

Data Migration Subpack

Map *from* Clinical Terms Version 3 (CTV3)
to 5 Byte READ Version 2

FINAL RELEASE APRIL 2020

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1st April 2020

Dear User

Clinical Terms Version 3 (CTV3) to 5-Byte Read Codes (V2) Map

Please find enclosed the scheduled **FINAL** April 2020 production release of the Clinical Terms Version 3 (CTV3) to 5-Byte Read Codes (V2) mapping table. The maps are synchronised with the final 21.0.0 production release of 5-Byte Read Codes (April 2016) and with the final 25.0.0 production release of CTV3 (April 2018). This release replaces all previous releases.

WARNING

This product is designed to support migration of coded data in ONE direction only:

FROM

Clinical Terms Version 3 (CTV3)

TO

5-Byte Read Codes V2

Use of the table to migrate data in the opposite direction is
NOT RECOMMENDED OR SUPPORTED

Nature of changes since 28.0.0 (October 1st 2019) release

8 maps were changed in response to user feedback.

Effect of READ Code end of maintenance (2016/18) and full withdrawal (2020):

Maintenance of the READ2 codeset itself ended at the April 2016 (21.0.0) integrated release; no new READ2 codes will be released after that date. Similarly, maintenance of the CTV3 codeset ended with the 25.0.0 production release (April 2018). New releases of this mapping table have, however, been issued biannually until April 2020. This permitted changes to correct mapping error.

Product Status: this release is **Deprecated with Support**.

This is the final release of this product. No further scheduled releases will occur and the content will therefore remain static. Only if required to resolve critical clinical safety issues, unscheduled updates may occur until April 2023.

Introduction

The UK Clinical Terminology Landscape

Many clinical systems capture part of the clinical information they hold using codes selected from a clinical terminology or classification. Within the NHS, seven different 'supported standard' terminology or classification artefacts were in common, concurrent use in 2007 (although individual systems normally use only one or two):

1. **READ4** 4-Byte READ Codes (support discontinued from October 2009)
2. **READ2** 5-Byte READ Codes (version 2)
3. **CTV3** Clinical Terms Version 3
4. **SNOMED CT**
5. **ICD-9**
6. **ICD-10**
7. **OPCS 4.x**

Additionally, a number of drug dictionaries are in use including NHS DM&D, Multilex (FDB), and the EMIS Drug Dictionary.

Finally, for a variety of reasons including that none of the supported terminology or classification standards provides complete 'within terminology' coverage of everything a clinical enduser might wish to code, most suppliers have in fact actually deployed hybrid solutions in which most codes are taken from one of the supported standards where possible, but this single-standard codeset is augmented by either or both of proprietary (by the supplier) or local (within enterprise) extensions.

From April 2018, clinical systems throughout Primary Care will begin migrating toward exclusive use of SNOMED CT, and correspondingly end their use of READ4, READ2 and CTV3 for new data entry. Historical data already captured using these legacy terminologies will become 'dual coded'.

Requirements for data transformation/migration

Partly as a direct result of NHS programmes, and partly due to changes in the clinical informatics market occurring independent of these initiatives, there is an increasing requirement for systems to be able to send and receive information that is coded using coding systems other than that used natively within the application. This data transformation may occur piecemeal and *ad hoc* e.g. when sending information about one patient to the national summary care record, or as *en bloc* migration e.g. when all historic patient data held by a healthcare enterprise is moved from an old system to a newly commissioned one (such as must necessarily occur across the entire Primary Care estate from April 2018 as it moves to SNOMED CT).

Before 2006, NHS policy with respect to the migration of data coded using its terminology products had been to support data migration in one 'forward'

direction only along the existing legacy pipeline of terminologies, ie from 4-Byte READ through 5-Byte (V2), CTV3 and finally to SNOMED CT. Additionally, rather than providing supported mappings as finished 'look-up table' products, technical guidance documents were distributed describing how the required mappings might be derived from intermediate products.

