Professional Record Standards Body

TRANSFERS OF CARE (DISCHARGE SUMMARIES AND OUTPATIENT LETTER STANDARDS)

CLINICAL SAFETY REPORT

JULY 2017

Better records for better care

Acknowledgements

NHS Digital
This project was funded by NHS Digital. NHS Digital is the trusted national provider of high-quality information, data and IT systems for health and social care. NHS Digital collects, analyses and publishes national data and statistical information as well as delivering national IT systems and services to support the health and care system. The information services and products are used extensively by a range of organisations to support the commissioning and delivery of health and care services, and to provide information and statistics that are used to inform decision-making and choice.

The Professional Record Standards Body
The independent Professional Record Standards Body (PRSB) was registered as a Community Interest Company in May 2013 to oversee the further development and sustainability of professional record standards. Its stated purpose in its Articles of Association is: “to ensure that the requirements of those who provide and receive care can be fully expressed in the structure and content of health and social care records”. Establishment of the PRSB was recommended in a Department of Health Information Directorate working group report in 2012.

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Community Interest Company No 8540834

Document Management

Revision History

Version	Date	Summary of Changes
0.1	11.01.2017	First draft created by Jan Hoogewerf
0.2	13.01.2017	Reviewed by Darren Wooldridge
0.3	21.03.17	Reviewed by Hannah McCann and Stuart Harrison. This version responds to their comments.
1.0	13.04.17	Final version produced, following sign off by Stuart Harrison on behalf of the NHS Digital Clinical Safety Group.
1.1	27.07.17	Version updated in response to feedback from NHS Digital Clinical Safety Officers
2.0	10.11.17	Version updated with new branding for publication

Reviewers

Individual projects had their own review arrangements specific to the project. This document must be reviewed by the PRSB Assurance Committee:

Reviewer name	Title / Responsibility
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This document must be approved by the following people:

Name	Signed off?	Date	Version
NHS Digital Clinical Safety Group	**Stuart Harrison on behalf of the CSG**	**11.04.17**	**0.3**
NHS Digital Clinical Safety Group	Stuart Harrison on behalf of the CSG	27.06.17	1.2

Related Documents

These documents will provide additional information.

Ref no	Title
[1]	Emergency Care Discharge Summary Clinical Safety Report
[2]	Mental Health Discharge Summary Clinical Safety Report
[3]	Hospital Discharge Summary (Phase 2) Clinical Safety Report
[4]	Standards for the Clinical Structure and Content of Patient Records http://theprsb.org/publications/bible-sets-out-the-latest-agreed-standards
[5]	Hospital Discharge Summary (Phase 2) Final Report v1 (including information models and implementation guidance)
[6]	Mental Health Discharge Summary Final Report v1(including information models and implementation guidance)
[7]	Emergency Care Discharge Summary Final Report v1 (including information models and implementation guidance)
[8]	Generic Editorial Principles for the Development of Standards for the Structure and Content of Health Records https://www.rcplondon.ac.uk/projects/outputs/editorial-principles-development-record-standards
[9]	Clinical Documentation and Generic Record Standards (CDGRS) Clinical Safety Report 2013 v1
[10]	Clinical Risk Management: its Application in the Manufacture of Health IT Systems SCCI 0129
[11]	Clinical Risk Management: its Application in the Deployment and Use of Health IT Systems SCCI 0160
[12]	Outpatient letter final report v1 (including information models and implementation guidance)

Contents

1. Executive Summary and Safety Statement

This document provides an update to the transfers of care clinical safety case to include outpatient letters. The previous version covered the following transfers of care from hospital to general practice:

- Generic hospital discharge summary.
- Mental health discharge summary.
- Emergency care (EC) discharge summary.

These transfer of care documents are based on the Clinical Documentation and Generic Record Standards (CDGRS) published by the Academy of Medical Royal Colleges (AoMRC) in July 2013. Four further projects were undertaken during 2016/2017 to:

a) adapt the CDGRS hospital discharge summary to meet the needs of mental health and emergency care settings
b) develop detailed information models so that key clinical data (diagnoses, procedures, medications and allergies) can be carried as structured and coded data to enable re-use in the GP system.
c) review and revise the outpatient letter standard so that it can carry structured and coded content.

The information models and associated implementation guidance developed by these projects will be used by NHS Digital to develop technical specifications which can be used by suppliers to develop electronic transfer of care messages.

These transfers of care are part of the NHS Digital Transfer of Care (ToC) initiative, which is part of a wider interoperability programme run collaboratively by NHS England and NHS Digital. Its primary purpose is the establishment and uptake of consistent professional and technical data standards across the health and care sector and in particular the patient documentation which accompanies a patient's transfer of care between care provider organisations such as discharge from hospital to GP services, (https://digital.nhs.uk/transfer-of-care-initiative).

The NHS Standard Contract for 2016/17 mandated the use of AoMRC approved headings in electronic hospital and mental health discharge summaries, with a strong recommendation to use structured messages. The NHS Standard Contract for 2017-19 includes a requirement for the use of structured messages for hospital, mental health and emergency care discharge summaries and outpatient letters, carrying both human readable narrative and coded (SNOMED CT) information from October 2018.

Each of the projects reviewed the original CDGRS clinical safety case and retained all hazards which were still considered to be relevant. In addition they identified new hazards arising from the new detailed clinical content defined during the projects.

As the transfer of care documents are very similar in their purpose and content, similar risks were identified for each, and so it was decided to amalgamate them into a single clinical safety case, which identifies both the generally applicable issues and any issues specific to an individual transfer of care.

Across the transfers of care 35 potential hazards were identified and mitigated, of which 26 were generic, 6 were specific to mental health, 2 were specific to emergency care and 1 was specific to outpatient letters. Of the 35 potential hazards, 12 were deemed implementation issues, of which 10 were generic and 2 specific to emergency care. The mitigated hazards include information that should be addressed by implementers. All hazards were identified through the consultation steps carried out to develop the transfer of care standards. The

consultations consisted, for each project: a multidisciplinary workshop, online survey, review of draft information models and implementation guidance (by clinical informaticians and system suppliers) and an expert user group meeting. These workshops, surveys and communications included patient representatives as well as professionals from Royal Colleges, specialist societies, nursing, midwifery, social care, allied health professions, health informatics professionals and vendors (see section 6 and Appendix B).

At each step of the consultation hazards were identified, reviewed and mitigations/actions considered. Nevertheless, some risk is inherent in the standards but most has been:

(A) mitigated by the development of the standards

(B) or the residual risk has been transferred (with guidance) to the implementers.

Certain hazards were deemed system implementation matters. The hazard log (a separate document) however provides guidance for system developers and implementers. It is important that this guidance in relation to these hazards become requirements for implementation.

NHS Digital is currently developing plans for first of type testing and deployment of electronic discharge summaries based on the PRSB information models. These plans will be in line with the NHS Standard Contract targets set for NHS providers. IT system suppliers and communities deploying these electronic discharge summaries will be responsible for conducting safety cases as part of the deployment process.

