

Eye and Vision Conditions in Preterm Children

Findings from the Australian Childhood Vision
Impairment Register

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Preterm birth

- **Preterm birth is defined as < 35 weeks of gestational age**



Born Too Soon: The Global Action Report on Preterm Birth 2012

- 15 million babies are born preterm globally and 1 million die due to complications
- Globally, prematurity is the leading cause of death in babies in the first 4 weeks of life, and the second leading cause in children under 5 years



- **Preterm birth rates are increasing globally**
- **Vision impairment is reported in approximately 25% of preterm babies globally (WHO, 2012)**

Australia's Mothers and Babies (2010), AIHW

- In 2010 there were nearly 300 000 live births in Australia
- 8.3% of babies were born preterm





Demographics

- **N = 55, or 11% of registered children are preterm**
- **Females: 22 (40%)**
- **Males: 33 (60%)**

Location by state

30
25
20
15
10
5
0

NSW

SA

QLD

VIC

TAS

WA



Gestational Age

- **23-29 weeks: 25 (45%)**
- **30-34 weeks: 30 (55%)**

Average gestational age 29 weeks

21 weeks



23 weeks



23 weeks



27 weeks



30 weeks



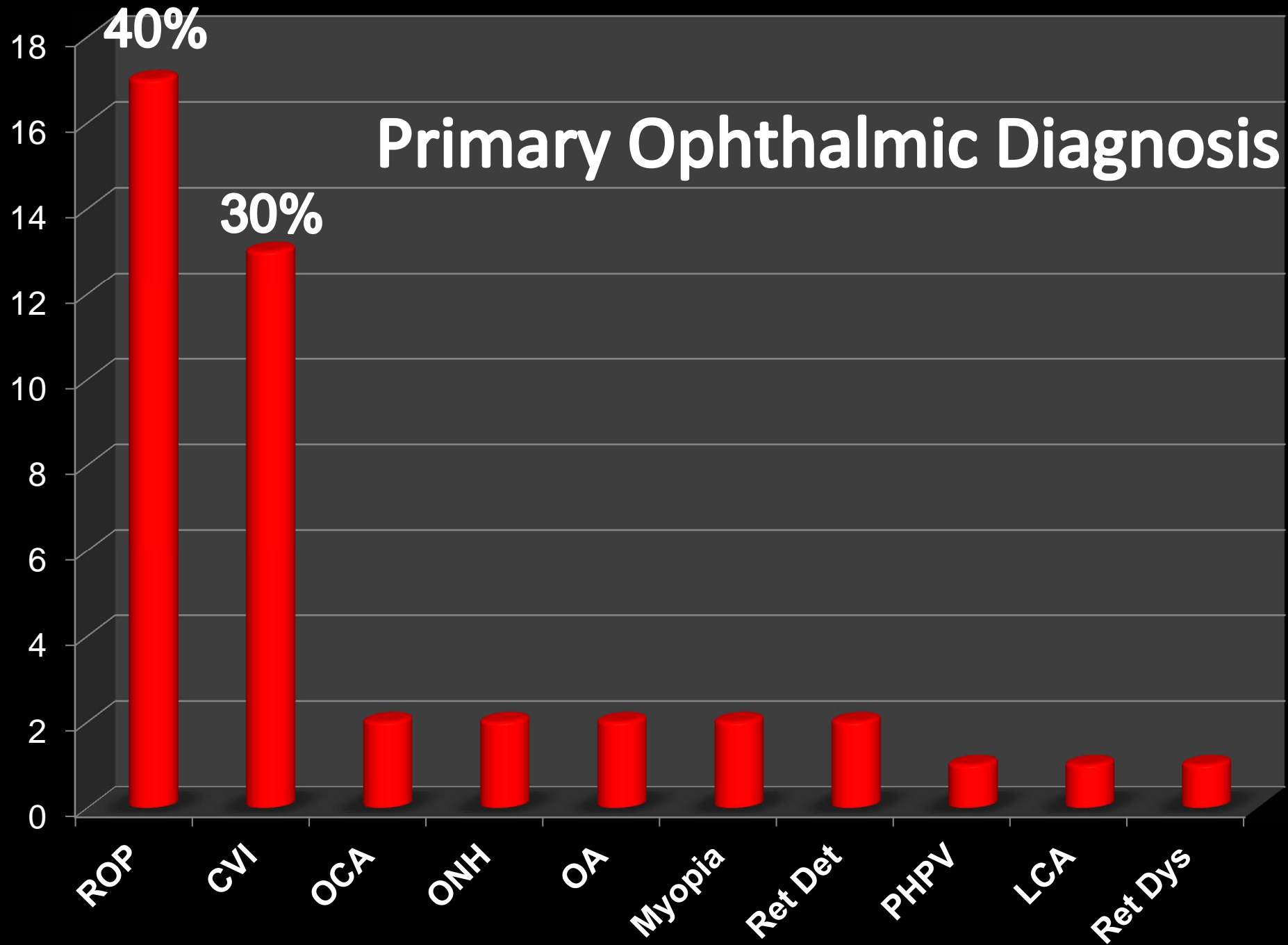
Birth Weight

- **750-2000 grams: 84%**
- **>2000-3000 grams: 16%**
- **48% weighed 750 grams at birth**
- * Low birth weight is twice as likely in mother's who smoke**

