

Epi-Log & VacScene

The Communicable Disease Prevention Quarterly

Epi-Log: Rabies Exposures and Reporting

Rabies is a vaccine-preventable zoonotic disease with a case fatality rate of nearly 100% after onset of neurological symptoms. In the United States, immunization of domestic cats, dogs, and ferrets against rabies and effective medical interventions have dramatically decreased the incidence of human rabies cases. The combination of the rabies vaccine series and rabies immune globulin (RIG) provides an effective prophylaxis after human exposure to rabies. Although any mammal can contract and spread rabies virus, the principal animal reservoirs vary geographically. Worldwide, dogs are the most common rabies reservoir and canine rabies is the dominant virus variant. In the United States, the canine rabies virus variant has been eliminated, in large part due to successful immunization programs focusing on domestic companion animals. Bats are the main host species of rabies in the Americas and are the source of the majority of human rabies cases; rabid bats have been found in every US state except Hawaii, which is rabies-free. Terrestrial mammals, such as raccoons, foxes, possums, and skunks, are known reservoirs for rabies in other regions of the US; however, there is no evidence for terrestrial mammals transmitting rabies

in Washington State, where bats are the only known animal reservoir for rabies.

Public health surveillance of suspected human exposures to rabies is necessary to ensure proper rabies post-exposure prophylaxis (PEP) is administered to exposed persons and to facilitate the testing of animals suspected of being infected with rabies. A change in the Washington Administrative Code (WAC) that went into effect in 2011 no longer requires all animal bites to be reported to the local health jurisdiction, but rather only cases where human exposure to rabies is suspected. There are clear seasonal variations in the volume of reports to Public Health – Seattle & King County (PHSKC) of animal bites and suspected human exposures to rabies with annual peaks in the summer months (Figure 1). After implementation of the new WAC in 2011, the overall volume of reports decreased; however, the number of reported cases that started rabies PEP remained consistent with previous years indicating that the high risk exposures were still being reported to PHSKC.

We evaluated the surveillance system of suspected human exposures to rabies in King County by requesting

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hospital pharmacy records of RIG prescriptions administered from 2007-2013 and matching these records to reported cases in the CD-Epi Database at PHSKC. Because RIG is only indicated for rabies PEP and is administered a single time, pharmacy records of RIG prescriptions are an ideal source of comparative data. We calculated the sensitivity of our surveillance system, also referred to as the percent of cases reported, as the percentage of King

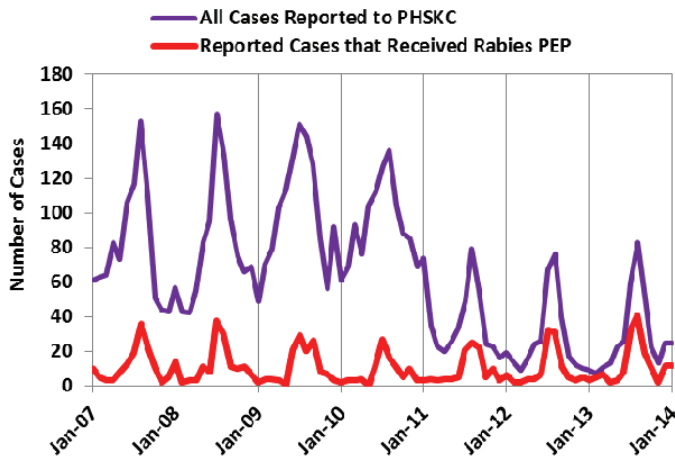


Figure 1. Cases of Animal Bites and Suspected Human Exposures to Rabies Reported to PHSKC and Reported Cases That Received Rabies PEP by Month of Report, 2007-2013.

County residents that received RIG and were reported to PHSKC among all King County residents that received RIG. We requested ED visit notes for any patient that received rabies PEP from 2011-2013 and did not match our database to assess exposure risk based upon the Washington State Department of Health guidelines and to determine if the criteria for rabies PEP administration were met.

