

Farewell and Thank You

Dear Subscribers,

It is with mixed feelings that I am announcing the last issue of the *Communicable Disease Epidemiology & Immunization Quarterly*. Many of you know this publication from its long standing predecessors, the *Epi-Log* and *VacScene* newsletters, which served King County healthcare providers for decades, providing information on communicable disease surveillance, local outbreak activity, unusual cases of public health significance, and news and guidance related to immunizations and vaccine-preventable diseases. In 2014, the changing electronic communication landscape and staffing considerations led us to consolidate those publications into the *Quarterly*. Today, we have many ways of sharing information with you in real-time, such as our [Public Health Insider](#) blog and [website](#), and are transitioning away from the periodical “newsletter” style publication entirely.

But it’s more important than ever for you to stay connected and informed. Our region has seen increasing numbers of disease outbreaks, including healthcare-associated and foodborne. Ongoing threats from emerging infections (e.g., Ebola, Zika, Enterovirus D68, etc.) demand that our health system is prepared for the possibility of a local outbreak, caused by both familiar and unfamiliar agents, at any time. And the continuous challenges of seasonal influenza, hepatitis C (with potential for amplification by the opioid crisis), HIV, STDs, TB and vaccine-preventable diseases require us to be nimble in our communication and coordination. Please take advantage of the information sources at the end of this newsletter to

sign up for active electronic alerts, updates, and educational materials that are relevant to your practice setting.

We will continue to operate our Health Alert and Health Advisory distribution lists. If you or a colleague are not subscribed, this is a great time to do so. Just send a message to Maybelle.Tamura@Kingcounty.gov.

On behalf of the entire Communicable Disease Epidemiology & Immunization Section team, we look forward to staying connected through new channels. As the world of clinical and population health continue to merge, we know that healthcare providers will find increasing value in public health as their “second specialty.”

Sincerely,

Jeff Duchin
Health Officer and Chief, Communicable Disease
Epidemiology & Immunization Section



Q2/18
Public Health
Seattle & King County



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Influenza Season Summary, 2017-18

By April 21, 2018, influenza activity had returned to baseline levels in King County. The local 2017-18 influenza season was more severe than four of the five past seasons by several measures, with more reported laboratory-confirmed influenza deaths and more influenza outbreaks in long-term care facilities (LTCFs) than were reported on average over the past five years.

As defined by rises from baseline across multiple influenza activity indicators, the 2017-18 flu season had two distinct waves: the first increase in emergency department visits for influenza-like illness (ED ILI) beginning at the end of 2017 and lasting approximately 12 weeks, and a second increase with smaller magnitude beginning at the end of February. For the season as a whole, the percent of visits for ILI among all ages combined exceeded levels observed during each of the previous 10 influenza seasons. However, the percent of ED admissions for ILI was below levels observed in the previous five influenza seasons.

Because most persons with influenza-related illness are not tested for influenza, routine surveillance data is most useful for tracking trends and unusual disease patterns and not as an indicator of the total number of influenza-related deaths or influenza infections. Special studies are done in representative communities nationally to determine hospitalization and death rates from influenza.

Influenza deaths: A total of 50 laboratory-confirmed influenza-related deaths were reported in King County through 6/23/2018. This is the second highest number of reported deaths since the 2012-13 season. Between 2012 and 2017, there was an average of 38 influenza-related deaths reported each season (range of 16-84). Sixty-six percent of cases were female, and 86% were over age 65 (average 81 years). No pediatric deaths were reported. Over 66% of deaths were attributable to influenza A. Twenty-two percent of deaths were attributed to influenza B, almost double the 5-year average (11%). All had contributing underlying conditions. Forty-eight percent had no evidence of influenza vaccination for this season. It is likely that the number of influenza related deaths in King County is much higher since seasonal influenza is infrequently listed as a cause of death and not all people with severe illness are tested for influenza.

Outbreaks in long-term care facilities (LTCF): Sixty-seven outbreaks were reported from LTCFs, all of which identified at least one laboratory-confirmed case of influenza. This was higher than the 5-year average, where the number of LTCF outbreaks reported ranged from 15 to 92 (average 49).

Laboratory: From 9/30/2017 through 6/16/2018, the King County Public Health Laboratory tested a total of 290 specimens contributed by sentinel influenza providers, 30% of which were positive for influenza. Of the 86 positive specimens, 41 (48%) were typed as influenza A while 45 (52%) were influenza B.

Syndromic surveillance: The peak volume of ED visits for ILI was approximately 5.6%, lower than the past season but higher than the average of the past five seasons. Peak activity occurred in late-January and early February 2018. ED volume was highest among pediatric age groups.

