

TARRANT

The Alberta Recording and Research Network
Tracking Influenza in Alberta

NEWSLETTER December 2004

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Dear colleagues,

Season's greetings from TARRANT group!



New sentinel physicians

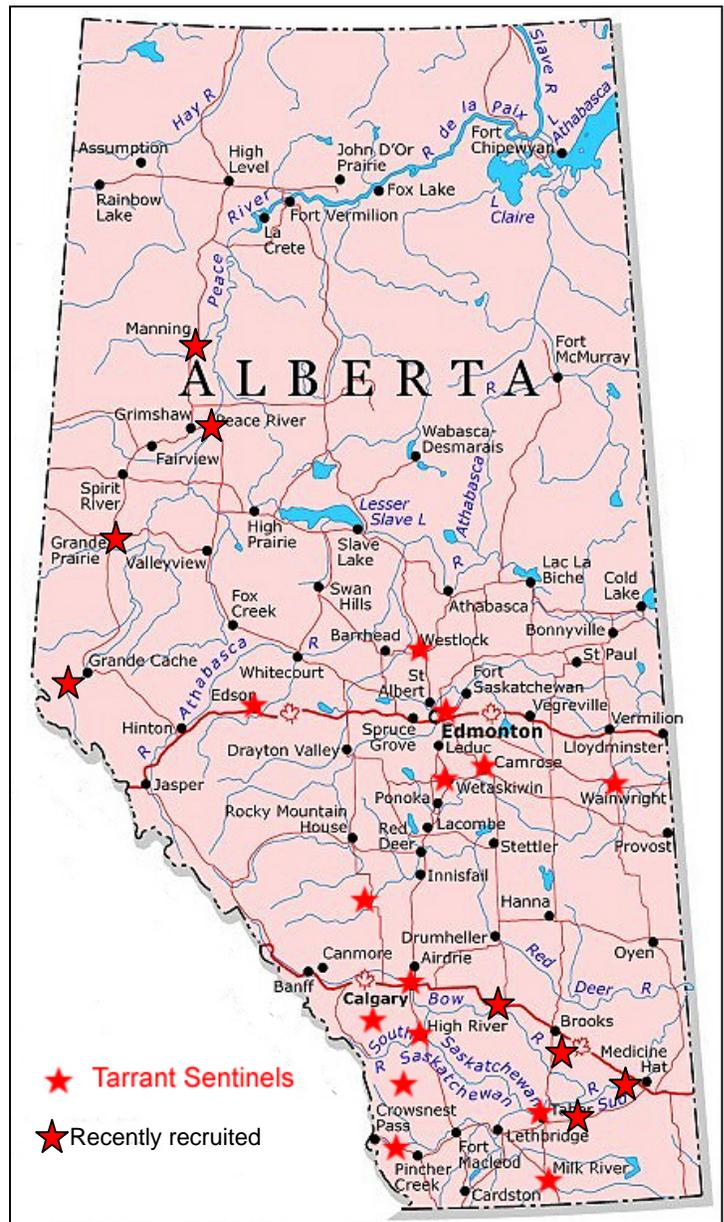
Welcome to the new sentinel physicians. Nine practices/doctors from Palliser Health Region and Peace Country Health have agreed to participate in the program recently. Some of them have already started sending in clinical information and swabs. Now TARRANT covers eight of the nine health regions in Alberta. The map shows the current coverage of TARRANT physicians.

New Sentinels:

- Medicine Hat: Dr. Doug Mastel & Dr. Tom Mohanraj
- Brooks: Dr. Antia Daniel
- Bow Island: Dr. Jerry Woodruff
- Bassano: Dr. T. Mucciarone
- Grande Cache Medical Centre: Dr John Gillett
- College and Community Health Centre, Grande Prairie: Dr Peter Lindsay
- Associated Medical Clinic, Manning: Dr Neil Heard
- Associated Medical Clinic, Peace River: Dr Bobbi-Jo Whitfield

Annual meeting Feb 24, 2005

We are planning to hold the TARRANT annual meeting in Delta Calgary Airport Hotel on February 24, 2005. The suggested topics include: 1) current and developing influenza lab tests, 2) use of computerized records for TARRANT, 3) other possible research projects, and 4) bigger picture of flu surveillance (link to the world, concerns about avian flu, etc.) We need to know the number of sentinel physicians/staff that would attend the meeting, costs to be covered by TARRANT, and other topics of interests to you. Please fill in the attached sheet and return it to us as soon as possible if you haven't done so. We will let you know the meeting agenda early next year.





