

Should Flu Shots be Made Mandatory for Healthcare Workers?

November 21, 2012 :: Dan Johnson
Moderated by Knud Petersen

dan.johnson@uleth.ca

Recently, British Columbia became the first province in Canada to implement a policy requiring health-care employees working at publicly funded facilities, including long-term care homes, to get a flu shot or wear a mask to protect patients during the flu season. This policy has been applied elsewhere, at some other major health centres. The B.C. Nurses' Union has taken issue with that policy and is fighting to keep the vaccinations voluntary.

Arguments against flu shots include objections to the government forcing anyone to be vaccinated, as a matter of principle. Some of those against mandatory flu shot vaccination state that they do not believe the vaccination is effective in preventing influenza, and that serious reactions, although rare, may occur. Some do not trust the safety of the ingredients.

Arguments for flu shots include patient protection through reduction of transmissions to those who are not able to be vaccinated, and through herd immunity, in which the vaccination of a sufficient proportion of the population can protect those who are vulnerable (including infants and the elderly that potentially could die should they come in contact with the virus). Studies of efficacy and degree of effectiveness for different age groups exist, and indicate moderate but useful value of vaccines.

Starting the
discussion:

Speaker: Dr. Dan Johnson

...not a health care professional or medical researcher

Dan is interested in data, evidence, and science-based policy. He has agreed to start off the discussion. He holds a Ph.D. from the University of British Columbia (Institute of Resource Ecology), and BSc in Biology from the University of Saskatchewan. He is a Professor of Environmental Science at the University of Lethbridge, where he teaches biogeography, evolution, environmental science, data analysis and experimental design. He conducts research on pathology (he notes "not human pathology") and other topics. Dan is a member of the Alberta Environmental

THE VANCOUVER SUN

Hospitals should make flu shots mandatory for health-care workers, journal says

BY HELEN BRANSWELL, THE CANADIAN PRESS OCTOBER 30, 2012

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TORONTO - The Canadian Medical Association Journal has added its voice to calls for mandatory flu shots for health-care workers.

STORY

PHOTOS (1)



Ron Davis, a Mississippi Department of Health employee, left, is given an intradermal shot of flu vaccine Wednesday, Oct. 17, 2012 in Jackson, Miss. The Canadian Medical Association Journal is adding its voice to calls for mandatory flu shots for health-care workers. The journal says hospital workers ought to be vaccinated to protect frail elderly patients whose immune systems are so weakened they don't get much protection from a flu shot themselves. THE CANADIAN PRESS/AP-Rogelio V. Solis

THE VANCOUVER SUN

Flu vaccine protects the vulnerable

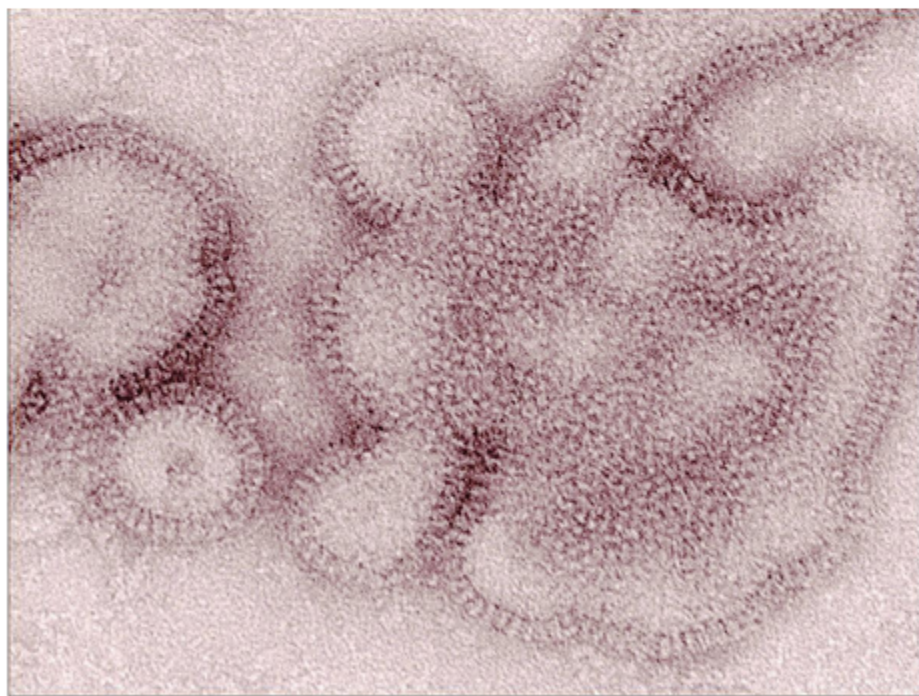
When health care workers get the shot it makes for better outcomes for their patients and long-term care residents

VANCOUVER SUN NOVEMBER 19, 2012

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STORY

PHOTOS (1)



Influenza will harm fewer patients if health care workers are vaccinated, letter writers argue.

Photograph by: Centers For Disease Control And Prevention, The Canadian Press ,

Dr. Paul van Buynder,

Chief Medical Health Officer, Fraser Health Authority

Dr. Patty Daly CMHO, Vancouver Coastal Health
Authority

Dr. Ronald Chapman CMHO, Northern Health Authority

Dr. Andrew Larder CMHO, Interior Health Authority

Dr. Richard Stanwick CMHO,

Vancouver Island Health Authority

Dr. Bonnie Henry Head of Epidemiology Services, BCCDC

Dr. Eric Young Deputy Provincial Health Officer

Dr. Perry Kendall Provincial Health Officer



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Intervention Review

Influenza vaccination for healthcare workers who work with the elderly

Roger E Thomas^{1,*}, Tom Jefferson², Toby J
Lasserson³

[The Cochrane Library](#)

Editorial Group: [Cochrane Acute
Respiratory Infections Group](#)

Published Online: 17 FEB 2010

Assessed as up-to-date: 27 SEP 2009

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Additional Information

The controversial editorial...

