NHS Digital

Using SNOMED CT in health and social care for care planning

A reflection on the national care plan content available till the October 2017 release

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Information and technology
for better health and care

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Introduction

Audience

This guidance is for suppliers, clinical leaders and health informatics staff involved in the design, development and configuration of electronic care plans, as well as those wishing to interface to such systems. A general understanding of SNOMED CT[®][1] and its use in clinical systems is expected prior to reading this document.

Purpose

This document provides guidance, system suppliers, organisation leaders, informatics and technical staff, on incorporating SNOMED CT in electronic clinical and social care systems that provide for multidisciplinary care / treatment plan functionality.

In addition to this document, reference to other editorial and technical documentation on SNOMED CT may be useful[2], in particular the SNOMED International Technical Implementation Guide.[3]

Document Overview

The document introduces a framework for realising care plans, in all their different forms, within electronic systems. This guidance references a pack previously nationally available (referred to as *Care Plan Content),* this contained a library of terminology content to support care planning, however this was withdrawn in the period following the October 2017 release as the Programmes supporting its governance ceased to exist some time ago.

A range of subsets continure to be published to support care planning.[4]

Scope

The care planning guidance is for use in electronic care plan applications within the scope of the United Kingdom. Implementation using this guidance beyond this scope should include consultation with the relevant terminology national release centre. It does not seek to modify or influence professional models of care. A number of clinical profession terminologies have been mapped to/from SNOMED CT over the years and quality improvement work is ongoing nationally and internationally to detect equivalence and reduce duplication.

While this document gives guidance on the use of SNOMED CT in care plan type functionality, it is not a replacement for the comprehensive requirements and functional design process that should accompany development of care plan systems.

Whilst there is no formal standard for care plans developed at this point several parties have consided them therefore it is prudent to check before any development takes place[5]*.*

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[1] SNOMED[®] and SNOMED CT are registered trademarks of SNOMED International[®]
http://www.snomed.org
[2]https://confluence.ihtsdotools.org/display/DOC
[3]http://snomed.org/tig
[4]Care plan subsets, details available at https://dd4c.digital.nhs.uk

Not in Scope

Care pathways, full resource scheduling and frequencies were not included in the content.

This document does not:

- Address differing models of professional care across the many disciplines involved in care/treatment plan, nor significantly influence them
- Consider the design, usability and specification of any user interface.
- Include medication administration in terms of the prescription and administration record. However, recording of the associated clinical activity is within the scope of this document.

Content Library[6]

This document references a national library of content for electronic care plans which incorporated SNOMED CT for the clinical content. The library contained hundreds of evidence based, professionally assured *Activities Bundle's* and *care plans*, together with *elements* which allowed the user to adapt or build additional or personalised care plans.

The library was developed to support the vision set out a number of strategic indicators and NHS improvement programmes, including:

- Reducing variation in care

- Improving care quality and outcomes

- Improve consistency in care planning

- Direct evidence base at point of care

The library was developed within a national programme for multidisciplinary care planning and involved care professionals, care support staff and providers of health and social care within the United Kingdom. This document reflects consultation with over 400 healthcare practitioners (predominantly nurses) and consultation with expert opinion at both a national and international level.

The library sought to enable systems to incorporate:

- A structured approach to care plans

- Status updates and reminders for outstanding actions

- Person-centred care plans to support co-ordinated care.

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[5]http://content.digital.nhs.uk/isce

[6] This content is no longer distributed. Details and guidance can be sought from information.standards@nhs.net citing Care Plan Content

Assumptions

In this document the term '*care plan*'[7] is used. Across healthcare the language used to reference a care plan currently differs between professions. For example, medicine has referred to 'management plans' or 'treatment plans', midwifery to 'birthing plans', social care to 'support plans' and nursing and many other health and social care professions have historically referred to 'care plans', 'intervention plans' or 'management plans'. International and national guidance are increasingly using 'care plan'; this includes guidance to primary care for long-term conditions such as the 'Year of Care Programme'.[8]

It is assumed within this document that these all refer to care plans and that these can be implemented using a generic care plan approach. However, it needs to be recognised that functionality and descriptions within applications may need to reflect these varying requirements, whilst bringing the information together as an integrated care record.

The model outlined within this guidance has undergone a review and harmonisation with the ISO 13940 Standard, following its publication in December 2015. In order for the language to be more consistent with national policy on coordination between health and social care, "care" tends to be used rather than the "healthcare" in ISO13940. In many cases the healthcare is dropped all together rather than replaced as the domain is known, e.g. "healthcare activity" becomes "activity" in this guidance. Links to the online http://www.contsys.org can assist readers with definitions and an understanding of the wider health and care system that care planning works within. It should be noted that this is an international standard and thus there may be subtle differences in which the NHS and social care works in the devolved nations of the United Kingdom.

Conventions Used in this Document

Within this document, speech marks indicate quoted text; italics are used to indicate conceptual objects within the *Core Care Plan content* model. The use of bold is used to represent the semantic tags within SNOMED CT

Whilst this document is not contractual, the guidance may form part of current or forthcoming tender specifications. In such a case, where used in this document, the keywords **MUST**, **SHOULD, MAY, MUST NOT** and **SHOULD NOT** when expressed in bold upper case, should be interpreted as follows:

- **MUST**: This word, or the terms "**REQUIRED**" or "**SHALL**", means that the definition is an absolute` requirement of the specification.

- **SHOULD**: This word, or the adjective "**RECOMMENDED**", means that there may exist valid reasons in particular circumstances to ignore a particular item, but the full implications **MUST** be understood and carefully weighed before choosing a different course.

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[7] https://contsys.org/concept/care_plan

[8] The Year of Care (YOC) Programme
http://webarchive.nationalarchives.gov.uk/20130805112926/http://healthandcare.dh.gov.uk/year-of-care

- **MAY**: This word, or the adjective "**OPTIONAL**", means that an item is truly optional. One implementer may choose to include the item because a particular implementation requires it or because the implementer feels that it enhances the implementation while another implementer may omit the same item. An implementation which does not include a particular option **MUST** be prepared to interoperate with another implementation which does include the option, though perhaps with reduced functionality. In the same vein an implementation which does include a particular option **MUST** be prepared to interoperate with another implementation which does not include the option (except, of course, for the feature the option provides).

- **MUST NOT**: This phrase, or the phrase "shall not" mean that the definition must not be included in the specification.

- **SHOULD NOT**: This phrase, or the phrase "not recommended" mean that there may exist valid reasons in particular circumstances when the particular behaviour is acceptable or even useful, but the full implications should be understood and the case carefully weighed before implementing any behaviour described with this label.

Background

High quality patient care and nursing practice have always relied on the effective management of information. The Information Strategy emphased the role of standardised recording of information in care records, capturing data at the point of care where possible, with standardised care plans to support integrated services across care pathways and between health and social care.

There is little current standardisation of either the format or the content of care plans, and each organisation follows local processes for their development and use. Care plans may be trust-wide or for use by a single professional group, clinical speciality, or even clinician. There is strong evidence that standardised electronic care plans can increase the ability to provide a consistent standard of high-quality care for all patients.[9] Failure of the care planning process (and in many cases the absence of care plans) was one of the key issues identified in the Francis Report.[10]

> *A structured approach to care plans with the ability to incorporate status updates and reminders for outstanding actions can provide staff essential support to manage care and mitigate risk in an environment with an ever-increasing workload and diminishing resource.*

This document uses content expressed using the national vocabulary provided by SNOMED CT. The *Personalised Health and Care 2020*[11] policy paper outlines the need for a single terminology of SNOMED CT across health and social care to achieve its aspirations to transform outcomes for patients and citizens.

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[9] Dahm and Wadensten (2008) Nurses' experiences of and opinions about using standardised care plans in electronic health records – a questionnaire study. Journal of Clinical Nursing. Blackwell Publishing Ltd

[10] Francis, F (2013) Report of the Mid Staffordshire NHS Foundation Trust Public Inquiry

[11] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/384650/NIB_Report.pdf

Multidisciplinary care for many service users is designed at its outset to cross organisational boundaries; it is therefore essential that a single national terminology is part of that solution.
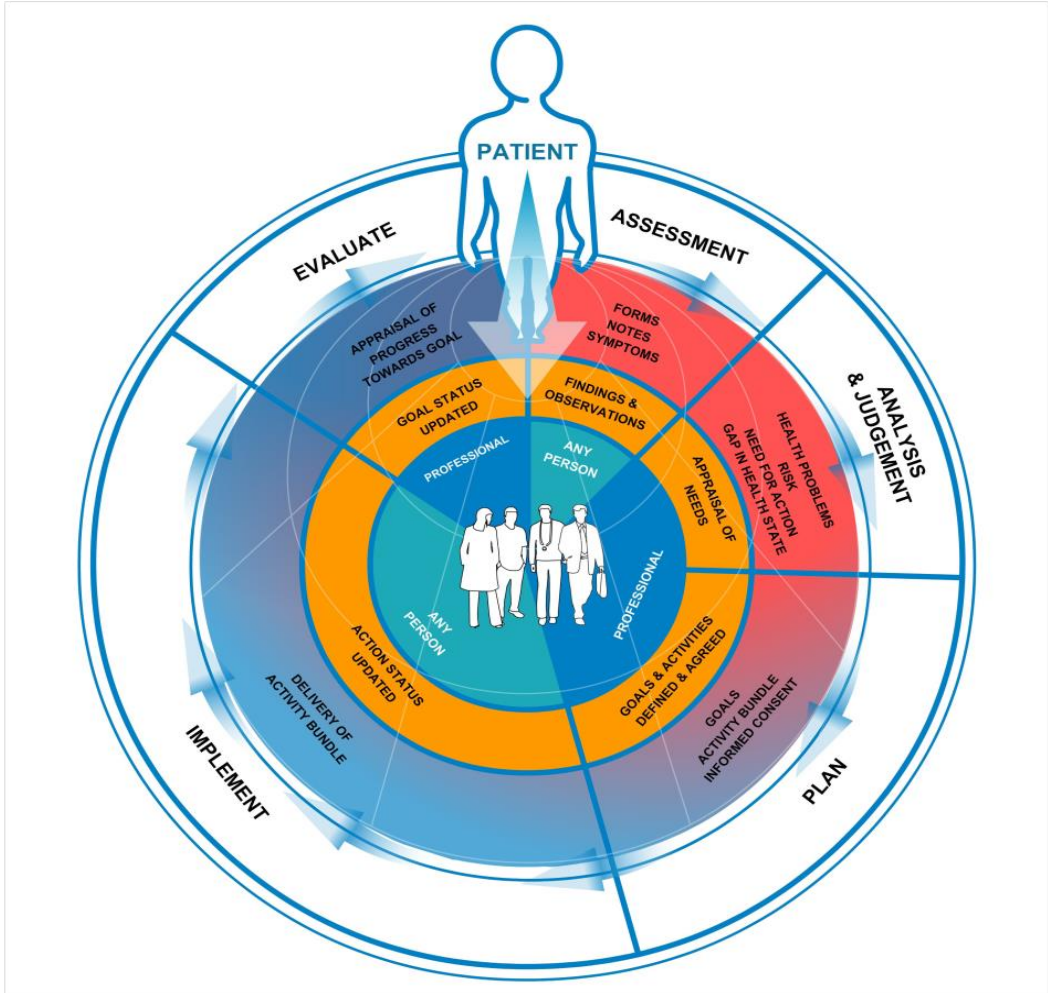
Care Planning[12]

Care planning is a conceptual framework with many interrelated dependencies. In the real world of care planning, processes include assessments, predefined care plans, bespoke care plans, integrated care pathways and may include re-usable elements for more than one care plan or various combinations of these.

Personalised care planning is described as addressing an individual's full range of needs, taking into account their health, personal, social, economic, educational, mental health, ethnic and cultural background and circumstances.[13]

Multi-professional models of care co-exist but each broadly follows a similar approach; this lends itself to a national generic model for care planning.

Figure 1 – Overview of the care planning process incorporating the key record update points

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[12] https://contsys.org/concept/healthcare_planning

[13] Department of Health (2009)
http://webarchive.nationalarchives.gov.uk/20130107105354/http://www.dh.gov.uk/en/Healthcare/Long termconditions/DH_093359

This guidance seeks to support all common models. Figure 1 is an illustration of the key elements that form a basic model common to most care planning approaches. It also illustrates the key 'documentation' points within the care planning process. In this model, 'referral' is either a handover of care or a service order request without handover of care. The care transfer can be internal or external.

Electronic care planning can better facilitate multi-professional care plans used by teams across organisational boundaries, for example between primary and secondary care, or between community and social care. The availability of such plans enables them to be viewed from multiple locations and by many people even at the same time. The use of core content in the care plan will help reduce the variation in care planning and thus support consistent, high quality, evidence based delivery of care..

How did the Library Work?

