The Scottish Government

eHealth
Better eHealth: Better Care

Public Health Scotland

Programmes

CLINICAL DOCUMENT INDEXING STANDARDS - *NOTES OF GUIDANCE*

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Contents

1. Document Control

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Approval Bodies

The initial issue of this document requires the approval of the signatories below on behalf of the Project Board, and then based on project rate the approval of the signatories below on behalf of the eHealth Bodies.

Approved by:			
Name	**Title**	**Signature**	**Date**
Project Board			
eHealth - PET			
eHealth Programme Board	Not Required		
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Document History

Version No.	Date	Details of Changes included in Update	Highlight / Tracking
1.0	22/4/11	Initial Draft	Off
1.1	26/5/11	Updated following review by ISD	Off
1.2	15/6/11	Updated following review by Sean Brennan/Neil Kelly	Off
1.3	22/7/11	Updated following review by Consortium Members	
1.4	3/7/12	Updated following CCLG review and changes to standard as part of approval process	Off
1.5	06/11/12	Updated following PET review and changes to standard as part of approval process (Candice Lequesne)	On
1.6		Updated following review by ISD – adding	
2.0	13/11/13	Update page 5 with current CDI version no	
2.1	13/03/14	ISD: Move Document Control to beginning of document. Update page 5 with current CDI version no. Page 9: Added 'When a new code has been requested and approved then Terminology Services are contacted for the issue of a SNOMED term'.	Off
2.2	24/03/14	ISD: Update page 5 with current CDI version no	
2.3	05/08/14	ISD: Update page 5 with current CDI version no	
3.0	05/07/16	Updated page 9 – step 6 SNOMED CT process due to revalidation of the CDI standard incorporating SNOMED codes.	
3.1	02/2021	Amended any reference to NSS, PHI, ISD to PHS (Public Health Scotland). Amended email addresses re: O365 migration	
3.2	08/2021	Insertion of details re: CDI Sub-specialty list	

2. Introduction

1.1 Background

As Health Boards modernise and reorganise patient[1] care there is a growing requirement for patients to move across traditional geographical and care boundaries. This requirement, in turn, creates a need to have greater sharing of information across the care boundaries - whilst maintaining patient safety and adhering to appropriate standards.

Over the past few years, Health Boards in Scotland have embarked on various initiatives to enhance the availability/use of electronic information and to increase the volume and scope of electronic clinical information and documents.

The provision of electronic solutions to support this increased clinical information sharing relies on effective, efficient and consistent indexing, display and storage across all NHS boards. To aid this a number of standards have been developed over recent years related to clinical documents. An Annex at the end of this guidance provides some illustration as to how these standards relate to each other.

Feedback received from different health boards suggested that the current NHS Scotland Clinical Document Indexing Standard, published in 2007, required review and possible amendment.

A project was set up & led by GGC health board and the following outcomes have been achieved:-

- The Document Types & Sub-Types have been reviewed and recommended changes have been incorporated into the revised list. (A copy of these can be found in the revised "**Clinical Document Indexing Standard**", available from the PHS or eHealth website.)
- Associated descriptions & examples have been added to each of the sub-types which will provide clarity on the use of the standards.

1.2 Benefits

Electronic access to clinical information results in a better and timelier access to patient information. The use of a clinical portal to view and share electronic information will result in all information for an individual patient being collated across departments, practices, sites and boards.

The benefits of this project work and the subsequent outcomes will result in the following:-

- More accurate indexing of electronic documents using metadata;
- More consistent indexing of electronic documents, both within and between Boards;
- Coverage extended to include all relevant NHS specialty document types and key partner agency shared document types;
- Reduced risk of documents being lost or misplaced;
- Enhanced document meta-data (to support storage / retrieval).

This in turn will benefit patients, clinicians and boards by providing:

- More rapid clinical response;

[1] Please note, in the interest of brevity, "Patient" is used to represent "Patient or Client" depending on appropriateness.

