



IDAHO DEPARTMENT OF
HEALTH & WELFARE

Disease Bulletin

- Norovirus GII.4 Sydney Arrives in Idaho
- Diseases and Conditions Reported to Idaho Public Health, 2012
- Vaccine Distribution for Children in Idaho: update

VOLUME 20 NUMBER 2 • JUNE 2013

Norovirus GII.4 Sydney Arrives in Idaho

Noroviruses are considered by the Centers for Disease Control and Prevention (CDC) to be the most common cause of instances and outbreaks of acute gastroenteritis in the United States. CDC estimates that noroviruses cause approximately 21 million illnesses, including 70,000 hospitalizations, and 800 deaths annually, mostly among young children, elderly, and immunocompromised patients.¹ A recent study reported that noroviruses are now the leading cause of medically-attended acute gastroenteritis in U.S. children, replacing vaccine-preventable rotavirus.¹

Common symptoms include nausea, vomiting, diarrhea, and abdominal pain. Fever, headache, and body aches can also occur. Symptoms occur acutely, within 12–48 hours after exposure. Virions are shed in vomitus and in stool up to six weeks after resolution of symptoms, although peak viral shedding, with approximately 100 billion viral copies per gram of feces, occurs 2–5 days after infection. Asymptomatic shedding is common, particularly in children. Fecal-oral transmission of noroviruses occurs directly

person-to-person or indirectly via contaminated surfaces, food, or water; aerosolized vomitus is also a source of infection. It only takes 18 virions to cause disease; consequently, the outbreak potential is high, particularly in restaurants and in fecally incontinent and congregate residential populations.²

Noroviruses are in the Family Caliciviridae. Currently five genogroups are recognized, with a sixth genogroup under investigation, three of which (GI, GII, and GIV) cause human infection. The genogroups are divided into genotypes and strains. Antigenically novel norovirus strains have been emerging in the United States and other countries every 2–3 years through the process of strain replacement.¹ Because there is no cross-protection between strains, new strains entering communities can produce increased numbers of outbreaks in the immunologically naïve population.³ Since 2002, various strains of GII genotype 4 (GII.4) have predominated in the United States and have repeatedly gone through strain replacement. The Sydney strain of GII.4 was first described in March 2012 in

NOROVIRUS GII.4 SYDNEY CONTINUED ON PAGE TWO

Diseases and Conditions Reported to Idaho

Assessment of the population's health is a core public health function. Surveillance for communicable diseases is one means of assessment. Epidemiologic surveillance is the systematic collection, analysis, and dissemination of health data for the planning, implementation, and evaluation of health programs. The Idaho Division of Public Health Bureau of Communicable Disease Prevention (BCDP) includes epidemiologists who work to collect information on certain communicable diseases for the purposes of determining disease impact, assessing trends in disease occurrence, characterizing affected populations, prioritizing control efforts, and evaluating prevention strategies. Prompt reporting allows outbreaks to be recognized in a timely fashion when control

measures are most likely to be effective in preventing additional cases.

In Idaho, public health disease reporting is not centralized and healthcare providers can submit disease reports to the BCDP or Public Health Districts. Cases of disease are reported pursuant to Idaho Reportable Diseases (Idaho Administrative Code 16.02.10). As stated in the rules, physicians, healthcare facilities, laboratories, and others are required to report these diseases. Reporting sources can designate an individual within an institution to perform routine reporting duties (*e.g.*, an infection control preventionist for a hospital). Provisions of the Health Insurance Portability and Accountability Act (HIPAA) allow for routine disease reporting to Public