The 'forward migration only' element of this approach provided no support for systems wishing to be early adopters of the advanced terminologies (CTV3, SNOMED CT) since pragmatically they would need the capability to migrate their coded data 'backward' when sending it to systems still based on the legacy terminologies (V2, CTV3). Additionally, the guidance documentation to support data exchange even in the approved direction (from legacy to advanced) proved incomplete and hard to implement.

In response to these problems, selected mapping table artefacts have been developed, released and maintained as 'finished products' since October 2007. From April 2009 the range of artefacts was extended to include those required to enable 'backward migration', ie mapping from advanced terminology back to legacy terminology.

About the map

There is no current guidance on how to migrate data backwards from CTV3 to READ2. From a technical standpoint it is impossible to achieve an exhaustive and complete backmap because CTV3 contains roughly three times as many codes as V2, such that:

- (a) many CTV3 codes provide more detail than similar codes in V2. In these cases it is only possible to map to a code in V2 that carries approximately the same, or only part of the meaning originally encoded in CTV3.
- (b) many CTV3 codes relate to areas of the clinical domain that are entirely absent from READ2, and in these cases it is not possible to derive even an approximate mapping. For example, there is no counterpart in READ2 for any CTV3 code for drugs, appliances, organisms or attributes or for most anatomical concepts.

However, given the present UK terminology landscape, a lossy map – in which some codes are only imperfectly translated and some not at all – is preferable to no map at all, in which all machine interpretable coded information must be entirely lost when data is transferred from systems using CTV3 to others using READ2.

The CTV3 to READ2 mapping artefact therefore provides three kinds of maps, indicated by the MAPTYP field in the table:

- **Exact** – the V2 code means exactly the same as the CTV3 code
- **Approximate** – the V2 code has a similar but less precise meaning than the CTV3 code
- **None** – no V2 code exists that has the same or a similar meaning to the CTV3 code

In general, most code-driven machine analyses - including many forms of individual patient decision support - can safely use data that has been migrated using the 'exact' maps (though still with caution). By contrast, whilst most 'approximate' maps will be suitable for aggregation queries over multiple patient records, they can not be relied upon in the general case to give the correct inference for more detailed analyses, such as individual patient decision support.

In addition to the precision of any (machine readable) mapping from CTV3 source to V2 target, a general medicolegal principle of safe data migration is to ensure that the exact same human readable rubric appears 'on screen' after migration as before. The new CTV3 to READ2 mapping artefact therefore maps (where possible) between each legal pairing of a CTV3 Concept identifier with a CTV3 Term identifier, and legal pairings of 5 character V2 concept codes and 2 character V2 term codes:

- Where a READ 2 Term Code exists for the mapped V2 code such that the V2 display term is an exact lexical match for the original CTV3 Term identifier, then the V2_TermID field will contain that Term Code value.
- Where the V2_TermID field is empty, this indicates that it is not possible to reproduce the original CTV3 human readable string using the V2 coding scheme apparatus alone. The original CTV3 text must therefore be persistently locally stored and messaged additionally as part of any migrated data item.

Mapping Quality, Coverage and Assurance

The ctv3rctmap table is derived by applying a complex algorithm to a collection of intermediate artefacts, plus additional unpublished intermediate mapping data. The methodology used to determine the maps and subsequently to assure them has been undertaken by the NHS Terminology Service in partnership with the Joint GP IT Committee.

The maps have been determined as clinically safe to use in the transition of general practice systems from CTv3 to READ2 by the Joint GP IT Committee and GPSoC

It is **strongly recommended** that the original rubric text, original source code and mapping table version used are preserved in any migrated dataset, alongside the mapped SNOMED CT code.

The mapping files do not include or provide maps for any of the Read Drug and Appliance Dictionary Codes. The ctv3rctmap table can not be relied upon to migrate prescribing, drug or appliance related data in systems from CTV3 to READ2. In most cases the map will say that no translation is possible.

