Paediatric Travel Vaccine Update

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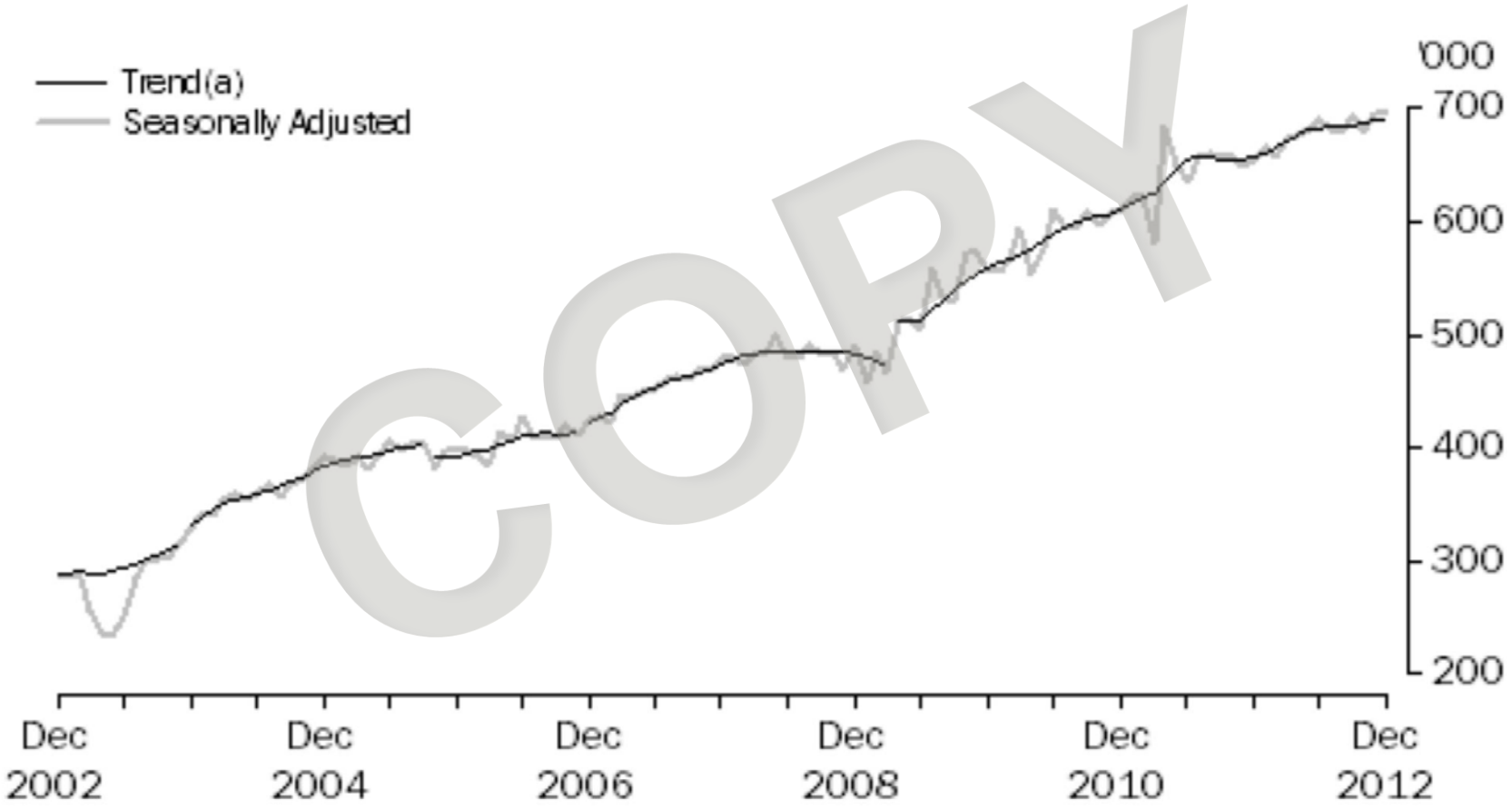
Overview

- Paediatric travelers
- Common travel queries
- Emerging areas
- Quick updates

Short-Term Departures



Top 10 Countries Visited 2017

1. New Zealand
2. Indonesia
3. USA
4. UK
5. Thailand
6. China
7. Singapore
8. Japan
9. India
10. Fiji

Source: ABS

Paediatric Travellers

- Higher risk for some illnesses: Diarrhoea, derm conditions (inc arthropod bites), febrile illness (esp. malaria), respiratory
- Unwell/dehydrated faster + recover faster
- MVA/water related/animal bites
- May not yet have had scheduled vaccines
- Less likely pre-travel advice compared with adults

