



<b>Title</b>	<b>A/H1N1 flu pandemic: Antiviral drugs: Distinguish treatment from prophylaxis</b>
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<b>Citation</b>	<b>Bmj (Online), 2009, v. 339 n. 7721, p. 589</b>
<b>Issued Date</b>	<b>2009</b>
<b>URL</b>	<b><a href="http://hdl.handle.net/10722/92540">http://hdl.handle.net/10722/92540</a></b>
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## A/H1N1 FLU PANDEMIC

### History and economics lessons in asymmetrical flu threats

The process of combining predictive tools in epidemiology and biostatistics with those from history and economics to develop a sustainable framework for addressing the ongoing swine flu pandemic is a global multidisciplinary challenge. During the 1976 swine flu outbreak, a precipitate decision to produce and initiate mass vaccination led to more vaccine-related morbidity and mortality than swine flu infections, adversely affecting public health's credibility. The current outbreak is so far mild compared with seasonal flu in the southern hemisphere. Therefore, whether vaccination should be the global first line of defence, as recently suggested by the World Health Organization, or whether current chemotherapeutic approaches are safer and more cost effective should be reconsidered.<sup>1,2</sup>

The contingency plans of the current swine flu pandemic seem to parallel the international sanitary conferences for cholera control in the mid-19th century. Then, most of the planning focused on protecting wealthy European nations from cholera, while nations in cholera's epicentre, particularly those adjacent to the Bay of Bengal, were under-represented.<sup>3</sup> Now, Australia's investment of over \$480m (£294m; €336) in pandemic flu preparedness over the past three years exceeds the national flu control budgets of Mexico and all African countries.<sup>4</sup> The United States spent \$135m in procuring 48 million vaccine doses for swine flu in 1976. The current cost of antiviral chemotherapy for swine flu is at least \$50 for each five day course. Healthcare workers are expected to take prophylactic antiviral drugs for up to six weeks while caring for patients with swine flu.<sup>5</sup>

Any plans yet for how these laudable initiatives will be funded in poor countries?

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**Competing interests:** None declared.

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Cite this as: *BMJ* 2009;339:b3618

### Antiviral drugs: distinguish treatment from prophylaxis

Shun-Shin and colleagues provide a timely review of the effectiveness of neuraminidase inhibitors for treatment and chemoprophylaxis of flu virus infections.<sup>1</sup> As the pandemic A/



H1N1 flu virus seems to have remained susceptible in vitro to neuraminidase inhibitors we expect that effectiveness against the pandemic virus would be similar to that against seasonal influenza A strains. There should by now be sufficient observational data to demonstrate this. Further trials to detect differences in effectiveness between pandemic and seasonal strains would need to be very large.

Distinguishing the use of antiviral drugs for treatment from their use as chemoprophylaxis against infection or illness is important. In the current pandemic oseltamivir treatment has been widely used in many countries as part of "mitigation phase" protocols whereas chemoprophylaxis has rarely been used since the initial "containment phase."<sup>2</sup> Shun-Shin and colleagues' conclusion that neuraminidase inhibitors shorten the duration of illness and reduce household transmission does not clarify that transmission refers to chemoprophylaxis whereas duration refers to treatment, as the review did not cover indirect benefits of treatment.<sup>1</sup> Oseltamivir treatment alone may lead to moderate reductions in transmission to household contacts.<sup>2</sup>

The 8% reduction in household transmission associated with chemoprophylaxis is an estimate of the absolute risk reduction, from around 12% in the placebo arm to around 4% in the antiviral arm,<sup>1</sup> corresponding to a relative risk reduction of almost 70%. However, in pandemics, secondary attack rates are typically higher because of the lack of population immunity,<sup>3</sup> and absolute risk reductions associated with chemoprophylaxis may be greater.

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**Competing interests:** None declared.

- 1 Shun-Shin M, Thompson M, Heneghan C, Perera R, Hamden A, Mant D. Neuraminidase inhibitors for treatment and prophylaxis of influenza in children: systematic review and meta-analysis of randomised controlled trials. *BMJ* 2009;339:b3172. (11 August.)
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Cite this as: *BMJ* 2009;339:b3620

## COW'S MILK ALLERGY IN CHILDREN

### Challenge is not crucial

Apps and Beattie state that diagnosis of cow's milk allergy should be confirmed by challenge, even in those at risk of severe reactions.<sup>1</sup> In practice, such confirmation is rarely done as it can be dangerous, is resource consuming, and is often unnecessary with a good history, positive test results (skin prick or specific IgE), and improvement with elimination of cow's milk.<sup>2</sup> Oral challenge should be reserved for cases with large diagnostic doubt, and for determining whether a known food allergy has resolved.

The authors incorrectly imply a significant difference in positive predictive value between specific IgE and skin prick testing. A positive specific IgE test does not have a positive predictive value as high as 90-95%. Specific IgE value may be important. A positive predictive value of 90% refers to specific IgE >2.5 kU(A)/l in infants under 12 months.<sup>3</sup> The threshold varies in different studies: a threshold for milk of 15 kU(A)/l in children with a mean age of 5 years predicted clinical reactivity with >95% certainty.<sup>4</sup> Similar studies assess the size of a wheal in skin prick testing above which 95% of patients would have an allergic reaction to that food.

