

# San Diego County hepatitis A outbreak:

## THE NEED FOR A COLLABORATIVE APPROACH TO INFECTION CONTROL

BY MELANIE PADGETT POWERS

In November 2016, health workers in San Diego County, California, noticed that the number of reported hepatitis A cases had increased. Over the next four months, 19 cases were reported in the county, as compared with the normal infection rate of two or three infections per month. The San Diego County Health and Human Services Agency issued its first health alert about the outbreak on March 10, 2017.<sup>1</sup>

### DISTINCTIVE ASPECTS OF THE OUTBREAK

According to Eric McDonald, MD, MPH, deputy public health officer for the County of San Diego, the hepatitis A strain in the county is a genotype 1B strain that had not previously been identified in North America. It's not the same 1B strain causing outbreaks in other places, such as Michigan. Also, while the strain found in San Diego spread unexpectedly, public health experts don't believe it is more virulent than others, Dr. McDonald said.

San Diego officials haven't been able to uncover where the disease originated locally. Typically, hepatitis A is linked to international travel or food poisoning at a restaurant or potluck. In San Diego County, however, it has been spreading primarily among people who are homeless and/or illicit drug users. As of March 2018, 584 cases of hepatitis A had been confirmed in the county, including 197 people who were both homeless and illicit drug users, 89 who were homeless only, and 74 who were illicit drug users only.<sup>2</sup> In most of the other 224 cases, the patients had some sort of relationship with individuals from one of

those groups, such as living with a person who used illicit drugs or working in services for homeless or illicit drug use populations.

Several healthcare workers became infected during the outbreak, although it's unclear exactly how. Dr. McDonald suspects improper handwashing and eating in patient care areas to be the culprits. A couple of the healthcare workers worked in clinical settings where many of the outbreak cases were treated, but it's not known how they became infected. Other healthcare workers didn't have clear connections to the outbreak cases but did work with the at-risk populations, homeless people, and illicit drug users. In one case, two physicians worked in the same urgent care facility and shared a bathroom and clinical space. However, there were no outbreak cases diagnosed at that urgent care facility, and, according to Dr. McDonald, that was the only known secondary case in the outbreak of any of the healthcare workers.

### INFECTION PREVENTION AND CONTROL LESSONS

While the spread of hepatitis A in an unexpected population has presented challenges,

it has also led to changes and improvements in infection prevention and control. Thus, the San Diego outbreak can provide lessons for all infection preventionists (IPs).

#### *Reporting of suspected cases*

The mainstay of hepatitis A control is to interview people to discover who their contacts are, where they've been, and what they've been eating, but it can be difficult to gather this information from homeless people and those who use illicit drugs. To help address this challenge during the outbreak, notification requirements were changed. Before the outbreak, California required labs and providers to report confirmed cases of hepatitis A. However, "by the time the lab test comes back, the patient sometimes has been admitted to the hospital and been discharged, or they may not have been admitted to the hospital at all," Dr. McDonald noted. Therefore, beginning with the first health alert, the county has asked that providers report all suspected cases immediately, while the patient is still in the hospital or provider's office.<sup>1</sup> That way, public health workers can conduct phone interviews before the patient leaves the healthcare facility. The



department has an off-hours phone number and a duty officer available 24/7.

***Vaccination policies***

Vaccination policies also changed. There is no cure for hepatitis A, and, once a person is infected, the vaccine doesn't help. However, if someone exposed to the virus receives the hepatitis A vaccine or immune globulin within two weeks of exposure, this measure could prevent disease, Dr. McDonald said. The San Diego County Health and Human Services Agency recommended vaccination of homeless people who show signs of hepatitis A infection before infection is confirmed.

UC San Diego Health facilities offered the vaccine to all patients presenting with symptoms such as diarrhea, as well as to outpatients who were not already vaccinated. The hospital also changed its employee vaccination program after a new employee who was not vaccinated became infected. Previously, hepatitis A vaccine was recommended for all new employees. Since April 2017, the

hospital has required vaccination for all new hires and opened the hepatitis A vaccination program to all current employees.