The provision of national content helps to standardise the clinical recording in care plans and reduce variation in care planning thus supporting consistent, high quality, evidence based delivery of care. The provision of this content using the national terminology of SNOMED CT ensures that such content will be transferrable across care settings and between different systems. The library therefore provides end users with a common vocabulary that can be incorporated within systems to support recording in electronic care plans by the clinician.

A range of *Core Care Plan content* was available in the library for use by any service in any electronic clinical system which supports care plan functionality, for NHS and social care service users. The content has been developed by a comprehensive synthesis of national guidance and clinical evidence from such sources as NICE, Department of Health and professional bodies. This collaborative exercise was co-ordinated by NHS Connecting for Health (now superseded) and included a peer review process with the NHS and other stakeholders, using a range of clinical expertise and including specialist input where appropriate.

The Core Care Plan content was designed to address the majority of patients care needs, and is not specific to age or sex unless specifically stated. However, the library also supported local adaptation and individual patient personalisation at the point of care. Personalisation could include contextualisation through the addition or removal of individual elements or the addition of free text notes (available in many systems). This contextualisation **MUST** be carried with the care plan and **SHOULD** be displayed clearly without the need for additional user input. Contextual text **SHOULD NOT** be hidden as this creates difficulties for the user and may carry additional clinical risk. However it is widely considered that where data is used for secondary uses and management reporting, the free text should not be utilised due to privacy and information governance risks.

The Core Care Plan content model

The generic model utilised common elements that are to be found in any of the different types of care plans to be found across health and social care. This model used 'Activities Bundles' as a fundamental building block, composed of three main elements:

- The Need(s) of the service user for which the core care plan content is produced

- The Goals to be achieved

- The Activities to be undertaken to achieve those goals based on the users' needs

For each need, there may be a number of goals to be achieved, and in order to achieve these a number of activities may need to be undertaken.

For example:

- **Need:**
  - Seizure management
- **Goals:**
  - Transient abnormality with full recovery
  - Seizure free
- **Activities:**
  - Neurological examination
  - Assessment of baseline neurological status
  - Review of medication
  - Emergency administration of medication
  - Capillary blood glucose measurement
  - 12 lead ECG
  - Ethanol measurement, breath
  - Patient reassurance
  - Referral to doctor
- **Referenced activity bundles:**
  - Safety precautions management
  - Airway management

The following diagram illustrates the relationship between a need, its goals and activities and thus what is called an Activities Bundle:

Each need with its associated goals and activities form an 'Activities Bundle' within the generic model. This enables pre-defined Activities Bundles to be provided for specific needs within the different specialties in health and care; it should be

emphasised that systems should enable these to be further personalised for a specific service user.

It should be noted that the relationships between Needs, Goals and Activities are multi-faceted, so:

- An Activities Bundle can have activities that are associated with the Need but do not have a specific Goal

- The Activities associated with a Goal may need to change depending on the patient Need, for example a Goal of 'Normal Blood Sugar' may be achieved by providing glucose or by the patient taking insulin.

Using this approach, Activities Bundles can be linked together to create a personalised care plan for a single service user. This may include a combination of generic needs (e.g. day case), specialist need (e.g. respiratory) and/or specific needs (e.g. anxiety).

The combination of these Activities Bundles to meet the overall list of needs of the service user provides the overall personalised care plan as illustrated below:

Activities Bundles can be linked together to create a personalised care plan

Generic	Specialist	Specific
Inpatient Community Day case Outpatient	Respiratory Cardiac Gynaecology Renal Stroke Mental Health	Diabetes Mobility deficit Asthma Anxiety
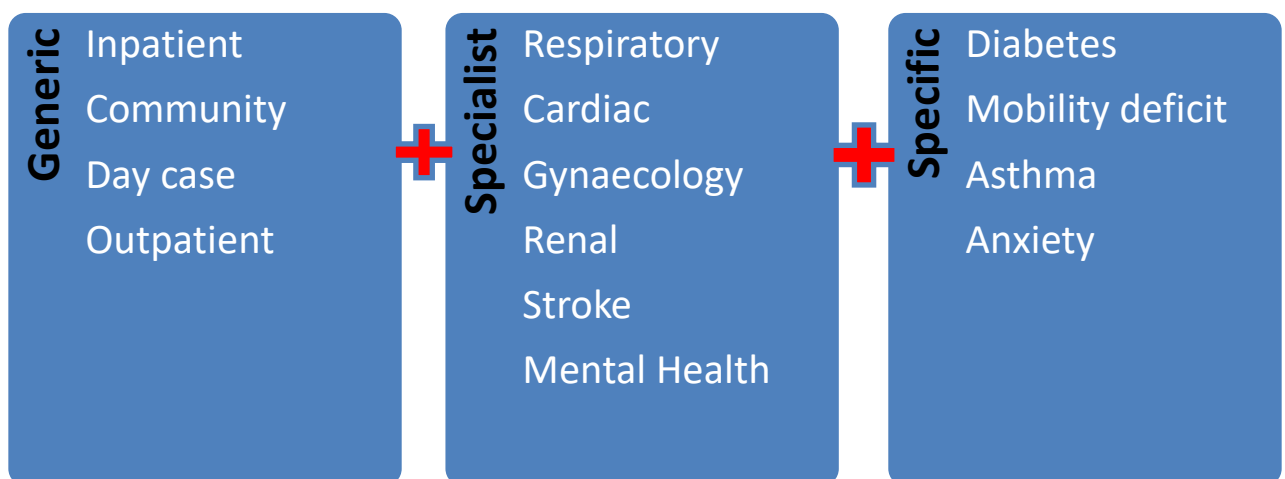
An Activities Bundle has a name to reflect the Need it addresses, such as the one illustrated above for seizure management. Within SNOMED CT it is possible to create concepts for needs that have an Activities Bundle created.

The role of SNOMED CT

Different areas within SNOMED CT (e.g. findings, procedures) are associated with the different elements in a care plan (e.g. the assessment). When considering which aspects of SNOMED CT to use within electronic care plan functionality, it is essential to consider the properties of SNOMED CT, any trigger/transition points for actions/intervention plus the likely retrieval and analysis requirements.

The scope for the Core Care Plan content using SNOMED CT is illustrated in Table 1 below. Whilst this would not support all aspects of the care planning process, these are likely to deliver the most benefits to planning professional care.

Table 1 – Care plan elements and SNOMED CT

Professional process/care plan element	Principle relevant SNOMED CT hierarchies
Assessment	Procedure
Assessment outcome	Finding, situation and/or observable entity + value
Health issue	Finding, situation, disorder +/- contextual modification
Need	Regime/therapy or Procedure
Goals	Finding with contextual modification, situation and/or observable entity + value. The information model MUST use the goal mood
Activities / actions	Procedure with contextual modification
Evaluation of care / reassessment, care outcomes	Finding +/- contextual modification

The care plan elements described above supported through related content from SNOMED CT; this library of content was provided through a number of subsets within the *Core Care Plan content pack*.

Many elements of the care plan can be usefully represented with terminology; however, it should also be noted that a degree of free text narrative will continue to be required. In general, information should be represented using SNOMED CT where:

- The data drives an aspect of the "clinical" process

- The data is needed to be retrieved in a report for clinical or management use

- It is beneficial to have this data highlighted for clinicians to quickly assimilate when reading the care plan

It needs to be recognised that there is also important information intended for context and/or detail that does not need to be processed or does not necessarily need structured terminology. These are likely to be better represented in other ways within the system; these include information such as dates, times, frequencies, scheduling, the ability to measure progress over time or for particular demographic classes of service user.

It is an important part of application training that associate free text must clarify or expand upon the structured entry and MUST NOT alter the context. For example,

adding a name "John" to the concept 276043007 | Looks after chronically sick husband is appropriate personalisation, but adding "excluded" to 195967001 | Asthma is not. Reporting tools will normally only function effectively on the structured entries and therefore any significant contextual modification MUST be done in a machine readable way.

The clinical content was used in less sophisticated systems (even paper), but expert advice should be sought to ensure the expected benefits can be delivered. Please contact the help desk at NHS Digital for assistance at information.standards@nhs.net

Responsibilities of Organisations using the Care Plan Content

The principle on which all content was published was that at any given organisational level only one object of a given type can exist e.g. only one *Core Care Plan* or *Activities Bundle*[14] **SHOULD** be returned in any search results. Each is unique at an organisational level.

National/generic content alone may not cover the entire scope of local care plan requirements and additional content may be required. A good example of content that may benefit from more local development is very specialist areas where single or small numbers of centres manage the care of a given condition or as part of research, improvement and innovation. Any modification means that clinical assurance of that modification needs to be undertaken by that organisation. This principle is illustrated below and applies to all content:

Example organisations	Core Care Plan A	Core Care Plan B	Core Care Plan C	Core Care Plan D
National (X26)	☑	☑	☑	☑
Clinical Network			Your network	Another network
Trust	☑			
Core Care Plan to be normally used	**Trust**	**National**	**Clinical network**	**National**

Content **MUST NOT** be used in a live clinical environment without going through a local governance process in addition to other governance already applied. The final arbiter is the care professional applying the content to the care record; they **MUST** ensure the content is appropriate for the individual patient in their care. The consideration of localisation of content **SHOULD NOT** be taken lightly and **MUST** incorporate a full clinical safety and risk assessment and ongoing clinical governance process including:

- Management of SNOMED CT content to manage retirements/change of concepts used in care plan content
- Interoperability standards with other systems
- Secondary reporting requirements
- Adherence to clinical standards
- Output specifications for messages, e.g. discharge notifications

Software as a medical device may well apply to this area, this may significantly influence the governance and customisations that are considered.[15]

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[14] Core Care Plan, Activities Bundles and Elements are defined later in this document
[15] https://www.gov.uk/government/publications/medical-devices-software-applications-apps

An overview of the care planning process

The following sections provide further detail on the elements that constitute the care plan.

Evidence based content

The Activities Bundles formerly provided within the Core Care Plan content were underpinned by national clinical evidence and further guidance can be found in the Appraisal of Guidelines for Research and Evaluation (AGREE) Instrument[16]. Where no evidence existed, a consensus of best practice has been sought through the peer review process. Core Care Plan content was developed to enable/support national policy and secondary clinical reporting requirements.

The Core Care Plan content owners historically maintained editorial control for the content associations and the NHS Digital manage the editorial principles for SNOMED CT descriptions within the UK.

Assessment

Assessment may be considered a precursor to care planning but is also an integral part of the overall process. Assessments may be launched from the care plan and care plan needs identified as part of the assessment process. When instantiating a new care plan, the initial assessment is normally a **procedure** within the care plan; this means the clinical terms are to be found within the procedure hierarchy within SNOMED CT. Increasingly organisations will have a core care plan which is almost universal of clinical needs; this initial care plan will act to provide the overall framework for the specific plans required to support the care of the service user.

The initial care plan for an unplanned admission may incorporate just those elements that are required for all service users, with identification of a more comprehensive plan once a working or definitive diagnosis is made. An alternative approach is to incorporate the Activities Bundles required for the individual service user once the initial assessment and diagnosis is complete. Future assessments in conjunction with evaluation/reassessment may be indicated as part of an ongoing process. In general, a need specific assessment is part of each Activities Bundle.

Formal Assessment Procedures and Named Care Plans

Many formal and informal assessments have been developed to support the care process ranging from simple checklists to enable care to be delivered efficiently, to more sophisticated measures to enable injuries or health status to be assessed against a scale which may determine a course of action or subsequent treatment. A full technical description of the representation of assessment procedures in SNOMED CT[17] is available from NHS Digital.

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[16] AGREE Next Steps Consortium (2009) *The AGREE II Instrument* [Electronic version]. Retrieved February, 20th, 2012, from http://www.agreetrust.org

[17] see the Use of SNOMED CT UK Edition for Scored Assessments Implementation Guidance (ref NPFIT-FNT-TO-DSD-0160

There are several types of structured assessment; these include the traditional clinical history and physical examination, scored assessments and structured assessments resulting in clinical findings. The outcome of the assessment includes the relevant health issues and this leads onto the planning phase of the care planning process through identification of the needs for health care.

Clinical history and physical examination

The clinical history and physical examination is widely used by doctors, allied health professionals (particularly physiotherapists and other musculoskeletal specialists) and increasingly by advanced nurse practitioners. There is a defined format, usually working from head to toe with a system-by-system approach. The practitioner relies on their training in the methodology rather than a form based approach, with many preferring little apparent structure to the documentation. More recently, particularly in the electronic environment, predefined headings have gained acceptance and are supported by all the professional bodies. The reason for the flexibility of this approach is to only record significant findings; whether normal or abnormal, relating to the presenting complaint or significant risks to the patient. The level of detail recorded depends not only on the speciality, but also on the findings as the history and examination proceeds. This flexibility is acknowledged to be challenging to represent, but has been demonstrated in some systems using algorithms behind the application to modify the screen content depending on the responses given to questions.

