlikely that the surgery will want you to wait in a busy surgery with people who may have ongoing medical conditions. Ring the surgery for advice before attending. A doctor will normally confirm that the illness is measles and arrange for a saliva test to be taken to confirm the diagnosis. However, you should see a doctor again if symptoms get worse.

11. Meningococcal Disease

What is meningococcal disease and septicaemia?

There are many different causes of meningitis, but the two most common organisms are viruses and bacteria.

- **Viral meningitis** is usually a mild disease, but it can make people very unwell. Many thousands of cases occur each year, mostly affecting babies and children. Although most people will make a full recovery, some are left with serious and debilitating after-effects.

- **Bacterial meningitis** can be life-threatening and needs urgent medical attention. Most people who suffer from bacterial meningitis recover, but many can be left with a variety of after-effects Meningitis means swelling of the lining around the brain and spinal cord. Septicaemia is blood poisoning caused by the same germs.
  They can occur together or separately. Meningitis and septicaemia are caused by many types of germs, but meningococcal bacteria cause the most common serious kind. Meningococcal disease is very dangerous and can come on very quickly.

Am I at Risk?

- The risk of getting the disease is very low. Although meningococcal disease is infectious and can cause outbreaks, 97 out of every 100 cases are isolated, with no link to any other cases.
- The bacteria that cause the disease are very common; at any time about one in ten of us has them in our noses and throats without ever knowing they are there, and for most of us this is harmless.
- The bacteria are passed by close contact, so family members of a case and others who have close contacts with a case may be spreading the same germs. This usually means household or kissing contacts. (deep kissing; not a peck on the cheek / lips)
- Close contact in residential accommodation, such as student halls of residence, and schools can also provide opportunity for the spread of infection.
- In the past, antibiotics were offered to nursery / school or playgroup contacts of isolated cases of meningococcal disease. There is now good evidence showing that these contacts **do not** benefit from antibiotics; the antibiotic used may eradicate protective organisms and

so be detrimental. Preventive antibiotics are only recommended in the rare event of two cases occurring in the same school or playgroup, within one month.

- The bacteria cannot live longer than a few moments outside the human body, so they are not carried on items like clothes and bedding, toys or dishes, water supplies, swimming pools, or buildings.

Is there an incubation period?

- **Yes.** Symptoms normally appear within two to seven days of picking up the bacteria.
- **Be aware - symptoms can develop within hours.**

Are there vaccines available to protect against meningitis?

Effective vaccines are available to prevent some types of meningitis, as part of the **Childhood Immunisation Programme.**

Haemophilus influenzae type b (Hib)

Hib bacteria can cause meningitis and septicaemia (blood poisoning). Before the vaccine was introduced in 1992, Hib was the leading cause of meningitis in children under 5 years of age, with around 800 cases and 25 deaths reported each year. Cases of Hib meningitis are now rare, with around 30 – 40 cases reported annually in the
UK. Hib is part of the combined vaccine that protects against diphtheria, tetanus, and pertussis (whooping cough), polio and Hib. This combined vaccine is offered to babies at 2, 3 and 4 months of age, with a booster dose given at 12-13 months of age. The booster vaccine is a combined vaccine for Hib and meningococcal group C (MenC).

Vaccination is the only way to prevent serious and life-threatening infectious diseases.

Are there other types of meningitis?

- **Yes** A,C, W-135 and Y3 and there are already vaccines against these other common strains of bacterial meningitis
- Since the meningitis C vaccine was introduced in 1999, Meningitis C disease has been virtually eliminated. Nowadays, there are just a handful of cases each year.
- Meningitis B is a serious cause of life-threatening meningitis and septicaemia (blood poisoning) and the leading infectious killer of young children in the UK.
- Meningitis B can affect people of any age, but is most common in babies and young children.

Is there a vaccine for Meningitis B?

- In March 2014, a new vaccine to guard against Men B, called Bexsero was introduced, and will be offered to babies at 2, 4 and 12 months of age as part of the childhood immunisation schedule
- The vaccine seems to provide good protection against meningitis B infection, although we can't know exactly how effective it is until it's used routinely in a large population
- There are hundreds of different meningitis B strains around the world and some tests predict that the new vaccine will protect against almost 90% of meningitis B strains circulating in the UK. But it's not clear how this will relate to lives saved or cases prevented.

- Septicaemia occurs if the bacteria enter the bloodstream. A characteristic rash develops and may start as a cluster of pinprick blood spots under the skin, spreading to form bruises under the skin. The rash can appear anywhere on the body.

Do the Glass test

Press the side of a clear glass to the skin spots/ rash may fade at first but keep checking

A rash that does not fade under pressure is a sign of meningococcal septicaemia. This is a MEDICAL EMERGENCY DIAL 999

• **DO NOT WAIT FOR A RASH**. If someone is ill and getting worse, get medical help immediately
• **ON DARK SKIN**, the spots/rash can be more difficult to see.

Viral meningitis

Most people with viral meningitis will have mild flu-like symptoms, such as:

- headaches
- fever
- generally not feeling very well

In more severe cases of viral meningitis, your symptoms may include:

- neck stiffness
- muscle or joint pain
- nausea and vomiting
- diarrhoea
- sensitivity to light (photophobia)

Unlike bacterial meningitis, viral meningitis doesn't usually lead to septicaemia (blood poisoning).

Is there an incubation period?

Yes. Symptoms normally appear within two to seven days of picking up the virus.
Be aware - symptoms can develop within hours.

What is the treatment?

- Antibiotics are used to treat bacterial meningococcal disease
- The earlier the treatment, the better the prospect of recovery. Often GPs will give treatment even before the person is admitted to hospital.
- If you suspect someone may have meningococcal disease, contact the doctor **immediately**. If the doctor is unavailable they should be taken to the nearest Accident and Emergency / Walk in department. Prompt action is vital.

How soon can a child be back at school after meningococcal disease?

- Cases are followed up by the hospital consultant; and the decision will be made when they are fully recovered.

- There is no reason to exclude any siblings or other close contacts of the case from school.

What are the symptoms of meningitis?

Babies and young children

Fever, cold hands and feet

Refusing feed and vomiting

Fretful, dislike being handled

Drowsy, floppy, unresponsive

Rapid breathing or grunting

Pale, blotchy skin, Spots / rash

See glass test

Unusual cry or moaning

Tense, bulging fontanelle (soft spot)

Stiff neck, dislike bright lights

Convulsions/ seizures

What are the symptoms of meningitis?

Teenagers and adults

Fever, cold hands and feet

Vomiting

Drowsy, difficult to wake

Confusion and irritability

Severe muscle pain

Pale blotchy skin

See glass test

Severe headache

Neck stiffness

Dislike of bright lights (Photophobia)

Convulsions /Seizure's

Taken from signs & symptoms Meningitis Now is the new name for Meningitis UK and the Meningitis Trust.
Copied from their web site on the 01/06/2014
Email: helpline@meningitisnow.org or 0808 80 10 388

Action check list for all schools:

Single case of suspected bacterial meningitis in a student / staff	**Discuss with PHE** **PHE will contact microbiology and the medical team to obtain further information.** • **PHE will contact the school with any facts** **If the diagnosis is likely to be meningitis, PHE will:** - **Discuss composition of a letter of reassurance to parents / guardians to raise awareness of signs and symptoms** - **Discuss the rational for antibiotic prophylaxis for close household contacts and why school contacts are unlikely to receive prophylaxis** • **PHE will Inform school nurse/ health visitor**

In the event of two or more students / staff being suspected of having meningococcal infection:	**When two or more cases are confirmed or there is a probability that they have been caused by the same bug within a 4 week period**
	
	PHE will:
	• **Establish an outbreak team including school staff members, school nurse and public health professionals**
	• **Discuss antibiotic prophylaxis within the school and to a defined close contact group within the establishment e.g.**
	  ○ **Household contacts (boarders)**
	  ○ **Classroom contacts**
	  ○ **Children who share common social activity**
	  ○ **Close friends**
	
	In the event of an two or more cases PHE will liaise with:
	• **Microbiology**
	• **Environmental Health (EHO)**
	• **GPs**
	• **Local Director of Public Health and their team within the local authority**

12. Molluscum Contagiosum

What is Molloscum Contagiosum?

Molluscum contagiosum is an infectious skin disease transmitted from person-to-person. It is caused by the Molloscum contagiosum virus, a member of the poxvirus family. Infection leads to the formation of small flat circular skin lesions, which may be flesh coloured, white, translucent or yellow. The lesions may appear anywhere on the body except the palms and soles and will not normally cause discomfort. In general, school age children and teenagers tend to experience lesions on the face, trunk, hands and feet whilst adults tend to have lesions on the lower trunk, genitalia and inner thighs.

How is it spread?

- Direct contact with a lesion (in adults this is often sexual contact)
- Contaminated objects such as towels, clothing or toys.

How is it diagnosed?

Diagnosis is usually clear to a doctor seeing a typical lesion. If there is doubt the lesion may be excised or sampled and examined at a laboratory. Laboratory confirmation of Molloscum contagiosum virus infection by the PHE is made by electron microscopy.

Prevention and treatment

Infection with Molloscum contagiosum virus can be prevented by avoiding direct contact with lesions or objects that may have come into contact with the lesions.