Eleven King County hospital pharmacies provided RIG prescription data for all or some years of the study period. From 2007-2013, our evaluation determined that 86% of patients receiving RIG were properly reported to PHSKC. There were annual variations in sensitivity of our surveillance system to detect suspected human exposures to rabies, as seen in Figure 2. Although there was a slight decrease in the percent of cases reported after the change in the WAC, 84% of all patients that received rabies PEP from 2011-2013 were reported to PHSKC and remained consistent during this time period while the total volume of patients receiving rabies PEP increased.

From 2011-2013, the majority of patients (58%) receiving rabies PEP had animal exposures that involved

bats, 15% involved dogs, 15% involved raccoons, and 12% involved cats or other animals. Our analysis found that 45% of patients that received rabies PEP did not have an exposure consistent with guideline criteria for the administration of rabies PEP. Most of these patients had encounters with raccoons, cats, or dogs that occurred locally, where rabies is not transmitted by terrestrial mammals. Among cases reported to PHSKC from 2011-2013, approximately 26% of bat encounters, 50% of dog encounters, and 82% of raccoon encounters did not meet the recommendations for administration of rabies PEP. Emergency department and other primary care providers should familiarize themselves with the local rabies epidemiology and guidelines for PEP administration (see [Rabies Resources](#), page 3).

It is important to conduct a thorough exposure assessment to determine the need for rabies PEP. The local epidemiology of rabies where the exposure occurred must be taken into account when determining whether rabies PEP is necessary. The circumstances surrounding the animal

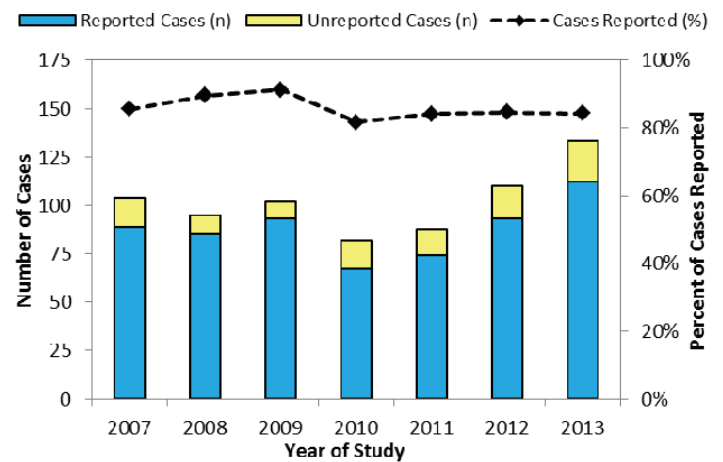


Figure 2. Number of Reported and Unreported Cases of Suspected Human Exposure to Rabies and Percentage of Cases Reported to PHSKC by Year of Study 2007-2013.

encounter must also be considered; if the bite was provoked, it may be normal animal behavior rather than an indication of rabies infection. When determining whether a bite is provoked, the encounter must be considered from the animal's perspective. For example, a person walking by a dog's house may be bit because the dog sees the stranger as invading their territory, or a person trying to shoo away a raccoon eating outdoor pet food may be attacked because the person is threatening the animal's food source. Before initiating rabies PEP, it is also important to consider whether the animal is available for testing. If the animal encounter involves a domestic cat, dog or ferret,

Epi-Log: Rabies (cont'd)

the animal may be quarantined for a 10-day observation period. If there is no laboratory evidence of rabies or if the animal remains healthy after quarantine, rabies PEP is not necessary.

The decision to initiate rabies PEP is made by the patient and their healthcare provider, optimally with input from our Public Health team when in doubt about whether or not PEP is indicated. When PEP is needed, our staff can assist when necessary in identifying healthcare facilities with an adequate supply of RIG, arrange for follow up doses of rabies vaccine with local healthcare providers, and can facilitate testing of animal specimens. The PHSKC CD-Epi staff is available 24/7 to take case reports and to answer questions about suspected human exposures to rabies.

