

# Disease Bulletin

IDAHO DEPARTMENT OF  
HEALTH & WELFARE

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VOLUME 20 NUMBER 4 • DECEMBER 2013

## Norovirus Outbreaks in Long-Term Care Facilities

The Centers for Disease Control and Prevention estimates that norovirus causes an average of 19–21 million cases of acute gastroenteritis in the United States annually. Over half of all norovirus outbreaks reported in the United States during 2010–2011 and 73% of norovirus outbreaks reported in Idaho during 2011–2012 occurred in long-term care facilities (LTCFs) (e.g., nursing homes and assisted living facilities).<sup>1</sup> To better understand the epidemiology of norovirus outbreaks in LTCFs in Idaho, we characterized reported outbreaks which occurred during 2008–June 24, 2013. We examined outbreak data and reports submitted by Public Health Districts. We included outbreaks classified\* as confirmed or probable; where norovirus was the confirmed, probable, or suspected etiologic agent; and the venue was an LTCF.

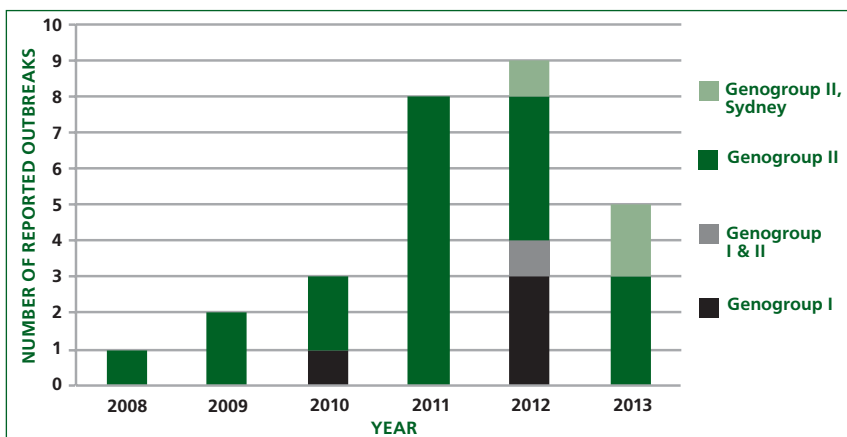
### Results

During the study period, 57 norovirus outbreaks occurring in LTCFs were reported, accounting for 21% of all confirmed and probable outbreaks reported. Among 42 (74%) of these 57 outbreaks, the mean attack proportion was 39% for residents and 30% for staff. A mean of 29 residents and 20 staff were reported to be ill. The index case was identified in a resident in

8 (53%) and in staff in 7 (47%) of 15 outbreaks. Severe illness was reported: 1–2 hospitalized residents or staff were identified in 17 (33%) outbreaks (n=51) and 1–3 deaths among residents in 7 (13%) outbreaks (n=52). Among 33 outbreaks in which the total number of stool samples submitted for laboratory testing was reported, the mean number of stool samples submitted for laboratory testing and positive for norovirus was 5 and 4, respectively. Genogroup II (GII) was detected in 24 (86%) of 28 outbreaks for which genotyping results were available (Figure).

Outbreak duration ranged from 3 to 45 days (mean, 17.8; SD, 10.5) (n=57). We examined the association between duration of outbreak and facility size, quarter of report, and time to report (i.e., the number of days from illness onset in the first case to the date the outbreak was reported to the Public Health District). Facility size was available for 39 (68%) outbreaks. Outbreaks in small (40–89 beds) and medium-sized (90–139 beds) facilities lasted longer than outbreaks occurring in large (140–189 beds) facilities.<sup>†</sup> Among these 39 outbreaks, most were reported in fall and winter months; among 34 outbreaks reported during 2008–2012 (complete years), 14 (41%) began in January–March and 10 (29%) began in October–December.<sup>‡</sup> Fewer outbreaks were

Figure. Norovirus outbreaks for which genotyping results were available (n=28) by genogroup and year, Idaho—2008–June 24, 2013.



reported in spring and summer: 7 (21%) began in April–June, and 3 (9%) began in July–September. Outbreaks occurring in April–June were approximately half the duration of outbreaks occurring in January–March.<sup>†</sup> Preliminary analysis indicates that time to report is moderately positively correlated<sup>§</sup>



IDAHO DEPARTMENT OF  
HEALTH & WELFARE

### BUREAU OF COMMUNICABLE DISEASE PREVENTION

Idaho Department of  
Health and Welfare  
P.O. Box 83720  
450 W State St, 4th floor  
Boise, Idaho 83720-0036

[WWW.IDB.DHW.IDAHO.GOV](http://WWW.IDB.DHW.IDAHO.GOV)

