	Care planning content clinical configuration and editorial guidance			
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Care planning content clinical configuration and editorial guidance

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Related Documents:

These documents will provide additional information.

Ref no	Doc Reference Number	Title	Version
1.	NPFIT-FNT-TO-TOSCI-007	SNOMED CT [®] representations to support care planning functionality	1.0
2.	NPFIT-FNT-TO-TOSCI-0045	Care plan content publication on Technology Reference Data Update Distribution Service (TRUD)	1.0
3.	NPFIT-FNT-TO-TOSCI-0046	Care plan content using SNOMED CT [®] editorial guidance (superseded by this document)	24/03/2011 1.0
4.	External Audiences: http://www.connectingforhealth.nhs.uk/about/acronyms	Glossary of Terms Consolidated	
5.	13940-1:2007	Health informatics - System of concepts to support continuity of care - Part 1: Basic concepts	Final Draft
6.	PRO-GOV-000-000-100012	Authoring Principles Development of Care Frameworks	2.1

Glossary of Terms:

Term	Acronym	Definition
Technology Reference Data Update Distribution Service	TRUD	Technology Reference Data Update Distribution Service
NPfIT Local Ownership Programme	NLOP	Accountability for the delivery of National Programme for IT transferred to strategic health authorities strategic health authorities on 1 April 2007, as part of the National Programme for IT Local Ownership Programme
London Programme for Information Technology	LPfIT	Part of NHS London, LPfIT has overall responsibility for upgrading NHS information technology to make it possible for hospitals, community services, mental health trusts and GPs to share electronic patient records across the capital.
North, Midlands and East Programme for Information Technology	NMEPfIT	The six strategic health authorities (SHAs) overseeing the geographic area covered by the former East, North East, and North West and West Midlands Clusters are: East of England SHA East Midlands SHA North East SHA North West SHA West Midlands SHA Yorkshire and the Humber SHA
Southern Programme for Information Technology	SPfIT	The three SHAs overseeing the Southern Programme for IT are: South Central SHA South East Coast SHA South West SHA

x Programme for Information Technology	xPfIT	Under the NLOP NPfIT Local Ownership Programme to describe any of the three regional programmes, LPfIT, NMEPfIT or SPfIT
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1 About this Document

1.1 Purpose

This document gives guidance to support the clinical implementation of care planning content in clinical informatics systems. This document provides guidance on using Systematised Nomenclature of Medicine Clinical Terms (SNOMED CT[®]) in the design and configuration of multidisciplinary care/treatment planning functionality within electronic health care systems to be compatible with anticipated clinical system capabilities for routine documentation.

Reference to other documentation regarding SNOMED CT[®], care planning functionality¹ and content will be required.

1.2 Audience

This document principally supports the implementation of national care planning content using SNOMED CT[®]. However, it will also provide guidance for those configuring content for care planning functionality at either a local or an international level.

This guidance is for NHS Connecting for Health (NHS CFH) teams, xPfiTs and clinical leaders or health informatics staff involved in electronic care planning content development and configuration. A good general understanding of SNOMED CT[®] and its use in clinical systems are required alongside this document.

1.3 Scope

The document also provides guidance for those designing electronic care planning or other applications, which may wish to interface with these systems.

The care planning content guidance is for use in electronic care planning applications within the scope of the United Kingdom Terminology Centre, principally NHS England.

1.4 Not in Scope

This document does not:

- Address differing models of professional care across the many disciplines involved in care/treatment planning, nor significantly influence them
- Address areas such as adult and child protection, multidisciplinary delivery of care, mental health and health and social care integration, although many principles will still be applicable to these areas
- Consider the design, usability and specification of any user interface. There needs to be consideration to making the care plan easy to use, accessible and consistent for service users in terms of both the terminology used and the ability to navigate a version of the care plan with little or no training.
- Give guidance on the service user's access to their care plan.

¹ Specifically Care Planning Content Technical Guidance, also available in the Care Planning sub-pack on TRUD

- Identify the specific training needs of staff including configuration or use of any SNOMED CT[®] enabled system
- Medication administration is considered out of the scope of care planning and this guidance
- Conditional statements to guide actions have not been considered in detail despite being required by many areas of care planning and therapeutic prescription (not just medication), which require a combination of statements e.g. “If ... then ...”
- At this point care pathways and resource scheduling are not included within this guidance
- The assurance process of clinical content.

1.5 Assumptions

This document describes the “care plan”; however, some professions/sectors have differing descriptions for this concept. The phraseology currently used differs slightly between professions; for example medicine generally refers to “treatment plans”, midwifery has “birthing plans”, social care has “support plans” and nursing and many other health and social care professions refer to “care plans”, “intervention plans” or “management plans”.

2 Background

This document supports the implementation of national care planning content using SNOMED CT[®]. SNOMED CT[®] is an international clinical terminology that provides machine-readable codes for clinical concepts; the clinical concepts being also represented in a consistent and human readable form through descriptions.

This document provides guidance in the use of SNOMED CT[®] in care planning functionality to address requirements for support in this area, requested by the supplier community and the NHS.

2.1 Care planning

Currently there is no standardisation of the content of care plans across the NHS; each organisation follows internal processes for the development of care plans. Development may be Trust-wide or for use by a single professional group or clinical speciality.

The Department of Health identifies personalised care planning as essentially about 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.²

Electronic care planning can enable multi-professional care plans used by teams across organisational boundaries (primary, secondary and social care). National care plan content (Templates, Bundles and Frameworks³) will give a broad base to

² Department of Health (2009) http://www.dh.gov.uk/en/Healthcare/Longtermconditions/DH_093359

³ Care Plan Templates, Bundles and Frameworks are defined later in this document

inform care plans and this approach should reduce the variation in care planning to support consistent, high quality, evidence based delivery of care.

