

Vaccination Update

Paul Van Buynder
Professor, Griffith University
Chairman, Immunisation Coalition



The Annual Women's & Children's Health Update

Saturday 20th May 2017



Disclosures

- I have been involved in vaccine studies funded by CSL, Sanofi Pasteur, Merck and Novartis
- I have received travel assistance and meals funded by vaccine companies
- I am a member of various CDNA specialty technical advisory subgroups
- I am an advocate...as are we all

Overview

- Pregnancy Issues
 - Influenza
 - Pertussis
- Children
 - Influenza
- Adolescents
 - Men ACWY
 - HPV

Pregnancy



Pertussis Vaccines in Pregnancy

- **Pertussis Booster Every Woman Every Pregnancy**
 - Officially after 28 weeks
 - Probably better between 20-28 weeks

Influenza Vaccines in Pregnancy

- **Triple whammy**
 - Reduces the chance of severe disease
 - Reduces FDIU and IGR risk
 - Protects the newborn in first six months of life
- **Influenza Vaccine Every Woman Every Pregnancy**
 - In all trimesters



Impact of influenza in 2015

- Impact of influenza determined by circulating strain and degree of match
- Severe H3N2 season excess hospitalisations and death in elderly
- Impact on the young, children and pregnant if H1N1 or B
- Children under 10 represented 25% of all notifications in 2015.
- Children aged less than 15 years accounted for one third.
- 9% of hospitalised children with laboratory confirmed influenza were admitted directly to ICU in 2015.
- In Queensland in 2015 children aged < 20 years accounted for 40% of all influenza notifications and 20% of admissions

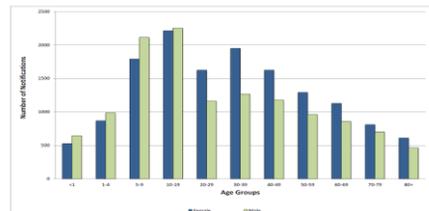
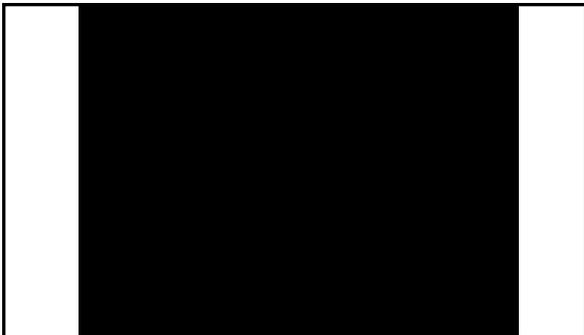
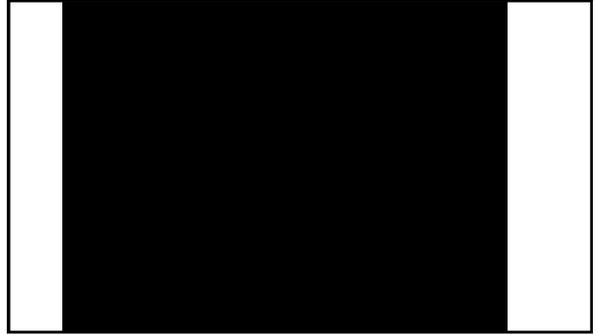
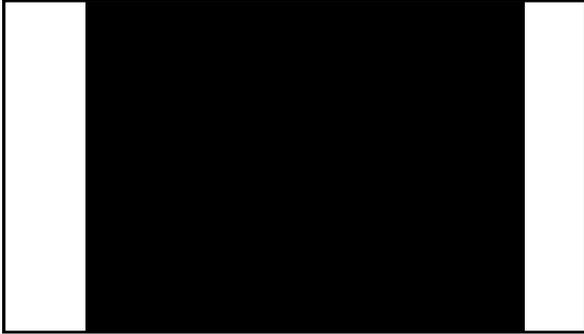


Figure 4 YTD 2015 influenza notifications in Queensland by age group and gender, 1 January to 18 October 2015. Data extracted from NOCS 20 October 2015.



Flu outbreak WA's worst in four years

Hundreds seek help in a night of worry

Three toddlers killed by fast-acting flu

The good news is flu vaccinations are free for children under five.

FLU'S BAD NEWS FOR KIDS UNDER FIVE

Vaccination is safe, effective and free. Make an appointment now with your GP.

Summary

Influenza hospitalisations in children are substantial especially in non-H3N2 years

Influenza and its complications kill more children each year in the developed world than all other vaccine preventable diseases combined ...

© Immunisation Unit | Professor Helen Ikin | Subject | Business law 101

Summary

Influenza and its complications kill more children each year in the developed world than all other vaccine preventable diseases combined ...
By around an order of magnitude

19

Presentation Title | Presenter Name | Date | Subject | Business Use Only



When I got my flu shot last year I asked about getting my son done and my dr said it isn't recommend for small healthy kids. If he had asthma or something then yes but as he is healthy no. I am going next week to see her again so might ask again.