EDITORIAL

“Health care workers must protect patients from influenza by taking the annual vaccine”

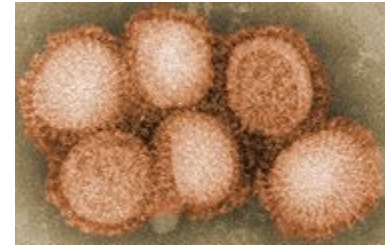
By Ken Flegel MDCM MSc, Editor, Canadian Medical Association Journal,
www.cmaj.ca

- 10 to 20% of the population becomes infected
- influenza infection rates are highest in children, but rates of serious illness and death are highest in older persons (> 65 years) and persons with underlying medical conditions.
- Complications such as secondary bacterial pneumonia and worsening of pre-existing medical conditions can cause serious illness.
- up to 20,000 hospitalizations related to influenza; 4,000 Canadians, mostly seniors, may die from pneumonia related to influenza; plus from serious complications of influenza.

Public Health Agency of Canada

- 2012-2013 , 6 authorized vaccines available to some extent, including:
- Fluviral[®] (GlaxoSmithKline)
- Vaxigrip[®] (Sanofi Pasteur)
- Intanza[®] (Sanofi Pasteur) 15 µg formulation
- FluMist[®] (AstraZeneca) (live attenuated vaccine)
- Agriflu[®] (Novartis)
- Fluvad[®] (Novartis).

History of extensive influenza pandemics

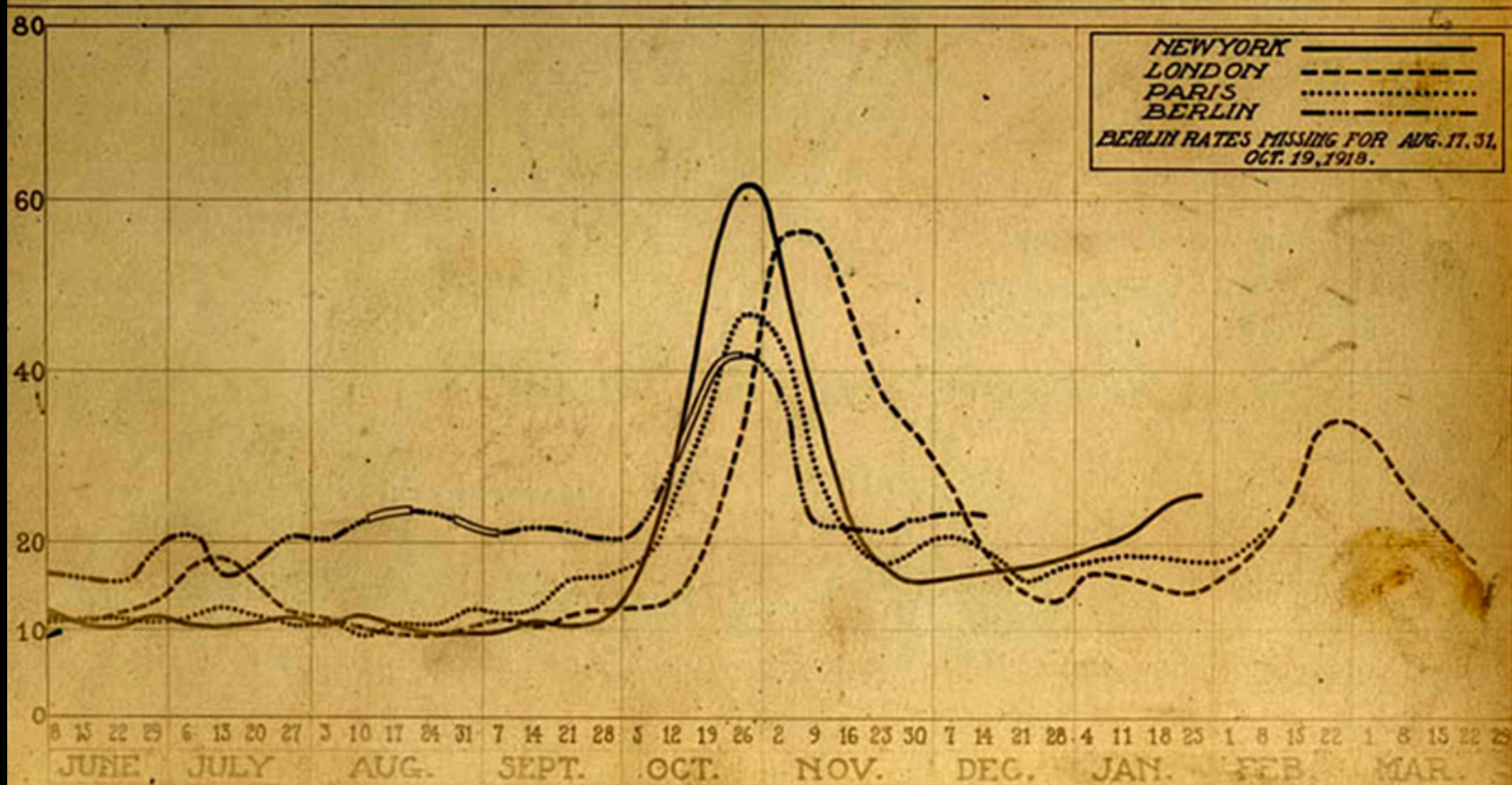


- Extensive pandemics during the Middle Ages.
- Medieval Latin: *influentia*, caused by the influence of the stars and heavenly bodies
- 1918-19. Spanish flu. May have originated in birds and pigs kept at a hospital camp in France. Killed 20 million +, mainly young (not so much the babies or elderly)
- 1957-58. Asian flu. 70,000+
- 1968-69. Hong Kong flu. 35,000
- 1970s - 90s. 110,000 hospitalized in US per year, 20,000 in Canada. 8,000 deaths/year (Canada). 2009 swine flu variants, lower than expected mortalities. Human avian influenza H5N1 separate concern.