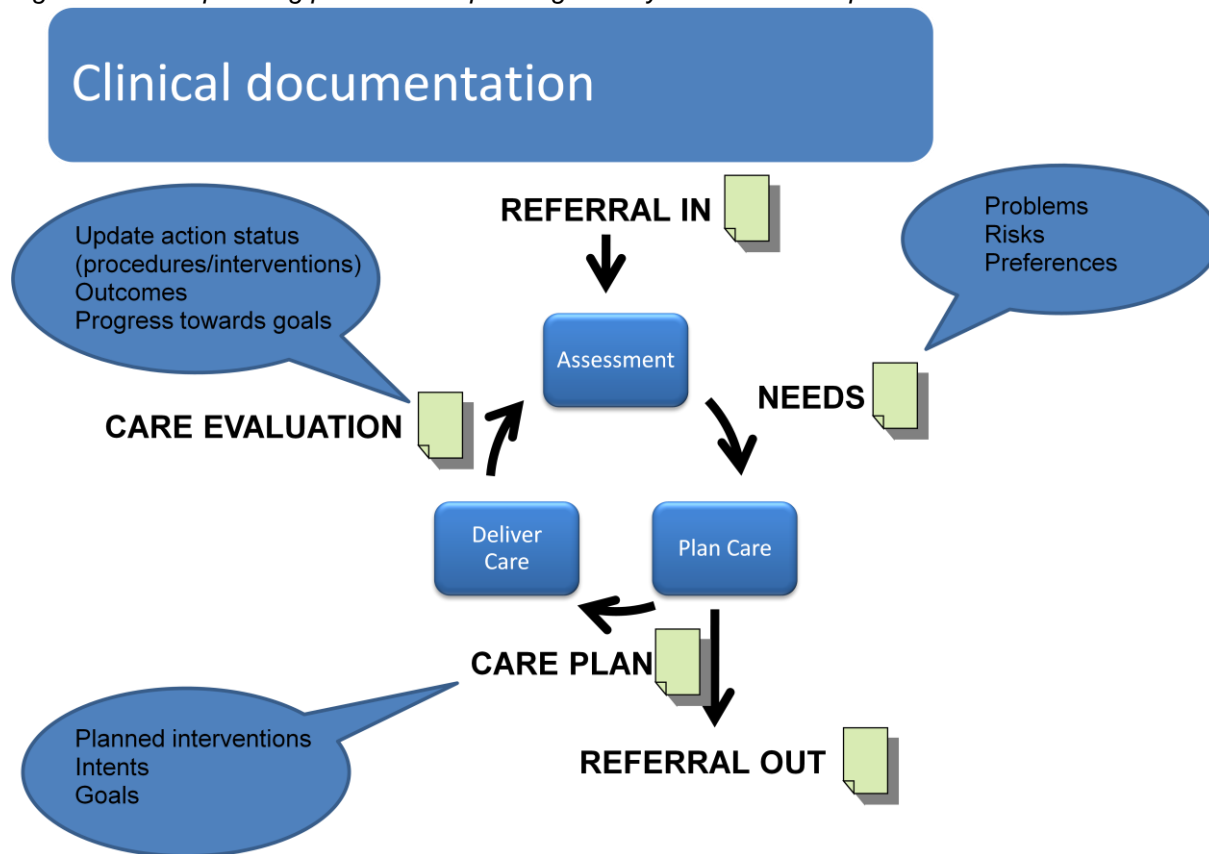
A range of care frameworks are being developed by the NHS for use by any service in any electronic clinical systems that support care planning functionality for NHS service users. These form a basis for professional staff to use for service user centric care plans, which are system agnostic, To ensure care plan content is fit for purpose a peer review process with the NHS has been undertaken, using a range of clinical expertise and including specialist input where appropriate.

A good working knowledge of SNOMED CT[®] is required to make full use of this guidance, and specialist advice and training from terminology specialists, e.g. the UK Terminology Centre will be required for any content developers. The conventional SNOMED CT[®] subset format does not support the complexities of associated concepts in the context of care planning elements. Technical specifications and guidance for implementers is in a more technically focussed associated document⁴.

In healthcare, multiple professional models of care co-exist which broadly follow a similar approach. This guidance seeks to support all common models without endorsing any particular one. Figure 1 is an illustration of the elements that form basic model common to most care planning approaches. It also illustrates the key “documentation” points associated with the care planning process. In this context, “referral” is either a handover of care or a service order request without handover of care. The care transfer can be internal or external and may involve integration with associated functionality. This will depend on system design, scope and configuration and the arrangements in place in a given health economy or health or social care environment.

⁴ Care plan content publication on Technology Reference Data Update Distribution Service (TRUD)

Figure 1 – Care planning process incorporating the key documentation points



2.2 SNOMED CT®

SNOMED CT® can be implemented in software applications to represent clinically relevant information reliably and reproducibly. Through the use of this information, SNOMED CT® enabled applications can support effective delivery of high quality healthcare to individual people and populations.

The Department of Health Informatics Directorate Data Standards & Products intends that SNOMED CT® will be the sole supported terminology from 1st April 2015. ISB 0034 states that SNOMED CT® SHOULD be used for Care Plans; in particular for clinical content that will be transferred between systems.⁵

The IHTSDO describes SNOMED CT® as a comprehensive terminology for health care with declared guiding principles that:

- Development efforts must encompass broad, inclusive involvement of diverse clinical groups and medical informatics experts
- The clinical content must be quality focused and adhere to strict editorial policies
- The quality improvement process must be open to public scrutiny and vendor input, to ensure that the terminology is truly useful within healthcare applications

⁵ Advance Notification for ISB 0034 <http://www.isb.nhs.uk/documents/isb-0034/amd-26-2006/0034262006an.pdf>

2.3 SNOMED CT® in care planning functionality

In preparation for understanding the contents of this paper, a thorough understanding of the contents of SNOMED CT® representations to support care planning functionality, and the general principles of care planning and SNOMED CT® are required. This document supports the Care Planning Sub Pack released as a draft for trial use in October 2011. Guidance focussed on the technical content is in the *Care Planning Content Technical Guidance*; also in this Sub Pack.

Table 1 – Care planning elements and SNOMED CT® Chapters

Professional process	Principle relevant SNOMED CT® chapters
Assessment	Procedure
Assessment outcome	Finding, situation and/or observable entity + value
Health issue	Finding, situation, disorder +/- contextual modification
Need	Regime/therapy or Procedure
Plan of required actions	Procedure with contextual modification
Goals	Finding with contextual modification
Actions	Procedure with contextual modification
Evaluation of care / reassessment, care outcomes	Finding +/- contextual modification

A technical preview of this content published in April 2011 and at 31st August 2011 there are 44 TRUD registrations for this sub pack. Limited feedback has led to some modifications of both SNOMED CT® and care planning content, without requiring significant change to the model. In the October 2011 Technical Preview two additional files are available:

- Record Type
- Procedure Intent Context Values

3 Considerations for content

3.1 Who are the intended users?

All care professionals and clinical support staff providing NHS healthcare and providers of social care within England.