Like · Reply · April 20 at 10:02am

I tried to get my children ages 1,3 and 6 done at the doctors the other day and my doctor refused, saying that she doesn't think it's necessary at there ages!

Like · Reply · 2 · April 20 at 10:02am · Edited

My doctor told me yesterday that there is no need to vaccinate my 3 kids under 10 for flu. 😊

Like · Reply · 1 · April 20 at 10:02am

My GP told me not to get my 16 month old vaccinated for the flu... (I vaccinate for everything possible). Is it safe for his age group?

Like · Reply · 1 · April 20 at 10:06am

When I asked my GP if my 6 month old should get the flu jab she said no

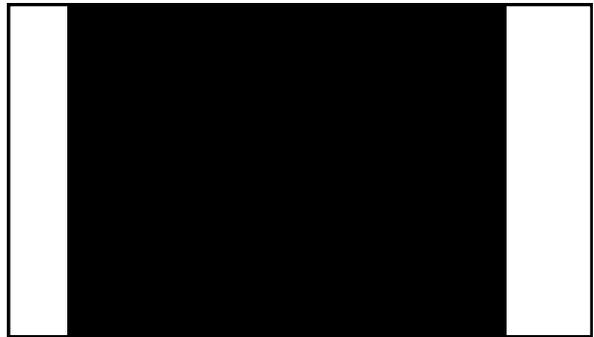
Like · Reply · April 20 at 11:04am

Flu in kids

- Vaccinate every child every year
- Two doses in the first year
- Role in Herd Immunity

21

Presentation Title | Presenter Name | Date | Subject | Business Use Only



Herd immunity

- Japanese ecological study
 - Disease rates in elderly increased again when school program stopped
- Loeb JAMA 2010
 - Children and adolescents appear to play an important role in the transmission of influenza. Immunizing children and adolescents with inactivated influenza vaccine significantly protected unimmunized residents of rural communities against influenza.
- Pebody euro surveillance 2016
 - Decreased rates of influenza in areas where children vaccinated

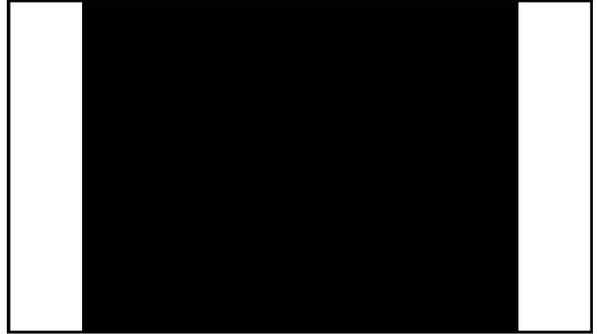
23

Presentation Title | Presenter Name | Date | Subject | Business Use Only

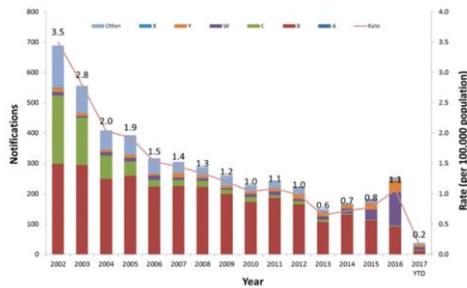
Adolescents

Meningococcal Disease

- The number of cases of invasive meningococcal disease (IMD) and overall risk remains low; however, since 2013 serogroup W (MenW) has emerged as a significant cause of IMD.
- From 2002 to 2015 the predominant meningococcal serogroup in Australia was meningococcal B (MenB). However, in 2016, MenW became the predominant meningococcal serogroup in Australia.
- Many of the MenW cases belong to the hypervirulent ST11 clonal complex, associated with a higher risk of invasive disease and a higher case fatality rate.



Notifications of IMD by serogroup and rates, Australia, 2002 to 2017*



New programs

- So far
 - Western Australia
 - NSW
 - Victoria
 - Queensland
- All largely 15-19 years with varying school component
- Aim is to clear carriage and stop it becoming endemic not prevent individual disease
- Lasts around 5+ years, eg US two doses



"Your son will be a tall, dark, handsome man with no throat cancer because you will vaccinate him for HPV when he's eleven."

..and

- Premature ovarian failure
- Orthostatic tachypnoea
- Chronic fatigue syndrome

CONSPIRACY THEORIES..

CONSPIRACY THEORIES EVERYWHERE.

Post licensure: Health authorities reaffirm the positive safety profile of Gardasil*

US CDC & other leading health organizations closely monitor the safety of GARDASIL, as they do with other vaccines

HPV Vaccination in boys



- Know about the program
- Know the concerns and how to deal with them
- Develop a relationship with your school providers
- Share information
- Help get the boys there and the third doses
- Next year 0,6 month schedule