- Reduced clinical risk resulting from incomplete information being presented to clinicians;
- Reduced time spent searching for and retrieving documents;
- Improved capability to meeting waiting time targets.

1.3 Guidance Notes - Introduction

Another recommendation from the project group was to provide guidance notes for users which would provide further clarity when applying the indexing standards to documents*.

Therefore these guidance notes have been produced to act as a quick reference to ensure there is an agreed and consistent approach for storing and retrieving electronic clinical documentation and will ensure all relevant clinical information can be stored safely and securely and retrieved quickly at the point of care.

* For the purposes of the indexing standards, a 'Document' is defined as ***a piece of written, printed or electronic matter that provides information or evidence or that serves as an official record.***

3. Indexing Fields (Metadata Information)

When documents are created or converted into electronic versions, they must be indexed and tagged with metadata to help clinicians find the relevant files. Fields which are used for rapid searching of records are identified as indexed fields. The following table illustrates the metadata applied to documents.

If a document is scanned, the date of scanning may not be the same as the date the document was created i.e. the document date.

The specialty, sub specialty and service data items will be populated from PHS lists. There are instances where a service and specialty may be interchangeable. For example, where a physiotherapist provides their service as part of an Orthopaedic outpatient contact then the specialty may be Orthopaedic whereas a direct referral to a Physiotherapist then the specialty may be Physiotherapy.

Please note however that indexing standards can be mapped to any local or specific requirements.

Expected **E**
Desirable **D**

Category	Item	Data	Scan	Note
Patient ID	CHI Number	E	E	
Patient ID	Patient ID	E	E	Required if no CHI entitlement
Patient ID	Date of Birth	E	E	
Patient ID	Surname	E	E	
Patient ID	Forename	E	E	
Document ID	Document Type	E	E	
Document ID	Document Subtype	E	E	Where applicable
Document ID	Document Version	E	D	
Document ID	Location	E	D	PHS reference file
Document ID	Organisation	E	D	PHS reference file
Document ID	Specialty	E	E	PHS reference file
Document ID	Sub specialty	E	E	PHS reference file
Document ID	Service	E	E	PHS reference file

Document ID	Date	E	E	This is the document date for scanned images.
Document ID	Time	E	D	
Document ID	Author	D	D	
Document ID	Author profession/grade	D	D	
Document ID	General Practice number	D	D	PHS reference file
Information Governance	Sensitivity	D	D	
Information Governance	Consent Withdrawn	D	D	

Examples

1) An ECG taken as an output from a clinical system and available in a portal.

Item	Data	Examples	ISD Code
CHI Number	E	1234561234	
Date of Birth	E	dd/mm/yyyy	
Surname	E	Patient	
Forename	E	Example	
Document Type	E	Report	RP
Document Subtype	E	ECG	RP02
Document Version	E	0.1	
Location	E	This Hospital	S314H
Specialty	E	Cardiology	A2
Date	E	01/03/11	
Time	E	13:00	
Author	D	A.N. Other	
Author profession/grade	D	Cardiology Technician	
Sensitivity	D	Sensitive	
Consent Withdrawn	D	No	

2) A discharge letter dated 30 March is received from a hospital and scanned

Item	Scan	Note	ISD Code
CHI Number	E	2345675678	
Date of Birth	E	dd/mm/yyyy	
Surname	E	Second	
Forename	E	Example	
Document Type	E	Correspondence	CO
Document Subtype	D	Discharge Letter	CO04
Location	D	Edinburgh Royal Infirmary	S314H
Organisation	D	NHS Lothian	SSA20
Specialty	E	Cardiology	A2
Date	E	30/03/11	

4. Specialty List

Specialty is defined as a division of medical, dental or professional care covering a specific area of clinical activity within one of the Royal Colleges, Faculties or Societies.