- Infected patients should be careful not share towels with others in a household
- Keep the lesion(s) covered when taking part in P.E. or other communal sporting activities
- Scratching should be avoided as this will;
    - Enlarge the site of infection and consequently the number of lesions suffered by the patient,
    - Increase the likelihood of spread of the virus to others,
    - Increase the likelihood of secondary, bacterial infection of the lesion
    - Increase the likelihood of scarring.

How long will the lesions last?

In patients with a normal immune system, the lesions will resolve over time without any treatment - usually six months, possibly up to two years. The lesions will usually leave no scarring unless they have been excessively scratched and / or bacterially infected. Some doctors may recommend piercing the spots and application of iodine. It is also possible to cauterise lesions.

Should children stay away from School?

There is no need to stay away from school, it is a self-limiting condition

13. Mumps

Mumps is an infection caused by a type of virus called a paramyxovirus. It is very contagious and spread in saliva, the same way as a cold or flu. This means it can be caught from an infected person coughing, sneezing, etc. It can also be caught from touching infected objects - for example, door handles.

Mumps infection is less common since the introduction of the measles, mumps and rubella (MMR) vaccine in the UK. Mumps infection is now most common in children who have not received the vaccine.

It is very unusual for children under one year to have mumps.

What are the usual symptoms of mumps?

- Swelling and pain of one or both parotid glands are the usual main symptoms. The parotid glands are the main salivary glands. They are just below the ears and you cannot normally see or feel them. The salivary glands make saliva which drains into the mouth.
- The mouth may feel dry.
- Chewing and swallowing may be sore.
- Fever (high temperature); headache, feeling tired and being off food may develop for a few days. These symptoms may occur before you develop swelling of your parotid gland.
- Mild abdominal (tummy) pain may occur.

The swelling of the parotid glands usually lasts for 4-8 days. Mumps is normally a mild illness, but complications sometimes occur. This is why immunisation is important.

There may be no symptoms, or only very minor ones. It is thought that about 3 in 10 people who contract the mumps virus have no symptoms. Rarely, complications alone occur without the usual symptoms occurring first.

The immune system makes antibodies during the infection. These clear the virus and then provide lifelong immunity. It is therefore very rare to have more than one episode of mumps.

How is mumps diagnosed?

Mumps is most commonly diagnosed by your symptoms and the type of glands that are enlarged in your body. However, some people have a swab taken from their mouth to obtain some saliva. This is sent to the laboratory to confirm the diagnosis.

What is the treatment for mumps?

There is no medicine that kills the mumps virus. For most people, mumps improves over a week with no long-term problems.

Treatment aims to ease symptoms until the body's immune system clears the virus:

- You do not usually need any treatment if your symptoms are mild.
- Paracetamol or ibuprofen can ease fever and pain. Aspirin should not be given to children
- Give children lots to drink, particularly if they have a fever. Fruit juice may stimulate the parotid gland to make more saliva, and cause more pain. Water is best if this occurs.

Are there any complications of mumps?

The outlook for young children with mumps is very good. Teenagers and adults with mumps are more likely to develop complications, which may include one (or more), of the following:

- The testes (testicles) are sometimes affected. One testis may become inflamed, swollen, and painful for about a week. This is uncommon in young children. However, about 1 in 4 males who get mumps over the age of 12 years will develop a painful swollen testis. Occasionally, both testes are affected. In very rare cases this may cause infertility.
- Hearing loss can sometimes occur in people with mumps. This is usually only transient and usually improves with time. Very rarely, mumps can cause permanent deafness.

Do I need to visit my Doctor?

Most children are back to normal within 7-10 days. Seek medical help if you suspect that a complication is developing (described above).

Should people with mumps keep away from others?

Yes! Mumps is very infectious. It takes 14-25 days to develop symptoms after being infected. Affected people are infectious from about six days before, until about five days after, a parotid gland begins to swell.

Children immunised against mumps are unlikely to catch mumps. However, immunisation is not 100% effective. So, people with mumps should stay off school, nursery, college or work and avoid other people as much as possible. This is as soon as mumps is suspected and for five days from the onset of parotid gland swelling.

Mumps immunisation

An effective vaccine to prevent mumps is available. It is part of the MMR vaccine.
A previous history of having mumps does **not** mean that you do not need an MMR vaccine. This is because the diagnosis of mumps is not an easy one to make. For example, someone thought to have had mumps may in fact have had another viral infection.

Mumps can be prevented in 95% of cases by having the routine MMR vaccination in childhood or later in life.

14. Norovirus- like illness

What is Norovirus?

Norovirus is the most common stomach bug in the UK. Each year, it's estimated that between 600,000 and 1 million people in the UK catch norovirus. The illness is sometimes called the "winter vomiting bug" because it's more common in winter. However, you can catch the virus at any time of the year.

There are at least 25 different strains of noroviruses known to affect humans. They're the most common cause of stomach bugs (gastroenteritis) in the UK.

There's no specific cure for norovirus, so you have to let it run its course. It's usually mild and shouldn't last more than a couple of days.

Is it infectious?

Yes! The virus is highly contagious. It can affect people of all ages and causes vomiting and diarrhoea.

What is the incubation period?

The incubation period is from when you're first infected to when you start to show symptoms. It usually lasts between 12 and 48 hours. You may be infectious to other people during this time.

Although having norovirus can be unpleasant, it's not usually dangerous and most people make a full recovery within a couple of days without having to see their GP.

What are the symptoms?

The first sign of norovirus is usually suddenly feeling sick followed by forceful vomiting and watery diarrhoea.

Some people may also have:

- a raised temperature (over 38°C/100.4°F)
- headaches
- painful stomach cramps
- aching limbs

Symptoms usually appear one to two days after you become infected, but they can start sooner.

Are there any complications?

The main risk from norovirus is dehydration from your body losing water and salts from vomiting and diarrhoea.

Thirst is the first sign of dehydration. Other symptoms include:

- dizziness or lightheadedness
- headache
- tiredness
- dry mouth, lips and eyes
- dark, concentrated urine
- only passing small amounts of urine (less than three to four times a day)

Mild dehydration is common and can easily be reversed by making sure you have plenty to drink.

The young and elderly are more at risk of becoming dehydrated. It's therefore very important that you seek medical attention immediately if you think your child or an elderly relative is becoming dehydrated.

What is the treatment?

If you have norovirus, follow the steps below to help ease your symptoms:

- drink plenty of water to avoid dehydration
- take paracetamol for any fever or aches and pains . Aspirin should not be given to children.
- if you feel like eating, eat foods that are easy to digest

What you should do – Staff (including parent helpers, meal time assistants)

- If you have any of the above symptoms, do not come to work.
- Remain off work for 48 hours after the last symptoms (exclusion is also a requirement for food handlers with symptoms).
- If symptoms commence during your working day – go straight home. The risk of spread is reduced considerably if contamination of the environment is reduced
- Inform the head teacher or manager of nursery.
- Movement of supply teachers and specialist staff between schools/nurseries may need to be restricted.
- Staff should supervise hand washing of pupils if possible.

REMEMBER, being at work with symptoms poses a risk to children and your work colleagues.

What you should do – students

- Children who become ill during the day should be sent home as soon as possible
- If the child cannot go home they should be kept away from other children if at all possible
- Parents should be informed verbally that the child should remain off school for 48hours after the last symptom

What should the school do if we have a lot of students and staff away with similar symptoms?

- Check the previous weeks menus to ensure that it is not a food related disease
- Follow the guidelines for **Infectious Diarrhoea and Vomiting**

Do I need to visit my GP?

- stay at home – don't go to see your GP because norovirus is contagious and there's nothing your GP can do while you have it
- contact your GP to seek advice if your symptoms last longer than a few days or if you already have a serious illness

Extra care should be taken to prevent babies and small children who have diarrhoea and vomiting from dehydrating by giving them plenty of fluids. Babies and young children can still drink milk.

How can I stop it spreading to others?

It's not always possible to avoid getting norovirus, but good hygiene measures can help limit the spread of the virus.

- Wash your hands frequently and thoroughly with soap and water, particularly after using the toilet
- Paper towels must be used
- Use liquid soap
- If possible designate one toilet for anyone who is symptomatic
- Do not prepare food for others until 48hrs after your symptoms have stopped
- Don't share towels and flannels.
- Toilet must be cleaned after use with a hypochlorite solution (bleach solution)
- Clean door handles, flush handle and light switches – remember little ones hold onto different parts of the toilet and doors than an adult, check under the rim of the toilet seat. It's best to use a bleach-based household cleaner.
- Flush away any infected faeces or vomit in the toilet and clean the surrounding toilet area. Ensure the bathroom is cleaned regularly during the day and if possible, stop others who are well from using it.
- Avoid eating raw, unwashed produce
- If you have norovirus, avoid direct contact with other people. You may still be contagious, even though you no longer have sickness or diarrhoea.

Don't worry if you're pregnant and you get Norovirus - there's no risk to your unborn child.

Can I get norovirus again?

Yes, you can get norovirus more than once. The virus is always changing, which means your body is unable to build up resistance to it.

15. Parvovirus or Fifth Disease (slapped cheek)

What is slapped cheek syndrome?

