

For reasons of space, letters may be edited for brevity and clarity.

## Effect of flu immunization programs on ED volumes

*To the Editor:*

The Groll and Henry article on the effect of influenza immunization programs on ED volumes is an excellent effort to identify some of the predictors of ED usage and volume,<sup>1</sup> but several issues should be highlighted.

First, the extent of coverage of the population in question is critical to the assessment of the impact of immunization. This was pointed out by the authors in the Discussion, under “Limitations,” but it cannot be overstated. If a significant proportion of the population does not receive vaccine in the first place, the program’s impact will be muted or nonexistent. A Health Canada telephone survey of over 3500 individuals from across Canada during the 2000–2001 flu season showed that close to 70% of adults 65 years and older received influenza vaccine during the 2000–2001 influenza season. In contrast, only 40% of those 18 to 64 years of age with high-risk medical conditions and 55% of health care workers were immunized during that season.<sup>2</sup> Are these immunization rates sufficient to influence ED volumes? Not likely!

In addition, if one is trying to assess the impact of a provincial influenza immunization campaign, ED volumes are only one outcome measure — and not a sensitive one. As Groll and Henry demonstrated, influenza and pneumonia make up a small proportion of total ED visits. At St. Paul’s Hospital, pneumonia, for example, accounts for about 1% of ED visits. Consequently, other

factors will have a much more profound impact on ED volumes, potentially obscuring small but meaningful benefits of a vaccination program. These other factors might include the development of new ED facilities, creation of a fast-track area, changing community demographics, changing ED processes, and even ED overcrowding itself — which has negative effects on publicity and ED volumes. The authors of this article made no attempt to compare year-by-year changes in ED volumes of influenza and pneumonia alone.

We recently measured the impact of a mass pneumococcal/influenza vaccination campaign on our ED. In November 1999 more than 8000 residents of the Downtown East Side of Vancouver were vaccinated, and we showed a 25% decrease in both ED cases of influenza and pneumonia year over year.<sup>3</sup> The drop in pneumonia volumes was seen in both admitted and discharged patients, but was not seen in lower mainland hospitals outside the Downtown (i.e., vaccination) area.

Finally, the major reason for enhanced influenza immunization programs and, even ED immunization programs, is not to decrease ED volumes, even though this is a stated objective of the Ontario government. The influenza vaccine prevents illness in approximately 70% to 90% of healthy persons younger than age 65 years. Among elderly persons living outside nursing homes or similar chronic care facilities, influenza vaccine is 30%–70% effective in preventing hospitalization for pneumonia and influenza.<sup>4</sup> Providing the vaccine in our EDs represents a community service and a way of decreasing morbidity and mortality in our patient population. Many of our patients, especially the disadvantaged and

indigent, use our facilities as their only source of medical care. We should wholeheartedly embrace the concept of ED influenza immunization in the same way we routinely provide tetanus prophylaxis.

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### References

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2. Health Canada. Influenza [information sheet]. Nov 2001. Available: [www.hc-sc.gc.ca/pphb-dgspsp/publicat/info/infflu\\_e.html](http://www.hc-sc.gc.ca/pphb-dgspsp/publicat/info/infflu_e.html)
3. Grafstein E, Daly P, Buxton J, Thorne A. Effect of a pneumococcal vaccine program on emergency department presentations [abstract]. *CJEM* 2001;3(2): 143.
4. Prevention and control of influenza: recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR Recomm Rep* 1999; 48(RR-4):1-28.

### [One of the authors responds:]

I thank Dr. Grafstein for his interest in our research regarding the impact of the Ontario universal immunization program on ED volume,<sup>1</sup> and I appreciate the opportunity to respond to some of the issues he has highlighted.

I agree with Dr. Grafstein that the issue of immunization coverage is critical when evaluating the success of an immunization program. The lack of any systematic method of collection of this data by the Ontario government prior to implementing a now \$81-million program is something the Ontario taxpayers should be concerned about.

However, even on the assumption that 100% of Ontarians were immunized and all influenza eliminated in