Congenital Measles

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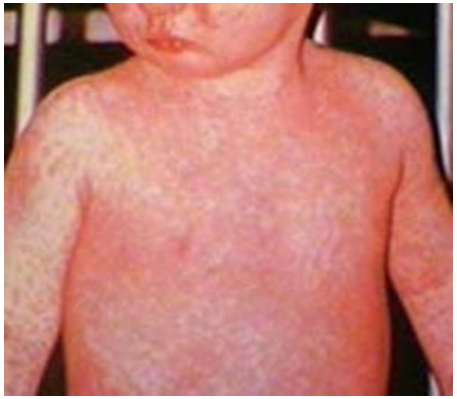
ACIPC 2016

About measles

Measles virus is a member of the genus *Morbillivirus*

Highly contagious (even without close direct contact)

- The virus can persist in the environment for up to 1/2 hour after the infected person has left.



Airborne route

Group A Notifiable disease (by phone 24/7 **ON SUSPICION**)

Vaccine preventable

- 2 vaccines

Complications

- Pneumonia, otitis media, diarrhoea, blindness or encephalitis
- Sub-acute Sclerosing Panencephalitis is a late diagnosis (SSPE)

Diagnosis: IgM, throat swab for measles PCR

Establishing communicability by rash

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Victoria

Most cases are overseas acquired

Two outbreaks in 2016 with cases of locally acquired measles – index cases never identified

Brunswick outbreak 22 cases (5 waves), CBD outbreak 5 cases (2 waves)

Mostly young adults – single or no vaccines

Victorian Data

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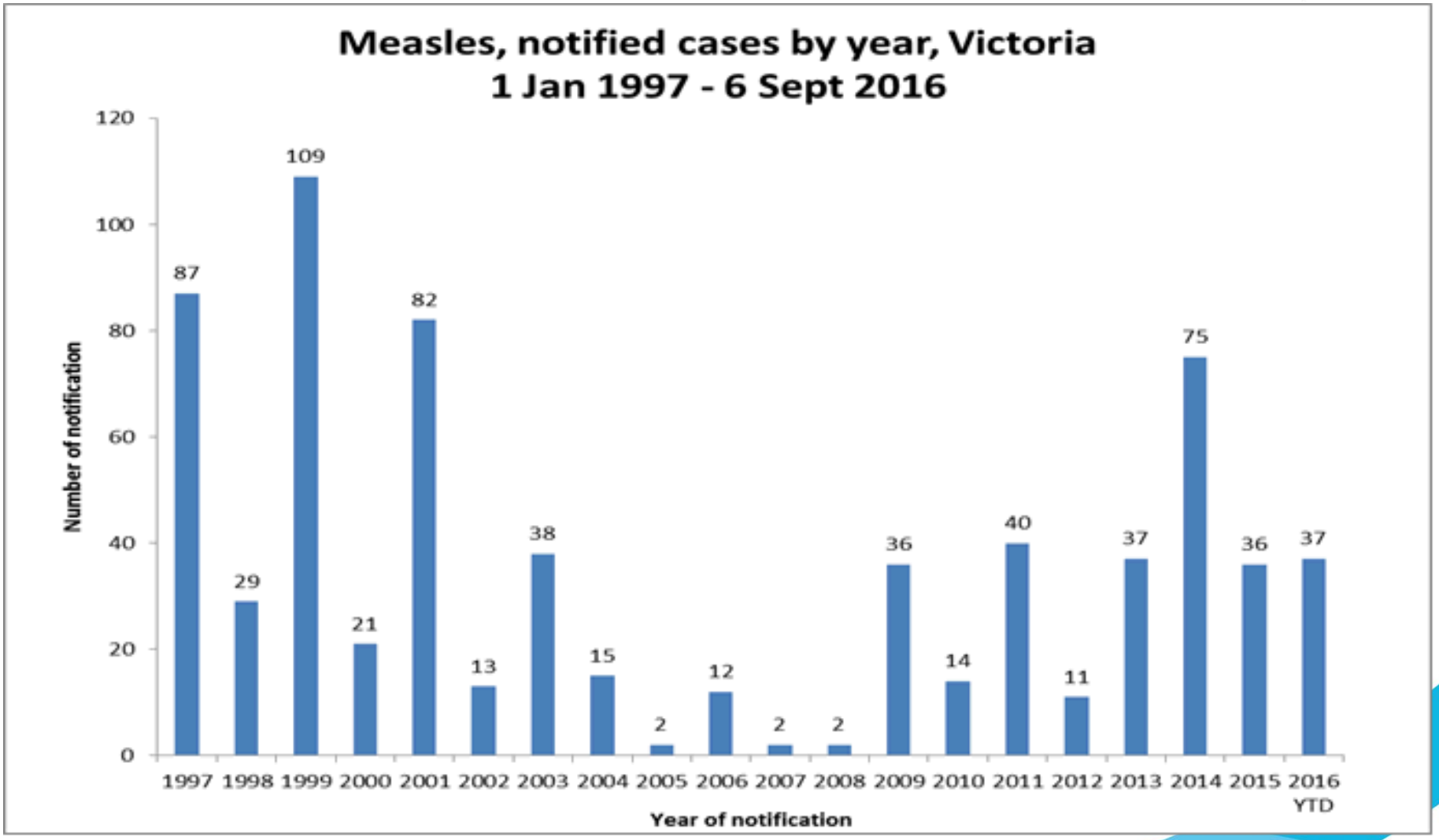

