Falling Vaccination Rates Threaten Herd Immunity: The Role of Pharmacists in Preventing Measles Outbreaks

ChatGPT said: Crystal Hodge, PharmD, BCIDP, BCPS, emphasized that declining vaccination rates below the 95% herd immunity threshold have fueled recent measles outbreaks, underscoring the urgent need for pharmacist-led vaccination advocacy.

In a discussion on the resurgence of measles in the United States, Crystal Hodge, PharmD, BCIDP, BCPS, highlighted the growing concern over declining vaccination rates and the resulting loss of herd immunity. As of September 2025, more than 1400 cases have been confirmed across 35 outbreaks, with the majority affecting children and adolescents. Although hospitalizations and deaths have remained relatively low, the highly contagious nature of measles means even small drops in vaccination rates can lead to rapid community spread.

Hodge emphasized the critical role pharmacists play in preventing future outbreaks by encouraging vaccination, educating patients, and supporting the use of state reporting systems to track immunizations. She noted that with national vaccination rates falling below the 95% threshold for herd immunity—down to 92.7% in 2023–2024 and as low as 80% to 85% in some states—pharmacists must be proactive in promoting well-child visits, routine immunizations, and timely isolation measures when measles is suspected.

Pharmacy Times: Where does the US currently stand with regard to measles outbreaks?

Crystal Hodge, PharmD, BCIDP, BCPS: As of September 2, 2025, there have been a little over 1000—about 1400—confirmed measles cases across the US, spread over about 35 different outbreaks. The vast majority, 86%, have been related to outbreaks. An outbreak is defined as three or more cases in one particular location, and the plurality of those cases have occurred in age groups between 5 and 19 years.

Thankfully, only about 12% of cases have required hospitalization, and we've had three deaths. Unfortunately, every death matters, but overall the impact has been minimized to a degree.

Some exciting news: as of August 18, Texas officially ended its outbreak. Texas had one of the largest outbreaks in the US and was a major driver of rising case counts, contributing about 800 of the 1400 total cases. With that outbreak officially ended, we're now on the decline. Kansas, another large outbreak area, has also seen its cases come to an end. In both states, more than 42 days have passed—two full incubation periods—leading health departments to declare the outbreaks over.

So, the exciting news is that our outbreaks are finally starting to decrease.

Pharmacy Times: How does the resurgence of measles intersect with the upcoming virus season, and what unique challenge does this pose for pharmacists?

Hodge: This is interesting because measles can have a variety of presentations. In some of the initial stages, it can appear as an acute viral illness that is difficult to differentiate from other viruses during respiratory season. Symptoms such as fever, malaise, and the "three C's"—cough, coryza, and conjunctivitis—can occur with many different viral infections, making it a challenge for pharmacists and providers to distinguish measles early on.

Some of the more unique indicators of measles include Koplik spots and a maculopapular rash, particularly one that starts at the head and travels downward. However, the rash typically does not present until about 14 days after exposure. Patients are infectious from four days before the rash appears to four days after, which makes it very challenging to contain the virus and prevent spread—especially given that measles is airborne.

So, what can pharmacists do? First, they can encourage vaccination. If they suspect measles, they should advise patients to isolate and get tested. Because the virus is airborne, patients need to be placed in negative pressure rooms. That's why it is important to avoid sending patients directly to clinics or emergency rooms without calling ahead, so the proper infrastructure can be put in place.

In a community pharmacy setting, for example, if a pharmacist receives a phone call from someone who thinks they might have measles or who has a viral prodrome, possible exposure, and no vaccination history, they should advise the patient to contact their provider for testing—while stressing the need to call ahead. If a patient presents in person and measles is suspected, pharmacists should try to isolate them as much as possible, even if a negative pressure room is not available, to avoid further spreading the virus to others who may be unvaccinated. They should also help ensure the right testing is arranged and remain mindful of potential exposures, particularly in areas near known outbreaks.

Finally, vaccination status is key. Our vaccines are very effective—about 95% at preventing measles when a patient is fully vaccinated. That means if someone is fully vaccinated, the likelihood that their illness is measles versus another respiratory virus during respiratory virus season is relatively low.

Pharmacy Times: How do declining MMR vaccination rates contribute to increased measles outbreaks, and what role can pharmacists play in improving vaccine uptake in their communities?

Hodge: For herd immunity—or community immunity—we generally look for about a 95% vaccination rate. We understand that not everyone can be vaccinated, since the MMR vaccine is a live vaccine and not appropriate for certain individuals. But to protect the greatest number of people, the community vaccination rate needs to be around 95%.

Right now, the most recent CDC data from 2023–2024 shows that national vaccination rates have fallen to about 92.7%, which is below the traditional threshold. Some states, such as Idaho, Alaska, and Wisconsin, have the lowest vaccination rates, between 80% and 85%. This is why pharmacists really need to take patients' vaccination status into account—we no longer have the herd immunity we once relied on, especially in communities with lower coverage.

That’s how outbreaks occur: when pockets of communities have low vaccination rates, one person with measles can enter and quickly spread the virus. Because measles is so contagious, every one case can lead to 12 to 18 new cases in unvaccinated populations. This is why encouraging vaccination is so important.

So what can pharmacists do? They can strongly encourage vaccination, including making sure children stay up to date with well-child visits. During the pandemic, those visits declined, and although rates are starting to come back up, we want to see that continue with routine vaccinations. Pharmacists should also focus on patient education—encouraging isolation if measles is suspected, vaccination before exposure, and ongoing education about prevention.

Finally, vaccine records are essential. I strongly encourage all immunizers, pharmacists included, to use state reporting systems for vaccines as much as possible and to remind families to maintain their own vaccine records as well.

News Source:

https://www.pharmacytimes.com/view/falling-vaccination-rates-threaten-herd-immunity-the-role-of-pharmacists-in-preventing-measles-outbreaks