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Influenza Season Summary, cont.

Influenza vaccine effectiveness: Based on data through 2/3/18, the U.S. Flu Vaccine Effectiveness (VE) Network estimates vaccine effectiveness at 25% for influenza A H3N2 viruses (95% CI: 13%-36%), and 42% for influenza B (95% CI: 25%-56%). Across all strains, the combined vaccine effectiveness is estimated at 36% (95% CI: 27%-44%).

For weekly flu summaries, visit [Public Health's Communicable Disease Website](#).

LAIV Approved for 2018-19 Flu Season

At its February meeting, the Advisory Council on Immunization Practices (ACIP) voted to [reintroduce](#) the live attenuated influenza vaccine (LAIV4) for the 2018-19 flu season, expressing no preference for any licensed, age-appropriate vaccine (IIV, RIV4, or LAIV4). All nasal spray flu vaccines will be quadrivalent in 2018-19, containing an influenza A (H1N1) virus, an influenza A (H3N2) virus and two influenza B viruses. The American Academy of Pediatrics urges providers to only offer LAIV as a [last resort](#), limiting it to those who would otherwise not receive an influenza vaccine (and for whom it is appropriate by age and health status). A small supply of FluMist will be available through the Washington State Childhood Vaccine Distribution Program.



Outbreaks Affecting People Living Homeless

Seattle/King County's most recent [point in time count](#), released on May 31st, reveals a continuously growing population of people experiencing homelessness, with more people living unsheltered on the street, in parks, tents, vehicles or other places not meant for human habitation than at any other time since the count started nearly a decade ago. Overcrowding and lack of hygiene services create ripe conditions for the spread of infectious disease, from influenza to tuberculosis, and barriers to health care, like transportation and cost, can hinder prompt identification and treatment of disease. Underlying medical conditions and substance use can leave a person living homeless even more susceptible to infection. As we've cautiously prepared for the possibility of a [hepatitis A outbreak](#) here in King County, we've also observed increases in the prevalence of group A streptococcus and *Shigella*, as well as a cluster of *Bartonella quintana* cases, a serious infection transmitted by body lice.

Group A streptococcus

[Group A strep](#) (GAS) is familiar to most people as [strep throat](#), the usually mild illness commonly affecting children. The bacterium also causes [scarlet fever](#), an illness that occasionally occurs alongside strep throat and triggers a bright red rash that covers most of the body. Common skin infections, like impetigo, cellulitis, and erysipelas are often caused by group A strep as well. In the absence of complications, these conditions typically resolve with antibiotic treatment and do not pose serious health threats. More rarely, however, group A strep can lead to serious wound infections and life-threatening [invasive infections](#) associated with shock and multi-organ failure, including: bacteremia; pneumonia; [necrotizing fasciitis](#), or "flesh eating bacteria" that rapidly infect the body's connective tissue, sometimes releasing toxins that destroy tissue; and [streptococcal toxic shock syndrome](#), characterized by a precipitous drop in blood pressure and multi-organ involvement that may include renal impairment, liver involvement, and acute respiratory distress, among other symptoms.

Group A streptococci live in the nose and throat and spread through direct person-to-person transmission, typically through saliva or nasal secretions, and through direct contact with open skin wounds. It can also spread by sharing needles and through contaminated objects that remain wet with respiratory secretions or wound drainage (e.g., cups,

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utensils, wound dressings). Occasionally, people may carry group A streptococci in the throat or on the skin and have no symptoms of disease, though infection is much more readily spread by a symptomatic carrier. Crowded conditions, like childcare, schools, long-term care facilities, and shelters can promote the spread of disease.

Group A strep is not a reportable disease in King County, so Public Health Seattle & King County does not have data on the total volume of cases throughout the county. However, we do know that since August 2016, one of the county's highest-traffic hospitals, Harborview Medical Center, has seen an increasing number of deep wound and tissue group A strep infections in their patient population, disproportionately among people living homeless and/or injecting drugs. Harborview admitted 219 patients with group A strep infections in 2017 compared to 117 in 2016 – nearly a two-fold increase. Between August 2016 and the end of 2017, roughly 60% of patients who presented at Harborview with wound infections caused by group A strep experienced [unstable housing](#), meaning they lacked a fixed, reliable and adequate nighttime residence. This includes individuals living in transitional housing or staying with relatives and friends, as well as those living unsheltered. Forty-four percent of these patients met a stricter definition of homelessness, and were living on the street, in tent encampments, in shelters, or in other places not fit for habitation.