Pre-Travel Consultation

- 6-8 weeks before travel
- Immunizations (routine + travel)
- Malaria chemoprophylaxis
- Other vectorborne diseases
- Respiratory illnesses
- Travellers' diarrhea
- Personal/car safety
- Disease-specific counseling

https://www.rch.org.au/kidsinfo/fact_sheets/Travel_health_advice/

EDITOR'S CHOICE

Pre-Travel Health Preparation of Pediatric International Travelers: Analysis From the Global TravEpiNet Consortium FREE

Stefan Hagmann ✉, Regina C. LaRocque, Sowmya R. Rao, Emily S. Jentes, Mark J. Sotir, Gary Brunette, Edward T. Ryan, for the Global TravEpiNet Consortium

Journal of the Pediatric Infectious Diseases Society, Volume 2, Issue 4, 1

- More likely VFR: 36% children vs 6% adults
- present late pre-travel (< 14 days)
- long travel periods (> 28 days)
- 30% parents refused 1 or more recommended vaccines

Practice points

- Tailor to travel location, duration, disease incidence
- Timing of live vaccines e.g. BCG and 12-month immunisations
- Ensure routine IUTD
- **Flu vaccine**
- Some scheduled vaccines can be given early as additional dose (e.g. MMR from 6 months)

- Pragmatic balance of recommendation, timeframe and cost

CDC: https://wwwnc.cdc.gov/travel/destinations/list

NaTHNaC: https://travelhealthpro.org.uk/

10M, fever, cough, rash, conjunctivitis and recent return from Antanarivo, Manilla, NYC…

Measles case involving Sydney baby two months away from vaccination 'terrified' parents

By Nicole Chettle

Updated 31 Mar 2019, 9:29am

Measles outbreak declared in Philippines

7 February 2019 Share

JIM GOODSON/CDC/SCIENCE PHOTO LIBRARY

Measles can spread easily through coughs and sneezes

Authorities in the Philippines have declared an outbreak of the highly contagious measles virus in several areas including the capital, Manila.

ABC NEWS LOCATION: Melbourne, Vic Change

Just In Australia Votes World Business Sport Science Health Arts

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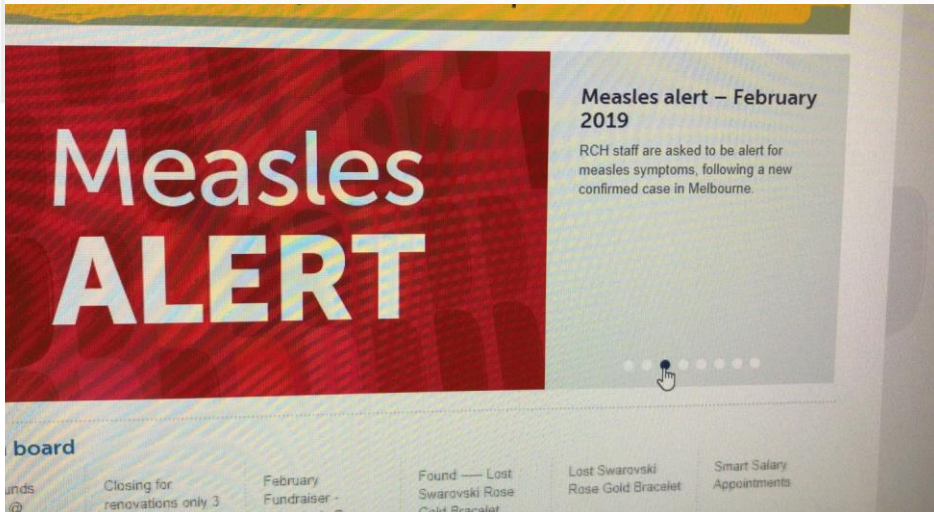
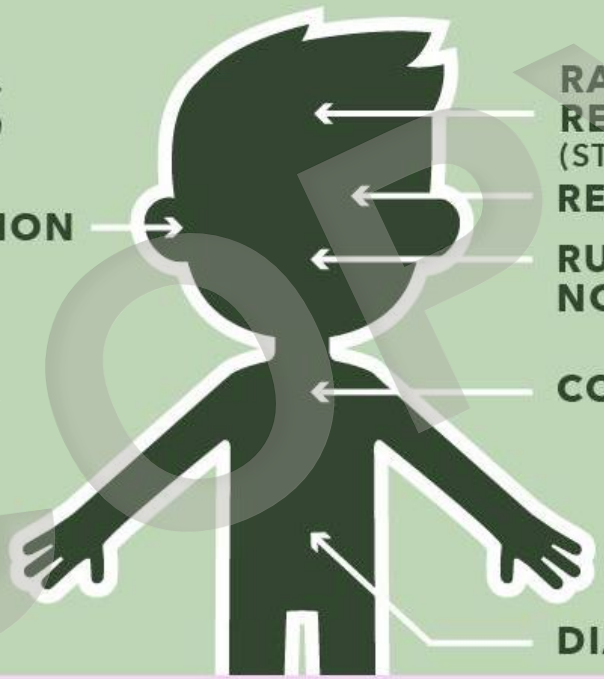
New York district bans unvaccinated children from public places as measles spreads