*Idaho Disease Bulletin  
Contributing Staff*

**CHRISTINE G. HAHN, MD**  
State Epidemiologist

**KATHRYN TURNER, PhD, MPH**  
Bureau Chief

**LESLIE TENGELSEN, PhD, DVM**  
Deputy State Epidemiologist

**JARED BARTSCHI, MHE**  
Epidemiology Program Specialist

**KRIS CARTER, DVM, MPVM**  
Career Epidemiology Field Officer

**PATRICK GUZZLE, MPH**  
Food Protection Program Manager

**TRAVIS KUSHNER, MPA**  
Public Health Informatics Specialist

**MARIANA ROSENTHAL, PhD, MPH**  
Epidemic Intelligence  
Service Officer

**MITCHELL SCOGGINS, MPH**  
Immunization Program Manager

**ELLEN ZAGER HILL, MS, DLSTHM**  
Epidemiology Program Specialist

**BRITTANY HOLZHAMMER**  
PNWRCE Intern, OHSU

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**NOROVIRUS OUTBREAKS CONTINUED FROM PAGE ONE**

with outbreak duration: longer times to report are associated with longer outbreak durations.

**Discussion and Recommendations**

Both residents and staff of LTCFs are at risk of illness from norovirus. Although infrequent, mortality associated with norovirus outbreaks can occur in LTCF residents. Staff with symptoms of norovirus infection should be excluded for a minimum of 48 hours after resolution of symptoms. Our finding that norovirus GII was the predominant genogroup in these outbreaks is consistent with CDC estimates

that in 2011, over 80% of confirmed human norovirus infections were associated with GII.<sup>2</sup> Increased efforts to submit stool samples for norovirus testing and genotyping are needed. Although norovirus outbreaks in LTCFs predominate in fall and winter, they occur throughout the year, demonstrating the need for ongoing surveillance and readiness to implement norovirus outbreak management practices. Prompt reporting of outbreaks to Public Health Districts is encouraged. Further study is needed to evaluate factors associated with duration of norovirus outbreak in LTCFs.

\*Two or more cases of similar illness associated in time and place, and laboratory confirmation in 1–2 persons or additional epidemiologic or environmental evidence.  
<sup>1</sup>Cox Proportional Hazards model.  
<sup>2</sup>Similar to proportion among all 50 outbreaks beginning during 2008–2012, of which 20 (40%) began in January–March and 16 (32%) began in October–December.  
<sup>3</sup>Spearman's correlation coefficient

**References**

<sup>1</sup>Centers for Disease Control and Prevention. Norovirus: trends and outbreaks. [www.cdc.gov/norovirus/trends-outbreaks.html?s\\_cid=cs\\_1049](http://www.cdc.gov/norovirus/trends-outbreaks.html?s_cid=cs_1049) Updated August 1 2013. Accessed October 3, 2013  
<sup>2</sup>MacCannell T, Umscheid CA, Agarwal RK, et al. Guideline for the Prevention and Control of Norovirus Gastroenteritis Outbreaks in Healthcare Settings. Centers for Disease Control and Prevention. May 4, 2011. [www.cdc.gov/hicpac/pdf/norovirus/Norovirus-Guideline-2011.pdf](http://www.cdc.gov/hicpac/pdf/norovirus/Norovirus-Guideline-2011.pdf).

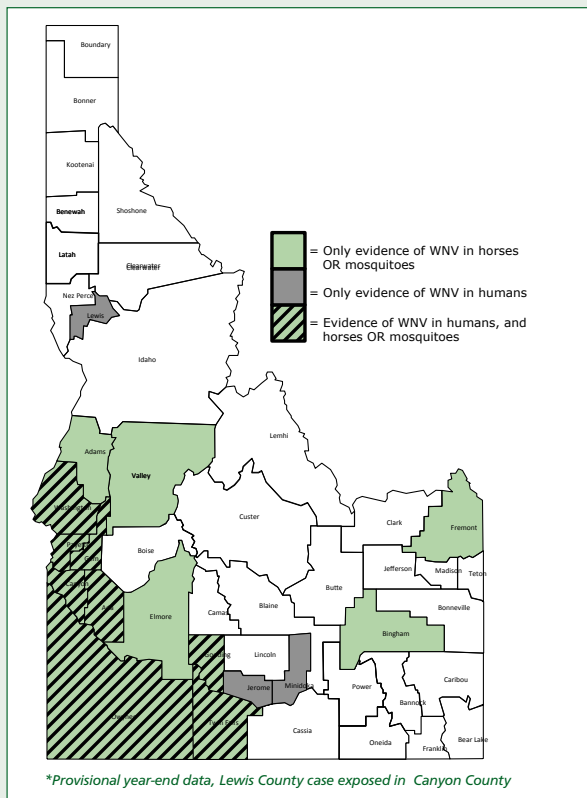
# WNV Entrenched in South and Southwestern Idaho