The PHS national specialty list is to be used in document indexing, this is available as a reference file from PHS:- http://www.isdscotland.org/Products-and-Services/Data-Definitions-and-References/National-Reference-Files/.

Separately and in addition to the national specialty list a CDI subspecialty list has been created and is to be used where appropriate in document indexing. This list was created in conjunction with the SCI Gateway Specialties listing, SNOMED Service Simple Reference Set and reviewing the Treatment Function Codes. The subspecialty list should follow the same convention as the National Reference files, e.g., all subspecialties of Surgery should be included under C1. The Virtual Reference Group (VRG) is the authorisation route for any new subspecialties.

5. Ownership/Management of Standards

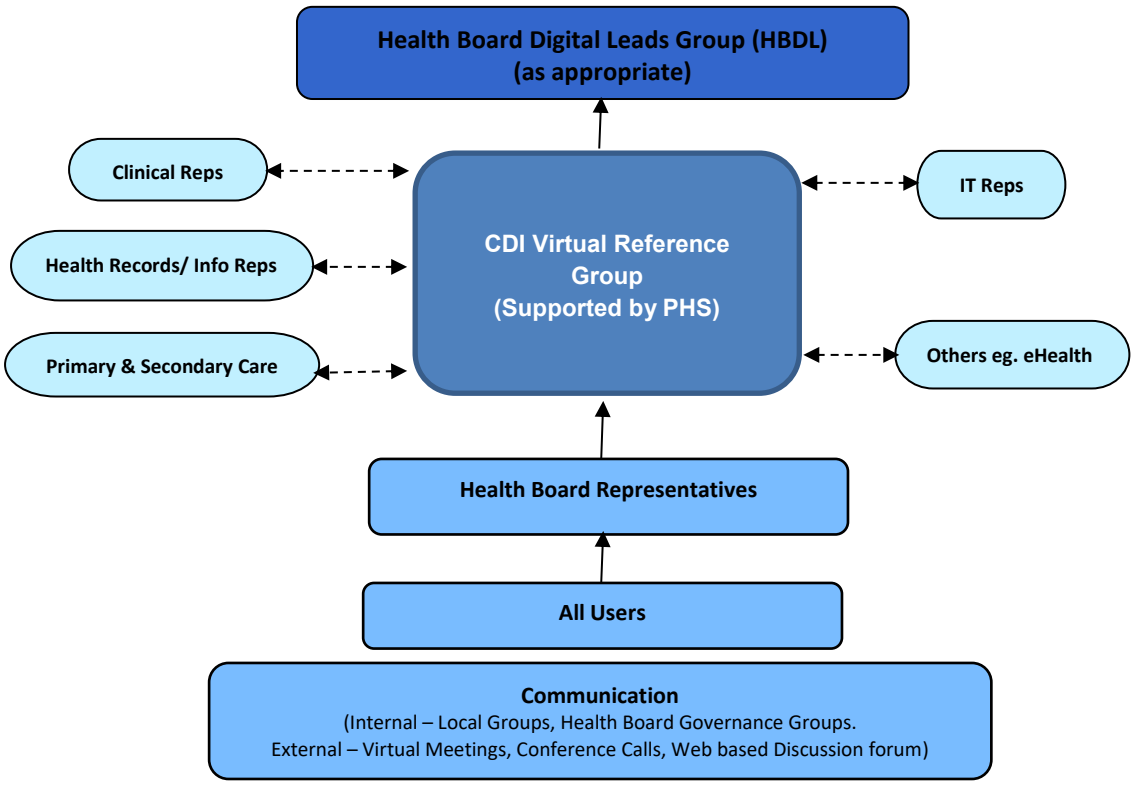
Recommendation from NHSGGC is that ownership of the Clinical Document Indexing Standards is with the Health Board Digital Leads Group (HBDL).

Intermittent updates will be maintained by Public Health Scotland (PHS) as stated in the standard.

Regular full reviews will be initiated by the Scottish Government eHealth Division.