Scored assessments

The outcome of assessments against a scale that have a value result in a SNOMED CT **observable** with the accompanying value; assessments that do not result in a formal score may be represented as a **clinical finding** (see below). This in turn may lead to the identification of a particular intervention (**procedure**) requirement or a formal care plan.

Specific guidance on assessment scales, including those scores that result in an inferred finding are in the paper, 'Use of SNOMED CT UK Edition for Scored Assessments'[18] This guidance is complementary to this document and is not repeated here.

Structured assessments resulting in clinical findings

Many scored assessments also fall into this category by guiding the user towards specific clinical findings resulting from the score. For example:

- 201221000000101 | Observation of Waterlow pressure sore risk score + [value] 12
- Assert finding of 285304000 | At risk of pressure sore

In reality, both may be recorded; with the second being derived from the first.

Judgement / Analysis

In addition to simple findings resulting from an assessment, the clinician may assert a formal diagnosis as part of the analysis of findings. The representation of **clinical findings**, **situations** and **disorders** has established guidance from the SNOMED International and is therefore not presented further in this paper. The assessment may result in the identification of health issues which may be used in the care planning process in the identification of needs.

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[18] Use of SNOMED CT UK Edition for Scored Assessments NPFIT-FNT-TO-DSD-0160

Referrals and transfer of care

Referrals normally summarise a practitioner's assessment and the reason they are requesting input to the service user's care. The exception to this may be a self or lay referral where a more limited assessment articulated as a patient narrative/story rather than part of a documented thread. This input is often the initiator of the care process by a given practitioner, especially where referrals cross an organisational or clinical system supplier boundary, which may even be within the same organisation, department or business unit.

The Core Care Plan content and Structure

Care plans are composed from the following, each of which is then described in detail:

Care Plan Relationships
- Core Care Plans
- Health Issue – Need relationships
- Activities Bundles

Care Plan Elements
- *Care plan type*
- *Procedures and Context*
  - *Needs*
  - *Activities*
  - *Context values actions*
  - *Context values intents*
- *Goals*
  - *Context values goals*
- *Health issues*
- *Health objectives*

An overall Content schema is provided in appendix 4.

Care Plan Relationships

Core care plans

Previously known as *Care Plan Templates* (update following ISO 13940 publication).

A *Core Care Plan* provides the basis of the elements required for the service user's overall care needs. Typically this might be based around a combination of treatment specialty/service, health issue/need, acuity level, specialty group and care setting; together with the document type, e.g. "736390003 | Gynaecology major surgery inpatient care plan (record artifact)".

Normally a single Core *Care Plan* would be active in the electronic care record at any point in time. For example, a care plan for a long-term condition **MAY** be suspended, whilst a service user is in hospital. However, some of those care Needs may need to be incorporated into the acute care plan. National Core Care Plans and Activities Bundles are being built for diagnoses or health issues when there are significant differences from generic Core Care Plan formats. However, these can be developed locally if they are felt to be of value.

Core care plan content
The content of the *Core Care Plan* is as follows:
- A single *Core Care Plan* title (semantic tag of "(record artifact)", a subtype of "419891008 | Record artifact (record artifact)" but normally a subtype of "734163000 | Care plan (record artifact)")

- *Activities Bundle(s)*[19] identified by their *Need*
- Optionally related Health objectives(s)

The title of the care plan will normally conform to the pattern indicated below (care setting, need, care location, document type). This could be readily associated with the document naming convention identified by the GP2GP programme. We are working with the SNOMED International to consider development of an appropriate model for record artifacts which is the hierarchy within SNOMED CT for the provision of document 'titles'.

Care setting	Need	Care location	Document type
•**Gynaecology** •**Gynaecology**	bladder training Major surgery	•inpatient •inpatient	•**care plan** •**care plan**
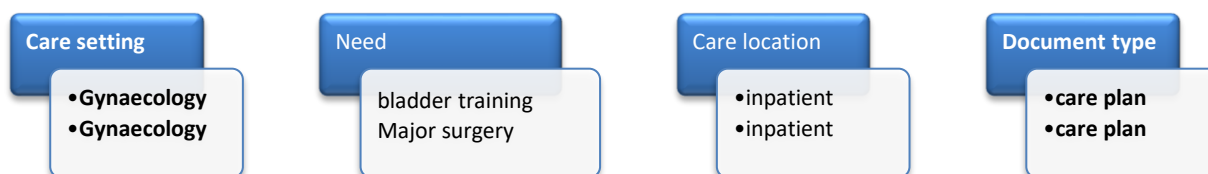
Health Issue – Need relationships

Associated *Health Issues* can exist to enable prioritisation of content in searches by defined health issues already identified in the care record; this improves the experience of the clinician with the electronic system. The table provide in the Core Care Plan content pack of '*Health Issue – Need*' relationships enable prioritisation of content in searches of SNOMED CT by defined *Health Issues* already provided in the care record. This only offers benefit to specialised *Needs*, rather than those of a generic care nature.

Health issues

> *Health Issue* is the identified reason for the request for health care and it may or may not encompass a disease but it is always subject to assessment with respect to whether *Health Care Activities* are needed. Such *Health Care Activities* can include medical statements, immunisations and other activities performed for a person in good health state.

Needs

> Assessed needs for *Health Care Activities* based on identified *Health Issues*
> NOTE 1: In CEN TS 15224, 'Needs for health services' is stated to be the health care activities that the subject of care needs as judged by a health care professional, based on evidence, knowledge and/or good clinical practice.
> NOTE 2: There are needs for both direct (investigating and treatment activities) and indirect (assessments, planning, evaluation etc.) health care activities.

Associated *Health Issues* can exist to enable prioritisation of content in searches by defined health issues identified in the care record. This only offers benefit to specialised *Needs*, rather than those of a generic care nature.

Activities Bundles

A logical association of Core Care Plan content to address a given care plan Need; many of these would equate to care bundles. These may include the elements of care from multiple care *Needs*, e.g. to facilitate the care resulting from a co-morbidity e.g. 385806006 | diabetic care management |.

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[19] A bespoke care plan may be built based on entirely individual criteria; however this is not usually the norm in most care environments

Within the care plan of the clinical record, ContSys defines the *Health Care Activities Bundle* as an…

> "Internally consistent set of health care activities to be performed by one or more health care actors, in the context of one or more care plans.

> NOTE: the payment of health care providers may be made on the basis of each individual health care provider activity; of a health care Activities Bundle; or of an episode of care etc.

Activities Bundle content

Within the *Core Care Plan content* the *Activities Bundle content* contains:

- A single *Need* (semantic tag of **procedure** or **regime/therapy**, which will normally incorporate "management" or "care" in the term) e.g. "Personal care management"
- Other Activities Bundles as nested content (the N*eed* will be identified which will include the semantic tag **procedure** and/or **regime/therapy**).
- At least one activity (**procedure** and/or **regime/therapy**)
- At least one goal (semantic tag of **finding** or **situation**)

Activities Bundle content should adhere to the following principles:

- *Activities Bundles* are based on a *Need,* they should only contain content explicit to the defined *Need*
- There may be an *Activities Bundle* that contains generic service user care content for a given care setting which would be incorporated in a specialist bundle once
- There should be sufficient content to address the Need without being so comprehensive that it would be unworkable in use. Usually the criteria applies that 80% of service users would need it or evidence shows it should be considered for all.
- The *Activities Bundle content* needs to be viewed during the process of combining bundles to avoid unnecessary duplication and ensure intended coverage
- Ensure that nested *Activities Bundles* do not form recursive loops by referencing the *Activities Bundle* itself or *Activities Bundles* that reference it.
- Checking the activities of the *Activities Bundle* fit the Need

A consistent order will reduce the effort for users, particularly if it also follows a conventional clinical path:

Suggested content order
1. *Goals* **not referenced directly by an** *activity*
2. *Activities Bundles*

3. **Assessments**
    a) **Generic assessments**
    b) **Specific assessments**

4. **Clinical investigations**
5. **Verification of consent**

6.	**Examinations**
7.	**Initial treatments**
8.	**Investigations (where not part of clinical assessment, e.g. chest x-ray)** a) **Radiology** b) **Pathology** c) **Others**
9.	**Counseling about serious diagnosis**
10.	**Education, guidance and counseling (specific to the *Activities Bundle*) or education where this does not exist**
11.	**Definitive treatments**
12.	**Referrals**

Where no clinically relevant order exists, alphabetical order within the categories is used for consistency).

Care Plan Elements

This is a repository of elements for care plans, which may or may not be present in existing Core Care Plans or Activities Bundles. It can be used to provide searchable content for system configuration or end users.

This includes the recommended context values for actions and goals for "status" fields in applications.

Elements such as *Goals* and *Activities* MUST NOT be associated outside the context of an *Activities Bundle.* This can lead to unintended content presented to end users and the associated clinical risk of this reaching the instantiated care plan for the service user.

Procedure intent values are also available, which are likely to have increasing use as the scope of content increases.

The content likely to be required for multidisciplinary care planning purposes is contained in the *Health Issue, Need* and *Goal* tables. This can be used to improve the search experience of the clinician.

The activities table includes values for linked functionality within clinical systems.

Note. Please inform the UKTC of any concepts that users identify they would wish to use in this way but have not been included. Where appropriate, the subset can be modified to include these. Please email information.standards@nhs.net with the subject of 'care planning'.

Care plan type

The *Care plan type* is used as an initial title for the care plan and emerging advice is suggesting that this could be associated with a "service" and date to form the human readable display of the instantiated care plan/pathway type. Example shown below:

Cardiology | **Inpatient care plan** | 20110822T131615

In the associated content, this is the core care plan name and the SNOMED CT semantic tag **record artifact** applies to this content.

Health issues

Health issues are not specifically identified in all care plan content; however, a specific subset exists to support their use. Principally, the clinical user should identify service user specific health issues in the appropriate area of the application and the practitioner should associate the relevant Core Care Plan content at run time for the individual patient. They would normally come from the **finding**, **disorder** or **situation** hierarchies within SNOMED CT. The subset is to support high value Health Issues to be identified in Core Care Plans and Activities Bundles to facilitate search ranking within clinical systems.

Procedures and Context

Many of the more useful components of a care plan to code with SNOMED CT are the actions/interventions/procedures required or undertaken. These may be at the Need or the Activity level.

Expressions for clinical actions/interventions are found in the **procedures** hierarchy in SNOMED CT, which encompasses regimes/therapies; this includes assessments, referrals, administrative procedures etc. Unless explicitly stated within this document, the term "**procedure**" includes any of these sub-categories.

SNOMED CT **procedures** are expressed in tense neutral verb forms. This allows them to have context added. For example, a commonly used expression in a care plans, such as "monitor blood pressure" is represented in SNOMED CT as 'blood pressure monitoring'. The default position is that the tense neutral statement indicates that it is "done" unless otherwise modified. To represent states such as "to be done", "not to be done" the system provider may provide the ability to modify the procedure using the SNOMED CT context model. The tense variation may be of little significance to users when displayed in the plan itself. However, those designing interfaces and search algorithms for subsequent analysis may need to account for end users searching using different tenses.

The SNOMED CT context model is of particular importance when attempting to represent a service user's progress with respect to procedures (as part of a care plan) as it allows significant modification of a concept meaning by combination with other concepts (for example 'planned').

Take for example a simple **procedure** concept such as "dressing of wound". We might want to say in a care record that this is "planned" as part of a formal care plan and we might want to record that it has been "done" or even "considered and not done". All of this can be achieved by applying **procedure** contextual modifiers to the focus concept 'dressing of wound (**procedure**)' – it is not necessary to create separate concepts to represent each possible stage or status of this procedure.

A considerable number of permissible SNOMED CT values support multiple possible similar use cases. The use of all of these values in care planning activities might lead to some confusion, e.g. is it clear, in the context of a care plan, or an activity within one, what the difference is between 'ended', 'done' and 'performed'. A constrained range of "context values for actions" has therefore been provided within the pack which will support most generic cases and will provide the most value in the short to medium term. However, as electronic systems incorporate greater degrees of sophistication there may be specific circumstances in which others from the range of context values for actions are appropriate.

In the case of an investigation or assessment procedure, alternative updating mechanisms such as citation (asserting a linkage between two statements in the record using the information model) may automatically change the status of a procedure. For example, the recording of a blood pressure value could be expected to automatically update the plan to indicate the action is "done". The functionality required for communication of repeating planned procedures/regimes such as 4-hourly blood pressure monitoring managing the relationship between "done", "in progress" or "to be done" needs to be supported.

Supplementary information, for example the reason for not doing something, can be recorded by citing existing statements in the record, citing new statements or using free text. The reason for not undertaking any procedure would not be built into a composite concept within SNOMED CT, for example 'arthroscopy not done due to death in the family' or 'patient did not attend for arthroscopy'. The system developer needs to address if this is required to be captured using the terminology how this may be facilitated.

