Six Years of the National Radiotherapy Dataset: Lessons Learnt

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AIM

To describe the six years of progress of the National Dataset for Radiotherapy (RTDS) in the UK and explain what led to its success and what we would have done differently.

BACKGROUND

Since April 2009 NATCANSAT collects records on every patient treated with radiotherapy provided or funded by the National Health Service (NHS) in the UK.

When the radiotherapy Körner return was disbanded in 1995, there was no longer a central collection of data for radiotherapy activity. The National Cancer Services Analysis Team formed in 1998 by Dr Brian Cottier recognised the gap in information and looked towards the Oncology Management System (OMS) which holds a wealth of electronic information on radiotherapy treatment.

A pilot project investigated the feasibility of extracting data from the OMS and linking it with patient demographic data found only in the hospital administration systems. It became apparent the processes of data entry and coding with the OMS were inconsistent and for central reporting to become feasible a common set of currencies, formatting and coding needed to be adopted.

DISCUSSION

What went well :

•NATCANSAT formed and continues to develop very close relationships with the Radiotherapy community in the UK at all levels. The involvement of the wider community was essential both in terms of their input into the development of the dataset, and also in gaining their trust in the use and credibility of the inputs and outputs.

•A standard extraction process was developed using software provided by NATCANSAT which extracted data directly from the OMS and combined it with data taken from hospital PAS systems, along with provider specific coding and technique data in order to produce an output in a consistent and reproducible format. As the data originates from the OMS, it is a complete and accurate record of radiotherapy actually delivered.

•There was considerable variation in the interpretation of the existing radiotherapy currencies. We developed and defined a new set of currencies which could be objectively extracted from the OMS without scope for individual interpretation. This allows for the delivery of a consistent output.

•Radiotherapy Providers were asked to adopt nationally recognised coding systems for a range of data items which had often been recorded using free text previously. Coded input facilitates the delivery of meaningful data outputs.

RTDS WORK FLOW
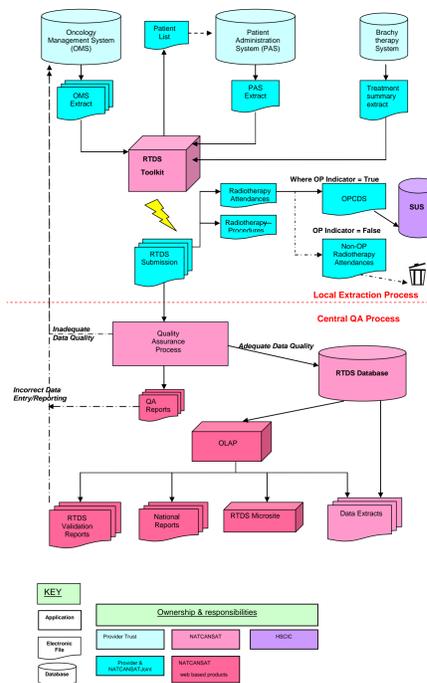
We worked closely with OMS manufacturers and user groups to develop clear guidance on recording data in these systems. Converging working practices improved patient safety and reduced training time.

We used geographic information systems (GIS) to map the location of radiotherapy facilities and the patient flows towards them. This allows for interpretation of catchment areas and modelling of impact of making changes to patient flows.

We developed a useful range of Business Information Systems to facilitate easy access to relevant data for radiotherapy providers and commissioners

What we would do differently next time:

Establish a resolute Quality Assurance System, prior to commencing data collection. Our QA systems and standards were developed alongside the first year of the RTDS.

Secure adequate funding for web based data exchange and reporting.
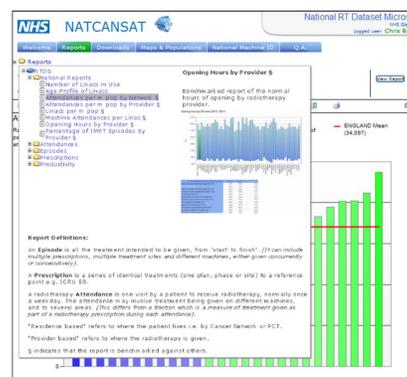
RTDS Microsite
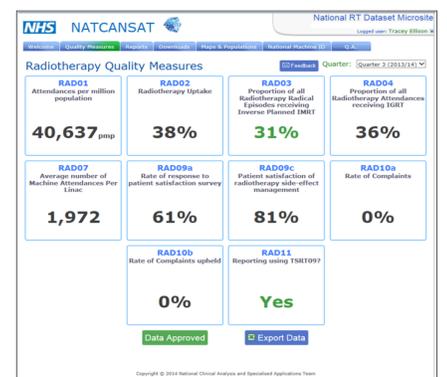
QM Dashboard

CONCLUSIONS

RTDS is the envy of the world. It provides high quality complete and consistent data which has excellent credibility within the radiotherapy community.

NATCANSAT is working with other countries to establish RTDS type databases to allow the knowledge and data to be shared throughout the radiotherapy community.

CONTRIBUTORS

A Bannatyne, A Brown, T Cooper, B Cottier, T Ellison, N Jones, D Jordan, P Kirkbride, S Mitchell, A Morris, J Shaw, R Shaw,S Tozer-Loft, Varian, Elekta, NRIG, RCIG - with thanks

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