

have been shown to be related to influenza outbreaks.⁵ The authors looked at only some of these conditions, and only for all age groups combined, and again with limited power. Other studies have found significant associations between influenza outbreaks and ED overcrowding,⁶ as well with increased ED utilization by the elderly.⁷

For all of these reasons, conclusions regarding the absence of benefit of influenza vaccination campaigns on ED utilization are likely premature and possibly incorrect. A full understanding of the impact of influenza outbreaks on EDs is still lacking.

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department overcrowding [abstract]. *Acad Emerg Med* 2002;9(5):515.

[One of the authors responds:]

I appreciate the comments by Drs Schull and Mamdani on our study of influenza and ED volume.¹ I agree with their conclusions that our study needs to be repeated with a larger number of hospitals and for a longer time period, and hope that this will be accomplished in the near future. I also feel that a full understanding of the impact influenza on ED volume is lacking. However, I feel that this research should have been undertaken prior to the launching of the universal influenza immunization campaign.

I stress “universal immunization,” because, as Drs. Schull and Mamdani point out, “the majority of ED patients are young, low-acuity patients, often with minor injuries, who are unlikely to contribute substantially to overcrowding. Hence, the increasing overcrowding likely relates ... to an older and sicker ED patient population, more of whom may require admission than in the past.”^{2,3} However, the older, high-risk patients were not the primary target of the universal immunization campaign, and they have been provided free influenza vaccinations since the 1980s.¹ If one concludes that the high-risk population is responsible for ED overcrowding then concentrating efforts on increasing their immunization compliance may be a more effective strategy. None of the above information changes the fact that ED volume is highest in the summer, when there are few influenza cases.^{1,3}

Finally, Drs. Schull and Mamdani state that “other studies have found significant associations between influenza outbreaks and ED overcrowding,⁴...”. Unfortunately, the outcome of ambulance diversion as a measure of ED overcrowding is not universal nor uniform, as many hospitals are simply not

able to divert ambulances. Furthermore, ambulance diversion is an administrative decision and can be based on several criteria such as beds available outside the ED and ED staffing, and these may vary at different hospitals. Using ambulance diversion as the outcome in Kingston, for example, would result in no relationship between ED volume and diversion, because Kingston is not able to divert ambulances.

Once again, I thank Drs. Schull and Mamdani for their interest in this research and look forward to more studies on the impact of influenza immunization on ED volume.

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In-flight emergencies

To the Editor:

Drummond and Drummond's excellent review of medical emergencies in flight correctly highlights British Airways (BA) leadership in on-board medical equipment.¹ I must add to this BA's superb staff training and organization. I have been involved in 3 episodes of