INFLUENZA PANDEMIC

MORTALITY IN AMERICA AND EUROPE DURING 1918 AND 1919

DEATHS FROM ALL CAUSES EACH WEEK
EXPRESSED AS AN ANNUAL RATE PER 1000



UNITED STATES ARMY

IN MEMORY OF

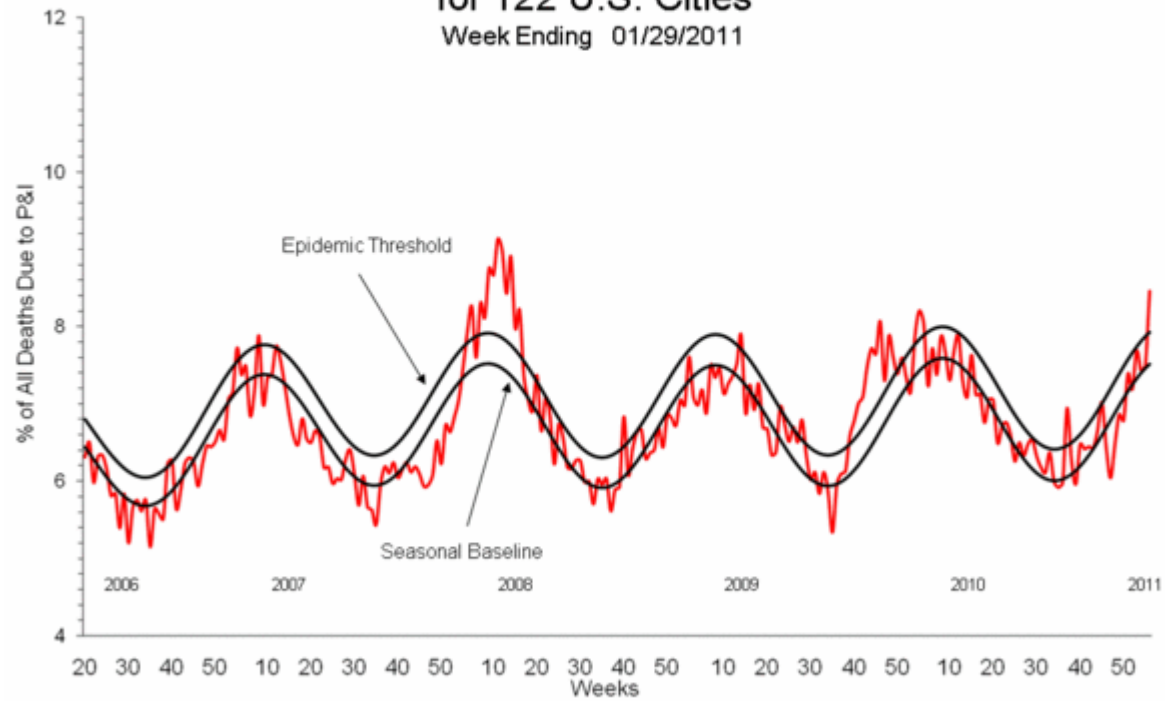
Private Iver Lindegard Nelson, Co. E. 513th Supply Train A.C.
who died December 29th. 1918.

He bravely laid down his life for the cause of his country.
His name will ever remain fresh in the hearts of his friends
and comrades. The record of his honorable service will be
preserved in the archives of the American Expeditionary Forces.

John J. Pershing
Commander-in-chief

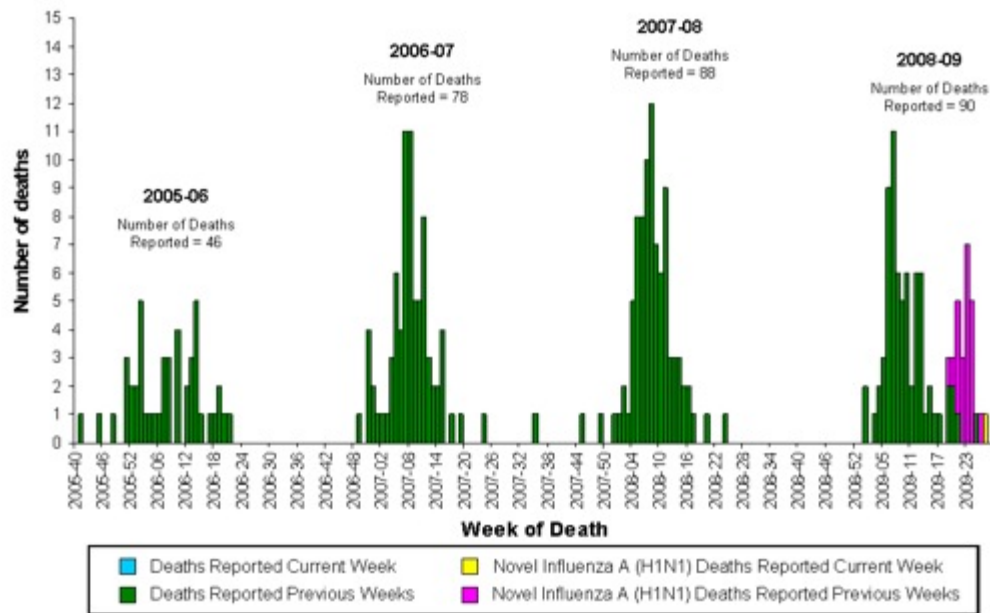
Pneumonia and Influenza Mortality for 122 U.S. Cities

Week Ending 01/29/2011

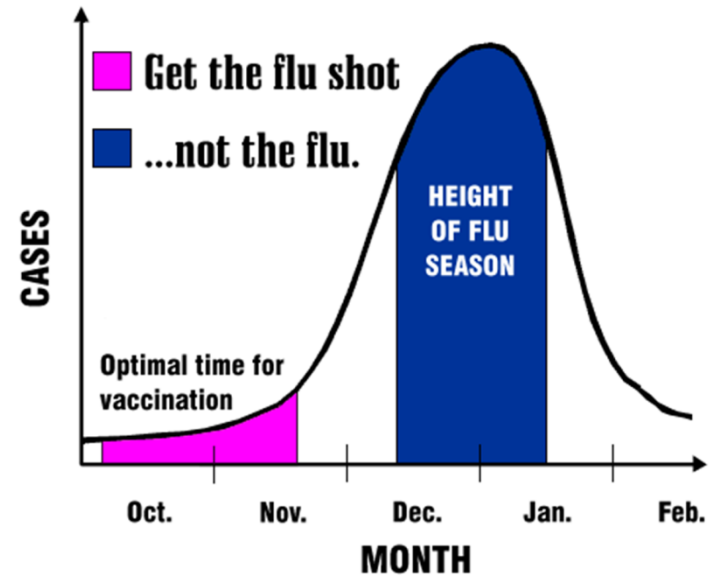


seasonality

Number of Influenza-Associated Pediatric Deaths by Week of Death: 2005-06 season to present



About one-third of pediatric deaths in 2009 were swine flu.

