



LABORATORY TRENDS



October 17, 2013

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BC HIV Point of Care Program

The British Columbia (BC) Point of Care HIV Test Program began in April 2011 as a 2-year pilot to expand HIV testing into remote communities and to expand HIV testing for clients who are isolated or who may not return for their test results.

The BC Centre for Disease Control was tasked to provincially coordinate supplies and quality assurance activities to support the introduction and use of a HIV Point of Care Test (POCT) in community sites throughout BC. In April 2013, this program was moved under PHSA Laboratories, managed by the BC Public Health Microbiology and Reference Laboratory (BCPHMRL).

The number of POCT sites have increased from 18 Vancouver Coastal Health Authority sites in 2010 to 76 sites in all Health Authorities in 2013 (Figure 1). These sites are predominantly Public Health Clinics but have expanded to include First Nations and correctional facilities.

Data on inventory use is collected from each participating site on a monthly basis, and analyzed quarterly. Data analysis includes tracking test results and observations of how the kits are used, effects of process changes to the use of the kits, and how the program has changed over time. Opportunities for improvement in the program have been made, and process improvements have been made in consultation with the site and Health Authority partners.

Highlights from the latest program analysis include the following:

Site Related Changes/Observations:

- From interest to implementation takes several months for most sites

- 57% of diagnostic tests are done by 4 sites in the Vancouver Lower Mainland; these sites account for 62% of true positive HIV results
- 72% (55) of sites report under 10 diagnostic test results/month, but report only 7% of the true positive results reported by the province
- 4% (4) of sites are reporting more than 100 diagnostic test results/month, but report 62% of the true positive results reported by the province.

Diagnostic Uses (cumulative total from 2011 to 2013):

- 88.2% used for diagnostic purposes
- 98.7% of kits used for diagnostic reasons yield Nonreactive results
- 0.7% of kits used yield true positive or preliminary positive results
- 94% of reactive results are true positive.

The overwhelming (63%) nondiagnostic use of test kits is for test Quality Control (QC) purposes. QC has evolved in spurts within the program. Sites have been slow to routinely test QC, but increased focus by the program as part of the transition from pilot to program, appears to be resulting in QC testing by more sites.

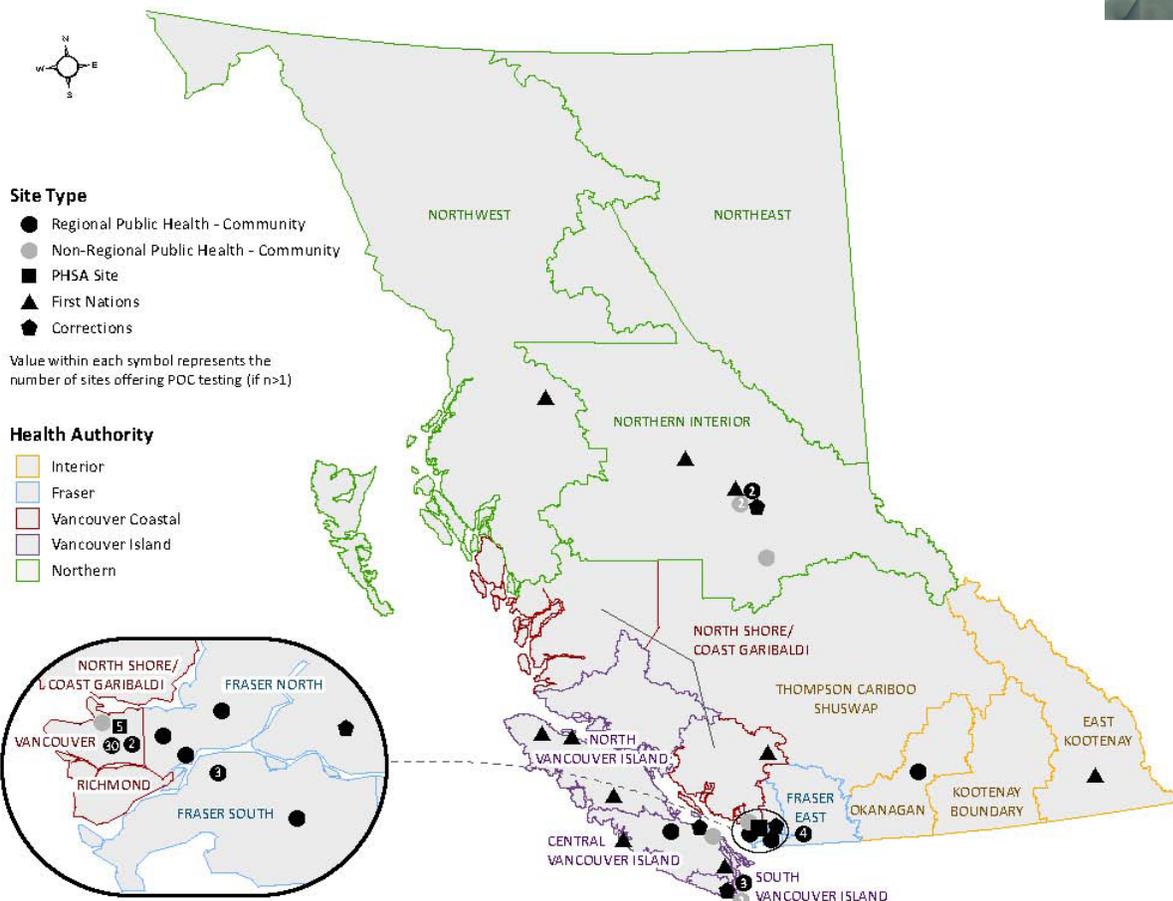
Analysis of the current inventory distribution and data collection mechanisms has identified current state and potential improvements, particularly for expired kits. Changes will likely be implemented in the next fiscal year after consultations with site and Health Authority partners.

