Visual loss in children

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1 Care map information

Quick info:
Definitions:
• an impairment of visual function which causes restriction in a person's life, for which full remediation is not possible with conventional spectacles, contact lenses, or medical intervention [RCOphth]
• measures of visual function for sight-impaired [RCOphth]:
  • visual acuity between 3/60 and 6/60 with a full visual field
  • visual acuity of up to 6/24 with any of:
    • moderate restriction of visual field
    • media opacities
    • aphakia
  • 6/18 or better with either:
    • gross field defect, eg hemianopia
    • marked constriction of the field, eg glaucoma or retinitis pigmentosa
• measures of visual function for severely sight-impaired (blind) [RCOphth]:
  • visual acuity less than 3/60
  • visual acuity between 3/60 and 6/60, but with a very contracted field of vision (unless this has been longstanding)
  • visual acuity better than 6/60 with a very constricted visual field, especially in the lower part of the field, excluding people with visual acuity better than 6/18 with:
    • homonymous hemianopia; or
    • bi-temporal hemianopia
Prevalence:
• about 346,000 people are registered as having a sight problem in England, Wales, and Scotland [RCOphth]
• around 2 million people self-define as having a sight problem [RCOphth]
• 18 per 10,000 children will have low vision before age 16 years [RCOphthChild]
Prognosis:
• people with impaired vision are at greater risk of [AOA]:
  • falling
  • sustaining a hip fracture
  • mortality
  • earlier admission to a nursing home
  • greater use of community services
  • increased social isolation
  • depression

3 Updates to this care map

Quick info:
References:

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4 Visual loss - clinical presentation

Quick info:
Low vision may be picked up as part of regular screening [RCOphthChild]:
• neonatal screening
• screening at 4-5 years
• secondary screening of children with a suspected ophthalmic disorder
• surveillance of high-risk groups:
  • sensorineural hearing impairment
  • neurodevelopmental impairments, eg Downs syndrome
  • family history of childhood onset ophthalmic disorder, eg retinoblastoma

Low vision is defined as vision impairment that is not corrected by standard eyeglasses, or by medical or surgical treatment [AOA]. Infants and young children who have congenital ocular abnormalities leading to visual defects should be certified as sight-impaired, unless they are obviously severely sight-impaired [CET1].

Referral to hospital eye services usually occurs through [CET1]:
• an identified concern by a:
  • parent
  • carer
  • teacher
• peri-natal or pre-school screening
• family history of sight loss, or conditions associated with sight loss

5 Confirm diagnosis

Quick info:
A low vision assessment can be performed by [CET2]:
• ophthalmologist
• orthoptist
• paediatrician
• GP
• education professional

Assessment should include [CET2]:
• comprehensive history taking, including:
  • symptoms
  • use of spectacles and devices
  • school support
  • familial history of low vision
  • any home modifications
  • near tasks
  • mobility
• assessment of visual function, including:
  • visual acuity, eg LogMAR tests, Maclure test
  • contrast sensitivity, eg Hiding Heidi chart
• visual fields, eg confrontation fields, Goldmann fields, static field tests
• colour vision, eg Ishihara test, D-15 and Hardy-Rand-Rittler (HRR) tests
• refraction and accommodative function
• functional vision and quality of life, usually performed by a Qualified Teacher of the Visually Impaired (QTVI)

Low vision can be defined as [CET1]:
• measures of visual function for sight-impaired [RCOphth]:
  • visual acuity between 3/60 and 6/60 with a full visual field
  • visual acuity of up to 6/24 with any of:
    • moderate restriction of visual field
    • media opacities
    • aphakia
  • 6/18 or better with either:
    • gross field defect, eg hemianopia
    • marked constriction of the field, eg glaucoma or retinitis pigmentosa
• measures of visual function for severely sight-impaired (blind) [RCOphth]:
  • visual acuity less than 3/60
  • visual acuity between 3/60 and 6/60, but with a very contracted field of vision (unless this has been longstanding)
  • visual acuity better than 6/60 with a very constricted visual field, especially in the lower part of the field, excluding people with:
    • homonymous hemianopia; or
    • bi-temporal hemianopia

NB: In practice, this may be extended to include any visual impairment that may affect learning [CET1].