Weekly influenza report

We believe that it is important to give feedback to you as sentinel physicians about the progress of influenza epidemics and virus results across the province, particularly the community data contributed by TARRANT sentinels. We sent out a weekly report from Alberta Health a couple of weeks ago, just to give you some idea how it looks like. We will continue to send out influenza reports via mail every 6 weeks. But if you prefer to receive these via email, please let us know and we will send reports to you every week by email.

What happens to your swab when it gets to the Provincial Lab?

(Kevin Fonseca, virologist, Provincial Laboratory for Public Health)

Methods used in virology laboratories are now very different from a few years ago. Now we can identify viruses much quicker compared to traditional culture in cell lines, which could take up to three weeks to demonstrate the presence of a virus. The Provincial Lab relies upon a combination of antigen and rapid culture tests as the backbone of respiratory testing. For unusual or difficult cases molecular tests are used as an adjunct. I hope this quick description will help you understand how the swabs you send get tested, and the advantages and pitfalls of these tests.

Rapid respiratory culture assay detects viral antigens expressed on the surface or in the infected tissue culture cells using fluorescent-tagged monoclonal antibodies, at about 18 to 24 hrs post-inoculation. Influenza A & B, RSV (respiratory syncytial virus), and the parainfluenza group are most amenable to detection by this test; however adenoviruses still require standard culture and take 10 to 14 days to completion. The rapid plate method is almost equal in sensitivity to standard culture. All TARRANT samples are cultured in the rapid plate for influenza A&B, RSV, and parainfluenza group. A preliminary report for these four viruses is issued at 24 to 48 hours and a final report at about 10 days for adenovirus.

A proportion of the influenza A & B virus isolates are to the Respiratory Department, National Microbiology Laboratory, Winnipeg, for subtyping. This is an important surveillance role comparing the circulating subtypes from across the country to the current influenza vaccine as a measure of its effectiveness, or identifying emerging subtypes that could be next years influenza “bug” or the worst case scenario of a pandemic strain.

EIA (Enzyme immunoassays) and DFA (direct immunofluorescent antibody) tests directly detect viral antigens in the patient’s respiratory tract, without requiring growth in cell culture. Some tests require nasopharyngeal swabs, secretions or washes, whereas others can be used on throat swabs. Unfortunately, the sensitivity is much lower, which is why we culture them instead. On the horizon is the next generation of highly sensitive molecular assays, such as PCR (polymerase chain reaction) and NASBA (nucleic acid sequence base amplification). Furthermore, for either influenza A or B, one can sequence the hemagglutinin and neuraminidase genes of the virus and determine the putative subtype within a day or so.

Subtyping reports are issued as soon as results are available, but sometimes further testing demonstrates a different result, requiring an amendment to a previous subtype. For example, last year, the first reports of the circulating influenza A in the fall outbreaks were released as influenza A/Panama (H3N2). But later the national laboratory demonstrated that it was A/ Fujian, a different subtype, with a new set of reference reagents, so all our reports were amended.

The strength of the TARRANT has been the close collaboration between the participating physicians and the Provincial Laboratory sited in Calgary & Edmonton. This partnership has been highly productive over the years in providing valuable surveillance data on influenza in the community. Many of the first influenza isolates came from TARRANT. During the 2003–2004 flu season, the Provincial Lab processed over 12,000 samples for viral respiratory agents, of which TARRANT accounted for 326 samples (2.7%). From these, influenza A was isolated from 45 patients (1%), with other agents from 9 (0.3%) cases. This year the first community influenza A again came from the TARRANT program. So keep up the good work, and keep sending those swabs !!

TARRANT Annual Meeting
Calgary Airport Inn
February 24, 2005



Please return this sheet to:
TARRANT Program
Fax (403) 270-4329

From: DR. _____

Would you like to attend the annual meeting in Calgary? Yes No

Who else in your practice will attend the meeting? _____

Costs to be paid by TARRANT:

Return airfare from _____ Yes No

Other travel costs Yes No

One night accommodation at Calgary Airport Inn Yes No

Suggestions and Comments:

For questions or additional information, please call (403) 220-2750.