



UK Health
Security
Agency

Principles of Outbreak Management in Early Years Settings

Plan:

During this session we aim to discuss:

- Outbreak definitions and when to contact the Health Protection Team (HPT)
- What information to gather and pass on to the HPT
- Respiratory Outbreaks
- Diarrhoea & Vomiting Outbreaks
- Other diseases such as Group A Strep and Measles
- Complex outbreaks
- Communications

Outbreaks

- It is important as a childcare provider that you can recognise an outbreak and escalate appropriately.
- The primary goal of outbreak management is to protect public health by identifying the source and implementing control measures to prevent further spread or reoccurrence.

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Guidance

Managing outbreaks and incidents

Updated 28 July 2023

[Managing outbreaks and incidents - GOV.UK \(www.gov.uk\)](https://www.gov.uk/guidance/managing-outbreaks-and-incidents)

Early Years Settings

Early years settings are at particularly high risk of developing into outbreaks due to the young age of the children:-

- Babies and toddlers will have had less exposure to infections in the past compared to older children
- Less able to control their own hygiene needs
- More hand to mouth exploring
- More 'hands-on' care given e.g. nappies, feeding, cleaning



When to contact the Health Protection Team

- Outbreaks are usually defined as 2 or more cases of a specific disease linked to a common setting or exposure over a specified time period.
- Not all disease cases need to be reported to HPT. Refer to specific disease information here for guidance [Managing specific infectious diseases: A to Z - GOV.UK \(www.gov.uk\)](#) e.g. Scarlet Fever-

You do not need to report single cases of scarlet fever, but you should [contact your UKHSA HPT](#) if any of the following apply:

- there is an outbreak of 2 or more scarlet fever cases within 10 days of each other and the affected individuals have a link, such as mixing in the same class or year group
- there are cases of serious disease which have resulted in overnight stays in hospital
- the setting has cases of chickenpox and/or influenza co-circulating in the group where a case of scarlet fever has been confirmed

When to contact the HPT continued...

Advice on when and when not to contact the HPT is included for each disease.

Contact the relevant UKHSA HPT for advice if you are concerned and/or have seen:

- a higher than previously experienced and/or rapidly increasing number of absences due to the same infection [\[footnote 2\]](#)
- evidence of severe disease due to an infection, for example if an individual is admitted to hospital [\[footnote 3\]](#)
- more than one infection circulating in the same group of people, for example chicken pox and scarlet fever
- an outbreak or serious or unusual illness for example:
 - [E.coli](#) 0157 or E. coli STEC infection
 - [food poisoning](#)
 - [hepatitis](#)
 - [measles](#), [mumps](#), [rubella](#) (rubella is also called German measles)
 - [meningococcal meningitis or septicemia](#)
 - [scarlet fever](#) (if an outbreak or co-circulating chicken pox)
 - [tuberculosis \(TB\)](#)
 - [typhoid](#)
 - [whooping cough](#) (also called pertussis)

Information for HPT

- Important for the staff at the HPT to collate all the relevant information in order to make a full risk assessment of any outbreak:
 - total numbers children registered and staff
 - total numbers of children and staff affected
 - the type of setting, for example nursery, special school, childcare
 - any food handlers affected
 - the number of classes, rooms and facilities. Good to get an overview of the layout of the setting.
 - the symptoms experienced
 - the date when symptoms started, brief overview of the sequence of numbers of new cases since the outbreak started
 - any indications of severe disease such as overnight admissions to hospital
 - if there were any events or trips in the week prior to the start of the outbreak
 - if known, whether any tests or clinical assessments have taken place
 - vaccination uptake (for example for MMR and other infections)
 - if there are any individuals within the affected group at higher risk from severe disease (clinically vulnerable)

Respiratory Infections/Outbreaks

- Common in young children especially in winter months
- Caused by a number of different organisms- including the common cold virus, COVID-19, RSV, influenza (Flu)
- Generally those with mild symptoms- runny nose (sniffles), slight cough, sore throat can stay in settings if otherwise well and no high temperature

Respiratory infections can spread easily between people.

Sneezing, coughing, singing and talking may spread respiratory droplets from an infected person to someone close by.

Examples of infections that are spread in this way are the common cold, COVID-19, influenza, and RSV

Droplets from the mouth or nose may also contaminate hands, stationery, toys or other items and spread to those who may use or touch them, particularly if they then touch their nose or mouth

Respiratory syncytial virus (RSV)

RSV is one of the common viruses that cause coughs and colds in winter.

