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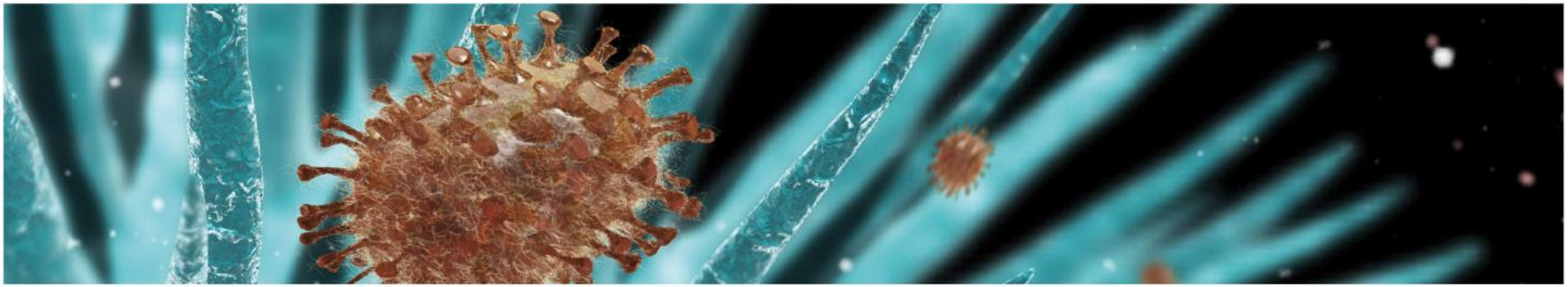

Should we fire healthcare workers who decline vaccination ?

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University of Crete

Stockholm, ESCAIDE 6 Nov 2013

ecdc
EUROPEAN CENTRE FOR DISEASE PREVENTION AND CONTROL

conflicts of interest

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The speaker

- **has conducted research on vaccines and VPDs supported, through his University, by the pharmaceutical industry**

- **is a clinician**

warning !

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This issue

has been controversial for >2 centuries and, most probably, will remain so for the decades to come

However

decisions on policies are made in the present time

A better understanding

might contribute to wiser decisions

a recently emerging issue, as usual ?

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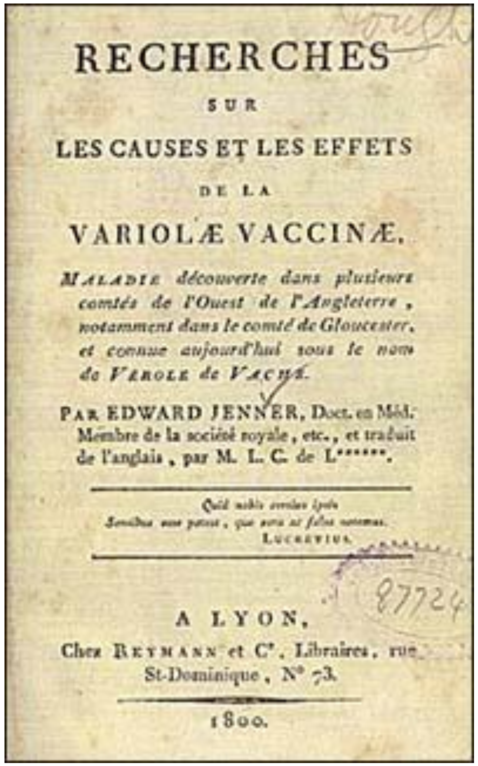
Edward A Jenner's findings were published in 1798 and within 2 decades had been translated into many languages including Japanese.



RECHERCHES
SUR
LES CAUSES ET LES EFFETS
DE LA
VARIOLÆ VACCINÆ,

MALADIE découverte dans plusieurs comtés de l'Ouest de l'Angleterre, notamment dans le comté de Gloucester, et connue aujourd'hui sous le nom de VAROLE de VACHE.

PAR EDWARD JENNER, Doct. en Méd. Membre de la société royale, etc., et traduit de l'anglais, par M. L. C. de L******.

A LYON,
Chez REYMANN et C^e^, Libraires, rue St-Dominique, N° 73.
1800.