The trends observed at Harborview appear to be part of a broader pattern of increasing group A strep illness among those living homeless in other Western states, including [Oregon](#) and [New Mexico](#), and outside the continental United States, in places like Alaska, Ontario, and England.

Various risk factors predispose people living homeless to both [acute and chronic wounds](#), and the same circumstances that create wounds also obstruct healing. People living homeless are particularly vulnerable to ectoparasites like lice, scabies, and mites, as well as rat bites, which can cause pruritus and lead to secondary infections. Reduced access to bathing facilities, increased exposure to crime and trauma, poor nutrition, unsanitary sleeping conditions, and the absence of family and medical support, among other factors, can heighten vulnerability to

wounds and infections including those caused by group A strep. Additionally, substance use and mental illness can impede adherence to a wound care treatment plan.



Group A Streptococci Bacteria, Photo Courtesy of CDC

What Can Health Care Providers Do?

- Be aware of an increase in group A strep infections in King County in recent years, particularly wound infections.
- Review invasive group A strep disease clinical presentation, risk factors, and the need for rapid evaluation and treatment of persons with suspected necrotizing fasciitis and other invasive group A strep syndromes.
- Review CDC guidance for chemoprophylaxis of household contacts of invasive group A strep cases.
- Be aware that people experiencing homelessness and persons who inject drugs (IDU) are at increased risk for group A strep infections.
- Report outbreaks of group A strep to Public Health at 206-296-4774.
- View and share this [infographic](#) with homeless service providers.

Shigella

[Shigellosis](#) is a highly contagious infection which typically causes watery or bloody diarrhea with abdominal pain, fever, and malaise. *Shigella* infection spreads easily via the fecal-oral route, and can be transmitted sexually and through contaminated water. Persons at higher risk of infection include men who have sex with men, young children, the elderly, and people whose immune systems are weakened due to illnesses like HIV or

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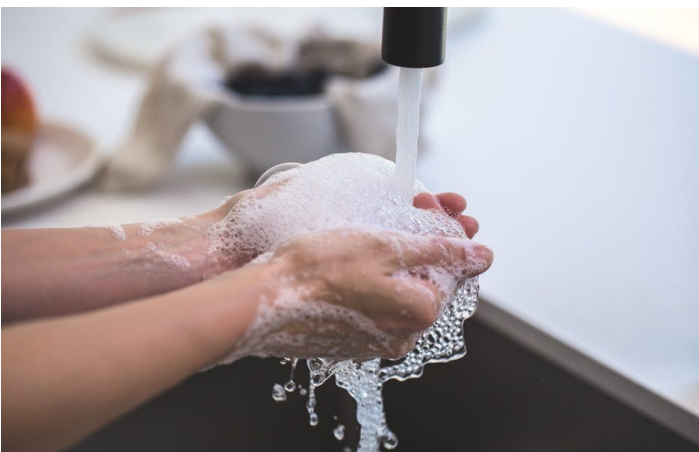
Shigella, cont.

treatments like chemotherapy, as well as travelers to developing countries. Those with weakened immune systems are more likely to experience serious symptoms including bacteremia, dehydration, and seizures.

The exposure period is usually one to seven days before symptom onset. Illness typically lasts five to seven days in immunocompetent individuals, but if left untreated, infected individuals can shed the bacteria in stool for up to six weeks. Antibiotic treatment can shorten the duration of illness and reduce the risk of transmission, but antimicrobial resistance is a serious threat; outbreaks of drug-resistant *Shigella* have been [reported](#) recently in the U.S. and abroad.

Meticulous hand washing, careful adherence to standard food and water safety precautions, and minimizing fecal-oral exposures during sexual contact are all essential to preventing *Shigella* transmission. However, limited access to toilets and hand washing facilities leave people living homeless especially at risk.

King County saw 164 reported cases of shigellosis in 2017, an 84% increase over the previous four-year average. The majority of cases have been among people who were housed, but since December 2017, eight cases of shigellosis were reported in people living homeless, compared to only three cases annually over the previous five years. Antimicrobial susceptibility test results are available for five of the cases and all are susceptible to ciprofloxacin. No common source of infection or specific location was identified, but several of the cases resided in the SODO or Georgetown area of Seattle. Cases have reported staying in a range of settings, including vehicles, shelters, and encampments, and living on the street.



What Can Health Care Providers Do?

