



EPI-UPDATE

VOLUME 1, ISSUE 1

GRANT COUNTY HEALTH DISTRICT LAUNCHES EPI-UPDATE

Welcome to the introductory issue of Grant County Health District's *EPI-UPDATE*. This will be a quarterly publication aimed at sharing notifiable condition data with our community partners, as well as pro-

viding other pertinent public health information relevant to disease prevention and control. We invite you to give us feedback on ways to improve this publication and encourage you to send questions that may

arise. You can contact us at (509) 766-7960 or info@granthealth.org Best,

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Contact Info

Grant County Case Numbers Reported to Washington State Department of Health

| Disease/Condition | JAN. – OCT. ONLY 2010 | JAN. – OCT. ONLY 2009 | Year total 2009 |
|-------------------------------|--------------------------|--------------------------|--------------------|
| Blood Lead – Child | 3 | 0 | 0 |
| Campylobacter | 16 | 15 | 17 |
| Chlamydia | 226 | 216 | 261 |
| Cryptosporidium | 0 | 0 | 0 |
| E. coli | 1 | 3 | 3 |
| Giardia | 6 | 4 | 5 |
| Gonorrhea | 12 | 8 | 9 |
| Hepatitis A | 1 | 1 | 1 |
| Hepatitis B | 9 | 2 | 2 |
| Hepatitis C chronic | 97 | 42 | 54 |
| Hantavirus | 0 | 0 | 0 |
| Herpes Simplex | 15 | 11 | 14 |
| Listeriosis | 0 | 0 | 0 |
| Malaria | 0 | 0 | 0 |
| Measles | 0 | 0 | 0 |
| Meningococcal | 0 | 1 | 1 |
| Mumps | 1 | 0 | 0 |
| Pertussis | 17 | 2 | 2 |
| Rabies PEP | 1 | 0 | 0 |
| Relap. Fever/Lyme | 0 | 0 | 0 |
| Rubella | 0 | 0 | 0 |
| Salmonella | 11 | 7 | 7 |
| Shigella | 2 | 2 | 3 |
| Syphilis | 2 | 2 | 2 |
| Tuberculosis | 1 | 2 | 3 |
| Yersiniosis | 0 | 0 | 0 |
| West Nile Virus | 0 | 1 | 1 |
| Totals Reported to DOH | 421 | 313 | 385 |

PERTUSSIS OUTBREAK IN GRANT COUNTY (2010)

Alexander Brzezny, MD MPH

www.granthealth.org/pertussis.html

BACKGROUND

On October 29, a pertussis outbreak was declared in Grant County. Rates of this disease have been on the rise since summer. At the end of October, two more cases were being investigated, demonstrating a sustained transmission of the bacteria in Grant County, and bringing the total to 17 cases (including one fatality) and 253 contacts this year. Just like other communicable diseases, pertussis does not occur isolated and generally is not contained to one area. Instead, this outbreak is a reflection of a persistent number of cases in our region (Graph 1.), and correlates with a 2010 resurgence of *Bordetella pertussis* (pertussis) nationwide.

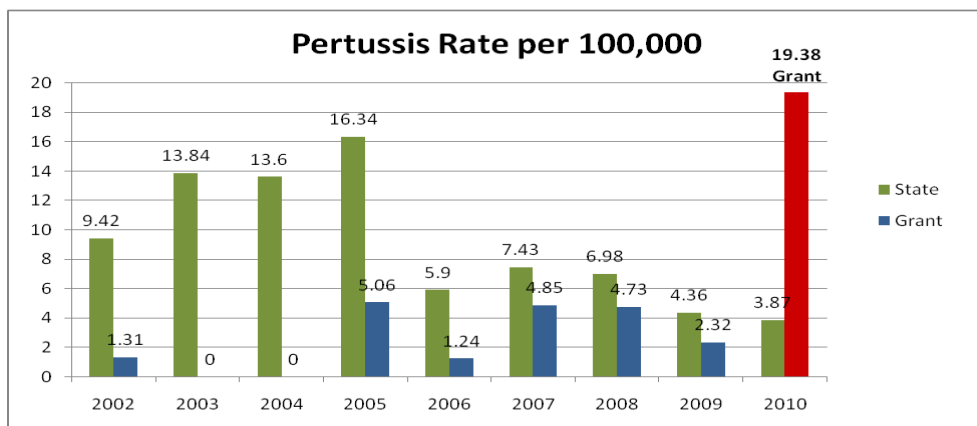
EPIDEMIOLOGY

Since the 1980s, cases of pertussis have been reported at 5,000-7,000 per year in the U.S. In Washington, there were 291 cases of pertussis in 2009 representing a rate of 4.36 per 100,000. To date, 261 cases have been reported statewide. In Grant County, there were 2 cases in 2009, but already 17 cases in 2010, representing a rate of 19.38 per 100,000, more than a 8-fold increase from a rate of 2.32 per 100,000 in 2009.