***Hospital infection control and prevention procedures***

After a healthcare worker in the county became infected, a county health alert was issued on May 31, 2017.<sup>3</sup> This alert included hospital infection control recommendations, including handwashing reminders, standard precautions, and the recommendation to not eat food in any patient care areas.

At the time the alert was issued, UC San Diego Health already prohibited food in patient care areas. To reduce the risk for infection, the hospital went a step further and banned sharing of food—such as potlucks and birthday celebrations—in all areas. The hospital implemented the ban “because we saw that this was happening, and our hand hygiene rates weren't where we wanted them to be,” said Kim Delahanty, RN, BSN, PHN, MBA/HCM, CIC, FAPIC,

administrative director of infection prevention-clinical epidemiology at UC San Diego Health. “Everyone pretty much complied because nobody wants to get sick.”

The hospital infection prevention and control (IPC) team also stepped up its IPC monitoring and roamed the hospital—particularly in the emergency department and other outpatient settings—to educate personnel about hepatitis A infection. “We were just out on the floors doing shoe-leather surveillance, watching hand hygiene, reminding people what was happening in the community and that this could be a risk,” Delahanty said.

Delahanty's department created one-page information fliers to post in the emergency department, ambulatory care areas, and the hospital's outpatient cancer center, reminding personnel to consider hepatitis A when patients presented with symptoms such as diarrhea, abdominal pain, or vomiting. However, for Delahanty, one of the biggest takeaways is to not simply send out a



“We meet even in times of noncrisis, so when you do have a crisis, you already have relationships,” she explained. “You have the contact information. We can mobilize quickly.”

memo, but also to talk to people face to face. “Get down there in the trenches with them and help them understand the seriousness of the transmission and what they need to do to mitigate that,” she said.

Data collected by the hospital’s IPC staff showed that proper handwashing and use of personal protective equipment increased during the outbreak. Such data can be used to illustrate to staff that compliance is doable and to advocate for compliance in areas where hospitals have found it to be lacking, Delahanty said. “Take that data, really use it next time,” she advised. When educating healthcare personnel, IPs can tell them, “We know we can have really good compliance, so let’s work on that going forward because there are other things we’re transmitting that we might not even know yet,” she said.

### *The importance of ongoing collaboration*

An existing commission called the Group to Eradicate Resistant Microorganisms (GERM), which is a part of the San Diego County Medical Society (SDCMS), helped San Diego County mobilize and coordinate its actions during the hepatitis A outbreak. Created to advise the SDCMS board of directors on antibiotic-resistant microorganisms and provide expert input on infectious disease and bioterrorism, GERM was the first group to be alerted about the hepatitis A outbreak because its quarterly meeting happened to be scheduled two days before Dr. McDonald issued the first health alert. “We were able to get commission members on board to help us do things like implementing hepatitis A vaccination programs in the emergency departments in their hospitals,” Dr. McDonald said.

With representatives from hospitals, county public health agencies, and physician groups, GERM has created a way for local health workers to establish trusting relationships and collaborate before a health emergency occurs. The commission meets quarterly and communicates via email throughout the year. Its objective has “morphed into all areas of sharing best practices of infection control,” Dr. McDonald said. When an outbreak occurs, “We all come together as a community to address those issues. That’s certainly what we do with hepatitis A, and it’s what we’ve done over the years with many different infection control issues.”

Delahanty shared this perspective: “We meet even in times of noncrisis, so when you do have a crisis, you already have relationships,” she explained. “You have the contact information. We can mobilize quickly.” For example, when H1N1 influenza spread to the county from Mexico, the team, including a border physician, was able to gather quickly at SDCMS offices. The response operations were coordinated and streamlined, allowing for prompt infection control actions and the efficient distribution of information on prevention.

### CONCLUSION

While the declared emergency was lifted in San Diego County on January 23, 2018, the outbreak continues.<sup>4</sup> Since it began, 20 deaths and more than 400 hospitalizations in the county have been associated with hepatitis A infection.<sup>2</sup> The county reports about one confirmed case per week and remains ever vigilant. **R**

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### References

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**Low level of immunity against hepatitis A among Korean adolescents: Vaccination rate and related factors.** Jung Yeon Heo, Joon Young Song, Ji Yun Noh, et al. *American Journal of Infection Control*, Vol. 41, Issue 10, e97-e100.