The PRSB are currently working on plans to take these information models through the SCCI process (as part of making the Clinical Documentation and Generic Record Standards a fundamental standard). These plans are dependent on the NHS Digital deployment plans for the transfers of care, which are still under development.

N.B: This clinical safety report is necessarily limited in its scope because it is neither directly related to software development nor to deployment. Suppliers developing software to implement these standards will therefore still be expected fully to apply SCCI 0129. Organisations involved in the deployment of such software will still be expected fully to apply SCCI 0160.

2. Introduction

NHS Digital commissioned the Professional Record Standards Body (PRSB) to develop standards for the following transfers of care:

- Generic hospital discharge summaries, for discharge from inpatient or day case hospital care to General Practice. The project was managed by the Royal College of Physicians (RCP) Health Informatics Unit (HIU), under subcontract from the PRSB and following PRSB processes and methodology. Clinical leadership was provided by a clinical lead from the RCP and a clinical advisor from the Royal College of General Practitioners (RCGP).
- Electronic mental health discharge summaries, for adult patient/client discharge from a mental health care inpatient service to GP practice. The project was managed by the PRSB. Clinical leadership was provided by a clinical lead from the Royal College of Psychiatrists (RCPsych).
- Electronic emergency care (EC) discharge summaries. The project was managed by the RCP HIU, under subcontract from the PRSB. Clinical leadership was provided by a clinical lead from the Royal College of Emergency Medicine (RCEM) and a clinical advisor from the Royal College of General Practitioners (RCGP).
- Electronic outpatient letters. The project was managed by the RCP HIU, under subcontract from the PRSB. Clinical leadership was provided by joint clinical leads from the RCP and RCGP.

The projects delivered information models and implementation guidance which will be used by NHS Digital to develop technical specifications which can be used by suppliers to develop electronic discharge summaries and outpatient letters.

The following approach, following standard PRSB methods, was taken to develop the deliverables in each project:

- An evidence review of documentation was carried out in order to inform an initial draft set of record headings and associated content definitions. This included:
    - The RCEM Emergency Care Data Set (https://www.england.nhs.uk/ourwork/tsd/ec-data-set/), for the emergency care discharge summary
    - For the mental health discharge summary, an existing mental health discharge summary (MHDS), developed by the RCPsych in 2012, based on the RCP discharge summary developed in 2008
    - The Scottish Community Medications Information Programme (SCIMP) and OpenEHR medication information models developed for GP2GP
    - The AoMRC clinical record standards (http://theprsb.org/publications/bible-sets-out-the-latest-agreed-standards**)**
    - PRSB standards for transfer of care communications from ambulance to EC services (http://theprsb.org/projects/ambulance-handover-to-ae), for the emergency care discharge summary.
- A multidisciplinary consultation workshop was held to discuss the acceptability of the initial draft deliverables. Outputs from the meeting were used to inform an updated version of the draft deliverables.
- An online survey was used to gain patient and professional consensus on a number of identified issues. (Note that for the generic hospital discharge summary, as the work was the development of detailed information models with no changes being made to the AoMRC headings, there was no need for an online survey).
- The draft information models and implementation guidance were reviewed by clinical informaticians and system suppliers.

- Outstanding issues were consulted on by an expert user group. The outputs of this meeting informed the final draft deliverables.
- Final draft deliverables were disseminated to the project board for their official sign off.

This document provides the final report of the work done to manage identified clinical safety risks associated with the three transfer of care projects. The projects have produced professional standards, as such the full application of SCCI 0129 cannot be applied, as the professional standards themselves are not manufactured health IT systems. However, the guidance within SCCI 0129 concerning clinical risk management and appropriately governed hazard assessment has been considered. Compliance to requirements from SCCI 0129 are summarised in section 12.

3. Clinical safety governance

The NHS Digital Clinical Safety Group (CSG) operates a full Clinical Safety Management System (CSMS) that encompasses integration with Health Organisations and professional bodies. The CSMS gives particular consideration to the integration with the Information Standards Board and the process in which professional standards are developed in the CSMS framework. The essential structures of a CSMS have been implemented in this project by engagements with the following organisations:

- PRSB Advisory Board
- RCP
- RCPsych
- Royal College of Surgeons
- RCEM
- RCGP
- Project boards, for each project
- Expert user groups, for each project, together with wider consultation through PRSB, professional body and patient networks
- NHS Digital terminology team (UKTC)
- NHS Digital messaging team
- NHS Digital clinical safety group
- Other Royal Colleges and specialist societies
- The professional bodies of nursing, midwifery and the Allied Health Professions
- The professional bodies for social care
- Involvement of patient representatives

However it should be noted that this clinical safety report is necessarily limited in its scope because it is neither directly related to software development nor to deployment. Suppliers developing software to implement these standards will therefore still be expected fully to apply SCCI 0129. Organisations involved in the deployment of such software will still be expected fully to apply SCCI 0160.

4. Safety organisation structure

The role of a Clinical Safety Officer (CSO) is to review the Clinical Safety Case using his/her clinical experience to judge the appropriateness and effectiveness of the risk management strategies and mitigating actions. The CSO should monitor the execution of the Clinical Safety Case and ensure that clinical safety obligations are being discharged.

5. Hazard identification & assessment approach

The first step to preventing harm to patients through the use of these standards is to ensure a good development process that results in standards fit for purpose.

Activities that have been carried out to clarify and address this potential include:

- Initial patient safety assessment carried out with input from stakeholders attending project workshops
- Production of a hazard log for the project and revised through consultation with stakeholders
- Review of the hazard log following national consultation on the headings and any safety risks associated with any of the headings
- Review of mitigation of risks as part of the development of the standard headings and the implementation guidance
- Clinical safety mitigation of the project deliverables and confirmation of risks to be passed to implementation / maintenance stages identified
- Final draft of hazard log, standard headings and clinical safety report following final consultation.
- Drafting of safety case (approaches to mitigating the risks identified)
- Review and updating of safety case.
- NHS Digital clinical safety case review and approval.

The patient safety risk assessment approach that was used was:

- What could go wrong? (likelihood and consequence) [See Appendix A for risk matrix]
- Possible main causes
- Most likely consequences / potential clinical impact (i.e. for patient safety)
- Mitigations (and recommendations to improve patient safety) leading to a reduced residual risk
- Clarification regarding actions required and risk transferred to implementers.

The full hazard log comprises:

- Hazard name and description
- Potential causes
- Potential patient safety impact
- Initial hazard rating including likelihood and consequence
- Dependencies and assumptions
- Proposed mitigation
- Revised hazard ratings
- Summary of actions and approvals

Risk assessment was undertaken using the risk matrix and scoring tool shown in Appendix A. Note that for these standards, consequences were interpreted in terms of impact on outcomes including the person's experience of care.

6. Consultation stakeholders

Consultation stakeholders are listed in Appendix B for all projects.

7. Hazard log

The full hazard log is detailed in a separate document. A summary of hazards identified, including those deemed implementation issues is included in the following section.