Updated 27 Mar 2019, 2:07pm

VIDEO: NY county bans unvaccinated kids from public areas amid measles outbreak (ABC News)



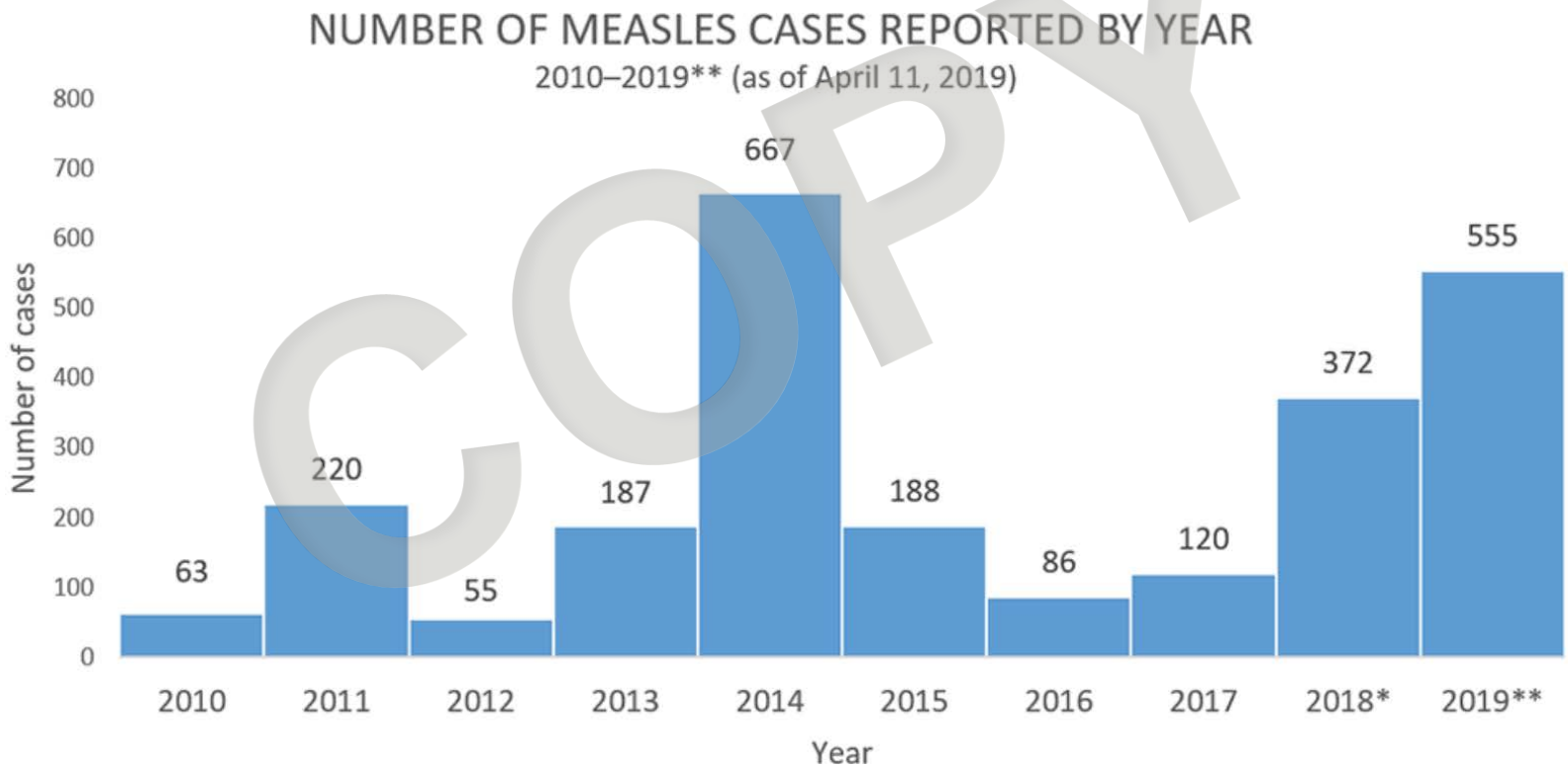
SYMPTOMS OF MEASLES



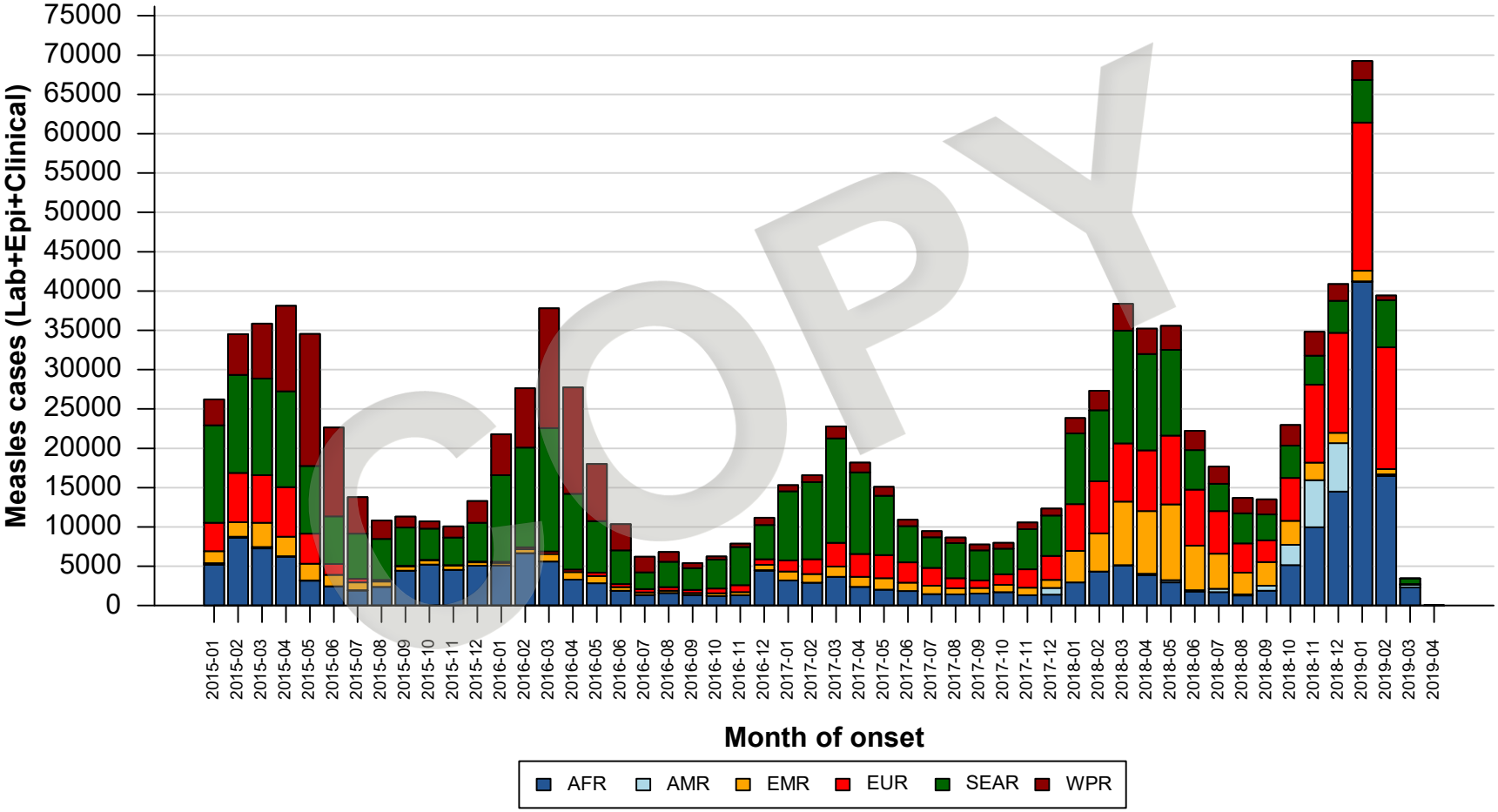
IMMUNIZATION. POWER TO PROTECT.