As of October 2011, the results of an automatic map assurance programme combined with an ongoing targeted manual review are included through the IS_ASSURED field. The nature of the manual review, and the limits of the

assurance provided, are outlined in the section detailing the IS_ASSURED field.

Reporting and Managing Mapping Errors

Implicit in the preceding section is an acceptance that the mapping table may still contain errors – even when IS_ASSURED=TRUE. **Users of the mapping tables have a duty of care to report any suspected mapping errors they detect** to information.standards@nhs.net and to avail themselves at the earliest opportunity of all update releases, in which such errors may be fixed.

Safe Use

The NHS Terminology Service within NHS Digital makes no express or implied assurances about the clinical safety or suitability of the map either in general or for any specific use case. Use of the maps must be undertaken in conjunction with any additional contractual requirements or guidance provided in relation to any specific use of the maps.

Product History and Status

The first release of the CTV3 to 5-Byte READ2 map occurred in May 2009, with minor design changes following a consultation with implementers in June 2010.

An alternate encoding of the product (designated with the filename pattern `ctv3rctmap_uk_yyyymmdd000002.txt` and containing additional information sufficient to permit clinically assured use) was introduced in February 2012. All releases between February 2012 and October 2014 contained the product in *both* original *and* alternate encodings, but only the alternate encoding was clinically assured. Only the assured version has been released since April 2015.

The original specification was approved as a 'Draft for Trial Use' in March 2012. The revised, clinically assured design was approved as a 'Supported Product' from June 2015.

This release has **Deprecated With Support** status within the NHS Terminology Product Development Lifecycle¹. This means that:

1. Both the release format specification of the product and the method of its content preparation shall remain fixed indefinitely *unless* a significant safety risk is identified that cannot be mitigated without changing them. Where changes are deemed necessary to improve a product then a formal consultation procedure will be undertaken which may include some or all parts of the product development process and may include an option for parallel running (i.e. support for both existing and new specification).
2. NHS Digital commits to continue limited support until April 2023, after which proper product termination and data withdrawal procedures will occur. There will be no further scheduled maintenance updates of the

¹ <http://systems.hscic.gov.uk/data/uktc/snomed/governance/lifecycle.pdf>

product. Only if required to resolve critical clinical safety issues, unscheduled updates *may* occur until April 2023.

3. Quality assurance may be ongoing but the product is approved for deployment in live clinical systems, subject to standard safety assessment procedures associated with deployment of any product into a live environment
4. The commitment to release against a stable specification does not preclude continued parallel evolution of the specification and consequent development of improved variants which may or may not be considered as new products.

Ctv3RctMap Mapping File Format

The mapping file is presented as a TAB delimited file with rows terminated by CR/LF combination. The first row contains the relevant field names.

The format of the Ctv3RctMap release table design is as follows. The next pages provide further description of the content of the individual columns of the table and some example rows from the table (Table 2):

Table 1. CTV3 Code + Term mapping structure (Ctv3RctMap_uk_YYYYMMDD.txt)

Column	Length	Type / Pattern	Database type	Note
MapId	38	UUID	HUGEINT (INT128)	Unique Identifier
CTV3_ConceptID	5	STRING	VARCHAR (5)	CTV3 Concept Identifier
CTV3_TermID	5	STRING	VARCHAR (5)	CTV3 Term Id
CTV3_TermTyp	1	STRING	CHAR(2)	P = preferred term S = synonym term
V2_ConceptID	5	STRING	VARCHAR(5)	Read V2 Code _NONE = no map _DRUG = no map
V2_TermID	2	STRING	CHAR(2)	00 = preferred term Other = synonym term NULL = no V2 equivalent (NB In original design only)
MapTyp	1	STRING	CHAR(1)	Mapping metadata: information about how the map was derived N = no map E = exact map A = approximate map
MapStatus	1	0 1	TINYINT	0=Inactive 1=Active. Value 1 for all columns in alpha release
EffectiveDate	8	YYYYMMDD	DATETIME	Date as YYYYMMDD e.g. 20061218
Is_Assured	1	0 1	TINYINT	0 = Not assured, 1=Assured