Needs

"Assessed needs for health care activities based on identified health issues

NOTE 1: In CEN TS 15224, 'Needs for health services' is stated to be the health care activities that the subject of care needs as judged by a health care professional, based on evidence, knowledge and/or good clinical practice.

NOTE 2: There are needs for both direct (investigating and treatment activities) and indirect (assessments, planning, evaluation etc.) health care activities.

A "Need" identifies the requirement, which normally stems from an identified *health issue* which includes preventative care. In SNOMED CT the semantic tag **procedure** or **regime/therapy** will be present and normally "management" or "care" will be incorporated in the term. These generally will be subtypes of 392134007 | care regimes management | or 243120004 | regimes and therapies |

Activities

"Activity performed for a subject of care with the intention of directly or indirectly improving or maintaining the health state of that subject of care

NOTE 1: Health care activities can be of two types; direct and indirect. Direct activities are those where a professional directly interacts with the subject of care. The aim with a direct activity can be either to clarify a health condition (indirectly influencing a health state (investigation) or to directly influence the health state of the subject of care (treatment) Investigation and treatment can also be integrated parts of one single *Activity* Indirect *Activities* can be planning, scheduling, resource booking, observation/assessment or evaluation *Activities*.

NOTE 2: An *Activity,* for example a lab test with its corresponding workflow, may be distributed between several "sub-activities": order, collection, analysis, report, validation, and recording.

NOTE 3: This superordinate concept can only be instantiated by one of its subordinate concepts.

An "Activity" identifies the more detailed requirement to address a given care "Need". In SNOMED CT, the semantic tag "(**procedure**)" or "(**regime/therapy**)" will be present. This is not normally expected to be broken down to a very detailed level, except where the activity is part of an explicit quality or safety measure, where this *may* be justified, e.g. "verification of allergy status". In a limited number of cases the semantic tag "(**situation**)" is present where the recipient of the action is not the subject of the record. The very detailed elements of the record are likely to be free text associated with the structured content. The detailed operating procedures for practitioners are expected to be in guidance, policies and protocols. Currently these should be as accessible as quickly as possible from the care plan. Where planned "actions" (see below) exist, following the first occurrence the status of the "activity" would be "in progress".

There is an activities table which includes values for linked functionality within clinical systems. Any suggestions for additional groups of functionality should be forwarded to Terminology Service at information.standards@nhs.net with a subject of 'care planning'.

Typical state transitions for procedures

Usually a **procedure** will go from being needed to being done and may go through various states in between. The number of recommended state transitions (procedure statuses) has been kept to a minimum to reflect well defined requirements. In particular, the permitted context value for procedures of 'planned' was not included in the recommended set due to the absence of an initial requirement for a care plan to represent whether an action was "scheduled", "being organised", "accepted" or "requested". Likewise, action states such as "cancelled", "denied" or "not needed" were not identified in the initial requirements.

For example, a care professional applying a care plan to a service user record will consider whether a procedure within a Core Care Plan is applicable to a service user – in which case the context will be set to 'to be done'. If the procedure is contraindicated for any reason then it would be set to 'not to be done' (or 'not done' if previously planned), usually with an associated reason which may or may not be coded.

This type of contextual post-coordination MUST be used to achieve representation of procedure status. There is therefore no need to create new pre-coordinated concepts for care planning across the entire procedure hierarchy such as:

- Arthroscopy to be done
- Arthroscopy not to be done
- Arthroscopy done

Context Values for Actions:

The range of **procedure** context values recommended for general care plan activities as part of a care plan at this time is:

To be done

- This indicates that a considered action has been accepted and/or agreed and is going "to be done".

Done

- This indicates that an action is completed and is the default status in the SNOMED CT context model.

- NOTE: This does not necessarily indicate that the action has been successful.

- In certain circumstances it may be appropriate to automate this based on other functionality or messaging, e.g. if an investigation report is received, it is reasonable to infer that the test has been done.

Not done

- This Concept identifies where the action entered a pre-starting action state but ended before entering any other post-starting action state. It is important to be able to state that it was "not done" (following some degree of consideration); it does not mean 'not yet done'

Not to be done

- This indicates that a considered action is "not to be done".

Stopped before completion

- This indicates that an action that has been in progress ended before completion.

Under consideration

- This indicates that a clinician is actively considering a given action.

In progress

- Most anticipated procedures start in the plan as "To be done" and then following completion or otherwise, are updated to an appropriate status. In most circumstances, a status update to "In progress" is superfluous; however, in the case of a prolonged or formal procedure, it may be appropriate, e.g. an operation, ECG monitoring or renal dialysis. Some degree of integration and communication with other systems will improve workflow and safety. For example, if a start time is recorded, without a finish time, the status might be set as "In progress". In the case of a recurring activity, the overarching activity may be "In progress" whilst individual instances are "Planned", "Done" etc.

Action Status Unknown

- **Where the current state of a procedure is unknown, this status SHOULD be applied. A null context for a procedure would mean the default context of "done" is applied, which may have undesirable effects in reporting. Staff should be made aware that statuses not being applied appropriately may result in under/over reporting of activity and potentially this can have financial implications for the organisation.**

Nature of the Procedure (Intent)

The aims of procedures are often important to reflect as they can affect the way they are performed and their evaluation. Such distinction can be provided by SNOMED CT using the 'Intent' qualifier. There are examples of pre-coordinated concepts that incorporate the intent within the concept, e.g. "Palliative course of radiotherapy". However, there are many more that do not incorporate the intent, but for which the

intent is important for primary clinical or reporting purposes. The intent may be implicit in the action concept or superfluous to the clinical record, so this should be an optional field.

A typical example, where this may be required is in the field of oncology care, e.g. where cytotoxic chemotherapy is administered; perhaps as an adjuvant or for palliative purposes. This intent may change during the course of therapy, but the majority of the care plan might remain unchanged. Extension of pre-coordination of intent is unlikely to be the most appropriate course of action and that post-coordination will generally offer a much more flexible approach.

Suggested Intent Value Range

Known use cases exist for post-coordination a constrained range of 'intent' values for care plans as follows:

827901000000108 | Adaptation - intent (qualifier value)

421974008 | Adjunct - intent (qualifier value)

373846009 | Adjuvant - intent (qualifier value)

373808002 | Curative - procedure intent (qualifier value)

261004008 | Diagnostic intent (qualifier value)

905551000000108 | Disease modification - intent (qualifier value)

447295008 | Forensic intent (qualifier value)

429892002 | Guidance intent (qualifier value)

827921000000104 | Habilitation - intent (qualifier value)

373847000 | Neo-adjuvant - intent (qualifier value)

363676003 | Palliative procedure (qualifier value)

129428001 | Preventative procedure (qualifier value)

360271000 | Prophylaxis - intent (qualifier value)

827911000000105 | Rehabilitation - intent (qualifier value)

15751000000109 | Ritual procedure (qualifier value)

360156006 | Screening procedure (qualifier value)

373825000 | Staging - procedure intent (qualifier value)

399707004 | Supportive - procedure intent (qualifier value)

262202000 | Therapeutic (qualifier value)

Content also exists with intent already modelled within its procedure context e.g. "Palliative course of deep X-ray therapy". It is not necessary to duplicate this intent.

Frequency and Representation of Recurring Procedures

Whilst some actions, (e.g. an operative procedure) are generally single occurrences in the service user plan, many occur several times throughout the care episode, e.g. vital signs investigations, medications administration, a course of therapy etc. An alternative consideration is required for the state transition in that a procedure will still need "to be done" again once "done" for the first and subsequent times.

For many of these recurring procedures, a certain amount of linkage between record entries is appropriate. For example, if the care plan has a regular scheduled element of "peritoneal dialysis catheter maintenance" it would be reasonable to expect the plan to be updated with "Done" and the item rescheduled for the next due time as "To be done".

Rendering of post-coordinated expressions for procedures

Where concepts are post-coordinated and then re-displayed in an environment, different to that where the information entered then consideration of readable simple rendering on screen is essential and this should be congruent with Common User Interface (CUI) guidance where available. The examples shown should be considered with caution; they illustrate the issue of presentation of post co-ordinated concepts, rather than a complete and generalisable model, which would come from CUI guidance.

Any care plan module should enable user interface functionality to combine the focus procedure concept with its context, e.g. using a radio button/check box. However, upon subsequent retrieval, say in a summary screen, the user interface options may be different and it should be possible to display a sensible equivalent expression to that originally entered:

- 'y' procedure context – 'x' procedure, e.g. Not to be done – Arthroscopy

The application itself would retain the full SNOMED CT expression, including default context and attribute relationships, but these additional attributes and some default values may not be needed for display purposes, e.g. considering the above example

Consideration of specific use cases may be required for scenarios, which differ, even slightly, from the guidance issued as not all guidance is universally applicable.

Representing Goals in a Care Plan

An electronic care plan may need to represent the overall goal of the plan and/or subsidiary goals of individual actions within the care plan. Historically only **findings** in SNOMED CT are identified as goals. However, this normally restricted a goal to a positive state as negative states already include contextual modification and would be unsuitable to use as goals within the existing concept model. High-level discussions in the UK have supported the identification of goals from **situations** and **observables** + value, utilising the goal mood code in the information model. HL7 guidance is currently that *wherever possible the goal context in the expression should also be identified in the terminology model.*

It is possible to express the achievement of a particular physical/mental state as the goal of a care plan by the use of the SNOMED CT finding context value of 'goal'. For example, it may be the goal of a care plan to be able to walk without assistance (independent walking), by assigning the finding context of 'goal' against the focus concept 'independent walking'.

The goal SHOULD NOT normally be expressed as a single concept attempting to combine the procedure with the goal, e.g.:
- Manipulation of knee joint to enable successful mobilisation
- Application of electric heat pad to reduce pain

Where required, these types of goal statements should be expressed separately as clinical attestations in their own right and any linkage with the actions

(interventions/procedures) accomplished by citation or similar associations in the information model of the application, both becoming integral parts of the care plan.

In SNOMED CT, there may be regimes that incorporate an implicit or explicit goal for example:

- Maintaining the client's dignity
- Aerosol or vapour inhalation for sputum induction for diagnostic purposes

These are not acceptable precedents of an approved term construct as many examples date from outdated terminologies which have been included to support migration of active clinical records. Editorial principles prevent these from being added in future and so the solution provided should provide appropriate linkage.

State transitions for goals

As with action statuses, there is a logical constraint to the sequence in which a goal status can transition. It is therefore suggested that care plan applications should only offer these possibilities to minimise the risk of inappropriate selection. In addition to the statuses shown in the state transition diagrams, "strikeout" is required for each group of possible statuses.

Any reference to time constraints for Goal achievement SHOULD be achieved through the interdependency between the terminology and information model in perpetuity within the electronic patient record.

Rendering of post-coordinated expressions for Goals

Where it is important to associate a particular condition (or improvement to one) as the *Goal*, then the pattern might be

- y finding context (or *Goal*), x finding, e.g. *Goal*, able to walk unaided

Evaluation and Outcomes

An outcome unrelated to the overall plan may be significantly recordable in its own right as a finding, e.g. the identification of "high risk of venous thromboembolism" identified by a "venous thromboembolism risk assessment" on admission to hospital. Whilst it may not be their primary reason for admission, this finding will be important to record and communicate to others involved in their care.

The system information model can be used to associating them in a care plan rather than using the terminology model, as there is no currently no SNOMED CT standard way of representing these notions.

Illustrations of example outcome types are shown below in Figure 6.

Measure of Status of Diagnosis or Finding

This is an essential part of the clinical process in which the assessment findings at the end of care process are compared to previous findings and a judgement asserted on this comparison. Examples include:

- Improved
- Worsened
- No change

A number of change values appear to be in SNOMED CT; however, at this point use the information model to express change over time.

Evaluation and review of the plan together with the expected and actual outcome

The process of evaluation also encompasses a degree of reassessment, thus there is likely to be a need to combine the recording of narrative text, the assessments or other procedures undertaken and findings of assessments. Whilst many of these elements are straightforward to develop in clinical systems, multidisciplinary evaluation involves a complex combination of conceptual processes, which need an interface with synergy between structured and unstructured content.

