

PUBLIC HEALTH INSIDER

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Q&A with Dr. Jeff Duchin: Communicable disease outbreaks show homeless at increased risk

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Public Health is currently responding to increases in several infectious diseases in King County that particularly affect people living homeless. These diseases include group A streptococcal infections, *Shigella*, and a cluster of serious infections transmitted by body lice called *Bartonella quintana*. We sat down with Dr. Jeff Duchin, Health Officer and Chief of Communicable Disease Epidemiology, to better understand these outbreaks and why living homeless can put a person at increased risk for infection.

Why are people living homeless at increased risk for infection?

People living homeless are at increased risk for a wide range of health problems, including outbreaks caused by a number of infectious diseases – not just those infections we are investigating right now. Gastrointestinal diseases, like hepatitis A, *Shigella* and norovirus, and respiratory infections, including influenza, tuberculosis and pneumonia, meningococcal disease, and diphtheria, could easily spread among this population. For these reasons among several, homelessness is considered a public health issue (<https://www.apha.org/policies-and-advocacy/public-health-policy-statements/policy-database/2018/01/18/housing-and-homelessness-as-a-public-health-issue>).

People who lack permanent housing often also have limited access to medical care, so many people living homeless and with health problems have difficulty getting prompt treatment. Living conditions – like crowding and fewer opportunities for personal hygiene – can contribute to the spread of disease. If someone has an underlying medical condition, alcohol or drug use, or weakened immune system, they are even more susceptible.

Can you tell us about the outbreaks you are currently investigating?

Right now, we're investigating outbreaks of group A streptococcus and *Shigella*, as well as a cluster of infections transmitted by a body lice called *Bartonella quintana*. We're also watching for the possibility of a hepatitis A outbreak.

Since 2016 in King County, we've seen more cases of **group A streptococcus** (<https://www.cdc.gov/groupastrep/>) overall, not just among persons living homeless. In recent years, invasive group A strep infections have been increasing in other states in the U.S., as well as in British

Columbia, Canada, and Europe.

At Harborview Medical Center, where many of the local cases have been cared for, the number of group A strep patients increased from 117 in 2016 to 219 in 2017. These bacteria commonly cause skin infections and sore throat (“strep throat”), but less commonly cause more serious invasive infections such as necrotizing fasciitis (“flesh-eating bacterial wounds”), blood stream infections, pneumonia, and streptococcal toxic shock syndrome.

Most people who got sick experienced skin and soft tissue infections, some were severe, and many infected persons were also experiencing homelessness and/or injecting drugs. No specific location in the community has been linked to the infections, and we have laboratory evidence that, at least among blood stream infections, several strains of group A strep are causing the infections. Group A strep is not a reportable disease in Washington state (meaning healthcare providers aren’t required to let us know when they see a case), so we still have more to learn. **For more on how group A strep spreads and how to prevent outbreaks, see our [infographic](https://www.kingcounty.gov/depts/health/locations/homeless-health/healthcare-for-the-homeless/~media/depts/health/homeless-health/healthcare-for-the-homeless/documents/wound-infection-prevention-providers.ashx)** (<https://www.kingcounty.gov/depts/health/locations/homeless-health/healthcare-for-the-homeless/~media/depts/health/homeless-health/healthcare-for-the-homeless/documents/wound-infection-prevention-providers.ashx>).

Shigella (<https://www.kingcounty.gov/depts/health/communicable-diseases/disease-control/shigellosis.aspx>) is a highly contagious diarrheal illness. *Shigella* cases have been increasing in King County since 2013, with a total of 164 cases being reported in 2017 compared to an average of 89 cases per year over the past 5 years. Although outbreaks of *Shigella* have been reported among persons experiencing homelessness in other cities, until recently, *Shigella* cases have been uncommon among people experiencing homelessness here.