Data related to increases in test sites, test volumes and changes in practice have been used to identify opportunities for improvement and to monitor the impact of changes to the program. More information is provided on the program [website](#).



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BRITISH COLUMBIA PUBLIC HEALTH
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LABORATORY
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Reported by:
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Figure 1
Current HIV Point of care testing sites.

Moving Towards Complete Electronic Distribution of Clinical Reports

The Lower Mainland Health Authorities are continuing with the expansion of electronic results delivery with the aim to phase out the distribution of clinical reports received via mail/courier and fax by the end of 2014. We previously reported on the implementation of Excelleris for report distribution. The next two phases are:

Phase 1: Beginning October 2013, delivery of lower mainland laboratory and transcribed reports by mail or courier from Excelleris will be phased out. These reports will eventually only be available electronically via Electronic Medical Record (EMR) or Excelleris Launchpad, or by fax.

Phase 2: During 2014, all mail, courier, and fax distribution will be phased out. Reports will be made available electronically via EMR or Excelleris LaunchPad.

If you are not using Excelleris Launchpad or an EMR and would like further information about its use, please contact Excelleris at 1-866-728-4777 or support@excelleris.com.



Recent Outbreaks and Clusters

Escherichia coli O157:H7 Linked to Unpasteurized Raw Milk Cheese

An outbreak of *E. coli* serotype O157:H7 has affected 25 residents of several provinces including BC, Alberta, Saskatchewan, Manitoba and Quebec. Epidemiological and laboratory evidence has linked the outbreak to unpasteurized cheese produced from a cheese production operation in the Interior Health Authority. A recall of affected products was issued on September 19, 2013.

For more information please see the Public Health Agency of Canada [website](#).

Measles

Our last update in mid-September reported on three lab confirmed measles cases in the Fraser Health Authority (FHA) which occurred in late August and early September. Since then, three additional cases in the Lower Mainland have been confirmed and others are being followed-up. Four of these six cases were confirmed to be genotype B3. Three cases have been in adults aged 20 to 40 years and three cases have been in children under 5 years of age.

Although few in number, these cases are not indicative of the enormous increases in workload for public health laboratory testing, follow up and management in response to this outbreak. The BCPHMRL Central Processing and Receiving Program performs measles serology testing and has implemented extra testing runs to accommodate the influx of specimens. The BCPHMRL Virology Program has also experienced increases in requests for measles PCR testing and has changed when testing occurs to optimize the number of specimens processed. Both programs have also performed extra hours stat testing when required.

