

VACCINATION

Life or death choice

WHAT DISEASE(S)?

- ❖ DITHERIA
- ❖ TETANUS
- ❖ WHOOPING COUGH (PERTUSSIS)
- ❖ HEPATITIS B
- ❖ POLIO
- ❖ HIB
- ❖ PNEUMOCOCCAL

WHAT DISEASE

- ❖ Meningitis (B and C)
- ❖ MEASLES
- ❖ MUMPS
- ❖ RUBELLA
- ❖ CHICKENPOX

TETANUS

- ❖ Death is vaccine preventable
- ❖ “SELFIE” vaccine
- ❖ May be the one vaccine we overdo
- ❖ Notoriously the “painful one”

HEPATITIS B

- ❖ About 30% of the planet has been infected at some time, so that is two billion infected people
- ❖ There are 20 million new infections per year and about 350 million chronically (carriers) infected people
- ❖ Death from the initial infection or late cancer of the liver
- ❖ Probably able to treat the infection now

POLIO

- ❖ On 31 July, the International Health Regulations (IHR) Emergency Committee on polio met to reassess the situation and examine the actions that countries have taken since the declaration of the ‘public health emergency of international concern’ (PHEIC) in May



- ❖ Being a front-line health worker usually isn't controversial. But in Pakistan, it can get you killed.
- ❖ The Taliban went on an offensive against polio immunization in 2012 after it became clear that the CIA used a fake hepatitis vaccination campaign to gather intelligence on Osama bin Laden.
- ❖ Since then, more than 60 polio workers have been gunned down

POLIO

- ❖ Oral polio vaccine is associated with a 1:2million chance of Vaccine Associated Polio Paralysis
- ❖ We switched to Inactivated (injection form) polio vaccine 1997-99 with a risk of serious side effects about 1:14 million
- ❖ In 1986 tests on faeces collected from a 22 year old Australian born man who had symptoms consistent with poliomyelitis yielded poliovirus type 3
- ❖ This is the last case of wild Polio in Australia

WHOOPING COUGH



- ❖ Dana McCaffery died after contracting whooping cough

WHOOPING COUGH

- ❖ Unable to treat the established infection
- ❖ Death comes from the overwhelming accumulation of white cells in the lung essentially leading to the patient drowning
- ❖ Cardio-pulmonary bypass not always useful
- ❖ Antibiotics only useful if early and then unreliable benefit
- ❖ 100 day cough disabling
- ❖ Vaccine offers protection

WHOOPING COUGH

- ❖ Young children at risk
- ❖ Use parents immune system to protect unvaccinated children
- ❖ Vaccines recognized on ACIR from 6 weeks (**cocooning**)
- ❖ Acellular not as effective as whole cell BUT LESS PAINFUL
- ❖ 5 years probably maximum effectiveness
- ❖ Need to rethink pertussis

MENINGOCOCCAL

- ❖ Globally 13 strains
- ❖ Most common are A, B, C, W135 and Y.
- ❖ In Australia are strain B and C.
- ❖ New B vaccine released this year

MENC AND MENB

- Can strike any age
- Can strike healthy people (even footballers)
- Peak age 1-2yo and 15 year old
- Vaccines are effective
- Vaccinations for travel can be considered

MEN B

- ❖ meningococcal b (MenB) vaccine added to the Australian Register of Therapeutic Goods (ARTG) for use in individuals two months of age and older to protect against meningococcal disease 2013
- ❖ rollout of a national meningococcal serogroup C vaccination program in Australia where cases decreased from 162 in 2002 to nine in 2011

PNEUMOCOCCAL

- ❖ Invades the brain, ears and lungs
- ❖ Yearly >1.5 million deaths worldwide,
- ❖ 1million of those in children
- ❖ Vaccine effective in children and elderly

PNEUMOCOCCAL

- ❖ Conjugated (13)
- ❖ Polysaccharide (23)
- ❖ Probably new recommendations will include the 13 in older patients

MUMPS

- Painful swelling of the salivary glands (parotid)
- Painful testicles (orchitis)/ovaries and a rash
- Usually self limiting
- Subfertility an issue

RUBELLA

- ❖ Benign disease in adults
- ❖ Can kill fetus or cause congenital abnormalities
- ❖ 1994 Boys and girls routinely vaccinated
- ❖ 2003 two infants with congenital rubella defects (congenital rubella syndrome) that have been reported from Queensland
- ❖ Universal vaccination will eliminate this

CHICKEN POX/SHINGLES

- ❖ Prior to vaccination program
 - ❖ about 1500 admissions to hospital
 - ❖ about 5-7 deaths per year
 - ❖ not a notifiable disease in all states
- ❖ Now part of the MMR vaccine (MMR-V)

SHINGLES

- ❖ 14 times stronger than chicken pox vaccine
- ❖ Effective
- ❖ Registered 50yo and older
- ❖ Announced in budget for 71-79 year olds

MEASLES

The past

Grandma was married at 18, widowed at 47, and lived for a further 48 years. She had four children, losing the two younger ones, we think, in the measles epidemic of the 1890's. One whole section of the Moonta Cemetery is given to the mostly unmarked graves of the children who died then. From the way she spoke of it, she was returning from the burial of one son, when they met her with the news of the others death.