This is a viral disease due to Parvovirus B19 (fifth disease syndrome); It is spread by respiratory droplets

Symptoms initially appear as:

- 'flu-like' illness and then the
- bright red 'slapped cheeks' rash appears,
- followed by a reddish rash on the body. This rash may last for up to **3 weeks**.

A few children, but most adults, have mild joint pains. It is invariably a mild illness.

By the time the 'slapped cheeks' rash appears, most patients are no longer infectious, and excluding children with the body rash serves no useful purpose.

The illness is commonest in the 4-10 year old age group and outbreaks are common in primary schools in the later winter through to early summer. It's thought that once you've been infected, you're immune for the rest of your life.

What are the symptoms?

The main symptom is a blotchy red rash on your face that looks like you have slapped cheeks. Other symptoms can include:

- headache
- mild fever
- sore throat

However, in about 20-30% of infections, there are no symptoms.

Who is usually affected with Parvovirus?

Slapped cheek syndrome usually affects children. Studies have shown that 60% of adults in the UK have antibodies to parvovirus B19. It's thought that once you've been infected, you're immune for the rest of your life.

It's difficult to avoid contact with people who have parvovirus B19 because they may have no symptoms. Once the rash appears, the person is no longer contagious.

What is the incubation period?
The incubation period is 6-11 days.

When to get advice if you are pregnant?

See your GP or midwife as soon as possible if you're pregnant and you think you've come into contact with Slapped Cheek. You should do this whether you develop a rash or not. There's no routine screening test for Slapped Cheek in pregnancy.
Your GP will do a blood test to check if you have antibodies to the virus from a current or previous infection.

16. Panton-Valentine Leukocidin (PVL)

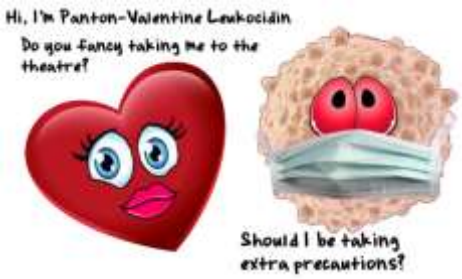
What is PVL?

Staphylococcus aureus is a 'bug' (a microbe or bacterium) that is a normal part of the skin flora (bacterium and fungi that live on healthy skin). It particularly likes to live on the moist surfaces of the body such as inside the nostrils, the armpits and in the groin area. People in the wider community carry many different strains of Staphylococcus aureus. Some strains are more likely to cause infections than others i.e. they are more virulent. Strains that secrete a toxin called Panton-Valentine Leukocidin (PVL) are more likely to cause infections, particularly of the skin.

The number of cases of this strain of Staphylococcus aureus has been rising over the past few years, but still remains relatively low. Almost all of the cases identified so far have been in normally fit healthy people, including children attending nurseries / schools and further education.

What are the symptoms?

Infections caused by PVL strains of *S. aureus* normally cause cellulitis (inflammation of layers under the skin) and pus-producing skin infections (e.g. abscesses, boils and carbuncles). They can, however, on very rare occasions, lead to more severe invasive infections, such as septic arthritis, blood poisoning or a severe form of pneumonia.



Is it infectious?

Yes! But the risk to other students / staff and the general public of becoming infected with PVL *S. aureus* is small but it is always good practice to maintain appropriate hygiene measures:

- regular bathing/showering
- regular changing of linen and underwear
- avoiding sharing personal items (e.g. toothbrushes, face cloths, towels) and keeping wounds covered.

In shared facilities (for instance, in gyms/ halls of residence) it is good practice to use:

- hand wash with liquid soap and use disposable towels

- always place a towel on the bench/equipment before using
- ensure the facilities are cleaned frequently and that there is good ventilation to the locker room and showers.

Why do people get PVL *S. aureus* infections?

Not all people with PVL *S. aureus* will suffer an infection. When these occur they are usually associated with the presence of other risk factors such as overcrowding, skin abrasions resulting from close contact sports such as wrestling or rugby, or using contaminated articles such as sharing towels, razors, poor hand hygiene and damaged skin from other conditions such as eczema.

For individual cases with PVL-SA infection

- Individuals can go to school provided they feel well, are of an age where they can understand the importance of good hand hygiene, and the infected skin is covered with a clean dry dressing able to stay dry and in place until the end of the school day.
- Individuals should not be at school if they have a boil that requires drainage or a newly discharging boil or abscess, the leakage from which cannot easily be contained.
- Individuals should not take part in contact sports or use communal gym equipment until their skin lesion has totally healed.
- Those with eczema or a more generalised skin condition should remain off school until treatment has been completed and/or discussed with local PHE.

Increasing numbers of skin infections

If it appears that infection is spreading between children, your local PHE centre should be contacted.

17. Respiratory Syncytial Virus

Respiratory syncytial virus (RSV) is also referred to as Bronchiolitis. In the majority of cases the virus responsible is the respiratory syncytial virus (RSV).

RSV is a very common virus. Almost all children are infected with RSV by the time they are two years old. In older children and adults RSV may cause a cough or cold, but in young children it can cause bronchiolitis.

What are the symptoms?

Most children with bronchiolitis have mild symptoms and recover within two weeks, but it's important to look out for signs of more serious problems, such as breathing difficulties.

The early symptoms of bronchiolitis tend to appear within a few days of becoming infected. These are usually similar to those of a common cold, such as:

- blocked or runny nose

- cough
- slightly high temperature (fever)

The symptoms usually get worse during the next few days before gradually improving. During this time your child may develop some of the following symptoms:

- a rasping and persistent dry cough
- rapid or noisy breathing (wheezing)
- brief pauses in their breathing
- feeding less and having fewer wet nappies
- vomiting after feeding
- being irritable

Although most cases of RSV are not serious, these symptoms can be very worrying.

Is it infectious?

Yes! Viruses are spread through tiny droplets of liquid from the coughs or sneezes of someone who is infected. The droplets can be breathed in directly from the air or picked up from a surface that they have landed on, such as a toy or table.

For example, your child can become infected if they touch a toy that has the virus on it and then touch their eyes, mouth or nose. RSV can survive on a surface for up to 24 hours.

An infected child can remain infectious for up to three weeks, even after the symptoms have gone.

How can I stop it spreading to others?

The viruses that cause RSV are very common and easily spread, so it's impossible to prevent the condition entirely. However, the following steps will help reduce the chances of your child developing or spreading the infection:

- cover your child's nose and mouth when they cough or sneeze
- use disposable tissues rather than handkerchiefs and throw them away as soon as they have been used
- wash both your child's hands and your hands frequently, particularly after touching their nose or mouth or after feeding
- ask anyone who comes into contact with your child, such as a relative or nanny, to wash their hands first
- wash and dry eating utensils after use
- wash or wipe toys and surfaces regularly
- keep infected children at home until their symptoms have improved
- keep newborn babies away from people with colds or flu, particularly during the first two months of life or if they were born prematurely (before week 37 of pregnancy)

Stop smoking

Children who inhale smoke passively are more at risk of developing bronchiolitis. If you smoke, avoid doing so around your child or consider stopping smoking.

Are there any complications?

It is particularly important to seek medical advice if your baby is under 12 weeks old or they have an underlying health problem, such as a congenital (present from birth) heart or lung condition.

While it is unusual for children to need hospital treatment for RSV, the symptoms can get worse very quickly.

Who's most at risk?

Bronchiolitis is very common in infants and is usually mild. However, there are several things that can increase your chances of developing the condition. These include:

- being born prematurely (before week 37 of pregnancy)
- being under two months of age
- having congenital heart disease (a birth defect that affects the heart)
- having chronic lung disease of prematurity (when injury to the lungs causes long-term respiratory problems in premature babies)
- being breastfed for less than two months or not at all
- being exposed to smoke, for example if parents smoke
- having brothers or sisters who attend school or nursery, as they are more likely to come into contact with a virus and pass it on

Do I need to see my GP?

If your child only has mild cold-like symptoms and is recovering well, there is usually no need to seek medical advice. In these cases you can normally care for your child at home.

Call 999 for an ambulance if:

- your child has severe breathing difficulties or exhaustion from trying to breathe – you may see the muscles under your child's ribs sucking in with each breath, your child may be grunting with the effort of trying to breathe, or they may be pale and sweaty
- your child has a rapid breathing rate of more than 60 breaths a minute
- you are unable to rouse (wake) your child or, if roused, they do not stay awake
- your child's breathing stops for a long period (more than 10 seconds at a time), or there are regular shorter pauses in breathing of 5-10 seconds
- your child's skin begins to turn very pale or blue, or the inside of their lips and tongue are a blue colour (known as cyanosis)
- poor feeding (your child has taken less than half the amount that they usually do during the last two or three feeds)
- no wet nappy for 12 hours or more
- a breathing rate of 50-60 breaths a minute

- a high temperature of 38°C (100.4°F) or above
- seeming very tired or irritable

18. Ringworm

What is it?

Despite its name, it doesn't have anything to do with worms. It's an infection of the skin caused by a fungus. Ringworm often looks like a round, red or silvery patch of skin that may be scaly and itchy.

What are the symptoms?

The ring spreads outwards as it progresses. You can have one patch or several patches of ringworm, and in more serious cases your skin may become raised and blistered.

