Handout #2

ARKANSAS DEPARTMENT OF HEALTH

Mumps Outbreak Status Report

Status Report
September 9, 2016

Total Cases as of 9/9/16: 89
Total Adults Under Investigation: 23
Total Children Under Investigation: 61
Children 0-5 years: 7
Children 6-18 years: 54
Persons over 18 years: 23
Persons with no reported age: 5

Age Range	Lab Confirmed Cases	Clinically Diagnosed Cases	Total Cases as of 9/9/16
0-5	1	6	7
6-19	15	39	54
19+	6	17	23
Unknown	1	4	5
Total	23	66	89

Number of School Districts Affected: 2
Number of Schools with Cases: 23
School Districts Affected:

Districts	Number of Schools in each District
Springdale	20
Rogers	3

Number of Businesses Affected: 2
Number of Other Establishments Affected: 3

ADH Outbreak Response:
ADH is requiring students with exemptions for the MMR (Measles, Mumps, and Rubella) vaccine, who attend school with another student or teacher with mumps, to be excluded from school for 26 days from the date of exposure and until the outbreak has ended. Those students with non-medical exemptions, who receive the recommended doses of MMR vaccine, may return to school immediately. Those students, who are vaccinated and return to school, should be monitored for symptoms of mumps for 26 days. If the student develops symptoms of mumps they must then be excluded from school and reported as a new case. If a child has a non-medical exemption, their parent or guardian was notified when the exemption was requested and granted that in the case of a disease outbreak, their child would be excluded from school.

Legislator Questions and Responses re: the Mumps Outbreak

ARKANSAS DEPARTMENT OF HEALTH

Mumps Outbreak Status Report

*****Please keep in mind that investigations are ongoing, case counts and listings of affected schools, businesses, and other facilities may change quickly.**

Responses provided on September 9, 2016

1. How many of the 89 cases are linked to mumps?
Currently there are 89 cases, of which 23 have been confirmed by testing. The remaining cases are clinically diagnosed with parotitis and have also been identified as a close contact to a test confirmed positive case. A clinical diagnosis in the context of an outbreak is considered sufficient. It is not necessary to subject all of these children to testing.
Clarification on 9/9/16: Testing for the mumps can occur with a cheek swab during the first 5-7 days of symptoms, or through a blood draw. When we refer to "subjecting" children to testing, it is in reference to the time and resources on the part of the patient and the possible discomfort of a blood draw in some circumstances.

2. Of the 89 cases, how many have had 1 round of shots?
Most of the children under the age of 19 have received the 2 recommended doses of MMR.
The majority of adults have not. Staff are actively investigating the immunization history on each case.

3. How many school districts are affected by this outbreak?
At this time, 20 schools in the Springdale school district and 3 schools in the Rogers school district are affected.

4. How many adults have mumps or symptoms?
At this time, 23 of the investigations are in adults (19 and older).

5. How many businesses have people employed that have mumps or symptoms?
Currently there are two businesses affected, a poultry plant and a manufacturing plant.

6. How many daycares?
No daycares are affected at this time, however one preschool is affected. The preschool is affiliated with one of the affected school districts.

7. What are the exclusion criteria for schools?

- In a school with no cases, we do not exclude the undervaccinated if they have an exemption.
- In a school with one case, we exclude the undervaccinated among close contacts (for example: children in the same classroom or who ride the same bus).
- In a school with more than one case, we exclude all undervaccinated because transmission is likely to have occurred in that setting and the risk is higher.

Cases can return 5 days after parotitis onset.
Exposed persons can return immediately if they receive a mumps vaccine. These individuals are placed under enhanced active symptom surveillance to rapidly identify whether they develop disease. But because being removed from school for an extended period is so impactful and outbreaks have been successfully managed this way, we allow them back immediately. For some diseases that are more infectious, we do not allow immediate return to school. This is completely in agreement with evidence based, CDC guidance on this issue.

If a person is subject to an immunization requirement and vaccine is refused, they are excluded for 26 days or for the duration of the outbreak within that setting – whichever is longer.

8. Why are children that get vaccinated allowed to return immediately when it takes 2 weeks to gain immunity from the vaccine?

It takes ~2 weeks to reap the full benefits of vaccination. Unlike with measles or varicella, the vaccine will not prevent infection in persons who are already incubating the virus. But ~2 weeks later the vaccine will likely make that individual immune.