Table 2 : Ctv3RctMap Mapping File Example Rows

MAPID	CTV3_CONCEPTID	CTV3_TERMID	CTV3_TERMTYP	V2_CONCEPTID	V2_TERMID	MAPTYP	MAPSTATUS	EFFECTIVEDATE	ISASSURED
{73c3cd5b-0d9f-11de-996d-5fbb8c8b13be}	C109.	Yagv6	P	C10F.	11	E	1	20090310	1
{73c3cdaf-0d9f-11de-996d-5fbb8c8b13be}	C109.	Y41PZ	S	C10F.	00	E	1	20090310	0
{73c3ce02-0d9f-11de-996d-5fbb8c8b13be}	C109.	Y41Pa	S	C10F.		E	1	20090310	0
{73c3ce91-0d9f-11de-996d-5fbb8c8b13be}	C109.	Y41Pb	S	C10F.		E	1	20090310	0
{73c3cee5-0d9f-11de-996d-5fbb8c8b13be}	C109.	YMJzT	S	C10F.		E	1	20090310	0
{73c3cf39-0d9f-11de-996d-5fbb8c8b13be}	C109.	YadyS	S	C10F.		E	1	20090310	0
{73c3cdaf-0d9f-11de-996d-5fbb8c8b13be}	C109.	Y41PZ	S	C10F.	00	E	0	20100318	0
{a9f504c2-32b2-11df-88b8-30a8bbae3913}	C109.	Y41PZ	S	C10F.	11	E	1	20100318	0
{aca04edc-32b2-11df-88b8-30a8bbae3913}	C109.	Y41PY	S	C10F.		E	1	20100318	0
{72192a60-0d9f-11de-996d-5fbb8c8b13be}	PE...	YE10X	P	PE...		E	1	20090310	0
{72192ab4-0d9f-11de-996d-5fbb8c8b13be}	PE...	Y7ICc	S	PE...	11	E	1	20090310	1
{72192b07-0d9f-11de-996d-5fbb8c8b13be}	PE...	Y7ICd	S	PE...	00	E	1	20090310	1
{72192b5b-0d9f-11de-996d-5fbb8c8b13be}	PE0..	YE10Y	P	PE0..		E	1	20090310	0
{72192baf-0d9f-11de-996d-5fbb8c8b13be}	PE0..	Y7IOG	S	PE0..	00	E	1	20090310	1
{72192c03-0d9f-11de-996d-5fbb8c8b13be}	PE0..	Y7IOW	S	PE0..	13	E	1	20090310	1
{72192c57-0d9f-11de-996d-5fbb8c8b13be}	PE0..	Y7IOb	S	PE0..	12	E	1	20090310	1
{72192caa-0d9f-11de-996d-5fbb8c8b13be}	PE0..	Y7IOc	S	PE0..	11	E	1	20090310	1
{729ad531-0d9f-11de-996d-5fbb8c8b13be}	XA03p	YA0Ui	P	S....		A	1	20090310	0
{729ad585-0d9f-11de-996d-5fbb8c8b13be}	XA03p	YA0Uj	S	S....		A	1	20090310	0
{729ad67b-0d9f-11de-996d-5fbb8c8b13be}	XA03t	YA0Up	P	S....		A	1	20090310	0
{729ad6cf-0d9f-11de-996d-5fbb8c8b13be}	XA03v	YA0Us	P	S7...		A	1	20090310	0
{729ad722-0d9f-11de-996d-5fbb8c8b13be}	XA03w	YA0Uv	P	S840.	12	E	1	20090310	1
{729ad776-0d9f-11de-996d-5fbb8c8b13be}	XA03x	YA0Uw	P	S7...		A	1	20090310	0
{729ad7ca-0d9f-11de-996d-5fbb8c8b13be}	XA03y	YA0Ux	P	S7...		A	1	20090310	0
{72c09bf0-0d9f-11de-996d-5fbb8c8b13be}	Xa03s	Ya0yy	P	2....		A	1	20090310	0
{738e92c9-0d9f-11de-996d-5fbb8c8b13be}	x05HG	y0Dun	P	_NONE		A	1	20090310	0
{738e93c2-0d9f-11de-996d-5fbb8c8b13be}	x05HJ	y0Duu	P	_DRUG		N	1	20090310	0