Scalp ringworm

The symptoms of scalp ringworm include:

- small patches of scaly skin on the scalp, which may be sore
- patchy hair loss
- an itchy scalp

In more severe cases, symptoms can also include:

- small, pus-filled sores on the scalp
- crusting on the scalp

Body ringworm

The symptoms of body ringworm include:

- a ring-like red rash on your skin – your skin will look red and irritated around the ring but healthy inside

In more severe cases:

- the rings may multiply, grow in size and merge together
- the rings may feel slightly raised to the touch and the skin under the rash may be itchy
- blisters and pus-filled sores may form around the rings

Foot ringworm (athlete's foot)

The symptoms of foot ringworm (athlete's foot) include:

- an itchy, dry, red and flaky rash, usually in the spaces between your toes

And, in more severe cases:

- cracked skin in the affected area
- blisters, which may ooze or crust
-

Is it Infectious?

Yes! It is highly contagious and easily spread among people.

How do you get ringworm?

- direct skin contact and by sharing objects such as towels, hairbrushes and bedding.
- pets such as dogs and cats can have ringworm, which they can pass on to people they come into contact with.

Who is affected?

Ringworm is common. It's estimated that 10-20% of people will have a fungal skin infection at some point during their lifetime.

People of all ages can be affected by ringworm, but children are particularly susceptible to it.

Scalp ringworm (tinea capitis) is most common in children who have not reached puberty, particularly African-Caribbean children and those who live in urban areas.

Body ringworm can affect anyone of any age, although groin infections are more common in young men.

What is the treatment?

Ringworm is easily treated using:

- antifungal creams
- tablets
- shampoo

How do you stop it spreading to others?

- wash areas of skin affected by ringworm daily and dry thoroughly, paying particular attention to skin folds and the areas between your toes
- in the case of a groin or foot infection, change your underwear or socks daily as fungi can persist in flakes of skin
- in the case of scalp infection, do not share combs, hairbrushes or hats
- wash clothes, towels and bed linen frequently
- wear loose-fitting clothes, preferably made of cotton or other natural materials

Do I need to see my doctor?

You need to see your GP if you or your child have ringworm of the scalp. This type of ringworm is treated with antifungal tablets only available on prescription.

Other types of ringworm are generally treated with antifungal cream from the pharmacy and you don't need to see a doctor unless the infection persists. However, pharmacists often prefer children to see a GP to confirm a diagnosis.

Inform PHE if more than two children have the same symptoms

19. Rubella (German measles)

What is rubella?
Rubella, also called German measles or 3-day measles, is a disease caused by the rubella virus. Rubella is generally a mild illness that does not result in long-term problems.

What causes rubella?
The rubella virus is most often spread through droplets of fluid from the mucous membranes that contain the virus. An infected person can spread these droplets by:

- coughing, sneezing, talking
- sharing food and drinks.
- touching a surface contaminated with the droplets and then touching your eyes, nose, or mouth before washing your hands.
- less commonly, you can get the virus through contact with infected blood if it gets on broken skin or on your hands and you don't wash them immediately.

What are the symptoms?
Symptoms of rubella include:

- mild fever,
- swollen glands (especially behind the ear and at the back of the head),
- skin rash that starts on the face and spreads to the neck, the chest, and the rest of the body.
- Older children and teenagers may have fever, eye pain, sore throat, and body aches. They may or may not develop a rash.

When am I contagious and what is the incubation time?

- Most contagious a few days **before** the rash develops until **5 to 7** days after it first appears.
- The incubation period—the time from exposure to the virus until you develop symptoms—is **14 to 21** days.
- However, as many as 25% to 50% of those infected with the rubella virus do not develop any symptoms.

All people infected with rubella are contagious, regardless of whether they have symptoms.

Generally, rubella causes only mild illness and no long-term problems. However, if you are pregnant and become infected with the rubella virus, this can have serious effects on your baby's development. It is important to see your midwife if you are concerned and she can have your antenatal bloods tested.

How is rubella diagnosed?
A simple blood test identifies antibodies to the rubella virus.

How is it treated?
Treatment for rubella involves caring for the specific symptoms.

- Paracetamol type analgesia can be given to children and adults for fever. Do not give aspirin to anyone younger than 16yrs because of the possible link to kidney problems
- If you are pregnant and not immune to rubella, Discuss with your midwife or your doctor.

Can rubella be prevented?
Rubella vaccine is part of the normal childhood measles, mumps, and **rubella** immunisation (MMR). The rubella vaccine protects 90% of immunised people from getting this disease.

Rubella is now a very rare disease in school aged children. It now most commonly affects men in their 20s because until the 1994 Measles Rubella campaign only girls were immunised (the MMR was introduced in the late 1980s)

20. Scabies

Scabies is a skin infection caused by a mite. It can be uncomfortable but is not a serious disease.

What are the symptoms?

The main symptoms:

- Itching
- Possible rash on the wrists, fingers, feet and body.

How is it transmitted?

It is transmitted by skin to skin contact in a warm environment e.g. by children holding hands. The scabies mite does not survive for long outside the human body and can not be picked up just from clothes.

What is the treatment?

Lotions can be purchased from a chemist or obtained on prescription from the doctor. It is important to follow the instructions on the bottle.

- The whole family should be treated at the same time even if only one person has obvious scabies.
- If more than one child in a class has scabies and it appears that transmission may be taking place at school, then it is important to treat the class

Advice can be sought from:

- The school nurse or health visitor
- Public Health England

- Children can return to school on the day after they have been treated.

Seek advice from your school nurse. Leaflets are available from your nurse, or from the Health Protection Unit.

21. Scarlet fever

What is Scarlet Fever?

Scarlet fever is a bacterial illness that causes a distinctive pink-red rash. Scarlet fever is also known as scarlatina, although this often refers to a milder form of the disease.

It usually follows a sore throat or a skin infection (impetigo) caused by particular strains of streptococcus bacteria.

What are the symptoms?

Symptoms of scarlet fever generally take two to five days to appear after infection.

The illness often starts with

- sore throat,
- headache
- high temperature (fever)
- rash developing 12 to 48 hours later

Rash

- Red blotches are the first sign of the rash. These turn into a fine pink-red rash that feels like sandpaper to touch and looks like sunburn.
- The rash usually starts in one place, but soon spreads to other parts of the body. It commonly affects the ears, neck, chest, elbows, inner thighs and groin, and may be itchy.
- It does not normally spread to the face. However, the cheeks become flushed and the area just around the mouth stays quite pale. The rash will turn white if you press a glass on it.

The rash usually fades after about a week, but the outer layers of skin, usually on the hands and feet, may peel for several weeks afterwards.

In milder cases, sometimes called scarlatina, the rash may be the only symptom.

Other symptoms may include:

- swollen neck glands
- loss of appetite
- nausea or vomiting
- red lines in the folds of the body, such as the armpit, which may last a couple of days after the rash has gone

- a white coating on the tongue, which peels a few days later leaving the tongue red and swollen (this is known as strawberry tongue)
- a general feeling of being unwell

Is it Infectious?

Yes! It is extremely contagious and can be caught by:

- breathing in bacteria in airborne droplets from an infected person's coughs and sneezes
- touching the skin of a person with a streptococcal skin infection
- sharing contaminated towels, baths, clothes or bed linen

It can also be caught from carriers - people who have the bacteria in their throat or on their skin but do not show any symptoms.

What is the incubation period?

Symptoms of scarlet fever usually develop two to five days after infection, although you will be contagious before showing signs of the illness.

What is the treatment?

Scarlet fever used to be a very serious disease, but most cases today are mild. This is because scarlet fever can easily be treated with antibiotic tablets. These must be taken for 10 days, even though most people recover after four to five days.

With proper treatment, further problems are very unlikely. However, there is a small risk of the infection spreading to other parts of the body, such as the ear, sinuses and lungs.

Although most cases of scarlet fever go away in about a week without treatment, treatment is recommended**.** This is because treatment reduces the length of time you are contagious, speeds up recovery and reduces the risk of complications from scarlet fever.

With treatment, most people recover in around four to five days and can return to work or school after 24 hours.

You may be contagious for two to five weeks without treatment.

You can help relieve many of the symptoms of scarlet fever with some simple self-care measures, such as:

- drinking plenty of cool fluids or eating soft foods if your throat is painful
- taking paracetamol to bring down a high temperature
- using calamine lotion or antihistamine tablets to relieve itching

Are there any complications?

Most cases of scarlet fever cause no complications, especially if the condition is properly treated.

In the early stages, there is a small risk of:

- an ear infection
- a throat abscess (painful collection of pus)
- sinusitis (inflammation of the sinuses)

- pneumonia (inflammation of the lungs)
- meningitis (inflammation of the membranes surrounding the brain and spinal cord0

How can I stop it from spreading?

If your child has scarlet fever, do not let them go to school and keep them away from other people until they have been on a course of antibiotics for at least 24 hours.

All tissues and cloths that someone with scarlet fever has coughed or sneezed into should be washed or disposed of immediately. Wash your hands thoroughly with soap and water if you have touched any of these.

Avoid sharing contaminated eating utensils, cups and glasses, clothes, baths, bed linen or towels.

Do I need to see my GP?

See your GP as soon as possible if you suspect you or your child has scarlet fever.

Can I catch it again?

It is possible to catch scarlet fever more than once, although this is rare.

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22.Threadworms

What are Threadworms?

