

Value Set Checks (SNOMED CT): Guide to the User Interface and the Outcome Report (version 1.1)

This document was originally prepared to work alongside the NHS England Value Set Management Tool Set Checks (Proof of Concept). The screenshots therefore represent this previous identity. No other connection with NHS England is intended.

The application is currently implemented freely to the community as Value Set Checks (SNOMED CT) and any queries should be directed to setchecks@jeremycraven.org.uk.

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1. Introduction

! Messages with an “!” in a thick black box (like this one) are particularly critical.

! The tool and its supporting material are under development and are liable to change. All outputs should be reviewed and approved by relevantly qualified clinical professionals before changes are made to any value set being used to record or assess care data.

1.1 Scope of document

This guide provides a basic overview of the User Interface for the Value Set Checks application.

Where necessary, brief explanations of some of the criteria or algorithms applied by the checks are provided, but for a more systematic coverage please [consult the accompanying documents “Guide to Set Checks” and “Catalogue of Outcome Messages”](#)

The tool is under continual development, therefore small deviations from screenshots shown may be encountered in the live application.

! This document was originally prepared to work alongside the NHS England Value Set Management Tool Set Checks (Proof of Concept). The screenshots therefore represent this previous identity. No other connection with NHS England is intended.

This document has been revised to correspond to the release made on 25/4/24 following the Preliminary Evaluation phase.

1.2 Basic terminology

A basic understanding of value sets containing concepts drawn from the SNOMED CT terminology is assumed.

In this document, in the application, and in the outcome report we refer to SNOMED CT Ids as “Identifiers”.

We refer to the human readable descriptions of concepts as “Terms”.

The use of Description Ids (as opposed to Concept Ids) causes considerable confusion. Although the checks handle Description Ids, if these are detected in the value set you will also receive messages advising that in most circumstances the use of Concept Ids is strongly preferred, and you will be given information about the corresponding Concept Id. If you are unsure about whether your value set contains Descriptions Ids (or even are unsure what the difference is between Description Ids and Concepts Ids) we advise you to continue to try out the application and study the messages given, and if in doubt please contact us via the “Feedback” button. This is a topic that stirs some controversy and we would welcome feedback.

In this application we refer in places to identifiers for set checks such as CHK04 or CHK20. These are internal codes used during development, and where possible we qualify these with a very short name for the check. A reference list of these codes and short names is provided below.

Code	Set Check Short Name
CHK01	ID type checks
CHK02	IDs found in selected release
CHK03	Appropriate/consistent Terms
CHK04	Inactive Concepts
CHK05	Acceptable hierarchies
CHK06	Default Exclusion RefSet
CHK08	Suggestions for inactive predecessors
CHK10	Suggestions for missing content
CHK12	Mixed Semantic Tags
CHK14	Complexity analysis
CHK20	IDs have correct format
CHK22	Duplicate entries
CHK51	Release version set differences

Table 1. Set check codes.

1.3 Browser related issues and accessing the Outcome Report

The application is a web app that generates an .xlsx format Outcome Report.

1.3.1 Browser specific issues

We are not aware of any browser specific limitations. The application has been trialled most extensively in Google Chrome, Mozilla Firefox and to a lesser extent Microsoft Edge.

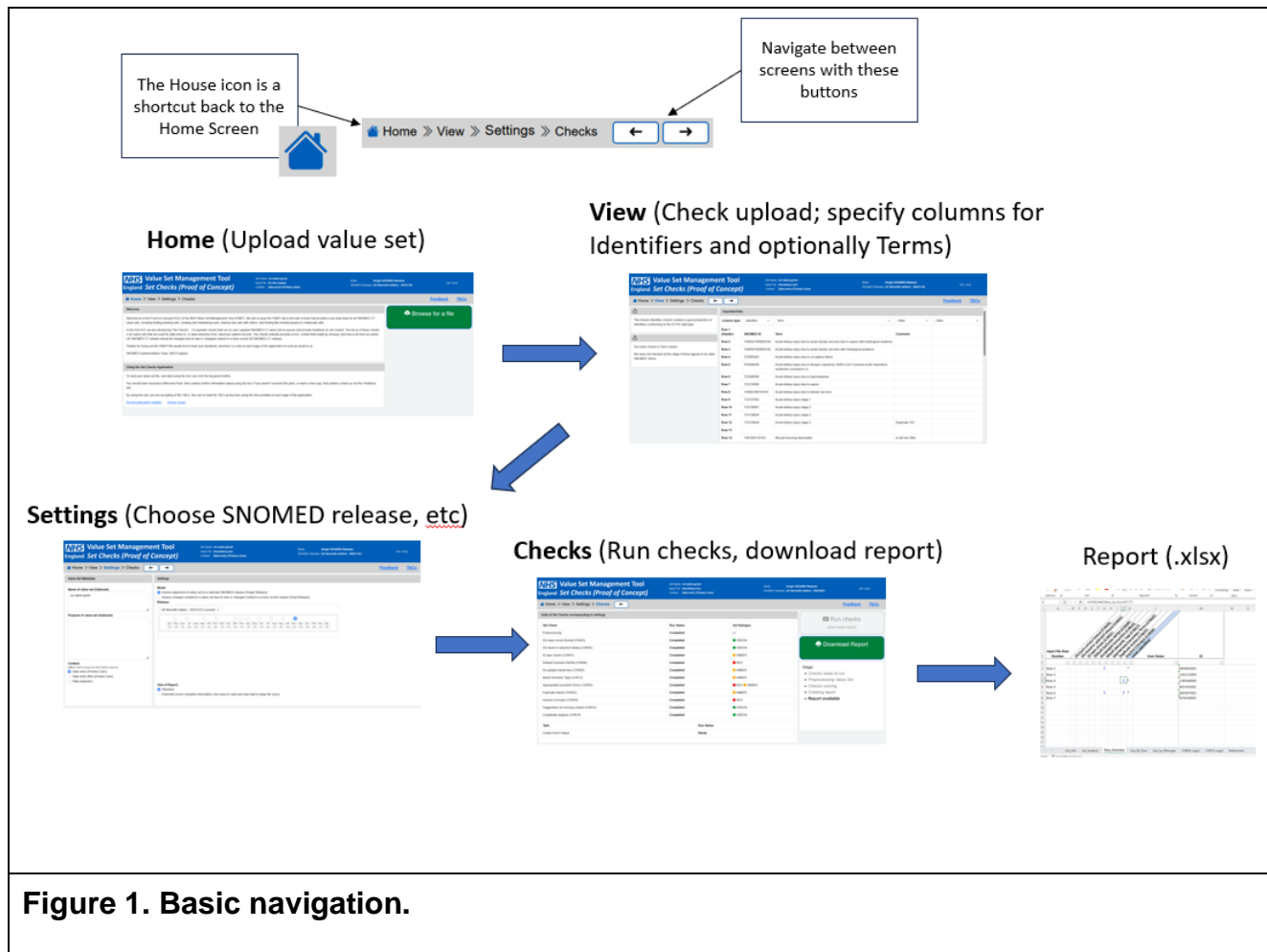
Whilst the .xlsx file can be opened in any compatible program, the hyperlink functionality has only been designed to function correctly in Microsoft Excel.