The mechanism to manage changed concepts should be maintained in accordance with medico-legal standards and SNOMED CT guidance.[20]

Figure 6 – Context values for Goals and state transitions

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[20] http://snomed.org/starterguide
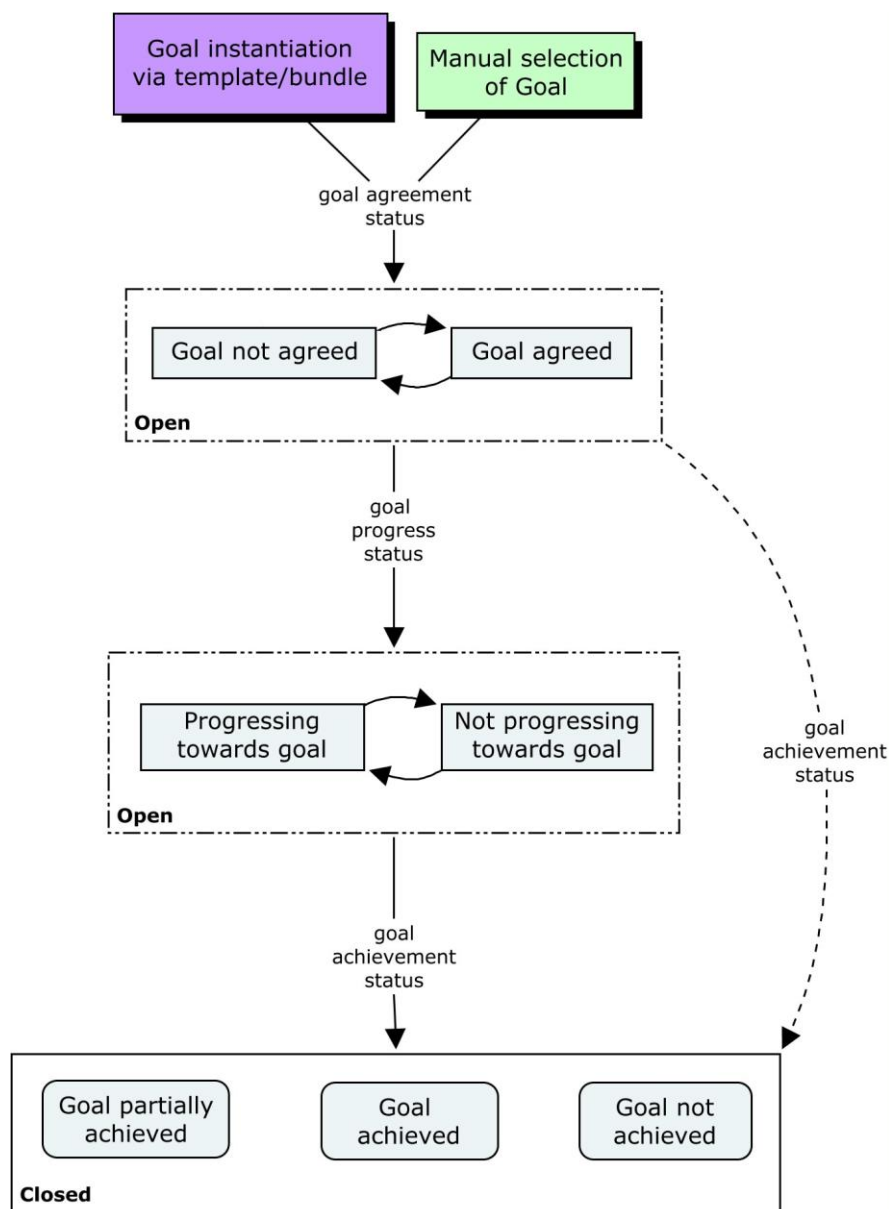
Considerations for use

Content Development Process - Essential Criteria

The development process MUST consider the scope of the Core Care Plan content under consideration.

All should:

- Be specific to the identified care "Need", the core care plan SHOULD cover the total care needs for the typical service user
- Activities Bundles MAY cover total care Needs.
- Incorporate relevant evidence and/or current best practice.
- Meet key national initiatives, e.g. High Impact Actions for Nursing and Midwifery.
- Incorporate Naming Convention criteria where applicable.
- Aim to reduce the cognitive load for users.
- Only include "Problem(s)" related to specialised Needs, rather than those of a generic care nature.

Content Review Cycle

In addition to a clinical review cycle (normally 2-3 years) there are other considerations for content updates.

- Release of new guidance from authoritative sources, e.g. NICE
- SNOMED CT content is currently refreshed every six months. An update in relation to new concepts added and a resolution of retired concepts is essential to ensure interoperability and clinical safety is maintained.

Release of Data

Releases of element subsets will be at least bi-annually synchronised with the UKTC bi-annual SNOMED CT release. These **SHOULD** be applied to comply with SNOMED CT licensing. The latest SNOMED CT release will be available to users at the applicable release date and no Core Care Plan content can be used ahead of this date except as part of a formally agreed process with the UK Terminology Centre (UKTC).

There MAY be additional releases of Core Care Plan content to meet the needs of deployments of care planning to additional specialties throughout NHS in England. Intermediate releases **SHOULD** be made available at the earliest opportunity to give the greatest benefit to clinical users of the system. Where a higher priority is assigned to an intermediate release it will be made clear in the notification email, this will normally only be undertaken for an identified clinical risk/benefit where there is an imperative to apply the update ahead of the next scheduled release.

Consideration of any additional fields required to support a specific supplier's system architecture can be considered; however, distribution will not be in a proprietary

format. The national format is designed to enable any supplier to generate the formats required for their system by simple post release processing.

Technical considerations

The Core Care Plan content is designed to address the majority of patients with a given care need; however, personalisation may also be required at run time. The personalisation will include addition or removal of concepts and contextualisation using additional SNOMED CT concepts or free text; this **MUST** be carried with the care plan and **SHOULD** be displayed clearly and without the need for additional action by the user. Contextual text **SHOULD NOT** be hidden as this carries additional clinical risk.

There are likely to be systems from many different suppliers in use across all health and social care sectors, therefore any care plan design is likely to need to be transferable or accessible and updatable in multiple systems rather than dependent on any single application. Adherence to a generic model provides benefits both from transfer of care plans and quick assimilation by users.

Some post-coordination within the supplier application is expected to be present or available in imminent releases. Care planning and delivery is an iterative process and pre-coordination of every phase of planning and recording of a given procedure would be unrealistic and onerous for the user, application, and terminology to manage.

The Common User Interface (CUI) standard mandates and recommendations **MUST/SHOULD** be incorporated into the specific requirements identified by the NHS for care plan functionality. The way a given application presents this functionality to a user will differ between supplier systems; however, consistency in the user interface will be beneficial in reducing training and ensuring safe use.

An archive of historical releases of content MUST be retained for clinical record keeping purposes, to enable reconstruction of the clinical record. Unless time limited a concept will not be issued with an end date; however, a subsequent release may update a concept with an end date. This is reflected in the Core Care Plan content and is normally synchronised with the SNOMED CT release, however additional releases may be notified through TRUD for business or safety reasons. Content SHOULD NOT be used in live clinical systems beyond its end date or before its start date.

The SNOMED CT Release Format 1 (RF1) for subsets does not support the requirements for care plan elements. It has therefore been necessary to develop a specification to capture all aspects required for care plan content; this is provided in the appendices 4 and 5. The subsets of the SNOMED CT content are also provided in RF1 and Release Format 2 (RF2). **Note**. This content is planned to move to RF2 only in April 2018, anyone implementing this now is recommended to use RF2.

A representation of the general associations within most professional models of care is shown in Appendix 4. The model and supplied fields reflect requirements defined by NHS and social care representatives, NHS messaging standards and supplier's acute clinical systems. Further development of content will be required to support the full requirements for care pathways; order sets, resource scheduling and frequencies.

Strikeout

Strikeout represents an information model only status used in some systems, which reverts the context value to the previously assigned state. This may be that the context itself is absent from the active record. Effectively this is the same as striking a line through a paper record. For medico-legal purposes, an audit trail of the insertion and correction must be maintained in the system.

Document Lifecycle & Feedback

The content of this document is based on extensive consultation within the community of experts. Principal contact at NHS Digital is Zac Whitewood-Moores

Experience gained from the application of this guidance in live systems will inform any updated versions. Whilst there are no plans for a future release of either this guidance or the content

Feedback setting out experience of implementation and use of this guidance is sought and should in the first instance be sent to NHS Digital via the helpdesk information.standards@nhs.net

Core Care Plan content resources

Distribution format

Within the Core Care Plan content pack were three top-level folders:

CarePlanDocumentation

CarePlanElements

CarePlanRelationships

Each folder contains content as described in the folder name. The Care Plan Documentation folder contains the latest version of this document.

SNOMED CT subset files

Within the SNOMED CT UK Edition release the subset files are still available. All supplementary files are no longer available but the format and data type information are available in Appendix 5 of this document. If a programme were established for this type of content in the future a RF2 format SHOULD be considered.

File format

The file format was simple text format with tab delimitation, as is the standard for the main SNOMED CT release files. All files contained a header row detailing columns. Some SNOMED CT concept descriptions contain multi-byte characters; the system must be able to support this in care plans, as it does in other areas of the application.

File names

The following files are provided with the date element (YYYYMMDD) providing the valid from date for implementation, the name of the file reflects its content:

CarePlanElements

CarePlanning_Activities_20171001.txt

CarePlanning_CarePlanTypes_20171001.txt

CarePlanning_ContextValuesActions_20171001.txt

CarePlanning_ContextValuesGoals_20171001.txt

CarePlanning_ContextValuesIntents_20171001.txt

CarePlanning_Goals_20171001.txt

CarePlanning_HealthIssues_20171001.txt

CarePlanning_HealthObjectives_20171001.txt

CarePlanning_Needs_20171001.txt

CarePlanRelationships

CarePlanning_ActivitiesBundleContent_20171001.txt

CarePlanning_ActivitiesBundles_20171001.txt

CarePlanning_CoreCarePlan_20171001.txt

CarePlanning_CoreCarePlanContent_20171001.txt

CarePlanning_HealthIssueNeedRelationships_20171001.txt

Appendices

Appendix 1 – SNOMED CT action status transitions

SNOMED CT action status transitions	Technical state
To be done	**Open**
Done	
In progress	
Not done	
Under consideration	
Not to be done	
Stopped before completion	
Action status unknown	
Strikeout	
In progress	**Open / In progress**
Done	
Stopped before completion	
Action status unknown	
Strikeout	
Not done	**Closed**
Strikeout	
Under consideration	**Open**
Done	
In progress	
To be done	
Considered and not done	
Not to be done	
Stopped before completion	
Action status unknown	
Strikeout	
Not to be done	**Closed**
Strikeout	
Considered and not done	**Closed**
Strikeout	
Stopped before completion	**Closed**
Strikeout	
Done	**Closed**
Strikeout	

Appendix 2 – SNOMED CT goal status transitions

SNOMED CT *Goal* status and possible transitions	Technical state
Goal not agreed	**Open**
Goal agreed	
Progressing towards Goal	
Goal achieved	
Not progressing towards Goal	
Goal partially achieved	
Goal not achieved	
Variance from Goal	
Goal achievement status unknown	
Strikeout	
Goal agreed	**Open**
Goal not agreed	
Progressing towards Goal	
Goal achieved	
Not progressing towards Goal	
Goal partially achieved	
Goal not achieved	
Variance from Goal	
Goal achievement status unknown	
Strikeout	
Progressing towards Goal	**Open**
Goal achieved	
Not progressing towards Goal	
Goal partially achieved	
Goal not achieved	
Variance from Goal	
Goal achievement status unknown	
Strikeout	
Goal achieved	**Closed**
Strikeout	
Not progressing towards Goal	**Open**
Progressing towards Goal	
Goal achieved	
Goal partially achieved	
Goal not achieved	
Variance from Goal	
Goal achievement status unknown	
Strikeout	
Goal partially achieved	**Closed**
Strikeout	
Goal not achieved	**Closed**
Strikeout	
Variance from Goal	**Closed**
Progressing towards Goal	
Goal achieved	
Not progressing towards Goal	
Goal partially achieved	
Goal not achieved	
Goal achievement status unknown	
Strikeout	

Appendix 3 – Clinical episode walk through

This walk through provides edited highlights of a clinical episode, not a comprehensive care plan. For simplicity, close-to-user forms are used for the example SNOMED CT Expressions. Other, sometimes more expanded representations may be needed (e.g. for analysis purposes). Explanations of 'close-to-user' and other forms (and rules for transformation between them) is found in *Transforming Expressions to Normal Forms*

> 243796009|Situation with explicit context|:
>
> 408731000|Temporal context|=410510008|Temporal context value|,
>
> 363589002|Associated procedure|=315639002|Initial patient assessment|,
>
> 408730004|Procedure context|=385658003|Done|

This document includes well-established assumptions about the record structure for SNOMED CT **observable entities**, such that a clinical record will preserve an inseparable pairing of the observable and any documented value (and often, unit of measure).

Beth is a 34-year-old visiting an oncology outpatient unit for treatment of her breast cancer. At her first visit, her team appraise Beth's treatment options, which might include a clinical trial depending on findings.

