What is a lazy eye and what causes it?
Amblyopia (or a lazy eye) occurs when the vision in one eye, the amblyopic eye, is at least 2 lines worse than the good eye (Figure 1). It is one of the most prevalent forms treatable of childhood blindness and occurs in around 3-5% of the population.

Amblyopia can be cause by various different reasons but the most common of these are a difference in the refractive error between the two eyes (anisometropia), a turn in one eye (strabismic) or a mixture of the two.

How do we treat Lazy eyes?
For many years treatment of a lazy eye involved prescribing glasses followed by occlusion of the good eye using a patch in children under 8 years of age (Figure 2). This form of treatment has been the mainstay treatment to this day. Where research has advanced treatment in this area has been the growing knowledge of how certain factors affect the outcome of visual acuity after treatment. One of these factors is compliance to treatment.

How do we monitor compliance during treatment?
We can monitor compliance to patching and glasses wearing objectively using special monitors which contain two temperature sensors that obtain a temperature reading every 5-10mins. As the body temperature is often warmer than the outside temperature this creates a differences between the two readings when the glasses and/or patch are worn. (Figure 3)

What have we learnt from research in amblyopia treatment using objective monitors?
We have found a number of important findings from using these monitors:

- Compliance to glasses wearing and patching during treatment is extremely variable and often poor.
- A relationship between patching and glasses wearing compliance and visual outcome exists.
- Compliance can be improved using educational material for parents and children.