** **Clarification provided 9/9/16:** It takes 2-3 weeks after receiving the shot for the shot to provide full protection. However, from the time someone receives the shot until it is fully effective, immunity gradually builds in the person. During that time, if they were to be exposed to mumps there is a lower likelihood that they would become infected or be able to transmit mumps to others. Therefore:

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9. What is the herd immunity threshold needed for mumps?

The herd immunity threshold for mumps is about 86%.

10. What is the efficacy rate of the mumps vaccine?

One dose of vaccine is considered ~78% effective. Two doses is ~88% effective. Vaccine effectiveness is a measure of how well a vaccine protects a population not an individual. Effectiveness is mathematically defined as (the attack rate in the unvaccinated minus the attack rate in the vaccinated) divided by the attack rate in the unvaccinated. Put another way the vaccination effectiveness is the proportion of cases that would occur in the unvaccinated population if the unvaccinated and vaccinated populations were equal in size. **Clarification 9/9/16:
The rate of mumps infections within the vaccinated population would be >9 times lower than in the unvaccinated population.

11. How many exempted students in Springdale School District have tested positive?

There have not been any children in the Springdale School District with an immunization exemption that have tested positive, or been investigated, for the possibility of mumps.

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Mumps Outbreak Status Report

Mumps Facts

What is mumps?
Mumps is a contagious disease caused by a virus. It spreads easily through coughing and sneezing. There is no treatment for mumps, and it can cause long-term health problems.

What are the symptoms of mumps?
Mumps usually causes the following symptoms for about 7 to 10 days:

- Fever
- Headache
- Muscle aches
- Tiredness
- Loss of appetite (not wanting to eat)
- Swollen glands under the ears or jaw

Some people who get mumps do not have symptoms. Others may feel sick but will not have swollen glands.

Is it serious?
In most children, mumps is mild. But it can cause serious, lasting problems, including:

- Meningitis (infection of the covering of the brain and spinal cord)
- Deafness (temporary or permanent)
- Encephalitis (swelling of the brain)
- Orchitis (swelling of the testicles) in males who have reached puberty
- Oophoritis (swelling of the ovaries) and/or mastitis (swelling of the breasts) in females who have reached puberty

In rare cases, mumps is deadly. Adults are more likely than children to become very sick with mumps.

How does mumps spread?
Mumps spreads when an infected person coughs or sneezes. Mumps can spread before swollen glands appear and for 5 days afterward.

What should you do if you get these symptoms?
Do not go to work or school or to public places. If you or your child gets any of these symptoms, call your doctor's office before going to the clinic. Tell them you or your child may have mumps. The doctor may not want you to sit in the clinic waiting area. Instead your doctor may ask you to come into the clinic another way. These steps will help keep from spreading mumps to the other people.

The MMR Vaccine

ARKANSAS DEPARTMENT OF HEALTH

Mumps Outbreak Status Report

The best way to protect against mumps is to get the measles-mumps-rubella (MMR) vaccine. It is also called the MMR shot.

The Arkansas Department of Health is asking that all children and adults get up-to-date with their MMR shots according to the Centers for Disease Control and Prevention (CDC) recommendations.

The following groups are recommended by CDC to get the MMR vaccine:

- **For children younger than 6 years of age, who are not at high risk for exposure**, one dose of MMR vaccine at age 12 months through 15 months, followed by a second dose of MMR vaccine at age 4 through 6 years.
- **For children age 7 through 18 years not previously vaccinated**, one dose of MMR vaccine, followed by a second dose of MMR vaccine at least 4 weeks after the first dose.
- **For adults born in 1957 or later and not previously vaccinated**, one dose of MMR vaccine. A second dose of MMR vaccine is recommended for some adults, who are at high risk for exposure, such as students in a post-secondary educational institution, people who work in a health care facility, or those who travel internationally. The second dose should be administered a minimum of 28 days after the first dose.
- **Adults born before 1957 are considered to be immune** to mumps and do not need to get the MMR vaccine.

In addition, ADH recommends these steps for young children and adults:

- **Children less than 4 to 6 years of age, who attend preschool at affected schools or live in high-occupancy households, are considered to be at high risk for exposure to mumps.** Therefore, those children older than 12 months of age, who have received their first dose of MMR vaccine, should receive their second dose as soon as possible after the minimum waiting period of 28 days between doses is over.
- **Adults, who live in high-occupancy households or travel internationally, are at increased risk for exposure to mumps.** Therefore, those adults born in 1957 or after, who have received their first dose of MMR vaccine, should receive their second dose as soon as possible after the minimum waiting period of 28 days between doses is over.