! The application is designed to function on a reasonably standard laptop or monitor, however the use of browser zoom is strongly advised for an optimal user experience. On small screens it may be necessary to adjust the browser zoom for optimal layout and readability. For information on zooming the browser, and why it may be necessary, see Appendix I.

! In order for the hyperlinked text in the .xlsx file to be visible it is necessary to “enable editing” in Excel - otherwise the corresponding cells will be blank. With the default settings in Excel, this is prompted by a yellow banner when files are downloaded from the internet. The Excel file contains no macros.

2. The User Interface (Web Application)

2.1 Basic navigation



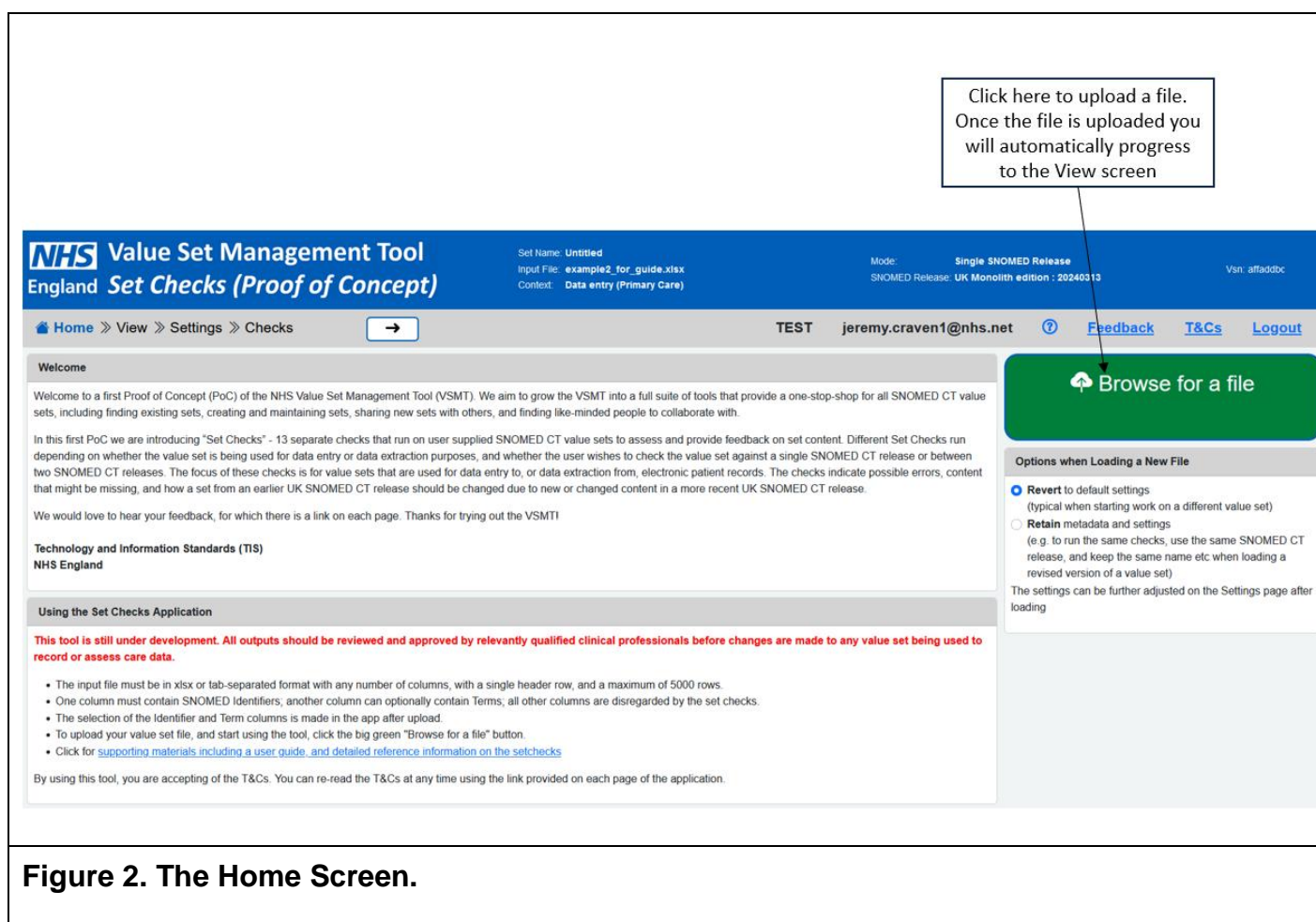
The application is structured as a set of four screens that can be moved through in a linear “wizard” fashion to make sure that all steps are completed.