Conversely, allergy to cow's milk is possible with a low or even negative specific IgE or skin prick testing result.

Non-IgE mediated milk allergy is not necessarily a type IV hypersensitivity reaction: the exact immunopathophysiology is unknown.<sup>2</sup>

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**Competing interests:** None declared.

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Cite this as: *BMJ* 2009;339:b3622

## BMJ PICO

### Pico research for pico doctors

Rapid responses in many cases resemble radio phone-ins, where people take up time without having anything much to say. In the rare instance when they do have something to say, I suspect that the people in a position to change things don't take any notice.

BMJ pico is pico minded.<sup>1</sup> As in bite size education, pico size education is for pico size brains. One can see the slogans now: Read *BMJ* on the go! Pico—all you need to know in just a few minutes!

Why stop at pico? Be bold *BMJ*! In a few years when BMJ pico becomes the norm for research, go for nano—a quarter of a page. When nano is too much of a burden to read, go for femto—just one liners. Preferably on Twitter. And why not team up with O2 and send the one liners by mobile phone?

Pico editors for a generation of pico doctors—with femto and nano to look forward to.

I would prefer splitting the *BMJ* in two: *Pico BMJ* and *Normal BMJ*. *Pico BMJ* has all the infotainment and could also include fashion, financial advice, secondhand cars, lonely hearts, recipes, travel, etc. *Normal BMJ* has the format used by highly read and highly rated medical journals such as *JAMA* and the *Lancet*.

Some doctors may prefer to subscribe only to *Pico BMJ*, some only to *Normal BMJ*, and some to both. The *BMJ* would most likely increase its overall subscription rates: those who do not currently subscribe (pico doctors who may be put off by seeing 3-5 pages of research papers and normal doctors who are put off by the infotainment) might well subscribe. Initially the two journals will have to share editors and peer reviewers but as they diverge, editors and reviewers will be different to cater for their different readership.

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**Competing interests:** None declared.

- 1 Groves T, Schroter S. BMJ pico for original research in the print *BMJ*. *BMJ* 2009;339:b3168. (6 August.)

Cite this as: *BMJ* 2009;339:b3631

### Understanding what you read

Groves and Schroter say that BMJ pico articles will be accompanied by a table showing ratio measures (relative risk, odds ratio).<sup>1</sup> However, evidence consistently shows that even experienced professionals may fail to interpret correctly data reported as ratio measures,<sup>2</sup> which may in turn affect decision making and communication with patients.<sup>3</sup> Better ways of conveying information are being developed,<sup>4,5</sup> and the *BMJ* should not miss the opportunity to apply them if the pico articles are to fulfil their potential.

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Cite this as: *BMJ* 2009;339:b3630

## THE AMERICAN CRISIS

### America's failure to provide

My father was a young general practitioner in Portsmouth at the inception of the NHS in 1948 and proud of being able to look after his poor patients living in the slums.<sup>1</sup>

I provide federally funded medical care to a few of the 46 million uninsured Americans: the working poor, homeless mentally ill, recent immigrants and migrant workers, and senior citizens with inadequate cover for their needs. I have a very hard time obtaining the services they need outside my own primary care efforts. They must scabble for cash (which they seldom get) to pay for medicine, consultant evaluations, optometry, and dental services; there is no domiciliary care; and hospitals kick them out in the middle of the night if they are able to walk.

I am currently in England looking after my dying mother at home. Nurses come in four times a day, the general practitioner visits three times a week, physiotherapy and occupational therapy are provided, and a night nurse comes every other night while I get some sleep. All medicine and supplies, including a hospital bed, are free. Staff have also gone out of their way to provide comfort and support to me. It is compassionate, practical, and makes clear

economic sense. Does that sound like the Republicans' "death panel"?

As I cannot assure my patients a decent standard of medicine, I plan to leave the profession for a while to help the Obama presidency to rectify and humanise American medicine. I don't know what my patients will do, but I think my father would appreciate this categorical imperative.

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**Competing interests:** MEA received the American Academy of Physician Assistants' "service to the underserved" award for 2009.

- 1 Spence D. The American crisis. *BMJ* 2009;339:b3375. (19 August.)

Cite this as: *BMJ* 2009;339:b3634

### The "S" word

Spence laudably defends the NHS, but it is a shame that he feels it necessary to claim that "this is not socialism."<sup>1</sup> The very things that most of us value about the NHS—its universality, equity, and the provision of personal good through public solidarity rather than private self interest—are the essence of socialism, and Spence's own description—"all our people are valued and will be treated equally"—is as good a 10 word definition of socialism as I have seen.

Ideologues in the US and elsewhere may treat socialism as a dirty word, but it was the source of the NHS, and those of us who support the results should at least recognise where the means originated. Nye Bevan and his comrades were proud of the NHS, and the NHS should be proud of them.

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**Competing interests:** CNJ is a member of the Labour party—whether that counts as socialism is a moot point.

- 1 Spence D. The American crisis. *BMJ* 2009;339:b3375. (19 August.)

Cite this as: *BMJ* 2009;339:b3629



**Nye Bevan and his comrades**