The following diagram illustrates the proposed overall governance structure for document indexing standards.

Schematic of Clinical Document Indexing Standards Governance (Recommended)



6. Change Request Process

A robust change request process is essential for the future review and update of the PHS Clinical Document Type Standards, this process needs to be managed and supported appropriately. The 'Custodian' of the maintenance of the standards will be PHS, as stated in the standard in the 'ownership section'.

The following 5 steps are a quick guideline on how minor intermittent (not major reviews) Change Requests will be raised & monitored:-

A change request is raised when a change/addition to a document type, sub-type or description has been identified. Changes are then evaluated by the Virtual Reference Group and approved or rejected. As a temporary measure, the appropriate document sub type 99 would be used and any re-coding applied retrospectively.

Step 1
The requesting health board needs to send the details of the change request to the custodian as stated in the standard via e-mail. The change request is logged and allocated a unique number (the management of this to be determined by the user group, a number of web-based approaches are available).

Step 2
A list of change requests/additions is considered by the Virtual Reference Group on an ad-hoc basis who will approve/reject the suggested changes.

Step 3
If the change is rejected by the user group, then advice will be given on how documents should be indexed within the current standards. The requesting board is notified of this decision.

Step 4a
If the change does not incur additional cost or implementation activity, the change will be made to the source file by the Virtual Reference Group and forwarded for publication.

If the change is rejected step 3 should be followed.

Step 4b
If a change endorsed by the Virtual Reference Group is significant and its implementation would result in additional cost or implementation activity, it will be escalated to the full eHealth Clinical Leads Group for approval.

If the change is rejected by the HBDL, step 3 should be followed.

Step 5
If the change is approved, the HBDL informs the users group of the decision and instructs a change to be made to the national reference file maintained by the custodian.

Step 6
When a new CDI code has been requested and approved by the Virtual Reference Group a request is referred to them to supply a SNOMED CT numerical code for insertion into the CDI standard document.

If the Virtual Reference Group advise that a SNOMED CT numerical code is not available, then a request is made to the Terminology Services Helpdesk for a new SNOMED CT numerical code and to request insertion of all new CDI codes into the 'Record Composition Type Simple Reference Set'.

NOTE The full eHealth standards approval process should be followed for full reviews instigated by SG eHealth.

7. Future Considerations

Labs – it has been suggested that in the future, consideration should be given to Lab Sub-Types being moved to Reports. This document type remains in the revised standards given the volume of results for this existing document type.

8. Working Example

Application of document standards – Acute Patient Journey

- A patient was referred to a specialty and attended an outpatient appointment.
- The patient was seen, had clinical information recorded, had blood tests requested and a letter was completed for the GP.
- The patient was admitted for surgery, had clinical information recorded, was sent to theatre for an operation, had blood tests requested, medication was prescribed on the ward.
- The patient was discharged and was given an immediate discharge letter for the GP and a note of discharge medication.
- The results of blood tests were available and included in the final discharge letter to the GP.
- The patient was seen for follow up, clinical information was recorded and discharged from care. A discharge letter was sent to the GP.

Information was captured from various systems, including scanning, and all documents were indexed using the document indexing standards. Metadata incorporating patient and document IDs are excluded from the table below but will be intrinsic to document indexing.

DST Code	Document Type	Document Subtype
CO14	Correspondence	Referral Letter
CL10	Clinical Notes	Outpatient Medical Note
LA01	Labs	Biochemistry
LA07	Labs	Microbiology
CO02	Correspondence	Outpatient Letter
CL03	Clinical Notes	Inpatient Medical Note
CL04	Clinical Notes	Inpatient Nursing Note
CHO9	Assessments	Theatre Patient Checklist (suggested change)
IN01	Interventions	Anaesthetic Record
IN07	Clinical Notes	Operation Record (suggested change)
ME03	Medications	Medication Record
ME02	Medications	Discharge Medication Record
CO08	Correspondence	Immediate Inpatient Discharge Letter
LA01	Labs	Biochemistry