Please note: **The mitigations we have taken to address clinical safety risks are largely in relation to the design of the structure and description of the content of the headings. Further mitigations will be required when the headings are implemented in electronic health record systems. We have flagged some risks relating to implementation in this report, but expect that further mitigations will be identified as clinical risk assessments and safety cases are developed by vendors and sites during the implementation. Despite mitigations identified in this report we have assessed the risk level of all risks as 'significant' in the absence of any clinical safety testing. We would expect software developers and implementers to reduce the likelihood to 'low', or at least to a level equal to or better than human transcription alone.**

8. Hazards

This section sets out identified hazards. Those applying to all discharge summaries are listed first, followed by specific additional headings related to mental health or emergency care discharge summaries.

Hazard Id:	1	**Hazard Name**	Critical data absent as not recorded	**Residual risk:**	2
Hazard Description:	Critical data absent because it is not recorded.				
Hazard Causes:	Critical data not entered in the system, e.g. because clinician is not prompted for it or forgets to record it.				
Potential Clinical Impact:	Incorrect treatment or advice may be given based on incomplete clinical information				
Mitigation:	Include headings and fields to capture critical data. Include coded text to indicate the absence of information eg allergies and adverse reactions, if none are recorded, clinician must record 'no known allergies' or 'no information available'. Guidance to implementers: This issue/risk might arise in use or misuse of our product. Mitigated by design. Training in good recording practice.				
Hazard Id:	2	**Hazard Name**	Unclear headings	**Residual risk:**	2
Hazard Description:	Unclear headings resulting in incorrect or inappropriate data entry.				
Hazard Causes:	Incorrect data entry as it is unclear what heading information should be recorded against. Data entry by individuals with insufficient training/skills. Poor understanding of headings.				
Potential Clinical Impact:	Incorrect information entered into the record or entered under an inappropriate heading, leading to inappropriate treatment.				
Mitigation:	Include headings and fields to capture critical data. Clear definitions of the information content under each heading, avoiding overlap. Guidance to implementers: This issue/risk might arise in use or misuse of our product. Mitigated by design				

Hazard Id:	3	**Hazard Name**	Inconsistent use of headings	**Residual risk:**	2
Hazard Description:	Inconsistent use of headings. i.e. The names and definitions of headings need to match between different sites/systems.				
Hazard Causes:	Inconsistencies in data transfer between systems.				
Potential Clinical Impact:	Incorrect data transfer, so that the data is presented under an inappropriate heading, resulting in it being missed or misinterpreted by the care professional.				
Mitigation:	Include heading and field definitions. Guidance to Implementers: Implementers have to ensure they have the most up to date version of the headings, and that the headings are correctly implemented in their system(s). Mitigated by design				
Hazard Id:	4	**Hazard Name**	Too many headings	**Residual risk:**	2
Hazard Description:	Too many headings will be time consuming and burdensome and may result in omission of key clinical information.				
Hazard Causes:	Headings design issue.				
Potential Clinical Impact:	Critical clinical information may be omitted, having an adverse effect on patient safety.				
Mitigation:	Although the requirement is for IT systems to support all the headings, not all headings will be mandatory for implementers. It is anticipated that local trading agreements will determine the optional headings to be used by a particular community, but that where they are used they must match those in the record standard. Also pre-population will be used wherever possible to reduce burden on user. Logical grouping for the practice setting. The headings have gone through several levels of consultation to make sure there are not too many headings. Pre-population where appropriate. Users trained to use headings appropriately. Complete only fields relevant to individual patient/specialty.				
Hazard Id:	5	**Hazard Name**	System does not support headings	**Residual risk:**	3
Hazard Description:	Clinicians unable to add information because the headings are not in the system.				
Hazard Causes:	System design issue.				
Potential Clinical Impact:	Critical clinical information may be omitted or recorded under the wrong heading having an adverse effect on patient safety.				
Mitigation:	Test that the system can support the headings				
Hazard Id:	6	**Hazard Name**	Incompatible prescribing formats	**Residual risk:**	3
Hazard Description:	Dose based prescribing format not compatible with product based prescribing format used in primary care.				
Hazard Causes:	A dose based medication item from secondary care may be converted to the wrong product based medication item in primary care either as a result of human transcription error or as a result of automated or semi-automated conversion.				
Potential Clinical Impact:	Patient given inappropriate medication.				

Mitigation:	Human readable rendition of original dose based prescription preserved and presented to Primary care prescriber to facilitate cross check. Primary care clinician review of the secondary care prescription and decision made about future prescribing rather than dependency on fully automated conversion process. Thorough clinical safety testing both during development and deployment.				
Hazard Id:	7	**Hazard Name**	Headings are not understandable to the patient	**Residual risk:**	3
Hazard Description:	Patients/carers with access to their records are unhappy with the content as they cannot understand it.				
Hazard Causes:	Headings are not understandable to the patient or patients are not happy with the clinicians population of the headings.				
Potential Clinical Impact:	Patient dissatisfaction, reducing engagement with their treatment.				
Mitigation:	Patients have been involved with the design of the headings to ensure they are understandable and appropriate from a patient perspective. Headings use terms that are comprehensible to patients. Train clinicians to record information appropriately.				
Hazard Id:	8	**Hazard Name**	Blank fields	**Residual risk:**	3
Hazard Description:	Lack of clarity over what a blank field signifies (i.e. not recorded, not assessed, not present etc).				
Hazard Causes:	Due to the design.				
Potential Clinical Impact:	Recipients will have insufficient information to make appropriate clinical decisions.				
Mitigation:	Implementation guidance states for optional fields that if a field is left blank the heading should not be communicated in the message. If a field is mandatory, the implementation guidance includes coded text for what should be recorded. System design should reduce this.				
Hazard Id:	9	**Hazard Name**	Lack of clarity about prescriber responsibility	**Residual risk:**	3
Hazard Description:	Confusion about whether a new medication item in the discharge summary is to be continued and whether an item has been changed/discontinued.				
Hazard Causes:	Clinicians may be unsure of the status of the medication or be unaware that a change has happened to the medication status.				
Potential Clinical Impact:	Patient receiving incorrect or no medication as clinician has insufficient information to make appropriate clinical decisions.				
Mitigation:	Implementation of e-prescribing system in secondary care which support the medications information models in the discharge summary. Mitigated by design.				
Hazard Id:	10	**Hazard Name**	Inappropriate auto population of information	**Residual risk:**	3
Hazard Description:	Inappropriate auto population could lead to excessive, superfluous information creating difficulty for the recipient to focus on the pertinent information.				
Hazard Causes:	Inappropriate auto population of information.				
Potential Clinical Impact:	The recipient may miss important information and not provide appropriate treatment.				