On arrival, the following are done:

129125009|Procedure with explicit context|: 363589002|Associated procedure|=315639002|Initial patient assessment|, 408730004|Procedure context|=385658003|Done|
129125009|Procedure with explicit context|: 363589002|Associated procedure|=46973005|Blood pressure taking|, 408730004|Procedure context|=385658003|Done|
129125009|Procedure with explicit context|: 363589002|Associated procedure|=65653002|Pulse taking|, 408730004|Procedure context|=385658003|Done|
129125009|Procedure with explicit context|: 363589002|Associated procedure|=56342008|Temperature taking|, 408730004|Procedure context|=385658003|Done|
129125009|Procedure with explicit context|: 363589002|Associated procedure|=82078001|Collection of blood specimen for laboratory|, 408730004|Procedure context|=385658003|Done|

A summary of findings

271649006|Systolic blood pressure| = 126
271650006|Diastolic blood pressure| = 76
78564009|Pulse rate| = 78
415974002|Tympanic temperature| = 36.7
166711002|Blood urea normal|
166716007|Serum creatinine normal|
165507003|White blood cell count normal|
429009003|History of left mastectomy|

373572006|Clinical finding absent|:
 	
    246090004|Associated finding|=
 	
    128462008|Secondary malignant neoplastic disease|

373572006|Clinical finding absent|:
 	
    246090004|Associated finding|=
 	
    22298006|Myocardial infarction|

373572006|Clinical finding absent|:
 	
    246090004|Associated finding|=
 	
    42343007|Congestive heart failure|

373572006|Clinical finding absent|:
 	
    246090004|Associated finding|=
 	
    38341003|Hypertensive disorder|

373572006|Clinical finding absent|:
 	
    246090004|Associated finding|=
 	
    44808001|Conduction disorder of the heart|

The results of the tissue sample are available at the time of the appointment 427685000|HER2-positive carcinoma of breast|

Care Plan Goal[21]

413350009|Finding with explicit context|:
 	
    246090004|Associated finding|=110279003|Inactive disease following therapy|,
 	
    408729009|Finding context|=410518001|Goal|

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[21] Representation of negated findings as goals and/or outcomes is not recommended within the SNOMED CT concept model. Positive findings SHOULD normally be used as goals and/or outcomes.

Actions

129125009|Procedure with explicit context|:

    363589002|Associated procedure|=

    425196008|Insertion of peripherally inserted central catheter|,

    408730004|Procedure context|=385643006|To be done|

129125009|Procedure with explicit context|:

    363589002|Associated procedure|=

    38216008|Infusion chemotherapy for malignant neoplasm|,

    408730004|Procedure context|=385643006|To be done|

    363703001|Has intent|=373846009|Adjuvant - intent|

129125009|Procedure with explicit context|:

    363589002|Associated procedure|=8151003|Echocardiography for detecting cardiac output|,

    408730004|Procedure context|=385643006|To be done|

Following the course of chemotherapy Beth is to receive Adjuvant Trastuzumab subject to satisfactory progress and investigation results. Specifically for this medication, cardiac function is evaluated and the following result is available prior to commencement.

371857005|Normal left ventricular systolic function and wall motion|

This further action is planned for a later appointment following several weeks of chemotherapy

129125009|Procedure with explicit context|:

    363589002|Associated procedure|=

    425196008|Insertion of peripherally inserted central catheter|,

    408730004|Procedure context|=385643006|To be done|

129125009|Procedure with explicit context|:

    363589002|Associated procedure|=

    429624006|Intermittent intravenous infusion of therapeutic substance| ,

    408730004|Procedure context|= 385642001|Under consideration|

Evaluation

After five years the outcome is evaluated

390802008|Goal achieved|:

    47429007|Associated with|=416312007|Patient in full remission|

Appendix 4 – Content Schema
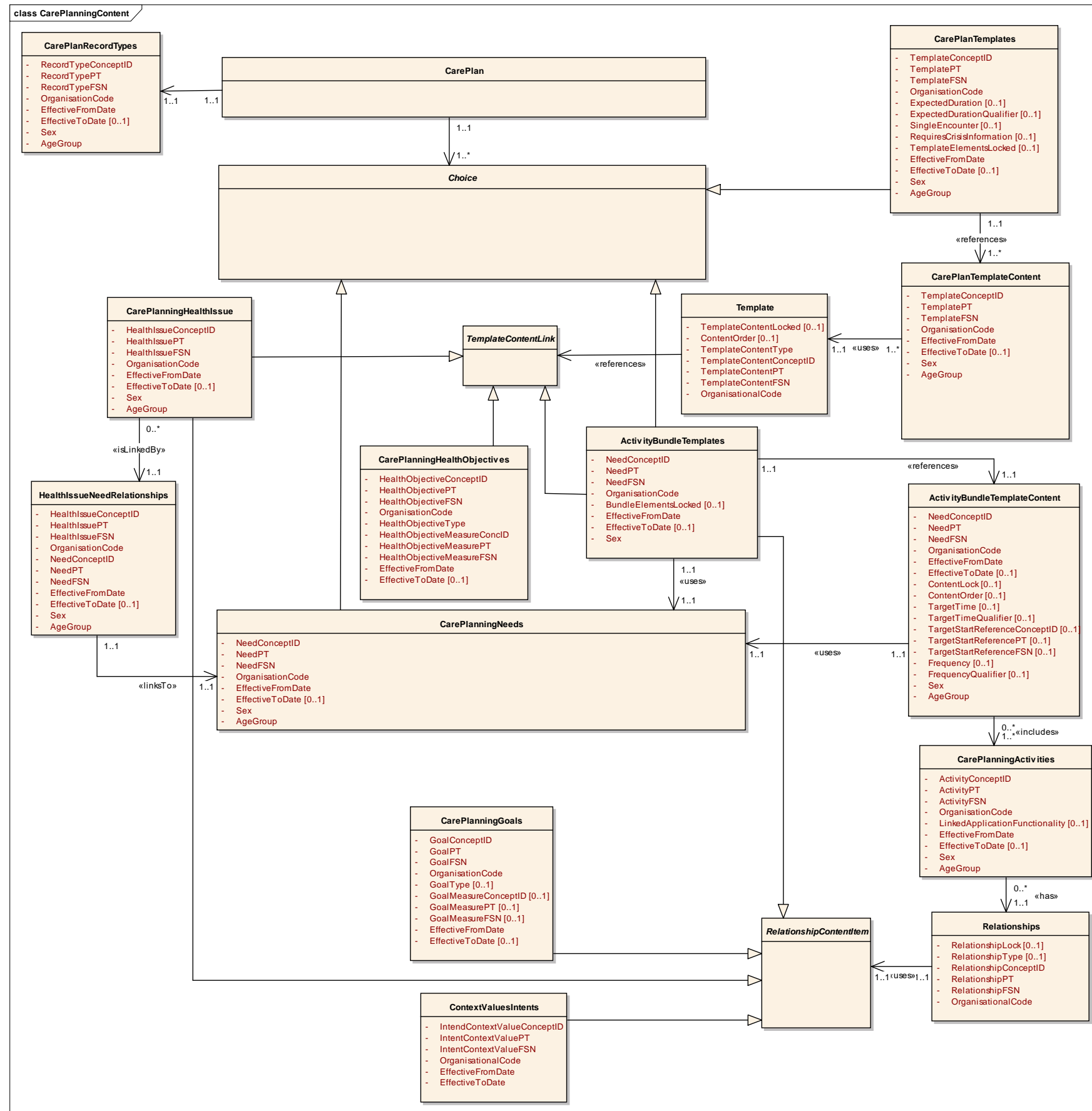
Appendix 5 – File formats and data types

Please note: There are planned subset changes including filename changes in the April 2016 release; please see the subset release documentation, new filenames are provided in brackets below.

Core Care Plan

Field Name	Field Name Specification	Mandatory / Optional	Explanation
CarePlanConceptID (part of unique key)	SCTID, digits 0 to 9, length 6 to 18. (See Glossary of terms)	Mandatory	The ConceptID of the Care Plan Core Care Plan
CarePlanPT	String (any characters except LF, CR and TAB), length 1 to 255	Mandatory	The term that is expected to be presented to end users
CarePlanFSN	String (any characters except LF, CR and TAB), length 1 to 255	Mandatory	The unambiguous description for the Core Care Plan, which includes the semantic tag "record artifact" in parenthesis
OrganisationCode (part of unique key)	Alphanumeric up to 10 characters As per Organisation Data Service	Mandatory	The organisation code (Organisation Data Service) to which this Core Care Plan applies, including all subordinate organisations unless an alternative applies**
ExpectedDuration	Null or Numeric, 1 to 3 characters	Optional	Expected duration of care plan Core Care Plan
ExpectedDurationQualifier	String, length 3 to 6 characters, values one of: HOUR HOURS DAY DAYS WEEK WEEKS MONTH MONTHS YEAR YEARS	Optional but Mandatory if Expected Duration completed	Only populated if ExpectedDuration value also populated
SingleEncounter	String, length 2 to 3 characters, values one of: YES NO	Optional	The Core Care Plan is only designed around a single encounter, not a longitudinal multiple encounter care plans. An example might be a surgical procedure care plan, which considers inpatient stay.
RequiresCrisisInformation	String, length 2 to 3 characters, values one of: YES NO	Optional	Crisis information (predominantly mental health) should be displayed with the plan of care, identifying previously successful strategies for managing a period of crisis.
CoreCarePlanContentLocked	String, length 2 to 3 characters, values one of: YES NO	Optional	Elements of the Core Care Plan should be locked to prevent them being removed by the end user, e.g. core quality standards, basic human rights etc.
EffectiveFromDate (part of unique key)	YYYYMMDD	Mandatory	The date the Core Care Plan should first be available
EffectiveToDate	YYYYMMDD	Optional	The last date the Core Care Plan should be available
Sex (part of unique key)	Numeric, 1 character, values one of: 1 = Male 2 = Female 9 = Not specified	Mandatory	This attribution, where stated is based on the sex of the patient, not gender, which is what tends to be used in the patient administration system currently. In the majority of cases these are the same; however systems may need to facilitate access to all Core Care Plans for some patients.
AgeGroup (part of unique key)	Numeric, 1 character, values one of: 1 = Child or young person 2 = Adult 3 = Neonate 4 = Pre-school infant 5 = Child 6 = Young person 7 = Older person 8 = Any age	Mandatory	This attribution, where stated is based on the age of the patient at admission/birth and is an indication of the age group intended in the relevant content.

Core Care Plan Content

Field Name	Field Name Specification	Mandatory / Optional	Explanation
CoreCarePlanConceptID (part of unique key)	SCTID, digits 0 to 9, length 6 to 18	Mandatory	The ConceptID of the Care Plan Core Care Plan
CoreCarePlanPT	String (any characters except LF, CR and TAB), length 1 to 255	Mandatory	The term that is expected to be presented to end users
CoreCarePlanFSN	String (any characters except LF, CR and TAB), length 1 to 255	Mandatory	The unambiguous description for the Core Care Plan, including the suffix "record artefact" in parenthesis
OrganisationCode (part of unique key)	Alphanumeric up to 10 characters As per Organisation Data Service	Mandatory	The organisation code to which this Core Care Plan applies, including all subordinate organisations unless an alternative applies**
CoreCarePlanContentLocked	String, length 2 to 3 characters, values one of: YES NO	Optional	This row of content is locked in the Core Care Plan if loaded, and cannot be removed at run time
ContentOrder	Null or Numeric, length 1 to 3 characters	Optional	If undefined alpha sort is suggested until set at configuration or by user. Content order should be carried through from subcomponents to the Core Care Plan content. HEALTH ISSUE(s) is/are not included in the sort order. If no other data has changed, the row will not be end dated, just the sort order will be updated. This should therefore be included in any difference comparisons as part of load procedures.
CoreCarePlanContentType	String, length 6 to 16 characters, values one of: ACTIVITY BUNDLE HEALTH ISSUE HEALTH OBJECTIVE	Mandatory	At least one ACTIVITY BUNDLE is compulsory with other content types optional. HEALTH ISSUE may be populated and typically would be specified as a concept and all of its subtypes. The HEALTH OBJECTIVE for the care plan overall may be defined.
CoreCarePlanContentConceptID (part of unique key)	SCTID, digits 0 to 9, length 6 to 18	Mandatory	The ConceptID of the Core Care Plan
CoreCarePlanContentPT	String (any characters except LF, CR and TAB), length 1 to 255	Mandatory	The term that is expected to be presented to end users
CoreCarePlanContentFSN	String (any characters except LF, CR and TAB), length 1 to 255	Mandatory	The unambiguous description for the Core Care Plan content
EffectiveFromDate (part of unique key)	YYYYMMDD	Mandatory	The date the Core Care Plan content should first be available
EffectiveToDate	YYYYMMDD	Optional	The last date the Core Care Plan content should be available
Sex (part of unique key)	Numeric, 1 character, values one of: 1 = Male 2 = Female 9 = Not specified	Mandatory	This attribution, where stated is based on the sex of the patient, not gender, which is what tends to be used in the patient administration system currently. In the majority of cases these are the same; however systems may need to facilitate access to all Core Care Plans for some patients.
AgeGroup (part of unique key)	Numeric, 1 character, values one of: 1 = Child or young person 2 = Adult 3 = Neonate 4 = Pre-school infant 5 = Child 6 = Young person 7 = Older person 8 = Any age	Mandatory	This attribution, where stated is based on the age of the patient at admission/birth and is an indication of the age group intended in the relevant content.