All cases of suspected human exposures to rabies are immediately reportable to the local health jurisdiction. Since rabies PEP should only be administered to patients suspected of being exposed to rabies, we encourage healthcare facilities to implement protocols to ensure that every patient that receives rabies PEP has been reported. For example, one strategy to improve reporting completeness is to develop alerts within the EMR system whenever RIG or rabies vaccine is ordered to remind the provider or infection control practitioner to report the case.

Rabies Resources:

[PHSKC Guidance for Assessment, Management and Reporting of Suspected Rabies Exposure](#)

[Washington State Department of Health Guidelines for Suspected Exposure to Rabies](#)

[WHO Expert Consultation on Rabies, 2004: Geneva Switzerland](#)

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Epi-Log: Many Chronic Hepatitis Patients Underimmunized, Need Linkage to Care

Beginning January, 2013, Public Health – Seattle & King County (PHSKC) has conducted enhanced surveillance for chronic hepatitis in conjunction with the Centers for Disease Control and Prevention (CDC) and Washington State Department of Health (WA DOH). These efforts will improve our understanding of the epidemiology of chronic hepatitis in King County by providing more complete and accurate data on demographic characteristics, case-reported risk factors, clinical information, and clinical management practices. While King County led investigative efforts in 2013-2014, enhanced surveillance has expanded to the rest of Washington State in 2015.

Due to high case volume, PHSKC preforms enhanced investigation on a 10% random sample of newly reported persons with chronic hepatitis B or C, and for all chronic hepatitis reports received in persons less than 21 years of age. Information for enhanced surveillance investigations is collected in two steps: (1) health care providers are faxed an informational letter, standardized 2-page questionnaire, and key messages document providing information on clinical management of patients with chronic hepatitis (see Resources Box to view copies of all surveillance materials); (2) a telephone interview is attempted with the patient with chronic hepatitis using a standardized investigation form. In addition, Public Health works to connect any patients who are lacking regular medical care with a primary care provider.

Below is a summary of findings for investigated cases reported in 2013. Stay tuned for additional reports on enhanced hepatitis surveillance, including a summary of 2014 cases and more detailed reports on both chronic hepatitis B and chronic hepatitis C enhanced surveillance findings.

Chronic Hepatitis B

A total of 491 newly reported cases of hepatitis B virus (HBV) infection were received by Public Health – Seattle & King County in 2013; following random sampling, 49 cases were investigated using the protocol described above.

Sampled cases with chronic HBV were distributed evenly across sex, and had a median age of 40 years (see Table 1). The majority of cases identified as Asian or Pacific Islander, and 14% identified as black or African. Over two-thirds of cases were born outside the United States; the most common countries of birth were

	Hepatitis B		Hepatitis C	
	N	%	N	%
Total reported	491		925	
Investigations completed	49		94	
Male	23	47%	61	65%
Female	26	53%	33	35%
<u>Age:</u>				
median	40		55	
range	(24 - 68)		(15 - 84)	
<u>Race:</u>				
White	3	6%	58	62%
Asian/Pacific Islander	37	76%	4	4%
Black	7	14%	19	20%
Latino/Hispanic	1	2%	6	6%
Other	0	0%	3	3%
Unknown	1	2%	4	4%
Born in the US	5	10%	54	57%
Born outside the US	37	76%	11	12%
Birth country not identified	7	14%	29	31%
<u>Insurance:</u>				
Uninsured	3	6%	18	19%
Private insurance	28	57%	23	24%
Public insurance	12	22%	41	33%
Other	0	0%	1	1%
Unknown	6	12%	11	12%

Table 1. Descriptive Statistics for Newly Reported Chronic Hepatitis B and C Cases in King County, 2013

China (8), Vietnam (6), Philippines (5), and the Horn of Africa region (Somalia, Ethiopia, Eritrea) (5 cases).