Mumps

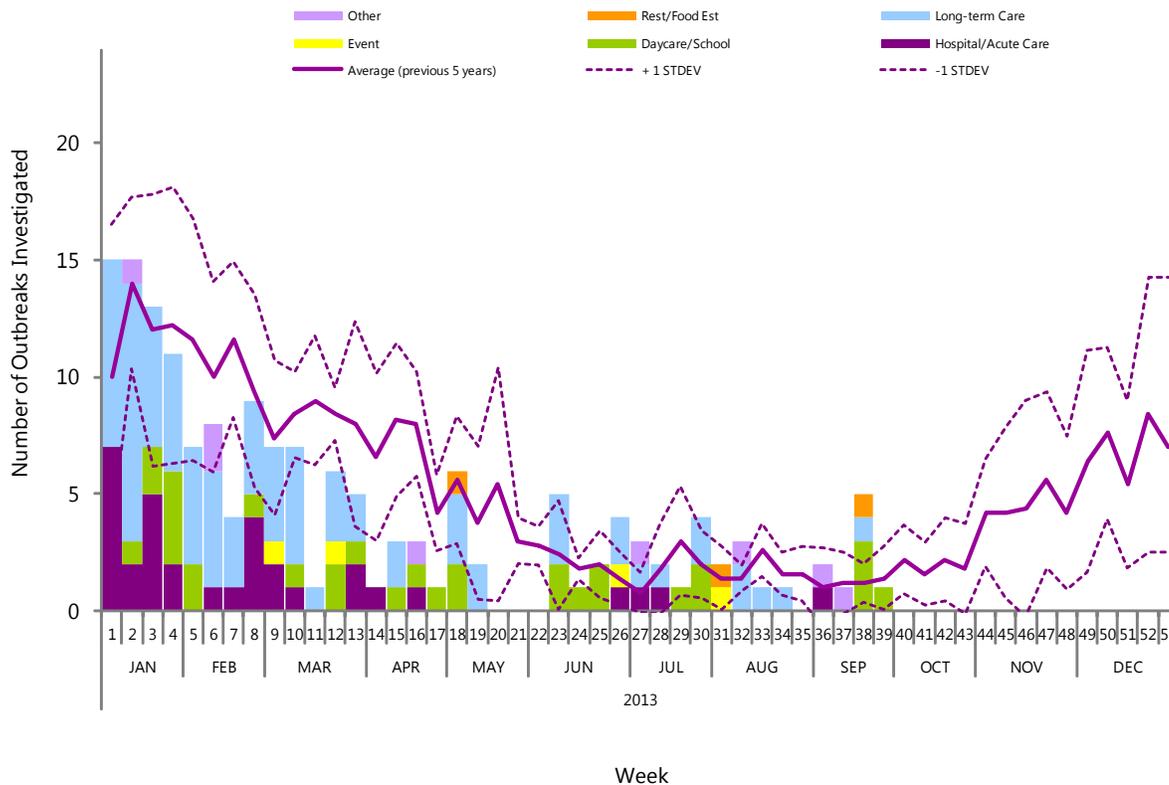
Since January, there have been 26 confirmed cases of mumps. Cases are from all health authorities except for Island Health. Cases range from 1-59 years old with a median age of 29 years and are 54% (14) female. Nearly half (46%, 12) of the cases have occurred since July and of these, 58% (12) have come from Northern Health Authority.



Other Gastrointestinal Outbreaks

In September, the Environmental Microbiology Program at the BCPHMRL investigated nine gastrointestinal (GI) outbreaks. Outbreaks were identified from four daycares, one long-term care facility, one restaurant, one hospital and two other locations/events (Figure 2). Samples for laboratory testing were submitted for seven (78%) of these outbreaks. Norovirus was confirmed at a daycare, sapovirus was confirmed at another daycare and *E. coli* was confirmed in the food sample linked to the unpasteurized cheese outbreak.

Figure 2
Gastrointestinal outbreaks investigated* since January, 2013, Environmental Microbiology, Public Health Advanced Bacteriology & Mycology, Parasitology and Virology Programs, BCPHMRL.



