ID News

Shaw J, Welch TR, Milstone AM. **The role of syndromic surveillance in directing the public health response to the *enterovirus* D68 epidemic.** JAMA Pediatr. 2014;168(11):981–2. doi:10.1001/jamapediatrics.2014.2628.
http://archpedi.jamanetwork.com/article.aspx?articleid=1910655

"Commercially available multiplex polymerase chain reaction-based respiratory pathogen panels offer rapid detection of common pathogens with high sensitivity and specificity. Because of the nucleic acid sequence similarities between the many types of *Rhinovirus* and *Enterovirus*, most of these panels do not distinguish between these 2 virus groups and are therefore typically reported as "*Rhinovirus*/*Enterovirus*." These panels have proved a useful screening test during the current EV-D68 outbreaks as specimens that test positive for *Rhinovirus*/*Enterovirus* can prompt further analysis to specifically identify EV-D68 . . . Confirmatory testing relies on partial sequencing of the structural protein gene VP4-VP2 or VP1 region, available in some . . . laboratories."

Skowronski D, Chambers C, Sabaiduc S, De Seers G, Dickinson J, Winter AL et al. **Interim estimates of 2014/15 vaccine effectiveness against influenza A(H3N2) from Canada's Sentinel Physician Surveillance Network**, January 2015, Euro Surveill. 201 Jan 29;19(5).
http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=21022

The 2014/15 influenza season to date in Canada has been characterised by predominant influenza A(H3N2) activity. Canada's Sentinel Physician Surveillance Network (SPSN) assessed interim vaccine effectiveness (VE) against medically attended, laboratory-confirmed influenza A(H3N2) infection in January 2015 using a test-negative case–control design. Of 861 participants, 410 (48%) were test-positive cases (35% vaccinated) and 451 (52%) were test-negative controls (33% vaccinated). Among test-positive cases, the majority (391; 95%) were diagnosed with influenza A, and of those with available subtype information, almost all influenza A viruses (379/381; 99%) were A(H3N2). Among 226 (60%) A(H3N2) viruses that were sequenced, 205 (91%) clustered with phylogenetic clade 3C.2a, considered genetically and antigenically distinct from the 2014/15 vaccine reference strain... Consistent with substantial vaccine mismatch, little or no vaccine protection was observed overall, with adjusted VE against medically attended influenza A(H3N2) infection of −8% (95% CI: −50 to 23%). Given these findings, other adjunct protective measures should be considered to minimise morbidity and mortality, particularly among high-risk individuals. Virus and/or host factors influencing this reduced vaccine protection warrant further in-depth investigation.

McNeil SA, Andrew MK, Ye L, Haguinet F, Hatchette TF, ElSherif M, LeBlanc J, Ambrose A, McGeer A, McElhaney JE, Loeb M, MacKinnon-Cameron D, Sharma R, Dos Santos G, Shinde V, on behalf of the Investigators of the Serious Outcomes Surveillance Network of the Canadian Immunization Research Network (CIRN**). Interim estimates of 2014/15 influenza vaccine effectiveness in preventing laboratory-confirmed influenza-related hospitalisation from the Serious Outcomes Surveillance Networks of the Canadian Immunization Research Network**, January 2015. Euro Surveill. 2015;20(5):pii=21024.
http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=21024

The 2014/15 influenza season in Canada has been characterised to date by early and intense activity dominated by influenza A(H3N2). A total of 99.0% (593/599) hospitalisations for laboratory-confirmed influenza with a known influenza virus type enrolled in sentinel hospitals of the Serious Outcomes

Surveillance Network of the Canadian Immunization Research Network were due to influenza A. Of the 216 with a known subtype, influenza A(H3N2) accounted for 99.1% (n=214). Interim unmatched vaccine effectiveness (VE) estimates adjusted for age and presence of one or more medical comorbidities were determined by test-negative case–control design to be −16.8% (90% confidence interval (CI): −48.9 to 8.3) overall and −22.0% (90% CI: −66.5 to 10.7) for laboratory-confirmed influenza A(H3N2). Among adults aged under 65 years, the overall VE was 10.8% (90% CI: −50.2 to 47.0) while in adults aged 65 years or older, the overall VE was −25.4% (90% CI: −65.0 to 4.6).