Mitigation:	System design should reduce this. Clinicians encouraged to review auto-populated information to make sure it is relevant.				
Hazard Id:	11	**Hazard Name**	Misidentification of patient	**Residual risk:**	3
Hazard Description:	Correct patient may not be identifiable from the information provided.				
Hazard Causes:	Unique identifier unknown or entered incorrectly e.g. NHS number entered incorrectly.				
Potential Clinical Impact:	If patient is misidentified they may not receive appropriate treatment.				
Mitigation:	The National Patient Safety Agency (NPSA) recommends that the NHS number is used to correctly identify a patient. System should be linked to the patient demographic service (PDS) to obtain NHS number. Clinicians encouraged to use the patient demographic service to identify the patient.				
Hazard Id:	12	**Hazard Name**	Lack of alignment with other standards	**Residual risk:**	2
Hazard Description:	The standards may not be consistent with the latest version of related standards e.g. Emergency Care Data Set, SNOMED CT subsets, etc.				
Hazard Causes:	As existing standards are updated they may be misaligned to the headings.				
Potential Clinical Impact:	Lack of standardisation across health/care records used in different sites.				
Mitigation:	Maintenance of the standards is the responsibility of the PRSB and changes must be possible for integration with relevant data standards as they change.				
Hazard Id:	13	**Hazard Name**	Un-read discharge summaries	**Residual risk:**	3
Hazard Description:	Recipients of the discharge summary do not read/act upon them.				
Hazard Causes:	Recipients may be unaware that the discharge summary has been automatically uploaded in their system.				
Potential Clinical Impact:	Clinicians unaware of the patient's attendance.				
Mitigation:	Electronic communications must not be automatically filed into the GP system without review. There are already well developed principles relating to pathology (PMIP) links System design through clear GPSoC requirements for safe management of incoming electronic communications (common inbox etc) and implementation of these requirements. Practices receive appropriate training and are encouraged to abide by best practice.				
Hazard Id:	14	**Hazard Name**	Lack of clarity about required actions	**Residual risk:**	3
Hazard Description:	Recipients of the discharge summary are unclear about what is expected of them for the ongoing care of the patient.				
Hazard Causes:	Clinicians completing the discharge summary do not clearly specify who is responsible for required actions.				
Potential Clinical Impact:	Patient receiving incorrect or no treatment as clinician fails to act upon the required actions described in the discharge summary.				

Mitigation:	Include heading and subheadings in hospital systems. Mitigated By Design. Training in system use should be an essential part of practice setting induction.				
Hazard Id:	15	**Hazard Name**	Legal issues	**Residual risk:**	2
Hazard Description:	Users may not be able to record information under the appropriate legal information headings or may not know where to find information.				
Hazard Causes:	Lack of understanding about medicolegal issues or where to find them in the record.				
Potential Clinical Impact:	The patient may not get the care needed. Eg if a patient has made an advance directive but care professionals do not know to look for this under the legal headings and thus do not meet the patients needs.				
Mitigation:	The descriptions under the legal headings provide clarity about what is to be recorded. Training on medicolegal issues.				
Hazard Id:	16	**Hazard Name**	Coded data included in summary, which is not human readable	**Residual risk:**	2
Hazard Description:	If coded information is carried without associated text it may not be comprehensible.				
Hazard Causes:	Sending organisation using codes other than SNOMED CT or using SNOMED CT codes which are not in the set supported by recipient system.				
Potential Clinical Impact:	Incorrect diagnosis or treatment.				
Mitigation:	Include associated text with any coded field. SNOMED CT is the only coded data that can be carried in outpatient letter communications (eg not READ, OPCS etc,) Guidance to implementers: This issue/risk might arise in use or misuse of our product. Mitigated by design				

Additional mental health risks are set out below.

Hazard Id:	17	**Hazard Name**	Inaccurate or out of date information	**Residual Risk:**	3
Hazard Description:	Incorrect or out of date information.				
Hazard Causes:	Erroneous information may have been entered into the record or old and outdated information carried over from previous entries.				
Potential Clinical Impact:	Incorrect information may be present in the record. Depending on what this is, this could lead to incorrect, delayed or no treatment. It could also lead to significant personal distress for the patient.				
Mitigation:	Mental Health discharge summary information is contemporaneous. The person completing the record is included in the message and it is mandatory that their contact details are also included in the communication. This is particularly important due to the possibility that the person completing the record may have left the discharging organisation (non permanent staff – locum/ agency or doctor on rotation) and the GP needs clarification on the information communicated. User training Guidance to implementers Mitigation by design				

Hazard Id:	18	**Hazard Name**	Headings are not appropriate for patients with mental health care needs	**Residual risk:**	2
Hazard Description:	Care professionals are unfamiliar with the language used in the headings and clinical descriptions				
Hazard Causes:	Headings and clinical descriptions are not those that are used in mental health care services.				
Potential Clinical Impact:	Important information is missing or entered in the wrong place leading to inappropriate care. Inappropriate clinical language may cause distress to patient and relatives.				
Mitigation:	The headings have been developed from wide consultations with experts in mental health and with patients. The language in the headings and descriptions and implementation guidance are appropriate for patient with mental health care needs and the service needs. Guidance to implementers Mitigated by design				
Hazard Id:	19	**Hazard Name**	Key information may be overlooked.	**Residual risk:**	2
Hazard Description:	Certain information of particular importance may be overlooked (e.g. Mental Health Act status, key worker/ care coordinator contact details, safety alerts.) causing patient harm.				
Hazard Causes:	Headings are not prominent enough.				
Potential Clinical Impact:	Clinicians may be unaware of this key clinical information and therefore do not take these into consideration when treating the patient.				
Mitigation:	Mandation and 'required' for key headings. These items to have a prominent position on the system template. Fields that are mandatory to complete must have ability to complete a null value e.g ' no GP'. Fields that are 'required' should record the information if there is information available e.g. key worker/ care coordinator contact details, care planning documentation. Guidance to implementers. Users trained to use headings appropriately. Mitigated by design				
Hazard Id:	20	**Hazard Name**	Grouping of headings not appropriate for practice setting	**Residual risk:**	2
Hazard Description:	Grouping of headings is not appropriate for the practice setting resulting in inaccurate or missing information.				
Hazard Causes:	The headings are grouped in a way that doesn't work for a speciality/service/clinician.				
Potential Clinical Impact:	Information will either be missed or put into the incorrect heading which could be propagated through the patient journey.				

Mitigation:	Multidisciplinary input from a wide range of specialities, included in the consultations. Piloting of headings in different practice settings in live use may be required. Template design groups the headings to support normal clinical practice. System design should reduce this.				
Hazard Id:	21	**Hazard Name**	High risk conditions	**Residual Risk**	2
Hazard Description:	Failing to identify a critical clinical condition e.g paranoid schizophrenia, borderline personality disorder, suicide risk.				
Hazard Causes:	Lack of a place to clearly recognise the condition.				
Potential Clinical Impact:	If the underlying conditions are not recognised and appropriate care given the patient may become a safety risk to self and/ or others.				
Mitigation:	The headings were developed from consultations with experts in mental health. They support the ability to record and communicate the pertinent information required to identify and evaluate criticality and high risk conditions e.g. diagnoses, clinical summary, safety alerts, actions and requested actions. Implementation guidance. Existing methods for identification of high risk patients should continue to be used, e.g. patient held information, care plans.				
Hazard Id:	22	**Hazard Name**	Different statutory and legal requirements across the four UK countries	**Residual Risk:**	1
Hazard Description:	Certain headings will have different statutory and legal requirements and applications in the four UK countries e.g. Mental Health Act, Deprivation of Liberty Safeguards, Mental Capacity Assessments, Care planning arrangements etc.				
Hazard Causes:	Confusion by clinicians about which headings are relevant to the country in which they work.				
Potential Clinical Impact:	Confusion for clinicians who are not aware of the correct requirements, which may result in the patient receiving inappropriate care.				
Mitigation:	The clinical descriptions under the legal and statutory requirement headings provide clarity about what is to be recorded. Implementation guidance refers to the relevant legislation and statutory requirements in each country. Clinicians know what is required in their practice. Training on country specific issues. System design should reduce this.				