Updates to the mapping table will use the EffectiveDate and MapStatus fields to indicate changes to each mapping. This is described further below.

Mapping File Column Details

MapID

A unique and persistent globally unique (or near unique) identifier for the combination of: a CTV3_ConceptID, a CTV3_TermID, a V2_ConceptID, a V2_TermID, and a MapTyp.

Each MapID is a 128-bit Universally Unique Identifier (UUID / GUID) generated using the conventions of RFC-4122 and expressed in the file using the standard 38-character alphanumeric string (for details please refer to RFC-4122 at the following URL <http://www.ietf.org/rfc/rfc4122.txt>).

CTV3_CONCEPTID

The five character alphanumeric code for the 5-Byte CTV3 concept.

Note: The CTV3_ConceptID must be processed in a Case Sensitive manner.

CTV3_TERMID

The five character alphanumeric code for a CTV3 Term.

Individual CTV3 concept codes, such as 'X20QM' in Table 2, can have multiple different terms associated with them. Each term is available in 30-, 60- and 198- character variants and each such triad has its own five-character term code (e.g. 'Y21Eu', 'Y21Ev', 'Y21Ew' and 'Y21Ex'). Of all the term codes associated with a given concept code, one is the 'preferred' term for that concept and the others 'synonyms'.

Note: The CTV3_TermID must be processed in a Case Sensitive manner.

CTV3_TERMTYP

The one character TERM TYPE code from the Descrip.v3 table of the main CTV3 release, indicating whether term referenced by CTV3_TERMID is the preferred term ('P') for or a synonym of ('S') the concept referenced by CTV3_CONCEPTID.

Null when the termID is no longer a valid term for the concept (e.g. when either the term or the concept itself have been retired).

V2_CONCEPTID

EITHER : The five character code for the 5-Byte READ code that corresponds in meaning to the CTV3_ConceptID

OR: One of two five character strings beginning with an underscore character, indicating that no map exists:

_DRUG = there is no code in V2 that carries the same or any approximate meaning as the CTV3_ConceptID, and the CTV3_ConceptID **DOES** code for a drug or device

_NONE = there is no code in V2 that carries the same or any approximate meaning as the CTV3_ConceptID, and the CTV3_ConceptID **DOES NOT** code for a drug or device

Note: The V2_ConceptID must be processed in a Case Sensitive manner.

V2_TERMID

(Clinically Assured Design)

The recommended Read Code version 2 Term Code. The field will always be populated (ie no NULL or empty values).

Although in the majority of cases the Term Code entered *will* encode for exactly the same triple of 30-, 60 and 198-character terms as the CTV3_TermID does natively within CTV3, this is not guaranteed and there will be many cases where there is not lexical equivalence. Where lexical identity could not be achieved using an existing term code for the V2_CONCEPTID, the preferred term (term code = '00') will be automatically recommended unless this automatic assignment has been overridden by a manual reviewer recommending a map to a synonym.

If a particular use case requires the ability to distinguish whether or not the source and target strings are lexically identical (or similar), then this must be determined as a post-processing step by the user, or by using the original specification.