It is also possible to move forwards and backwards between screens using the navigation arrows. For instance, after running checks on a value set it may be desired to go back and alter some settings before running the checks for a second time.

There are a few situations where progression between screens is prevented because incomplete or incompatible information has been provided. Clear warning messages are provided in such situations.

2.2 Home Screen

The main function of the **Home Screen** of the application is to allow upload of a value set from a file.



The basic input file structure is:

- a required column of Identifiers (by default this is the first column but this can be changed by the user)
- an optional column of Terms (by default this is the second column but can be changed by the user)
- any number of other optional columns. These columns are ignored by the set checks, but retained in some features of the Outcome Report for reference.

Two input formats are supported:

- 1) Tab separated files. This format is assumed if the file extension is ".txt" or ".tsv"

- 2) Office Open XML spreadsheet format (.xlsx file extension). Whilst operating from .xlsx files is very convenient via programs such as Microsoft Excel, great care must be taken because of the problematic way that such spreadsheet programs handle numbers comprising more than 15 digits. The application attempts to detect corruption due to this issue and to suggest remedies, but it is preferable that you are vigilant to prevent the issue causing you problems in the first place.

! Known issue: If an attempt is made to upload a file that is on OneDrive and is open in Excel, then Firefox gives the incomprehensible error message “<filename> not implemented”. The resolution is to close the file in Excel. Chrome and Edge give more obvious messages, with the same resolution. This appears to be an issue with any web app uploading files open in OneDrive.

The detailed requirements for the input file are

- a) The file can be either a .xlsx file (in which case only the first sheet is read) or a tab separated file (.tsv or .txt). Comma separated files (.csv) are not supported.
- b) There must be one, and only one, header row
- c) The file can contain multiple columns
- d) One column must contain the SNOMED CT Identifiers that comprise the value set (N.B. Only extensional definitions, i.e. a explicit lists of codes, are handled by this application).
- e) The Identifiers can be either Concept or Description Identifiers. In general the use of Concept Identifiers is very strongly recommended. If you are using Description Identifiers (or are not sure what this means), the Outcome Report will contain information about the corresponding Concept Identifier.
- f) The default in the application is that the first column contains the Identifiers, but this can be changed in the application after file upload.
- g) You may also provide a Term for each concept, but providing Terms is not mandatory. By default, if the file contains more than one column then the Term column defaults to being the second. Again, this can be changed in the application after file upload.
- h) It is perfectly acceptable, indeed encouraged, to include other columns in the file. These will be ignored in the checking algorithms, but will still be reported in the Outcome Report. This is to facilitate workflows where important extra information is included in these columns (such as dates, initials or comments) that may be helpful for interpreting issues reported by the checking algorithms.

- i) Entirely blank rows are allowed, and ignored for analysis but retained in the Outcome Report.
- j) Blank entries in the Identifier column will generate a check error (except in entirely blank rows). Therefore it is not possible to put in any divider line in files beyond a completely blank row.

	A	B	C	D
1	ID	Term	Initials	Comment
2	200802008	Contact dermatitis due to acids	AP	
3	200804009	Contact dermatitis due to alkali	AP	
4	93418006	Contact dermatitis due to chromium	AP	
5	200785003	Contact dermatitis due to cyclohexane	AP	
6	42733007	Contact dermatitis due to dichromate	AP	
7	200786002	Contact dermatitis due to ester	AP	Please check with JR
8	200787006	Contact dermatitis due to glycol	AP	
9	200788001	Contact dermatitis due to hydrocarbon	JC	
10	83150005	Contact dermatitis due to iodine	JC	
11	81581001	Contact dermatitis due to mercurial	JC	
12	32371003	Contact dermatitis due to neomycin	JC	
13	93419003	Contact dermatitis due to nickel	JC	
14	83508001	Contact dermatitis due to nylon	JC	
15	111190006	Contact dermatitis due to phenol	JC	
16	31948006	Contact dermatitis due to plastic	JC	
17	46240005	Contact dermatitis due to rubber	JC	
18	23012005	Contact dermatitis due to solvents	JC	

Figure 3. An example input file. In this example the information from columns C and D will be retained in the Outcome Report but such information is ignored by all checks.

2.3 View Screen

When a value set has been successfully uploaded, the application automatically moves to the **View Screen**. It is also possible to navigate back to this screen later to double check the upload or to alter column choices.

