Public Health England

Protecting and improving the nation's health

Radiotherapy Data Set (RTDS)

Implementation Guide

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Data Alliance Partnership Board

Acting on behalf of the Data Alliance Partnership Board (DAPB), which holds delegated authority from the Secretary of State for Health and Social Care, the Data Alliance Partnership Sub Board (DAPSB) has approved a change to an existing information standard for publication under section 250 of the Health and Social Care Act 2012.

Assurance that this information standard meets the requirements of the Act and is appropriate for the use specified in the specification document has been provided by the Data Standards Assurance Service (DSAS) and approved by the Data Alliance Partnership Board (DAPB).

This information standard comprises the following documents:

- Specification
- Implementation Guide
- Change Request.

An Information Standards Notice (DCB0111 Amd 84/2020) has been issued as a notification of use and implementation timescales. Please read this alongside the documents for the standard.

The controlled copies of these documents can be found on the NHS Digital website. Any copies held outside of that area, in whatever format (e.g. paper, email attachment), are considered to have passed out of control and should be checked for currency and validity.

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Contents

Title	PHE document		
DAPB Reference	DAPB0111 Amd 84/2020		
Sponsor	Dr Brian Rous – Director of Tumour Classification	Status	Draft
Senior Responsible Officer	Sarah Stevens – Deputy Director	Versions	RTDS v6.0
Lead Developer	Andrew Murphy – Head of Cancer Datasets		
Author(s)	Andrew Murphy – Head of Cancer Datasets Catherine Roe – RTDS Project Lead Michael Sharpe – RTDS Project Manager	Version Date	20 July 2021

Amendment history

Version	Date	Brief Summary of Change	Editors
0.6	09 October 2015	Draft amended in light of ISAS consolidated review comments	Stephen Raynor
6.0 Final	16 June 2021	Final version for publication	Andrew Murphy

Approvals

This data set and subsequent changes and amendments have been approved by the senior RTDS development team. In addition, the changes were also discussed within the RTDS User Group (RUG) and Radiotherapy Information Strategy Group (RISG) following extensive consultation.

Executive summary

The purpose of this document is to provide guidance to prepare for the implementation of the Radiotherapy Data Set (RTDS) v6.0 from April 2022. This document will support all NHS Acute Trust providers of radiotherapy services in England, private facilities where delivery is funded by the NHS and IT software developers (both in-house and commercial system suppliers).

This document is one of a suite of documents to aid users in implementing the RTDS Information Standard (DAPB0111 Amd 84/2020). It provides clear instructions on implementing the RTDS standard for collection.

This document should be read in conjunction with the Specification, User Guide and Technical Guide documents, as they include all the data items in RTDS version 6.0, together with definitions, formats, codes, values and additional guidance on collection and implementation.

Where a word or name is highlighted, this indicates that there is an embedded link that will take you to a webpage outside of this document or directs you to another page within this document that provides additional information. Please use this facility throughout the implementation guide, as this improves the accessibility for users with visual impairment or those using screen readers.

Introduction

This standard specifies a data set for use at both national and local levels to generate secondary uses information about radiotherapy treatment. It assists in achieving the business objectives of the data set, as well as specialist commissioning and related policies.

All patients receiving radiotherapy in or funded by the NHS in England are covered by the standard. This includes adult and paediatric patients receiving radiotherapy, in acute inpatient, day-case and outpatient settings for solid tumours and haematological malignancies, including patients in clinical trials.

Data providers and their oncology management system (OMS) suppliers are required to prepare their resources, systems and processes to ensure they meet the requirements for change outlined within the standard.

OMS suppliers will be expected to meet the detailed requirements and conformance of the standard as set out fully in the specification document. Support for data providers and OMS suppliers is available from senior members of the RTDS development team or through the local network of data liaison staff.