The most frequently reported risk factor was having a known contact with hepatitis B (9 cases, 18% of total, 38% of those who responded); three cases reported that their mother also had chronic hepatitis B. None of the cases reported any history of injection drug use, nor of blood sugar testing.

Fifty-five percent of cases had been tested by their primary care provider, with smaller proportions tested at specialist clinics or OB/GYN clinics. The majority of cas-

Epi-Log: Chronic Hepatitis (cont'd)

es were insured, mostly through private insurance plans (57%).

Of those included in our sample, 65% reported being linked to care for their hepatitis B (see Table 2). Seven (14%) reported no linkage to care with cited reasons including financial barriers, because the patient perceived that follow-up was unnecessary, or there was an inability to identify an appropriate provider.

	Hepatitis B		Hepatitis C	
	N	%	N	%
Yes	32	65%	45	48%
No	7	14%	30	32%
Patient says yes, provider says no	0	0%	4	4%
Provider says yes, patient says no	0	0%	4	4%
No response or unknown	10	20%	11	12%

Table 2. Case Has Been Linked to Care for Their Chronic Hepatitis.

Chronic Hepatitis C

A total of 925 newly reported cases of hepatitis C virus (HCV) infection were received by PHSKC in 2013; following sampling, 94 cases were investigated.

Roughly two-thirds of sampled cases with HCV were male, and an equal proportion was aged 45 – 64 years (“baby boomers”). Cases were predominantly white, with black or African as the next most frequent race reported. In contrast to chronic HBV cases, over half of cases with HCV were born in the United States (83% among cases with this information available). Ten cases (11%) were homeless. Seven cases (7%) were deceased by the time of investigation.

Two thirds of cases with chronic HCV identified having used injection drugs at some time during their lifetime; only 16% reported injecting in the previous three months. Twenty-eight cases (30% of total, 70% of those who responded) reported history of incarceration, and 24 (26% of total, 63% of those who responded) had a known contact with hepatitis C. Two cases reported having a mother who was a known hepatitis case. Eleven cases reported history of an occupation involving exposure to human blood or bodily fluids, four of whom also reported history of an occupational splash or needle stick. Roughly one third of cases had documented immunity to hepatitis A and B; the

remainder of cases were known to be unimmunized (20%) or had no immunization data available. Eighteen cases (19%) reported history of cirrhosis.

Over thirty percent had no insurance or unclear insurance status. Fewer than half of the cases reported being linked to care for their hepatitis C. Thirty (32%) reported no linkage to care, for reasons including financial barriers, and a perception that follow-up was unnecessary.

Key Findings:

- Many patients with chronic hepatitis, especially those with HCV, reported not being linked to care for management of their infection.
- Among patients with HCV, only 1/3 had documented immunity against hepatitis A and B.
- Most patients with HBV reported some form of insurance; 20% of patients with HCV were uninsured.

Resources For Health Care Providers:

[Enhanced Surveillance HCP Letter](#)

[HCP Questionnaire Hepatitis B](#)

[HCP Questionnaire Hepatitis C](#)

[Key Messages For HCP for patients with HBV](#)

[Key Messages For HCP for patients with HCV](#)

[WA DOH Patient Interview Forms](#)

NEW! Get Hep C Updates!

We've added an option in your *Epi-Log & VacScene* subscription to receive occasional updates regarding hepatitis C prevention and treatment. **Update your subscription preferences** today by following the direct link to your personal preferences located in any *Epi-Log & VacScene* email.

