



# TARRANT

The Alberta Recording and ReseArch NeTwork  
Tracking Influenza in Alberta

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## February 2009

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## Annual General Meeting

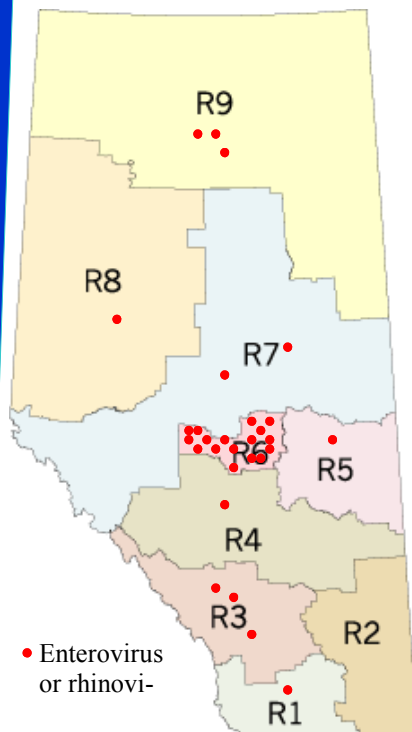
**March 21, 2009**

12:00— 5:00pm

Coast Edmonton House Hotel, Edmonton

Please join the TARRANT team and your fellow sentinels at our **AGM**. This is a wonderful chance to share your thoughts on the TARRANT program and to learn what your data has contributed to the influenza picture in Alberta!

For more information or to RSVP, please contact Karen at 403.220.2750



### Enterovirus/Rhinovirus Surveillance

- The recent development of a new microarray technique at the Provincial Lab allows TARRANT to conduct surveillance on respiratory viruses other than influenza.
- High levels of enterovirus/rhinovirus were detected over the period from May 31 to October 30, 2008. During that time TARRANT physicians identified 29 positive specimens (see map). This constituted 80.6% of all positive specimen (n=36) during that time.
- Most cases were detected in the Capital Health Region.
- This year TARRANT will analyze viral activity by tracking movement (real-time) using geographic imaging software.

# 2008-09 Update

As of February 9, 2009, TARRANT sentinels have submitted over 400 specimens for inclusion in the Vaccine Effectiveness Study. We are on our way to reaching the seasonal goal of 1000 submissions!

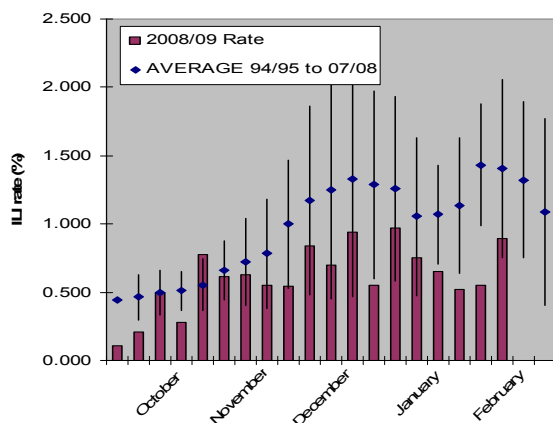
TARRANT detected its first influenza case of the season in the Calgary Health Region on November 3, 2008.

The sample was sequenced and it corresponds to the B/Malaysia strain of the Victoria lineage. Since that initial case, 33 Influenza B cases have been reported by TARRANT sentinels. All of the 19 samples tested to date at the National Microbiology Laboratory have been the B/Malaysia strain. The Yamagata lineage is the Influenza B component of the 2008-09 trivalent vaccine. This indicates that the B component is a lineage mismatch this season.

**From November 1, 2008 to February 9, 2009, TARRANT sentinels have identified 58 cases of influenza, 33 cases of enterovirus/rhinovirus infection and 15 cases of coronavirus.**

The average ILI rate for the 2008-09 season has generally been below the historical average of the past 14 seasons (Figure 1).

**Figure 1. Influenza-like Illness (ILI) Visits to TARRANT Sentinel Physicians by Week in 2008/09 Compared to Historical Data from the Previous 14 Influenza Seasons**



## Your contributions make a difference!

Skowronski DM, De Serres G, Dickinson J, et. al. Component-Specific Effectiveness of Trivalent Influenza Vaccine as Monitored through a Sentinel Surveillance Network in Canada, 2006–2007. *Journal of Infectious Diseases*. 2009. 199:168–179.

**Background.** Trivalent inactivated influenza vaccine (TIV) is reformulated annually to contain representative strains of 2 influenza A subtypes (H1N1 and H3N2) and 1 B lineage (Yamagata or Victoria). We describe a sentinel surveillance approach to link influenza variant detection with component-specific vaccine effectiveness (VE) estimation.

