The effect of media reporting on public worry during the swine flu outbreak
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H1N1/09 (“swine flu”) pandemic

~ Sep 2008: new strain of H1N1 (combination of previous triple reassortment of bird/pig/human flu plus Eurasian pig flu) reaches human population (?Asia)

17 Mar 2009: first confirmed case (Mexico)

27 Apr 2009: first confirmed deaths at the time; first confirmed case in UK

1 May 2009: study surveys begin

11 Jun 2009: pandemic declared

14 Jun 2009: first UK confirmed death

16 Jul 2009: DH predicts worst case of 65,000 UK deaths

21 Oct 2009: mass vaccination begins in UK

10 Aug 2010: pandemic officially over
H1N1/09 ("swine flu") pandemic

Worldwide deaths ≈ 18,000
Mortality rate ≈ 0.03%
  Mildest flu pandemic on record;
  compare ~0.1% mortality and
  ~1,000,000 deaths in 1968/9

_UK figures:_
deaths = 298
hospitalised = 5,501 (by Apr 2010)
cases (lab confirmed) > 28,000
Behaviour is key to preventing and managing influenza
Germs. Out in a second, around for hours.

When you cough or sneeze, your germs go everywhere. Fast. And once they've hit a surface, they can survive for hours. Covering your mouth and nose with your hand won't stop them. But a tissue will. Catch the sneeze, then bin the tissue and wash your hands with soap and water as soon as possible to kill the germs. The current swine flu alert increases the importance of this.

Catch it. Bin it. Kill it.

Calls to this number are free from UK landlines and most mobiles.
Role of media communication

Overly alarmist
- Incites panic, avoidance of health advice

Overly reassuring
- Leads to complacency, not adhering to behavioural advice
Pandemic could kill up to 120m, warn experts

Swine flu ‘could strike millions’

UK prepares for 65,000 deaths from swine flu

Pig flu ‘may kill 94,000 Londoners’

‘Ealing and Barnet to be worst hit,’ predict experts
Objectives & method

- Opportunity to analyse large data set
- Are there predictors of behaviour that we can target in the short-term?
- Are communications working?

- 36 telephone surveys of general UK public
  - Approx. weekly from 1 May 2009-10 Jan 2010
  - \( n = 1047 \) to 1173
- Questions by Dept of Health; surveys by Ipsos MORI
- Count number of newspaper stories per day about swine flu
- Epidemiological data
“How worried, if at all, would you say you are now about the possibility of personally catching swine flu?”

Changes Over Time for Hospitalisations and Worry

Number of new hospitalisations with swine flu that week

Percentage of survey respondents reporting worry about swine flu

Date

28/03/09 17/05/09 06/07/09 25/08/09 14/10/09 03/12/09 22/01/10

Weekly hospitalisation

Worry
Changes over time for media reporting and worry

Worry predicted by media reporting, controlling for hospitalisations: $\chi^2(1) = 6.6$, $p = 0.010$
Figure 2: Changes Over Time for Media Reporting and Worry

Date

28/03/09 17/05/09 06/07/09 25/08/09 14/10/09 03/12/09 22/01/10

Number of swine flu stories

Worry

Changes over time for media reporting and worry
Figure 2: Changes Over Time for Media Reporting and Worry

Changes over time for media reporting and worry

- Number of swine flu stories
- Worry

Date:
- 28/03/09
- 17/05/09
- 06/07/09
- 25/08/09
- 14/10/09
- 03/12/09
- 22/01/10
Changes over time for media reporting and worry

Date

Number of swine flu stories

Worry
How did the public behave early on (early May 2010)?

Have you done any of the following since the beginning of the swine flu outbreak? (5,419 people asked 1-17 May, 5 UK national surveys combined)

*Recommended behaviours…*

Carried tissues with me 1793 (33.1%)

Bought antibacterial gel 513 (9.5%)
Does worry predict behaviour?

Association between being worried and … (odds ratios*)

Carrying tissues  aOR 1.7 (1.5 to 2.0)
Buying sanitising hand gel  aOR 2.3 (1.9 to 2.9)

*Adjusted for demographics and self-reported health
  OR for ‘very’ vs ‘not at all worried’
Exposure to mass communications

Respondents who were exposed to adverts (self-report):

- more likely to carry tissues: $aOR \, 1.2 \, (1.05 \, to \, 1.3)$
- more likely to buy hand gel: $aOR \, 1.4 \, (1.2 \, to \, 1.7)$
I know a lot about swine flu

Exposure to adverts

Exposure to media coverage

Higher actual knowledge

I am worried about catching swine flu

I know a lot about swine flu

Median or higher hygiene efficacy score

I am satisfied with the amount of information available

Carried tissues
I know a lot about swine flu

Exposure to adverts

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Median or higher hygiene efficacy score

Carried tissues
Conclusions

- Worry about public health incidents predicts behaviour change
- Finding ways to keep a pandemic in the news may help maintain such changes
- Other channels promote such changes: perceived efficacy, mere exposure
- Concerns about media scaremongering in initial period unproven
Bibliography

Rubin GJ, Potts HWW, Michie S (2010). The impact of communications about swine flu (influenza A H1N1v) on public responses to the outbreak: Results from 36 national telephone surveys in the UK. Health Technology Assessment, 14(34), 183-266.


See also:


Figure 1: Changes Over Time in Survey Data

- WHO declares pandemic
- Launch of National Pandemic Flu Service
- Vaccination of priority groups begins
- First UK death
- Extension of vaccination to children announced

Survey start date

- Satisfaction with amount of information
- Worry
- How much heard about swine flu