Threadworms, also known as pinworms, are tiny parasitic worms that hatch eggs in and infect the large intestine of humans.

Threadworms are the most common type of worm infection in the UK, and they are particularly common in young children under the age of 10.

What are the symptoms?

- intense itching around the bottom (or the vagina in girls), particularly at night when the female worms are laying eggs
- disturbed sleep as a result of the itching, which can lead to irritability

In some cases, you may spot threadworms on your bed clothes or sheets at night, or you may notice them in your stools. The worms look like threads of white cotton about one centimetre long.

Severe or persistent threadworm infections can cause:

- loss of appetite
- weight loss
- skin infection around the rectum, if bacteria enter any scratches caused by itching (wearing cotton gloves while sleeping may help prevent this)
- difficulty getting to sleep or staying asleep
- bedwetting

Is it infectious?

Yes! Threadworms lay their eggs around an infected person's bottom, usually at night. Along with the eggs, the worm also secretes mucus that causes itching.

If the eggs get stuck on the person's fingertips when they scratch, they can be transferred to their mouth or onto surfaces and clothes. Other people who touch an infected surface can then transfer the eggs to their mouth.

What is the incubation period?

Threadworm eggs can survive for up to three weeks before hatching. If the eggs hatch around the anus, the newly born worms can re-enter the bowel. Eggs that have been swallowed will hatch inside the intestine. After two weeks, the worms reach adult size and begin to reproduce, starting the cycle again.

How can I stop it spreading to others?

It is not always possible to prevent a threadworm infection, but you can significantly reduce your risk by always maintaining good hygiene and encouraging children to do the same.

- Children should wash their hands regularly, particularly after going to the toilet and before mealtimes.
- Keep fingernails short
- Wear pajamas or pants to bed
- If your child is infected, encouraging them not to scratch the affected area around their bottom or vagina; this will help prevent re-infection and reduce the risk of the infection spreading to other people
- Kitchen and bathroom surfaces should be kept clean.

What is the treatment for threadworms?

- Everyone in your household will need to be treated because the risk of the infection spreading is high. This includes people without any symptoms of a threadworm infection.
- Treatment will involve a single dose of a medication called mebendazole to kill the worms.
- Another dose can be taken after two weeks, if necessary.

During treatment and for a few weeks afterwards, it is also important to follow strict hygiene measures to avoid spreading the threadworm eggs. This involves:

- Regularly vacuuming your house
- Thoroughly washing your bathroom and kitchen.
- If you are pregnant or breastfeeding, hygiene measures are usually recommended without medication.
- This is also often the case for young children. Discuss with GP / Pharmacist

Do I need to see my GP?

If you think you or your child may have threadworms, you can usually treat the infection yourself with medication available at pharmacies without prescription.

You only usually need to see your GP if you think you have threadworms and you are pregnant or breastfeeding, or if you think your child has threadworms and they are under two years old. This is because the treatment recommended in these circumstances is usually different to what is recommended for most people.

Do I need to stay away from work/school?

No! If you or your child has a threadworm infection, it is not necessary to stay off work or school.

However, it's important to inform your child's school or nursery so they can take steps to limit the spread of infection by:

- Regular cleaning of toys/equipment
- Staff to wear PPE when changing nappies / taking child to the toilet
- Ensuring hand washing after removing gloves
- Washing hands before food preparation
- Washing hands after going to the toilet

23. Tuberculosis?

What is Tuberculosis (TB)?

Tuberculosis (TB) is caused by a type of bacterium called Mycobacterium tuberculosis. It is a bacterial infection spread through inhaling tiny droplets from the coughs or sneezes of an infected person.

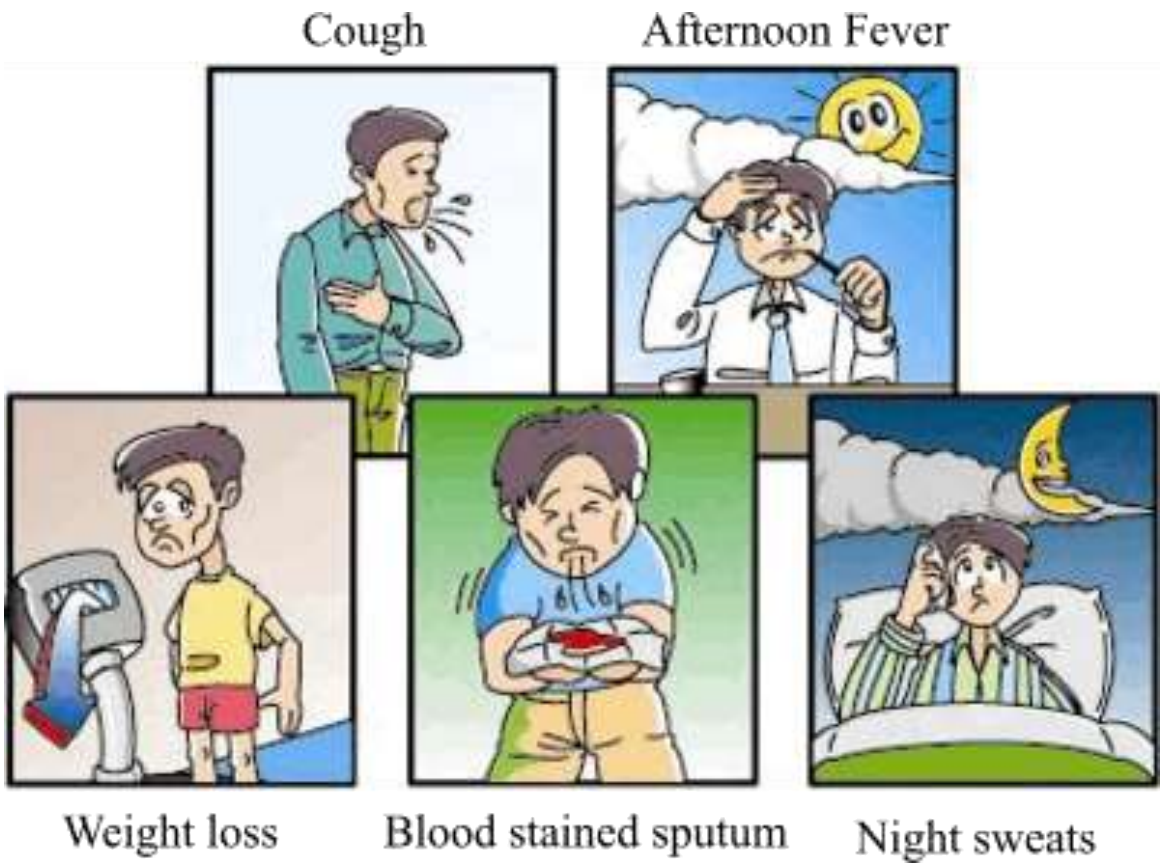
TB mainly affects the lungs. However, it can affect any part of the body, including the bones and nervous system

What are the symptoms of TB?

The symptoms of tuberculosis (TB) depend on where the infection occurs.

TB usually develops slowly. Your symptoms might not begin until months or even years after you were initially exposed to the bacteria.

In some cases the bacteria infect the body but don't cause any symptoms, which are known as latent TB. It is called active TB if the bacteria cause symptoms.



You should see a GP if you have a cough that lasts more than three weeks or if you cough up blood.

Is it Infectious?

TB that affects the lungs is the only form of the condition that is contagious and usually only spreads after prolonged exposure to someone with the illness. For example, TB often spreads within a family who live in the same house.

- In most healthy people, the immune system (the body's natural defense against infection and illness) kills the bacteria and you have no further symptoms, however; sometimes the immune system cannot kill the bacteria, but manages to prevent it from spreading in the body. This means you will not have any symptoms, but the bacteria will remain in your body. You cannot pass the infection on to others.

  This is known as latent TB.

- If the immune system fails to kill or contain the infection, it can spread to the lungs or other parts of the body and symptoms will develop within a few weeks or months.

  This is known as active TB.

Without treatment, latent TB could develop into an active TB infection at a later date, particularly if your immune system becomes weakened.

- children are rarely infectious (usually diagnosed when an adult, relative or close friend is found to have TB)
- exclusion from school is not necessary once treatment has been taken for 2 weeks.
- Adults (staff, parents) with TB **may** be infectious, hence children in close contact may need medical assessment and this should discussed with PHE.

What is the treatment?

Treatment for tuberculosis (TB) depends on which type you have. You will be cared for by a TB treatment team who will ensure you are on the appropriate drug regime' and several different antibiotics are available. This is because some forms of TB are resistant to certain antibiotics. If you are infected with a drug-resistant form of TB, treatment can last as long as 18 months.

With treatment, a TB infection can usually be cured.

What if someone I know has TB?

When someone is diagnosed with TB, their treatment team will assess whether other people are at risk of infection. This may include close contacts, such as people living with the person who has TB, as well as casual contacts, such as work colleagues and social contacts.

Anyone who is assessed to be at risk will be asked to go for testing, and will be given advice and any necessary treatment after their results.

Interferon gamma release assay (IGRA)

The IGRA is a newer type of blood test for TB that is becoming more widely available.

