

## Moorfields Eye Hospital case study: OpenEyes supporting decision making



### Summary

**Moorfields Eye Hospital NHS Foundation Trust decided to develop their own application to be used across all 13 of their sites as a way to reduce duplication of data entry, ensure recording in a consistent manner, to improve the sharing of information and the ability to search records from any site.**

**The pilot has been running for over a year and went live over the summer months this year. This case study aims to provide an overview of their achievements.**

### Organisation profile

Moorfields is one of the world's leading eye hospitals, providing expertise in clinical care, research, teaching and education.

Their specialty is the treatment and care of NHS patients with eye problems, from common complaints to rare conditions offering care not available anywhere else in the UK.

There are 80 consultant ophthalmologists, 270,000 outpatient visits and 30,000 operations annually, distributed over 13 geographical sites around London.

### Background

Multiple different means of recording patient information had developed at Moorfields. OpenEyes was developed to overcome the difficulties brought about by these different systems. It was designed by doctors for doctors to support them in making decisions that have a direct impact on people's lives. Its aim was to improve the data quality and to ensure that a diagnosis was recorded against every patient.

Following the BMA and Department of Health strategic direction, the system was implemented with SNOMED CT as its coding method. The development was supported by the creation of SNOMED CT subsets, identified by taking the top 10-20 diagnoses/procedures for each specialty to make the process of searching easier for clinicians; however, the ability to search the whole of SNOMED CT is still available.

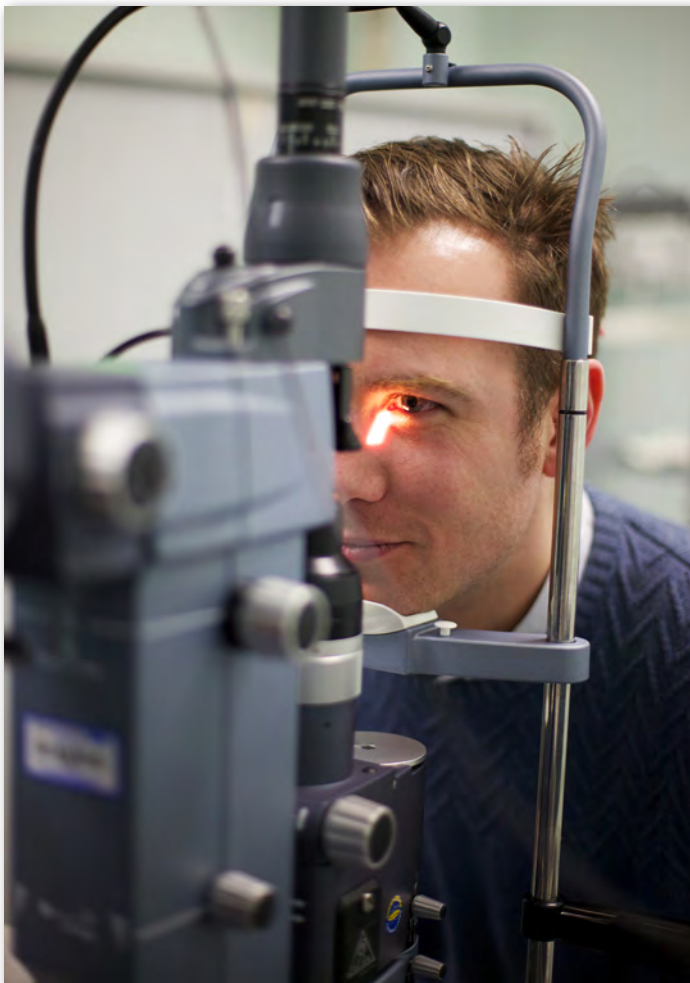
**The benefits are:**

- a. Improvement in data quality: Prior to the introduction of OpenEyes, the data quality was felt to be sub-optimal with a high proportion of patient records having no diagnosis recorded against them.

After its introduction 100% of patient records have a diagnosis recorded which in turn has led to coding by Clinical Coders being more efficient.

- b. Cost savings: Developing the system in-house significantly reduced the development time and associated costs of traditional software developments by external system suppliers.

Making the application available as Open Source will facilitate its use by other NHS organisations and hopefully open up future collaborative developments.



## Business process

### Before the Introduction of OpenEyes using SNOMED CT

Multiple different methods of recording patient information, including separate electronic systems, some using different coding schemes, together with paper records, led to the diagnosis rarely being recorded.

### After the Introduction of OpenEyes using SNOMED CT

The development of SNOMED CT subsets to include the clinicians' favourites has made the selection of diagnoses and procedures quicker and led to the recording of diagnosis in 100% of patient records.

In March 2012 the ability to select drugs will be made available. The list of drugs will be produced using the SNOMED CT UK drug extension.

## Approach

It was decided to use SNOMED CT terms for diagnoses, procedures and drugs. Each specialty was asked to provide up to a maximum of 20 of their most used diagnoses and procedures and these were collated into SNOMED CT subsets.

In the procedures part of the application, short codes for the terms are displayed which clinicians are familiar with, but are mapped to the full SNOMED CT terms in the background to ensure consistency; these maps have been developed with and agreed by clinicians. In any correspondence, such as a discharge summary to a GP, the full SNOMED CT term is always used.

## Benefits

Audits of the previous systems highlighted poor data quality, so a decision was made to develop a new system to be used across all sites, and for that system to use SNOMED CT as it provided a greater level of detail in a standardised format and would also allow the comparison of data across the different sites.

The improvement in data quality was part of the business case, because as a research centre it is important that they can quickly identify patients suitable for clinical trials and thus gain contracts from pharmaceutical companies.

Another benefit of using coded data is the ability, during live entry of clinical information, to calculate the risk of complications, e.g. risk of posterior capsular rupture, the most common complication of cataract surgery. We are generally led to believe that the risk of complication in this scenario is approximately 3% on average, however, for a particular patient based on their clinical characteristics it could be more.

OpenEyes uses the coded data and clinical characteristics of the patient to calculate a more accurate risk of complication. This is then used in deciding on the appropriate resources to allocate to any procedures.

### Challenges and lessons learned

A major challenge was clinical engagement amongst busy schedules; getting clinicians to appreciate that using OpenEyes with coded data would improve their audits and searches. A conscious decision was made not to record everything which would keep input times down, thus the decision to record only diagnoses, procedures and drugs.

### Training

Training is very limited; it fits in with the induction. OpenEyes is quite an intuitive system, however, clinicians generally have half a day training either in the classroom or online.

Training is not compulsory but encouraged and 1-1 sessions are available if requested.

### Further information

- For more information on SNOMED CT visit: <http://systems.hscic.gov.uk/data/uktc/snomed>
- or for more information on OpenEyes visit: <http://www.openeyes.org.uk/>
- Get in touch [information.standards@hscic.gov.uk](mailto:information.standards@hscic.gov.uk)



Ref. 4843

Health and Social Care Information Centre  
1 Trevelyan Square  
Boar Lane  
Leeds LS1 6AE

[enquiries@hscic.gov.uk](mailto:enquiries@hscic.gov.uk)  
0845 6006016  
[www.hscic.gov.uk](http://www.hscic.gov.uk)