Health Issue – Need relationships

Field Name	Field Name Specification	Mandatory / Optional	Explanation
HealthIssueConceptID (part of unique key)	SCTID, digits 0 to 9, length 6 to 18	Mandatory	The ConceptID of the Health Issue
HealthIssuePT	String (any characters except LF, CR and TAB), length 1 to 255	Mandatory	The term that is expected to be presented to end users
HealthIssueFSN	String (any characters except LF, CR and TAB), length 1 to 255	Mandatory	The unambiguous description for the health issue, including the semantic tag
OrganisationCode (part of unique key)	Alphanumeric up to 10 characters As per Organisation Data Service	Mandatory	The organisation code to which this content applies, including all subordinate organisations unless an alternative applies**
NeedConceptID (part of unique key)	SCTID, digits 0 to 9, length 6 to 18	Mandatory	The ConceptID of the Care Plan Need
NeedPT	String (any characters except LF, CR and TAB), length 1 to 255	Mandatory	The term that is expected to be presented to end users
NeedFSN	String (any characters except LF, CR and TAB), length 1 to 255	Mandatory	The unambiguous description for the Need
EffectiveFromDate (part of unique key)	YYYYMMDD	Mandatory	The date the content should first be available
EffectiveToDate	YYYYMMDD	Optional	The last date the content should be available
Sex (part of unique key)	Numeric, 1 character, values one of: 1 = Male 2 = Female 9 = Not specified	Mandatory	This attribution, where stated is based on the sex of the patient, not gender, which is what tends to be used in the patient administration system currently. In the majority of cases these are the same, however systems may need to facilitate access to all Core Care Plans for some patients.
AgeGroup (part of unique key)	Numeric, 1 character, values one of: 1 = Child or young person 2 = Adult 3 = Neonate 4 = Pre-school infant 5 = Child 6 = Young person 7 = Older person 8 = Any age	Mandatory	This attribution, where stated is based on the age of the patient at admission/birth and is an indication of the age group intended in the relevant content.

Activities Bundles

Field Name	Field Name Specification	Mandatory / Optional	Explanation
NeedConceptID (part of unique key)	SCTID, digits 0 to 9, length 6 to 18	Mandatory	The ConceptID of the Activities Bundle is the same as the "Need"
NeedPT	String (any characters except LF, CR and TAB), length 1 to 255	Mandatory	The term that is expected to be presented to end users
NeedFSN	String (any characters except LF, CR and TAB), length 1 to 255	Mandatory	The unambiguous description for the Activities Bundle Need, which includes the semantic tag, "procedure" or "regime/therapy" in parenthesis
OrganisationCode (part of unique key)	Alphanumeric up to 10 characters As per Organisation Data Service	Mandatory	The organisation code to which this Bundle applies, including all subordinate organisations unless an alternative applies**
ExpectedDuration	Null or Numeric, 1 to 3 characters	Optional	Expected duration of Core Care Plan
ExpectedDurationQualifier	String, length 3 to 6 characters, values one of: HOUR HOURS DAY DAYS WEEK WEEKS MONTH MONTHS YEAR YEARS	Optional but Mandatory if Expected Duration completed	Only populated if ExpectedDuration value also populated
SingleEncounter	String, length 2 to 3 characters, values one of: YES NO	Optional	The Core Care Plan is only designed around a single encounter, not a longitudinal multiple encounter care plans. An example might be a surgical procedure care plan, which considers inpatient stay.
RequiresCrisisInformation	String, length 2 to 3 characters, values one of: YES NO	Optional	Crisis information (predominantly mental health) should be displayed with the plan of care, identifying previously successful strategies for managing a period of crisis.
ActivityBundleContentLocked	String, length 2 to 3 characters, values one of: YES NO	Optional	Elements of the Bundle should be locked to prevent them being removed by the end user, e.g. core quality standards, basic human rights etc.
EffectiveFromDate (part of unique key)	YYYYMMDD	Mandatory	The date the bundle should first be available
EffectiveToDate	YYYYMMDD	Optional	The last date the bundle should be available
Sex (part of unique key)	Numeric, 1 character, values one of: 1 = Male 2 = Female 9 = Not specified	Mandatory	This attribution, where stated is based on the sex of the patient, not gender, which is what tends to be used in the patient administration system currently. In the majority of cases these are the same, however systems may need to facilitate access to all Core Care Plans for some patients.
AgeGroup (part of unique key)	Numeric, 1 character, values one of: 1 = Child or young person 2 = Adult 3 = Neonate 4 = Pre-school infant 5 = Child 6 = Young person 7 = Older person 8 = Any age	Mandatory	This attribution, where stated is based on the age of the patient at admission/birth and is an indication of the age group intended in the relevant content.

Activities Bundle Content

Field Name	Field Name Specification	Mandatory / Optional	Explanation
NeedConceptID (part of unique key)	SCTID, digits 0 to 9, length 6 to 18	Mandatory	The ConceptID of the Activities Bundle is the same as the "Need"
NeedPT	String (any characters except LF, CR and TAB), length 1 to 255	Mandatory	The term that is expected to be presented to end users
NeedFSN	String (any characters except LF, CR and TAB), length 1 to 255	Mandatory	The unambiguous description for the Activities Bundle Need, which includes the semantic tag, "procedure" or "regime/therapy" in parenthesis
OrganisationCode (part of unique key)	Alphanumeric up to 10 characters As per Organisation Data Service	Mandatory	The organisation code to which this Bundle applies, including all subordinate organisations unless an alternative applies**
ContentLock	String, length 2 to 3 characters, values one of: YES NO	Optional	This row of content is locked in the bundle if loaded, and cannot be removed at run time
ContentOrder	Numeric, length 1 to 3	Optional	If undefined alpha sort is suggested until set at configuration or by user. HEALTH ISSUE(s) is/are not included in the sort order. If no other data has changed, the row will not be end dated, just the sort order will be updated. This should therefore be included in any difference comparisons as part of load procedures.
ActivityConceptID (part of unique key)	SCTID, digits 0 to 9, length 6 to 18	Optional	The ConceptID of the Activity
ActivityPT	String (any characters except LF, CR and TAB), length 1 to 255	Optional	The term that is expected to be presented to end users
ActivityFSN	String (any characters except LF, CR and TAB), length 1 to 255	Optional	The unambiguous description for the Activity
RelationshipLock	String, length 2 to 3 characters, values one of: YES NO	Optional	This row of content is locked in the bundle if loaded, and cannot be removed at run time
RelationshipType	String, length 6 to 15 characters, values one of: ACTIVITY BUNDLE GOAL INTENT HEALTH ISSUE	Optional / Mandatory	Mandatory if RelationshipConceptID, RelationshipPT, RelationshipFSN are completed ACTIVITY BUNDLEs are optional, care should be taken to avoid creating loops where local content is developed. HEALTH ISSUE may be populated and typically would be specified as a concept and all of its subtypes The use of INTENT has not been seen in all system designs; however, application suppliers may find challenges meeting the demands of some datasets.
RelationshipConceptID (part of unique key)	SCTID, digits 0 to 9, length 6 to 18	Optional	The ConceptID of the related content
RelationshipPT	String (any characters except LF, CR and TAB), length 1 to 255	Optional	The term that is expected to be presented to end users
RelationshipFSN	String (any characters except LF, CR and TAB), length 1 to 255	Optional	The unambiguous description for the related content including its semantic tag
TargetTime	Null or Numeric, 1 to 3 characters	Optional	The target maximum elapsed time from the event time first recorded in this "referral to treatment period"[22] identified by the TargetStartReferenceConceptID
TargetTimeQualifier	String, length 3 to 6 characters, values one of: HOUR HOURS DAY DAYS WEEK WEEKS MONTH MONTHS YEAR YEARS	Optional but Mandatory if TargetTime completed	Only populated if TargetTime value also populated
TargetStartReferenceConceptID (part of unique key)	SCTID, digits 0 to 9, length 6 to 18	Optional	The target event start time is identified by the TargetStartReferenceConceptID when it is first recorded in this "referral to treatment period"[23]
TargetStartReferencePT	String (any characters except LF, CR and TAB), length 1 to 255	Optional	The term that is expected to be presented to end users

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[22] http://www.datadictionary.nhs.uk/data_dictionary/classes/r/referral_to_treatment_period_de.asp?shownav=1

[23] http://www.datadictionary.nhs.uk/data_dictionary/classes/r/referral_to_treatment_period_de.asp?shownav=1

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Field Name	Field Name Specification	Mandatory / Optional	Explanation
TargetStartReferenceFSN	String (any characters except LF, CR and TAB), length 1 to 255	Optional	The unambiguous description for the TargetStartReferenceConceptID
Frequency	Null or Numeric, 1 to 3 characters	Optional	The frequency at which the event is expected to be planned initially, until adjusted dependent on the clinical need of the service user
FrequencyQualifier	String, length 3 to 6 characters, values one of: HOUR HOURS DAY DAYS WEEK WEEKS MONTH MONTHS YEAR YEARS	Optional but Mandatory if Frequency completed	Only populated if Frequency value also populated
EffectiveFromDate (part of unique key)	YYYYMMDD	Mandatory	The date the bundle content should first be available
EffectiveToDate	YYYYMMDD	Optional	The last date the bundle content should be available
Sex (part of unique key)	Numeric, 1 character, values one of: 1 = Male 2 = Female 9 = Not specified	Mandatory	This attribution, where stated is based on the sex of the patient, not gender, which is what tends to be used in the patient administration system currently. In the majority of cases these are the same; however systems may need to facilitate access to all Core Care Plans for some patients.
AgeGroup (part of unique key)	Numeric, 1 character, values one of: 1 = Child or young person 2 = Adult 3 = Neonate 4 = Pre-school infant 5 = Child 6 = Young person 7 = Older person 8 = Any age	Mandatory	This attribution, where stated is based on the age of the patient at admission/birth and is an indication of the age group intended in the relevant content.

Care Plan Elements Folder

Care Planning Health Issues

Field Name	Field Name Specification	Mandatory / Optional	Explanation
HealthIssueConceptID (part of unique key)	SCTID, digits 0 to 9, length 6 to 18	Mandatory	The ConceptID of the "HEALTH ISSUE"
HealthIssuePT	String (any characters except LF, CR and TAB), length 1 to 255	Mandatory	The term that is expected to be presented to end users
HealthIssueFSN	String (any characters except LF, CR and TAB), length 1 to 255	Mandatory	The unambiguous description for the HEALTH ISSUE, which includes the suffix, "disorder", "finding" or "situation" in parenthesis
OrganisationCode (part of unique key)	Alphanumeric up to 10 characters As per Organisation Data Service	Mandatory	The organisation code to which the HEALTH ISSUE applies, including all subordinate organisations unless an alternative applies**
EffectiveFromDate (part of unique key)	YYYYMMDD	Mandatory	The date the HEALTH ISSUE should first be available
EffectiveToDate	YYYYMMDD	Optional	The last date the HEALTH ISSUE should be available
Sex (part of unique key)	Numeric, 1 character, values one of: 1 = Male 2 = Female 9 = Not specified	Mandatory	This attribution, where stated is based on the sex of the patient, not gender, which is what tends to be used in the patient administration system currently. In the majority of cases these are the same, however systems may need to facilitate access to all Core Care Plans for some patients.
AgeGroup (part of unique key)	Numeric, 1 character, values one of: 1 = Child or young person 2 = Adult 3 = Neonate 4 = Pre-school infant 5 = Child 6 = Young person 7 = Older person 8 = Any age	Mandatory	This attribution, where stated is based on the age of the patient at admission/birth and is an indication of the age group intended in the relevant content.

Care Plan Types

Field Name	Field Name Specification	Mandatory / Optional	Explanation
CarePlanTypeConceptID (part of unique key)	SCTID, digits 0 to 9, length 6 to 18	Mandatory	The ConceptID of the "CarePlanType"
CarePlanTypePT	String (any characters except LF, CR and TAB), length 1 to 255	Mandatory	The term that is expected to be presented to end users
CarePlanTypeFSN	String (any characters except LF, CR and TAB), length 1 to 255	Mandatory	The unambiguous description for the "CarePlanType", which includes the suffix, "record artifact" in parenthesis
OrganisationCode (part of unique key)	Alphanumeric up to 10 characters As per Organisation Data Service	Mandatory	The organisation code to which this Need applies, including all subordinate organisations unless an alternative applies**
EffectiveFromDate (part of unique key)	YYYYMMDD	Mandatory	The date the need should first be available
EffectiveToDate	YYYYMMDD	Optional	The last date the need should be available
Field Name	Field Name Specification	Mandatory / Optional	Explanation
Sex (part of unique key)	Numeric, 1 character, values one of: 1 = Male 2 = Female 9 = Not specified	Mandatory	This attribution, where stated is based on the sex of the patient, not gender, which is what tends to be used in the patient administration system currently. In the majority of cases these are the same; however systems may need to facilitate access to all Core Care Plans for some patients.
AgeGroup (part of unique key)	Numeric, 1 character, values one of: 1 = Child or young person 2 = Adult 3 = Neonate 4 = Pre-school infant 5 = Child 6 = Young person 7 = Older person 8 = Any age	Mandatory	This attribution, where stated is based on the age of the patient at admission/birth and is an indication of the age group intended in the relevant content.