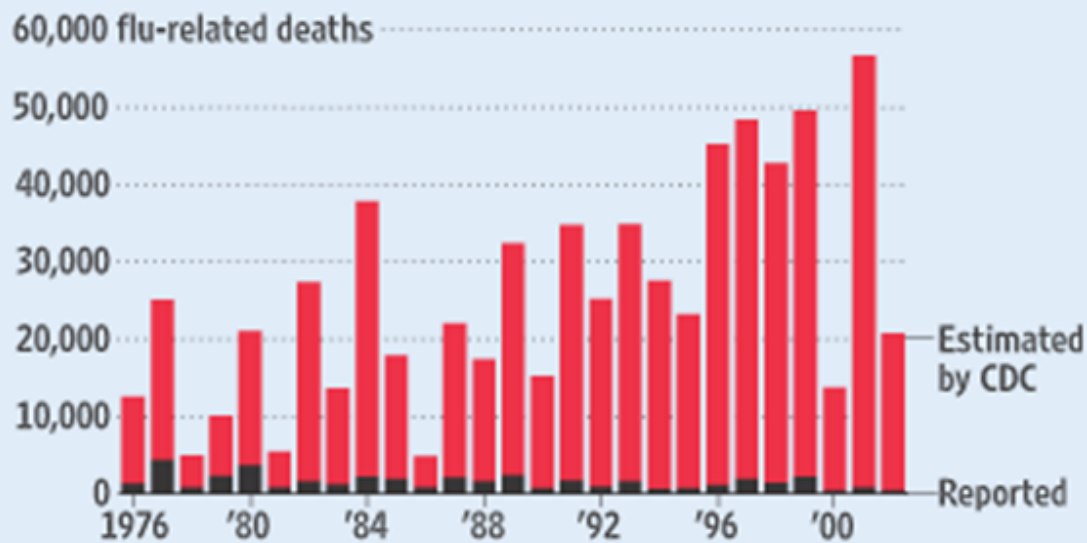


CDC

seasonality

The Silent Killer

The CDC estimates that flu is involved in about 15 times more deaths each year than is recorded on death certificates.



Note: Yearly death totals are for flu seasons extending into the early part of the following year.
Source: Peter Doshi, Centers for Disease Control and Prevention

Current flu and vaccine characteristics

Respiratory infection is caused by influenza A and B viruses. The seasonal trivalent vaccine for 2012-2013, as per recommendations by the World Health Organization for the northern hemisphere, contains:

- **A/California/7/2009 (H1N1)**pdm09-like virus;
- **A/Victoria/361/2011 (H3N2)**-like virus; and
- B/Wisconsin/1/2010-like virus (B Yamagata lineage).

Public Health Agency of Canada

“Immunization programs should focus on:

- those at high risk of influenza-related complications - adults and children with underlying health conditions
- those capable of spreading influenza to individuals at high risk of complications - health care providers ... and
- those who provide essential community services.”

“There's insufficient evidence to force vaccinations or masks”

BY DEBRA MCPHERSON President, B.C. Nurses' Union
SPECIAL TO THE VANCOUVER SUN, NOV16, 2012

It's time for B.C. health employers to withdraw their coercive policy on flu shots for health care workers, in light of scientific reviews questioning the credibility of the very studies they're using to justify the policy.

The latest was the devastating letter in The Vancouver Sun Nov. 14 from a representative of the U.K.-based Cochrane Collaboration. He effectively shredded the credibility of the rationales touted by provincial health officer Perry Kendall and others to force health care workers to get the shot or wear a mask throughout flu season.

“There's insufficient evidence to force vaccinations or masks”

BY DEBRA MCPHERSON President, B.C. Nurses' Union
SPECIAL TO THE Vancouver SUN, NOV16, 2012

...

Dr. Tom Jefferson ended, "It is not my place to judge the policies underway in British Columbia, but coercion and forcing public ridicule on human beings (for example by forcing them to wear distinctive badges or clothing) is usually the practice of tyrants."

An earlier Cochrane paper said, "there is no credible evidence that vaccination of healthy people under the age of 60, who are (health care workers) caring for the elderly, affects influenza complications in those cared for."

The controversial editorial...



“Health care workers must protect patients from influenza by taking the annual vaccine”

By Ken Flegel MDCM MSc, Editor, Canadian Medical Association Journal,
www.cmaj.ca

EDITORIAL

Let's look at the main points of this strong call for HCW to take the seasonal flu vaccine, and compare to replies and data from studies.

The controversial editorial...

“Health care workers must protect patients from influenza by taking the annual vaccine”

By Ken Flegel MDCM MSc, Editor, Canadian Medical Association Journal,
www.cmaj.ca

EDITORIAL

Canada, annual rate of influenza infection: 5%–10%

20,000 hospital admissions result

4,000 and 8,000 deaths are attributed to influenza

“Health care workers must protect patients from influenza by taking the annual vaccine”

By Ken Flegel MDCM MSc, Editor, Canadian Medical Association Journal,
www.cmaj.ca

EDITORIAL

55%–65% of physicians fail to take the annual seasonal influenza vaccine.

“...they are exposing their patients to the risk of death from influenza.”

