Queensland Paediatric Guideline

Guideline for ophthalmic follow-up of ex-premature infants

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Custodian	Director Ophthalmology	**Approval date**	06/03/2026
Accountable Officer	Executive Director Medical Services	**Effective date**	24/03/2026
Applicable to	All CHQ clinical staff	**Review date**	06/03/2032

HUMAN RIGHTS

This governance document has been human rights compatibility assessed. No limitations were identified indicating reasonable confidence that, when adhered to, there are no implications arising under the *Human Rights Act 2019.*

PURPOSE

This guideline has been created to establish a risk-stratified approach to ophthalmic follow-up for infants screened for ROP who did not require treatment, based on evidence from a large Queensland cohort.

SCOPE

This guideline applies to:

- Infants screened for ROP per Queensland Neonatal Network criteria.
- Applies to paediatric ophthalmologists, neonatologists, GPs, child health nurses.

Infants treated for ROP (laser or anti-VEGF) are excluded as they will already have an established care pathway.

GUIDELINE

This guideline aims to allocate specialist ophthalmology resources to infants at genuine risk of ocular morbidity post-ROP screening; to avoid unnecessary clinical burden for low-risk infants; ensure clear escalation pathways for concerns and to maintain timely access for those with red flags or higher ROP stages.

A CHQ analysis of 1027 ex-premature infants screened, not treated for ROP showed: (REF 1)

- **Low prevalence** of ocular issues at 12 months of corrected age:
  - Refractive error 2.3%
  - Spectacle prescription 1.9%
  - Strabismus 3.7%
  - Amblyopia 0.2%
- **No association** with gestational age or birth weight.
- **Strabismus more common** in infants with high stage (S3) of ROP (5.3% vs 2.3%).

Most children without ROP or comorbidities had normal findings.

1.0 RECOMMENDATIONS

1.1 Low-Risk Infants - NO routine ophthalmology review required

- **Applicable to infants who meet all the following criteria:**
  - No ROP, or stage 1 or 2 ROP detected during screening
  - No parental or clinician concern
- **Management:**
  - No ophthalmology appointment required after discharge from NICU
  - Attend routine **preschool vision screening** (Appendix 1)
  - Seek referral any time concerns arise

1.2 Infants Requiring Ophthalmic Review - Targeted Follow-up

- **Infants with higher stage ROP (Stage 3, or worse)**
  - One ophthalmology review at **12–18 months corrected age, or earlier deemed appropriate by screening ophthalmologist**
  - Further review only if abnormalities found
- **Clinical Concern**
  - Abnormal visual behaviour
  - Suspected strabismus
  - Abnormal red reflex
  - Parent or clinician concern → **Prompt ophthalmology referral**

2.0 RATIONALE

- Universal review does **not** improve outcomes.
- Targeted follow-up focuses resources on infants at genuine risk.
- Preschool vision screening programs reliably detect amblyopia and refractive error.
- Aligns with international evidence favouring “as-indicated” models.

3.0 IMPLEMENTAION

- Neonatal discharge summaries should clearly state follow-up pathway
- Health professionals should provide parents with education (see handout).
- Data collection should be ongoing for future audits.
- Guideline should be reviewed every 6 years.

4.0 SAFETY CONSIDERATIONS

- Parents must be educated on visual red flags.
- Any deviation in visual behaviour warrants early referral.
- Premature infants with ROP or comorbidities remain at increased risk and must be reviewed.

5.0 SUMMARY

This guideline recommends **selective**, evidence-based ophthalmic follow-up only for ex-premature infants with identifiable risk factors. Routine review of all infants is not required.

SUPPORTING DOCUMENTS

Standards:

- National Safety and Quality Health Service (NSQHS) Standards

CONSULTATION

Key stakeholders who reviewed this version:

• Director of ophthalmology CHQ • Lead Orthoptist CHQ	• CNC ophthalmology CHQ

DEFINITIONS

Term	Definition
ROP	Retinopathy of prematurity
Premature	Defined as birth before 37 weeks’ gestation, with very preterm infants being born before 32 weeks and those classified as extremely preterm born before 28 weeks, according to the WHO.

REFERENCES

No.	Reference
1.	Hegde M, Willett F, Dai S. The rationale for long-term follow-up of ex-premature infants who were screened, but not treated, for ROP. 56th RAZNCO Annual Congress, Melbourne 2025
2.	https://www.rcpch.ac.uk/resources/screening-retinopathy-prematurity-rop-clinical-guideline
3.	WHO, World Health Organisation; WHO EMRO - Prematurity accessed 02/02/2026

GUIDELINE REVISION AND APPROVAL HISTORY

Version No.	Modified by	Amendments authorised by	Approved by	Comments
1.0 06/03/2026	Director Ophthalmology	A/Divisional Director Surgery & Peri Op	Chief Operating Officer	New document

Key words	ROP, Ophthalmology, premature, 00417

Accreditation references	The National Safety and Quality Health Service (NSQHS) Standards (1-8):
	• Standard 1 Clinical Governance
	  ○ Action 1.27 Evidence-based care
	• Standard 2 Partnering with Consumers
	  ○ Action 2.06 Sharing decisions and planning care
	  ○ Action 2.08, 2.10 Communication that supports effective partnerships

APPENDIX 1:

Prep vision screening - Information for parents and carers

APPENDIX 2: PARENT INFORMATION HANDOUT

Children's Health Queensland Hospital and Health Service

Queensland Children's Hospital, Department of Ophthalmology

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Parent Information

Why was my baby screened for ROP?

Premature babies can develop **Retinopathy of Prematurity (ROP)**, a condition where the retina is not fully developed.

Your baby underwent eye screening during their hospital stay in NICU so that any signs of severe ROP could be identified and managed appropriately.

After discharge from ROP screening, do all premature babies need an eye check later?

No.

New research from the Queensland Children's Hospital (involving over 1,000 premature babies) shows that **most premature babies who did NOT need ROP treatment have excellent eye health at 1 year of age.**

Only **very few** had:

- Refractive error (2%)
- Strabismus / eye turn (3–4%)
- Amblyopia / "lazy eye" (0.2%)

This means **most babies do not need an eye clinic visit** after leaving hospital.

Who do we recommend having a follow-up eye appointment?

Your baby is recommended to have an eye check at 12–18 months if ANY of the following apply:

1. Your baby had stage 3 ROP at some stage whilst being screened

2. You or your doctor have any concerns about:

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- Eye alignment / turning
- Poor or inconsistent eye contact
- Rapid eye movements (nystagmus)
- Abnormal red reflex (in photos)
- Any unusual visual behaviour

If **any** apply → your baby should see a paediatric ophthalmologist.

Who does NOT need a routine eye clinic visit?

Your baby does **NOT** need a routine ophthalmology appointment if they have:

- No ROP, or Mild (Stage 1,2) ROP
- Normal visual behaviour

These children will be assessed through the **standard preschool vision screening program** before starting school (age 4–5).

When should I seek help?

If you notice:

- One eye turning
- Poor tracking of faces
- White reflex in photos
- Any concerning behaviour

→ Please see your GP or child health nurse for referral.

Your child's vision is important. We are here to help.

If you are unsure whether your baby needs an eye check, speak to your neonatal doctor, GP, or child health nurse.

Reference:

Hegde M, Willett F, Dai S. The rationale for long-term follow-up of ex-premature infants who were screened, but not treated, for ROP. 56th RANZCO Annual Congress, Melbourne 2025

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