

## **Appendix**

### **Definitions**

Visual impairment is defined in relation to acuity level in the better eye (after correction of refractive error) and may acknowledge the impact of field restriction.

WHO definition :

Severe visual impairment / blindness - worse than 6/60

Moderate Visual impairment – less than 6 / 18 to 6 /60

- *Note that studies do not always use the same definition.*
- *See a useful table of definitions in 'Solebo AL, Rahi JS. Epidemiology, aetiology and management of visual impairment in children. Arch Dis Child 2014;99:375–379'*

The Snellen notation has traditionally been used in the UK (metres) and the US (feet) whereas in Europe a decimal notation has been more common.

LogMAR values, from charts with design features that create a linear rather than a geometric progression (such that the difference between each line on a chart is equal) are now more commonly reported.

logMAR	Snellen notation	Decimal
0.0	6/6	1.0
0.3	6/12	0.5
0.6	6/24	0.25
0.9	6/48	0.125

1.0	6/60	0.1
1.3	6/120	0.05

### **Other vision problems**

Refractive error occurs when there is a mismatch between the axial length of the eye and the power of the lens and corneal curvature

Accommodation refers to the eye's ability to alter its focusing power for targets at different distances.

Emmetropia The state of refraction of the eye in which parallel rays, when the eye is at rest, are focused exactly on the retina

Emmetropisation. The process by which the refraction of the anterior ocular segment and the axial length of the eye tend to balance each other to produce emmetropia

Myopia: a condition in which the visual images come to a focus in front of the retina of the eye because of defects in the refractive media of the eye or of abnormal length of the eyeball: distant objects appear blurred, while near objects can still be seen clearly

Hypermetropia a condition of the eye in [which](#) parallel rays are focused behind the retina, distant objects being seen more distinctly than near ones

## **Who's who in the Eye clinic**

**Ophthalmologist** ('ophthalm' – Greek - 'eye') a medically trained doctor who acts as both physician and surgeon. A paediatric subspeciality interest develops during training but usually paediatric practice is combined with continued work with adults, apart from in tertiary specialist centres, where highly specialist expertise is required to manage children with rare disease.

**Orthoptist** ('orth' –Greek - 'ortho' - straight – thus 'straight eyes') assesses vision in order to diagnose and treat visual problems involving eye movement and alignment. In paediatric practice, orthoptists play a key role in the assessment and management of squint and amblyopia, and generally work as a member of the Eye team.

**Optometrist** ('optos' – Greek - 'seen/visible' – thus 'sight measurement') assesses vision and performs a detailed eye examination to establish whether there is refractive error that would benefit from provision of spectacles. Optometrists work closely with opticians in high street practice but may also work within the Eye team.