LA07	Labs	Microbiology
CO06	Correspondence	Inpatient Final Discharge Letter
CL10	Clinical Notes	Outpatient Medical Note
CO04	Correspondence	Discharge Letter

9. Annex

CLINICAL DOCUMENTS – RELATIONSHIP BETWEEN INDEXING STANDARDS

9.1 Background

As Health Boards modernise and reorganise patient[2] care there has been a growing requirement for patients information to move electronically across traditional geographical and care boundaries. This requirement, in turn, creates a need to have greater commonality of sharing of information for safe sharing across the care boundaries between care partners - whilst maintaining patient safety and adhering to appropriate standards.

Over the past few years, Health Boards in Scotland have embarked on various initiatives to enhance the availability/use of electronic information and to increase the volume and scope of electronic clinical information and documents. SCI Gateway and Store, EDT and Docman enable different kinds of clinical document transfer between clinicians in primary and secondary care. Some as images, some as reusable data.

The provision of electronic solutions to support this increased clinical information document sharing relies on effective, efficient and consistent indexing naming, filing and metadata tagging of the same kinds of documents across all NHS boards sharing partners (which may be all boards).

In recent years SG have commissioned the following standards to help with consistent handling of documents:

Clinical Information presentation standard (Headings for finding information in clinical portal)

Clinical Document Indexing standard revision (for tagging document types in acute care)

Docman filing standards (for GPs filing documents)

The purpose of this Annex is to highlight the areas where there is consistency between these standards and areas of inconsistency. This will be done paying particular attention to implementation and use of the documents.

9.2 Clinical Information Presentation Standard

Electronic access to clinical information results in a better and timelier access to patient information. The use of a clinical portal to view and share electronic information will result in all information for an individual patient being collated across departments, practices, sites and boards. A presentation standard was developed with particular attention to the 'headings' or 'tabs' which a clinician would use to find information and documents within a portal type presentation of a patient record.

[2] Please note, in the interest of brevity, "Patient" is used to represent "Patient or Client" depending on appropriateness.

The pertinent headings are listed in a table below:

	Heading	**Subheadings or examples of information**
		(**Please note:** These are only *examples* of information and not intended to be a definitive list of sub headings)
A	Demographics and contacts	• Demographics • Next of kin • Services involved in care • Carer details
B	Social & Personal Summary	• Family History • Social History • Home circumstances • Lifestyle choices
C	Alerts & Risks	Examples include: • child protection alert • alert that patient has DNAR form available • warning for community staff that patient has dangerous dog
D	Healthcare encounters	e.g. • Inpatient/ Daycase Admissions • Waiting list Appointments • Outpatient clinic attendances • Therapy Appointments • Emergency Department attendances • Out of Hours attendances
E	Patient Needs/Preferences	• Organ Donation • Patient and family wishes • patient support needs
F	Allergies and adverse events	
G	Clinical history:	• Diagnoses • Problems/Issues • Procedures / Interventions
H	Correspondence	All letters including: • Referral • Admission • Discharge • Outpatient clinic • A&E letters • AHP letters etc.
I	Medication, immunisation & Devices *	• Active/ Ongoing • Inactive/ • Completed • Immunisations • Devices
J	Notification and Legal documents	Would include such things as: • DNACPR form, • Mental Health Act docs • Adults with Incapacity form
K	Investigations & Results	• Labs

		• Radiology • Other Diagnostic Test results • Pending/Outstanding Requests
L	Clinical Notes	Would include any documentation about patients other than letter sent to other healthcare professionals e.g. • Pre-op assessments • Progress notes • Care plans • Images (videos, medical images etc)
M	Observations	• Vital signs • Anaesthetic charts • Structured scores

There is an obvious relationship between the headings and the 'National Data Services' being developed by the Integration Governance Group. However for the purposes of this paper we shall focus on the document related headings.