Much of southern and western Idaho is high desert and sports a dry climate, but don't let that fool you: mosquito-borne transmission of West Nile virus (WNV) has occurred seasonally in many of these areas for the last 10 years. WNV entered the United States in the greater New York City area in 1999, and crossed the continent by 2003. WNV has been considered

endemic in Idaho since 2004. In 2013, as of November 1, 40 human cases, 10 horse cases, and multiple positive mosquito samples have been identified in 16 Idaho counties (Figure); up from 11 counties in 2012. Of the 40 human cases, 26 are classified as West Nile fever (WNF) and 14 as West Nile neuroinvasive disease, including one death. The current 2013 case count is more than double the number of cases reported in 2012 (17 cases).

tory for all symptomatic WNV infections in Idaho, 43% of cases reported in 2013 and 47% of cases reported in 2012 required hospitalization, suggesting severe cases are more likely to be reported. The number of case reports likely underrepresents incidence of milder disease in Idaho.

**Figure. WNV Surveillance Findings, by County of Residence (or Collection)—Idaho, 2013\***



According to CDC, approximately 75% of infections are asymptomatic. Of the remaining 25%, < 1% (1 in 150 to 1 in 250) are classified as neuroinvasive and the rest are classified as WNF\*. WNV-related disease is likely underreported because WNF symptoms can range from mild to severe and are non-specific. CDC suggests that disease trends are best monitored by the incidence of neuroinvasive disease because reporting of these cases is considered high, compared to persons with mild WNF who might not seek medical attention, be misdiagnosed, and could be less likely to be reported even if diagnosed correctly.

WNV is maintained in nature in a complex cycle involving mosquitoes and birds, sometimes spilling into other mammalian species such as squirrels, horses, and people. Two mosquito species are primarily responsible for maintenance of the virus in nature and spread: *Culex pipiens*, associated with urban transmission, and *C. tarsalis*, more strongly associated with rural transmission. These mosquito species feed primarily on birds early in the summer, and become less discerning and feed on mammals (including humans) later in the summer. This change in feeding preference, known as bridging, accounts for the seasonality of infections, which typically peak in August and continue until a killing frost.

To learn more about WNV in Idaho visit the Idaho Department of Health and Welfare WNV webpage: [www.westnile.idaho.gov](http://www.westnile.idaho.gov).

\*Petersen LR, Brault AC, Nasci RS. West Nile Virus: review of the literature. *JAMA*. 2013;310(3):308-315 <http://jama.jamanetwork.com/article.aspx?articleid=1713596>

Although reporting is manda-



# Meaningful Use in Idaho: an update on public health reporting for providers

More doctors and hospitals are making the switch from paper to electronic health record keeping as part of a government-incentivized initiative to improve health outcomes through the use of health information technology, otherwise known as “Meaningful Use” (MU). Recent data suggest that nationwide more than half of physicians have implemented electronic health record (EHR) systems in their practice and 80% of hospitals have implemented EHR systems. In Idaho, 42% of providers and 58% of hospitals have adopted an EHR system.

In order to receive monetary incentives, providers are required to meet specific MU objectives through use of certified EHR system technology. These MU objectives are being rolled out in three stages through 2016.

## Meaningful Use Requirements for Eligible Providers

MU Stage 2 (MU2) will begin for eligible providers (EPs) in January 2014. The focus of MU2 is to use the capacity built in MU Stage 1 (MU1) for advanced clinical processes. These processes focus on more rigorous health information exchange, electronic transmissions of patient care summaries, and patient controlled data. In MU2, providers must meet 17 core objectives and 3 of 6 menu objectives.

In MU2, ongoing submission of electronic immunization data has moved from

a menu objective to a core objective. A new menu objective includes public health reporting of data electronically to the Idaho Cancer Registry of Idaho (CDRI). The Idaho Bureau of Communicable Disease and Prevention (BCDP) has declared its readiness to receive electronic data from EPs. The BCDP will accept the submission of electronic immunization data and the CDRI will accept submission of cancer case information. The state of Idaho currently does not have the capacity to receive syndromic surveillance data from providers.

## Registration Process

EPs must register their intent to initiate public health reporting in order to meet requirements to receive incentive payments. Any provider currently submitting ongoing immunization data in production using HL7 version 2.3.1 (MU1 requirement) will be grandfathered into MU2 and will not be required to upgrade their data to HL7 version 2.5.1; however, they must still register in order to meet MU2 requirements to receive incentive payments. A Public Health Reporting registration site is available to register intent to report to Idaho Public Health [www.healthandwelfare.idaho.gov/Providers/PublicHealthMeaningfulUseReporting/tabid/2486/Default.aspx](http://www.healthandwelfare.idaho.gov/Providers/PublicHealthMeaningfulUseReporting/tabid/2486/Default.aspx).