Additional outpatient letter hazards

Hazard Id:	23	**Hazard Name**	Lack of clarity about required actions	**Residual risk:**	3
Hazard Description:	Recipients of the outpatient letter are unclear about what is expected of them for the ongoing care of the patient.				
Hazard Causes:	Clinicians completing the outpatient letter do not clearly specify who is responsible for required actions.				
Potential Clinical Impact:	Patient receiving incorrect or no treatment as clinician fails to act upon the required actions described in the outpatient letter.				
Mitigation:	Include heading and field definitions. Mitigated By Design. Training in system use should be an essential part of practice setting induction.				

9. Hazards transferred to implementation

These are issues that are out of scope of these projects but need to be addressed by system developers and implementers. These issues should be taken into account by system vendors and sites when implementing the headings.

Hazard Id:	24	**Hazard Name:**	Unavailable information	**Initial risk**	3
Hazard Description:	Information missed out as system already implemented is too structured/ inflexible to include headings.				
Hazard Causes:	E.g. Already structured systems, which cannot be changed or only at high cost.				
Potential Clinical Impact:	Incorrect treatment as a result of insufficient information.				
Hazard Id:	25	**Hazard Name:**	Electronic system failure	**Initial risk**	5
Hazard Description:	If the headings are only designed for use in electronic systems, there is a risk that there is no fall back if the system is not available.				
Hazard Causes:	Critical problem of system.				
Potential Clinical Impact:	Inability to record patient data.				
Hazard Id:	26	**Hazard Name:**	Confidentiality issues	**Initial risk**	2
Hazard Description:	There may be some information (such as sexual health information) that patients do not want recorded on a shared record.				
Hazard Causes:	Auto-population of sensitive information or failure of clinician to discuss what information was acceptable to be included.				
Potential Clinical Impact:	Violations of privacy may cause great distress to the patient.				
Hazard Id:	27	**Hazard Name:**	Cross boundary interpretation	**Initial risk**	2
Hazard Description:	Incorrect interpretation/ translation of clinical information.				
Hazard Causes:	Incorrect interpretation/ translation of clinical information.				
Potential Clinical Impact:	Incorrect clinical information.				
Hazard Id:	28	**Hazard Name:**	Poor template design	**Initial risk**	3
Hazard Description:	Clinicians use the clinical template as a tick box exercise and do not put sufficient thought into process.				
Hazard Causes:	Clinicians use the template as a tick box exercise and do not put sufficient thought into the process.				
Potential Clinical Impact:	Use of template leads to inaccurate/missing information.				

Hazard Id:	29	**Hazard Name:**	Actions taken by unqualified clinicians	**Initial risk**	4
Hazard Description:	Users undertaking actions for which they are unqualified				
Hazard Causes:	As the heading is in the record users may feel that are supposed to complete it.				
Potential Clinical Impact:	Care professionals undertaking actions without appropriate qualifications will be likely to make clinical errors.				
Hazard Id:	30	**Hazard Name:**	Refusal to adopt the standard	**Initial risk**	4
Hazard Description:	Services may refuse to use the record standard.				
Hazard Causes:	Lack of support for the standard.				
Potential Clinical Impact:	If some services do not adopt the standard there will remain a lack of interoperability between services.				
Hazard Id:	31	**Hazard Name:**	Inability to exchange information	**Initial risk**	4
Hazard Description:	Different coding systems used in different sites will limit exchange and re-use of data.				
Hazard Causes:	Different coding systems used in different sites.				
Potential Clinical Impact:	Incorrect clinical information.				
Hazard Id:	32	**Hazard Name:**	Policy/statutory evolution	**Initial risk**	4
Hazard Description:	As policy/statutory requirements change the current headings will be obsolete.				
Hazard Causes:	Statutory requirements change all the time.				
Potential Clinical Impact:	Use of obsolete headings mean required information may not be captured.				
Hazard Id:	33	**Hazard Name:**	Temporary GP registration	**Residual risk**	4
Hazard Description:	There may instances where a patient has a registered GP practice but is treated as a temporary registration (e.g. whilst on holiday) by another practice. There is a risk that the discharge summary will only be sent to the registered GP practice.				
Hazard Causes:	Hospital system functionality may only allow discharge summaries to be sent to the patient's registered GP practice.				
Potential Clinical Impact:	Temporary doctor, who has the most immediate need of the discharge summary, may not receive the discharge summary, impacting patient care.				

Hazards specific to EC discharge summary

Hazard Id:	34	**Hazard Name:**	Use of diagnosis qualifiers	**Initial risk**	4

Hazard Description:	EC use diagnosis qualifiers to indicate certainty of diagnoses. If the qualifier indicating 'working diagnosis' is separated from the diagnosis code it may be taken to be 'final diagnosis'.				
Hazard Causes:	Separation of diagnosis qualifier from diagnosis SNOMED CT code.				
Potential Clinical Impact:	Inappropriate treatment as clinical decision support may indicate an inappropriate medication e.g. working diagnosis of ischemic heart disease (IHD) may trigger prescription of statins.				
Hazard Id:	35	**Hazard Name:**	Recording allergies as diagnoses	**Initial risk**	5
Hazard Description:	If allergic causative agents are recorded using SNOMED CT diagnosis codes, the GP system will not be able to use the code in prescribing decision support.				
Hazard Causes:	GP system prescribing decision support uses allergic agents rather than diagnosis codes, so they would not be picked up in prescribing contraindications.				
Potential Clinical Impact:	Risk of allergic reaction as GPs are unaware of the allergic agent.				

10. Summary safety statement

35 potential hazards were identified and mitigated, of which 26 were generic, 6 were specific to mental health, 2 were specific to emergency care and 1 was specific to outpatient letters. Of the 35 potential hazards, 12 were deemed implementation issues, of which 10 were generic and 2 specific to emergency care. The mitigated hazards include information that should be addressed by implementers. All hazards were identified through the consultation steps carried out to develop these standards. The consultations consisted of a multidisciplinary workshop, online survey, review of draft information models and implementation guidance (by clinical informaticians and system suppliers) and an expert user group review. These workshops, surveys and communications included patient representatives as well as professionals from Royal Colleges, specialist societies, nursing, midwifery, social care, allied health professions, health informatics professionals and vendors.

During the consultation, hazards were identified, reviewed and mitigations/actions considered. Nevertheless, some risk is inherent in the standards but most has been:

(A) mitigated by the development of the standards

(B) or the residual risk has been transferred (with guidance) to the implementers.

Certain hazards were deemed system implementation matters. The hazard log (a separate document) however provides guidance for system developers and implementers. It is important that this guidance in relation to these hazards become requirements for implementation.