Care Planning Needs

Field Name	Field Name Specification	Mandatory / Optional	Explanation
NeedConceptID (part of unique key)	SCTID, digits 0 to 9, length 6 to 18	Mandatory	The ConceptID of the "Need"
NeedPT	String (any characters except LF, CR and TAB), length 1 to 255	Mandatory	The term that is expected to be presented to end users
NeedFSN	String (any characters except LF, CR and TAB), length 1 to 255	Mandatory	The unambiguous description for the "Need", which includes the suffix, "procedure" or "regime/therapy" in parenthesis
OrganisationCode (part of unique key)	Alphanumeric up to 10 characters As per Organisation Data Service	Mandatory	The organisation code to which this Need applies, including all subordinate organisations unless an alternative applies**
EffectiveFromDate (part of unique key)	YYYYMMDD	Mandatory	The date the need should first be available
EffectiveToDate	YYYYMMDD	Optional	The last date the need should be available
Sex (part of unique key)	Numeric, 1 character, values one of: 1 = Male 2 = Female 9 = Not specified	Mandatory	This attribution, where stated is based on the sex of the patient, not gender, which is what tends to be used in the patient administration system currently. In the majority of cases these are the same; however systems may need to facilitate access to all Core Care Plans for some patients.
AgeGroup (part of unique key)	Numeric, 1 character, values one of: 1 = Child or young person 2 = Adult 3 = Neonate 4 = Pre-school infant 5 = Child 6 = Young person 7 = Older person 8 = Any age	Mandatory	This attribution, where stated is based on the age of the patient at admission/birth and is an indication of the age group intended in the relevant content.

Care Planning Goals

Please see associated guidance on SNOMED CT expressions, it is very important that any message or report contains the correct context for Goals.

Field Name	Field Name Specification	Mandatory / Optional	Explanation
GoalConceptID (part of unique key)	SCTID, digits 0 to 9, length 6 to 18	Mandatory	The ConceptID of the "Goal"
GoalPT	String (any characters except LF, CR and TAB), length 1 to 255	Mandatory	The term that is expected to be presented to end users
GoalFSN	String (any characters except LF, CR and TAB), length 1 to 255	Mandatory	The unambiguous description for the Goal, which includes the suffix "finding" in parenthesis
OrganisationCode (part of unique key)	Alphanumeric up to 10 characters As per Organisation Data Service	Mandatory	The organisation code to which this Goal applies, including all subordinate organisations unless an alternative applies**
GoalType	String, length 9 to 10, values SUBJECTIVE OBJECTIVE	Optional	Where objective can link to a specific measure
GoalMeasureConceptID (part of unique key)	SCTID, digits 0 to 9, length 6 to 18	Optional unless GoalType is set at OBJECTIVE	The ConceptID of the Goal measure
GoalMeasurePT	String (any characters except LF, CR and TAB), length 1 to 255	Optional	The term that is expected to be presented to end users
GoalMeasureFSN	String (any characters except LF, CR and TAB), length 1 to 255	Optional	The unambiguous description for the Goal measure, which includes the suffix "finding" in parenthesis
EffectiveFromDate (part of unique key)	YYYYMMDD	Mandatory	The date the Goal should first be available
EffectiveToDate	YYYYMMDD	Optional	The last date the Goal should be available

Care Planning Health Objectives

Field Name	Field Name Specification	Mandatory / Optional	Explanation
HealthObjectiveConceptID (part of unique key)	SCTID, digits 0 to 9, length 6 to 18	Mandatory	The ConceptID of the "HealthObjective"
HealthObjectivePT	String (any characters except LF, CR and TAB), length 1 to 255	Mandatory	The term that is expected to be presented to end users
HealthObjectiveFSN	String (any characters except LF, CR and TAB), length 1 to 255	Mandatory	The unambiguous description for the Goal, which includes the suffix "finding" or "situation" in parenthesis
OrganisationCode (part of unique key)	Alphanumeric up to 10 characters As per Organisation Data Service	Mandatory	The organisation code to which this Goal applies, including all subordinate organisations unless an alternative applies**
HealthObjectiveType	String, length 9 to 10, values SUBJECTIVE OBJECTIVE	Optional	Where objective can link to a specific measure
HealthObjectiveMeasureConcID (part of unique key)	SCTID, digits 0 to 9, length 6 to 18	Optional unless HealthObjectiveType is set at OBJECTIVE	The ConceptID of the HealthObjectiveMeasure
HealthObjectiveMeasurePT	String (any characters except LF, CR and TAB), length 1 to 255	Optional	The term that is expected to be presented to end users
HealthObjectiveMeasureFSN	String (any characters except LF, CR and TAB), length 1 to 255	Optional	The unambiguous description for the HealthObjectiveMeasure
EffectiveFromDate (part of unique key)	YYYYMMDD	Mandatory	The date the Goal should first be available
EffectiveToDate	YYYYMMDD	Optional	The last date the Goal should be available
Sex* (part of unique key)	Numeric, 1 character, values one of: 1 = Male 2 = Female 9 = Not specified	Mandatory	This attribution, where stated is based on the sex of the patient, not gender, which is what tends to be used in the patient administration system currently. In the majority of cases these are the same; however systems may need to facilitate access to all Core Care Plans for some patients.
AgeGroup* (part of unique key)	Numeric, 1 character, values one of: 1 = Child or young person 2 = Adult 3 = Neonate 4 = Pre-school infant 5 = Child 6 = Young person 7 = Older person 8 = Any age	Mandatory	This attribution, where stated is based on the age of the patient at admission/birth and is an indication of the age group intended in the relevant content.

*Sex and Age Group will be added to this table in April 2016

Care Planning Activities

Please see associated guidance on SNOMED CT expressions, it is very important that any message or report contains the correct context for actions linked with the relevant activity.

Field Name	Field Name Specification	Mandatory / Optional	Explanation
ActivityConceptID (part of unique key)	SCTID, digits 0 to 9, length 6 to 18	Mandatory	The ConceptID of the "Activity"
ActivityPT	String (any characters except LF, CR and TAB), length 1 to 255	Mandatory	The term that is expected to be presented to end users
ActivityFSN	String (any characters except LF, CR and TAB), length 1 to 255	Mandatory	The unambiguous description for the "Activity", which includes the suffix , "procedure" or "regime/therapy" in parenthesis
OrganisationCode (part of unique key)	Alphanumeric up to 10 characters As per Organisation Data Service	Mandatory	The organisation code to which this activity applies, including all subordinate organisations unless an alternative applies**

Field Name	Field Name Specification	Mandatory / Optional	Explanation
LinkedApplicationFunctionality **(part of unique key)**	String, length 1 to 30 characters, values one of: ALLERGIES - RECORDING ALLERGIES - VIEWING ALERTS - RECORDING ALERTS - VIEWING CONTACT SCHEDULING DAY CARE SCHEDULING DEVICE/AID PROVISION DISCHARGE - ACTUAL DISCHARGE - MEDICAL DISCHARGE - PLANNING DOCUMENTS - CREATECLINICALNOTE DOCUMENTS - CREATE DOCUMENT ENDOSCOPY REQUEST ENDOSCOPY RESULTS FORMAL CARE PLAN REVIEWS HEALTH ISSUE - RECORDING HEALTH ISSUE - VIEWING IMAGING REQUESTS IMAGING RESULTS INFORMATION PRESCRIPTION INITIATE ASSESSMENT FORM INPATIENT SCHEDULING MEDICATION ADMINISTRATION MEDICATION REVIEW NON NATIVE OUTPATIENT SCHEDULING PATHOLOGY REQUESTS PATHOLOGY RESULTS PRESCRIBE PROCEDURE - RECORDING PROCEDURE - VIEWING REFERRAL - CREATE REFERRAL - MANAGE SERVICE REQUESTS SERVICE RESULTS THEATRE SCHEDULING	Optional	The area of the electronic patient record expected to be linked with native application functionality. Where blank or "Non Native" is selected, no linkage has been assigned
EffectiveFromDate **(part of unique key)**	YYYYMMDD	Mandatory	The date the activity should first be available
EffectiveToDate	YYYYMMDD	Optional	The last date the activity should be available
Sex **(part of unique key)**	Numeric, 1 character, values one of: 1 = Male 2 = Female 9 = Not specified	Mandatory	This attribution, where stated is based on the sex of the patient, not gender, which is what tends to be used in the patient administration system currently. In the majority of cases these are the same; however systems may need to facilitate access to all Core Care Plans for some patients.
AgeGroup **(part of unique key)**	Numeric, 1 character, values one of: 1 = Child or young person 2 = Adult 3 = Neonate 4 = Pre-school infant 5 = Child 6 = Young person 7 = Older person 8 = Any age	Mandatory	This attribution, where stated is based on the age of the patient at admission/birth and is an indication of the age group intended in the relevant content.

IMPORTANT NOTE

There are a small number of cases where more than one design unit MAY be the target of the activity, a pragmatic decision based on the most likely to be required by a service user facing clinician using care plan functionality has been made.

The values in the following lists should not normally be modified at an organisation level as this will limit exchange of care plans between organisations and clinical systems (interoperability). Requests for change to information.standards@nhs.net marking the email "care planning subsets"

Care Planning Context Values Actions

Field Name	Field Name Specification	Mandatory / Optional	Explanation
ActionContextValueConceptID (part of unique key)	SCTID, digits 0 to 9, length 6 to 18	Mandatory	The ConceptID of the context value for action
ActionContextValuePT	String (any characters except LF, CR and TAB), length 1 to 255	Mandatory	The term that is expected to be presented to end users
ActionContextValueFSN	String (any characters except LF, CR and TAB), length 1 to 255	Mandatory	The unambiguous description for the status value for activities, which includes the suffix "qualifier value" in parenthesis
OrganisationCode (part of unique key)	Alphanumeric up to 10 characters As per Organisation Data Service	Mandatory	The organisation code to which this activity applies, including all subordinate organisations unless an alternative applies**
EffectiveFromDate (part of unique key)	YYYYMMDD	Mandatory	The date the context values for action should first be available
EffectiveToDate	YYYYMMDD	Optional	The last date the context values for action should be available

Care Planning Context Values Goals

Field Name	Field Name Specification	Mandatory / Optional	Explanation
GoalContextValueConceptID (part of unique key)	SCTID, digits 0 to 9, length 6 to 18	Mandatory	The ConceptID of the Goal achievement finding
GoalContextValuePT	String (any characters except LF, CR and TAB), length 1 to 255	Mandatory	The term that is expected to be presented to end users
GoalContextValueFSN	String (any characters except LF, CR and TAB), length 1 to 255	Mandatory	The unambiguous description for the Goal achievement finding, which includes the suffix "finding" in parenthesis
OrganisationCode (part of unique key)	Alphanumeric up to 10 characters As per Organisation Data Service	Mandatory	The organisation code to which this activity applies, including all subordinate organisations unless an alternative applies**
EffectiveFromDate (part of unique key)	YYYYMMDD	Mandatory	The date the Goal should first be available
EffectiveToDate	YYYYMMDD	Optional	The last date the Goal should be available

Care Planning Context Values Intents

Field Name	Field Name Specification	Mandatory / Optional	Explanation
IntentContextValueConceptID (part of unique key)	SCTID, digits 0 to 9, length 6 to 18	Mandatory	The ConceptID of the intent qualifier value
IntentContextValuePT	String (any characters except LF, CR and TAB), length 1 to 255	Mandatory	The term that is expected to be presented to end users
IntentContextValueFSN	String (any characters except LF, CR and TAB), length 1 to 255	Mandatory	The unambiguous description for the intent qualifier value, which includes the suffix "qualifier" in parenthesis
OrganisationCode (part of unique key)	Alphanumeric up to 10 characters As per Organisation Data Service	Mandatory	The organisation code to which this activity applies, including all subordinate organisations unless an alternative applies**
EffectiveFromDate (part of unique key)	YYYYMMDD	Mandatory	The date the intent qualifier value should first be available
EffectiveToDate	YYYYMMDD	Optional	The last date the intent qualifier value should be available