“Health care workers must protect patients from influenza by taking the annual vaccine”

By Ken Flegel MDCM MSc, Editor, Canadian Medical Association Journal,
www.cmaj.ca

EDITORIAL

20% of HCW get influenza [no reference given]

28%–59% of young healthy adults who get it have asymptomatic or subclinical infections.

Some of them may shed virus up to a day before symptoms appear.

“Health care workers must protect patients from influenza by taking the annual vaccine”

By Ken Flegel MDCM MSc, Editor, Canadian Medical Association Journal,
www.cmaj.ca

EDITORIAL

“The benefits of vaccination in health care workers are clear. Efficacy rates are about 86% when the circulating strain and vaccine strain are well matched.”

[Actually, around flu vaccine effectiveness is about 60% overall. This seems to be a fairer estimate, based on the data.]

“Health care workers must protect patients from influenza by taking the annual vaccine”

By Ken Flegel MDCM MSc, Editor, Canadian Medical Association Journal,
www.cmaj.ca

EDITORIAL

4 trials showed a 5%–20% reduction in overall seasonal mortality in residents of chronic care institutions where staff vaccination rates were 51%–70% in intervention groups versus 3.5%–32% in control groups.

“Health care workers must protect patients from influenza by taking the annual vaccine”

By Ken Flegel MDCM MSc, Editor, Canadian Medical Association Journal,
www.cmaj.ca

EDITORIAL

Compulsory vaccination may be regarded as ethically questionable because it violates a person's autonomy.

But in the case of influenza vaccination, the autonomy of health care workers comes into conflict with the best interests of the patient.
(example, HIV)

“Health care workers must protect patients from influenza by taking the annual vaccine”

By Ken Flegel MDCM MSc, Editor, Canadian Medical Association Journal,
www.cmaj.ca

EDITORIAL

“Barriers to taking the annual vaccine include

- fear of getting sick or getting the flu from it,
- belief that the person “does not get the flu”
- belief that the vaccine will not work,
- belief that the vaccine has not been proven to protect patients. All of these reasons appear now to be untenable. “

“Health care workers must protect patients from influenza by taking the annual vaccine”

By Ken Flegel MDCM MSc, Editor, Canadian Medical Association Journal,
www.cmaj.ca

EDITORIAL

The inactivated virus that is used cannot induce influenza. Adverse effects may consist of local reaction, low-grade fever and runny nose. Serious complications (Guillain–Barré syndrome) occur at a rate close to the background annual rate of 1 in 100,000, and those strains are generally avoided in creation of the vaccine. (this last claim is disputed in CMAJ submitted replies)

Guillain–Barré syndrome

- the most common cause of acute non-trauma-related paralysis
- 1976-77 swine flu vaccine. Data from the USA: 35,000,000 doses resulted in 354 cases of GBS. 28 cases resulted in death
- 1+ per 100,000
- recent vaccines have much lower risk

“Health care workers must protect patients from influenza by taking the annual vaccine”

By Ken Flegel MDCM MSc, Editor, Canadian Medical Association Journal,
www.cmaj.ca

EDITORIAL

- To justify compulsory vaccination, there must be
- an outbreak of serious illness;
 - immunity levels must be low;
 - the vaccine must be effective, safe and available;
- ...

These conditions appear to be met for annual seasonal influenza.

“Health care workers must protect patients from influenza by taking the annual vaccine”

By Ken Flegel MDCM MSc, Editor, Canadian Medical Association Journal,
www.cmaj.ca

EDITORIAL

“Compulsory programs for health care workers have resulted in participation rates above 95% in the leadership example of many Philadelphia teaching hospitals, as well as in a host of public and private American health care.”

Paul A. Offit- pediatrician specializing in infectious diseases, immunology, virology.
Professor of Pediatrics, Univ of Pennsylvania.

Co-inventor of a rotavirus vaccine that has saved thousands of lives.

Maurice R. Hilleman Professor of Vaccinology.
Chief of the Division of Infectious Diseases.
Director of the Vaccine Education Center at The Children's Hospital of Philadelphia.

Member of the Centers for Disease Control (CDC) Advisory Committee on Immunization Practices.

Founding Board Member of the Autism Science Foundation.

130 scientific articles published, plus books

DEADLY CHOICES

HOW THE
ANTI-VACCINE
MOVEMENT
THREATENS
US ALL

PAUL A. OFFIT, M.D.

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**DEADLY
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HOW THE
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PAUL A. OFFIT, M.D.

In 2009, 8 hospitals in the USA mandated flu vaccine for employees. Some allowed a surgical mask instead. At Children's Hospital of Philadelphia, refusal resulted in 2 weeks unpaid leave. If they still refused, they were fired. Health care provider immunization rates went from 35% in 2000 to 99.9% in 2010.

(Some patients at CHP are known to be vulnerable.)

“Health care workers must protect patients from influenza by taking the annual vaccine”

By Ken Flegel MDCM MSc, Editor, Canadian Medical Association Journal,
www.cmaj.ca

EDITORIAL

Public Health Ontario recently changed its guideline to recommend a mandatory program. The participation rate needs to be above 90% to prevent importation and to interrupt transmission within a hospital.

Reactions and replies

Canadian Medical Association Journal; Published November 12, 2012

Gaston De Serres MD PhD, Laval University and Institut national de santé publique du Québec

Danuta M. Skowronski MD, FRCPC, School of Population and Public Health, University of British Columbia

David M. Patrick MD, FRCPC, School of Population and Public Health, University of British Columbia

... there is ... a duty to ensure evidence that is cited is relevant, valid, up-to-date, and without overstatement, particularly in the absence of good scientific estimates of patient impact.

Reactions and replies

Canadian Medical Association Journal; Published November 12, 2012

**Gaston De Serres MD PhD, Danuta M.
Skowronski MD, David M. Patrick MD**

We support influenza immunization for
health care workers (HCW) but ...

Reactions and replies

Canadian Medical Association Journal; Published November 12, 2012

...details cited in a recent CMAJ editorial as the scientific basis for making this compulsory are questionable.