580 grams



Primary Ophthalmic Diagnosis



ACVIR

160
140
120
100
80
60
40
20
0

CVI

Ret Dys

OCA

ONH

OA



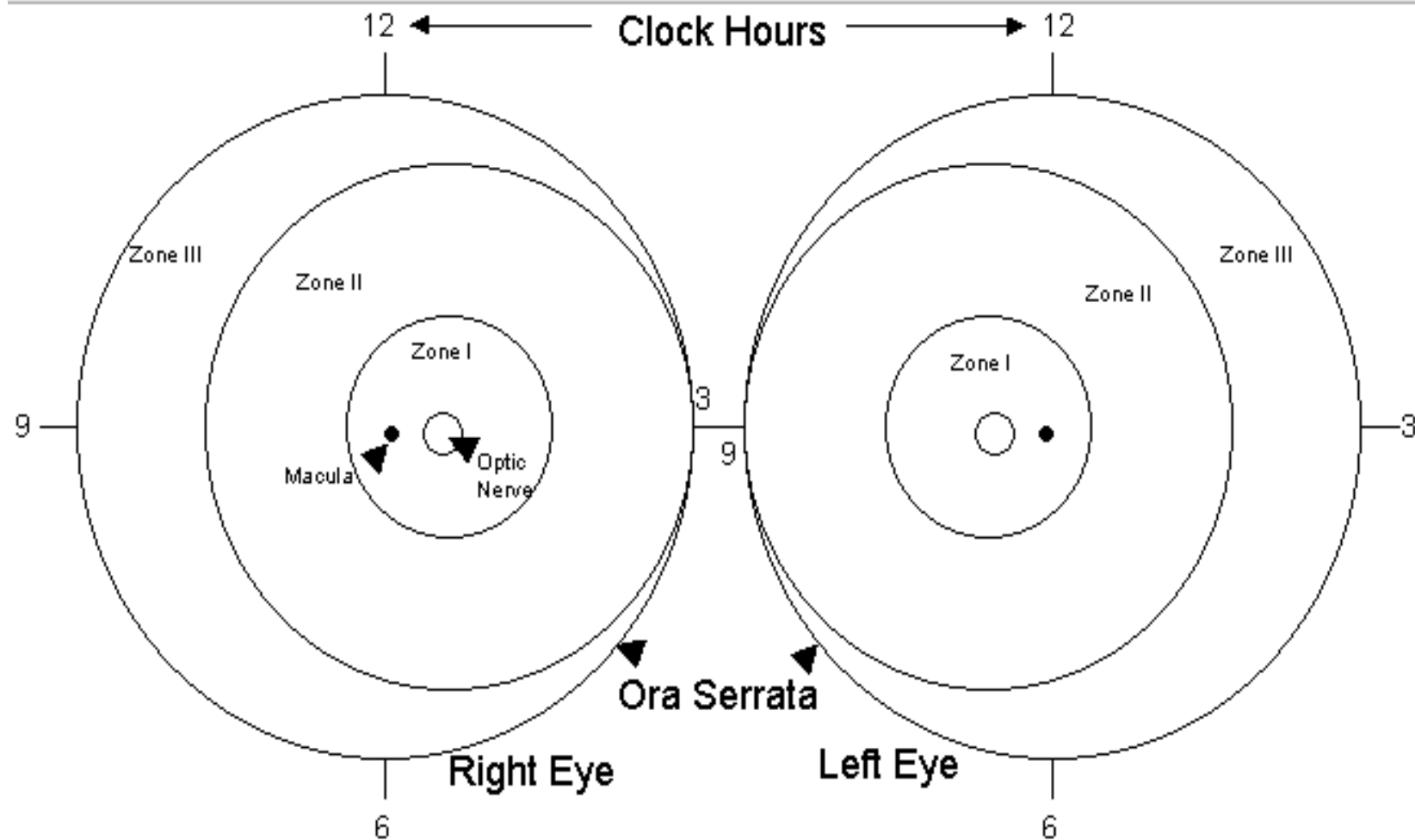