Implementation approach

The impact of the standard will vary, depending on the configuration of hospitals and services. Data for the standard will continue to be collected by radiotherapy radiographers and practitioners treating patients with radiotherapy, and clerical staff supporting them. The data set is routinely collected using Oncology Management Systems (OMS) associated with radiotherapy machines.

The items in the data standard are already collected in radiotherapy facilities, and the changes in version 6.0 build on the excellent work started in 2016 with version 5.0. Many of the data items are extracted directly from radiotherapy equipment software (record and verify systems, or radiotherapy management systems) for production of the standard.

The contents of this Implementation Guide and the new User and Technical Guidance documents should be made available to all staff groups involved in responding to the standard including:

- radiographers, oncologists and physicists
- IT, developers and OMS system suppliers

- radiotherapy service managers
- medical and nursing staff

It is not intended that the amendment of the standard should have any direct impact on the delivery of patient care. However, the above groups, which are involved in the local implementation of the information standard, need to take account of implications of the standard in their work area and develop a strategy to fully meet its requirements by the end of the implementation period.

If you are a new provider of radiotherapy, as well as reading this Implementation Guide, please contact the RTDS helpdesk at rtds.helpdesk@nhs.net. Other useful resources to support the collection of the radiotherapy data set version 6.0, include:

- User Guide
- Technical Guidance
- Data Set version 6.0

These can be found on the RTDS website.

This version change is important in order to continue to meet the business objectives of the standard, and to ensure that all data requested is clinically accurate and relevant for the lifetime of the standard.

The implementation of RTDS is managed by the RTDS development team, the RTDS helpdesk and liaison teams who work directly with its data providers. The principal approach is to work in partnership with clinicians and their information, management and radiotherapy teams to implement the standard successfully.

Mapping local data to the RTDS information standard

There is no requirement to modify local clinical practices or data recording, however local system managers will be required to map local nomenclature and data formats to that defined in the RTDS information standard before transmission.

Provider organisations are encouraged to review the content of the standard and consider whether making primary data recording consistent with the standard would benefit their services in terms of safety and efficiency.

Maintenance and updating

Over time, there may be a requirement to improve the functionality and incorporate changes to ensure that the data standard remains consistent with need, and the data standard continues to meet its business objectives.

These will be coordinated through the senior development team and discussed at both the Radiotherapy User Group (RUG), and the Radiotherapy Information Strategy Group (RISG). These groups consist of senior clinicians, medical oncologists, physicists and lay members.

Provider organisations are encouraged to submit comments or future requests for change concerning the data set, its collection and analysis to rtds.helpdesk@nhs.net for consideration.

Agreed changes or enhancements to the implementation of the data standard will be circulated to all contributors on a regular basis, and via the formal consultation process for the information standard. This allows for a wide and informative review of existing and newly proposed data items before the final data set is agreed.

Implementation process

All documents referenced below have all been published by either RTDS or the Data Alliance Partnership Board (DAPB), unless otherwise stated.

The following is a sequence of steps, set out to help you understand the implementation process and to support you in asking the right questions and engaging the right people within your organisation.

It is important to read all the steps first as depending on your current readiness, you may be required to follow a different process from the published order below. If you are a new user/system supplier or creating a new radiotherapy/oncology management system for the first time, it is important to use the Implementation Guide to help you manage the development process.

Step 1: Read the Information Standards Notice (ISN)

This is the official notification of the information standard, published by the Data Alliance Partnership Board (DAPB). It provides an outline of the approved standard and timeframe for compliance. Compliance with ISNs will normally be included in contracts between NHS Providers and their system suppliers.

This was available to download from the 20 July 2021 and will provide an implementation period of 8 months (please refer to the table in Step 9). To receive notifications about standards activity please email standards.assurance@nhs.net.

Step 2: Read the Specification document

This provides a more detailed description of the Information Standard. This provides information about all the requirements and conformance that new and existing users must comply with, including information about:

- the data set process
- clinical and information governance
- technical architecture

This document is published by the Data Alliance Partnership Board (DAPB).