- Consider *Shigella* infection in patients with compatible symptoms, including diarrhea (bloody or nonbloody), fever, and abdominal pain.
- Gather information about risk factors, including travel history, housing situation and location, sexual history and potential exposed contacts.
- Counsel patients with diarrhea on how they can prevent spreading the infection to others:
 - Wash hands with soap and water for at least 20 seconds, especially after using the toilet, after handling a soiled diaper, and before eating or preparing food; avoid preparing food for others.
 - Children with active diarrhea should not attend childcare, school, or group activities while ill.
 - Wait to have vaginal, anal, and oral sex for at least one week (several weeks is preferable) after diarrhea has resolved because *Shigella* may remain in stool for multiple weeks.
 - People with *Shigella* should be excluded from food handling, childcare settings, and administering patient care until follow-up is completed by Public Health.
- View and share this [infographic](#) with patients and homeless service providers.
- For more specific information about how to test for and treat suspected *Shigella* infection, see PHSKC's [Health Advisory](#).
- Call Public Health at (206) 296-4774 to report suspect or confirmed *Shigella* cases and for guidance on when *Shigella* patients may return to childcare, school, or work.

Bartonella quintana

Though exceedingly rare among those who are housed, [Bartonella quintana](#) is the most common louse-borne disease reported in people experiencing homelessness. Body lice, carriers of *B. quintana*, live in infested clothing and bedding and travel to the skin several times a day to feed.

The [emergence of *B. quintana*](#) among those living homeless was recognized in the early 1990s with concurrent reports of *B. quintana* bacteremia in 10 people living homeless here in Seattle and three cases of *B. quintana* endocarditis in France. *B. quintana* can cause trench fever, characterized by attacks of fever that last one to three days and are associated with headache, shin pain, and dizziness

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Bartonella Quintana, cont.

recurring every four to six days. *B. quintana* [can also cause](#) chronic bacteremia; endocarditis, a life-threatening infection of the inner lining of the heart chambers and heart valves; bacillary angiomatosis, a vascular disease that most commonly affects the skin but can damage other organs including the liver, spleen, bone marrow, and lymph nodes; and lymphadenopathy, a disease in which the lymph nodes are abnormal in size, number, or consistency.

Bathing regularly, laundering bedding, and changing into clean clothing at least once per week can help prevent and control the spread of body lice. However, for those living homeless, shower facilities and laundry services may be out of reach, making proper hygiene practices unattainable. Here in King County, we've seen three cases of *B. quintana* among people living homeless since mid-2017, and one additional case among a person permanently housed. There is no known common source for these cases. Each of the patients was hospitalized, two experienced endocarditis, and one had bacteremia.

Resources for Limiting Outbreaks Among People Living Homeless

- [Group A Strep Health Alert](#)
- [Group A Strep Health Warning for Homeless Service Providers](#)
- [Wound Infections: Alert for People Living Homeless](#)
- [Health Advisory: *Shigella* and *Bartonella quintana* Infections in Persons Experiencing Homelessness in King County](#)
- [Shigella Infographic for the Public](#)
- [Q&A with Dr. Jeff Duchin: Communicable Disease Outbreaks Show Homeless at Increased Risk](#)

What Can Health Care Providers Do?

- Be aware of the possibility of *B. quintana* infections in persons experiencing homelessness.
- Consult with your clinical lab and/or infectious disease specialist when ordering diagnostic tests. Tests include blood (or tissue) culture and PCR in combination with serological testing.
- Make a treatment plan in consultation with an expert in the treatment of *Bartonella* infections.
- Call Public Health at (206) 296-4774 to report suspect or confirmed *Bartonella* cases.

School Immunization Season Starts Now!

Boosting school immunization rates is a constant work in progress. If you're a provider who sees students, you play an essential role! Consider trying out these strategies:

- Take advantage of every opportunity to vaccinate students. Whether you're treating a sprained ankle or filling out a sports physical, consider every appointment a chance to get your patients caught up.
- Offer weekend, evening, and/or walk-in immunization clinics to accommodate working parents and busy students. Use [WA IIS's reminder-recall system](#) to reach students who are due or overdue for vaccines. With this tool, you can easily generate auto-dialer content, custom postcards, print labels, and emails.
- Use standing orders. These written protocols are approved by a physician or other authorized practitioner and allow qualified health care professionals to assess the need for and administer vaccine. Click here to [access standing order templates](#) and learn more.
- **Consider referring students to their [School Based Health Center \(SBHC\)](#) for immunizations.** SBHCs are located at many schools in Seattle, as well as some in Bellevue, Vashon, Renton, Kent and SeaTac. Just like a typical clinic, SBHCs provide a range of services, from primary care to mental health counseling to immunizations. For students that have a hard time getting to your clinic for immunizations or returning to complete a vaccine series, SBHCs are the perfect way to close the treatment loop. Parents don't have to miss work, students don't have to miss class, and services are all free! To learn more, visit [King County's School Health blog](#).