Learn more at www.cdc.gov/vaccines/parents

US Measles



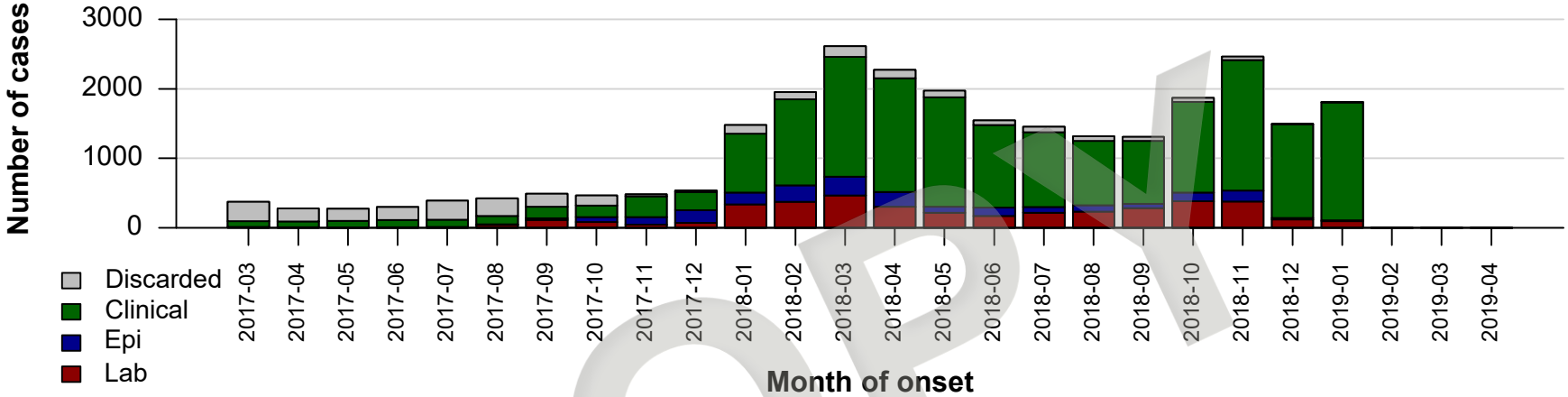
Measles case distribution by month and WHO Region (2015-2019)

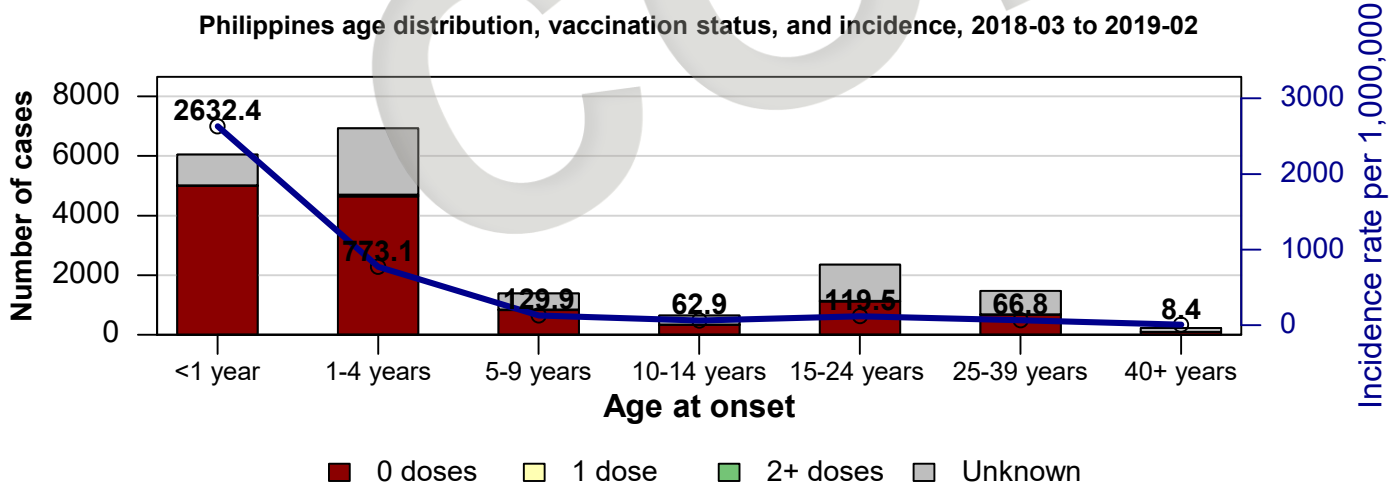


2019-04-09

Notes: Based on data received 2019-04 - Data Source: IVB Database - This is surveillance data, hence for the last month(s), the data may be incomplete.

Measles cases: Philippines





Year	Confirmed Cases
2006	216
2007	612
2008	838
2009	1351
2010	6363
2011	6519
2012	1441
2013	4855
2014	53906
2015	2021
2016	647
2017	2409
2018	20758
2019	1802