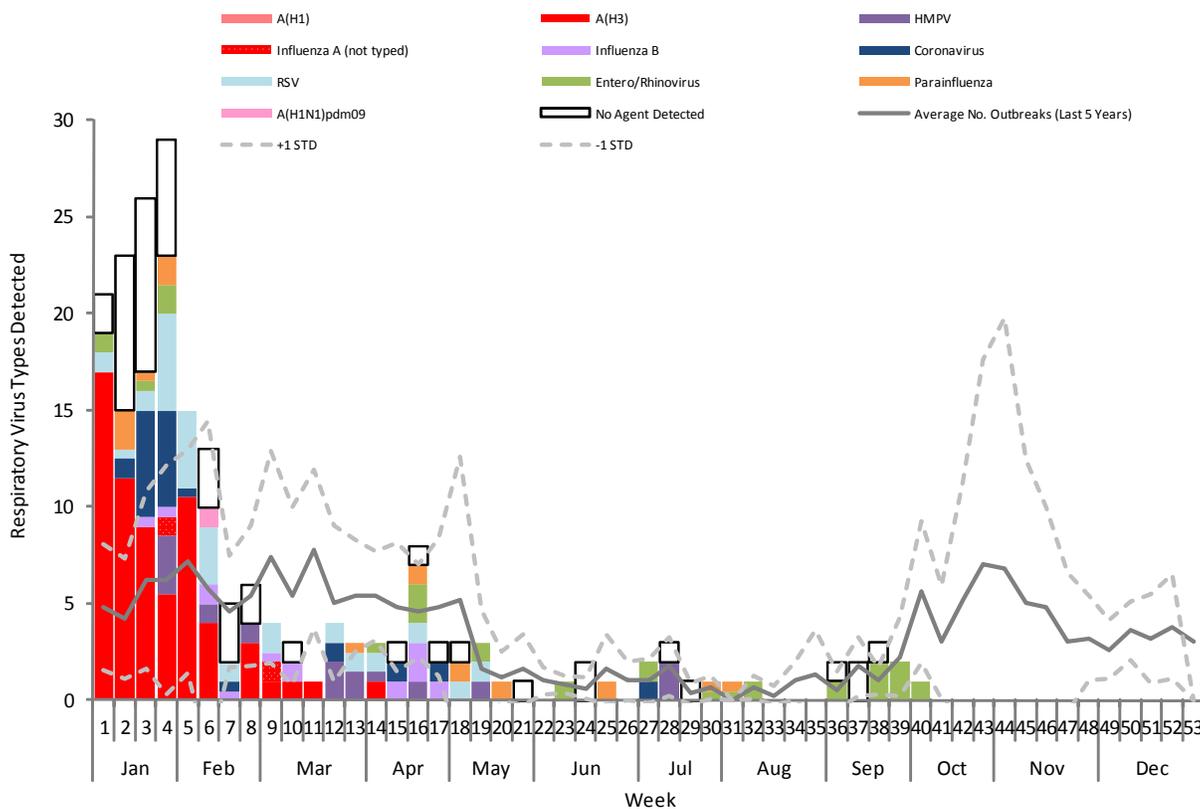
* The data available are from outbreaks in which the BCPHMRL has been notified. Some acute care microbiology laboratories are also testing for norovirus in the province and these data may not include outbreaks from all Health Authorities. Given the nature of GI outbreaks, samples are not always available for testing.



Other Respiratory Outbreaks

In September, samples were submitted to the BCPHMRL for respiratory outbreak investigations from 10 longterm care facilities. Enterovirus/rhinovirus was detected for six (60%) of these outbreaks.

Figure 3
Respiratory outbreaks investigated* by respiratory season, Virology Program, BCPHMRL.



* Figure 3 reflects respiratory sample results submitted for investigation to the PHMRL and may not be representative of respiratory outbreaks in the entire BC community.



A Report of the BC Public Health Microbiology & Reference Laboratory, Vancouver, BC

The BC Public Health Microbiology Reference Laboratory (BCPHMRL) at the BCCDC site provides consultative, interpretative testing and analyses for clinical and environmental infectious diseases in partnership with other microbiology labs and public health workers across the province and nationally. The PHMRL is the provincial communicable disease detection, fingerprinting and molecular epidemiology centre providing advanced and specialized services along with international defined laboratory core functions province-wide.

This report may be freely distributed to your colleagues. If you would like more specific information or would like to include any figures for other reporting purposes, please contact us.

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