Pediatric Vision Scanner for the detection of eye conditions in children

**TIMEFRAME:** Estimated earliest commercial availability in the UK

Currently unclear | Now | 6 months | 1 year | 18 months | 2 years | Over 2 years

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**TECHNOLOGY**

The Pediatric Vision Scanner (PVS) is a device developed by REBIScan, which is intended to identify eye conditions that require medical treatment in children between the ages of two and seven years. The disease focus of the PVS is amblyopia (lazy eye) and strabismus (misaligned eyes). The device may also allow for the detection of other conditions that cause reduced vision, including cataracts and retinal diseases such as retinoblastomas.

The PVS is a hand-held device that scans the retinas of both eyes in three seconds and analyses the properties of the reflected, polarised light (birefringence). The device records these measurements for both eyes simultaneously and provides an instant ‘pass or refer’ result. The company intend for the test to be used on an annual basis.

The company are planning to CE mark and launch the Pediatric Vision Scanner in the UK for private and NHS clinical use in 2015.

**POTENTIAL FOR IMPACT**

Strabismus (or squint) is a condition where the eyes point in different directions. Squints can cause blurred and double vision. Amblyopia (lazy eye) is a condition that occurs when the vision in an eye does not develop properly. If left untreated, it can lead to the central vision of an eye never reaching normal levels. The earlier treatment is started for these conditions, the more successful it is likely to be. After the age of eight, treatment is unlikely to be as successful. Children in the UK are currently screened for amblyopia and strabismus at around four to five years of age during routine preschool or school-entry vision tests.

The company claim that a key innovative feature of this device is that it can capture birefringence of the retina to detect the exact point of fixation of the eye. They claim this allows for more accurate detection of eye disease in children. The device also gives instant results that are easy to understand. In addition the company highlight that minimal training is required for its use, as the device has been simplified with only two buttons on the unit. The PVS test is also quick and would be easier to use on younger children. Therefore, a lay user...
can operate the device, removing the need for trained specialists to administer the test.

The PVS has been designed to detect eye conditions in children at the earliest age so that they can be referred for treatment as early as possible when there is a higher chance of successful treatment, and when it is most cost-effective to treat. This may therefore improve patient outcomes by reducing vision loss and save costs to the NHS, if it is proven to detect eye disease in more children and earlier than current methods. The company also anticipate that use of the PVS device may reduce the number of false referrals, thereby saving NHS time and costs.

**EVIDENCE**

**PUBLISHED PAPERS AND ABSTRACTS**


**COMPLETE UNPUBLISHED STUDIES**


**ONGOING STUDIES**


**INFORMATION FROM**

This Alert is based on information from the company and a time-limited internet search.