Australian Government
Department of Health

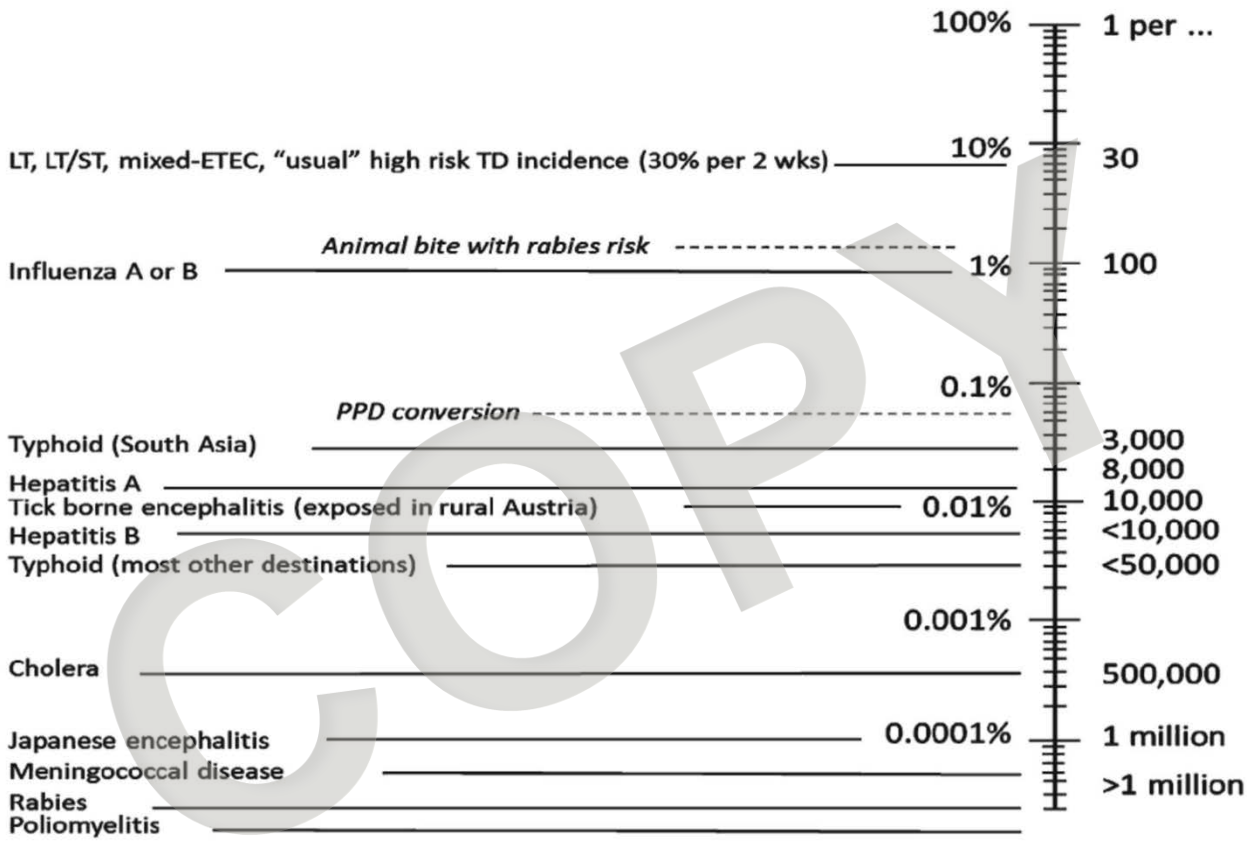
Australian Immunisation Handbook

Travellers are strongly recommended to have received 2 doses of measles-containing vaccine

Travellers aged <12 months

Infants travelling to countries where measles is endemic, or where measles outbreaks are occurring, may receive MMR vaccine from as young as 6 months of age, after an individual risk assessment.

However, this dose needs to be repeated, meaning that these infants need 2 further doses of measles-containing vaccine. They should receive the next dose of MMR vaccine at 12 months of age or 4 weeks after the 1st dose, whichever is later. They should receive their final dose of measles-containing vaccine as MMRV vaccine at 18 months of age.



From: Vaccine-Preventable Travel Health Risks: What Is the Evidence—What Are the Gaps?

J Travel Med. 2014;22(1):1-12. doi:10.1111/jtm.12171

Immunisation schedule Victoria. Infants and children – January 2019 (continued)