Step 3: Read the Change Request

This provides a summary of the changes to the data set since the last version, including the timescales for delivery. This document is published by the Data Alliance Partnership Board (DAPB).

Step 4: Read the Data Set, Technical and User Guides

These provide the detailed information and explanation about the data items in the data set, including the definitions, formats and values that can be recorded. These are divided by the data set sections and will give you an idea of what will need to be submitted.

The RTDS should be reviewed to understand the requirements of the current version. For new users, this is important as the change request document will only give details of items that have changed since the previous versions.

The data set workbook has many worksheets (or tabs) at the bottom of the document. All changes are highlighted in the relevant worksheets and specified in the change-control log.

The RTDS v6.0 User Guide and Technical Guides should be read in conjunction with the data set for additional information/guidance and are included within the overall suite of documentation.

The Information Standards Notice (ISN) and all related documents were published on 20 July 2021, via the NHS Digital website.

Additional supporting documents, such as the User Guide, Data Set and Technical Guide, were also published on the 20 July 2021, via the RTDS webpage. These are separate to those published by NHS Digital above.

For version 6.0, there is no longer a requirement to convert downloads to XML. Instead, submit as a ‘double quote’ comma-separated value (CSV) document or a spreadsheet format, as specified in the Technical Guide. This will prevent any unnecessary financial burden on Trusts.

Step 5: Identify and discuss with stakeholders

It is essential to engage with those who are involved in recording, checking, submitting and using the data in or for your organisation. This will probably include (but is not restricted to) some or all of the following (titles may vary):

- clinical teams (multi-disciplinary teams):
  - radiographers
  - oncologists
  - physicists
  - nursing staff
  - medical staff
- radiotherapy services managers
- informatics/IT departments:
  - OMS system suppliers
  - software suppliers
  - local IT teams
  - developers
- strategic clinical network teams:
  - radiotherapy operational delivery networks (ODN's)
  - commissioners and providers
  - cancer alliances/vanguards
- your local RTDS/NCRAS office:
  - liaison officers
  - help desk

If you are developing an in-house system, you need to understand how the data is collected to improve existing collection systems. Where an off-the-shelf system is used, the system supplier should have done this through client engagement and/or a service level agreement (SLA).

Step 6: Plan how you will implement

Implementation of the new version of the standard will be between 20 July 2021 and 31 March 2022 (8 months). Please refer to the table in step 9 for the phased implementation to full conformance timeframe.

Between April and June 2022, both versions (5.0 and 6.0) of the data set can be submitted. From July 2022, only the amended version 6.0 will be accepted.

Not all the data will need to be submitted immediately, but you need to be sure you have considered all the issues.

Step 7: Check your current state of readiness

Systems (software):

Many of the new or amended data items in RTDS will already be recorded electronically in your Trust.

Check what changes are required to meet the amendments or new items.

Processes:

Are there any changes to your existing process required, such as:

- additional training needs
- additional clinical system access
- clearer mapping documents with your IT/system supplier

Collection:

New/amendments: there will be new and amended data which will be required to be collected differently, including a change of mandation of some items. Identify who will collect these data and at what stage in the pathway.

Deletions/corrections: data has been grouped into more logical pathways or in some cases deleted to reduce the burden of data collection. Identify where these data are and collect appropriately.

Quality assurance and submission:

It is essential that clinical teams are confident in the data being submitted for their patients.

Review processes to ensure quality assurance of the data is performed before submission via the api portal. If necessary, review audit tools with software suppliers to meet the new requirements.

Feedback on current submissions are available from the CancerStats2 portal. Access and registration are available to all authorised NHS staff, and it is recommended that each organisation has a clinical member responsible for reviewing their monthly submitted data (a clinical champion).

Data files are required to be submitted monthly, 20 working days after the end of each calendar month. To help and support staff, there is an upload schedule table in Appendix G of the Specification document.