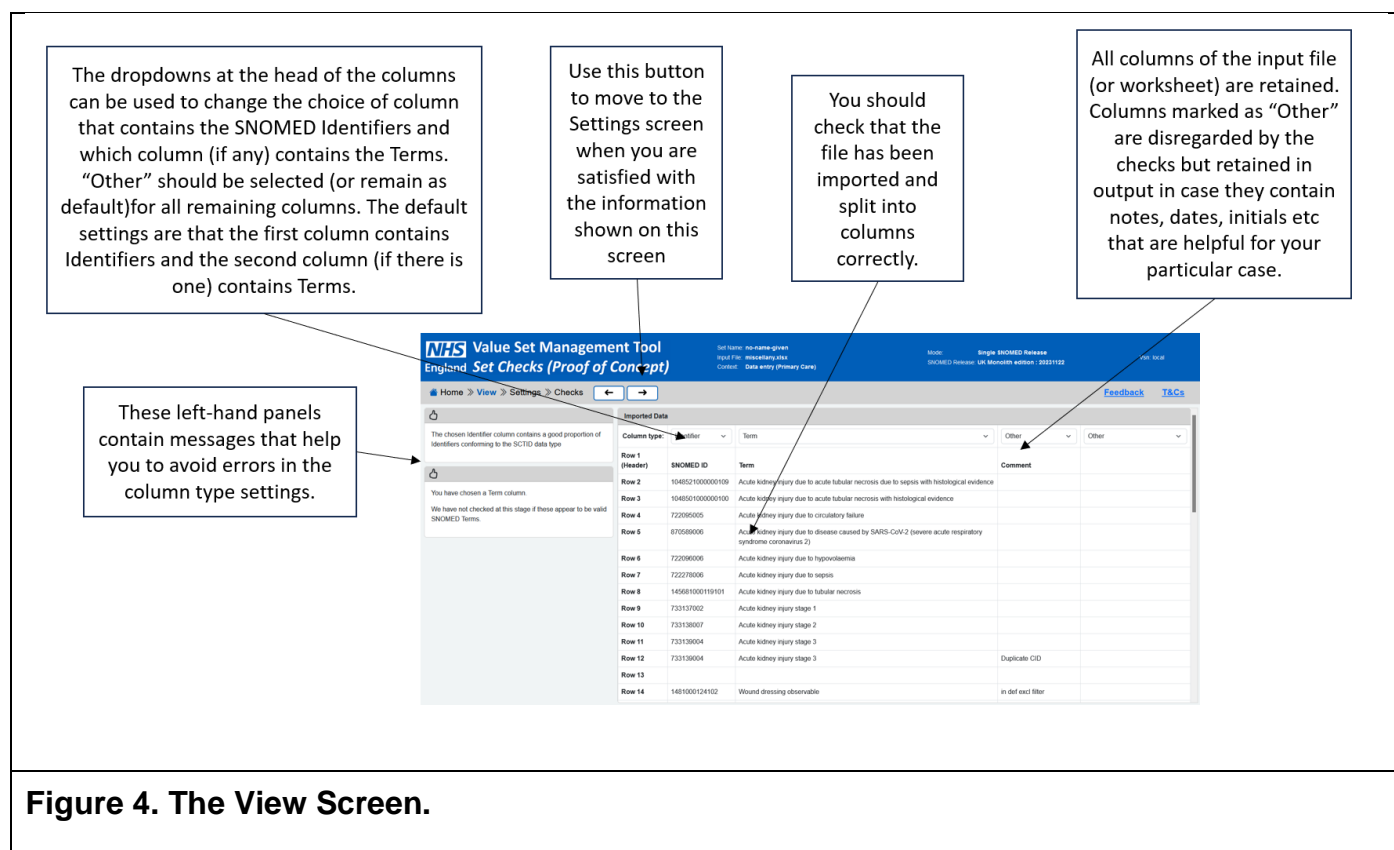


Figure 4. The View Screen.

This screen has three main purposes

- i) **To allow you to check that the file has been uploaded correctly.**
For instance, if the file has been uploaded from a tab separated file, then make sure that the division into columns is as expected. If not, you will need to reinspect and correct your input file.
- ii) **To allow you to specify which column of your file contains the SNOMED CT Identifiers.**

You must supply one, and only one, such column. The default setting is that the first column contains the Identifiers, but this can be changed using the dropdowns at the top of the columns.

The application assesses the column chosen as Identifiers and issues a warning message if many of the entries do not conform to the rules for the SCTID data type. The most common trigger for this warning is where your file deviates from the default of Identifiers in the first column. In this case, you will need to select the correct column.

The assessment at this stage is merely whether the Identifiers look like they *could*

be entries in the SNOMED CT terminology: detailed checking of whether they *actually are* entries in a particular release is reported later in the formal checking process.

iii) **To allow you to specify which column of your file contain the SNOMED CT Terms.**

As mentioned previously, providing such a column is optional. The default setting is that if you provide at least two columns then the second column is assumed to contain Terms. Again, if necessary, the column can be specified using the dropdown.

The application currently does not assess or warn at this stage whether the column specified for Terms contains a good proportion of entries that appear likely to be SNOMED CT Terms (since that cannot be readily defined). Therefore particular care is needed in setting this column in non-default cases.