Incubation period: is short, about 3 to 5 days.

When RSV circulates generally, start in October and last for 4 to 5 months, peaking in December

High-risk groups: Under 2 years. Infants aged less than 6 months frequently develop the most severe disease such as bronchiolitis and pneumonia, which may result in hospitalisation

Statistics: Over 60% of children have been infected by their first birthday, and over 80% by 2 years

Symptoms: similar to a cold, including rhinitis (runny nose, sneezing or nasal congestion), cough, fever, ear infections and croup

Complications: most common cause of bronchiolitis in infants

Prevention: respiratory & hand hygiene, (washing with soap and warm water, and cleaning of surfaces)

Influenza (Seasonal Flu)

Incubation period: 1-4 days with average of 2 days

Infectious period: Usually the day before symptoms start, until 5-6 days while symptomatic

Common Symptoms: Headache, fever, sore throat, aching muscles and joints, gastrointestinal symptoms in children

Exclusion period: If symptoms remain then individual is still infectious. Return when no fever and fully recovered.

Prevention : Flu vaccinations now part of the childhood vaccinations 2- and 3-year-olds (plus all primary aged children and some secondary school). Staff maybe eligible based on age and medical history


People at risk: Chronic heart, chest or kidney diseases are offered annual vaccines.

Pregnant staff: Offered flu jab during pregnancy.




Response measures

- Raising awareness in staff and parents/carers that a respiratory illness is circulating- sign posting to vaccinations where appropriate
- Clear messaging around exclusion
- Clear guidance regarding respiratory and hand hygiene within the early years setting (ensuring appropriate facilities are accessible)
- Keep areas well ventilated



Cover your coughs and sneezes.

1.  **Use a tissue if you have one**

 **If you have no tissue, use your sleeve**

2.  **Wash your hands for 20 seconds with soap and water.**

To help keep time - sing 'Happy Birthday' twice.

Diarrhoea and/or Vomiting Outbreaks

Diarrhoea has numerous causes but diarrhoea caused by an infection in the gut can be easily passed to others

Lots of different organisms can cause D&V outbreaks from norovirus (usually self-limiting), campylobacter and salmonella associated with food poisoning to Shiga Toxin producing E.coli (STEC) which can cause serious disease.

Spread

- Contaminated hands or objects are put in the mouth
- Eating contaminated food or drinks.
- Poor hygiene practices
- Some may be spread vomit (airborne)

Early Years settings

Early years settings are at higher risk:

- Liquid stools more likely to contaminate hands and objects than formed stools
- Often nappies are involved, increasing risk and exposure
- More hand to mouth contact amongst the young children
- Babies unable to communicate when they are about to vomit



D&V Cases- what to do....

Exclude (really important!)

Exclude the infected individual until 48 hours after symptoms have stopped and they are well enough to return. If medication is prescribed, ensure that the full course is completed and there is no further diarrhoea and/or vomiting for 48 hours after the course is completed.

Contact your UKHSA HPT if there are a higher than previously experienced and/or rapidly increasing number of absences due to diarrhoea and vomiting.

For some gastrointestinal infections, longer periods of exclusion are required. For these groups, your UKHSA HPT, or the local authority Environmental Health Officer (EHO) will advise you if any action is required.

Encourage individuals to implement good hand hygiene practices.

Clean kitchen and toilet areas regularly (see cleaning).

Use PPE when handling blood or bodily fluids such as vomit or diarrhoea.

Video showing how vomit spreads

[Spewing robot 'Vomiting Larry': unusual weapon against a highly infectious virus - BBC - YouTube](#)



Food Poisoning

- If reporting cases of D&V to the Health Protection Team (HPT) or LA then they will ask for some additional information regarding food provided for example:
 - Is food provided in the setting? Any change in menu/suppliers?
 - Any recent parties/events?
 - Any pattern with those who are unwell- all had the same food/meal?
 - Any food handlers/kitchen staff affected?

Symptoms of food poisoning usually begin within 1-2 days of eating the contaminated food item but this can vary from a few hours to several weeks depending on the organism. Usually with a food source then people develop symptoms at the same time (point source).

Infection prevention and control – Hand hygiene



Handwashing after using the toilet, between nappy changes, before eating or handling food, after playtime and after touching animals.

Remember alcohol hand gel is not effective against norovirus.

