NHS Digital

Transfer of Care – Acute Inpatient Discharge Standard

Implementation Guidance

Improving lives with data and technology

Data Alliance Partnership Board

The Data Alliance Partnership Board (DAPB), which holds delegated authority from the Secretary of State for Health and Social Care, has approved a new 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 endorsed by the Data Alliance Partnership Sub Board (DAPSB). This information standard comprises the following documents:

- Requirements Specification
- Implementation Guidance.

An Information Standards Notice (DAPB4042 Amd 75/2021) has been issued as a notification of use and implementation timescales. Please read this alongside the documents for the standard.

The controlled versions 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

1. Introduction

1.1. Definition

The Transfer of Care initiative aims to improve patient care by using the Transfer of Care Application Programming Interfaces (APIs) to share information consistently between different systems and organisations across England. This implementation guidance provides recommendations to secondary care providers and their IT suppliers on how this work can be tackled to allow effective and successful use of the API in the live environment.

1.2. Scope

The use case within scope for this Transfer of Care standard is the:

- Inpatient and Day Case Discharge Summary - an ITK3 FHIR document containing Transfer of Care information supporting an inpatient and day case discharge. The document would need to be sent by any secondary care provider (NHS or independent sector) contracted under the terms of the NHS Standard Contract. The recipient would be the registered General Medical Practice of the patient.

The Transfer of Care - Acute Inpatient Discharge is applicable for all ordinary admission and day case admissions. It should be considered for adoption by the specialty using the patient classification “regular day admission” or “regular night admission” based on the value and frequency of GP correspondence currently being generated at the end of each treatment session, and as agreed with the commissioning organisation.

Additional use cases for Emergency Care Discharge, Mental Health Discharge and Outpatient Letters are expected to be included in future national information standards work once the Inpatient and Day Case Discharge work has completed. Other correspondence types, such as routine maternity discharges, will remain out of scope until sufficient preparation work is done for inclusion as an API. However, the expansion of requirements via addition of new use cases, recipients, formats and transport routes needs to be considered in any initial correspondence solution design.

It is expected that existing processes for generating and sharing a copy of the discharge letter with the patient will continue to be utilised (i.e. a discharge letter is printed off by an end-user and handed to the patient or their carer). The purpose of this standard is to facilitate the automated transmission of the discharge summary from secondary care to GP IT systems.

1.3. Related Information

This document should be read alongside:

- Transfer of Care eDischarge (Acute Inpatient Discharge) FHIR API payload specifications
- Introduction to ITK3 eDischarge (2.9.0-live)
- The ITK3 Message Distribution Specification
- Release 2.1 of the PRSB eDischarge Standard
- Transfer of Care: Acute Inpatient Discharge Requirements Specification (per DAPB4042)
- Information Standards Notice (per DAPB4042)

Where any discrepancies in requirements exist between the publications of different parties, implementers of the ToC API messages always need to comply with the current NHS Digital Transfer of Care Inpatient Discharge payload and ITK3 message distribution technical specification publications.

2. Timescales

Secondary care providers are expected to implement as early as possible following the implementation start date (1st April 2022) and go live no later than 1st October 2022.

Both the Inpatient Acute Discharge payload and ITK3 Message Distribution specifications have reached live status which means they are mature enough for anyone to implement against now.

Live usage is dependent on the readiness of General Practice Foundation IT Supplier’s customer base to receive and process the IP Discharge FHIR message. However, live usage will not be held back by any minor General Practice Foundation IT supplier failing to deliver.

Solutions Assurance at NHS Digital manages conformance certification of IT solutions. Details of the awarding of conformance certification can be found by reviewing the Conformance Catalogue.

Those message initiators with GP Practices using non-compliant foundation IT systems within their local catchment area should work with NHS Digital so full rollout approval can be granted to the relevant IT suppliers following successful First of Type (FoT) activities.

Both major suppliers of General Practice Foundation IT systems are expected to have Full Rollout Approval and an enabled General Practice customer estate before the end of Quarter 4 2021/22. This will bring the number of Practices in England with a FHIR receive capability to around 99%.