The IGRA may be used to help diagnose latent TB:

- if you have a positive Mantoux test
- if you previously had the BCG vaccination (as the Mantoux test may not be reliable in these cases)
- as part of your TB screening if you have just moved to the UK from a country where TB is common
- as part of a health check when you register with a GP
- if you are about to have treatment that will suppress your immune system
- if you are a healthcare worker

Mantoux test

- The Mantoux test is not widely available in the South West
- If you have had the BCG vaccination, you may have a mild skin reaction to the Mantoux test. This does not necessarily mean you have latent TB.

How can I stop it spreading to others?

If you are diagnosed with pulmonary tuberculosis (TB), which affects the lungs, you will be contagious up to about two to three weeks into your course of treatment.

You will not normally need to be isolated during this time, but it is important to take some basic precautions to stop TB spreading to your family and friends. These precautions are:

- stay away from work, school or college until your TB treatment team advises you it is safe to return
- always cover your mouth when coughing, sneezing or laughing
- carefully dispose of any used tissues in a sealed plastic bag
- open windows when possible to ensure a good supply of fresh air
- do not sleep in the same room as other people because you could cough or sneeze in your sleep without realising it

The TB Team will contact and trace any close contacts of someone who is found to be positive

- If you are in close contact with someone who has TB, tests may be carried out to see if you are also infected, this depends on the type of TB

Do I need to see my GP?

Your GP may refer you to a TB specialist for testing and treatment if they think you have TB.

24. Warts and verrucas

What are warts and verrucas?

Warts are small lumps that often develop on the skin of the hands and feet.

Warts vary in appearance and may develop singly or in clusters. Some are more likely to affect particular areas of the body. For example, verrucas are warts that usually develop on the soles of the feet.

Warts are non-cancerous, but can resemble certain cancers.

Most people will have warts at some point in their life. They tend to affect children and teenagers more than adults.

What causes warts?

Warts are caused by an infection with the human papilloma virus (HPV).

The virus causes an excess amount of keratin, a hard protein, to develop in the top skin layer (epidermis). The extra keratin produces the rough, hard texture of a wart.

What are the symptoms?

Warts are not usually painful, but some types, such as verrucas, may hurt. They can occasionally itch or bleed.

There are several different types of warts, all varying in size and shape.

Are they infectious?

Warts aren't considered very contagious, but they can be caught by close skin-to-skin contact. The infection can also be transmitted indirectly from contaminated objects or surfaces, such as the area surrounding a swimming pool.

You are more likely to get infected if your skin is wet or damaged. After you become infected, it can take weeks or even months for a wart or verruca to appear.

What is the treatment?

- Warts usually clear up without treatment
- It can take up to two years for the virus to leave your system and the warts to disappear.
- The length of time it takes for a wart to disappear will vary from person to person. They tend to last longer in older children and adults.
- In adults and people with a weakened immune system, warts are less likely to clear up on their own or respond well to treatment.

There are a number of treatments available for warts. However, no single treatment is 100% effective, and the wart may return.

The aim of treatment is to remove the wart without it returning and without leaving any scarring.

Do I need to see my GP?

Most types of warts are easy to identify because they have a distinctive appearance. You should always see your GP if you have a growth on your skin you are unable to identify or are worried about.

Your GP will be able to tell if it's a wart simply by looking at it. Where it is on your body and how it affects the surrounding skin will also be taken into consideration.

You should visit your GP if you have a wart that:

- bleeds
- changes in appearance
- spreads
- causes you significant pain, distress or embarrassment

25. Whooping Cough – (Pertussis)

Whooping cough (pertussis) is a highly contagious bacterial infection of the lungs and airways.

The condition usually begins with a persistent dry and irritating cough that progress to intense bouts of coughing. The gasping for breath after one of these coughing bouts causes a distinctive "whooping" noise, which is how the condition gets its name.

Other symptoms include:

- a runny nose
- raised temperature
- vomiting after coughing.

The coughing can last for around three months (another name for whooping cough is the "hundred day cough").

What causes whooping cough?

Whooping cough is caused by a bacterium called Bordetella pertussis, which infects the lining of the airways, mainly the windpipe (trachea) and the two airways that branch off from it to the lungs (the bronchi).

If the bacteria make contact with your airways, this leads to:

- a build-up of thick mucus – which causes the intense bouts of coughing as your body tries to expel it
- swollen airways – which makes breathing more difficult and causing the "whoop" sound as you gasp for breath after coughing

People with whooping cough are infectious from **six days after** exposure to the bacteria to three weeks after the "whooping" cough begins (without treatment).

The bacteria are passed from person to person by infected droplets in the air, spread by coughing and sneezing. Pertussis activity tends to peak every three to four years in the UK.

When should I see my GP?

See your GP as soon as possible if you think you or your child may have whooping cough.

Your GP can usually diagnose the condition by asking about your symptoms and listening to the cough (the whooping cough is very distinctive).

Whooping cough can also be confirmed with:

- a blood test – to test for antibodies to Bordetella pertussis bacteria
- a sample of mucus taken with a swab – to test for Bordetella pertussis bacteria

Whooping cough can be severe in young babies and, in some cases, they may need to be diagnosed and given immediate treatment in hospital.

Treating whooping cough

If whooping cough is diagnosed during the first **21 days** of infection, a course of antibiotics may be prescribed. This is to prevent the infection being passed on to others.

It's important to take steps to avoid spreading the infection to others, particularly babies under six months of age.

Children with whooping cough should be kept away from school or nursery until either:

- five days from the time they start taking antibiotics
- they have had three weeks of intense coughing

The same advice applies to adults returning to work.

As a precaution, household members of someone with whooping cough may also be given antibiotics and a booster shot of the vaccine.

Antibiotics won't usually be prescribed if whooping cough is diagnosed in the later stages of infection (two to three weeks after the onset of symptoms). By this time, you will no longer be infectious. It's also very unlikely that antibiotics will improve your symptoms at this stage.

Your GP will be able to advise you about how to manage the infection at home using some simple self-care measures, such as:

- resting
- drinking plenty of fluids

Babies under a year old are likely to be admitted to hospital as they are most at risk of severe complications, such as serious breathing difficulties.

Whooping cough vaccination

In the UK, all pregnant women are offered vaccination against whooping cough when they are 28-38 weeks pregnant. Getting vaccinated while you're pregnant could help to protect your baby from developing whooping cough in its first few weeks of life.

Children are vaccinated against whooping cough with the 5-in-1 vaccine at two, three and four months of age, and again with the 4-in-1 pre-school booster before starting school at the age of about three years and four months.

Although the number of cases of whooping cough has fallen dramatically since vaccination began, it is still possible for children to get the infection, so having the vaccination is vital.

By increasing the numbers of people vaccinated against whooping cough, the risk of passing on the infection to a young baby, which could cause serious, and possibly fatal complications, is reduced.

The effectiveness of the whooping cough vaccination may fade over time, meaning it's possible to develop the condition during adulthood, even if you were vaccinated as a child.

Who is affected?

Due to the success of the NHS vaccination scheme, whooping cough is now uncommon in young children. However; there are areas or groups of people who do not agree with immunisation, therefore these children and adults may be at risk from developing pertussis and passing it on to vulnerable individuals.

Most cases occur in adults whose immunity has faded be this vaccine induced or from a natural infection. In these cases, symptoms tend to be less serious, although the persistent cough can be frustrating and unpleasant.

26. Pregnant staff /students

If a pregnant woman develops a rash or is in direct contact with someone with a potentially infectious rash, this should be investigated according to PHE guidelines by a doctor. The greatest risk to pregnant women from such infections comes from their own child/children, rather than the workplace. Some specific risks are:

- **Chickenpox:** can affect the pregnancy if a woman has not already had the infection. Report exposure to midwife and GP at any stage of exposure. The GP and antenatal carer will arrange a blood test to check for immunity. Shingles is caused by the same virus as chickenpox, so anyone who has not had chickenpox is potentially vulnerable to the infection if they have close contact with a case of shingles
- **Influenza:** There is good evidence that pregnant women have a higher chance of developing complications if they get flu, particularly in the later stages of pregnancy. One of the most common complications of flu is bronchitis, a chest infection that can become serious and develop into pneumonia. The vaccine is available from September to January/February each year. It can be given at any time during your pregnancy and will help to protect the baby in the early months.
- **German measles (rubella):** If a pregnant woman comes into contact with German measles she should inform her GP and antenatal carer immediately to ensure investigation. The infection may affect the developing baby if the woman is not immune and is exposed in early pregnancy
- **Slapped cheek disease** :(parvovirus B19) can occasionally affect an unborn child. If exposed early in pregnancy (**before 20 weeks**), inform whoever is giving antenatal care as this must be investigated promptly

- **Measles**: during pregnancy can result in early delivery or even loss of the baby. If a pregnant woman is exposed she should immediately inform whoever is giving antenatal care to ensure investigation
- **Whooping Cough** (Pertussis): Pregnant women can help protect their babies by getting vaccinated – ideally at 20 weeks, after the foetal scan, up to 32 weeks pregnant. If for any reason you miss having the vaccine, you can still have it up until you go into labour.

9. Guidelines on food hygiene for childminders

Legal Requirements
If meals are being prepared for children then registration as a Food Business is required. Application forms for registration can be obtained from the District Council Environmental Health Department.