Note: This upload schedule will continue to apply to all future months.

Step 8: Put RTDS on the agenda

Make sure that clinical colleagues are aware of RTDS by raising it at any local or network meetings. This could include radiotherapy operational delivery networks (ODN's), vanguard or cancer alliance meetings, or any other relevant clinical network or Trust event.

Step 9: Talk to your software supplier/customers

If you have a commercial system, you will need to speak with your supplier to confirm the timescale for any necessary changes to the oncology management system you use. In most cases these changes will be part of your service level agreement (SLA). If you do not have an SLA, it is recommended that you agree one, as this helps with all future amendments and changes to the data set.

Similarly, Trusts **must** talk with their software suppliers to agree dates for roll-out of their systems and local updates. Based on previous experience implementing other major data sets, we have allowed a 3-month window to accommodate this.

If Trusts use an in-house system, they need to start discussions early to ensure all changes can be incorporated within the 3-phased timetable below.

The revised data set RTDS v6.0 is expected to be submitted using the following timetable:

Phase	**Dates**	**Action**
Phase 1: Implementation Period	20 July 2021 to 31 March 2022	the development lead time for software suppliers and in-house developers, to make changes to systems to reflect requirements and align with conformance criteria
Phase 2: Data Collection Period	1 April to 30 June 2022	allows for a 3 month period where data can be submitted in accordance with either version 5.0 or version 6.0 formats
Phase 3: Full Conformance	1 July 2022 onwards	requires full conformance, using only version 6.0 format

Step 10: Read the Technical Guide

If you have not already, read the Technical Guide. This has been updated for version 6.0, and is available on the RTDS website from 20 July 2021.

This provides excellent advice around reporting, your data files structure, including the format and layout of the csv files, including examples.

Step 11: Attend your regional roadshow

The RTDS management team is planning to run a series of regional roadshows (between January and February 2022) across England. These may be in the form of a virtual event using Teams, but the final media format for these events has not yet been agreed.

Details will be communicated towards the end of 2021 via newsletter, and the RTDS development team will work with each Trust to arrange placements for these events.

Although the final details of the day have not been confirmed it is expected that the event will be a half day, repeated in morning and afternoon of the same day, to maximise attendance as follows:

- morning session:
  - discussions around the RTDS changes, (what is in and what is out)
  - what change was required and the impact to local teams (burden)
  - additional data analysis and reporting presentations
  - Q+A session

If the event is a physical meeting, then lunch will be provided for all delegates.

- afternoon session:
  - discussions around the RTDS changes, (what is in and what is out)
  - what change was required and the impact to local teams (burden)
  - additional data analysis and reporting presentations
  - Q+A session

It is recognised that the target audience may be from multiple different departments within each treatment centre. Therefore, if the events are a face-to-face meeting, a maximum of 4 attendees per Trust will be allocated for the roadshows from the following groups:

- radiographers, oncologists and physicists
- radiotherapy service managers
- medical and nursing staff
- IT, in-house developers

These can be allocated to different sessions during the day (morning or afternoon), depending on local business commitments or availability, but never exceeding 4 (in total) for the day.

Trusts will be allocated to a venue to manage overall numbers and to support local networking. Where possible, RTDS will also allocate 1 place to each vanguard/cancer alliance and 1 place to NHS England and NHS Improvement.

It will also be an opportunity for both central teams and clinical teams to find out more, discuss issues and ask questions.

Step 12: Check for updates

All documents will be available to download from either the NHS Digital Information Standard webpage or the RTDS website.

It is important to note that there is a new website under construction by the National Disease Registration Service (NDRS), which will include pages dedicated to RTDS. An update to the landing page will be issued once launched.

End-To-End testing

End-to-end testing with system suppliers is an ongoing and iterative process, which requires careful planning and support. Extensive consultation will continue throughout 2021 and 2022 with system suppliers and IT departments across the NHS in England, to help and support development, implementation and testing, prior to ‘Full Conformance’ from 1 July 2022.