9.3 Document Indexing Standards

When documents are created or converted into electronic versions, they must be indexed and tagged with metadata to help clinicians find the relevant files. Fields which are used for rapid searching of records are identified as indexed fields. The following table illustrates the metadata applied to documents and comes from the guidance issued with the clinical document indexing standard.

Item
CHI Number
Patient ID
Date of Birth
Surname
Forename
Document Type
Document Subtype
Document Version
Location
Organisation
Specialty
Sub specialty
Service
Date
Time
Author
Author profession/grade
General Practice number
Sensitivity
Consent Withdrawn

Examples

1) An ECG taken as an output from a clinical system and available in a portal.

Item	Data	Examples	ISD Code
CHI Number	E	1234561234	
Date of Birth	E	dd/mm/yyyy	
Surname	E	Patient	
Forename	E	Example	
Document Type	E	Report	RP
Document Subtype	E	ECG	RP02
Document Version	E	0.1	
Location	E	This Hospital	S314H
Specialty	E	Cardiology	A2
Date	E	01/03/11	
Time	E	13:00	
Author	D	A.N. Other	
Author profession/grade	D	Cardiology Technician	
Sensitivity	D	Sensitive	
Consent Withdrawn	D	No	

2) A discharge letter dated 30 March is received from a hospital and scanned

Item	Scan	Note	ISD Code
CHI Number	E	2345675678	
Date of Birth	E	dd/mm/yyyy	
Surname	E	Second	
Forename	E	Example	
Document Type	E	Correspondence	CO
Document Subtype	D	Discharge Letter	CO04
Location	D	Edinburgh Royal Infirmary	S314H
Organisation	D	NHS Lothian	SSA20
Specialty	E	Cardiology	A2
Date	E	30/03/11	

The document type and subtype as well as the specialty are highlighted in yellow as these are closely related to the headings in the presentation standard and the docman folder in the Docman standard.

The document type list is the subject of a revision standard proposal currently going through eHealth approval process. It is a classification of different clinical document types, in part reproduced below:

Document Type/Subtype	Description (examples where applicable)
Alerts & Risks	
Allergies and Adverse Reactions	Any allergy or adverse reaction noted at a point in time
Alerts	Any alert noted at a point in time
Assessments	
Nursing assessment tool	Any tool used by nursing staff for recording an assessment.

Document Type/Subtype	Description (examples where applicable)
(SSA) assessment	Single Shared Assessment - person-centred and more streamlined approach led by a single professional with other specialist involvement where appropriate.
Care Plans	
Clinical Care Plan	Any care plan involving clinicians and/or social services which may or may not be integrated. Also includes Care Pathway.
Observations	
Fluid Balance Chart	Any chart, form or document used to record fluid balance
Fundal height chart	Any chart, form or document used to record fundal height
Clinical Notes	
Inpatient medical note	Any inpatient information recorded by medical staff
Inpatient nursing note	Any inpatient information recorded by nursing staff
Correspondence	
Outpatient Letter	Created as a result of an out patient clinic attendance e.g.. clinic letter
Discharge letter	Created as a result of discharge from care
Images	
Radiology	Images which are sourced from else where and not available on other electronic systems e.g. PACS.
Medical Photograph	Photographic images related to patient management
Interventions/Procedures	
Anaesthetic record	Record of Anaesthesia
Endoscopy record	Record of endoscopic intervention
Labs	
Biochemistry	Any result from a test performed in a Biochemistry lab
Haematology	Any result from a test performed in a haematology lab
Medication	
Controlled drugs dispensing	Any chart, form or document recording the dispensing of controlled drugs e.g., Morphine, Diamorphine
Drug administration chart	Any record of the administration of medicine for example Insulin or Warfarin
Miscellaneous	
Miscellaneous	Non defined document within this section
Front sheet	Patient Master Index Sheet. For Bulk Scanning.
Notification & Legal Documents	
Fiscal Autopsy report	Formal Autopsy report from Fiscal office.
Child protection documentation	Record of child protection case conference, child safety action plan, summary of investigation.
Death certificate	Certificate of death
Patient held records	
Patient held record	Any record held by the patient
Patient Preferences/Instructions	
DNAR order	Any patient instruction regarding resuscitation
Reports	
ECG	For example ECG, ETT
Pulmonary Investigation	For example, PFT, Sleep tests
Vascular Investigation	For example, Carotid, DVT