The Cow Pock or the wonderful effects of the new inoculation
Etching by James Gillray, 1802. The Welcome Library

a recently emerging issue, as usual ?

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1st mandatory vaccination law, MA 1809 :

"Boards of health, if in their opinion it is necessary for public health or safety, shall require and enforce the vaccination and revaccination of all the inhabitants of their towns, and shall provide them with the means of free vaccination.

Whoever refuses or neglects to comply with such requirements shall forfeit five dollars"

US Supreme Court, 1905, *Johnson v. MA* : "*the state could not require vaccination in order to protect an individual, but it could do so to protect the public*"

The British Vaccination Act of 1840:

first incursion into civil liberties, in the name of public health

British Law, 1898 : concept of *"conscientious objector"* introduced for parents objecting to smallpox vaccine for their children

a recently emerging issue, as usual ?

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Sweden, 19th century, smallpox vaccination uptake rates :

Initially high, but later on

- **90% for the rest of Sweden**
- **falling to ~40% for Stockholm by 1872**

Dr CA Grähs, the city chief physician, asked for stricter measures

Dr Grähs was right : Stockholm suffered an epidemic in 1874

Widespread vaccination followed; no further epidemics

Nelson MC, Rogers J. The right to die? Anti-vaccination activity and the 1874 smallpox epidemic in Stockholm. Soc Hist Med 1992;5:369

are vaccines good ?

Eurosurveillance

yes

✓global eradication of smallpox ✓near eradication of polio ✓bacterial meningitis ✓congenital rubella syndrome ✓herd immunity ✓hepatocellular carcinoma ✓invasive pneumococcal disease ✓diphtheria ✓human papilloma virus ✓meningococcal disease ✓pertussis ✓warts ✓perianal malignancies ✓measles ✓anthrax ✓Japanese encephalitis ✓post-exposure hepatitis A ✓travel medicine ✓influenza in high risk groups ✓neonatal tetanus ✓epiglottitis ✓typhoid fever ✓yellow fever ✓ring protection ✓perinatal transmission of hepatitis B ✓tuberculous meningitis ✓cocooning ✓varicella ✓Lyme disease ✓rotavirus hospitalization ✓pneumococcal resistance ✓rabies ✓shingles ✓domestic animal vaccination

what motivates us to vaccination ?

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Incentive	Vaccine
Self interest	tetanus
The common good ▪ elimination of a disease ▪ herd immunity ▪ protection of community	rubella ------ smallpox polio
Protection of the vulnerable ▪ cocooning ▪ ring protection	influenza pertussis varicella

are HCWs a high-risk group ?

Eurosurveillance

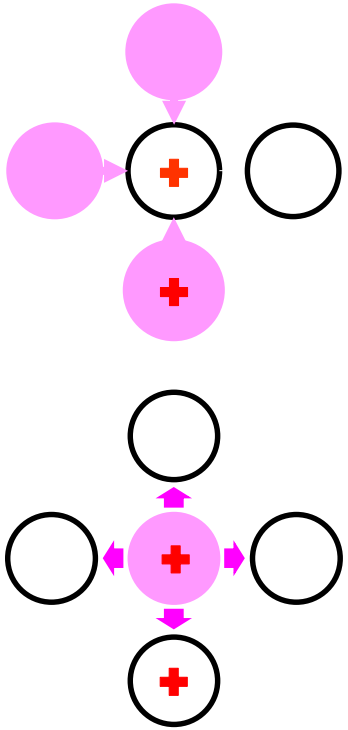
yes

HCWs at high risk of

- **contracting infections at work**
- **transmitting infections to colleagues and patients**

Immunity would

- **block transmission**
- **protect the HCW**
- **protect patients and colleagues**



why do we decline vaccination ?