3. ToC Inpatient Discharge Standard

3.1. Technical Specifications

The technical specifications have now been published and are designed to guide the reader on how to implement this Transfer of Care standard.

A good starting point for developers is to look at the test messages and sample messages available on the NHS Digital website.

3.2. Transport

The FHIR document will be sent using the ITK3 messaging distribution standard over the MESH service provided by NHS Digital. The ITK3 standard uses FHIR STU3.

3.3. Document Headings

The Transfer of Care headings have been produced by the Professional Record Standards Body (PRSB) who develop care record standards that are widely accepted and endorsed across the UK.

The following PRSB documents are offered to inform safe implementation:

- Clinical Safety Case Report
- Hazard Log

3.4. Profiles

The FHIR profiles have been developed through collaboration with healthcare providers (NHS and social care organisations), system vendors and standards bodies (such as PRSB and INTEROPen).

NHS Digital's ToC technical specification illustrates how the PRSB headings are accommodated in the FHIR profile bundle and how values are set.

The list of profiles and how the profiles are connected to each other is illustrated under Resource Referencing.

FHIR usage for Transfer of Care has previously been endorsed by NHS Digital's Clinical Safety group in April 2018.

4. Implementation Approach

There is a need for secondary care providers who create Inpatient and Day Case discharges to understand and plan for the degree of change needed. This can best be done by analysing existing workflows and anticipated future workflows. The scope of this activity should be done sufficiently wide and generic to make it easier to adopt all future relevant ToC use cases.

At the data input and system level what is currently gathered and sent for an Inpatient or Day Case Discharge should be gap analysed with what the corresponding ToC FHIR message can carry. Emphasis on the narrative/text elements of the composition profile is required, but the encoded (machine readable) parts of the message should not be ignored. Plans must be put in place to rectify any identified data gaps.

To obtain an Inpatient Discharge ToC FHIR solution, secondary care may decide to:

1. Retain but upgrade one or more existing systems.
2. Replace and migrate to one or more entirely new systems.
3. Develop in-house to create new or enhance existing functionality.
4. Adopt a combination of the above options.

Progress with the national first of types has been possible by adopting an approach with an emphasis on change at the middleware level.

Any FHIR correspondence solution should have:

- At human readable level, an appropriate electronic sign-off by the author, which triggers the send processes to one or more recipients.
- Back-end processes capable of gathering the clinical and demographic information, so it is possible to form the correspondence into a FHIR structured message.
- A tracking capability that gives the status of each message.
- An ability to handle both MESH level and application level (infrastructure and business) responses returned from primary care and generate appropriate alerts when action is needed.
- A means of adding attachments, especially for Trusts that already have this functionality

In addition to technical changes there is a need to consider:

- Cultural changes so that there is a uniform way of working that can be adopted rapidly across the hospital in all wards. This needs to be supported by decommissioning of other message formats and transport layers.
- Training for authors and support staff in the new approach.
- A review of how correspondence problems are currently dealt with and who will take on follow-on actions from specific ITK3 response codes.
- A rewrite of any relevant Standard Operating Procedures.

5. Assurance

Secondary care organisations must perform due diligence in ensuring that the Inpatient Discharge FHIR message is built correctly and is clinically assured by appropriate clinical safety staff and authors working in the organisation prior to full live usage.

An initial technical assurance of the message build can be obtained from NHS Digital by following a defined Solutions Assurance conformance certification process. NHS Digital has developed a set of test components that simulates a compliant primary care system. This tool is known as the ITK3 Test Harness. Its use is an integral part of the conformance certification process. The Solutions Assurance email contact for ToC/ITK3 assurance is ITKConformance@nhs.net

Clinical assurance must be done locally with volunteer General Practices and is the responsibility of the secondary care provider. It needs to involve appropriate clinical safety staff based within the secondary care organisation. Authors of Inpatient and Day Case Discharge correspondence and any administrative support need to be adequately consulted and trained prior to full live usage.