3.2 What is the intended use of the care frameworks?

Service user centric care plans are used increasingly under the self-care agenda for carers, for a variety of purposes and this must be considered when developing care frameworks. These include but are not exclusive to:

- Care Professionals – to inform the intended care delivery, the proposed outcomes and evaluation period

- Care Support Staff – who are involved in the delivery of service user care
- Strategic use – national reporting requirements demonstrating achievement of quality standards using a consistent approach
- Service users – as part of the agreement process and as deliverers of their own care, e.g. “expert patient”

3.3 Intended scope of content

All health and social care settings planning electronic care plan systems are in scope. Delivery of content is planned according to deployment priorities; please contact the Knowledge and Strategic Alignment team at NHS Connecting for Health for assistance knowledgeandstrategicalignment@nhs.net and for addition areas to be considered. Assurance and focus is initially on NHS England but this does not preclude use or development for further areas within the UK.

3.4 Evidence Base

The care frameworks should be underpinned by clinical evidence⁶ and further guidance can be found in Appraisal of Guidelines for Research and Evaluation (AGREE) Instrument⁷, where there is no evidence a consensus of best practice will be sought through the peer review process. Care plan content should enable/support national policy and secondary clinical reporting requirements. The NHS maintains editorial control for the content associations and the UKTC manage the editorial principles for SNOMED CT[®] descriptions within the UK.

4 Content description

The current content is based on pre-coordinated, preferred term descriptions; however, post-coordination with status values and appropriate linkage concepts would be required for any messaging outside the hosted system to ensure correct understanding by the receiving system/practitioner.

4.1 User interface guidance

Where available, Common User Interface (CUI) guidance takes precedence. Some basic principles regarding the display of SNOMED CT[®] content are:

- The **Concept ID** is from the International Edition or relevant Member State Extension of SNOMED CT[®]. End users SHOULD NOT see or need access to concept identifiers; they are for machine processing only, people configuring content or reports SHOULD have access to them.
- The **preferred term** SHOULD be displayed by default to end users
- The **fully specified name** MUST be displayed to system configuration and SHOULD be available to end users, e.g. by hover over tool tip. This enables the configure to confirm the concept type and is particularly important where the person assembling the content has access to the whole of SNOMED CT[®],

⁶ <http://www.nks.nhs.uk/bestcurrentknowledge.asp>

⁷ <http://www.agreecollaboration.org/instrument>

rather than a subset constrained to the specific applicable parts of the terminology.

4.2 Major groupings of care plan structures:

- Care Plan Templates
- Care Plan Bundles
- Care Plan Frameworks
- Care Plan Elements

4.2.1 Care Plan Templates

The template provides the elements required for the service user's overall care needs. Typically this might be based around a combination of speciality, acuity level, and setting, e.g. 774071000000109 | Gynaecology major surgery inpatient care plan|. Normally a single care plan template 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 was in hospital; although some of those care needs may need to be incorporated into the acute care plan.

A single template title (“(record artifact)”, a subtype of 419891008 | Record artifact)

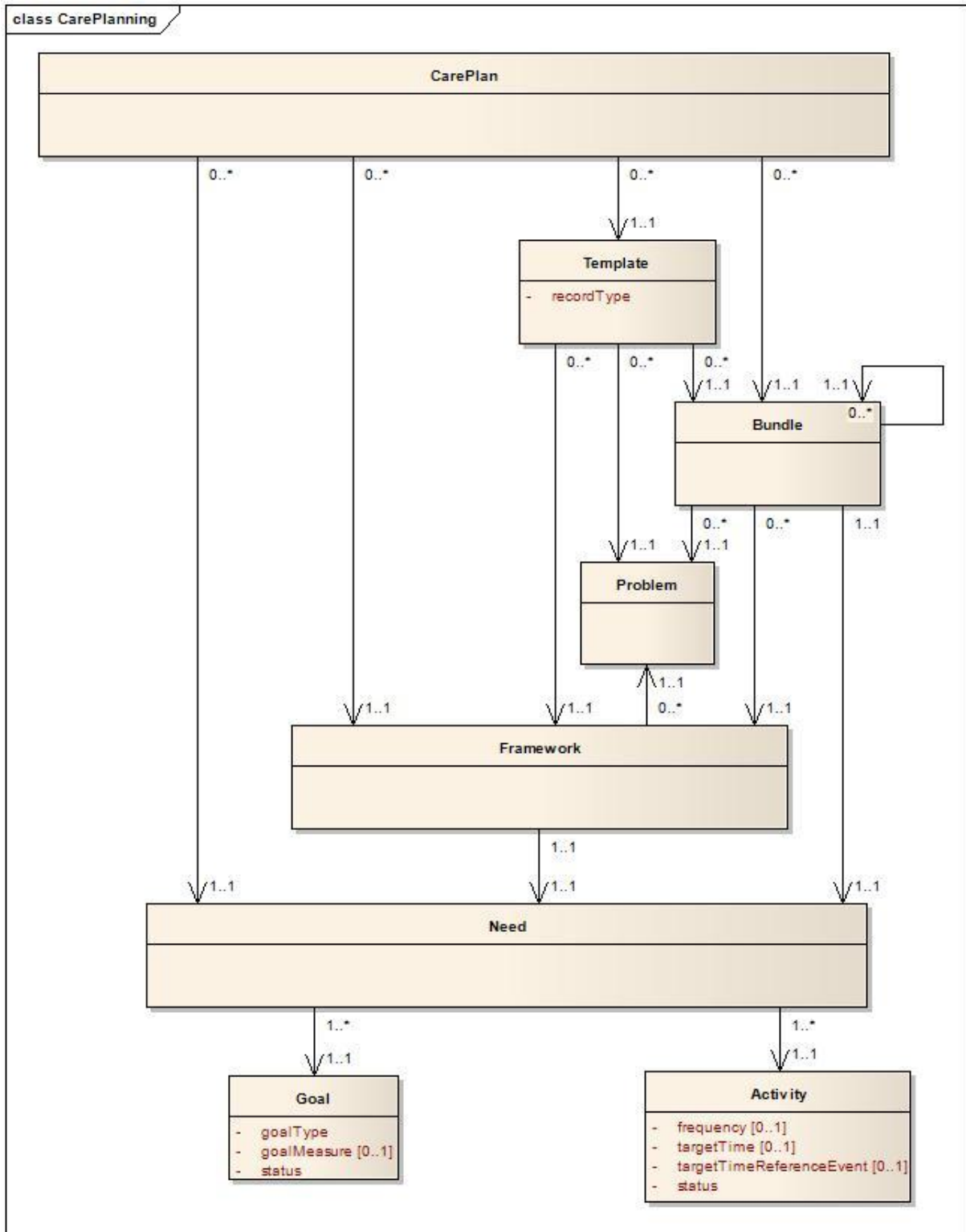
- Normally at least one of the following (both are not required, but can coexist)⁸
- Care Plan Bundles
- Care Plan Frameworks