11. Document control and post standard approval maintenance

Maintenance arrangements for the headings that constitute these standards are specified in the Generic Editorial Principles for the Development of Standards for the Structure and Content of Health Records (a separate document). Future governance of development and maintenance for all professional record standards is the responsibility of the PRSB.

12. SCCI 0129 compliance matrix

The table below summarises the compliance status of this safety case for the emergency care discharge summary project.

Requirement	Compliant (Y/N)?	Comments
4 General requirements for effective clinical risk management	Y	See section 3
4.1 Clinical risk management process	Y	See section 3
4.2 Management responsibilities	Y	See section 3
4.3 Competencies of personnel	Y	See section 3 & 6
4.4 Clinical risk management planning	Y	See section 3 & 4
4.5 Clinical risk management file	Y	This document in its entirety, including supporting evidence and the standard in full.
4.6 Clinical safety case	Y	This document in its entirety, including supporting evidence and the standard in full.
5 Clinical risk analysis	Y	See section 5
5.1 Clinical risk analysis process	Y	See Section 5
5.2 Intended use and identification of characteristics related to the clinical safety of the health software product	Y	See section 2
5.3 Identification of hazards to patients	Y	See section 5
5.4 Estimation of the clinical risk(s) to a patient for each hazardous situation	Y	See section 8
6 Clinical risk evaluation	Y	See section 5
7 Clinical risk control	Y	See section 8
7.1 Clinical risk reduction	Y	See section 8
7.2 Clinical risk control option analysis	Y	See section 8
7.3 Implementation of clinical risk control measure(s)	Y	See section 8
7.4 Residual clinical risk evaluation	Y	See section 8
7.5 Clinical risk/benefit analysis	Y	See section 8
7.6 Clinical risks arising from clinical risk control measures	Y	See section 8
7.7 Completeness of clinical risk control	Y	See section 1
7.8 Evaluation of overall residual clinical risk acceptability	Y	See section 1

8 Clinical safety case report(s)	Y	This document in its entirety, including supporting evidence and the standard in full.
9 Stage reports and pre-release clinical risk management process review	N	Not required for a professional standard.
10 Post-deployment monitoring	N	Not required for a professional standard.
11 Product modification	Y	See section 11

Appendix A – Risk matrix

Likelihood						
	Very High	3	4	4	5	5
	High	2	3	3	4	5
	Medium	2	2	3	3	4
	Low	1	2	2	3	4
	Very low	1	1	2	2	3
		Minor	Significant	Considerable	Major	Catastrophic
		Consequence				

Likelihood

Category	**Likelihood**
Very High	Unacceptable level of risk. Mandatory elimination or control to reduce risk to an acceptable level.
High	Unacceptable level of risk. Mandatory elimination or control to reduce risk to an acceptable level
Medium	Undesirable level of risk. Attempts should be made to eliminate or control to reduce risk to an acceptable level. Shall only be acceptable when further risk reduction is impractical.
Low	Tolerable where cost of further reduction outweighs benefits gained.
Very Low	Acceptable, no further action required

Consequence

Category	**Interpretation**	
	Consequence	**Patients Affected**
Catastrophic	Death	Multiple
	Permanent life-changing incapacity and any condition for which the prognosis is death or permanent life-changing incapacity; severe injury or severe incapacity from which recovery is not	Multiple

	expected in the short term	
Major	Death	Single
	Permanent life-changing incapacity and any condition for which the prognosis is death or permanent life-changing incapacity; severe injury or severe incapacity from which recovery is not expected in the short term	Single
	Severe injury or severe incapacity from which recovery is expected in the short term	Multiple
	Severe psychological trauma	Multiple
Considerable	Severe injury or severe incapacity from which recovery is expected in the short term	Single
	Severe psychological trauma	Single
	Minor injury or injuries from which recovery is not expected in the short term.	Multiple
	Significant psychological trauma	Multiple
Significant	Minor injury or injuries from which recovery is not expected in the short term	Single
	Significant psychological trauma	Single
	Minor injury from which recovery is expected in the short term	Multiple
	Minor psychological upset; inconvenience	Multiple
Minor	Minor injury from which recovery is expected in the short term; minor psychological upset; inconvenience; any negligible consequence	Single

Appendix B – Consultation stakeholders

This appendix provides lists, by project of the stakeholders consulted during the course of the project.

Generic hospital discharge summary

1. **Individuals who participated in the consultation workshop (24 March 2016)**

Name	Organisation
Andy Spencer	Royal College of Paediatrics and Child Health
Angus Wallace	Royal College of Surgeons(England)
Ann Slee	NHS England
Annette Gilmore	Assurance Lead, Professional Record Standards Body
Brett Lambert	Tees, Esk and Weir Valleys NHS
Chris Johnson	Respiratory Physician, Papworth Hospital
Darren Wooldridge	RCP HIU
Dave Barnet	HSCIC
Devesh Sinha	Stroke physician, Southend
Emily Ward	Royal Pharmaceutical Society

Name	Organisation
Gerry Bolger	CCIO, Imperial Hospitals NHS Trust
Gill Otway	South Devon Healthcare NHS Trust
Howard Leicester	Patient/ accessibility issues
Ian McNicoll	OpenEHR
Ian Turner	National Care Home Association
James Reed	Royal College of Psychiatrists (link to MH Discharge)
Jan Hoogewerf	RCP HIU
John Williams	Clinical Lead (Royal College of General Practitioners)
Leo Fogarty	RCGP
Lis Warren	Diabetes UK patient representative
Liz Goodall	RCP Patient Carer Network
Liz Sheehan	Allied Health Professional Federation
Matt Butler	Royal College of Nursing
Munish Jokhani	HSCIC
Neil Betteridge	PRSB patient representative
Nicola Quinn	RCP HIU
Paul Rastall	Gastroenterologist (RCP)
Philip Scott	PRSB (Technical Coordination Committee)
Ron Newall	Patient representative
Stephen Goundrey Smith	Royal Pharmaceutical Society
Susan Rayment	District nurse
Suzie Shepherd	RCP Patient Carer Network
Tom Armstrong	Radiology SpR Royal Free Hospital
Zein Toukan	Junior Doctor

2. Stakeholders who were members of expert group who reviewed all deliverables

Name	Organisation
John Williams	RCGP (project clinical lead)
Ann Slee	NHS England
Anoop Shah	RCP (HIU)
Colin Brown	NHS Scotland
Colin Brown (plus CCG colleagues)	CCIO, Morecambe Bay University Hospitals NHS Trust
Emma Melhuish	HSCIC

Name	Organisation
Ian McNicoll	OpenEHR
Iain Thompson	NHS Lothian
Jo Goulding	HSCIC
Keith Farrar	NHS England
Leo Fogarty	HSCIC/RCGP/NHS Scotland
Munish Jokhani	HSCIC
Paul Miller	Greater Glasgow HB/RCGP
Paul Rastall	RCP (HIU)
Phil Koczan	RCGP