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HCW

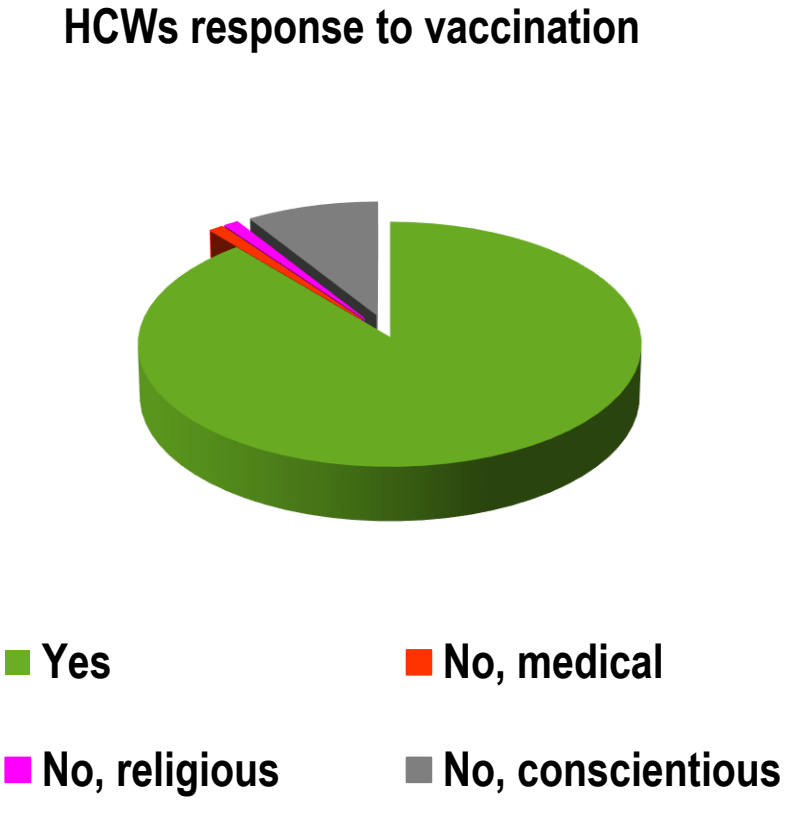
- medical contra-indications
- religious reasons
- conscientious objection
- inconvenience, needle phobia

Disease

- is very rare nowadays / forgotten
- is mild, may be useful
- I will not get / transmit the disease

Vaccine

- costly / not easily accessible
- not effective
- not safe / may cause the disease



are European HCWs vaccinated ?

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could be better

Setting	Immunity
UK. Hospital-based HCWs [1]	A(H1N1)pdm09 13%
France. University hospitals [2]	Measles: 8% susceptibility to
France. Paed and Med wards [3]	Flu 50% physicians, 20% other HCWs
Germany. Telephone survey [4]	Flu 30% 2008/9, flu 26% 2010/11, A(H1N1)pdm09 16%
Greece. Paed wards [5]	Flu ≥5 doses 10%, measles all doses 33%, DiTe all doses 36%
Portugal. Hospital employees [6]	Flu 50%, A(H1N1)pdm09 31%

[1] Chor J, Vaccine 2011;29:7364. [2] Freund R, J Hosp Infect 2013;84:38. [3] Loulerque P, Vaccine 2013;31:2835. [4]Bohmer M, BMC PH 2012;12:938. [5] Maltezou E, PIDJ 2012;31:623. [6] Costa JT, IAOEH 2012;85:747.

Policies ?

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Vaccination policy options

Voluntary, simple

⬇

Voluntary, promoted

⬇

Mandatory, declination

⬇

Mandatory, enforced

Enforcement

- **no contact to patients**
- **masks and prophylaxis**
- **marked badges**
- **holding checks**
- **fines**
- **firing : not fit for job/practice**

are mandates fair?

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Mandatory HCW vaccination : prerequisites

- are vaccines good for HCWs ?
- are immune HCWs good for patients ?
- have voluntary policies failed ?
- have mandatory policies performed better ?
- are exemptions/penalties fair and well defined ?

are vaccines good for HCWs?

Eurosurveillance

yes

Cost-benefit	**reasonable, shown for flu vaccine**
Effective	**particularly in healthy adults** **not always 100%, but still effective**
Safe	**considerable side effects rare, but need to be taken into consideration** **? the narcolepsy issue**

are immune HCWs good for patients?