MapTyp

Metadata about the mapping between CTV3_ConceptID+CTV3_TermID and V2_ConceptID+V2_TermID. MAPTYP is a 1-character code indicating how the mapping was derived:

E = the meaning of CTV3_ConceptID and V2_ConceptID in the two schemes are an **Exact** match.

A = the meaning of CTV3_ConceptID and V2_ConceptID in the two schemes are an **Approximate** match. When the suggested V2_ConceptID is sent as a map for the CTV3_ConceptID, then the text for the original CTV3_TermID should also be sent.

N = V2 contains **no code** that is suitable for the original CTV3 code.

MapStatus

The status of a mapping, as described in the table definitions. Normally:

0=Inactive

1=Active

EffectiveDate

The date from which a MapStatus value holds true: A given MapStatus for a mapping (as uniquely identified by a MapID) holds true indefinitely from the EffectiveDate unless and until superseded by a subsequent update release in which the same MapID appears but with a more recent value in the EffectiveDate field.

In the mapping file the date is represented in the ISO standard separator free from YYYYMMDD (e.g. "20061218")

IS_ASSURED

Use of the IS_ASSURED field should be in line with any contractual or use case specific guidance.

The current clinical assurance status of each map assertion between a source CTV3 concept and term ID pair and a target READ2 concept and term ID pair.

0=Not assured

1=Assured

A semi-automatic quality assurance process was agreed with the NHS GP Systems of Choice (GPSoc) programme in October 2010 and subsequently with the Joint GP IT Committee. Under this process, maps are automatically assured if the 5-Byte READ target

For information on NHS Digital terminology products and services, please visit the web site:

<https://digital.nhs.uk/article/290/Terminology-and-Classifications> or contact the Information Standards helpdesk on Tel: 0845 13 00 114, email: information.standards@nhs.net

concept has a legitimate description that is exactly lexically equivalent to at least one of the three string-length variant strings encoded for by the original CTV3 TermID (both strings normalised to lowercase).

In addition to this entirely automatic assurance, a targeted manual inspection process sponsored by GPSoC was concluded in August 2011. This review targeted the maps from the most commonly used source scheme codes whose stated map to READ2 does not satisfying the above 'lexical match' criteria From the October 2011 release, both the IS_ASSURED field and the map more generally take account of that manual inspection.

Thus, where the IS_ASSURED field holds a TRUE value, this now indicates:

EITHER that the term for the given READ2 map target is lexically identical to the original CTV3_TERMID rubric as defined above

OR that, after inspection by at least two clinicians, the clinical consensus was that the meaning conveyed by the original CTV3_TERMID rubric was the same as (or sufficiently similar to) that conveyed by the stated READ2_map target, even though the two strings are not lexically identical.

About the manual review

Detailed information on the mapping principles and an overview of the assurance work undertaken to date is available on request from NHS Digital.

Preparation and Use of the Mapping File

Note: the Data Migration Workbench is available as a Prototype/Demonstrator Implementation (available via TRUD).

Preparation

Each mapping file is provided in a form that supports tracking of historical changes to the maps. Therefore, wherever the mapping to READ V2 for the same pairing of a CTV3_ConceptID and CTV3_TermID has been changed over time, the raw file will contain multiple rows relating to those different mappings issued in the past. Each of the mappings will be uniquely identified by a MapID.

At any given point in time t_2 , only one row exists for each combination of CTV3_ConceptID and CTV3_TermID where the MapStatus value is 1 (active), the EffectiveDate is t_1 , and no other row exists with the same MapID, an EffectiveDate prior to t_2 but after t_1 and with MapStatus value 0 (inactive). All previous mappings for that pairing will have been inactivated by the inclusion of additional table rows for the relevant MapIDs in which the MapStatus value is 0 and the EffectiveDate post-dates the original activation date.

Therefore, on receiving an update, the combination of the updated rows and the pre-existing rows should be processed to inactivate or ignore these historical map rows.