Although the vast majority of *Shigella* cases are in people who have permanent housing, since December 2017, 8 cases of shigellosis were reported in individuals living homeless in King County (compared to an average of 3 cases per year over the past 5 years). No specific location has been linked to the source of these infections. **For more on how *Shigella* spreads and how to prevent it, see our [infographic](https://kingcounty.gov/depts/health/communicable-diseases/disease-control/~media/depts/health/communicable-diseases/documents/shigella-info-facts.ashx)** (<https://kingcounty.gov/depts/health/communicable-diseases/disease-control/~media/depts/health/communicable-diseases/documents/shigella-info-facts.ashx>).

Bartonella quintana (<https://www.cdc.gov/bartonella/>) is an uncommon infection that causes “trench fever,” with fever, headache, rash and bone pain (mainly in the shins, neck, and back). It can also cause infection of the heart valves and an unusual syndrome called bacillary angiomatosis, a disease of small blood vessels that can affect the liver, spleen, skin and other organs. *Bartonella quintana* infections are carried by body lice and live in infested clothing and bedding. Body lice bite people, but do not live on their bodies.

Public Health is looking into three cases of *Bartonella quintana* among people living homeless in King County since mid-2017 (one additional *Bartonella quintana* case was reported in a person who was housed). All the patients were hospitalized, two had infection of the heart valves, and one had a blood stream infection. There is no obvious common source or location for these cases.

Finally, we remain on the alert for cases of **hepatitis A** (<https://www.kingcounty.gov/depts/health/communicable-diseases/disease-control/hepatitis-A.aspx>). We have recently identified one case in a person living homeless, but it was likely acquired out of state, with no evidence of spread to other people locally.

A lot of our readers have connections with people who don't have permanent housing. What do people who may be at increased risk need to know?

The risk for these infections in the general population remains low. The best thing anyone can do to prevent these illnesses is to practice good hygiene, keep wounds clean and covered, avoid direct contact with someone else's wounds, and see a healthcare provider promptly if signs of a wound infection appear (<https://www.kingcounty.gov/depts/health/locations/homeless-health/healthcare-for-the-homeless/~media/depts/health/homeless-health/healthcare-for-the-homeless/documents/wound-infection-prevention-providers.ashx>) or you have severe or bloody diarrhea. Whenever possible, wash your hands with soap and water, shower and do laundry regularly. Vaccination is the best way to protect against hepatitis A.

And, if you work in encampments or shelters, please take a look at some of the flyers (<https://kingcounty.gov/depts/health/locations/homeless-health/healthcare-for-the-homeless.aspx>) we have created. These can help staff and residents learn more about the risk of certain diseases and take appropriate actions to prevent their spread.

What is Public Health doing about these outbreaks?

To better understand the increase in group A streptococcus cases, we have consulted with Washington State Department of Health and experts at the Centers for Disease Control and Prevention, and we are working with physicians at Harborview Medical Center to learn more about cases they have cared for.

Information regarding the current risk of shigellosis among people living homeless and on prevention measures has been distributed to local providers of services to this population. In addition, Public Health has provided information to help promote identification of cases and appropriate evaluation, treatment and prevention measures.

Our Healthcare for the Homeless (<https://kingcounty.gov/depts/health/locations/homeless-health/healthcare-for-the-homeless.aspx>) team has guidelines to prevent lice infestations (<https://www.kingcounty.gov/depts/health/locations/homeless-health/healthcare-for-the-homeless/~media/depts/health/homeless-health/healthcare-for-the-homeless/documents/shelter-health-safety-guidelines.ashx>), and is sending information on disease recognition, management and prevention to multiple agencies serving persons experiencing homelessness at fixed clinic sites, Mobile Medical services, shelters, day centers and to outreach teams.

More information and resources on outbreak prevention from Healthcare for the Homeless Network: <https://kingcounty.gov/hch> (<https://kingcounty.gov/hch>).

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One thought on “Q&A with Dr. Jeff Duchin: Communicable disease outbreaks show homeless at increased risk”

1. CHRIS SHERWOOD