

The I-Test Vision Screener

Bill Harvey learns about a simple yet effective way to increase patient numbers



Figure 1 The I-Test unit folded



Figure 2 The unit in operation



Figure 3 The unit in use in Haiti

The I-Test Vision Screener is essentially a simplified hand-held phoropter. As a means of accurately refracting a patient it is of limited use. As a method of efficiently screening for refractive error, the I-Test is excellent.

The I-Test was invented in Norway by a GP who was involved in medicals for private pilot's licences. His main aim was to produce a means to offer those twin goals of any effective screening process – simplicity with accuracy.

Light and simple

The unit is a foldable head set (Figure 1) made of lightweight plastic. It is easily portable, weighs just 186g and measures 155mm by 125mm by 20mm when folded. Within each half is a rotatable lens rack containing hard-coated sphere lenses from -4.00 to +4.00DS in 0.50DS steps. By folding the unit over, the two lens racks work in unison to offer a range of -8.00DS to +8.00DS. There is also an occluder and a pinhole stop.

Operation is simplicity itself. The patient chooses an appropriate target (for example a text-based sign in the distance, a computer display or a book held at the usual working distance) and, for each eye, rotates the lens rack until the target is seen as clearly as possible (Figure 2). Though not stated in the operator manual, it would seem useful to recommend the lenses be moved from a blurred view until the view becomes just clear, so minimising

any major accommodative error.

The best mean sphere established by this means is displayed in the aperture and may then be used to indicate the need for any correction. In this way, myopia and hypermetropia, presbyopia, if a near target is chosen, and significant levels of anisometropia might be detected. The procedure takes less than two minutes and should then allow a decision to be made as to whether a full eye examination is needed.

'I-Test is not intended to be a replacement for a full eye test at the opticians,' said head of UK operations for the Vision Company. 'Instead it offers a way for healthcare professionals to reinforce the need for regular eye tests and increase visits to the optician for further help and support.'

Practice building

The units are starting to be used in a number of novel ways. One optometrist has acquired units which he donates to local schools. The school undertakes a routine I-Test screening of the children and, if any error is indicated, recommends that the child has a full eye examination. This is most likely to be at his practice as his logo is upon the form for the I-Test results to be noted on.

On average around one in five children are recommended a full eye examination after screening. This obviously does not result in a correction requirement every time (remember the potential for error due

to poor compliance or accommodation fluctuations in children), but the knock-on effects of gaining the family of each child examined as patients cannot be underestimated. Bearing in mind each unit costs just £99.50, the return on the initial outlay seems impressive.

Furthermore, it doesn't take a marketing guru to see how the units might also be used in high street or shopping mall sites for screening a curious but unsuspecting public, and thereby raising the profile of eye care while at the same time improving productivity. No specialist staff would be required for such a set up.

Overseas activities

The I-Test Vision Screener is now being used by the international organisation Volunteer Optometric Services to Humanity (VOSH), in America. This recognised organisation of opticians and optometrists is in the process of working with Vision Company to use the I-Test Vision Screener in bringing vision screening to the whole world. VOSH has already had good results with I-Test in Mexico and Haiti (Figure 3).

It is likely that the device will develop in the coming years to incorporate more lens options (perhaps most notably cylinders) making simple and quick subjective refraction in needy areas a realistic prospect. ●

● The instrument is supplied by Graham Coates (UK) and further information is available at 01242 603888.