Clinical Guidelines paper – supplementary digital content.

Key open-access meta-analysis and systematic review papers:

- Efficacy comparison of 16 interventions for myopia control in children: a network meta-analysis.(Huang et al., 2016)
- The safety of soft contact lenses in children.(Bullimore, 2017)
- The safety of OK: a systematic review. (Liu and Xie, 2016)
- Time spent in outdoor activities in relation to myopia prevention and control: a meta-analysis and systematic review.(Xiong et al., 2017)

Online practitioner education resources:

These are examples of currently available online practitioner resources:

- Professional (non peer reviewed) publications are a source for clinically focussed articles, such as Contact Lens Spectrum and Review of Optometry
- A clinically-focussed compendium of the latest research and practical advice on myopia management is available at www.myopiaprofile.com.
- A practitioner education website with support resources is www.managemyopia.org
- A comprehensive listing of publication abstracts are available from the practitioner education site www.myopiacontrol.org/.
- A practitioner blog for clinically relevant research, available in English, German and French, is available at www.myopiacare.com/blog
- A beginner's guide to OK principles and fitting is provided at www.eyefit.com.au The Brien Holden Vision Institute (BHVI) Managing Myopia course was piloted in Australia in 2017 and is now being extended, in an online and webinar format, to other countries. Clinicians can register their interest for future courses online. https://academy.brienholdenvision.org/browse/australia/courses/myopia

Online forums:

These are closed Facebook groups requiring administration permission to enter. Examples include:

- Myopia Profile. 'An international collective for optometrists to discuss myopia control – science, clinical cases and management – with a focus on putting research into practice.'
- International Academy of OK and Myopia Control. 'The IAOMC is open to practitioners, researchers and scientists interested in corneal reshaping.'
- Ortho-K Lens Specialists. 'This group is accessible to Doctors or Opticians that are fitting Ortho-K lenses and other professionals in the Ortho-K community.'
- EurOK – European Academy of OK and Myopia Control – the European section of the IAOMC, 'open to all practitioners and researchers in the field of OK and Myopia Control.'
- OK Society of Oceania – orthokeratologists group.

Resources for practitioner-patient communication

Below are examples of currently available practitioner-patient communication tools and resources:

- The open access, peer reviewed research articles described above can be provided by practitioners to parents interested in research detail.
- A paper based, practitioner-patient communication tool, with chairside reference guide, can be downloaded in English, Chinese, German or French from www.myopiaprofile.com
- A patient-specific explanation of myopia and its consequences, a linked blog, and a short survey to explain genetic, environmental and individual risk factors for myopia development and progression is available at www.mykidsvision.org
- The Brien Holden Vision Institute Myopia Calculator is designed to predict progression of myopia throughout childhood, based on the child's current age and refraction. It then allows the practitioner to apply different myopia treatment strategies to demonstrate the effect of myopia management. https://www.brienholdenvision.org/translational-research/myopia/myopia-calculator.html
- Myappia is an android app which also allows for visualisation of childhood myopia progression based on research, and the likely outcomes of treatment choices. (Search Google Play / Myappia)
- An information home page, comprehensive survey tool for myopia risks and two leaflets on myopia (available for purchase) are found at www.myopiacare.com. This is available in English, German, French, Spanish, Dutch, Italian, Polish and Norwegian.
- Myopia treatment types, FAQ's and a blog for parents are available at www.myopiainstitute.com
- Information on myopia for parents can be found at http://www.allaboutvision.com/conditions/myopia.htm

Both www.myopiacare.com (International) and www.myopiainstitute.com (North America) offer a 'Specialist / Doctor finder' where a practitioner can apply to have their name listed, for public searches.

Software tools available to customize OK lens designs:

- Orthotool (http://orthotool.com/)
- Wave (https://www.wavecontactlenses.com/software.html)
- EyeSpace (http://eyespacelenses.com/)
- RGP designer (https://rgpdesigner.com/)
- Easyfit software (http://www.menicon.com/pro/our-products/gp-lens/menicon-z-night/)

Sample informed consent form: Myopia Control Treatment Informed Consent example form, from the University of California Berkeley Myopia Control Clinic.

Myopia Control Treatment Informed Consent

Evidence in the scientific literature suggests that some novel contact lens designs and eye drops may slow the progression of nearsightedness in children. However, the United States Food and Drug Administration (FDA) has not specifically approved any contact lenses or eye drops for this specific purpose. All contact lenses used in the Myopia Control Clinic at UC Berkeley Eye Center have been approved by the FDA, just not specifically to slow the progression of nearsightedness. 1% atropine eye drop has been approved by the FDA for the treatment of amblyopia and stratismus, however 0.01% atropine eye drop for myopia retardation is still considered off-label use.

There are three ways to potentially slow the progression of nearsightedness in children: corneal reshaping and soft bifocal contact lenses and/or atropine eye drops. As explained below, each treatment has its own risks. Your child's treatment(s) is/are marked with a check.

❑ **Corneal Reshaping**
Corneal reshaping contact lenses are worn during sleep and removed in the morning. They temporarily change the shape of the cornea (the clear window on the front of the eye), so that the child can see clearly all day long without glasses or contact lenses. During the first two weeks of wear, your child will experience changing vision. When the vision gets worse, s/he may put on glasses to provide clear vision. Although the chance of an eye infection is still very low (about one case per 500 years of wear), it is greater for corneal reshaping contact lenses than usual daytime contact lens wear because the contact lens is worn overnight.

❑ **Multifocal Contact lenses for daytime wear**
Soft and rigid gas permeable multifocal contact lenses are routinely worn to help people over 40 years of age read clearly as well as see far away. Children may not see quite as clearly with these contact lenses as other types of contact lenses, but there are no additional risks compared to regular daily contact lens wear.

❑ **Atropine**
Atropine is an eye drop that typically makes light seem bright because it makes the pupil (black hole in the middle of the eye) bigger, and it blurs near vision because it reduces the ability to focus the eyes while looking at near. Low concentration (0.01%) atropine has been shown to slow the progression of nearsightedness by 61% without increasing pupil size or decreasing near vision dramatically. Only 8% of children complained of problems with low concentration atropine, and glasses can reduce symptoms if your child notices poor reading vision or lights seem too bright.

I understand the risks as indicated above, and I understand that while these treatments are approved by the FDA, they are not approved to slow the progression of nearsightedness. I further understand that there is no guarantee or assurance of any treatment outcome for my child and that these treatments may not slow the progression of nearsightedness.

Child's name (print): _____
Parent's name (sign): _____
Date: _____
Dispenser's name (sign): _____