1st contact timeline

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NHIG may be administered

Day 1
Index case symptomatic

Day 2-5
visited 3 primary care providers

Day 6
visited hospital ED

Day 8
re-visited hospital ED, swab for measles PCR, admitted to negative pressure room

Day 9
measles PCR +ve
At this point DHHS were aware

Day 13
Pregnant household contact (32 weeks gestation) went to GP with symptoms.
Swab taken for measles PCR ➔ +ve

About the mother

20 y.o.

G1P0

Non English speaking background (requiring an interpreter)

Had not long been in Australia

Living with husband in an extended family setting

32/40 when 1st diagnosed

Course of maternal illness

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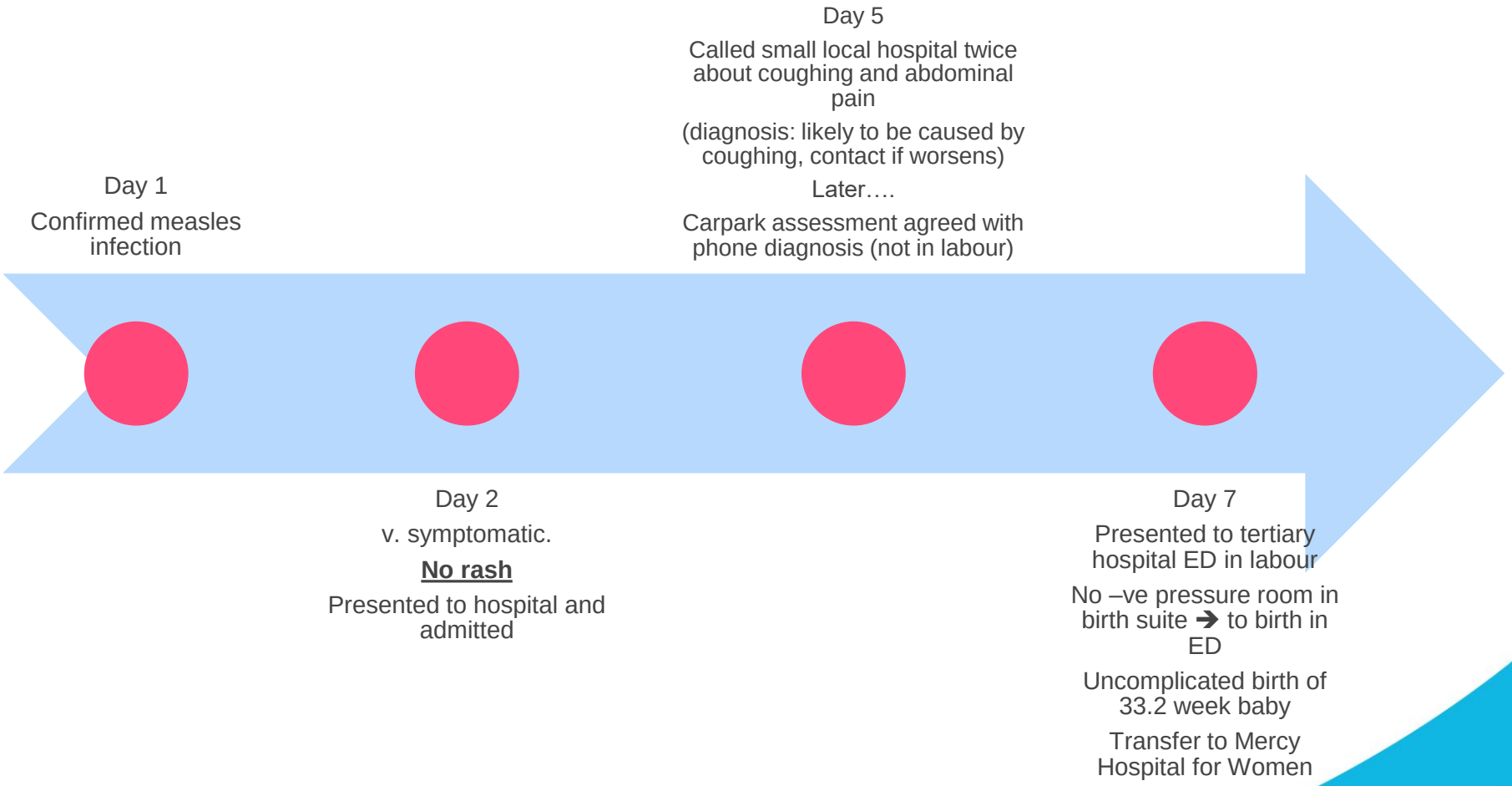