Associated “problem(s)” can exist to enable prioritisation of content in searches by defined problems identified in the care record. This only offers benefit to specialised needs, rather than those of a generic care nature.

-

⁸ A bespoke care plan may be built based on entirely individual criteria; however this is not usually the norm in most care environments

4.2.2 Content schema



4.2.3 Care Plan Bundles⁹

A logical association of care plan content based on frameworks or bundles to address a given care plan need. These are likely to 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](#) |. Many could be incorporated in the overall care plan template.

A single need (“(procedure)” or “(regime/therapy)”, normally incorporating “management” or sometimes “care” or in the term) and should usually be subtypes of 392134007 | [care regimes management](#) | or 243120004 | [regimes and therapies](#) |¹⁰. There MUST NOT be ambiguous content and therefore an active Bundle and Framework cannot both have the same “Need” identified at a given release level (see 4.7).

Normally, at least two Care Plan Bundles or Frameworks (containing their need, goal(s) and activities)

Associated “problem(s)” can exist to enable prioritisation of content in searches by defined problems identified in the care record. This only offers benefit to specialised needs, rather than those of a generic care nature.

Bundle content should adhere to the following principles:

- Bundles are based on a “Need”, E.g. “Personal care management”
- They should contain only those bundles/frameworks that are explicit to the defined Need
- There may be a 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
- The content needs to meet the criteria that 80% of service users would need it
- The bundle content needs to be viewed during the process of bundling to avoid unnecessary duplication and ensure intended coverage
- The frameworks contained in every bundle incorporated should be rechecked to avoid unnecessary duplication in the overall bundle
- Mindful of bundles within bundles, in particular to avoid duplication
- Ensure content in a bundle is NOT at a higher level than the bundle itself e.g. “Universal precautions management” MUST NOT contain “Infection control management” as conceptually this is the parent concept, the potential for loops in content are then avoided
- Sense checking the activities of the framework fit the requirement of the bundle

⁹ Please note that in searchable lists Bundles and Frameworks can be searched together as “Needs” with the relevant associated content. Both are conceptual constructs relevant to informatics, not clinical models.

¹⁰ International work to improve the consistency of these hierarchies is underway. Historically many areas of SNOMED CT relating to nursing and allied health professionals are separate from the more medically orientated content. However in today’s multidisciplinary healthcare environment this is a less helpful separation.

4.2.4 Care Plan Frameworks¹¹

A logical association of care plan content based on frameworks to address a given care plan need. This is a low-level association of content that can be expected to be reused many times, in different combinations.

A single need (“(procedure)” or “(regime/therapy)”¹²); this should normally be available within the Needs Subset. There MUST NOT be ambiguous content and therefore an active Bundle and Framework cannot both have the same “Need” identified at a given release level (see 4.7).

At least one goal (“finding”), must support multiples

At least one activity (“procedure” and/or “regime/therapy”), must support multiples

Associated “problem(s)” can exist to enable prioritisation of content in searches by defined problems identified in the care record. This only offers benefit to specialised needs, rather than those of a generic care nature.

Framework content should adhere to the following principles:

- Frameworks are based on a “Need”, E.g. “Fertility care”
- They should contain only those concepts that are explicit to the defined Need
- Content of frameworks should work as stand alone as well as being part of a bundle

4.2.4.1 Suggested sequence of activities in Care Plan Frameworks

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

Suggested content order
1. Assessments a) Generic Assessments b) Specific Assessments
2. Clinical investigations
3. Verification of consent
4. Examinations
5. Initial Treatments

¹¹ Please note that in searchable lists Bundles and Frameworks can be searched together as “Needs” with the relevant associated content. Both are conceptual constructs relevant to informatics, not clinical models.

¹² International work to improve the consistency of these hierarchies is underway. Historically many areas of SNOMED CT relating to nursing and allied health professionals are separate from the more medically orientated content. However in today’s multidisciplinary healthcare environment this is a less helpful separation.

6. Investigations (where not part of clinical assessment, e.g. chest x-ray) <ul style="list-style-type: none"> a) Radiology b) Pathology c) Others
7. Counselling about serious diagnosis
8. Education, guidance and counselling (specific to framework) or Education where this does not exist
9. Definitive Treatments
10. Referrals

Where no “clinically relevant” order exists, use alphabetical within the categories for consistency).

4.3 Care Plan Elements

A repository of elements for care planning, which may, or may not, be present in existing templates, bundles or frameworks which 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. These elements SHOULD NOT be associated outside the context of a care framework, bundle or template as 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.

The activities table includes values for linked functionality within clinical systems. Any suggestions for additional groups of functionality should be forwarded to the Knowledge and Strategic Alignment team at NHS Connecting for Health knowledgeandstrategicallignment@nhs.net

4.3.1 Assessment

Assessment is often considered a precursor to care planning but is an integral part of the process overall. When instantiating a new care plan, the assessment itself is a procedure and increasingly systems will display this in an initial care plan as one of the first planned interventions. It may be that even though the assessment has already started, if not finished, it may require evaluating to record progress or completion. Thus, 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. Future assessments in conjunction with evaluation/reassessment may be indicated or as part of an ongoing process.

4.3.1.1 Formal assessment procedures and named care plans

Many formal and informal assessments have been developed to support the care process ranging from simple check-lists 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. The formal assessment process may be thought of as a care plan itself; although

there may not be a need to code components individually within the assessment. For a full description of representation of assessment procedures is in SNOMED CT[®] see the Use of SNOMED CT[®] UK Edition for Scored Assessments Implementation Guidance (ref NPFIT-FNT-TO-DSD-0160).