VacScene: Attitudes and Barriers to Adolescent Immunizations

Vaccine preventable diseases (VPDs) continue to cause preventable morbidity and mortality among adolescents. Although research suggests children with a foreign-born mother have lower vaccination completion rates than children with US-born mothers¹, evidence is lacking regarding: 1) knowledge, attitudes and barriers related to the uptake of routinely recommended adolescent vaccines (Tdap, MCV4, HPV) among ethnic minorities, and 2) optimal strategies to maximize vaccine coverage among adolescents for whom access to health care may be limited. With a grant from the Society for Adolescent Health and Medicine, Public Health – Seattle & King County embarked on a project to identify attitudes and barriers regarding adolescent vaccination with Tdap, MCV4, and HPV vaccines among Hispanic, Somali, and Ethiopian/Eritrean communities in SeaTac, Tukwila, and Burien and to promote vaccination

through tailored outreach to community members and providers.

In-person surveys of Hispanic, Somali, and Eritrean adolescents (n= 45) and parents of adolescents (n=157), and three focus groups with mothers of 11–18 year olds were conducted to assess knowledge, attitudes and barriers related to adolescent vaccinations. Findings were used to develop: 1) culture-specific written brochures for community members that addressed perceptions about adolescent immunizations and related diseases and, 2) a presentation and materials highlighting specific messages for health care providers that addressed concerns of the different cultural groups.

Overall, 56% of parents surveyed had heard of Tdap vaccine for pertussis prevention, whereas fewer had heard of MCV4 (33%) or HPV (38%) vaccines. Hispanic parents had the greatest likelihood of having heard of any of the adolescent vaccines, and Somali parents were least likely to have heard of any of them. Adolescents were less aware of the vaccines compared with parents. Parents from all three ethnic groups reported that the main reason their children had not been vaccinated was that they did not know that the vaccines were recommended. According

¹ Buelow VH, Van Hook J. *Timely immunization series completion among children of immigrants*. J Immigrant Minority Health 2008; 10: 37-44.

	Hispanic	Somali	Eritrean
General vaccine beliefs	<ul style="list-style-type: none"> • Supportive of vaccination • Positive associations with vaccine safety • Prefer to vaccinate when child is well 	<ul style="list-style-type: none"> • Reluctant to vaccinate if child is ill, otherwise generally supportive of vaccination • Concern about porcine gelatin as ingredient in vaccines • Disease is “God’s will” 	<ul style="list-style-type: none"> • Believe vaccines are therapeutic (will promote health if administered while adolescent is ill) • Believe protection from “baby shots” persists throughout teen years
Pertussis/Tdap	<ul style="list-style-type: none"> • Few were aware of the disease or how it is transmitted 	<ul style="list-style-type: none"> • Pertussis not distinguished from other respiratory illnesses such as asthma and pneumonia • Not thought to be contagious 	<ul style="list-style-type: none"> • Most aware of the disease and its serious nature • Some believe pertussis can lead to TB
Meningococcal/ MCV4	<ul style="list-style-type: none"> • No awareness of the disease or its complications 	<ul style="list-style-type: none"> • Believe disease is serious • Associated with crowded conditions (e.g. Hajj) • Do not perceive teens to be at risk 	<ul style="list-style-type: none"> • Believe disease is serious and all ages susceptible • Some believe the disease is caused by exposure to scorching sun/heat or spread by wind
HPV	<ul style="list-style-type: none"> • Minimal awareness of the vaccine or disease and its complications • Most do not believe children are at risk • Believe vaccine could lead to early initiation of sexual activity 	<ul style="list-style-type: none"> • No awareness of HPV vaccine or disease and its complications 	<ul style="list-style-type: none"> • Minimal awareness of HPV vaccine or disease and its complications

VacScene: Barriers (cont'd)

to the survey, 60% of parents would have their adolescent vaccinated with Tdap or MCV4 vaccines, but less than half would have their adolescent receive HPV vaccine, even with a doctor's recommendation.