The efficacy of influenza vaccine when well matched to circulating strains is unfortunately lower than 86% [this is true]. Updated meta-analysis instead shows vaccine efficacy of 59% in healthy young adults with little correlation to vaccine match.

Reactions and replies

Canadian Medical Association Journal; Published November 12, 2012

**Gaston De Serres MD PhD, Danuta M.
Skowronski MD, David M. Patrick MD**

... The evidence that pre- symptomatic or asymptomatic infections contribute substantially to influenza transmission remains scant.

Reactions and replies

Canadian Medical Association Journal; Published November 12, 2012

**Gaston De Serres MD PhD, Danuta M.
Skowronski MD, David M. Patrick MD**

... Validity concerns have been raised with respect to studies showing reduction in patient outcomes through HCW immunization. These studies are limited to long term care and benefits are unlikely to be higher in acute care (as suggested in the editorial).

Reactions and replies

Canadian Medical Association Journal; Published November 12, 2012

**Gaston De Serres MD PhD, Danuta M.
Skowronski MD, David M. Patrick MD**

... Patient and visitor turnover is greater in acute care so that the proportionate HCW contribution to overall influenza transmission (HCW-attributable/preventable fraction) and likelihood of herd immunity in that setting would therefore be less, not more.

Reactions and replies

Canadian Medical Association Journal; Published November 12, 2012

Replies pointed out the need for improved vaccines.

Prof Peter Collignon, Infectious Diseases
Physician and Microbiologist Professor, Australian
National University, Woden, Australia.

Prof CB Del Mar, Coordinating Editor, Cochrane
Acute Respiratory Infections Group Faculty of
Health Sciences and Medicine, Bond University
Gold Coast, Queensland, Australia.

Reactions and replies

Canadian Medical Association Journal; Published November 12, 2012

Replies pointed out the need for improved vaccines.

Prof Peter Collignon, Prof CB Del Mar:

“These are not good vaccines. To enforce them annually on all HCW's seems perverse. We need new influenza vaccines and with: long lasting immunity; against most influenza strains; consistently high efficacy rates (>90%); relative stable formulations; and very low side-effect profiles.”

[how good it needs to be, relative to what, is not clear]

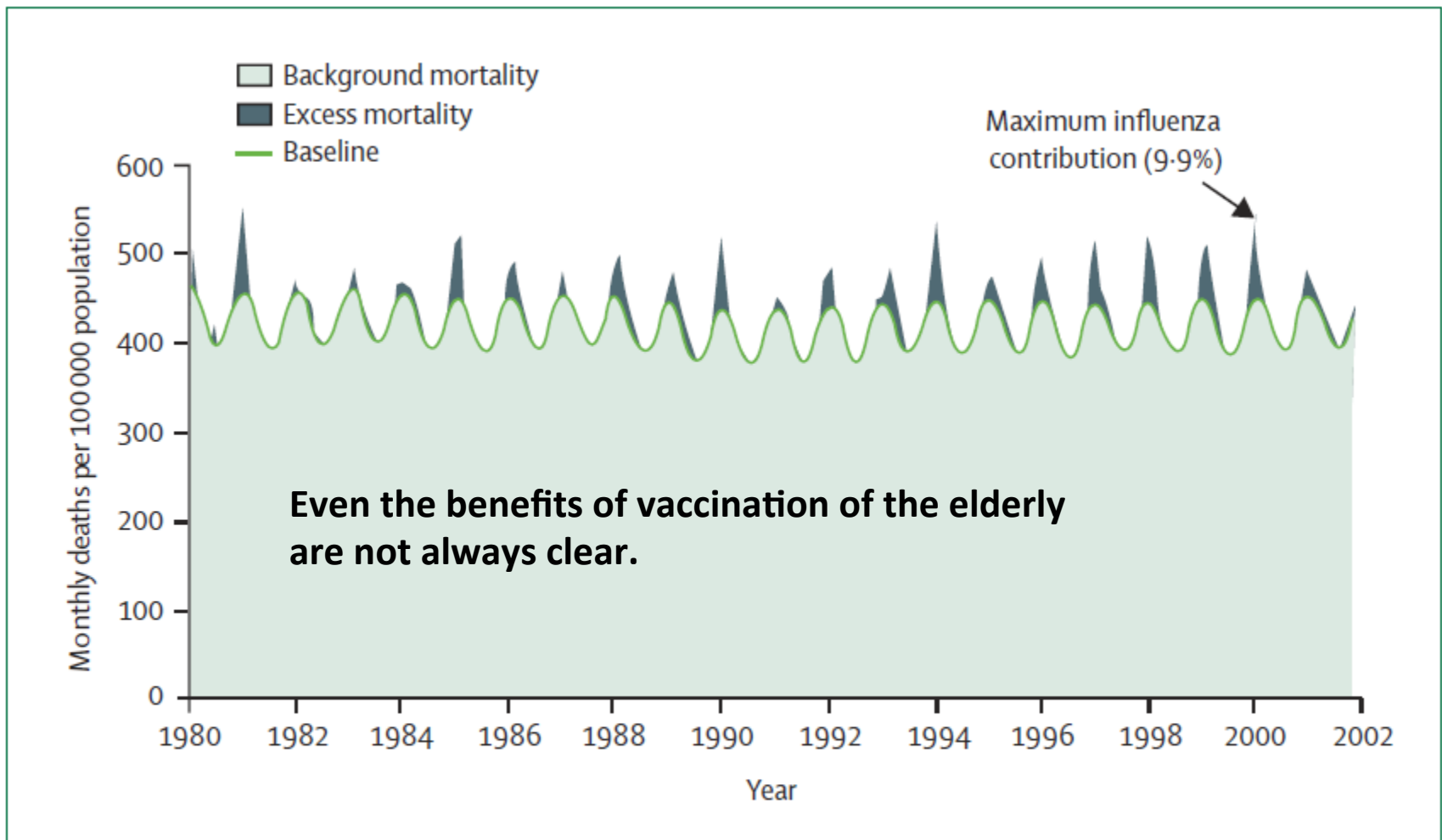


Figure 1: Monthly national all-cause mortality rates in all US elderly people aged 65 years or more, 1980–2001
The total winter-seasonal fraction of mortality attributed to influenza in national excess mortality studies averaged 5%, and was always less than 10%. Based on data from Simonsen et al.⁶

Mortality benefits of influenza vaccination in elderly people: an ongoing controversy
Lone Simonsen et al.
***Lancet Infect Dis* 2007. 7:658–66**

Direct benefits of vaccination of the elderly are not clear.