Results of assessments, which do not result in a formal score, are normally represented as a clinical finding. This may identify a particular intervention requirement or a formal care plan.

4.3.1.2 Diagnosis/Analysis

In addition to simple findings resulting from an assessment, the clinician may assert a diagnosis as part of the analysis of findings. The representation of clinical findings, situations and disorders has established guidance from the IHTSDO and therefore not presented further in this paper.

4.3.1.3 Health Issues / Problems

“Health issues” / “problem(s)” can be associated with care plan templates, bundles or needs to enable prioritisation of content in searches by defined problems identified in the care record. This only offers benefit to specialised needs, rather than those of a generic care nature.

4.3.2 Procedures and context

One of the more useful components of a care plan to code with SNOMED CT[®] are the actions (interventions/procedures) required or undertaken.

Expressions for clinical actions/interventions are found in the procedures hierarchy in SNOMED CT[®], which encompasses regimes/therapies, assessments, administrative procedures etc. Within this document, the term “procedure” includes any of these sub-categories unless explicitly stated otherwise.

SNOMED CT[®] procedures are expressed in “tense neutral” verb forms. This allows them to have context added, e.g. a commonly used expression in a care plan, such as “monitor blood pressure”, represented in SNOMED CT[®] as “blood pressure monitoring” and would indicate that it is “done” unless otherwise modified. To represent other states such as “to be done”, or “not to be done” etc this concept could be modified using the SNOMED CT[®] context model. Anecdotal evidence suggests that the tense variation may be of little significance to users when displayed in the plan itself; however, those designing interfaces and search algorithms may need to account for end users 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.

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 apparently 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'.

For care planning, a constrained range of "context values for actions" will support most generic cases and will provide the most value in the short to medium term whilst 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. E.g., Recording of a blood pressure or Waterlow pressure risk assessment score can 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.

For example, the reason for not undertaking any procedure would not be built into a composite concept such as 'arthroscopy not done due to death in the family' or 'patient did not attend for arthroscopy'.

4.3.2.1 Context values for actions

The number of recommended state transitions has been kept to a minimum to reflect known 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 to represent, in a care plan, whether an action was "scheduled", "being organised", "accepted" or "requested". Likewise, action states such as "cancelled", "denied" or "not needed" are not identified in initial requirements.

The range of procedure context values recommended for general care planning 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, 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.

4.3.3 Typical state transitions for procedures

Most often a procedure will go from being needed to being done and may go through various states in between.

For example, a care professional applying a care plan to a service user record will consider whether a procedure within a care plan template 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.

If the procedure was completed satisfactorily then the procedure status would be set as ‘done’, however, if started and problems were encountered forcing abandonment, then it could be assigned a context of ‘stopped before completion’.

This type of contextual post-coordination should 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:

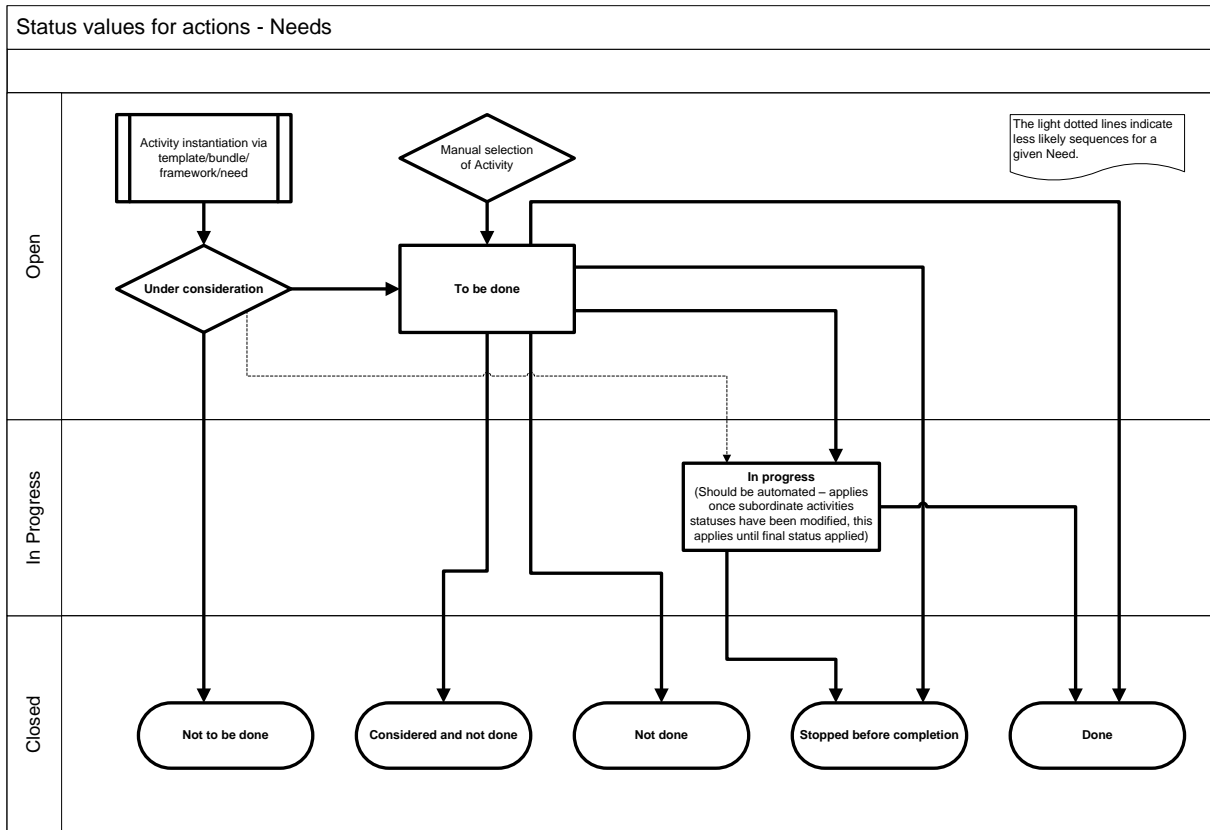
- Arthroscopy to be done
- Arthroscopy not to be done

