

Ensuring the willingness to
vaccinate and be vaccinated.

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Orlando Strip Club Gives Seniors Flu Vaccine...



Free food and flu shots!!!

<http://whtq.com/blogs/bubba/2009/09/orlando-strip-club-gives-senio.html>

A Paradox !

- Vaccination is the most important independent feature of the history of Medicine....
- But the vaccination degree is many times very low...
- Why??

Classical ways of promotion

- Mandated by regulation
 - National infant vaccination programs
- Encouraged by health authorities
 - Flue vaccine campaigns for adults 60+
- Linked to informed decision by individuals.
- Incentives to general practitioners
- Recommendations from healthcare workers

Variable vaccine coverage...

- Between countries and different age and socio-economic groups

Many other factors involved...

- Education of healthcare workers
- Information produced by professional societies
- Providers' patient-oriented interventions
- Reimbursement issues
- Reduced appreciation of seriousness of diseases as smallpox, poliomyelitis, diphtheria, tetanus, measles, pertussis, rubella, meningococcal meningitis, mumps... (feeling risk vaccination > risk disease)

Anti-vaccine movements are appearing...

- In WHO Europe Region:
 - 500.000 infants do not receive full protective immunizations
 - 32.000 infants die each year from vaccine-preventable diseases.

A strong belief in the effectiveness of vaccine is the strongest predictor of vaccine uptake.

Benefits of a life-long vaccination program

- In 2000 poliomyelitis disappeared from the USA (in 1900: annual morbidity 16.316).
- USA:

Mortality	In 2000	In 1900
Diphtheria	1	175.885
Measles	86	503.282
Mumps	338	152.209
Rubella	176	47.745
Tetanus	35	1.314

Why are these irrefutable public health successes of vaccine programs being continuously questioned?

We can learn a lot from the vaccine paediatric model

Statements of parents	Parents approve vaccination	Parents do not approve vaccination
Immunizations are getting better and safer all the time	95%	45%
I refuse vaccination because I know what is best for my child	5%	50%
Vaccines are more important than ever because of global travel	92%	60%
My child should not been given a lot of shots at the same time	12%	82%

We can learn a lot from the vaccine paediatric model

- Better information can avoid such bizarre believes of the parents.
- That includes:
 - full information of the benefit of vaccination (risk of vaccination <<<risk of disease)
 - Full information about the possible (exceptional) side-effects.

Barriers to vaccination in adults aged 60+

Have a lower vaccine coverage in the USA:

- Low socio-economic status
- Men < women
- African Americans
- A smoker in deprived areas
- Not being insured

Barriers to vaccination in adults aged 60+

Results for the flu season peak:

- Substantially higher in poor districts (if more vaccination in those poor districts → less flu season peak)

Barriers to vaccination in adults aged 60+

Why this people do not receive vaccination?

- They think them unnecessary
- Do not know how to obtain free vaccination

Have a negative effect on vaccine coverage rate:

- Not having a GP
- Having difficulty getting to the GP for vaccination
- Not receiving either verbal or written recommendations
- Not being previously vaccinated
- Not having any incentives
- Not getting any reminders

Some practitioners are negatively influenced by some publications

- Ex.: Simonsen and Rizzo: no diminution of mortality during influenza episodes by vaccination... (but ... frailest are less vaccinated and have less immune response)

Doubts about vaccine safety and fear of side effects

- Not likely to contract influenza because they feel healthy
- Take regular exercise
- Influenza is not a serious disease which cannot in any case be avoided by vaccination
- Vulnerable older adults with co-morbidities think that vaccination will make them feel even more ill
- The absence of any vaccine recommendation may reinforce their deep belief

Willingness to vaccinate begins
with healthcare workers'
willingness to be vaccinated
themselves.

Remarks of Dutch GP's on the reasons for not being vaccinated against influenza:

- I have no medical indication for vaccination (52%)
- I am protected against influenza by frequent professional exposures to the virus (28%)
- I doubt whether vaccination will be effective (16%)
- I forgot the vaccination (14%)
- I am frightened by possible adverse effects of vaccines (6%)

Healthcare workers' vaccine uptake is associated with:

- Older age ($p=0,008$)
- Believing that other departmental colleagues have been vaccinated ($p<0,0001$)
- Having cared for patients suffering from severe influenza ($p=0,03$)

Predisposing, reinforcing and enabling factors influencing Influenza vaccination acceptance among Healthcare workers.