“the unexpected failure to show a reduction in mortality over time in at least two countries raises questions about the mortality benefits to vaccinated elderly people.”

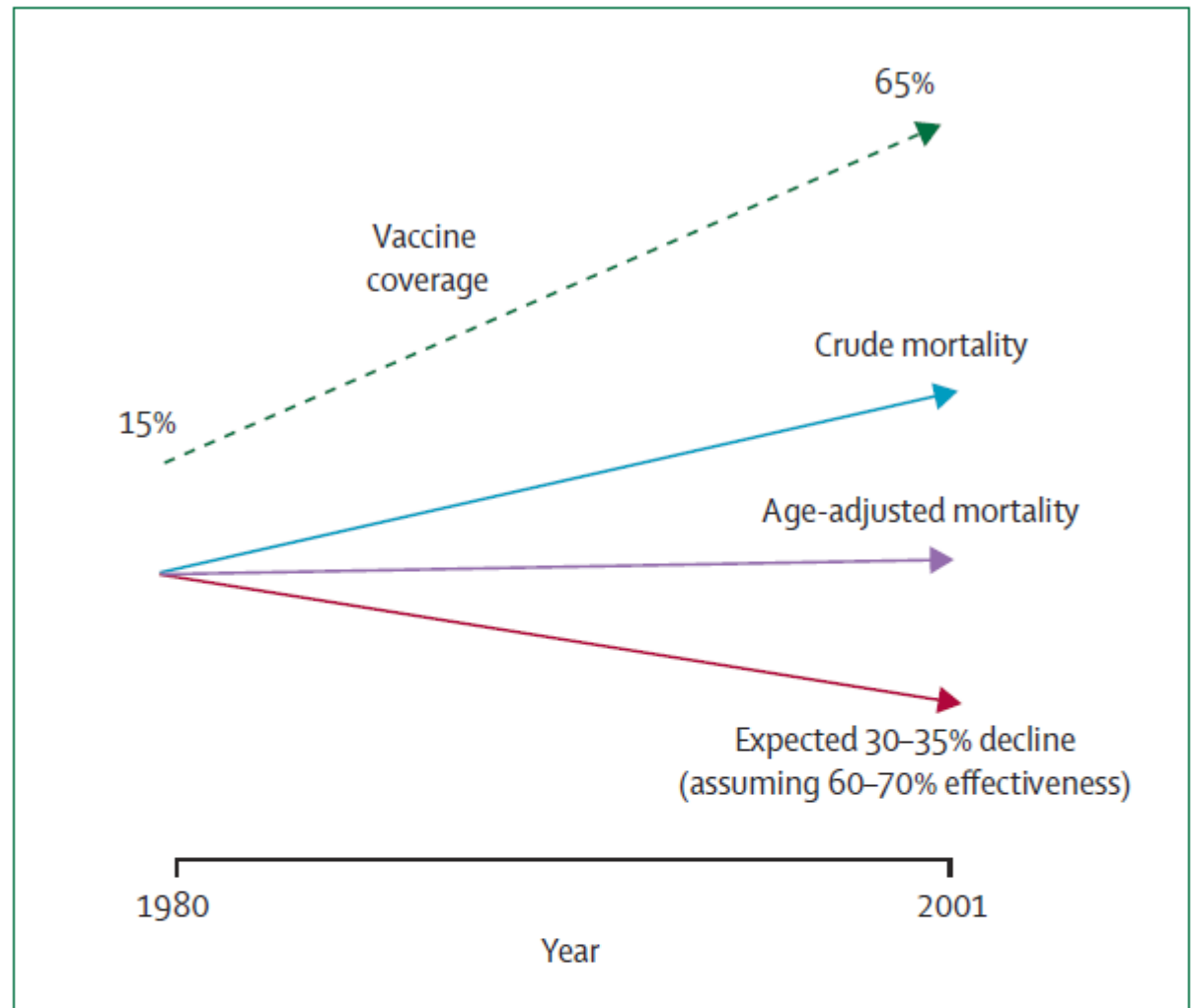


Figure 2: Crude and age-adjusted trends in vaccination and national excess pneumonia and influenza mortality in US elderly people aged 65 years or more

Data are for 13 influenza A (H3N2)-dominated seasons as vaccine coverage rose from about 15% to about 65% (dotted line). The point estimates of excess mortality trends (crude and age-adjusted, solid lines) are shown, as presented in

Mortality benefits of influenza vaccination in elderly people: an ongoing controversy
Lone Simonsen et al. *Lancet Infect Dis* 2007. 7:658–66

...since the 1968 pandemic, influenza has accounted for about 5% of approximately 600 000 annual winter deaths among the US elderly population of 31 million, ... an incidence of one influenza-related death per 1000 elderly people every winter.

...Age-specific risk of influenza-related (excess) mortality increases exponentially after the age of 65 years.

...people aged at least 80 years in the USA are at 11 times higher risk than those aged 65–69 years.

...between 1990 and 2001, 76% of influenza-related deaths occurred among people aged 70 years or older

J Infect Dis. 2012 Jun 15;205(12):1858-68.

Estimates of influenza vaccine effectiveness for 2007-2008 from Canada's sentinel surveillance system: cross-protection against major and minor variants.

Janjua NZ, Skowronski DM, De Serres G, Dickinson J, Crowcroft NS, Taylor M, Winter AL, Hottes TS, Fonseca K, Charest H, Drews SJ, Sabaiduc S, Bastien N, Li Y, Gardy JL, Petric M. British Columbia Centre for Disease Control. <http://www.ncbi.nlm.nih.gov/pubmed/22492921>

OBJECTIVES: To estimate influenza vaccine effectiveness (VE) for the 2007-2008 season and assess the sentinel surveillance system in Canada for monitoring virus evolution and VE.