Eurosurveillance

yes (?)

All studies, including RCTs[1-4] for seasonal flu, have concluded so

But

- **3 systematic reviews[5-7] did not provide credible evidence**
- **lack of data for other settings, HCW groups, diseases**

Which way out?

? need for <u>further studies</u>, but is this ethical ?

? should we better rely on <u>common sense</u>?

[1]Potter J, JID 1997;175:1. [2]Carman W, Lancet 2000;355:93. [3]Hayward A, BMJ 2006;333:1241. [4]Lemaitre M, Am Geriatr Soc 2009;57:1580. [4]Thomas R, Cochrane 2006;(3). [4]Thomas R, Vaccine 2010;29:344. [4]Thomas R, Cochrane 2013;7.

have voluntary programmes failed?

Eurosurveillance

yes, more or less

Seasonal flu	**Uptake rates stagnated** **USA <50%, rarely 60% - 70%** **Europe <35%, often <25%**
A(H1N1)09	**13% - 83%**
Measles	**Susceptible HCWs in EU : 3% - 17%**
Pertussis	**Not better, studies?**

HCWs occasionally reluctant to preventive measures

have mandates done better ?

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yes

Virginia Mason Med Center, Seattle [1]

2002-2004 2005-2009

29-54% → 97-99%

Elsewhere in USA

69-71% → 96-98%

Results promising but

may not be replicable everywhere

Target population	Debate
All individuals	plenty
Children	very long
Travelers etc	no
HCWs - newcomers	no
HCWs - employed	plenty

[1] Rakita RM, et al. Infect Control Hosp Epidemiol 2010;31(9):881-8

Clinical Ethics

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Principle	mandatory - against	mandatory - for
Autonomy	No one has the authority to force people to take drugs or vaccines	Restrictions are reasonable, if it is to harm others by infecting them
Beneficence	Doing good is not protecting some by harming others	HCWs ought accept a minimal risk, if it is to benefit patients
Non-maleficence	Unclear to what extend non-immune HCWs harm patients	Any vaccine-preventable harm is unacceptable
Justice	Unfair for HCWs to be treated in a different way	Unfair for non-immune patients to be treated by infectious HCWs
Deontology	Unfair to use persons as a means to good ends	The key virtue for healers is "do no harm" 

Professional Ethics

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Professional societies : duty to

- **guide members on obligations and responsibilities**
- **meet public trust : HCWs ought not appear to suggest vaccines but avoid them themselves**

Free choice of HCW profession :

- **assumes some personal risk**
- **makes exemptions questionable**

"*You should protect your patients, your colleagues and yourself by being immunised against serious communicable diseases where vaccines are available*" [GMC 2012]

"*Physicians have an obligation to: (a) accept immunization .. (b) accept a decision .. to adjust practice activities if not immunized*" [AMA 2010]

Institutional and Public Health Ethics

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Institutions : the duty to

- protect patients-residents
- reduce costs from outbreaks
- meet the public trust
- keep working in outbreaks

hence to

- achieve adequate rates by
  taking the issue seriously
  adopting the best policy

Public health : targets

- community rather than individuals
- safety rather than liberty

Terminology

- dominated by *herd immunity* - *ring protection* - *coccooning* - *no free riders* - *shield wall* - *barriers*
- rather than *autonomy* - *freedom*

policies and practicalities

Eurosurveillance

Argument	mandatory - against	mandatory - for
Benefit	No solid evidence for patients	Benefit difficult to be studied
Uptake	Voluntary not trivial; can be higher	High rates only with mandates
Coercion	Penalties devalue allies	Rules need not be seen as coercion
Trust	HCWs are trusted to more critical decisions	Rules facilitate a fair policy; it's not about trust
Consensus	Works better	Has failed

concluding questions

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Should we fire healthcare workers who decline vaccination ?

Is it a duty

for a HCW

not to transmit a vaccine-preventable disease to a patient

?

Is it a duty

for a health authority

not to accept HCWs, who may transmit vaccine-preventable diseases to patients

?