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Group 5
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Module: Public Health
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Chicken pox



The introduction of the case that is related to chicken pox

Chickenpox is a highly contagious and viral infection, which is caused by the varicella-zoster virus. It mainly affects children but can also affect any age group.

The disease is characterised by an itchy, red rash that develops into fluid-filled blisters, along with symptoms such as fever, tiredness, headache, and loss of appetite. Chickenpox spreads easily through coughing, sneezing, or direct contact with the blisters of an infected person.

Exact national totals for Chickenpox between 2023 and 2026 in the United Kingdom are difficult to calculate precisely because chickenpox is not always a notifiable disease, so many mild cases are not formally reported. However, health data and estimates give a good picture of how many people are affected each year.

During this investigation, we found out that around 600,000 cases of chickenpox occur each year in the UK, mostly in children. (NHS England)



What are the main approaches and strategies that could be used to measure an infectious disease outbreak?

That can include surveillance, data analysis, and epidemiological investigation. Public health authorities collect information about reported cases through hospitals, laboratories, and clinics to monitor how the disease spreads within a population.

- ▶ The chickenpox outbreak in Roma's school demonstrates how infectious diseases can be monitored and measured using several epidemiological strategies.
- ▶ Epidemiological surveillance and case detection are used to identify infected individuals. This involves recognising symptoms such as fever and itchy spots, counting confirmed and suspected cases, and conducting contact tracing to identify people who may have been exposed.
- ▶ Another key strategy is the use of surveillance systems. These systems monitor outbreaks through data such as school absence records, GP consultations, and public health reporting systems. Surveillance helps authorities track trends and respond quickly to outbreaks.
- ▶ Overall, these strategies help public health authorities measure the size and spread of an outbreak, identify transmission patterns, and implement control measures such as vaccination programmes and health education.

What are the many approaches and strategies that could be used to monitor an infectious disease outbreak?

To continue to identify and track and detect new infection early

- the teachers and school nurse will have to report suspected cases
- Parents will need to inform the school if their child is diagnosed
- The school will have to inform the local health authorities
- School staff will need to actively check students for symptoms (fever or rash)
- Follow up regularly with parents during an outbreak

Esther - 2510499



School Monitoring Absentees Strategies

- ▶ The absentee records will help with detecting increase in the spread of infection
 - School will track student daily attendance
 - Able to identify patterns of illness related to absence
 - Also be able to report clusters of absence in certain classes
 - School will need to keep accurate record of cases
 - School need to collaborate with NHS and local public team for guidance and recommended control measures
- ▶ Increase in absences may be an indication of the infection spreading

What are the main approaches and strategies that could be used to control an infectious disease outbreak?

Controlling an outbreak involves a combination of medical, administrative, and environmental strategies designed to prevent the spread of infectious diseases.

Firstly, case identification and isolation Roma. The most immediate step is to identify the person with the symptoms and isolate the person from the population.

Infected individuals like Roma must stay home until they are no longer contagious, (Isolation).

Identifying who was in close contact with the infected student, Roma to monitor them for early symptoms.



Akua-2509126

Secondly, vaccination and immunisation are the primary long term strategy for controlling outbreaks. We have the pre-exposure to take the vaccine to prevent infectious diseases and the post exposure is to take the vaccine as an emergency when u have the infection.

Thirdly, environmental and hygiene measures

Enforcing strict hand washing protocols for students and staff.

Deep cleaning high touches surfaces in the school, (door, desks, handles, toys etc.)

Improving airflow in classrooms to dilute airborne particles.

Lastly, administrative control and policy. Schools must have clear protocols to manage health crises effectively.

Setting firm rules on when a child can return to school.

Providing clear guidelines letters to parents explaining the symptoms to be aware of and the actions being taken by the school.

Tracking absences to identify if the outbreak is spreading to other year groups or staff members in the school.

What policies and strategies are available to the UK government to maintain public health?

UK Health Security Agency (UKHSA) during chickenpox outbreak provides school and healthcare providers with health control guidance monitor, and advice on managing vulnerable contact.

Department of Health and Social Care(DHSC), ensures systems are in place to respond to infectious disease outbreak.

NHS diagnose , treat, and deliver MMRV vaccine chicken pox (varicella) most effective to reduce infection rate.

Local councils work with schools and nurseries, provide public health education, lead to control outbreaks in communities.

Health and promotion strategies such as government public health campaigns which raise awareness of symptoms, promote hygiene practices, advise to stay at home, and give clear guidance via NHS websites and school communications.

What health education will you give to the school to address the chicken pox outbreak?

Simple clear information must be provided to staff, parents and pupils
Explaining how highly contagious chickenpox is, how it is spread through respiratory droplets (cough, sneezing), or direct contact.

Staff and parents should be educated to look out for symptoms such as fever, tiredness, itchy red spots that turn into fluid-filled blisters.

Inform persons it can be contagious 1-2 days before the rash appears
And that the incubation period is 10-21 days.

School hygiene and Infection controls measures must be daily reinforced regular hand washing, use of tissues for cough or sneeze, clean touched surfaces frequently.

Parents and staff should be informed that chickenpox can be serious if individual is pregnant, those with weakened immune systems or a newborn baby, so avoid contact with high risk groups.

Tanya -2508552

Attendance and exclusion guidance

- School exclusion advice must be clearly given to reduce classroom transmission.
- The school should be immediately informed if a child is diagnosed.
- Monitor for any complications, seek medical help if needed.
- Children should be kept out of school until all their spots have crusted over to prevent the spread. (at least 5 days after rash appears).
- Staff with chickenpox should stay off work until non- infectious.



Tanya - 2508552

Common questions about chickenpox

1. What causes chickenpox?

Chickenpox is caused by the varicella-zoster virus, which spreads easily from person to person.

2. Who is most at risk of chickenpox?

Children under 10 years old are most commonly affected, but adults who have never had chickenpox can also get it.

3. How is chickenpox diagnosed?

Doctors usually diagnose it by examining the typical rash and symptoms. Laboratory tests may be used in some cases.

4. How can chickenpox be treated?

Treatment usually focuses on relieving symptoms, such as using paracetamol for fever, antihistamines for itching, and keeping the skin clean.

5. Can chickenpox be prevented?

Vaccination, avoiding close contact with infected individuals, and good hygiene can help prevent the spread.

6. When can a child return to school or nursery after chickenpox?

A child can usually return when all blisters have dried and crusted over.

7. Can you get chickenpox more than once?

Most people only get chickenpox once because the body develops immunity, although it is possible in rare cases.

8. Are there complications of chickenpox?

Complications can include skin infections, pneumonia, or brain inflammation, especially in adults or people with weakened immune systems.

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