- Arthroscopy done

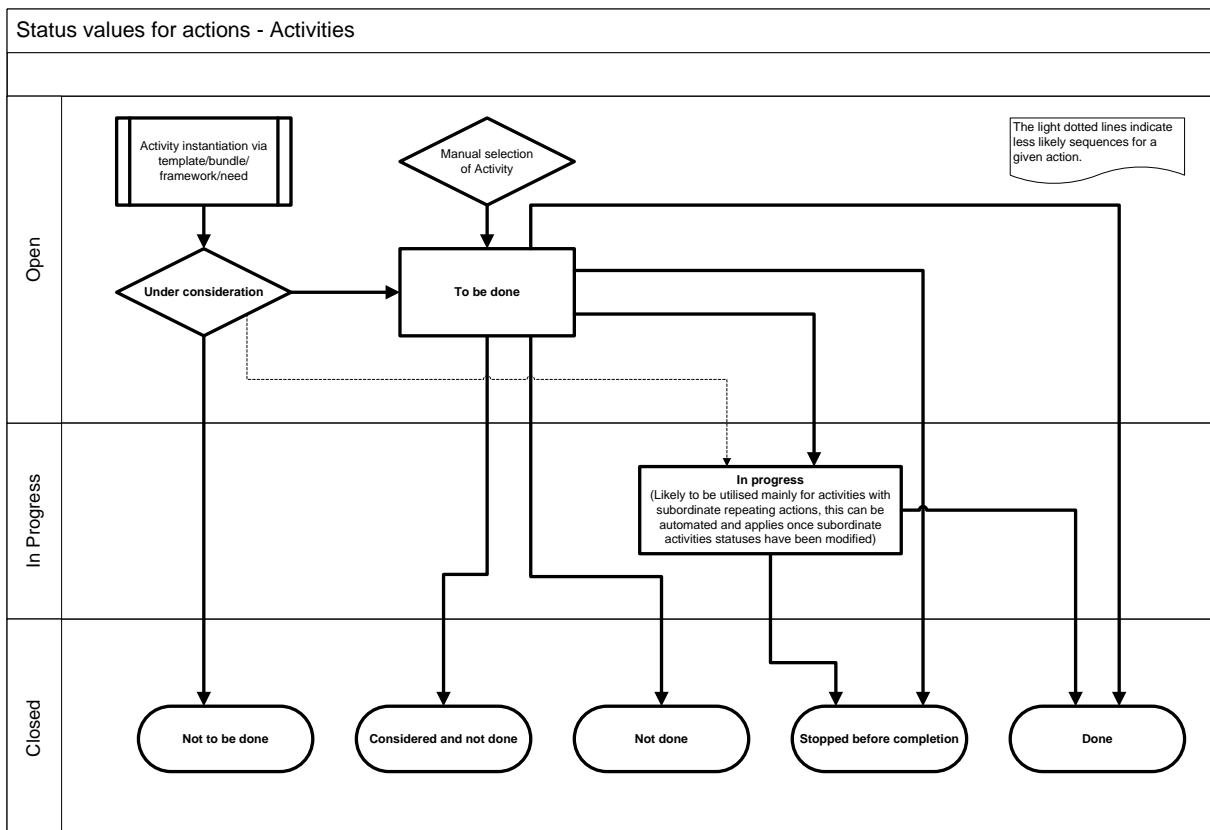
4.3.3.1 Table 2 – SNOMED CT[®] action status and possible transitions

SNOMED CT[®] action status and possible transitions
Under consideration
Considered and not done
Done
In progress
Not to be done
Stopped before completion
Strikeout
To be done
Action status unknown
To be done
Considered and not done
Done
In progress
Not done
Not to be done
Stopped before completion
Strikeout
Under consideration
Action status unknown
In progress
Done
Stopped before completion
Strikeout
Action status unknown
Not to be done
Strikeout
Considered and not done
Strikeout
Not done
Strikeout
Stopped before completion
Strikeout
Done
Strikeout

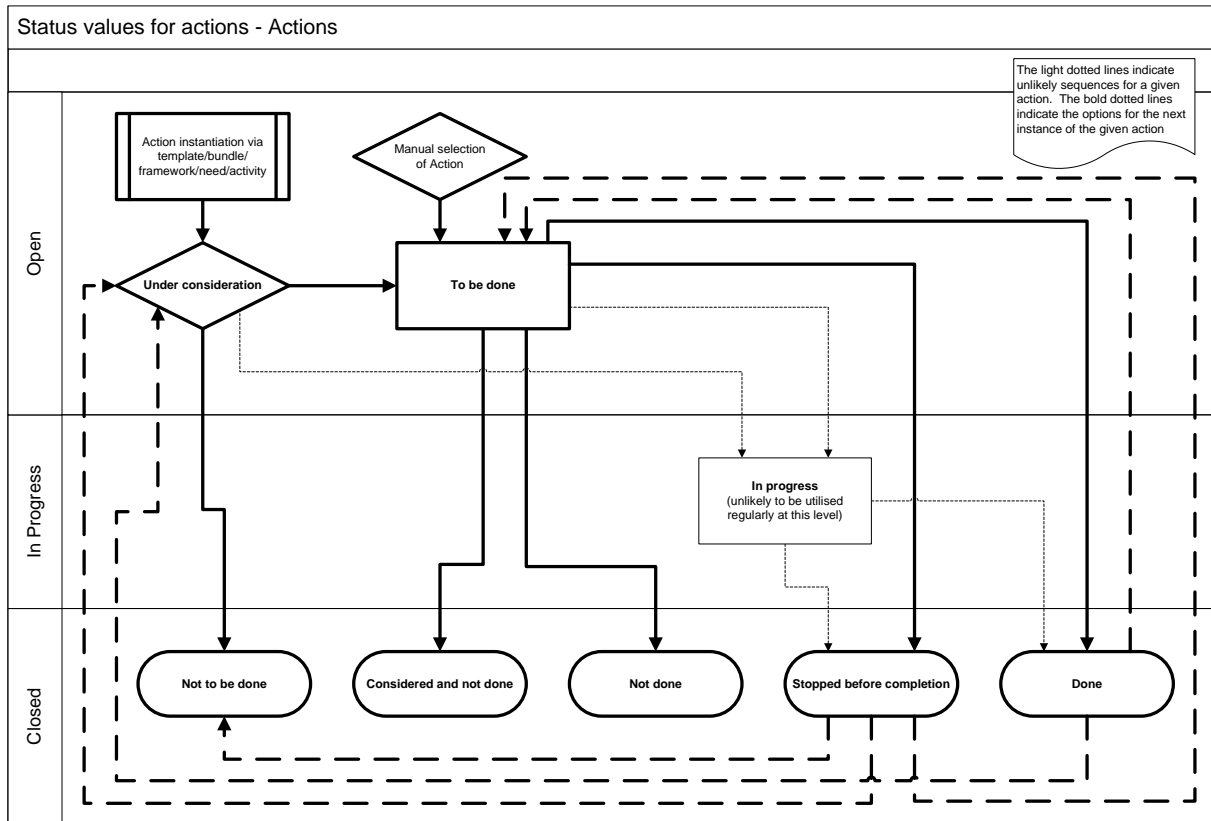
4.3.3.2 Needs



4.3.3.3 Activities



4.3.3.4 Actions



4.3.4 Nature of the procedure (Intent)

The aims of procedures, which 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.