Document Type/Subtype	Description (examples where applicable)
Third party documents	
Non-Statutory provider document	Any document from a non-statutory organisation for example, local authority information

There is fairly good mapping between the document type classification and the document presentation headings. It's clear that 'Notification and legal' would appear in the same heading on a clinical portal for example. There are some areas where guidance would be needed however, for example documents of type 'Labs' + 'Imaging' + 'Reports' would all appear under the one heading of 'Investigations and results'.

A mapping exercise would be necessary to clearly map which document types appear under which heading. Such an exercise will have been done for clinical portal implementations.

9.4 Docman Folder Standard

In 2005 when the original SCI document indexing standards were developed at the same time the GP practices were rolling out Docman scanning and desired a standard folder structure for filing scanned documents. A structure was developed which had some harmonisation with the SCI indexing structure but had obvious differences to users.

The PCTI system suppliers have assured us their system uses the same indexing metadata to tag files (eg with date, type, patientIDs) as well as displaying the files in the Docman folder structure.

The Docman folder structure follows the table example below:

Accident & Emergency	Include	Accident and Emergency letters
	Exclude	GP Out of hours contacts Out of hours)
Administration	Include	General practice administrative paperwork, letters from patients, Benefits agency letters and requests, Insurance reports and requests. Criminal justice reports
	Exclude	Scanned clinical GP notes (Clinical) Scanned nursing notes (nursing) Employment medicals (Occupational Health)
Allergy	Include	Allergy clinic
	Exclude	Patch testing (dermatology) RAST results (Labs)
Breast	Include	Breast clinics, breast screening services
	Exclude	Plastic surgery (Plastics) Genetic clinics (Genetics)
Cardiology	Include	Cardiology, paediatric cardiology, cardiovascular risk factor clinics, cardiac surgery, thoracic surgery, ECG, ETT
	Exclude	Thallium scans (Imaging)
Clinical	Include	Scanned clinical GP notes
	Exclude	General practice administrative paperwork, letters from patients (Administration) Scanned nursing notes (nursing)
	Exclude	Acupuncture given as part of a physiotherapy programme or at pain clinic (Pain)
	Exclude	Plastic surgery (Plastics)
	Exclude	Cardiovascular risk factor clinics (cardiology) Biochemistry, haematology, bacteriology laboratory results (Labs)

Labs	Include	All biochemistry, haematology, bacteriology and serology results. Nuclear medicine laboratory results (C_{13} urea, Schilling tests). Blood grouping reports.
	Exclude	Radiology results nuclear medicine imaging including bone scans and DEXA (Imaging) Biopsy and post mortem results (pathology) Cervical cytology results (pathology)
Referrals	Include	Copies of referrals made to other services, including secondary care, voluntary and non-health services agencies, community services, social work and AHP's
	Exclude	Insurance reports and requests

The names in the structure are mostly, but not exclusively, specialties signifying the specialty department (in acute care) from where a piece of correspondence originates. Cardiology is an example of this. Where they do not map to specialties then they map to the document type classification. Clinical, Labs, Referral are examples of document types or subtypes.

If documents stored in a GP Docman folder structure were viewed within a clinical portal then an exercise would be necessary to map the files into the document presentation headings. One view taken from the GP perspective is that all his documentation are 'correspondence' and should appear in the same heading. A different view might see the same documents under different headings. Hence mapping the GP view of filing documents is not the same as the acute care view.