SNOMED CT In Action Case Study

Using SNOMED clinical terms in Open Eyes – Ophthalmology Electronic Patient Record Application

Background

The Scottish Government's Digital Health and Care Directorate is undertaking a programme of engagement related to the development of Scotland's First Data Strategy for Health and Care. It is understood that a fundamental building block of this strategy is for structured clinical data to be captured in SNOMED CT. The implications of the strategy are that all systems across the NHS in Scotland will be required to record clinically related data that is captured in structured form using SNOMED CT.

As a starting point in the journey to achieve the Scottish Government's requirements, a Programme team based in National Service Scotland (NSS) has been set up to facilitate the objectives of the programme, with teams from NHS, NSS, NES, PHS and members of the GP cohort already collaborating to map READ Term Code to SNOMED CT. Several suppliers of NHS systems have also been engaged at an early stage to assist with scoping out the overall landscape. The expectation is that Target Operating Models will be produced along with any other relevant artefacts to aid progress of the programme deliverables.

Summary

NHS National Education Scotland's (NES) Technology Service has been working with colleagues in NHS Scotland, Scottish Government, and the Apperta Foundation to create a national Electronic Patient Record (EPR) for eyecare services in Scotland. This

Once for Scotland approach forms part of the Scottish Government's National Eyecare Workstream and is a game-changer for eye care services.

By adopting the OpenEyes system, the open-source Ophthalmic EPR, a service has been created that will allow eyecare records to be shared across primary and secondary care and stored using the National Digital Platform for health and care. The robust and secure service will help NHS Boards in Scotland digitise their clinical workflows, improve outcomes by reducing waiting times and hospital visits, and ensure clinicians are better informed by having clinical information in one accessible place (ultimately modelled in openEHR).

The OpenEyes programme is currently in initial go live phase in Scotland, with live clinical services using the product in NHS Grampian, Greater Glasgow & Clyde and Forth Valley. Other areas are planned for national roll out, including options to build a long-term capability for community optometry. To cover the majority of patients, it has been decided to focus on the subspecialties of Cataracts, Glaucoma and Medical Retinopathy. OpenEyes has be configured for Scottish use. The programme has agreed a 'Once for Scotland' approach to the clinical pathway rollout, supporting best practice across the country.

Initially OpenEyes was developed by Moorfields, a leading London eye hospital, around 15 years ago. It was designed by clinicians to be fast in recording content, intuitive to use and easy to navigate. As the system developed, the decision was made to adopt SNOMED. Now diagnoses, procedures, medications and investigations are all coded with SNOMED, with the

Royal College of Ophthalmologists taking a lead role in developing the current reference set for SNOMED concepts. The system is now also in use throughout Wales and parts of England.

Benefits

The use of recognised terminology in line with the direction of travel for terminology coding in Scotland.
SNOMED CT gives clinical IT systems a standard, which makes exchanging information between systems easier, safer, and more accurate.
SNOMED CT allows the clinicians to record the actual clinical diagnosis rather than allocating a category.
SNOMED CT doesn't use NOS, NEC type terms so the diagnosis is more detailed.
The recording of SNOMED codes enables more meaningful analysis to be conducted which provides better visibility of activity and in turn can lead to improvements in the patient's outcome.
It is flexible and covers multiple aspects of current OpenEyes use cases.
Data will be consistent and repeatedly useable.
Ability to analyse and run queries on target areas.
Being able to add new concepts.
The development and availability of a National Ontology Server.

Challenges and Developmental Requirements

The requirement for automation as any changes or additions to concepts/descriptions are not currently automated.
Process to add missing or new concepts.
Timescales to add missing or new concepts.
Not having a common reference set across the UK.
Requirement for support to update/maintain reference set.

Conclusion

There's a potential future option for extending OpenEyes to query the National Ontology server directly. There is ongoing work with the teams to explore possibilities.