What to do if symptoms start in the early years setting:

- Isolate the affected individual(s) as much as possible
- Dedicated toilet/changing mat or station
- Thoroughly clean up vomit/diarrhoea using the recommended PPE and cleaning solutions. Use disposable paper towels/spillage kit.
- Environmental cleaning should be implemented which includes 'high contact' areas such as door handles, flush handle, light switches and under the rim of the toilet seat. Consideration must be given to the age of the children affected (small children will hold onto a different parts of the toilet and doors than an adult) Cleaning of shared computer equipment.
- Suspend use of soft toys plus water and sand play and cookery activities during outbreak. Any toys used should be wipe cleanable. If settings have a communal class fruit bowl/snacks where the children all help themselves remove.
- Send home ASAP giving clear exclusion advice (not to return until 48hrs with no symptoms). Siblings if asymptomatic can remain in the setting

D&V checklist

- Really useful resource [Diarrhoea and vomiting outbreak: action checklist \(khub.net\)](http://khub.net)



Diarrhoea and vomiting outbreak: action checklist

Date completed:
Checklist completed by (Print Name):
Name and telephone number of institution:
Name of Head Teacher/Manager:

	Yes	No	Comments:
Deploy 48-hour exclusion rule for ill children, young people and staff.			
Children and young people with symptoms to wait in an area away from communal/busy areas where they can be observed until parent/carer collects them			
Liquid soap and paper hand towels available at all hand wash basins			
Staff to check, encourage and supervise hand washing in children.			
Check that enhanced cleaning using appropriate products, that is, twice daily (min) cleaning is being carried out, (especially toilets, frequently touched surfaces, for example, handles and taps and including any special equipment and play areas). (See Preventing and controlling infections section for detail). Ensure that all staff and contractors involved are aware of and are following the guidance.			
Disposable protective clothing available (for example, non-powdered latex or synthetic vinyl gloves and aprons).			
Appropriate waste disposal systems in place for infectious waste.			

	Yes	No	Comments:
Appropriate spill kit in place. Staff to wear appropriate PPE when dealing with spills, which should be removed and disposed of quickly			
Advice given on cleaning of vomit (including steam cleaning carpets and furniture or machine hot washing of soft furnishings).			
Clean and disinfect hard toys daily (with detergent and water followed by bleach/Milton). Limit and stock rotate toys.			
Suspend use of soft toys plus water and sand play and cookery activities during outbreak.			
Segregate infected linen (and use dissolvable laundry bags where possible).			
Consider having a box of spare clean clothing to replace soiled clothing			
Visitors restricted. Essential visitors informed of outbreak and advised on hand washing.			
New children joining affected class or year group suspended.			
Keep staff working in dedicated areas (restrict food handling if possible). Inform HPT of any affected food handlers.			
Trays of fruit/snacks to be covered until point of serving. Snacks should be served in individual bowls handed directly to children and young people			
Drink bottles clearly labelled with names			
Consider signage on doors advising of circulating illness with exclusion advice			
Check if staff work elsewhere and that all staff are well (including agency). Exclude if unwell (see above regarding 48-hour rule).			
HPT informed of any planned events at the institution.			

Other Outbreaks

- Generally seen an increase of various disease outbreaks in schools/early years setting. This follows COVID lockdowns where young children were often isolated and not exposed to normal childhood infections. This has resulted in settings reporting higher incidences of diseases such as chickenpox, whooping cough and scarlet fever recently.
- If HPT is aware of someone (child or staff member) with certain notifiable infections who attends your setting, we may call to check whether there are any others with similar symptoms (without discussing case PII) and give guidance accordingly.

Other Outbreaks

- Early years settings may see various infectious disease outbreaks (other than respiratory/D&V).
- Refer again to [Managing specific infectious diseases: A to Z - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/managing-specific-infectious-diseases-a-to-z) for actions/exclusion and when to escalate