METHODS:

Nasal/nasopharyngeal swabs and epidemiologic details were collected from patients presenting to a sentinel physician within 7 days of influenza-like illness onset. **Cases tested positive for influenza A/B virus by real-time polymerase chain reaction; controls tested negative.**

J Infect Dis. 2012 Jun 15;205(12):1858-68.

Estimates of influenza vaccine effectiveness for 2007-2008 from Canada's sentinel surveillance system: cross-protection against major and minor variants.

Janjua NZ et al.

RESULTS: Of 1425 participants, 21% were vaccinated. Influenza virus was detected in 689 (48%), of which isolates from 663 were typed/subtyped: 189 (29%) were A/H1, 210 (32%) were A/H3, and 264 (40%) were B. Of A/H1N1 isolates, 6% showed minor HI antigenic mismatch to vaccine, with greater variation based on genetic identity. All A/H3N2 isolates showed moderate antigenic mismatch, and 98% of influenza B virus isolates showed major lineage-level mismatch to vaccine.

Adjusted VE for A/H1N1, A/H3N2, and B components was 69% (95% confidence interval [CI], 44%-83%), **57%** (95% CI, 32%-73%), and **55%** (95% CI, 32%-70%), respectively, with an **overall VE of 60%** (95% CI, 45%-71%).

Lancet Infect Dis. 2012 Jan;12(1):36-44.

Efficacy and effectiveness of influenza vaccines: a systematic review and meta-analysis.

Osterholm MT, Kelley NS, Sommer A, Belongia EA.

Center for Infectious Disease Research and Policy, University of Minnesota, MN 55455, USA.

Lancet Infect Dis. 2012 Sep;12(9):655.

We searched Medline for randomised controlled trials assessing a relative reduction in influenza risk of all circulating influenza viruses during individual seasons after vaccination (efficacy) and observational studies meeting inclusion criteria (effectiveness). ... estimated efficacy for trivalent inactivated vaccine (TIV) and live attenuated influenza vaccine (LAIV)...

Lancet Infect Dis. 2012 Jan;12(1):36-44. doi: 10.1016/S1473-3099(11)70295-X. Epub 2011 Oct 25.

Efficacy and effectiveness of influenza vaccines: a systematic review and meta-analysis.

Osterholm MT, Kelley NS, Sommer A, Belongia EA.

...identified 31 eligible studies (17 randomised controlled trials and 14 observational studies). Vaccine effectiveness was variable for seasonal influenza: six (35%) of 17 analyses in nine studies showed significant protection against medically attended influenza in the outpatient or inpatient setting. Median monovalent pandemic H1N1 vaccine effectiveness in five observational studies was 69% (range 60-93).

Lancet Infect Dis. 2012 Jan;12(1):36-44. doi: 10.1016/S1473-3099(11)70295-X. Epub 2011 Oct 25.

Efficacy and effectiveness of influenza vaccines: a systematic review and meta-analysis.

Osterholm MT, Kelley NS, Sommer A, Belongia EA.

INTERPRETATION:

Influenza vaccines can provide moderate protection against virologically confirmed influenza, but such protection is greatly reduced or absent in some seasons. Evidence for protection in adults aged 65 years or older is lacking. LAIVs consistently show highest efficacy in young children (aged 6 months to 7 years). New vaccines with improved clinical efficacy and effectiveness are needed to further reduce influenza-related morbidity and mortality.



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Intervention Review

Influenza vaccination for healthcare workers who work with the elderly

Roger E Thomas^{1,*}, Tom Jefferson², Toby J
Lasserson³

[The Cochrane Library](#)

Editorial Group: [Cochrane Acute
Respiratory Infections Group](#)

Published Online: 17 FEB 2010

Assessed as up-to-date: 27 SEP 2009

DOI: 10.1002/14651858.CD005187.pub3

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Additional Information

Thomas RE, Jefferson T, Lasserson TJ. Influenza vaccination for healthcare workers who work with the elderly. Cochrane Database Syst Rev 2010(2): Feb 17 2010 CD005187.

No effect was shown for specific outcomes: laboratory-proven influenza, pneumonia and death from pneumonia. An effect was shown for the non-specific outcomes of ILI, GP consultations for ILI and all-cause mortality in individuals ≥ 60 . These non-specific outcomes are difficult to interpret because ILI includes many pathogens, and winter influenza contributes $< 10\%$ to all-cause mortality in individuals ≥ 60 .

It would be a great shame if a lack of evidence that meets the Cochrane Collaboration's narrow evidentiary standard were to be interpreted as evidence of lack of effectiveness of influenza vaccination. In effect, the perfect would then have become the enemy of the good.

Dr. Paul van Buynder, Chief Medical Health Officer, Fraser Health Authority

Dr. Patty Daly CMHO, Vancouver Coastal Health Authority

Dr. Ronald Chapman CMHO, Northern Health Authority

Dr. Andrew Larder CMHO, Interior Health Authority

Dr. Richard Stanwick CMHO, Vancouver Island Health Authority

Dr. Bonnie Henry Head of Epidemiology Services, BCCDC

Dr. Eric Young Deputy Provincial Health Officer

Dr. Perry Kendall Provincial Health Officer

Dr. Jefferson reveals his own biases in the last paragraph of his letter whereby he suggests the B.C. health care worker influenza policy is the practice of "tyrants." Internationally recognized ethicists would disagree, including Arthur Caplan of the Center for Bioethics at the University of Pennsylvania, who has stated "Health care workers have an absolute duty to do what can be done to ensure they do not transmit disease to those at grave risk who cannot protect themselves."

The great majority of public health and influenza experts across North America and the UK are convinced the weight of evidence favours the protective effect of influenza vaccines. Far from being a "tyrannical" notion, professional bodies from every health care discipline have gone on record as stating patient protection through influenza vaccination is part of a "duty of care."

Dr. Paul van Buynder Chief Medical Health Officer, Fraser Health Authority

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