A series of meetings will be held with the major software suppliers and Trust IT departments, to assess their readiness and compliance. It is expected that all organisations and suppliers provide a written report to the RTDS project lead by the end of December 2021, outlining their compliance readiness and timescales for deployment to their clients. This will be coordinated by the regional RTDS helpdesk.

A 3-month phased implementation period for deployment of the new data set upgrades has been written into the implementation programme from 1 April to 30 June 2022. This will help with roll-out where, for instance, suppliers have multiple clients and where simultaneous upgrades are not possible.

The RTDS senior development team will also have the ability to insert a stop/go on the implementation process, if there are serious concerns that implementation cannot be safely achieved. Should this occur, it will be widely communicated through:

- RTDS helpdesk
- newsletters
- the Data Alliance Partnership Board

In this eventuality, Trusts will be able to revert to version 5.0, until the serious issue (which caused the stop/go process) is resolved and an acceptable solution agreed.

Lessons learned

Throughout the implementation process the RTDS project lead will monitor the roll-out and any lessons learned will be documented and used to improve the next version.

Appendix A - Definitions for the radiotherapy data set

Within the radiotherapy data set, it is important that field naming is consistent within hospital systems and the definitions of the fields are unambiguous and applied by all providers.

All field naming and definitions have been agreed and aligned with the NHS Digital's data model and dictionary service. Where there is crossover, these have been aligned with COSD and SACT. The following should also be read in conjunction with this information standard:

- DCB0084 OPCS Classification of Interventions and Procedures
- DCB1521 Cancer Outcome and Services Data Set
- DCB1533 Systemic Anti-Cancer Therapy Data Set
- SCCI0021 International Classification of Diseases
- SCCI0034 SNOMED CT

Definitions

The RTDS user guide has been specifically designed for version 6.0, to provide added advice around the recording of all data items within the new data set.

In addition, there is extended advice that helps define and explain specialist radiotherapy treatment codes, these identify a specialist type of radiotherapy being delivered for the plan.

Glossary of terms

There is an extensive glossary of terms available in Appendix A of the Specification document. This is avaible on the official NHS Digital, RTDS information standard page.

RTDS data model

The relationship diagram (fig 1) shows the current schema relationships, whereas (fig 2) is based on the proposed changes for version 6.0 and should not be used in relation with any other version.

Please contact the rtds.helpdesk@nhs.net for any further information.