*Live attenuated vaccine *Medical risk factors*

Age	Disease	Vaccine brand®	Reconstitute	Site given	Route given	Notes
12 months	Measles-mumps-rubella	Priorix* or M-M-R-II*	✓	Anterolateral thigh	IM/SC	
	Meningococcal ACWY	Nimenrix	✓	Deltoid	IM	
	Pneumococcal	Prevenar 13	✗	Deltoid	IM	
12 months of age premature baby < 32 weeks gestation or < 2000g birthweight	Hepatitis B	H-B-Vax-II Paediatric or Engerix-B Paediatric	✗	Deltoid	IM	single booster dose
18 months	Measles-mumps-rubella-varicella (chickenpox)	PriorixTetra* or ProQuad*	✓	Deltoid	PriorixTetra SC/IM, Proquad SC	Online edition of the handbook recommends 2nd dose of Varilrix®/Varivax® to reduce incidence of 'breakthrough' varicella. This MUST be on prescription. Minimum 1 month interval for 2 live vaccines.
	Diphtheria-tetanus-pertussis	Infanrix or Tripacel	✗	Deltoid	IM	
	Haemophilus influenzae type b	ActHIB	✓	Anterolateral thigh	IM	
4 years	Diphtheria-tetanus- pertussis-poliomyelitis	Infanrix IPV or Quadracel	✗	Deltoid	IM	
5 years of age and over for all Aboriginal and Torres Strait Islander children	Influenza	As supplied	✗	Deltoid	IM	If less than 9 years of age in the first year of administration, give 2 doses a minimum of 1 month apart
4-5 years of age with medical risk factor	Pneumococcal	Pneumovax 23	✗	Deltoid	IM	See online edition of the handbook for recommended additional doses for children at increased risk
BCG for eligible infants and children	Tuberculosis	As supplied				BCG* for infants and children under 5 years of age travelling to TB endemic countries
5 years of age and over with medical risk factor	Influenza	Influenza	✗	Deltoid	IM	If less than 9 years of age in the first year of administration, give 2 doses a minimum of 1 month apart

BCG Recommendation

- Children < 5 years of age travelling countries with high rates of TB for 4 weeks*
  - e.g. India, China, Indonesia, Philippines, Bangladesh, many countries in Africa.
- BCG protects children from severe forms TB
- BCG routine immunisation in most countries
- Booster doses of BCG are not required

*Countries with incidence of > 40/100,000, for a full list see:
http://www.health.nsw.gov.au/Infectious/tuberculosis/Documents/countries-incidence.pdf

BCG Considerations

- Live vaccine – timing
- Needs skilled delivery
- Mantoux prior only in some instances

- Ideally 2-3 months before travel
- Consider earlier for families who are likely to travel
- Alternative – mantoux post travel then BCG

BCG

- Worldwide shortage BCG vaccine
- International manufacturing and supply issues
- Australian Therapeutic Goods Administration (TGA) approved vaccine supply ended 31st December 2015

- Replacement BCG-10 (Polish) and BCG-Moscow (SII) limited supply

ELSEVIER

Travel Medicine and Infectious Disease

Volume 28, March–April 2019, Pages 3-5

Intradermal travel vaccinations-when less means more

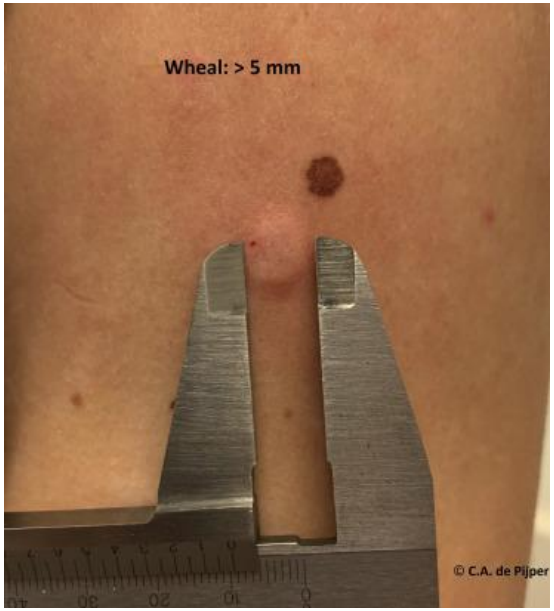
Frieder Schaumburg, Cornelis A. De Pijper, Martin P. Grobusch

Show more

https://doi-org.ezp.lib.unimelb.edu.au/10.1016/j.tmaid.2019.03.007 Get rights and content

- Vaccine supply shortages (influenza, rabies, YF)
- Fractional dose
- Possible increase in immunogenicity
- Dose sparing and cost-saving
- Less invasive