4.3.4.1 Suggested intent value range

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

- Palliative
- Therapeutic
 - Adjunct
 - Adjuvant
 - Neo-adjuvant
 - Curative

- Supportive
- Preventative
 - Prophylactic

Whilst other intents exist, their use is not thought relevant at this point for care planning. Content also exists with intent already modelled within its procedure context, e.g. “palliative course of deep X-ray therapy”.

4.3.5 Needs

A “need” identifies the level requirement, which normally stems from an identified problem or as a preventative care process. 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 should generally be subtypes of 392134007 | [care regimes management](#) | or 243120004 | [regimes and therapies](#) |¹³. There MUST NOT be ambiguous content and therefore an active Bundle and Framework cannot both have the same “Need” identified at a given release level.

4.3.6 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”.

4.3.7 Activities

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”. 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, as currently; these should be as accessible 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”.

4.3.7.1 Actions

An “action” is as an individual instance of a given recurring “activity”. In SNOMED CT[®], the semantic tag “(procedure)” or “(regime/therapy)” will be present. Each will have its own cycle of “status values for actions” context modifiers.

¹³ International work to improve the consistency of these hierarchies is underway. Historically many areas of SNOMED CT relating to nursing and allied health professionals are separate from the more medically orientated content. However in today’s multidisciplinary healthcare environment this is a less helpful separation.

4.4 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. A goal can be considered the same as the desired outcome. The finding in SNOMED CT[®] should be described in terms of a positive state as negative states already include contextual modification and are unsuitable to use as goals.

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 precedent of an approved term construct as many examples date from legacy terminologies, which have been included to support migration of active clinical records.

4.4.1 Rendering of post-coordinated expressions for goals

The model of SNOMED CT[®] supports the achievement of a positive outcome more effectively than the elimination of a negative situation. It may be that additional content is required or the SNOMED CT[®] model will need adapting to support such use cases, e.g. a goal of reduction of knee pain is currently problematic.

It will be easier to determine the achievement of a goal if it is defined objectively, this is especially important for goals that relate to quality indicators where a clear cut achieved/not achieved is required for reporting purposes. We describe progress towards a goal in the real world; however, in the context of informatics, individual goals of steps towards the final goal make representation of progress more tangible.

4.5 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 in the following sections:

4.5.1 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:

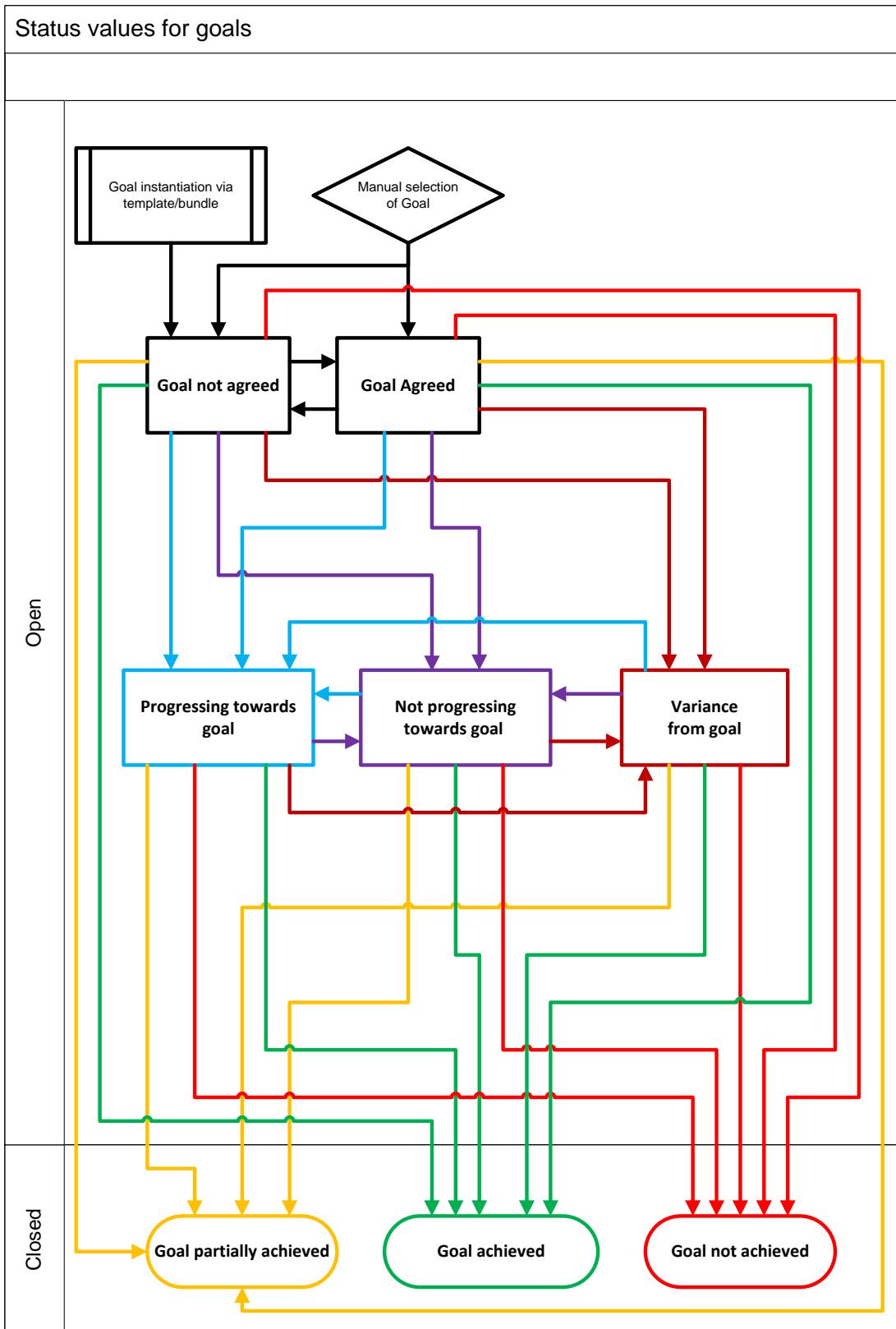
- Improved
- Worsened
- No change

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

4.5.2 State transitions

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 planning applications should only offer these possibilities to minimise the risk of inappropriate selection. The following sections illustrate the state transitions suggested for Goals. In addition to those shown in the state transition diagrams, “strikeout” is required for each group of possible statuses.

