Automated data extraction from general practice: influenza-like illness surveillance

***Gösta Liljeqvist*[A], *Hans Blom*[B] *and C. Raina MacIntyre*[C]**

[A]*NSW Public Health Officer Training Program, NSW Department of Health*

[B]*Manly Warringah Division of General Practice*

[C]*School of Public Health and Community Medicine, The University of New South Wales*

In *Global Agenda for Influenza Surveillance and Control*, the World Health Organization (WHO) articulates the need for improved capabilities in influenza surveillance.[1] Enhanced intelligence about influenza improves our understanding of both the health burden and the economic burden posed and informs both seasonal influenza response and pandemic preparedness and response.

Two of the WHO's global thematic aims for influenza surveillance and control are:

- improved quality and coverage of influenza surveillance
- more rapid communication and information exchange between Influenza Network Members and key partners and stakeholders on local, state, national and international levels.

Meeting these aims in gathering intelligence about influenza-like illness (ILI) in the community is a complex task, requiring multiple approaches. Building public health intelligence involves gathering data from a range of sources, interfacing the various pieces of information to facilitate broad analysis leading to intelligence.

New South Wales (the pandemic response in 2009)

The focus in New South Wales (NSW) during the 2009 pandemic influenza season was largely on emergency department presentations and hospital and intensive care unit admissions. This provided a view of ILI activity in hospitals.[2] Based on epidemiological assumptions, this sample examines only a portion of all ILI cases in the community (Pentinnen P, senior influenza expert at the European Centre for Disease Prevention and Control, pers. comm, Nov. 2009). A missing piece of the data puzzle in NSW is general practice records.

General practice surveillance for ILI has been conducted in Australia in a variety of ways. The Australian Sentinel Practices Research Network, operated by the Royal Australian College of General Practitioners and the University of Adelaide is engaging general practitioners (GPs) in national level surveillance.[3] A recent report from the Australian Department of Health and Ageing[4] showed that GP participation in this program remains low. Informal feedback from general practice networks within the former Northern Sydney Central Coast Area Health Service (NSCCAHS) has identified some issues with the extra demands being placed on GP workloads with current surveillance systems.

NSW Health carried out a general practice sentinel surveillance program during the pandemic (H1N1) 2009 influenza response. This effort gained support from GPs and divisions, but provided inconsistent results.[2] Participating GPs within NSCCAHS indicated that the paper-based report system used in this program was time consuming and resulted in lack of compliance.

A possible public health intelligence enhancement

The Canning Division of General Practice has designed a software package applied in practices nationally.[5] The Canning Data Extraction Tool has been used to collect de-identified data about chronic diseases and appears to be well accepted by GPs. A pilot study in the former NSCCAHS will explore the adaptation of the Canning Tool to extract ILI data from routine general practice records.

Post scriptum

The aforementioned study has now been completed and a report published in BioMed Central Public Health: Liljeqvist G, Staff M, Puech M, Blom H, Torvaldsen S. Automated data extraction from general practice records in an Australian setting: Trends in influenza-like illness in sentinel general practices and emergency departments. *BMC Public Health* 2011; 11: 435. Available from: http://www.biomedcentral.com/1471-2458/11/435.

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