- 0.1 ml administered into the papillary dermis
- Wheal of >5 mm diameter occurs

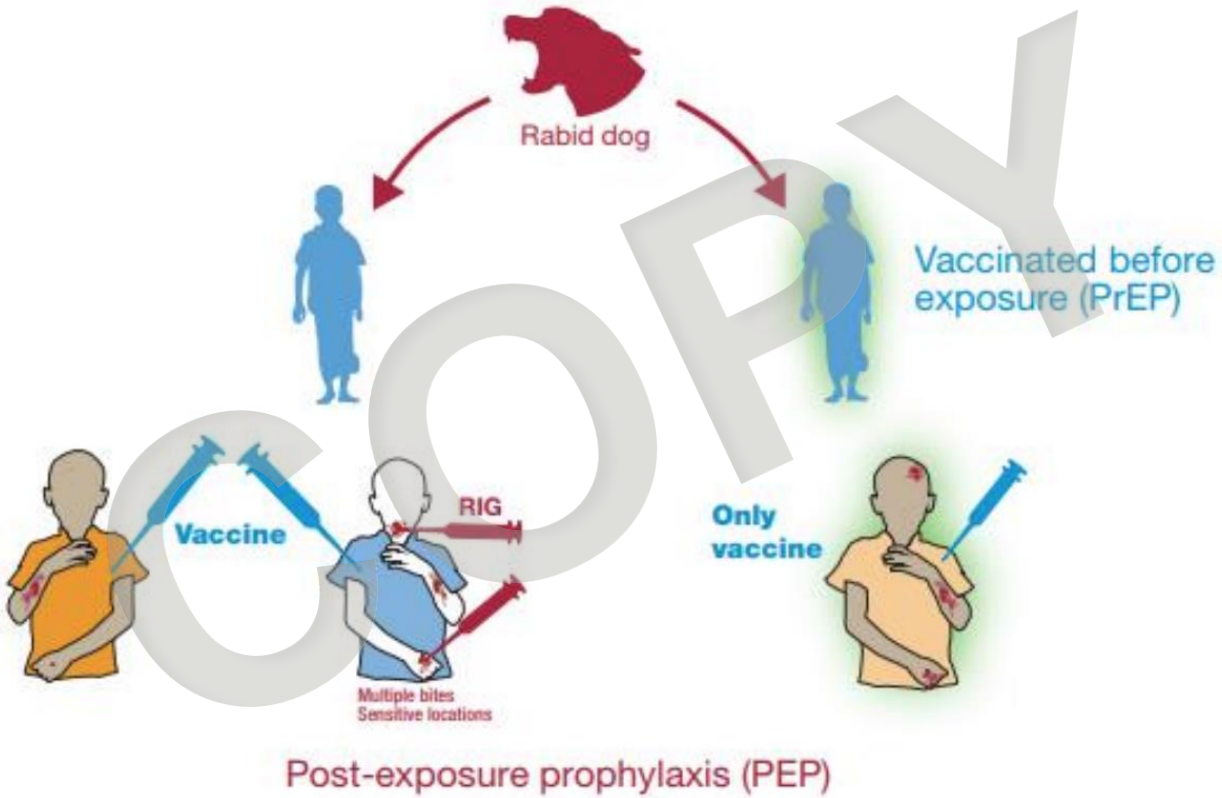


Considerations

- Concerns about higher rates of local adverse events (redness or itching)

- More complex vaccination technique
- Staff training (do we have sufficient numbers of trained in Vic??)

Rabies



recommends 2 main immunization strategies for the prevention of human rabies: Post-exposur (PEP) and Pre-exposure prophylaxis (PrEP)

Rabies Update

WHO Position Paper April 2018:

- For both PEP and PrEP, vaccines can be administered by either the **ID or IM route**.
- One ID dose is 0.1 mL of vaccine and one IM dose is an entire vial of vaccine, irrespective of the vial size.

New PrEP Schedule

- 2 sites ID or 1-site IM vaccine administration on days 0 and 7

New PEP Schedule

- 2-sites ID on days 0, 3 and 7

WHO Rabies Vaccine Position Paper: https://www.who.int/immunization/policy/position_papers/rabies/en/

QUICK UPDATES

International travel and health

New yellow fever vaccination requirements for travellers

Amendment to the period of validity of the international certificate of vaccination against yellow fever, which is now extended to the life of the person vaccinated

27 July 2016

World Health Organization

http://www.who.int/ith/updates/20160727/en/

Take Home Points

- Paediatric travellers have additional consideration related to age
- Flu vaccine for all
- MMR in children over 6 months
- Consider BCG in < 5 travelling to high incidence areas
- ID – watch this space

Paediatric Travel Immunisation References

Minimum age of Scheduled Vaccines in Special Circumstances:
https://immunisationhandbook.health.gov.au/resources/handbook-tables/table-minimum-acceptable-age-for-the-1st-dose-of-scheduled-vaccines-in

Recommended Lower Age Limit for Travel Vaccines:
http://www.ncirs.edu.au/assets/provider_resources/handbook-tables/Table-3-2-2_Recommended-lower-age-limits-of-travel-vaccines-for-children_2015-update.pdf

WHO Rabies Vaccine Position Paper:
https://www.who.int/immunization/policy/position_papers/rabies/en/

WHO Yellow Fever Requirements:
http://www.who.int/ith/updates/20160727/en/

BCG:
http://www.mvec.vic.edu.au/immunisation-references/bcg-vaccine/

Interesting articles:
https://www.abc.net.au/news/health/2017-07-13/should-parents-give-children-drugs-to-survive-long-haul-flights/8697636

General references:
CDC: https://wwwnc.cdc.gov/travel/destinations/list
NaTHNaC: https://travelhealthpro.org.uk/