4.5.3 Status values for goals



4.5.4 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, 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.

4.5.5 Clinical service codes

Care plan content can also be associated with NHS Data Dictionary codes where content relates to specific clinical service to enable content to be prioritised in searches based on a given clinical service.

4.6 Essential criteria

The development process SHOULD consider the scope of the care plan content under consideration.

All should:

- Be specific to the given care “need”, only templates should cover the total care needs for the service user, bundles MAY cover those total care needs. A framework should contain specific content for a given need only.
- Incorporate relevant evidence and/or current best practice.
- Meet key national initiatives, e.g. High Impact Actions for Nursing and Midwifery, World class commissioning.
- 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.

4.7 Owning organisations of content

The assurance of the clinical content in this context should go through a local governance process in addition to the governance already applied. They MUST NOT be used without this, in a live clinical environment. The final arbiter is the clinician applying the content to the clinical record who MUST ensure the content is appropriate for the individual patient in their care.

The principle on which all content is published is a top down policy that if more than one of the same content exists, it is the lowest level one relevant to your organisation that applies. ONLY one given template/bundle/framework at each organisational level is permitted; thus, each is unique at an organisational level. Where not stated, this is UK Terminology Centre / National.

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. Generic content is likely to cover the entire scope and additional content may be required. Another example may be for content that refers to legislation, which may differ in different countries within the United Kingdom, e.g. the Mental Health Act

This SHOULD be automated and invisible to end users and will be decided at configuration by each organisation whether they will accept the higher authority template unmodified, any modification means the assurance then becomes entirely the responsibility of the owning organisation. This principle is illustrated overleaf and applies to all content:

Example organisations	Template A	Template B	Template C	Template D
IHTSDO (International)	*			
UKTC (National)		*	*	*
Clinical Network			Your network	Another network
Trust				
Site		*		
Template to be used	International	Site	Clinical network	National

The consideration of localisation of content SHOULD NOT be taken lightly and SHOULD incorporate a full clinical risk assessment as part of a clinical governance process including.

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

In most cases, it is likely that contributing to national development of content will result in more efficient and successful project delivery.

4.8 SNOMED CT[®] care planning content

The relevant care plan subsets of content SHOULD be used in configuration tools to avoid accidentally using inappropriate concept types.

The content of care planning in electronic systems SHOULD be based on SNOMED CT[®] concepts and preferred term descriptions. In most systems, and certainly those expecting to communicate care plan messages within the NHS, an underlying terminology infrastructure of SNOMED CT[®] should be present. For example, it is unlikely that system architecture designed for Read Version 2 or Clinical Terms Version 3 would readily support the demands of the national content. The clinical content can be used in less sophisticated systems (even paper), but expert advice should be sought to ensure the expected benefits can be delivered by these alternatives. Contact the Knowledge and Strategic Alignment team at NHS Connecting for Health for assistance knowledgeandstrategicalignment@nhs.net.

The latest release of SNOMED CT[®], including the International Edition and United Kingdom Extension SHOULD normally be loaded ahead of any content referencing it. The main SNOMED CT[®] tables and care plan content are dynamic to meet current clinical standards; localised content development SHOULD also reflect these

updates and retired content SHOULD NOT continue to be used. Processes SHOULD be in place to update instantiated care plan content that contain retired concepts.

In time content may be developed referencing the UK Drug Extension too, at this time loading of drug data for care planning specifically is not compulsory; however, it may be required for other areas of functionality. If content directly references medications, this SHOULD be loaded.

4.8.1 SNOMED CT[®] expressions

Most SNOMED CT[®] concepts used in the care plan require context modification to be correctly understood outside the system in which they are held. For more guidance, please reference associated documentation.

5 Content review cycle

In addition to a clinical review cycle, which is 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, however this cycle may change. A delta against existing concepts and resolution of retired concepts is essential to ensure interoperability and in some cases, safety is maintained.
- The history mechanism to manage changed concepts should be maintained in accordance with medico-legal standards and SNOMED CT[®] guidance.¹⁴

6 Document Lifecycle & Feedback

The content of this document is based on extensive consideration within the community of experts.

Experience gained from the application of this guidance will inform updated versions. It is anticipated that the provisions set out in the first formal release will not be subverted by subsequent releases of this document.

Feedback setting out experience of implementation and use of this guidance is sought and should in the first instance be sent to the UK Terminology Centre via the Data Standards helpdesk datastandards@nhs.net

¹⁴ http://www.ihtsdo.org/fileadmin/user_upload/Docs_01/Publications/doc_UserGuide_Current-en-US_INT_20100131.pdf

7 Appendix – Additional Reference Materials

Ref	Website	Organisation
1	http://www.ihtsdo.org	International Health Terminology Standards Development Organisation
2	http://www.dh.gov.uk	Department of Health
3	http://www.medicine.ox.ac.uk/bandolier/booth/glossary/ICP.html	Bandolier
4	http://www.careplans.com	Care Plans
5	http://www.rcn.org.uk/newsevents/government/briefings/electronic_patient_record_brief	Royal College of Nursing
6	http://www.nice.org.uk	National Institute for Health and Clinical Excellence
7	http://www.ic.nhs.uk	Information Centre for Health and Social Care
8	http://www.projects smart.co.uk	Project Smart
9	http://www.mercksource.com	Merck Source
10	http://www.askoxford.com/?view=uk	Ask Oxford
11	http://www.hl7.org.uk	HL7 UK

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