Compliance with the Food Hygiene (England) Regulations 2006 is required to ensure that prepared food is safe, supplied hygienically and all hazards are controlled.

Food handlers should also attend an approved food hygiene course or hold a Basic Food Hygiene Certificate or equivalent.

Kitchen Standards

A good domestic standard of kitchen equipment and facilities is acceptable. A double/twin sink for correct wash and rinse/sterilisation procedures is expected but a single sink used in conjunction with a dishwasher is satisfactory. In addition, a separate wash hand basin (with soap and hand drying facilities) and both hot and cold water supplies is a requirement. This should ideally be installed in the kitchen but if you have one in a utility room or ground floor toilet then this is also acceptable. It is recommended that the use of a sanitizer (chemical bactericidal cleaning agent) be used on work surfaces, cutting boards and all equipment in contact with food.

A household fridge set to work at less than 8°C is necessary and a simple plastic thermometer stored in the appliance will indicate the correct working temperature or that the thermostat should be adjusted.

A washing machine in the kitchen is acceptable but the laundering of clothes should be carried outside the food preparation times.

Avoid carpeted kitchens, artex ceilings and ensure that pets and pet foods, potted plants and cleaning chemicals/materials are kept out of the food room generally but particularly during food preparation.

Food Handling
It is important that you are up to date with food handling practices. You may wish to contact your local environmental health department for advice.

In addition, you should make sure hands are washed and utensils and surfaces thoroughly cleaned before preparing food, and, that food is:
- stored at an appropriate temperature;
- not out of date;
- thoroughly cooked or reheated;
- partly eaten or used food is not re-offered;
- commercial baby foods are stored and cooked following the manufacturer's recommendations;
- microwaved food is allowed to reach the appropriate temperature before it is given to the child.

Food handlers with diarrhoea or vomiting should not handle or prepare food until 48 hours after full recovery.

10. Frequently asked questions about outbreaks in schools/nurseries

How do we know if it is viral or bacterial in nature?
Informing the PHE at the start of an outbreak will enable us to assess the likely nature of the outbreak. The following information is important:

- symptoms,
- numbers affected,
- timescales, dates of onset of illness, duration of illness in affected individuals (we do understand that this information may be difficult to collect and may be incomplete).
- Stool samples are important, particularly to rule out more serious causes of infection.

If it is thought to be related to food handlers/food then the local environmental health officer at your council will take the lead.

Throat swabs in some situations may be required to confirm diagnosis in outbreaks in children that are respiratory in nature, for example, in a flu outbreak. This may be undertaken in school with the liaison of the head teacher, nursery manager, school nurse, the health protection team from your local PHE centre and the local microbiology service.

What happens when a child vomits in the food hall?
If possible the child should be sent home as soon as possible. Any vomit should be cleaned up immediately and disposed of into a plastic bag and secured and disposed of safely. Under no circumstances should vomit go into the food preparation area as this could pose a threat of further transmission if the environment becomes contaminated. Any children in the immediate vicinity of the vomiting should be offered alternative food stuffs, as the likelihood is that their food will have been contaminated by aerosol droplets, and they should wash their hands.

Under what circumstances would the school/nursery need to be closed?
It would depend on a number of issues e.g. the numbers of children/staff with illness and whether the school can manage its normal business safely and effectively. PHE does not have the power to close the school/nursery - that decision would be made by the head teacher and the LEA.

Will every area of the school/nursery need to be cleaned even if it has not been contaminated?
A risk assessment will be made by PHE and the head teacher or nursery manager. It is important that a record is kept of the location of where contamination i.e. vomiting occurred. If there are only a moderate number of cases and the areas have been cleaned appropriately (as per Appendix 1) then a thorough general clean will suffice in most cases once the outbreak is deemed to be over.

11. Exclusion from school

Guidelines for the exclusion from day nursery and school of children and household contacts suffering from an infectious disease

Disease	Usual Incubation Period (days)	Infectious Period (days)	Minimum period of exclusion of patients from school, day nursery, playgroup, etc.	Exclusion of family contacts who attend playgroup, day nursery or school
Campylobacter	3-5	Whilst organism is in stools (<7 weeks) but mainly whilst diarrhoea is present	Until clinically fit with no diarrhoea for 48 hours	None
Chickenpox	13-21	From 1-2 days before, to 5 days after appearance of rash	5 days from onset of rash	None
Shingles	Usually years after chicken pox	Blisters contain Chicken Pox virus (Varicella Zoster)	Discuss with local HPU	None
Colds /'Flu	1-3 days	while symptoms persist	while child unwell	None
Conjunctivitis	2-3 days	during active infection (with pus and crusting)	Single cases: if child is well no exclusion necessary	None
Cryptosporidium	3-11	Whilst cysts are present in stools (several weeks) but mainly whilst diarrhoea is present	Until clinically fit with no diarrhoea, for 48 hours	None
Diphtheria	2-5	Whilst the organism is present in nose and throat	Until clinically fit and bacteriological examination is clear	7 days and until bacteriological result is negative

Disease	Usual Incubation Period (days)	Infectious Period (days)	Minimum period of exclusion of patients from school, day nursery, playgroup, etc.	Exclusion of family contacts who attend playgroup, day nursery or school
Ear Infections/Sticky Ears	may be chronic	usually not infectious	None	None
Fifth Disease (Slapped Cheek)	4-20	1 week+ before the rash develops	Until clinically well. Presence of rash does not indicate infectivity	None
Food Poisoning (including salmonellosis and shigella sonnei but not E coli 0157- seek further advice)	varies according to cause	Varies according to cause- usually whilst symptomatic (may need to consult CCDC)	Until clinically fit with no diarrhoea or vomiting for 48 hours.	None
German Measles (Rubella)	14-21	From 7 days before to 5 days after onset of rash	6 days from appearance of rash	None. If pregnant woman is in contact, she should consult GP.
Giardia lamblia	7-28	Whilst cysts are present in stools but mainly whilst diarrhoea is present	Until clinically fit with no diarrhoea after treatment	None
Glandular Fever	4 - 6 weeks	Once symptoms have cleared risk is small apart from very close contact e.g. kissing	Until clinical recovery	None

Disease	Usual Incubation Period (days)	Infectious Period (days)	Minimum period of exclusion of patients from school, day nursery, playgroup, etc.	Exclusion of family contacts who attend playgroup, day nursery or school
Hand, Foot and Mouth Disease (HFM)	3-5	Probably from 2-3 days before and up to several weeks after onset of symptoms (virus in stools)	Until clinically well. Presence of rash does not indicate infectivity	None
Head and Body Lice	eggs hatch in 1 week	as long as live lice or eggs	None: treatment should be started on day head lice found. No need to send child home	None. Others affected in household should be treated at same time
Hepatitis A	2-6 weeks	From 7-14 days before to 7 days after onset of jaundice	7 days from onset of jaundice	Adults in family should discuss prophylaxis with GP
Hepatitis B (see text)	2 weeks to 6 months	not infectious under normal conditions	until the child feels well	None
Herpes Simplex (Cold Sore)	2-12 days	during infection	None	None
HIV infection (see text)	variable	not infectious under normal conditions	None	None
Impetigo/ Erysipelas	Impetigo: 4-10 days Erysipelas: 1-3 days	as long as lesions are wet and pus is present	until lesions are crusted or healed	None
Measles	7-14 days	From a few days before to 5 days after onset of rash	4 days from onset of rash	None

Disease	Usual Incubation Period (days)	Infectious Period (days)	Minimum period of exclusion of patients from school, day nursery, playgroup, etc.	Exclusion of family contacts who attend playgroup, day nursery or school
Meningitis **(see text)**	varies, depending on cause (meningococcal is less than 7 days- usually 3-4 days)	see text	Until clinical recovery	None
Molluscum Contagiosum	2-7 weeks	As long as lesions persist	None	None
Mumps	12-21 commonly 18 days	2 days before onset of swelling to 5 days after	Until swelling has subsided (5 days minimum)	None
Poliomyelitis	3-21	Whilst virus is present in stools	Until clinical recovery. At the discretion of CCDC	At the discretion of CCDC
Ringworm: Tinea Captitis (head), Tinea Corporis (body), Athletes Foot	4-10 days	as long as rash present	none (treatment recommended)	None
Scabies	few days to 6 weeks	until mites and eggs are destroyed by treatment	day of treatment	None. Household should be treated at the same time

Disease	Usual Incubation Period (days)	Infectious Period (days)	Minimum period of exclusion of patients from school, day nursery, playgroup, etc.	Exclusion of family contacts who attend playgroup, day nursery or school
Scarlet Fever and other Streptococcal infections	2-5	Whilst organism is present in the nose and throat or skin lesion	24 hours after commencing antibiotic treatment.	None
Skin Infection, e.g. **PVL or MRSA**			Please discuss with PHE	Good hygiene, in particular hand washing and environmental cleaning are important to prevent spread.
Threadworms	2-6 weeks to complete life cycle	when eggs are shed in faeces	none once treated	None. Household should be treated at same time
Tuberculosis	4-6 weeks	whilst organism is present in sputum	For 2 weeks following start of treatment	None. Close contacts may need to be screened
Typhoid and Paratyphoid Fever	Typhoid:7-21days Paratyphoid:1-10 days	Whilst organism is present in stools or urine	At the discretion of the CCDC	At the discretion of the CCDC
Verrucae (plantar warts)	2-3 months	as long as wart present	None	None
Whooping Cough	7-10	From 7 days after exposure to 21 days after onset of severe coughing fits	until clinically recovered	None

Appendix1

Suggested letter for parents: D&V

Date

Dear Parent/Guardian

I am writing to let you know that a number of children and staff at school/nursery have had gastro-enteritis over the last few days.