2.4 Settings Screen

Once you are satisfied that the value set has uploaded correctly and the various columns are selected correctly, you can move to the **Settings Screen** using the forward navigation arrow.

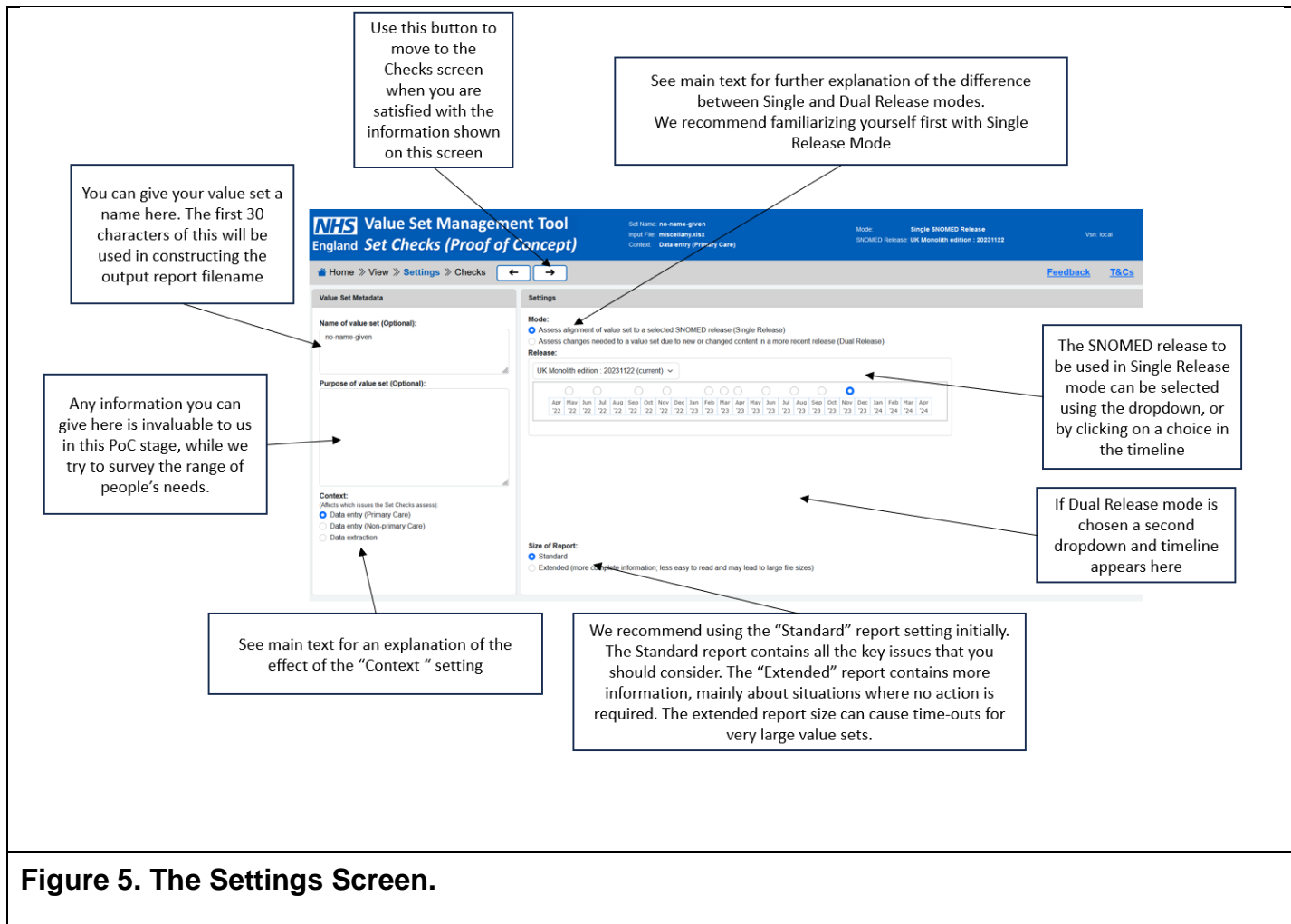


Figure 5. The Settings Screen.

In this screen you can specify a variety of items as annotated in Figure 5.

Two items require a little more explanation:

2.4.1 Context

We use "Context" here to allow a distinction to be made between value sets that are

- (i) Intended for providing selection lists for entering data into patient records
- (ii) Intended for specifying data extractions. Such data extractions might be, for example, to find patients that should be deemed to be in (or to be considered for inclusion in) a particular cohort. These extractions might be undertaken for clinical, research, or administrative/payment reasons.

Although some criteria for what constitutes an “issue” in a value set are common between these two contexts, there are some distinctions. For example, inactive concepts should never be in a value set intended to guide data entry. In contrast, inactive concepts may often need to be in value sets for data extraction since such concepts are often found in historic patient records.

The details of the differences that the Context setting makes to the way in which the checks are selected or run is beyond the scope of this guide. Further information can be found in the Guide to Set Checks.

We have implemented a small extra feature where a distinction is made between Data Entry in Primary Care and in non-Primary Care. The distinction here is a small difference in which top level hierarchies are deemed acceptable in these two different contexts. Further information can be found in the Guide to Set Checks.

This is a particular area where we look forward to feedback and suggestions.

2.4.2 Mode

The application can analyse value sets in two distinct ways, which we term “Modes”.