The following query can be applied to determine the active map rows at a given date:

```
SELECT * FROM Ctv3RctMap As Map
WHERE Map.MapStatus>0 AND Map.EffectiveDate=
    (SELECT MAX(LatestMap.EffectiveDate) AS LatestDate
    FROM Ctv3RctMap As LatestMap
    WHERE LatestMap.MapId=Map.MapId
    AND LatestMap.EffectiveDate<='<Date as YYYYMMDD>')
```

Using the mapping file

These active map rows can then be used to map from a combination of a CTV3_ConceptID and CTV3_TermID to the relevant pair of a V2_ConceptID and V2_TermID.

The following query illustrates how the current map for one pair of a CTV3_ConceptID and CTV3_TermID can be retrieved from the ctv3rctmap table as distributed.

```
SELECT V2_ConceptID, V2_TermID, MAPTYP, ISASSURED
FROM Ctv3RctMap AS Map
WHERE Where Map.CTV3_ConceptID='<CTV3 Code>'
AND Map.CTV3_TermID='<CTV3 TermID>'
AND Map.MapStatus>0 AND Map.EffectiveDate=
    (SELECT MAX(LatestMap.EffectiveDate) AS LatestDate
    FROM Ctv3RctMap AS LatestMap
    WHERE LatestMap.MapId=Map.MapId
    AND LatestMap.EffectiveDate<='<Date as YYYYMMDD>')
```

However, for practical purposes it may be more efficient to use a pre-generated view based on the query above and a simplified follow-on query for individual mappings.

Note: The database must treat CTV3_ConceptID and CTV3_TermID as Case Sensitive. The code “65a0.” has a different meaning from “65A0.”.

The preferred and synonymous terms associated with a given CTV3 concept may change over successive releases of CTV3. However, the mapping table currently provides an active mapping only for those valid pairings of a CTV3 concept and a CTV3_TermID published in or after the October 2008 release. Clinical data captured using earlier releases of CTV3 may therefore legitimately have associated a given CTV3_Concept ID with a CTV3_TermID no longer valid after October 2008.

In this situation, the ctv3rctmap table will contain no active map row for that pairing of a CTV3_ConceptID and CTV3_TermID. However, in these circumstances, the CTV3 Description Change File (DCF) should already have been used to determine a currently legitimate replacement pairing of a current CTV3_ConceptID and CTV3_TermID, and the mapping table will contain rows for this pair. Mapping should therefore proceed after using the CTV3 Description Change File (DCF) to effect a migration to a current term as described *or if this is not possible* then according to the section below on how to use the map with a CTV3_ConceptID only.

Using the map with CTV3_ConceptID+Term but no TermCode

Use the terms.v3 and dcf.v3 tables in the CTV3 release data to identify the CTV3_TermID for the Term string when used with the CTV3_ConceptID, and then proceed as described in the preceding section.

Using the map with CTV3_ConceptID only

Although it is generally the case that the set of terms associated with a given CTV3_ConceptID are truly synonyms of each other, this is not the case in READ2. Therefore, the mapping for some CTV3_ConceptIDs is different for each of its valid CTV3_TermIDs.

Despite this limitation, we currently recommend that, where no originally stored CTV3_TermID or Term string is available, then the map assigned to the preferred term for the CTV3_ConceptID should be used:

```
SELECT V2_ConceptID, V2_TermID, MAPTYP, ISASSURED
FROM Ctv3RctMap AS Map
WHERE Map.CTV3_ConceptID='<ReadCode>' AND Map.V3TermType='P'
AND Map.MapStatus>0 AND Map.EffectiveDate=
    (SELECT MAX(LatestMap.EffectiveDate) AS LatestDate
     FROM Ctv3RctMap AS LatestMap
     WHERE LatestMap.MapId=Map.MapId
     AND LatestMap.EffectiveDate<='<Date as YYYYMMDD>')
```

1.