Prognosis cannot always be determined after diagnosis, especially in [CET1]:
• children with delayed maturation of the visual pathways
• babies with known cerebral damage, eg:
  • premature babies
  • cerebral palsy

6 'Early years' services

Quick info:
Consider referral to an 'early years' service, where present, for children younger than age 5 years [CET4].
Families with young children may also receive generic support via local Sure Start Children's Centres [CET4].
Early referral to a Qualified Teacher of the Visually Impaired (QTVI) may also be useful [CET4].

7 Provide information

Quick info:
Provide information to the child and parents/carers as appropriate about [CET1]:
• the issue of certification
• the value of registration
• the role of disability discrimination
• support services, eg:
  • Action for Blind People
  • the Royal National Institute of Blind People (RNI)
  • LOOK
  • the National Blind Children's Society
Counselling should be available to families who want it [RCOphthChild].
8  Prescribe appropriate visual aids

Quick info:
Before prescribing visual aids [CET3]:
- establish the goals
- manage expectations appropriately
Consider prescribing the following, as appropriate [CET3]:
- spectacles and contact lenses:
  - consider prescribing for even small refractive errors
  - contact lenses:
    - may be prescribed for clinical or cosmetic reasons
    - may attain better visual acuity in cases of high myopia
    - nystagmus is not a contraindication
- optical aids can include:
  - high reading additions
  - hand and pocket magnifiers
  - stand magnifiers
  - bar and bright field magnifiers
- distance aids:
  - monoculars
  - binoculars
- non-optical aids:
  - text enlargement
  - black fibre-tipped pens (to increase contrast)
  - home modifications, eg extra rails and lighting
- electronic aids:
  - speech converters
  - text enlargement
  - tints and/or brimmed hats to reduce glare

9  Referral to health and social care

Quick info:
Certification in children and young people is usually through [CET1]:
- Certificate of Vision Impairment (CVI)
- Referral of a Vision Impaired Patient (RVIT) – hospital-based referral form
Registration does not secure support from specialist education services, who can be contacted by:
- teacher
- ophthalmologist
- any other care giver
People in Wales can access a contact directory and referral forms as part of the Children’s Low Vision Project (URL) at http://www.wales.nhs.uk (URL).

12  Local care provision

Quick info:
Care provision for children and young people with visual impairment [CET4]:

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• many will not come into contact with a social care professional unless they have:
  • complex needs in additions to visual impairment
  • child protection issues
  • provision varies across the country
• low level social care work is increasingly taken on by educational services and voluntary agencies, eg:
  • Royal National Institute of Blind People (RNIB)
  • Action for Blind People
  • National Blind Children's Society
• mobility and rehabilitation services:
  • may work for:
    • social care teams
    • voluntary sector
    • education teams
  • usually provide services including:
    • taught programmes on orientation and mobility
    • teaching daily living skills
    • mobility outings

13 Specialist educational services

Quick info:
Consider assessment for a statement of special educational needs (SEN) [CET4]:
  • consider a school that has teachers with specialist training
Education services can be [CET4]:
  • centrally held stand-alone teams
  • part of a service for children with sensory impairment
  • part of a service for children with generic special needs
  • multi-agency hubs with staff from health and social care
  • outreach teams from local specialist schools
Education teams usually consist of:
  • Qualified Teacher of the Visually Impaired (QTVI) [CET4]:
    • are teachers with a further specialist qualification
    • often play a key role in supporting the family and liaising between professionals
    • may have a direct role in teaching children
  • mobility/rehabilitation specialist
    • may work for:
      • social care teams
      • voluntary sector
      • education teams
    • usually provide services including:
      • taught programmes on orientation and mobility
      • teaching daily living skills
      • mobility outings
      • technician who supports production of materials in alternative formats
      • specialist teaching assistants

14 Follow-up
Visual loss in children
Surgery > Ophthalmology > Visual loss

Quick info:
Follow-up should include:

- annual review of the statement of special educational needs (SEN) [CET4]
- regular review of visual aids [CET3]
- changing aids to meet changing circumstances, especially at transition stages [CET3]:
  - primary to secondary school
  - secondary school to further education or the workplace
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Key Dates

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