Secondary care providers can utilise their own internal templates for creating safety cases and hazard logs. The equivalent documents at the receiver end can be requested from the relevant General Practice Foundation IT suppliers. The General Practice Foundation IT supplier's safety documents are reviewed after national First of Type by the Clinical Safety Group within NHS Digital prior to issuing a clinical authority to release and subsequent full rollout approval of their solution to their entire General Practice customer base. Full Rollout Approval is given at General Practice Foundation IT supplier level and not to individual Practices.

5.1. Purpose of the ITK3 Test Harness

The Test Harness is intended to allow FHIR message senders to confirm, for example, whether:

- a message is formatted in valid xml
- a message conforms to the FHIR schemas
- a message is valid against the FHIR profiles for the payload
- the message payload conforms to the technical and business rules stated in the payload specification
- the ITK3 header components are valid against the FHIR profiles for the ITK3 Messaging distribution specification
- the ITK3 Header components conforms to the technical and business rules stated in the ITK3 distribution specification.

The response to the message initiator sent by the Test Harness will vary from:

- a technical (infrastructure) level response confirming that the message has been successfully received and processed and is valid at the technical level
- a technical (infrastructure) level response confirming that the message has not been successfully processed - the response message will also return an error code stating the problem with the message, for example the xml is invalid
- a business level response confirming that the message has been successful at the business level and the patient has been located on the system of the receiving practice
- a business response confirming that the patient is either not known on, or is no longer present on, the system of the receiving practice.

The ITK3 Test Harness is available in several path-to-live environments. This includes OpenTest, DEV and INT. Development should be done in either OpenTest or DEV, and final conformance certification testing is done in INT.

Enquiries about conformance certification and use of the ITK3 Test Harness can be directed to ITKConformance@nhs.net

5.2. INT Environment End-to-End Testing

In addition to the Test Harness, it is possible via Solutions Assurance (contact ITKConformance@nhs.net) to send FHIR messages to the actual General Practice

Foundation IT applications stood up in the INT environment. This work is being finalised to allow messages to be sent to EMIS Web, SystmOne and Vision 3. This additional testing facility allows the automated return of ITK3 response codes and by a request to Solutions Assurance the sharing of screenshots of the Human Readable Object created from the FHIR message.

5.3. Local First of Type

Prior to complete turn on of any production capable Inpatient and Day Case Discharge FHIR solution, the implementing secondary care organisation must conduct limited live usage with a representative set of General Practices. The choice of Practices should aim to include different General Practice Foundation IT applications where possible.

Working closely with each recipient Practice, the secondary care organisation could choose to initially run legacy and new FHIR solutions in parallel. Appropriate tidying up actions would need to be agreed to prevent duplication in the General Practice system. When all parties are satisfied there is no loss in clinical content going from the legacy solution to the FHIR solution, then the legacy solution can be retired and the FHIR only message solution can be depended upon.

6. Change Management

Maintaining the ToC APIs to accommodate shifts in component standards needs appropriate coordination to ensure a proportionate gain in benefits is achieved compared to the disruption caused to workflow processes and IT systems across primary and secondary care.
Inevitably this means that significant change is likely to be measured in years rather than months. Change implementation must follow adequate signalling to suppliers to accommodate the time lag in announcing a ToC Inpatient Discharge standard change and the delivery of a modified and fully assured ToC FHIR API at the message initiator and receiver ends.

Decisions on change will be the result of dialogue between multiple bodies including the PRSB, INTEROPen, HL7, and NHS Digital's Interoperability Team. It is not envisaged to change the usage of the ToC FHIR API at least until 2023. The priority

is to first drive-up usage, and then assess message quality for the viability of further interoperability improvements. As owners of the ToC information standard, NHS England and NHS Improvement will oversee any maintenance activities.

7. Helpdesk

Any questions or enquiries regarding this standard should be emailed to the NHSX Standards and Interoperability team: interop.standards@nhsx.nhs.uk

For specification queries contact: interoperabilityteam@nhs.net

For conformance queries contact: ITKConformance@nhs.net

For queries relating to SNOMED CT contact: snomed.implementation@nhs.net

For general interoperability queries contact: information.standards@nhs.net