SYMPTOMS CAN VARY

It is generally thought that adolescents and young adults, whose immunity

GRAPH 1. Pertussis Case Rate per 100,000



from primary childhood immunization has waned, account for the majority of pertussis transmission in the community. The role which adults play in sustaining transmission is thought to be considerable on a population basis. Table 1. summarizes the differences in symptoms occurrence per age group. Atypical presentation should be considered a norm when evaluating a pertussis suspect. In California, a number of new cases have occurred in fully immunized individuals.

VACCINES AND NEW RECOMMENDATIONS FOR GRANT COUNTY

CHILDREN 7 through 10 years old (for whom DTaP is not indicated): Administer one dose of Tdap to children 7-10 years old who are un- and under-vaccinated against pertussis (who have not received the full DTaP series).

CHILDREN 11 years old through ADULTS 64

years old: Follow current ACIP recommendations; adolescents and adults who have not received a dose of Tdap and /or for whom vaccination history is unknown should receive a dose of Tdap as soon as feasible. No minimum interval since last Td necessary to follow since last Td.
PERSONS 65 years and older: Encourage a single dose of Tdap for persons 65 and older who have or anticipate close contact with an infant less than 12 months of age. Vaccination of adults 65 and older is still not routinely recommended, but is permissible in certain other situations and per discussion of risks and benefits with the patient.

TESTING

When testing for pertussis at this stage in the Grant County outbreak, collect both PCR and culture specimen if permissible, preferably from a nasopharyngeal wash (Instructions available at www.granthealth.org). If only one specimen is feasible, submit for PCR only.

TREATMENT AND CONTAINMENT

Individuals suspected with pertussis should be treated and **ISOLATED** for at least 5 days, even before the test results are available. Usually, azithromycin is considered the first line drug of choice, with clarithromycin, erythromycin as other choices. Trimethoprim-sulfamethoxazole (TMP-SMZ) is an alternate choice in patients with macrolide allergy.

TABLE 1. Pertussis symptoms comparison per age group

| PERTUSSIS SYMPTOM | INFANT | CHILD /YOUNG ADOLESCENT | OLDER ADOLESCENT / ADULT |
|-------------------------------|-----------------------------------------|-------------------------|--------------------------|
| Prodromal/cold-like sxns | Frequent | Frequent | Rare |
| Classic paroxysms and “Whoop” | Sporadic; post-tussive cyanosis instead | Frequent | Sporadic |
| Cough | Frequent | Frequent | Sporadic |
| Post-tussive emesis | Frequent | Sporadic | Rare |
| Poor feeding | Frequent | Sporadic | Very rare |
| Apnea | Frequent | Rare | Absent |
| Breathing difficulties | Frequent | Rare | Very rare |
| Fever (usually low-grade) | Sporadic | Rare | Very rare |

(Scale: absent, very rare, rare, sporadic, frequent)

INFLUENZA

Alexander Brzezny, MD MPH

www.granthealth.org/HealthcarePro.html

Influenza activity in Grant County is currently very low: no reports of confirmed cases have been received from the labs or medical professionals. Occasional cases of influenza-like illness (ILI) have been seen in all areas of Grant County, but the tests are so far negative. The state's first influenza cases have been reported from Stevens and Spokane counties. It continues to be crucially important to vaccinate against influenza.

Who should receive influenza vaccine?

Starting in 2010-2011 influenza season, routine annual influenza vaccination is now **UNIVERSALLY recommended for all persons aged ≥6 months**. This represents an expansion of the previous recommendations. We should continue to focus on vaccinating persons at increased risk for influenza complications due to underlying health conditions, pregnancy, age, or morbid obesity (BMI>40).

Influenza vaccine protects beyond just "influenza." It has been demonstrated that influenza vaccine with pneumococcal vaccine decrease all-cause mortality. The influenza vac-

cine alone also decreases risk of acute MI and stroke by up to 25% in a given year.

What is the best test?

All tests have different detection thresholds which is why it is common to have a false-negative results depending on the test used and the amount of days after symptoms onset (Graph 2 below). We recommend obtaining two nasopharyngeal swabs and considering RDT (to screen) and DFA /PCR (to confirm) RDT negative, or type if positive).

What cases should be reported to the Health District during 2010-11 season?