DISEASES AND CONDITIONS CONTINUED ON PAGE TWO



IDAHO DEPARTMENT OF
HEALTH & WELFARE

DIVISION OF PUBLIC HEALTH

Bureau of Communicable Disease Prevention

P.O. Box 83720
450 W. State Street, 4th Floor
Boise, Idaho 83720-0036

WWW.IDB.DHW.IDAHO.GOV

*Idaho Disease Bulletin
Contributing Staff*

CHRISTINE G. HAHN, MD
Public Health Medical Director and
State Epidemiologist

KATHRYN TURNER, PhD, MPH
Bureau Chief

LESLIE TENGELSEN, PhD, DVM
Deputy State Epidemiologist

JARED BARTSCHI, MHE
Epidemiology Program Specialist

CARLA BRITTON, PhD, MS
Epidemic Intelligence Service
Officer

KRIS CARTER, DVM, MPVM
Career Epidemiology Field Officer

PATRICK GUZZLE, MPH
Food Protection Program Manager

MITCHELL SCOGGINS, MPH
Immunization Program Manager

ELLEN ZAGER HILL, MS, DLSHTM
Epidemiology Program Specialist



NOROVIRUS GII.4 SYDNEY CONTINUED FROM PAGE ONE

Sydney, Australia.³ By the end of 2012, CDC noted that outbreaks of GII.4 Sydney-associated illnesses in the United States had occurred and were on the rise, quickly surpassing the frequency of outbreaks associated with the previously most common strains, GII.4 New Orleans and GII.4 Minerva. Strain replacement is occurring in Idaho, as well: GII.4 Sydney was first detected in Idaho in December 2012.

During September–December 2012,

CDC reported that 65% of the GII.4 Sydney outbreaks reported to CDC were long-term care facility (LTCF)-associated and 13% were restaurant-associated.³ In Idaho, for all norovirus clusters, regardless of genogroup, 62% in 2011 and 84% in 2012 were associated with LTCFs, nursing homes, or assisted living facilities. In LTCFs and other healthcare facilities with high-risk individuals, rapid implementation of infection prevention strategies is key to norovirus

control and outbreak management.⁴ These strategies include aggressive disinfection using an EPA-approved antimicrobial product effective against norovirus⁵, cohorting ill patients, and exclusion of ill workers to prevent facility-wide spread.

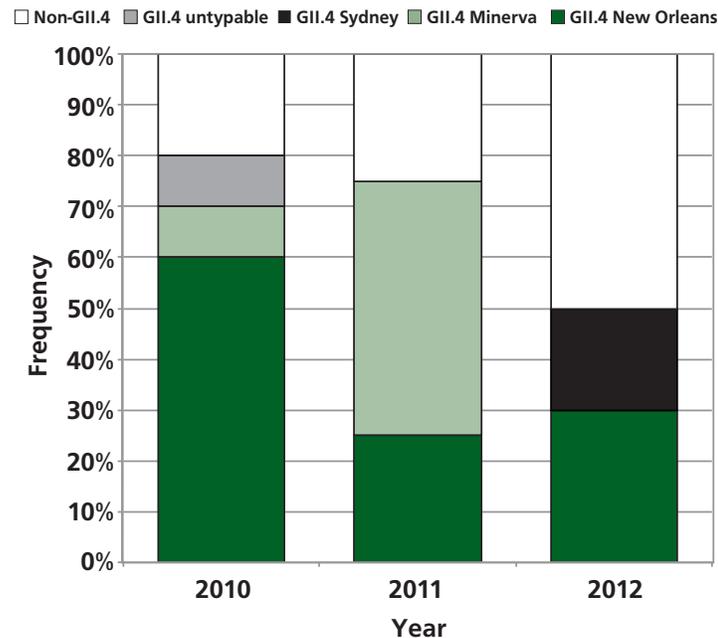
The Idaho Bureau of Laboratories (IBL) is a regional CaliciNet laboratory. CaliciNet is a nationwide network of public health and food regulatory laboratories

coordinated by CDC that participates in national norovirus surveillance efforts. IBL is able to detect norovirus genogroups I and II in stool and vomitus samples. Although there is no difference in clinical management of patients with norovirus based on strain typing, strain information is used to link outbreaks that might be caused by common sources (such as food), monitor trends, and identify emerging strains. The Idaho Division of Public Health encourages healthcare providers to collect clinical samples in support of outbreak investigations to help assess the public health implications and significance of emerging norovirus strains.⁶

References

¹Payne DC, Vinjé J, Szilagyu RG, et al. Norovirus and medically attended gastroenteritis in U.S. children. *NEJM*. 2013; 368(12): 1121–1130.
²Norovirus: Clinical Overview. www.cdc.gov/norovirus/hcp/clinical-overview.html. Updated February 21, 2013. Accessed April 22, 2013.
³Barclay L, Wikswo M, Gregoricus N, et al. Notes from the Field: Emergence of New Norovirus Strain GII.4 Sydney- United States, 2012. *MMWR Morbidity and Mortality Weekly Report*. 2013 January 25; 62(3):55. www.cdc.gov/mmwr/preview/mmwrhtml/mm6203a4.htm?cid=mm6203a4_e
⁴Healthcare-associated infections: norovirus in healthcare settings, prevention of norovirus. www.cdc.gov/HAI/organisms/norovirus.html#a4. Updated February 25, 2013. Accessed April 12, 2013.
⁵US Environmental Protection Agency: Office of Pesticide Programs. List G: EPA's Registered Antimicrobial Products Effective Against Norovirus (Norwalk-like virus). www.epa.gov/oppad001/list_g_norovirus.pdf. Published January 9, 2009. Accessed April 12, 2013.
⁶Norovirus: Specimen Collection. www.cdc.gov/norovirus/lab-testing/collection.html. Updated April 12, 2012. Accessed April 16, 2013.