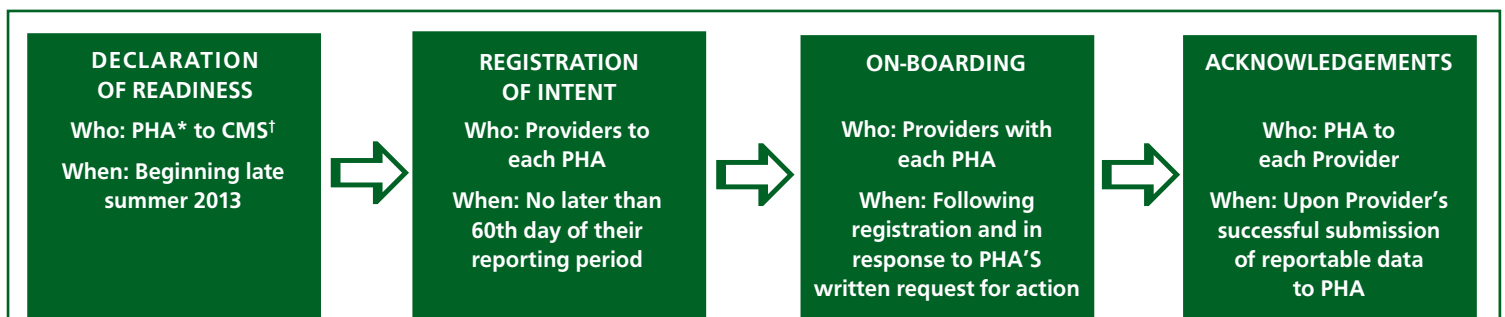
## Onboarding and Acknowledgement

The person named as a contact for Meaningful Use public health reporting

during the registration process will be provided instructions on the process and timelines for onboarding electronic data reporting. Onboarding refers to the testing and validation process to integrate clinical electronic data feeds into public health surveillance systems (Figure). After registering, the contact will receive a written request for action via email. The request for action will vary based on the type of reporting that was registered for, but will generally include contact information, message testing phase timelines, implementation guides, and reporting-type specific information. Once electronic message testing is implemented, BCDP (or CDRI for cancer reporting) will provide direction to achieve MU2 acknowledgement of ongoing submission. The onboarding process ends when the reporter is routinely submitting actual patient data that meets electronic data standards set out in the Meaningful Use regulations. Those seeking MU2 acknowledgement will be required to provide actual patient data from production systems. A written acknowledgement from BCDP that the reporter is engaged in ongoing data submission will be provided after successful electronic data reporting is implemented and sustained.

For more information on public health reporting to meet meaningful use, please visit our website at the URL listed in middle column or email questions to [PublicHealthMU@dhw.idaho.gov](mailto:PublicHealthMU@dhw.idaho.gov).

Figure: Meaningful Use Public Health Reporting Process for Stage 2



Source: [www.naccho.org/topics/infrastructure/informatics/upload/MU2\\_PHA\\_ReadinessGuidance\\_Recommendations.pdf](http://www.naccho.org/topics/infrastructure/informatics/upload/MU2_PHA_ReadinessGuidance_Recommendations.pdf)

\*Public Health Agencies

†Centers for Medicare and Medicaid



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

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**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](http://www.idb.dhw.idaho.gov).

## Hepatitis C Update: screening for hepatitis C in Idaho

It is estimated that up to 80% of all hepatitis C virus (HCV) infections in the United States are among adults born between 1945 and 1965, a birth cohort also known as “baby boomers.” The Idaho Viral Hepatitis Prevention Task Force supports and promotes the 2013 United States Preventive Services Task Force (USPSTF) recommendations on screening for HCV infection in persons at high risk for infection, and recommends offering one-time screening for HCV infection to adults born between 1945 and 1965. The recent

endorsement by USPSTF of the screening recommendations released by CDC in 2012 sends a strong message to health care providers, policy makers, and the public that expanded screening for HCV is beneficial for patients and the overall health of the public. When considered together, the Affordable Care Act’s requirement for insurers to cover the cost for one-time HCV screening and the newly expanded HCV screening recommendations for baby boomers can generate the momentum needed to identify the millions of U.S.

adults currently unaware of their infection status. To help prevent liver disease and deaths related to chronic HCV infections, medical providers should focus on ensuring capacity for the delivery of clinical preventive services that can reduce missed opportunities for HCV diagnosis and linkage to care and treatment. To access the full article regarding the USPSTF recommendation on baby boomer HCV screening, go to [www.uspreventiveservicestaskforce.org/uspstf12/hepc/hepcfinalrs.htm#summary](http://www.uspreventiveservicestaskforce.org/uspstf12/hepc/hepcfinalrs.htm#summary).