1. Lab-confirmed influenza deaths in persons of any age.
2. Pregnant women with lab-confirmed influenza admitted to an intensive care unit.
3. Any suspected or lab-confirmed infection due to a novel influenza virus ("avian influenza" A/H5N1). Note that 2009 H1N1 influenza is no longer a novel virus.
4. Outbreaks of influenza-

LABORATORY CRITERIA FOR DIAGNOSIS

- ✗ Influenza virus in respiratory cell culture;
- ✗ RT-PCR testing of respiratory specimens;
- ✗ Immunofluorescent antibody staining (direct or indirect);
- ✗ Rapid influenza diagnostic testing;
- ✗ Immunohistochemical (IHC) staining for influenza viral antigens in respiratory tract (autopsy);
- ✗ Four-fold rise in influenza hemagglutination inhibition (HI) antibody titer in paired acute and convalescent sera.

like illness or lab-confirmed cases in an institutional setting (long term care or hospital).

5. Unexplained critical illness or death in persons <50 years.

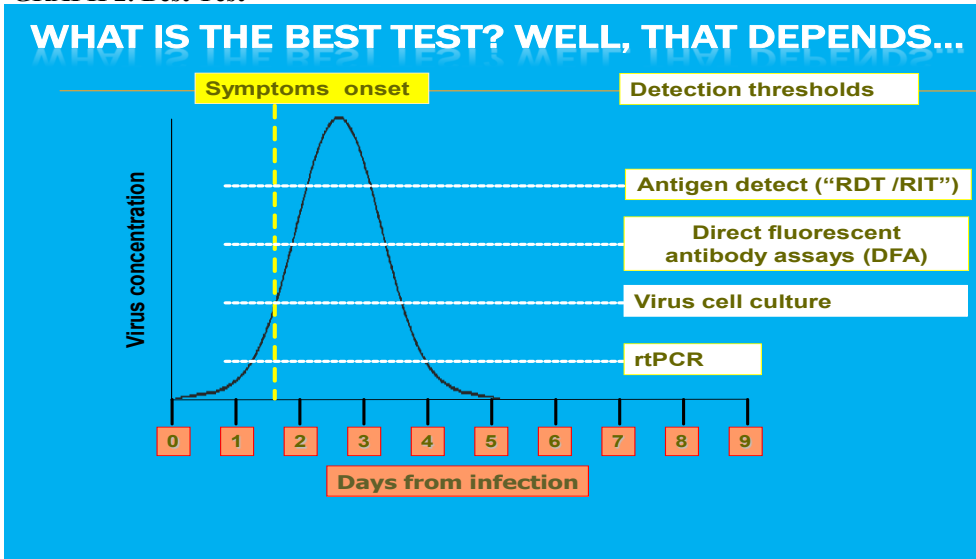
What antiviral medications are recommended?

The neuraminidase inhibitors oseltamivir and zanamivir are currently recommended for use against circulating influenza viruses. Amantadine and rimantadine are **NOT** recommended because of high levels of resistance to these drugs among recently circulating influenza A (H3) and 2009 H1N1 viruses.

Who should be treated with antiviral medication?

Antiviral treatment should start promptly for those with severe or complicated illnesses, or for patients at increased risk for severe disease. When antiviral treatment is clinically indicated, do not wait for laboratory confirmation. Rapid influenza tests have limited sensitivity and false negative results are common.

GRAPH 2. Best Test



How about Healthcare workers?

All healthcare workers should be vaccinated annually. The Grant County Board of Health endorses policies requiring influenza vaccine for all HCW's in Grant County. Your workplaces are asked to develop individual policies as suited for your particular circumstances.

Unimmunized health care workers put patients at risk.

HCWs are frequently implicated as the source of influenza outbreaks in health care settings. Influenza vaccination should be mandatory for HCWs according to documents recently issued by the Society for Healthcare Epidemiology of America and the American Academy of Pediatrics.



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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
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| <p>Moses Lake Office 1038 W. Ivy, Suite #1 Moses Lake, WA 98837 (509) 766-7960</p> | |

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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

What did we learn /confirm during the 2009-10 H1N1 pandemic?

1. 20% of influenza cases are ASYMPTOMATIC! Those cases can still transmit influenza to others.
2. Surgical face masks decrease transmission.
3. Early treatment improves outcomes.
4. Pregnancy is a major risk factor for influenza.
5. You can get infected TWICE with the same virus during the same season; you can even get infected with several influenza viruses at the same time!
6. Schools (and other proximity environments) really are the breeding ground for influenza.

GRANT COUNTY HEALTH DISTRICT
‘Always working for a Safer and Healthier Grant County’
www.granthealth.org

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