

Colorimetry Testing and Prescribing

Background

The history of tinted lenses was and still has an insubstantial evidence base. Tinted lenses were first prescribed by Mrs Helen Irlen, with no identifiable research behind them and at significant cost to the patient. As a result of the scepticism about this practice this area was researched and the intuitive colorimeter was born to allow a double blind trial to be done. The ¹research showed that a small group of children experienced "Meares Irlen Syndrome" (words observed on a white page appear to move or come in and out of focus) and a small number of these children did benefit from a tint, however only a very small group.

With such a limited evidence base available and given that almost every patient could find a colour that makes text appear easier to read there is a disparate and patchy service across Wales.

It has come to the attention of Optometry Wales that some teachers in Wales are now receiving training (we are unaware of who provides this training) on overlays and how to recognise Irlens Syndrome and are giving overlays without the child ever having had an eye test (as presumably this is not mentioned in the training). The teachers have been advised that most Optometrists don't understand Irlens Syndrome and that it is 'probably not worthwhile going to see one about the vision problems'. Many of these children may have a "regular" eye problem - convergence insufficiency or hyperopia or Cyls that need a normal pair of glasses or some exercises to correct.

Even when these children do present at a practice there is still a significant cohort of children who may benefit from tints but are not able to access them due to the cost.

Overlay assessments and colorimetry assessments have produced some positive results. We estimate that fewer than 30% go on to need tinted lenses and more like 5-10% have true Irlens Syndrome.

Optometry Wales propose the following to respond to a growing number of concerns about this area:

- Collation of a National Resource.

¹ Insert reference

This would not be endorsed by Welsh Government, NHS Wales or Optometry Wales but would be available for practices to signpost patients. We suggest that the list contains only:

1. Practitioners who provide overlay assessments (including hospital departments)
2. Practitioners who provide Colorimetry assessments

Although a list currently exists : <http://www.s4clp.org/> we would suggest that an exercise specifically for Wales could be generated to ensure access for all in Wales and ease of reference. The list could also include a link to the College of Optometrists guidance (attached as Appendix One).

Appendix One

Guideline

E2.01 When examining a patient with specific learning difficulties, the optometrist has a duty to carry out all tests necessary to satisfy him/herself of the appropriateness of any intervention prescribed, including the prescribing of tinted lenses. The optometrist has a duty to ensure that s/he has the necessary training.

Advice

Conventional optometric/orthoptic treatment

E2.02 Patients with specific learning difficulties may have conventional visual or orthoptic problems that require treatment. Optometrists should ensure that these are addressed before any treatment such as vision therapy or the prescribing of tinted lenses is carried out. It is unethical to use tinted lenses or vision therapy before the patient has been thoroughly examined to exclude other visual problems.

Tinted lenses

E2.03 Before prescribing specific tinted lenses the following points should be borne in mind:

- (a) Tinted lenses should not be prescribed unless the practitioner is satisfied that the lenses will be of benefit. Tinted lenses should not be prescribed before the patient has shown a significant improvement in symptoms or in visual performance with coloured filters. An improvement in symptoms can be inferred from the sustained use of a coloured overlay (a coloured sheet of plastic placed upon the page). An improvement in visual performance can be demonstrated by an immediate increase of more than 5% in reading speed with coloured filters (overlay or lenses) with the Wilkins Rate of Reading Test;
- (b) The colour of the tint may need to be highly specific for optimal therapy and can be selected only by comparison of a comprehensive range of tints. The colour of the tint that a patient may require cannot be predicted from the colour of a coloured overlay which the patient finds beneficial.

Information

E2.04 People who are helped by these coloured filters are described as having Meares-Irlen syndrome. Evidence for this therapy has been supported by results of two double-masked randomised placebo-controlled trials.

E2.05 The evidence suggests that coloured filters for people with reading problems or visual stress need to be prescribed with precision using a system that allows the opportunity for at least 1000 colours to be prescribed.

E2 Examining patients with specific learning difficulties or visual discomfort

Additional information

The following information is relevant to this section:

Evans BJW *Dyslexia and Vision*. Whurr Publishers, London 2001

Evans BJW, Patel R, Wilkins AJ, Lightstone A, Eperjesi F, Speedwell L, Duffy J A review of the management of 323 consecutive patients seen in a specific learning difficulties clinic.

Ophthalmic Physiol Opt 1999 19 (6), 454-466.

Lightstone A, Evans BJW A new protocol for the optometric management of patients with reading difficulties. *Ophthalmic Physiol Opt* 1995 15, 507-512

Lightstone A, Lightstone T, Wilkins A Both coloured overlays and coloured lenses can improve reading fluency, but their optimal chromaticities differ. *Ophthalmic Physiol. Opt* 1999 19 279-285.

Wilkins A Overlays for classroom and optometric use. *Ophthalmic Physiol. Opt* 1993 14, 97-99

Wilkins AJ, Evans BJW, Brown J, Busby A, Wingfield AE, Jeanes R, Bald J Double-masked placebo controlled trial of precision spectral filters in children who use coloured overlays. *Ophthalmic Physiol and Opt* 1994 14, 365-370

Wilkins AJ, Jeanes RJ, Pumfrey PD, Laskier M Rate of Reading Test: its reliability, and its validity in the assessment of the effects of coloured overlays. *Ophthalmic Physiol Opt* 1996 16, 491-497.

Wilkins AJ. Reading through colour. Wiley, 2003.