I have been advised by Public Health England and the local Environmental Health Department that this is a mild illness probably caused by a virus, but that it is very infectious. The most usual symptom is vomiting. Some people may have diarrhoea and/or abdominal pain. Symptoms rarely last for more than 24 – 48 hours. The incubation period (time it takes for the illness to develop) is between 24 and 48 hours.

If your child is affected, please keep him or her off school/nursery. He or she should not return until 48 hours after the diarrhoea and vomiting have stopped.
The virus is easily spread from person to person. Good hygiene by everyone in the family reduces the risk. This means washing hands with soap and warm water after going to the toilet and before preparing or eating food.

It is important to clean up carefully when someone has been sick as vomit is very infectious. It is important to clear up spills of vomit or faeces immediately, by thorough washing of the contaminated environment with detergent and hot water. For hard surfaces, (floor, work tops etc, an additional disinfection with a dilute solution of Milton or household bleach (according to manufacturer's instructions) will reduce the contamination. DO NOT MIX these substances with soap and water. Be sure that each family member uses separate towels and flannels which are changed and washed frequently.

Hand washing after visiting the toilet, cleaning up spillages and before handling food is the most important element of reducing the risk of infection.

We are ensuring the school/nursery is thoroughly cleaned to reduce any further risk.

If you need any further advice you can phone Public Health England Tel: 0300 303 8162 or NHS 111

Yours faithfully

Head Teacher/Nursery Manager

Appendix 2

Suggested letter for parents: Flu-like illness

Date

Dear Parent/Guardian

I am writing to let you know that a number of children and staff at school has had [many/several] students off sick with a flu-like illness (cough, headache, fever and body aches). Some students have been sick (vomiting) or have had diarrhoea.

If your child is unwell with symptoms of flu please make sure they stay off school until they are fully recovered. If your child has vomited or had diarrhoea, they must stay away from school until **48 hours** after the symptoms have stopped.

You can lower the risk of passing on viruses like this by washing your hands, before preparing food or eating - and remember to wash them thoroughly after going to the toilet. If you have symptoms of the flu, use a tissue when you cough or sneeze, and dispose of it by throwing it in the bin or flushing it down the toilet.

If you need any further advice you can phone NHS 111 or Public Health England on 0300 303 8162

Yours faithfully

Head Teacher/Nursery Manager

Appendix 3

Outbreak Form

Case number	Name	Date of onset	School year	School class	School House (for boarders)	Diarrhoea Y/N	Vomiting Y/N
1							
2							
Total							

Case number	Name	Date of onset	School year	School class	School House (for boarders)	Diarrhoea Y/N	Vomiting Y/N
Total							

NOTIFICATION OF INFECTIOUS DISEASE
OR
FOOD POISONING

The following diseases are notifiable:

Acute Encephalitis	**Paratyphoid fever**
Acute Poliomyelitis	**Plague**
Anthrax	**Rabies**
Cholera	**Relapsing Fever**
Diptheria	**Rubella**
Dysentery (Amoebic or Bacillary)	**Scarlet Fever**
Food poisoning	**Smallpox**
Leprosy	**Tetanus**
Leptospirosis	**Tuberculosis**
Malaria	**Typhoid Fever**
Measles	**Typhus**
Mumps	**Viral Haemorrhagic Fever**
Meningitis	**Viral Hepatitis**
Meningococcal Septicaemia	**Whooping Cough**
Opthalmia Neonatorum	**Yellow Fever**

Contact Numbers

West Cornwall

Area	Contact Details	Telephone
Isles of Scilly	St Mary's Health Centre	01720 422628 / 07920 818051
Penzance Schools	Bodriggy Health Centre	01736 757100/ 759922
Hayle Schools	Bodriggy Health Centre	01736 757100/ 759922
All schools in Camborne, Pool and Redruth	Camborne Health Office	01209 318522
All schools in Helston and the Lizard	Helston Health Centre	01326 435861

Mid Cornwall

Area	Contact Details	Telephone
Truro Schools	Truro Health Park	01872 354330
Falmouth Schools	Falmouth Health Centre	01326 430056
Newquay Schools	Truro Health Park	01872 354330
St Austell Schools	St Austell Community Hospital	01726 291221

East Cornwall

Area	Contact Details	Telephone
Bodmin Schools	Bodmin Health Centre	01208 251537
Callington Schools	Callington Community Clinic	01579 389198
Liskeard Schools	Oak Tree Surgery, Liskeard	01579 335218
Launceston Schools	Callington Community Clinic	01579 389364
Wadebridge Schools	Wadebridge Health Office	01208 256808
Saltash Schools	Saltash Community Clinic	01752 857451
Bude Schools	Neetside Health Centre	01288 287722
Looe Schools	Looe Children's Centre	01503 756955

Head Office, Fairview House, Corporation Road, Bodmin, PL31 1FB
Telephone: 01208 834600

Notes and useful addresses:

Somerset

Area	Contact Details	Telephone
Taunton and West Somerset School Nurse team Taunton, Wellington, Wiveliscombe, Williton, Minehead and Dulverton areas	School Nurse Office Parkgate House East Reach Taunton TA1 3ES	01823 346182
Sedgemoor School Nurse team *This team covers Bridgwater, Burnham on Sea, Highbridge and Cheddar areas.*	School Nurse Office Bridgwater Community Hospital, Bower Lane Bridgwater TA6 4GU	01278 410044
Mendip School Nurse team *This team covers Wells, Glastonbury, Street, Frome and Shepton Mallet areas.*	School Nurse Office Priory House Priory Health Park Glastonbury Road Wells BA5 1XL	01749 836545
South Somerset School Nurse team This team covers Yeovil, Chard, Crewkerne, Ilminster, langport and Wincanton areas.	School Nurse Office Bracken House, Crewkerne Road Chard TA20 1YA	01460 238741

For more copies please contact:-
Devon, Cornwall and Somerset Public Health England Centre
Tel: 0344 225 3557

Notes and useful addresses:

NORTH DEVON PUBLIC HEALTH NURSING TEAMS		
BARNSTAPLE TEAM Springfield Court, Fishleigh Road, Roundswell Business Park, Barnstaple EX31 3UD		
CUTHBERT, Lesley (Team Leader) – based at Springfield Court, Barnstaple	lesleycuthbert@nhs.net	01271 384093/ 01769 575124/ 07814659097
Health Visitors	**VCL.BarnstapleHVs4Professionals@nhs.net**	01271 384093
School Nursing	**VCL.BarnstapleSchoolNurses@nhs.net**	01271 384090
BIDEFORD TEAM Lower Ground Floor, Bideford Medical Centre, Abbotsham Road, Bideford EX39 3AF	VCL.BidefordPHN@nhs.net	
O'FLAHERTY, Elaine – Team Leader (Based at Bideford Medical Centre)	Elaine.oflaherty@nhs.net	01237 426080/ 07814659062
Admin: Andrea Flavell –	andreaflavell@nhs.net	01237 426080

NORTH DEVON PUBLIC HEALTH NURSING TEAMS		
TILKE, Helen (Wellie) (Team Leader) based at Crown Yealm House, South Molton	helen.tilke@nhs.net	01769 575176/ 07814659157
Torrington/Holsworthy teams Torrington team based at: Bluecoats Childrens Centre, Borough Road, Torrington EX38 7NU Holsworthy team based at: Holsworthy Skills Centre, Western Road, Holsworthy EX22 6DH	vcl.HolsTorrICS@nhs.net	
Administration: MARSHALL, June (Torr)	junemarshall@nhs.net	Torr – 01805 628000
Administration: Sue Read (Hols)	susanread@nhs.net	Hols – 01409 255340

NORTH DEVON PUBLIC HEALTH NURSING TEAMS		
ILFRACOMBE/BRAUNTON TEAMS Ilfracombe team based at The Police Station, Princess Avenue, Ilfracombe EX34 9LW Braunton team based at Caen Medical Centre, Braunton EX33 1LR	**Generic email:** VCL.ilf-braphnt@nhs.net	
GRIMSHAW, Laura – Team Leader Based at The Police Station, Princess Avenue, Ilfracombe EX34 9LW	laura.grimshaw@nhs.net	01271 879950/ 07814659091
Administration: BERRY, Steph (Ilf + Braun)	stephanieberry@nhs.net	Ilf – 01271 879950 Braun – 01271 818030

NORTH DEVON PUBLIC HEALTH NURSING TEAMS		
TILKE, Helen (Wellie) **(Team Leader)** (Based at Crown Yealm House, South Molton)	helen.tilke@nhs.net	01769 575176/ 07814659157
South Molton/Chumleigh Teams Both teams based at Crown Yealm House, Pathfields Business Park, South Molton EX36 3LH	**VCL.smphnt@nhs.net** **Admin:** Kim Cole – kim.cole@nhs.net	01769 575124
Administration: Kim Cole	kim.cole@nhs.net	