Figure. Proportion of norovirus genotypes in outbreak-associated isolates, by year, 2010–2012—Idaho



DISEASES AND CONDITIONS CONTINUED FROM PAGE ONE

Health without patient authorization. Data maintained by the BCDP are private and protected from redisclosure under state and federal law.

The table summarizes reported cases of selected communicable diseases reported during calendar year 2012. Pertinent observations for some of these diseases follow. Incidence rates in this report were calculated using disease-specific numerator data collected by BCDP and a standardized set of denominator data derived from United States Census data, which are also available from the Bureau of Vital Records and Health Statistics at www.healthandwelfare.idaho.gov/Health/VitalRecordsandHealthStatistics/HealthStatistics/VitalStatistics/tabid/914/Default.aspx

Botulism (infant)

Idaho received reports of two cases of infant botulism in 2012. The average number of cases reported per year over a 20 year period is less than 1; therefore, 2 cases in one year is unusual. Patients were aged 4 months and 12 months at the time of illness. Both patients were hospitalized in Utah and have recovered. There was no connection between the two cases.

Cryptosporidiosis

In 2007, Idaho experienced a very high rate of reported cryptosporidiosis cases, in part, due to a large outbreak associated with water parks in the Treasure Valley area. Since then, the incidence rate of cryptosporidiosis has been at or below about 7.0 cases per 100,000 population. However, in

2012, the Treasure Valley again experienced clusters of illness associated with bodies of recreational water and the incidence rate of illness more than doubled to 16.9 cases per 100,000 population.

E. coli (STEC)

With 139 cases reported, 2012 was a record year for reported cases of *E. coli* STEC infections, although the incidence rate of 8.7 cases per 100,000 population was slightly lower than the last peak in 2007 of 8.9 cases per 100,000 population (n=130). Most cases in 2012 were not found to be linked to other reported cases, but a large outbreak in the summer of 2012 among attendees of two large family reunion gatherings accounted for 40 (29%) of the cases that year. Forty-eight (36%) of


DISEASES AND CONDITIONS CONTINUED FROM PAGE TWO

the 138 reported cases were confirmed as *E. coli* O157:H7 and 42 (30%) were not serotyped.

Giardiasis

Mandated reporting of giardiasis in Idaho started in 1983. The disease began to be tracked nationally in 2002 and since then, Idaho's annual incidence rate has ranged from 10.2 to 15.3 cases per 100,000 population, generally about double the national rate. However, in 2012, the incidence rate of giardiasis in Idaho fell to 9.6 cases per 100,000 population, the lowest since reporting began.

Pertussis (whooping cough)

Pertussis incidence was up nationwide in 2012. Washington state health authorities declared an epidemic of pertussis in the state in the spring of 2012. Although Idaho did not experience the intense increase in cases reported that Washington did, the 235 cases reported in 2012 was the highest incidence of disease since 1998 when 263 cases were reported. Idaho's 2012 incidence rate of 14.7 cases per 100,000 population was the 19th highest in the United States. Other western states, including neighboring Oregon, Utah, and Montana reported rates higher than Idaho, but the national provisional incidence rate was 13.4 cases per 100,000 population (see www.cdc.gov/pertussis/downloads/Provisional-Pertussis-Surveillance-Report.pdf). Please see previous Idaho Disease Bulletin articles published in 2012 for more detail on Idaho's pertussis surveillance. Most pertussis in Idaho was due to household transmission and clusters. The death of an Idaho infant in May 2012 received local and national media attention.

Salmonellosis

Reports of infection with *Salmonella* have been decreasing over the past 5 years and the 2012 incidence rate of 8.4 cases per 100,000 population is the lowest rate in Idaho since 1995. The decrease in incidence this year is likely a result of the fewer number of cases associated with in-state outbreaks of disease compared with previous years combined with no reports of Idaho cases associated with major national outbreaks of *Salmonella* infections in 2012.