Retinopathy of Prematurity



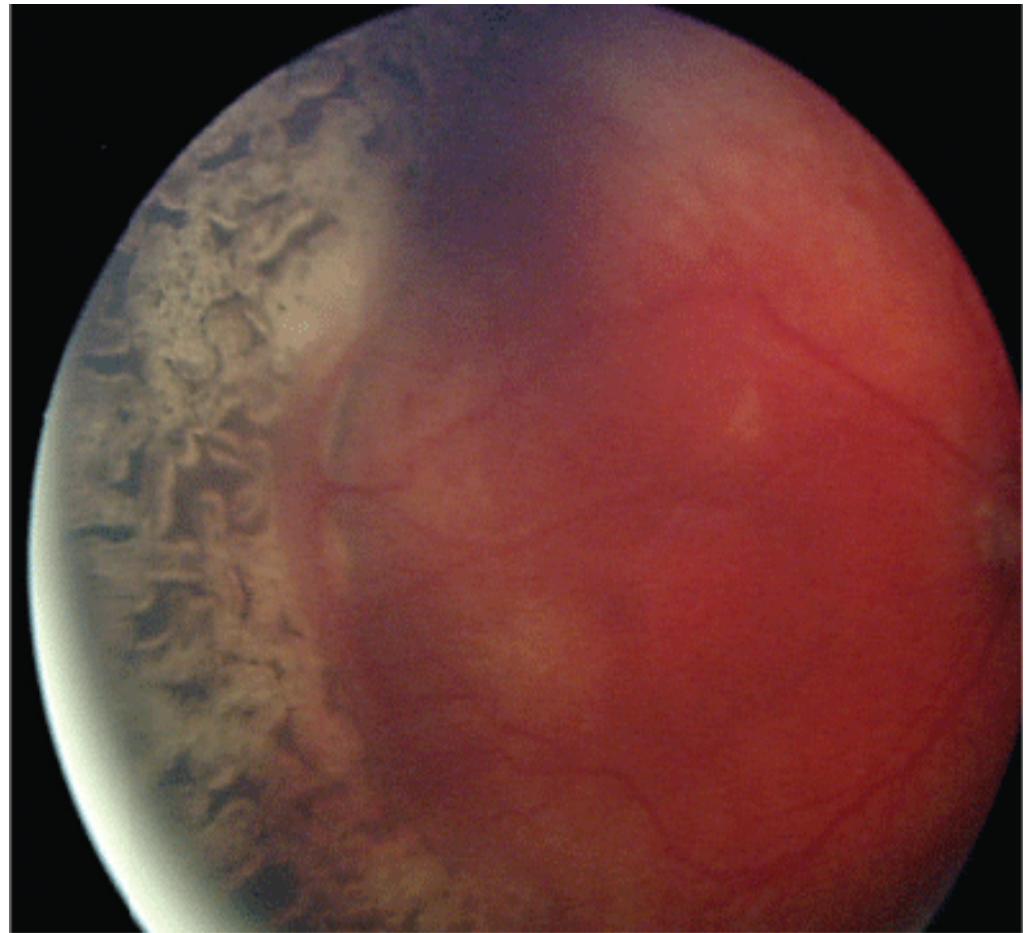
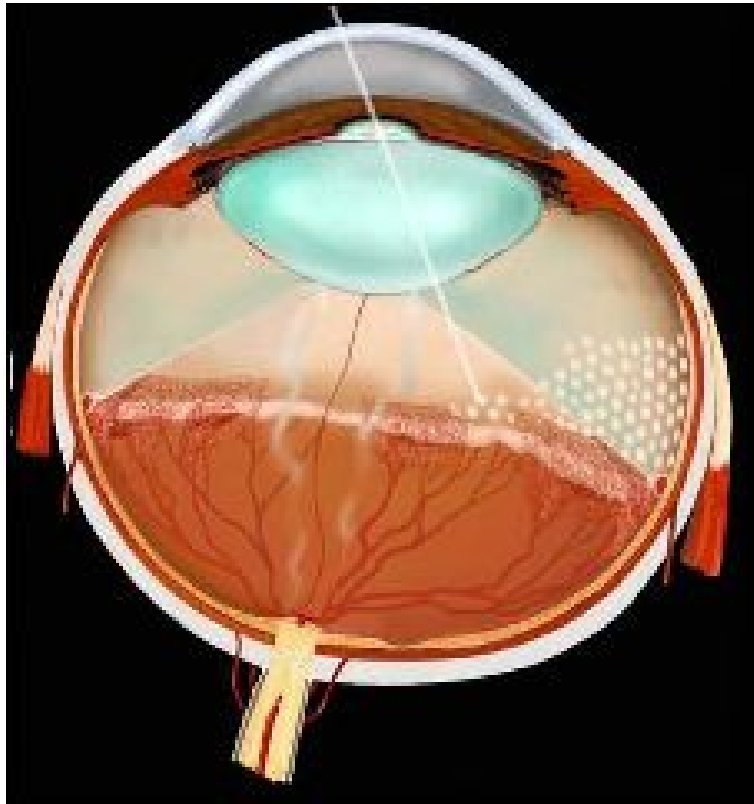
RetCam