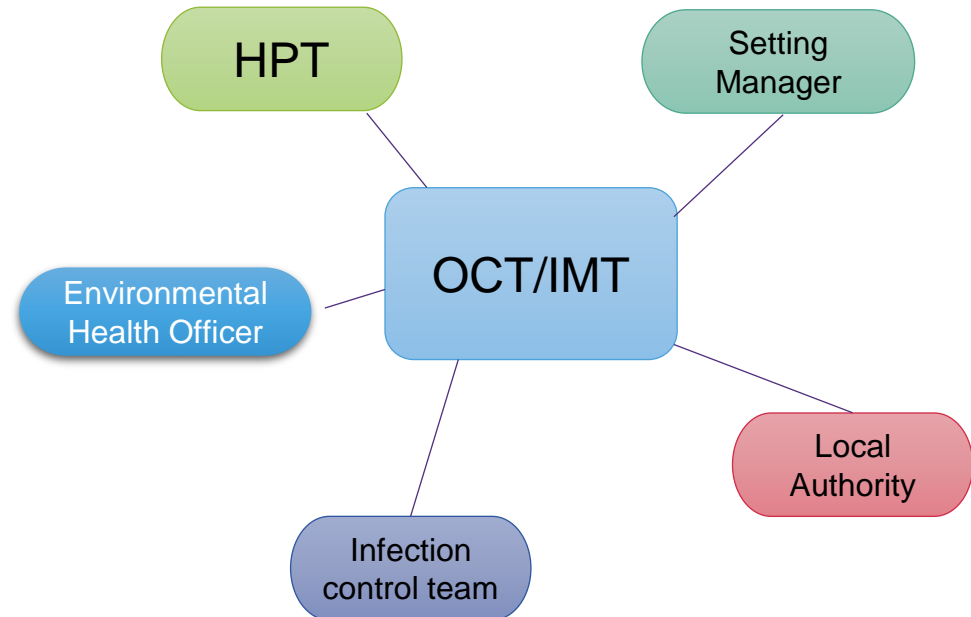
Might including multiple cases of:

- Scarlet fever (with co-circulating chickenpox)
- Invasive group A Streptococcus (increases when scarlet fever circulating as caused by same bacteria)
- Hepatitis A
- Meningococcal disease (meningitis or septicaemia)
- Whooping cough (pertussis)
- Measles

Complex Outbreaks

- Sometimes an outbreak is complex or involves a serious infection and requires many stakeholders and experts to coordinate the response
- An OCT (Outbreak Control Team) or an IMT (Incident Management Team) may be convened
- This ensures all the relevant parties are involved and are able to co-ordinate the most effective response

- OCT/IMT may involve many different stakeholders including comms experts



Clearance samples



- Occasionally clearance samples are required following before cases in certain risk groups can return to setting.
- Children under 5 attending nursery/school, childcare settings are Risk Group B.
- Shiga-toxin producing E.coli is the most common disease that this would be requested for.

Table 1: Risk groups for transmission of gastrointestinal pathogens

Risk Group	Description	Additional Comments
Group A	Any person who is unable to perform adequate personal hygiene due to lack of capacity or ability to comply OR has lack of access to hygiene facilities.	Risk assessment regarding access to hygiene facilities should consider the availability of toilets /handwashing/hand drying facilities in a work/educational setting.
Group B	All children aged 5 years old or under (up to the sixth birthday) who attend school, pre-school, nursery or other similar child care or minding groups.	For children aged 5 years and under who do not attend school, risk assessment for clearance purposes should explore potential for transmission within other settings e.g. household or attendance at parties.
Group C	People whose work involves preparing or serving unwrapped ready to eat food (including drink).	Consider informal food handlers e.g. someone who helps to prepare food for charity and community events.
Group D	Clinical, social care or nursery staff who work with young children, the elderly, or any other particularly vulnerable people, and whose activities increase the risk of transferring infection via the faecal -oral route.	Risk assessment should consider activities such as helping with feeding or handling objects that could be transferred to the mouth.

STEC Outbreaks (Shiga-Toxin producing E.coli)

- STEC is a nasty bacterial infection that may develop severe/potentially life threatening complications such as acute kidney damage (HUS).
- Children under 5 have been shown to shed STEC in their stools for longer than adults and older children therefore needing clearance samples (2 consecutive clear samples) before returning to a setting.
- These can take a long time to complete and be frustrating for parents/carers.
- Recent large outbreaks in nursery settings have been noted and require careful management with relevant partners. HPT/LA will provide guidance, letters and comms in these circumstances

Clear and accurate communications with families/staff vital



- [Managing specific infectious diseases: A to Z - GOV.UK \(www.gov.uk\)](https://www.gov.uk) has useful links to NHS infection regarding different diseases that can be shared
- HPT will provide templated letters for certain scenarios e.g. meningococcal meningitis, measles, co-circulating scarlet fever and chickenpox etc
- Education/Childcare facilities have a role in supporting immunisations campaigns

[Supporting immunisation programmes - GOV.UK \(www.gov.uk\)](https://www.gov.uk)

Outbreak Management Summary



Early years settings pose particular risks regarding the transmission of infections



Important that exclusions are adhered to, and cases/outbreaks reported appropriately and in a timely manner to help prevent further spread



UKHSA Health Protection Teams along with Local Authority colleagues will support you with certain outbreaks and provide guidance and comms