Focus group participants expressed a variety of misperceptions and beliefs regarding adolescent vaccines and the respective VPDs, including severity of illness, complications and transmission (see Table, Page 6). Each ethnic group had distinct beliefs about each of the vaccines and the diseases they prevent. For example, some Eritrean parents expressed the belief that meningococcal disease is caused by the scorching sun and heat and did not perceive that their families were at risk because they now reside in a temperate climate. Somali parents participating in the focus group did not distinguish pertussis from pneumonia, asthma, or other respiratory illnesses, and were unaware that it could be transmitted person-to-person. Parents were least knowledgeable about HPV and its relationship to cervical cancer. All parents expressed a desire to access vaccine information in their native language(s) and in a variety of formats, including community classes and small group settings. There was nearly universal agreement among focus group participants that they would vaccinate their adolescents if recommended to do so by their doctors.

In conclusion, we identified barriers to adolescent immunization including: parents' and adolescents' limited awareness of, and inaccurate perceptions regarding, adolescent vaccines and VPDs; lack of health care provider recommendations for vaccination; and, inability to access health information in native languages. **A strong recommendation from the physician is a critical factor influencing parents' decision to vaccinate, even when hesitancy exists. Other factors (such as personal experiences with these diseases and religious and cultural beliefs) also influence parents' decisions regarding vaccination. Knowledge of beliefs, perceptions and concerns regarding adolescent immunizations and related VPDs can help inform strategies to improve adolescent vaccine uptake among ethnic populations.** To access the full report, visit: [Strategies for Increasing Adolescent Immunizations in Diverse Ethnic Communities](#).

VacScene: Rubella Eliminated in the Americas

Rubella is a once common viral infection transmitted through direct or droplet respiratory secretions. The illness is typically mild in children and may include rash, low-grade fever, malaise, and lymphadenopathy. However, rubella infection during pregnancy can lead to miscarriage, stillbirth, or Congenital Rubella Syndrome (CRS), a complication in the developing fetus that can result in hearing loss, cataracts, congenital heart defects, and intellectual disabilities. Before rubella vaccine was introduced in the US in 1969, infection was endemic with epidemics occurring every 6 to 9 years. During the 1964-65 US epidemic, an estimated 12.5 million cases occurred, 11,000 fetuses were miscarried, stillborn or aborted, and 20,000 infants were born with CRS. Globally, more than 100,000 children are born each year with severe birth defects attributable to CRS.

On [April 29](#), the Pan American Health Organization (PAHO) and World Health Organization (WHO) declared the Americas region free of endemic rubella transmission and CRS, [culminating a 15-year comprehensive effort among member countries](#) including:

- combined high-level political and economic commitments
- strategic partnerships with CDC, UNICEF, the United Nations Foundation and others
- broad sweeping MMR vaccination campaigns in healthcare and nontraditional settings in urban, rural and remote areas
- use of mass and social media, and celebrity and religious institution endorsements to promote vaccination
- integration of rubella and measles disease surveillance
- Establishment of CRS surveillance
- strengthened laboratory capacity to document endemic disease

"The fight against rubella has taken more than 15 years, but it has paid off with what I believe will be one of the most important Pan American public health achievements of the 21st century," said PAHO/WHO Director Dr. Carissa F. Etienne. "Now it's time to roll up our sleeves and finish the job of eliminating measles as well."

In 2012, WHO launched a [Global Measles and Rubella Strategic Plan](#), which includes the goal to eliminate measles and rubella in at least 5 WHO regions by 2020.

See next page for [Rubella Resources](#).

Rubella Resources

[WHO's Rubella page](#)

[Measles and Rubella Initiative](#)

[MMR Vaccination Recommendations](#), CDC

Epidemiology and Immunization Section and Interim Health Officer. “We are proud to honor the doctors, nurses and medical staff who work every day to protect and improve the health of our community through vaccination.”

All eight clinics are especially vigilant in systematically screening for and administering needed vaccines at every opportunity and educating parents and their clinic staff on the most current vaccine information to help parents make the best choice: on-schedule vaccination. These exceptional results also reflect accuracy and completeness of getting clinic immunization data into the IIS.