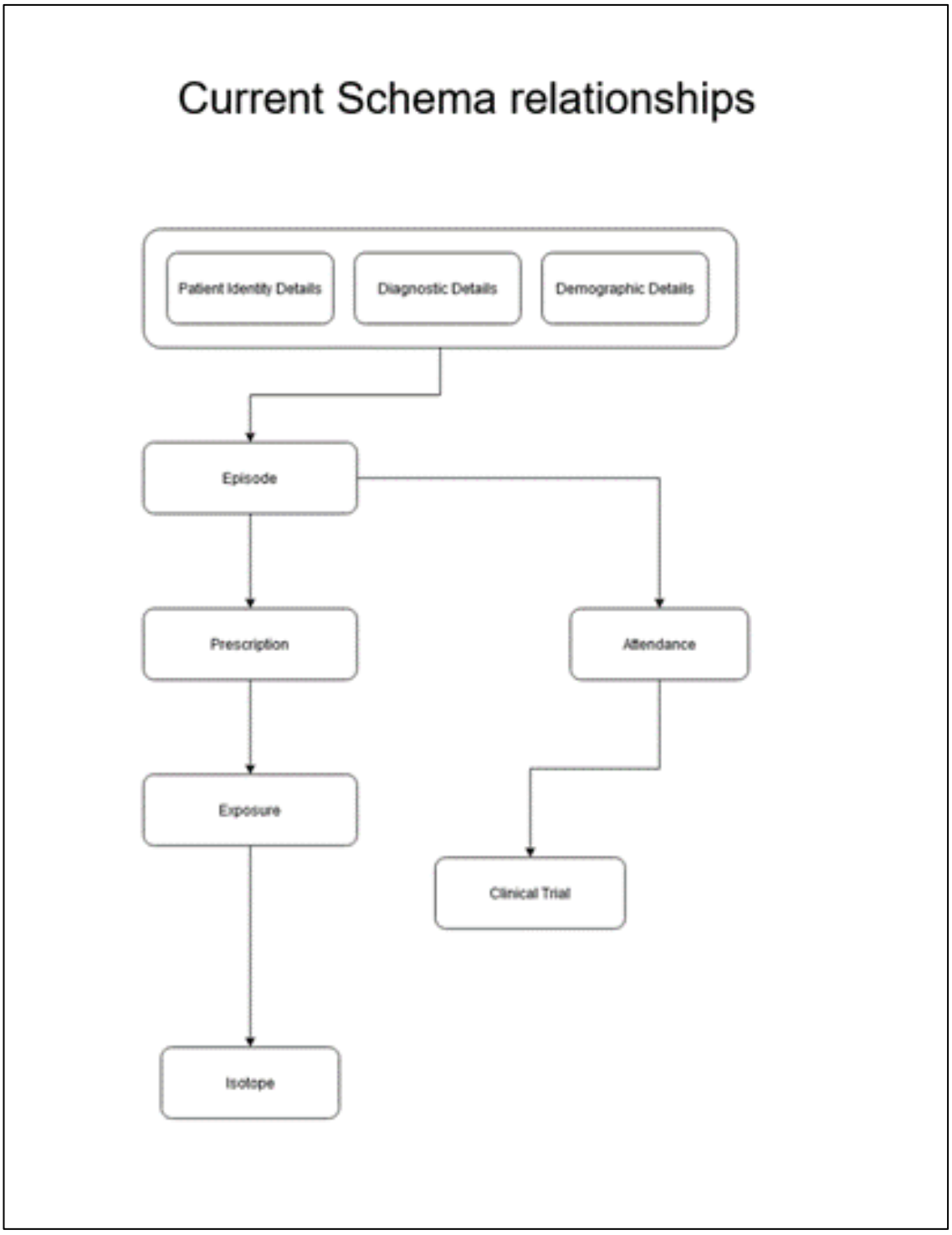

fig 1: Current schema relationships for RTDS version 5.0

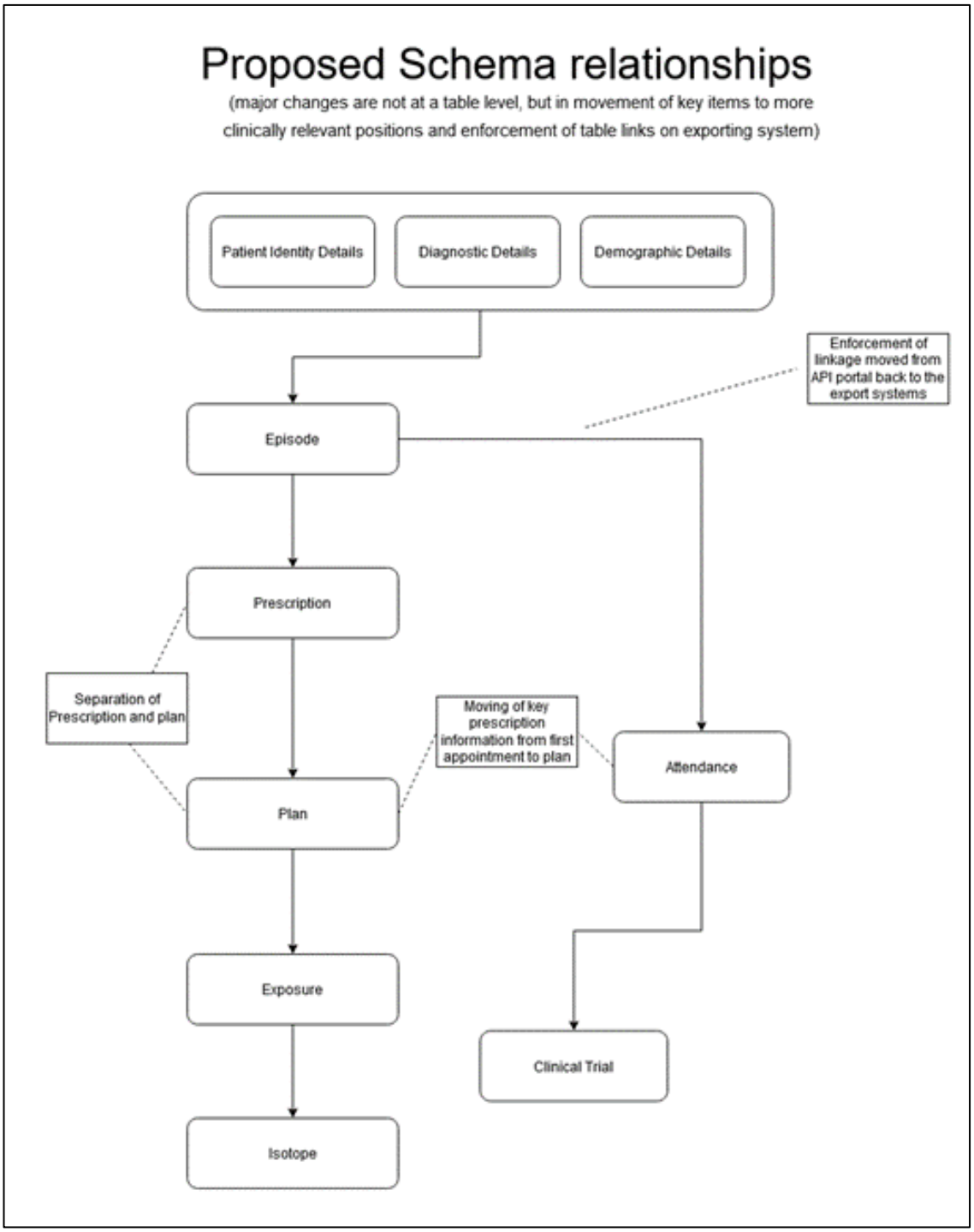

fig 2 Proposed schema relationships changes for version 6.0

Appendix B - Summary of changes

Version 6.0 (RTDS) builds on the work that has continued over the past 5 years since the last update. These new changes were required in order to make the data set clinically accurate and also meet the business objectives of the data set.

Please refer to the new RTDS v6.0 User Guide and Change Request documents for detailed information about each data item, including:

- field formats
- attributes
- names
- data dictionary names (if different)
- detailed descriptions about each item

This will aid collection and delivery of the standard, whilst allowing the RTDS team to provide an up-to-date (version controlled) User Guide for all developers and end users.

Status of documents

All the documents referred to in this guidance were submitted to the Data Standards Assurance Service (DSAS) for review under DAPB0111 Amd 84/2020. Following acceptance by the Data Alliance Partnership Board (DAPB) and confirmation of authority to publish by the Department of Health and Social Care, the official Information Standards Notice (ISN) and related documents were published on the 20 July 2021.

These documents are intended to support providers and developers who wish to identify and plan changes to their systems. The standard will be formally issued via DAPB as an approved standard and additional documents (for example the Data Set, User Guide and Technical Guide) will be available to download via the RTDS website.

Changes to Systems

Please note that RTDS specifies the data which providers are required to submit to the NDRS for secondary uses and does not define record-level data to be used in the delivery of care.

The data for RTDS should be derived from patient identifiable data, which is already recorded for the purpose of care management.