(i) Single Release Mode

In this mode a single SNOMED Release is nominated and checks are primarily made with reference to this single release. For instance, a check is made that all concepts referred to in the value set are concepts that are found in this particular release. The analysis also draws on items such as the Default Exclusion Filter Reference Set contained in this release.

This mode of checking can loosely be thought of asserting the belief that a value set corresponds to a particular release, perhaps having been specifically authored from content in that release, or having been maintained up to and including that release. The checks in part report on discrepancies found on the basis of this assertion.

A small extra feature is that if a concept is not found in a selected release, and if that selected release is not the current release, then a check is made to see if the concept can be found in the current release. If it can be found then it suggests that the value set may have been authored from content in a later release.

(ii) Dual Release Mode

In this mode two releases must be nominated.

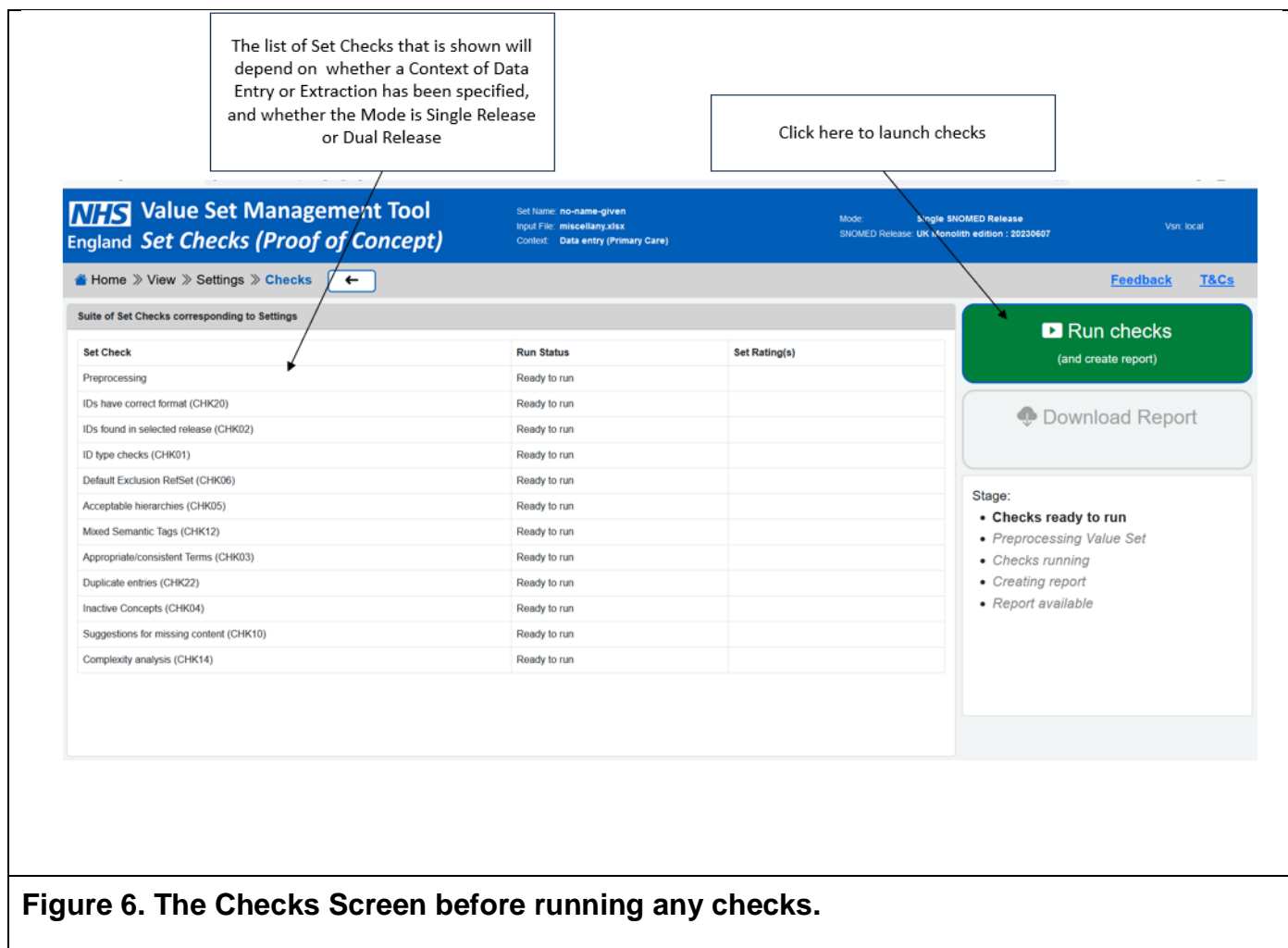
The assertion is that the value set corresponds to the earlier release selected, and it is desired to check what changes might be needed to the value set as a result of changes in content as seen in the later selected release.

The checks are primarily related to detecting:

- (a) Concepts that were active in the earlier release but have since been inactivated
- (b) Concepts that have been added to the release which, on the basis of analysis of the earlier release, should be considered for inclusion. The analysis is made on the basis of the refactoring algorithm that is mentioned in the Outcome Report section.

2.5 Checks Screen

From the Settings Screen you can navigate to the Checks Screen (Figure 6) using the forwards navigation arrow.



If you are happy that the settings made are appropriate you can click the “Run Checks” button.

The progress of each check is shown (see Figure 7). A brief indication of the overall outcome of each check is also shown.