3. Stakeholders who provided comments on the information models

Name	Organisation
John Parry	TPP
Pete Hughes (and colleagues)	Cerner
Paul King	SystemC
Afzal Chaudhry	Cambridge University Hospitals NHS Foundation Trust
Rupert Fawdry	RCOG
Howard Leicester	Patient
Neil Betteridge	Patient
Kai Sanders	CCG/GP
Cath Jenson	GP
Dermot O'Riordan	CCIO
Tim Hoare	Hospital doctor
Mark Rickenbach	GP/trainer
Brian Elvey	Hospital doctor
Peter Isaacs	Hospital doctor
Andrew Jennings	GP
Bernard Fernando	GP
Beatrice Cooper	Hospital doctor
Andrew Jennings	CCIO
Jack Barker	CCIO

Name	Organisation
Zabeda Ali-Fogarty	Nurse/ Supplier
Ruth Caudwell	Paediatrician
Angus Wallace	Surgeon
Stephen Goundrey-Smith and colleagues	Royal Pharmaceutical Society
Gary Warner	Pinnacle Health (pharmacist)

Mental health discharge summary

A panel of expert reviewers was established including representation from patients and carers, mental health nurses, consultant psychiatrists, psychologists, doctors and allied health professionals. Individuals came from hospital, mental health, community and primary care backgrounds. See the table below for the full list of contributors.

Name	Organisation
James Reed	Psychiatrist, Birmingham & Solihull Mental Health Foundation Trust, CCIO and RCPsych
Jonathan Richardson	Northumberland, Tyne and Wear NHS Foundation Trust (RCPsych)
Matt Butler	Mental Health Nurse, RCN
Ken Lunn	Mindfulness Network
Munish Jokhani	NHS Digital
Ronald Newall	RCP Patient and Carer Network
Julian Costello	GP, RCGP HIG
Graham Fawcett	Psychologist and CCIO, East London NHS Foundation Trust, BSP
Ashimesh Roy Chowdhury	Psychiatrist, St Andrews Healthcare, Northampton (RCPsych)
Anthony Jemmott	Mental Health Nurse, Camden and Islington NHS Foundation Trust
Jane Leigh	GP Advisor, Tees, Esk and Wear Valleys NHS Foundation Trust
David Dodwell	Psychiatrist
Rajesh Moholkar	Specialist advisor to the CQC
Steve Carney	National Deaf Mental Health Service
Dhruba Bagchi	Birmingham & Solihull Mental Health Foundation Trust

Thomas Clark	Birmingham & Solihull Mental Health Foundation Trust
Jayne Greening	Birmingham & Solihull Mental Health Foundation Trust
Tina Irani	Birmingham & Solihull Mental Health Foundation Trust
Alison Reed	Birmingham & Solihull Mental Health Foundation Trust
Suzanna Lingiah Rongpi	Birmingham & Solihull Mental Health Foundation Trust
Mahmoud B Saeed	Birmingham & Solihull Mental Health Foundation Trust
Muzaffar Sajid	Birmingham & Solihull Mental Health Foundation Trust
Leo Fogarty	GP, Clinical Lead GP2GP Scotland, RCGP
Ian McNicoll	GP, Fresh EHR, RCGP
Annette Gilmore	RCN, Professional Record Standards Body
Matthew Whitty	Professional Record Standards Body
Philip Scott	Professional Record Standards Body

The online survey resulted in 289 individual responses and there were additional responses from clinicians who preferred to submit comments directly onto the Excel spreadsheet (displaying the headings) and by email. The majority of respondents were mental health care professionals from a broad range of relevant disciplines. Patients, GPs, community physicians and other relevant professionals also contributed. The analysis of the survey results, including thematic analysis of the very large number of comments received (from 34 to 114 for each question), and the review of the draft MHDS by expert reviewers ensured a robust evidence-based set of documentation standards were produced and identification of potential clinical safety hazards and practical mitigations to these risks (see final report for fuller explanation of methods, results and development of products).

Emergency care discharge summary

1. **Individuals who participated in the consultation workshop (8 September 2016)**

Name	Organisation
Aaron Haile	Royal College of Emergency Medicine
Adnan Azfar	NHS Digital
Ana Miorelli	Royal College of Psychiatrists
Andrew Carr	Royal College of Nursing
Anoop Shah	University College London (Clinical Pharmacology and PhD student)
Ashish Sinha	British Society of Gastroenterology
Carey Bloomer	National Care Association
Darren Wooldridge	Royal College of Physicians
David Barnet	NHS Digital
Deirdre McLellan	Royal College of Physicians Patient and Carer Network
Grace Charlesworth	Royal College of Physicians
Haidar Samiei	EMIS
Howard Leicester	Accessible Info
Ian McNicoll	OpenEHR Foundation
Jan Hoogewerf	Royal College of Physicians

Jane Lynch	Legal Advisor
John Williams	Royal College of General Practitioners
Jonathan Brown	British Society of Gastroenterology
Liz Goodier	Royal College of Physicians Patient and Carer Network
Manesh Patel	System C
Martin Orton	PRSB
Monah Shah	Royal College of Physicians Patient and Carer Network
Nicola Quinn	Royal College of Physicians
Rosa McNamara	Imperial College Healthcare NHS Trust (Consultant Emergency Medicine)
Sarah Montgomery	College of Occupational Therapists
Sarah Pearce	Imperial College Healthcare NHS Trust (Matron)
Shamil Haroon	University of Birmingham (Public Health, Epidemiology and Biostatistics Clinical Research Fellow)
Tom Hughes	Royal College of Emergency Medicine
Vijaya Rajoo Naidu	University of Hertfordshire (Emergency Care and Advance Nursing Practice)

2. **Stakeholders who provided comments on the draft information model and implementation guidance, when they were opened for general review**

Name	Organisation
Afzal Chaudhry	Cambridge University Hospitals
Andrea Dantas	Cerner
Bernard Fernando	University College London
Gill Otway	South Devon Health Informatics Service
Haidar Samiei	EMIS
Howard Leicester	Accessible Info
Isabelle Smith	Age UK
John McCormick	Kingskerswell and Ipplepen Medical Practice
Kai Sander	NHS Hartlepool and Stockton-on-Tees Clinical Commissioning Group
Laura Sharples	TPP
Liz Angier	British Society for Allergy & Clinical Immunology
Marianne Markowski	University of Greenwich
Marie Migale	Kings College Hospital NHS Foundation Trust
Michael Green	Torbay and South Devon NHS Foundation Trust
Michael Thick	IMS Maxims
Neelam Dugar	Royal College of Radiologists
Nick Booth	Connected Health Cities
Sharon Bishop	St Helens & Knowsley Health Informatics Service

3. **Stakeholders who were invited to participate in the online survey consultation (03 – 31 October 2016)**

Academic Health Science Networks	Accessible Info
Action on Pain	Age UK
All Scripts	Allied Health Professions Federation
Ambulatory Emergency Care Delivery Network	Association of Directors of Adult Social Services
Asthma UK	Atos
British Cardiac Patients	British Computer Society