For more information on the AFIX continuous quality improvement process, visit <http://www.cdc.gov/vaccines/programs/afix/about/overview.html>

VacScene: 2014 Immunization Coverage Excellence Awards

Public Health—Seattle & King County Immunization Program staff conduct about 125 Vaccines for Children (VFC) Program compliance site visits annually (the visits are required by law for recipients of federally funded vaccine). One-third of the visits include an AFIX assessment (Assessment, Feedback, Incentive, eXchange), which involves using clinic data in the Washington State Immunization Information System (IIS) to generate site-specific childhood immunization coverage rates and identify clinic factors potentially influencing coverage levels.

While it is apparent to us that all of our Childhood Vaccine Program providers work hard to keep their patients up to date, we would like to bestow recognition for excellence in immunization practice to a group of “Hot Shots”: King County clinics that achieved childhood immunization coverage levels at or above 80% for the 4313314 series (4 DTaP, 3 IPV, 1 MMR, 3 HepB, 3 Hib, 1 VAR, and 4 PCV) in patients aged 24-35 months in 2014:

- North Seattle Pediatrics
- Swedish Factoria Primary Care
- Swedish Greenlake Primary Care
- Swedish Issaquah Primary Care
- Valley Medical Center/Valley Family Medicine

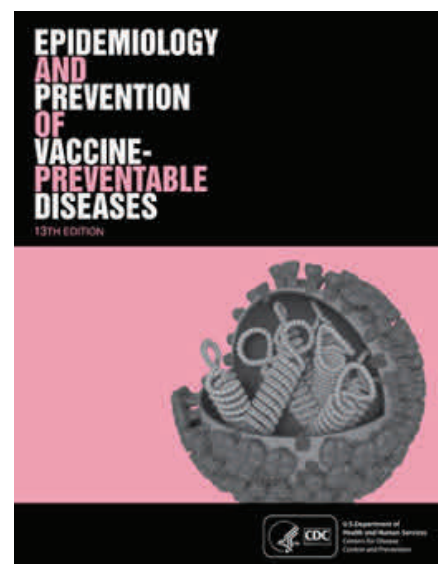
Three additional clinics receive an honorable mention for achieving immunization coverage levels above 75%:

- HealthPoint/Renton
- International Community Health Services/Holly Park Medical Clinic
- Virginia Mason/Issaquah Medical Center

“Strong healthcare provider recommendations for vaccination and clinic systems that support best practices for immunization are the most important factors in getting children fully vaccinated on schedule,” said Dr. Jeff Duchin, Chief of Public Health’s Communicable Disease

VacScene: CDC Pink Book Course September 16-17 in Tacoma

WithinReach and CDC will offer a two-day course “Epidemiology and Prevention of Vaccine-Preventable Diseases” at Hotel Murano in Tacoma, WA September 16-17. This “Pink Book” course will be led by faculty experts from CDC’s National Center for Immunization and Respiratory Diseases. Featured content will include a comprehensive review of immunization principles featuring the most up-to-date information and recommendations from the Advisory Committee on Immunization Practices (ACIP).



Visit <http://www.withinreachwa.org/get-involved/events/the-pink-book-course/> to learn more about registration, pre-course workshops, continuing education credit and more.