Finally, when the checks are completed the Outcome Report can be downloaded (see Figure 8).

The report is in .xlsx format. Depending on your browser settings you may be prompted for a download folder; a default download folder may be assumed; and/or the file may be directly opened in an application such as Excel.

Once the checks are completed you may discover that you want to change something, such as the SNOMED CT release selected. You can navigate back to the Settings or View

screens, make changes and then navigate back to the Checks screen and the Run Checks option will be available again.

The Run Checks option becomes available once a setting that could affect the outcomes is changed: once a single such setting change is made the previous results are discarded, even if the setting is then reverted to its original value.

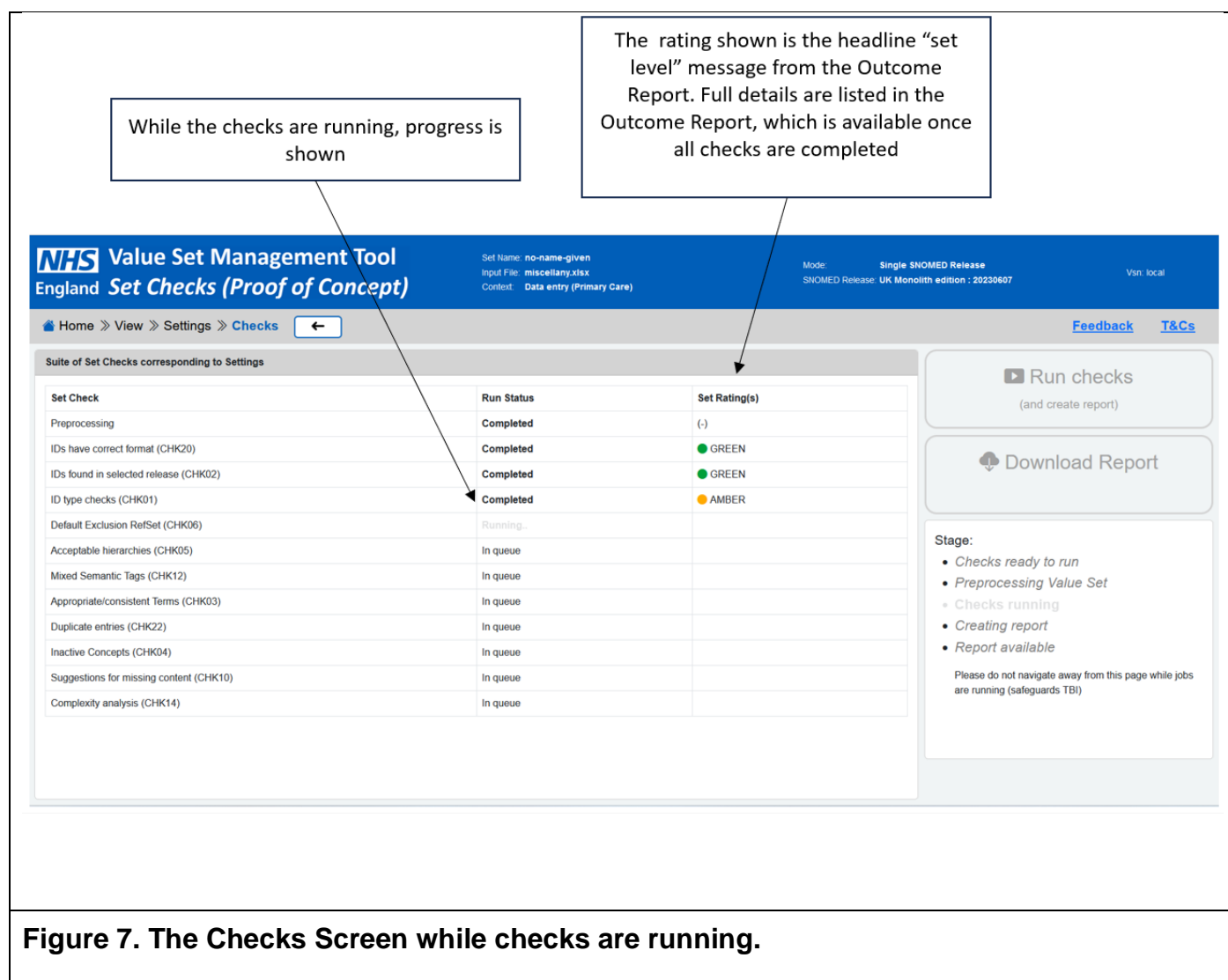
! There is currently no way to terminate a set of checks once they are running.

**Please do not navigate away from the Checks page while checks are running.
Please wait until the checks and generation of the Outcome Report are complete.**


This is because the queueing system in this application may get overwhelmed if a user initiates new checks while a set are already running and/or your session could be left in an inconsistent state.

This would probably only be problematic in the case of very large value sets, but we ask you to observe this restriction to help us to maintain performance for all users.

The queueing system has a set of timeouts (typically 3 minutes per item) and if you inadvertently launch jobs that seem to be taking a long time rest assured that they will terminate themselves eventually once the timeout is reached.