Association	
British Heart Foundation	British Liver Trust
British Lung Foundation	British Society of Gastroenterology
Care Quality Commission	Carers UK
Cerner	Chief Clinical Information Officers leaders network
Clinical commissioning group lay members	Computer Sciences Corporation
Diabetes UK	EMIS
Epilepsy Society	General Electric
Genetic Alliance	Health Chief Information Officers network
Healthy London Partnership Urgent and Emergency Care Programme	Ideagen
IMS Maxims	Interopen
Intersystems	Mind
Multiple Sclerosis Society	National Care Association
National Kidney Federation	National Voices
NHS Clinical Commissioners	NorseCare Ltd
Nuffield Trust	Nursing Home Association
PRSB advisory board members	Quadramed
Registered Nursing Home Association	Resuscitation Council
Royal College of Emergency Medicine	Royal College of General Practitioners
Royal College of Midwives	Royal College of Nursing
Royal College of Paediatrics and Child Health	Royal College of Physicians, Health Informatics Unit register (individuals who have expressed an interest in the work of the HIU)
Royal College of Physicians, Patient and Carer Network	Royal College of Psychiatrists
Royal College of Radiologists	Royal Pharmaceutical Society
Servelec Healthcare	Sickle Cell Society
Siemens	Silverlink Software
Society for Acute Medicine	Stroke Association
System C	TechUK
TPP	

4. Stakeholders who attended the expert user group meeting (24.11.16)

Name	Organisation
Adnan Azfar	NHS Digital
Andrea Dantas	Cerner
Andrew Carr	Cambridge University Hospitals Trust
Darren Wooldridge	Royal College of Physicians
David Barnet	NHS Digital
Gary Hartnoll	Chelsea and Westminster NHS Trust
Jan Hoogewerf	Royal College of Physicians
John Williams	Royal College of General Practitioners
Kirsty Challen	Lancashire Teaching Hospitals NHS Trust
Laurie Beed	Royal College of Psychiatrists Informatics Committee (Patient & Carer Representative)
Marcus Baw	Royal College of General Practitioners
Matthew Barlin	Cerner

Michael Bond	NHS Digital
Mona Shah	Royal College of Physicians Patient and Carer Network
Munish Jokhani	NHS Digital
Rhian Morgan	Royal Berkshire NHS Foundation Trust
Tom Hughes	Royal College of Emergency Medicine
Victoria Heald	Royal Pharmaceutical Society

Outpatient Letters

1. **Individuals who participated in the consultation workshop (19 January 2017)**

The consultation workshop on 19 January 2017 had representation from patients and carers, nurses, doctors and allied health professionals. Individuals came from hospital, community and primary care backgrounds. See the table below for the full list of attendees.

Name		Role
Sebastian	Hendricks	Audiovestibular physician
Munish	Jokhani	Clinical Engagement Lead, NHS Digital
Frances	Sanderson	Consultant Infectious Diseases
Steve	Jackson	Consultant physician and chief medical information officer
Kiri	Eliott	Dietician
Jonathan	Brown	Gastroenterologist
Ashish	Sinha	Gastroenterologist
Mike	Robson	General adult psychiatrist
Arjun	Dhillon	GP
Phil	Koczan	GP
John	Williams	GP
Manpreet	Pujara	GP and chair of RCGP health informatics group
Marcus	Baw	GP and IT specialist
Jane	Leigh	GP Strategy Advisor
Linda	Mennell	Hospital based, non-clinical EPR business change manager
Tarek	Chahine	Industry representative
Tim	James	Industry representative
Dave	Barnet	Interoperability lead, NHS Digital
Helen	Gyves	Lead Nurse for Clinical IT
Karen	Selby	Obstetrician/gynaecologist
Joanne	Hurford	Occupational therapist
Carla	Eccleston	Orthoptist

Name		Role
Andy	Goldberg	Orthopaedic Surgeon
Will	Carroll	Paediatrician
Gary	Hartnoll	Paediatrician
Satyapal	Rangaraj	Paediatrician
Mariam	George	Palliative medicine
Neil	Betteridge	Patient/ carer representative
Jacky	MacBridge	Patient/carer Representative
Andrew	McCracken	Patient/carer representative
Howard	Leicester	Patient/carer representative and expert on accessibility issues
Stephen	Goundrey Smith	Pharmacist
Christine	Roffe	Physician – stroke medicine
Johan	Holte	Physiotherapist
Priyanka	Bichala	Psychiatrist
David	Pitcher	Respiratory physician
Ira	Pande	Rheumatologist
Angus	Wallace	Surgeon, faculty of sport and exercise medicine
Martin	Orton	Director of Delivery & Development, PRSB
Helene	Feger	Director of Strategy, PRSB
Philip	Scott	Technical assurance lead, PRSB
Nadine	Taylor	Health informatics – programme coordinator
Kajal	Mortier	Health informatics – project manager
Nicola	Quinn	Health informatics – project manager
Darren	Wooldridge	Health informatics – project manager

2. **Draft 2 of the information models was reviewed by:**

Name		Role
Robert	Allcock	CCIO and chest physician
Chris	Austin	AHP informatics lead, NHS England
Dave	Barnett	NHS Digital interoperability lead
Michael	Bond	NHS Digital
Adrian	Burke	CCIO and psychiatrist
Afzal	Chaudhry	CCIO and nephrologist

Name		Role
Cath	Chilcott	NHS Data Dictionary
Sarah	Clarke	British Cardiovascular Society
Andrea	Dantas	System supplier
Kiri	Elliot	On behalf of National AHP Information Strategy team
Joanne	Entwhistle	Associate general manager-commissioning, Salford Royal NHS Foundation Trust
Ian	Gaywood	British Society for Rheumatology
Mariam	George	Association for Palliative Medicine, Great Britain and Ireland
Mark	Holland	Society for Acute Medicine
Steve	Jackson	CMIO and physician
Peter	Kalu	British Association of Plastic Reconstructive and Aesthetic Surgeons
Cathy	Kelly	CCIO and physician
Mike	Knapton	British Heart Foundation
Dinesh	Nagi	Association of British Clinical Diabetologists
Gill	Otway	IT programme manager, South Devon Health Informatics Service
Katerina	Sarafidou	Royal College of Surgeons
John	Williams	General practitioner, RCGP
Annette	Gilmore	Nurse

3. **The expert clinical group which reviewed all information models and the implementation guidance were:**

Name		Role
Phil	Koczan	General practitioner
Jonathan	Brown	British Society of Gastroenterology representative
Munish	Jokhani	NHS Digital
Afzal	Chaudhry	CCIO and nephrologist
Chris	Austin	AHP informatics lead, NHS England
Dermot	O'Riordan	CCIO and surgeon
Andy	Spencer	Paediatrician (retired)
James	Parrott	System supplier (hospital)
Marcus	Baw	General practitioner
Jacinta	Ni Suaird	System supplier (general practice)
Adnan	Azfar	NHS Digital

Name		Role
Tim	James	System supplier (hospital)
Jan	Hoogewerf	Programme manager, Health Informatics Unit, Royal College of Physicians
Nicola	Quinn	Project Manager, Health Informatics Unit, Royal College of Physicians
Sheena	Jagjiwan	Programme Coordinator, Health Informatics Unit, Royal College of Physicians