

## “Are you vaccinating your children?”

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As we write this commentary, the country has just entered the second week of mass vaccination against pH1N1. Cynics would suggest that the lowercase “p” designates “pandemonium” rather than “pandemic.” The merits of vaccination are being debated at nursing stations, at hockey arenas and at an emergency session of federal parliament. The unintended consequence of this public health measure is that vaccine skepticism has reached a feverish pitch.

Such a response is not altogether surprising, especially given history’s ability to repeat itself. Many consider that vaccine skepticism entered the mainstream following the failed mass vaccination campaign of 1976 against another swine flu outbreak. Mistrust of government edicts later fed into the junk science linking vaccination to autism.<sup>1-3</sup> When irrational fears are inoculated into a culture medium of Internet-amplified misinformation, supplemented by misplaced concerns regarding the toxicity of thimerosal, and nourished with opinions of so-called experts profiting from private chelation clinics and other self-interests, objections to universal childhood vaccination “go viral.”<sup>4,5</sup> What will be the ultimate consequences of this year’s influenza vaccination program?

In this issue of *CJEM*, Grunau and Olson<sup>6</sup> report a case of tetanus in an unvaccinated 7-year-old child in British Columbia. This case report serves as a poignant reminder of the perils of complacency to the public health success stories with other diseases now rare. The annual incidence of tetanus has fallen to under 0.1 cases per million in the developed world because of widespread vaccination. Recent editions of Fleisher and colleague’s *Textbook of Pediatric Emergency Medicine*<sup>7</sup> mention the disease only in passing. Few of us ever expect to

make this diagnosis, despite robotically asking about tetanus status and prescribing tetanus toxoid daily. When successful vaccination programs reduce the incidence of a disease such as tetanus to such low levels, some naturally question the need for vaccination. Yet *Clostridium tetani* remains ubiquitous in the environment. And a substantial proportion of Canadians of all ages have nonprotective serum tetanus antitoxin levels.<sup>8</sup> Globally, without comprehensive vaccination, tetanus is estimated to kill hundreds of thousands annually.<sup>9</sup>

So, as we analyze the current pH1N1 campaign, we must remember our history lessons. We must also strive to provide rational scientific opinion, evidence and common sense, the main safeguards against panic and misinformation. Emergency physicians enjoy a golden opportunity to reinforce public health interventions: smoking cessation, motorcycle helmets, car seats for infants and responsible use of alcohol, for example. Scientific uncertainty and difference of opinion can result in conflict, but broad societal values may trump individual choice, especially when the parent is choosing on behalf of a minor. Driving with an unrestrained child in the front seat because the parent believes that exposing the child to sublethal skull impacts will “boost” their child’s skull thickness and thus resistance to other trauma is absurd. Why are we less likely to voice our objection to theories about vaccination weakening the immune system or poisoning the nervous system?

Timely and widespread vaccination against influenza is the single most effective means to reduce the impact of influenza on ourselves and the community. Only between one-quarter and one-half of health care workers in hospitals and long-term care facilities get their seasonal influenza vaccination, despite demonstrated

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*CJEM* 2010;12(1):14-5

benefits on their patients' mortality.<sup>10,11</sup> As the debate rages on regarding pH1N1 vaccination, we must remember that some will extrapolate this skepticism to other diseases, and to other vaccines. So how often will this case report of preventable tetanus repeat itself?

Prevention is almost always better than any treatment. We must voice our consistent and clear support for those preventive health interventions with demonstrated and important benefits. In the wake of the pandemic of 2009, we must not forget the benefits of vaccination for individuals and for the population. Seeing a febrile and undervaccinated child is a teachable moment, and an opportunity to dispel myths surrounding vaccination. This is notwithstanding the other lessons pH1N1 taught us this past fall.

**Competing interests:** None declared.

**Keywords:** tetanus, human influenza, vaccination, mass immunization

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