For more ideas, visit the AAP page, "[Office Strategies for Improving Immunization Rates](#)."

The VFC Program: Looking Back, Looking Ahead (*a note from Darren Robertson*)



I have been King County's Vaccines for Children (VFC) Program Manager since 2001, but the time has come—as of July 2, 2018—when I will be leaving VFC to pursue other interests.

Beginning July 1st, VFC Program management functions will be centralized in Olympia. King County providers in the VFC Program will still see a Public Health employee for the biannual VFC compliance site visit, for immunization assessment presentations, and for new enrollments; however, all other functions such as temperature log monitoring, vaccine ordering and approval, and program policy questions will be handled by the Department of Health (DOH) Immunization Program in Olympia. Official messages about this transition will originate with the state DOH. If you are enrolled in the VFC program and are not receiving these messages, contact DOH at wachildhoodvaccines@doh.wa.gov with the state DOH.

I came to the VFC Program following 12 years with Public Health's HIV/AIDS Program (occupying three or four different roles), and an undergraduate degree in Journalism from the University of Washington (class of '85!). Little did I know how long the VFC gig would last and how much variety I would encounter, how many people I would meet, and how many places I would go. Since I started this job nearly two decades ago, our quiet, far-north corner has become the hottest destination in the US, with the city and county both growing in population by about a third.

In the earliest days of VFC we stored the vaccine in a

brewery, packing and shipping the vaccine ourselves. Since then the number of childhood vaccines VFC makes available has doubled, the cost of fully immunizing one child has risen from \$370 to \$1,671 at VFC's reduced contract price, and the value of vaccine distributed in King County has sextupled. King County's enrollment grew as high as 340 providers in 2008, and is now hovering around 290 individual practices.

This job has done wonders for my confidence, my patience, my sense of direction (literal and figurative), and my knowledge of our communities. My time with VFC took me to every corner of King County—I don't think I even knew that Enumclaw was in King County before I joined the program! I have met so many people who work so hard to provide quality health care and who are always being asked to do just a *little* bit more. I have tremendous respect for the women and men I have met in all of King County's VFC locations—especially the many nurses and medical assistants who shoulder the majority of the VFC Program's responsibilities—I wish I could name you all. And, of course, true respect and affection for the people I have worked with most closely over the years.

I will be plotting my next move throughout July and August, and I hope our paths will cross again!

VFC Program Changes

Effective July 1, 2018, providers should contact the Washington State Department of Health (DOH) for the following activities:

- Vaccine ordering and approvals
- Vaccine accountability submission
- Provider agreements
- Vaccine storage and handling
- Vaccine reporting, incidents, returns, and wastage
- Use of the Immunization Information System (IIS)
- Program technical assistance

To reach DOH, email WACHildhoodVaccines@doh.wa.gov or call 360-236-2VAX (2829).

Public Health – Seattle & King County will remain the primary contact for VFC enrollment and for all site visit related activities.

The Quarterly

Public Health

Seattle & King County

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Public Health Resources:

**Communicable Disease Epidemiology &
Immunization Section:** kingcounty.gov/health/cd

Our monthly **reportable cases table** has moved
online. Visit: kingcounty.gov/communicable

Program-related questions..... (206) 296.4774

Communicable Disease Reporting:

AIDS/HIV (206) 263.2000
STDs (206) 744.3954
TB (206) 744.4579

All Other Notifiable

Communicable Diseases (206) 296.4774

Automated reporting for conditions
not immediately notifiable (24/7) .. (206) 296.4782

Communicable Disease Hotline..... (206) 296.4949

Stay Engaged

Local issues:

- [Public Health Insider blog](#)
- [Public Health Seattle & King County \(PHSKC\)](#)
- [PHSKC Foodborne Outbreak Disclosure](#)
- [Washington State Department of Health Communicable Disease Epidemiology](#)
- [Washington State Department of Health Immunization](#)
- [Immunization Action Coalition of Washington](#)

National Issues:

- [CDC Morbidity and Mortality Weekly Report \(MMWR\)](#)
- [CDC Vital Signs](#)
- [Immunization Action Coalition](#)
- [National Foundation for Infectious Diseases \(NFID\)](#)
- [Children's Hospital of Philadelphia \(CHOP\)](#)
- [Virtual Immunization Communication \(VIC\) Network](#)
- [Shot of Prevention](#)