Epi-Log: Influenza Season Summary and Vaccine Updates

The 2014-15 influenza season was more severe than the past four flu seasons, with a record number of reported laboratory-confirmed influenza deaths and influenza outbreaks in long-term care facilities (LTCFs). Peak influenza activity based on emergency department (ED) influenza-like illness (ILI) and laboratory reporting occurred from late December through January. The predominant strain was influenza A (H3N2) compared with A (H1N1) in 2013-14. On February 26, 2015, updated interim influenza (flu) vaccine effectiveness (VE) estimates for the current 2014-2015 season were presented to the Advisory Committee on Immunization Practices (ACIP). The updated VE estimate against influenza A H3N2 viruses was 18% (95% confidence interval (CI): 6%-29%). Reduced protection against H3N2 viruses this season has been attributed to the fact that more than two-thirds of circulating H3N2 viruses analyzed at CDC are drifted from the H3N2 vaccine virus recommended for vaccine production. The proportion of drifted viruses at the U.S. VE study sites was even higher (>80%). The VE estimate against influenza B viruses this season was 45% (95% CI: 14% – 65%). The World Health Organization and US Food and Drug Administration have recommended a change in the influenza A(H3) and influenza B vaccine components for the 2015-2016 season. For more information, see: <http://www.cdc.gov/flu/news/updated-vaccine-effectiveness-2014-15.htm>

VacScene: Increasing Evidence Supports Use of High-Dose Flu Vaccine in Adults 65 Years of Age and Older

Fluzone High-Dose (HD) influenza vaccine is approved for use in people 65 years of age and older. Fluzone HD vaccine contains four times the amount of antigen contained in standard-dose adult flu vaccine.

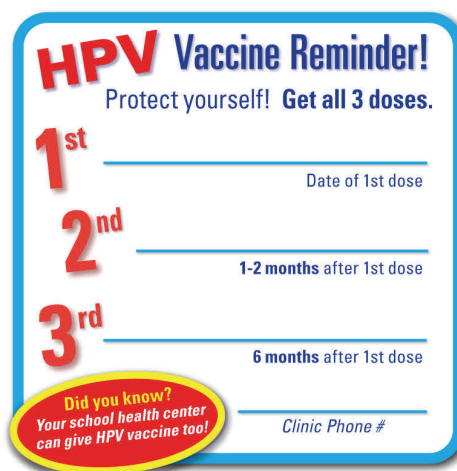
Data from clinical trials comparing Fluzone (standard dose) to Fluzone HD among persons aged 65 years or older indicate that higher antibody levels occur after vaccination with Fluzone HD. A [2-year randomized trial involving close to 32,000 volunteers at more than 100 sites and published in the New England Journal of Medicine](#) indicated that the high-dose vaccine was 24.2% (95% confidence interval: 9.7% - 36.5%) more effective in preventing flu in adults 65 years of age and older relative to a standard-dose vaccine. Because the study did not include an unvaccinated group for comparison, the authors could not calculate how much either vaccine lowered the volunteers' overall risk of contracting flu (absolute efficacy).

A retrospective cohort study in US Medicare beneficiaries showed that, in people 65 years of age and older, high-dose inactivated influenza vaccine was significantly more effective than standard-dose vaccine in prevention of influenza-related medical encounters. Additionally, the large population in this study showed, for the first time, a significant reduction in influenza-related hospital admissions in high-dose compared to standard-dose vaccine recipients, an outcome not shown in randomized studies.

At this time the Advisory Committee on Immunization Practices has not expressed a preference for any flu vaccine indicated for people 65 and older.

VacScene: FREE HPV Vaccine Reminder Magnets!

As part of Public Health's immunization promotion effort, we are pleased to provide two reminder magnet designs to keep adolescent patients on track for HPV vaccine series completion. We hope that you will give a magnet to each patient seen in your clinic for whom HPV vaccine is indicated. Clinics located in Seattle are encouraged to order the red/blue magnet, which also includes a message that HPV vaccine is offered at school-



HPV Vaccine Reminder!
Protect yourself! **Get all 3 doses.**

1st _____ Date of 1st dose

2nd _____ 1-2 months after 1st dose

3rd _____ 6 months after 1st dose

Did you know?
Your school health center
can give HPV vaccine too!

Clinic Phone #

based health centers. The green/blue magnet is suitable for all provider offices in King County. See what the magnets look like and order a supply for your clinic at <http://www.kingcounty.gov/healthservices/health/communicable/immunization/children/magnets.aspx>

Epi-Log & VacScene

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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

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