**Methods.** The 2006–2007 TIV included A/NewCaledonia/20/1999(H1N1)–like, A/Wisconsin/67/2005(H3N2)–like, and B/Malaysia/2506/2004(Victoria)–like components. Included participants were individuals  $\geq 9$  years of age who presented within 1 week after influenza-like illness onset to a sentinel physician between November 2006 and April 2007. Influenza was identified by real-time reverse-transcriptase polymerase chain reaction and/or culture. Isolates were characterized by hemagglutination inhibition assay (HI) and HA1 gene sequence. VE was estimated as  $1 - [\text{odds ratio for influenza in vaccinated versus nonvaccinated persons}]$ .

**Results.** A total of 841 participants contributed: 69 (8%) were  $\geq 65$  years of age; 166 (20%) received the 2006–2007 TIV. Influenza was detected in 337 subjects (40%), distributed as follows: A/H3N2, 242 (72%); A/H1N1, 55 (16%); and B, 36 (11%). All but 1 of the A/H1N1 isolates were well matched, half of A/H3N2 isolates were strain mismatched, and all B isolates were lineage-level mismatched to vaccine. Age-adjusted estimated VE for A/H1N1, A/H3N2, and B components was 92% (95% CI, 40%–91%), 41% (95% CI, 6%–63%), and 19% (95% CI, -112% to 69%), respectively, with an overall VE estimate of 47% (95% CI, 18%–65%). Restriction of the analysis to include only working-age adults resulted in lower VE estimates with wide confidence intervals but similar component-specific trends.

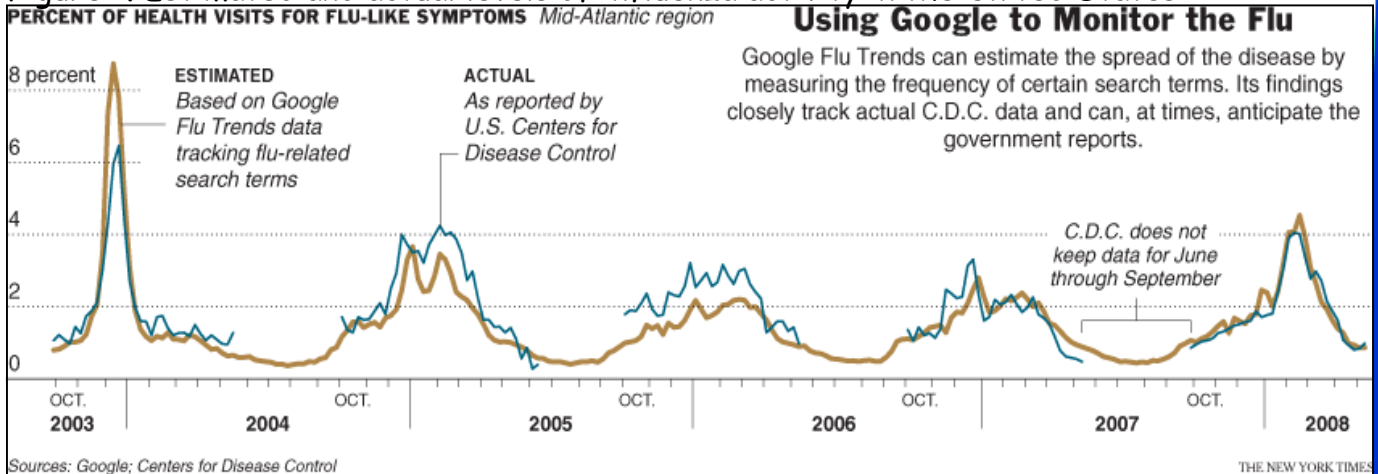
**Conclusions.** Sentinel surveillance provides a broad platform to link new variant detection and the composite of circulating viruses to annual monitoring of component-specific VE.

# Influenza facts

## Google Flu Trends

- A new web tool known as Google Flu Trends is tracking influenza activity in the United States. Certain search terms have been found to be good indicators of influenza activity, such as "flu symptoms."
- Google Flu Trends claims to be able to estimate influenza activity up to two weeks faster than traditional surveillance systems (Figure 1). The Centers for Disease Control and Prevention relies on information compiled by physicians and laboratories which can delay the response to influenza activity.

Figure 1. Estimated and actual levels of influenza activity in the United States



- More information can be found at: <http://www.google.org/flutrends/>

**TARRANT** will send you  
**\$5** for every completed  
weekly reporting form.

Cheques for the 2007-08  
season were sent out in  
January 2009.

**REMEMBER:**

Specimen collection must  
be within 7 days of ILI  
symptom onset.