Our Mother

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Arrived in early evening post delivery by ambulance

- Staff received the patient with wearing PPE
- Patient wore mask also during the transfer
- Dedicated lift

Admitted to

- -ve pressure room
- Airborne precautions

Physical condition

- Febrile and extremely tired
- Looked unwell
- Difficult to determine rash due to skin pigmentation

Family

- Husband immune status unknown
  - no Hx of disease or of vaccination --- tested

About the baby

Gestational age: 33.2

Apgar's at birth 9 & 9

BW 1920

Nasopharangeal swab for measles PCR taken at birth at birth… - +ve

IgM taken at birth -ve

NHIG given at birth

Transferred by PIPER (Paediatric Infant Perinatal Emergency Retrieval) to MHW

- –ve pressure room in neonatal unit

Healthy, bonny baby

NGT inserted for 8 days

- Oral feeding established quickly for gestational age

Clinically well

- No fever, no rash, no coryza,, no conjunctivitis or cough

Transferred from isolette on D14

Discharged on D14 to home isolation and HITH

Follow up of baby

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- Post discharge HITH team to monitor weight gain
- ? Infectious with no clinical symptoms
- In consultation with paediatric infectious diseases clinicians
- Weekly PCR swabs taken by HITH/visiting pathology to monitor if still shedding
- Home isolation until 2 swabs negative, 1 week apart
- This occurred on 4/52 age & 5/52 age)

Ongoing follow up by paediatric ID and general paediatrics teams at local tertiary hospital post PCR clearance

Things done well

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Administering NHIG at birth

Taking Measles PCR at birth

Appropriate isolation

Challenges

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Clinical management

- Defining the rash
- Little known about congenital measles
- Maternal/Infant Bonding
- Expressed Breast Milk
- The big unknown is are these babies are infectious?

Inter-organisational communication

- This case involved primary care providers, 2 tertiary referral hospitals (including HITH services), 1 outer suburban hospital, Ambulance service, DHHS
  - Staffing issues (1 on 1 nursing care of a well infant in a busy service)
  - Staff concerns
  - DHHS concerns

Logistical

- Transferring infectious diseases
- Managing Relatives
- Home Isolation

Lessons learned

At Birth

- Administer immunoglobulin
- Take nose and throat swabs for measles PCR

Observe neonate for maculopapular rash, vital signs and activity (active, lethargic etc.)

- Rash may be absent or it may be present at birth or within the 1st 10 days of life
- Neonate may become febrile and systemically unwell.

Care of the neonate

- Negative pressure room (as for measles)

Discharge plan should clearly state how the neonate will be managed in the community and who will have medical oversight if required.

Literature

Limited

- Early gestational measles may leads to FDIU/stillbirth/miscarriage

Neonates Born after 30 weeks appear to do well (NHIG given to most cases)

- Indicates NHIG is beneficial at birth

Using serology as the only diagnostic tool at birth may not be indicative of infection

Case reports of SSPE

References

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Department of Health and Human Services

https://www2.health.vic.gov.au/public-health/infectious-diseases/disease-information-advice/measles

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