Syphilis

Idaho's incidence rate of syphilis has historically been well below the national incidence rate. However, since 2010, reports of syphilis have increased substantially. The increased incidence is due in a large part to an ongoing syphilis outbreak among Treasure Valley men who have sex with men. During June 1, 2011–April 15, 2013,

the outbreak investigation has involved follow-up of 229 individuals, including 59 cases of early syphilis. New or existing HIV diagnosis was found in 37 cases and contacts; where HIV testing results were available, 69 had tested HIV negative.

Table. Incidence and incidence rates for selected communicable diseases, 2012—Idaho

Disease / Condition	Condition Incidence	Incidence Rate *
Amebiasis	3	0.2
Botulism, infant	2	0.1
Campylobacteriosis	293	18.4
Chlamydia	4,550	285.1
Cryptosporidiosis	267	16.7
<i>E. coli</i> STEC	139	8.7
Encephalitis, viral or aseptic	5	0.3
Giardiasis	153	9.6
Gonorrhea	168	10.5
<i>Haemophilus influenzae</i> , invasive disease	18	1.1
Hemolytic uremic syndrome	3	0.2
Hepatitis A	14	0.9
Hepatitis B, acute	7	0.4
Hepatitis C, acute	12	0.8
HIV	58	3.6
Lead, elevated blood levels	112	7.0
Legionellosis	5	0.3
Listeriosis	1	0.1
Lyme Disease	5	0.3
Malaria	8	0.5
Meningitis, viral or aseptic	22	1.4
Meningococcus	4	0.3
Methicillin-resistant <i>Staphylococcus aureus</i> , invasive	98	6.1
Pertussis	235	14.7
<i>Pneumocystic pneumoniae</i>	3	0.2
Q fever	1	0.1
Respiratory syncytial virus	530	33.4
Spotted fever rickettsiosis	4	0.3
Salmonellosis	134	8.4
Shigellosis	9	0.6
<i>Streptococcus pneumoniae</i> , invasive (<18 years of age)	5	0.3
<i>Streptococcus pyogenes</i> (Group A Strep), invasive	11	0.7
Syphilis	48	3.0
Toxic Shock Syndrome, staphylococcal	1	0.1
Tuberculosis	15	0.9
Tularemia	1	0.1
West Nile virus infection	17	1.1
Yersiniosis	5	0.3

*Incidence rate is per 100,000 population



Division of Public Health
P.O. Box 83720
Boise, ID 83720-0036

PRSRT STD
U.S. Postage
PAID
Permit No. 1
Boise, ID

**ROUTINE 24-Hour
Disease Reporting Line
1.800.632.5927**

**EMERGENCY 24-Hour
Reporting Line
1.800.632.8000**

An electronic version of the Idaho Reportable Rules may be found at <http://adminrules.idaho.gov/rules/current/16/0210.pdf>.

Current and past issues are archived online at www.idb.dhw.idaho.gov.

Vaccine Distribution for Children in Idaho: update

House Bill 178 “Immunization Boards,” passed the legislature on March 29, 2013. Passage of the bill extends the authority of the Idaho Vaccine Assessment Board, which otherwise would have sunsetted on July 1, 2013, for an additional two years. Idaho’s vaccine assessment system was created in 2010 in response to the loss of state general fund dollars which had been used to provide free vaccines for insured children in Idaho prior to the economic downturn in 2009. Funds collected by assessing insurance companies on a per-covered-child basis ensures access to immunizations is maintained.

The federally funded Vaccines for

Children (VFC) program provides free vaccine for children who are covered by Medicaid, or uninsured or underinsured, or are American Indian or Alaska Native. With the addition of vaccine purchased with assessment funds for insured children, Idaho is able to maintain its status as a “universal” vaccine state. “Universal” means that any Idaho child who presents at a provider enrolled with the state vaccine program is eligible for free vaccine purchased through the state program (though providers are permitted to charge a fee for the administration of the vaccine). If House Bill 178 had failed to pass the legislature, Idaho would have become a “VFC-only” state on July 1, 2013.

Providers who wanted to vaccinate insured children would have had to purchase vaccines for insured children from the private market, keep track of VFC and non-VFC vaccine stocks separately, and bill insurance companies for reimbursement.

Insurance companies support Idaho’s assessment system not only because it improves access to vaccines, but because they can take advantage of the lower cost of vaccines purchased by the state from federal vaccine contracts relative to the private market. Stakeholders agreed that an extension of the sunset date to July 1, 2015 will allow more time for evaluation of the expected cost savings of this program.