MEASLES

now

MEASLES

Measles outbreak continues! —19 February 2014

SA HEALTH

The CDCB has been notified of another case of measles. The case was in the healthcare settings listed below whilst infectious.

- ❖ **Croydon Medical Centre**, 219 Torrens Road, Croydon: Wednesday 12 February 2014
- ❖ **Ashford Hospital**, 55-57 Anzac Highway, Ashford: Monday 17th February 2014

MEASLES

Why scared of measles?

It can be a lethal viral infection

90% of the population needs to be vaccinated to stop spread

MEASLES

❖ *In the 30 years (1976–2005) since measles vaccination was recommended in Australia, there have been 95 deaths recorded from measles, 1 death in 2004 being the only one recorded since 1995.*

WHAT IF.....

❖ We have a new disease spreading around the world

❖ We can do nothing about it

If only we had a vaccine...

SHOULD I VACCINATE?



CAN I STOP THIS DISEASE?



WILL IT COME HERE?



Ebola is still limited to parts of Africa



rash appears over entire body

NO VACCINE AVAILABLE

so we would want one

If we do have a vaccine

Why don't people have the vaccine?

DECISION TO JAB

Emotional

or

logical

MEASLES

Emotion	Logic
Painful jab	1 in 25 patients with measles get pneumonia
1:1million have serious side effects from vaccine	1:25,000 die

TETANUS

Emotion	Logic
Vaccine hurts	1 in 10 die
Not that common	

HEXA VACCINE

Emotion	Logic
Poor little baby is getting all that poison protein in an injection (6 in one)	Normal daily exposure to proteins is about 1000

Emotion	Logic
Better hygiene and sanitation will make diseases disappear	infections can spread regardless of how clean we are.



- ❖ be open about benefits/limitations
- ❖ Invite scrutiny
- ❖ Establish a relationship with the person(s) needing immunisation
- ❖ Practice what you preach

Emotion	Logic
influenza is just a nuisance, and the vaccine isn't very effective	601 patients ended up in ICU with swine flu in Australia More than 50 of those were pregnant

- ❖ be open about benefits/limitations
- ❖ Invite scrutiny
- ❖ Establish a relationship with the person(s) needing immunisation
- ❖ Practice what you preach

- ❖ be open about benefits/limitations
- ❖ Invite scrutiny
- ❖ Establish a relationship with the person(s) needing immunisation
- ❖ Practice what you preach

- ❖ Any concerns ask for documentation and report them to authorities
- ❖ Remind people that the hospitals were busier with polio, measles and other epidemics

- ❖ be open about benefits/limitations
- ❖ Invite scrutiny
- ❖ Establish a relationship with the person(s) needing immunisation
- ❖ Practice what you preach

VACCINES

are offered by

- ❖ Doctors/ Nurses
- ❖ Private clinics/public clinics
- ❖ Recommended by chiropractors

- ❖ be open about benefits/limitations
- ❖ Invite scrutiny
- ❖ Establish a relationship with the person(s) needing immunisation
- ❖ Practice what you preach

- ❖ Have you had your

INFLUENZA

INFLUENZA

Fluvax caused febrile convulsions in WA

Children's vaccination started because 3 children died in WA from influenza

Flu vaccines in USA in the 1970s killed people

It is estimated flu vaccination saves 1000's of lives each year in Australia

INFLUENZA(2)

- ❖ Flu shots were efficacious 67 percent of the time
- ❖ Less disease
- ❖ Less severe illness

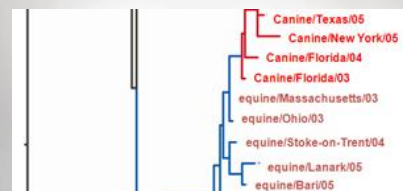
2B OR NOT TO BE

- ❖ 2015 is the first year that two categories of influenza vaccines are available.
- ❖ The quadrivalent vaccines contain the same strains as the trivalent vaccines with the addition of a second influenza B strain

OCT 2014 RECOMENDATIONS

- ❖ **A (H1N1):** an A/California/7/2009 (H1N1)-like virus, 15 µg HA per dose
 - ❖ **A (H3N2):** an A/Switzerland/9715293/2013 (H3N2) - like virus, 15 µg HA per dose
 - ❖ **B:** a B/Phuket/3073/2013 - like virus, 15 µg HA per dose
- Quadrivalent vaccines should contain viruses listed above, plus the additional B virus:
- ❖ B/Brisbane/60/2008-like virus, 15 µg HA per dose

PHYLOGENY





HEALTH CARE WORKERS

- ❖ In Australia less than 50% of doctors have flu vaccine
- ❖ May be we should make it compulsory like British Columbia (Canada)