- 1906 workers Univ. Hospital Valencia
- Influenza season 2002-2003
- Vaccination offered free of charge
- Several weeks intense promotion: letters, meetings and posters.
- Control subjects (who did not receive the influenza vaccine).

Predisposing factors

- Perception of the influenza vaccine's effectiveness
- Knowledge about influenza vaccination recommendation
- Agreement with the influenza vaccination recommendation
- Fear of adverse reactions due to influenza vaccination
- Fear of needles
- Presence of chronic disease
- Perception of high likelihood for acquiring influenza
- Belief that influenza may be a serious illness
- Worry about missing work due to illness
- Worry about transmitting influenza to relatives/patients
- Contact with severely ill patients
- Previous influenza in the absence of influenza vaccination

Reinforcing factors

- Previous influenza after influenza vaccination
- Presence of adverse reactions due to influenza vaccine

Enabling factors

- Receipt of personal advice about influenza vaccination
- Adequate free time for vaccination

Results

- 10,2% vaccinated
- Response rate of
 - vaccinated : 91,2%
 - 291 controls initially selected: 87,6%

Results

Was associate with receipt of the vaccine:

- Agreement with the influenza vaccination recommendation
- Previous influenza vaccination
- Adequate free time for vaccination
- Perception of high likelihood for acquiring influenza
- Concern about transmitting influenza to relatives
- Age
- Occupation (nurses < doctors)
- Receipt of personal advice
- Previous influenza in the absence of influenza
- perception of influenza vaccination effectiveness
- Fear of adverse reactions
- Contact with severely ill patients

Correlation between healthcare worker's knowledge of influenza vaccine and vaccine receipt.

- HCW:
 - at risk for occupational exposure
 - are potential vectors for nosocomial transmission
- Influenza vaccination:
 - decreased worker absenteeism
 - decrease in excess mortality in NH (1997)
- Since 1986 recommendation in the USA for all HCW!!!

Survey regarding general knowledge of influenza

1. Can influenza vaccine cause influenza infection?
2. Is the influenza vaccine effective in preventing influenza?
3. Should HCW receive the influenza vaccine each year?
4. As a HCW, do you feel you are at risk to get influenza?
5. Can HCW spread influenza to their patients? How contagious is influenza? (very, somewhat, minimally)

Survey regarding general knowledge of influenza

	Received vaccination	All questions answered correctly	Declined vaccination	All questions answered correctly
Physicians	82%	87%	18%	95%
Nurses	62%	80%	38%	49%

Need for separate strategies for physician and nursing populations

- Nursing benefit from
 - In-service didactic sessions: impact influenza vaccination, benefits influenza vaccination, side effects.
- Physician staff benefit from:
 - Ease and convenience of vaccination
 - Leadership of influential figures
 - For medical residents: contact with infectious disease subspecialists

Strategies to improve willingness of healthcare workers

- Are not so successful...
- Important role of senior healthcare managers
 - Convincing
 - Easy access and diminish costs
- Peer pressure (professional duty)
- Need for targeting with adapted information this special group

Policy to improve vaccination in the general population

- **First Step:** convince the healthcare workers:
 - Benefits of vaccination > possible inconvenience / adverse reactions
 - Complete and accurate information
- **Second Step:** cheap and easy vaccination has to be organised; attention for special groups (ex. house-bound)
- Social pressure is very important
- **Third Step:** Need for a massive but objective information campaign

Public health aspects in vaccination of HCW

- Limit infections of frail patients by the HCW
- Limit staffing problems during severe epidemic

What about mandatory vaccination?

- Always better to convince people...
- The only effective method is really a **mandatory vaccination** (alternatives are: no patient contact, wearing a mask, be fired). Result: 97% is vaccinated...(2010, Society for healthcare Epidemiology of America)

Conclusions

- The approach has to be different for nurses and physicians.
- Better information about the positive aspects of vaccination and the minor risks.
- The role of (older) prominent figures are important to convince the others.
- Vaccination is a social behaviour: a need to influence a whole group.
- May be mandatory vaccination has to be taken in account....