ROP Classification System



Treatment



Cortical Vision Impairment

AFB (2012)

“CVI is defined as impaired vision that is due to bilateral dysfunction of the optic radiations or visual cortex or both. It can coexist with ocular and ocular motor disorders.”



Other Conditions

18
16
14
12
10
8
6
4
2
0

Cerebral Palsy

Epilepsy

Autism

Low muscle tone



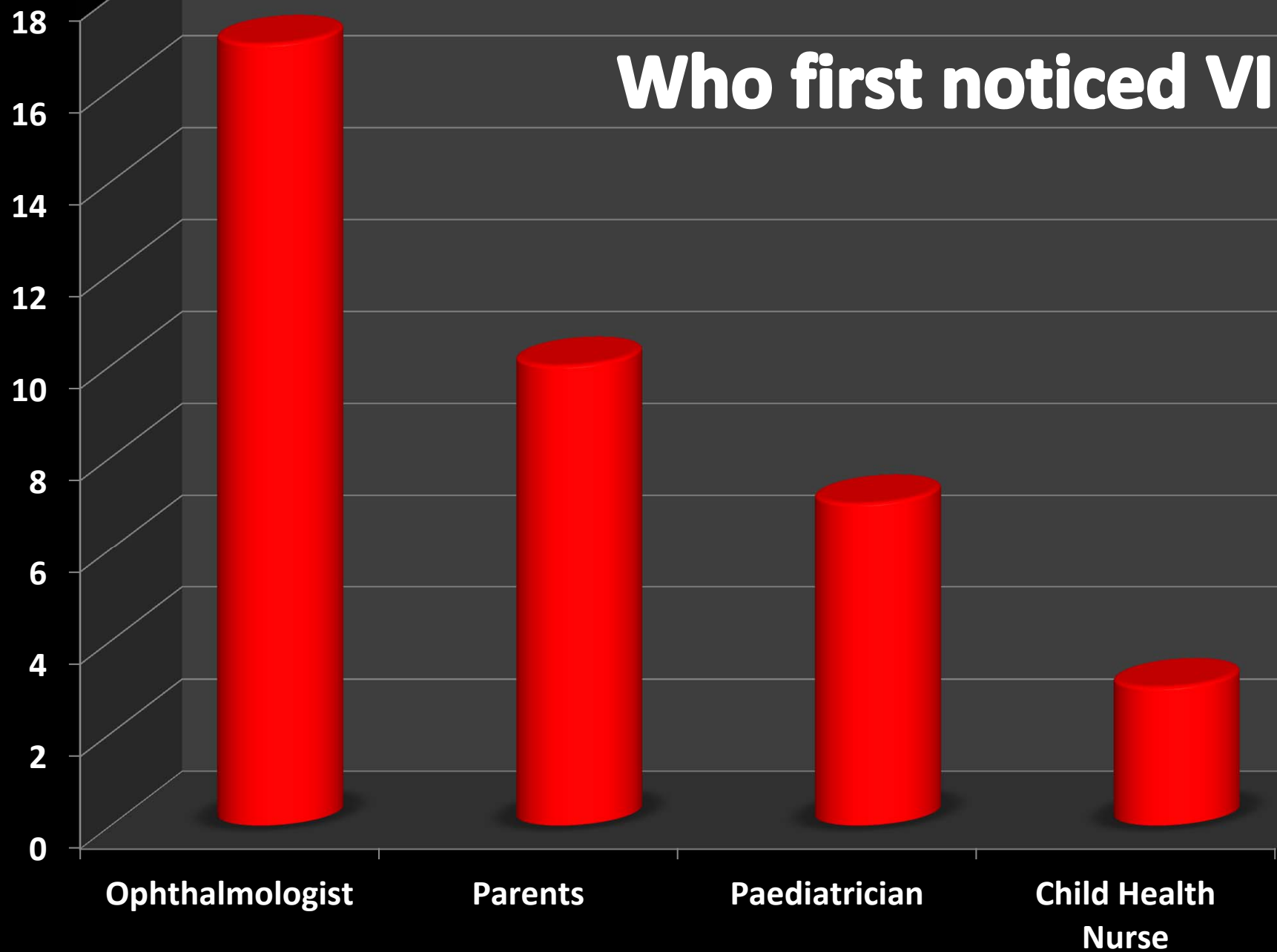
Other Conditions

- **Chronic lung disease**
- **Chronic kidney disease**
- **Hydrocephalus**

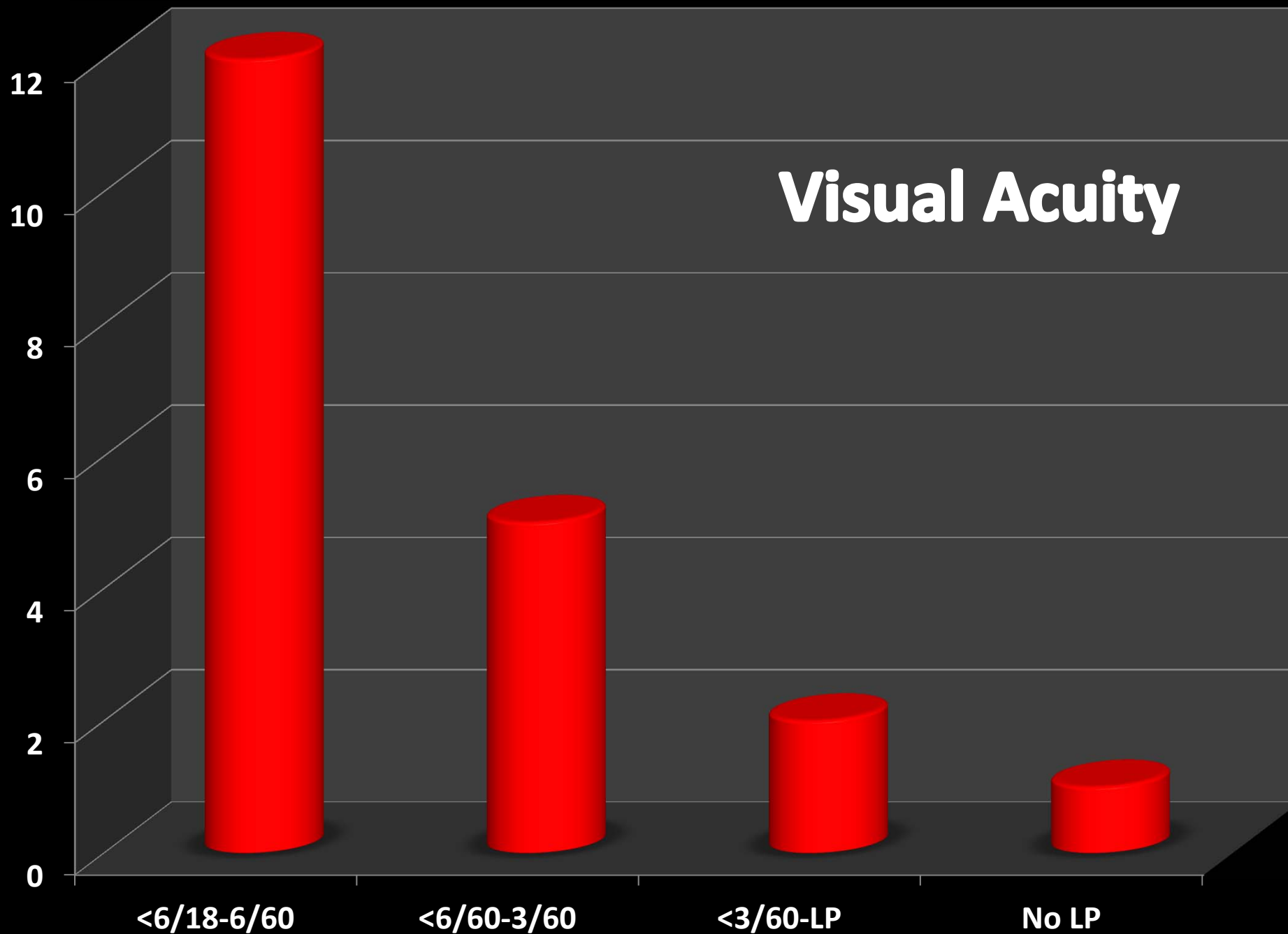
Detection of VI

- **83% of children noticed to have VI in the first 6 months of life**
- **Average time between suspicion of VI and diagnosis of VI was 1.6 months**

Who first noticed VI



Visual Acuity



Kia ora