The Outcome Report is available once all checks have completed



Value Set Management Tool

England *Set Checks (Proof of Concept)*

Set Name: no-name-given
 Input File: miscellany.xlsx
 Context: Data entry (Primary Care)

Mode: Single SNOMED Release
 SNOMED Release: UK Monolith edition : 20230607
 Vsn: local


[Home](#) » [View](#) » [Settings](#) » [Checks](#)


[Feedback](#) [T&Cs](#)

Suite of Set Checks corresponding to Settings

Set Check	Run Status	Set Rating(s)
Preprocessing	Completed	(-)
IDs have correct format (CHK20)	Completed	● GREEN
IDs found in selected release (CHK02)	Completed	● GREEN
ID type checks (CHK01)	Completed	● AMBER
Default Exclusion RefSet (CHK06)	Completed	● RED
Acceptable hierarchies (CHK05)	Completed	● AMBER
Mixed Semantic Tags (CHK12)	Completed	● AMBER
Appropriate/consistent Terms (CHK03)	Completed	● RED ● AMBER
Duplicate entries (CHK22)	Completed	● AMBER
Inactive Concepts (CHK04)	Completed	● RED
Suggestions for missing content (CHK10)	Completed	● GREEN
Complexity analysis (CHK14)	Completed	● GREEN

Task	Run Status
Create Excel Output	Ready


 Run checks
 (and create report)

 Download Report

Stage:

- Checks ready to run
- Preprocessing Value Set
- Checks running
- Creating report
- Report available

Figure 8. The Checks Screen after checks have completed.



Value Set Management Tool

England *Set Checks (Proof of Concept)*

Set Name: no-name-given

Input File: starter_example.xlsx

Context: Data entry (Primary Care)

Mode: Single SNOMED Release

SNOMED Release: UK Monolith edition : 20231122

Vsn: local

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Suite of Set Checks corresponding to Settings

Set Check	Run Status	Set Rating(s)
Preprocessing	Completed	(-)
IDs have correct format (CHK020)	Completed	RED
IDs found in selected release (CHK02)	Completed	GREEN
ID type checks (CHK01)	Will not be run	
Default Exclusion RefSet (CHK06)	Will not be run	
Acceptable hierarchies (CHK05)	Will not be run	
Mixed Semantic Tags (CHK12)	Will not be run	
Appropriate/consistent Terms (CHK03)	Will not be run	
Duplicate entries (CHK22)	Will not be run	
Inactive Concepts (CHK04)	Will not be run	
Suggestions for missing content (CHK10)	Will not be run	
Complexity analysis (CHK14)	Will not be run	

Task	Run Status
Create Excel Output	Ready

▶ Run checks

(and create report)

Download Report

Stage:

- Checks ready to run
- Preprocessing Value Set
- Checks running
- Creating report
- Report available

[Alert] It has been detected that some of the Identifiers in your value set do not meet certain basic criteria. A set of basic checks will be run, which will provide information on the problematic entries. No other checks will be run until these entries are corrected or removed from your file, and the file is reloaded.

Figure 9. The Checks Screen after checks have completed with failure of the

“Gatekeeper” checks. If ANY concepts fail CHK20 (i.e. they do not conform to the SCTID data type for concepts or descriptions), or CHK02 (i.e. they are not found in the specified release) then we deem the value set to have failed the basic requirements for a value set. (In the case of data extraction data sets the presence of ANY description Identifiers is deemed a failure of the gatekeeper). If a set fails the “gatekeeper” checks then no further checks are run.

This strict “gatekeeper” functionality is required since several of the checks require judgments to be made on the basis of the entire value set and that is compromised by the presence of concepts that have perhaps been missed out due to a simple clerical error.

3. Outcome Report

3.1 Overall structure

The report is a multi-tab (multi-sheet) workbook in .xlsx format. We have used this format to allow us to trial ideas about how the results might be best represented in a web application. There are internal hyperlinks between a number of tabs to facilitate navigation between the different data representations.

The report retains a close correspondence of row numbering to the input file, with the row number in the input file reported in the results. Row numbers take into the account the mandatory presence of a header row, counting it as Row 1. Therefore, the first data row is referred to as Row 2. Blank rows are considered to have a number, so that the correspondence between the input file and row numbers is retained.

We refer to things detected by the checks that require attention (or at least consideration) in the value set as “Issues”.

Issues can be

a. Set-level

e.g. the fact that the value set contains concepts with a mixture of Semantic Tags.

b. Row-level

e.g. the fact that the concept on a particular row of the value set is inactive.

At **Set-level** we distinguish issues that are

a. Red

Issues that we consider to be a definite error. For instance, the presence of inactive concepts in a Data Entry set.

b. Amber

Issues that are perhaps inadvisable, or which may be inadvisable/wrong if considered in detail.

The basic tab structure of the file is

- i) **Set_info.** General information about the input file, SNOMED release, date etc

- ii) **Set_analysis.** Messages and count statistics about issues in the value set as a whole
- iii) **Row_overview.** Indicators, for every row in the input file, of whether issues were found for each row
- iv) **Grp_by_Row.** Row-level messages for those rows where issues were found. The messages for each row are grouped together, and the groups come in row order
- v) **Grp_by_message.** Row-level messages grouped together by message so that it is possible to see all the rows that trigger a certain message
- vi) **Supplementary tabs.** Certain checks generate extra information that cannot conveniently be shown in the Grp_by_Row or Grp_by_Message tabs
 - a. Some of these extra tabs contain extra row-level information. (CHK04 and CHK08)
 - b. Some of these tabs contains set level information, *i.e.* information that arises from the analysis of the value set as a whole and that do not correspond to particular rows in the input file. (CHK10 and CHK51).

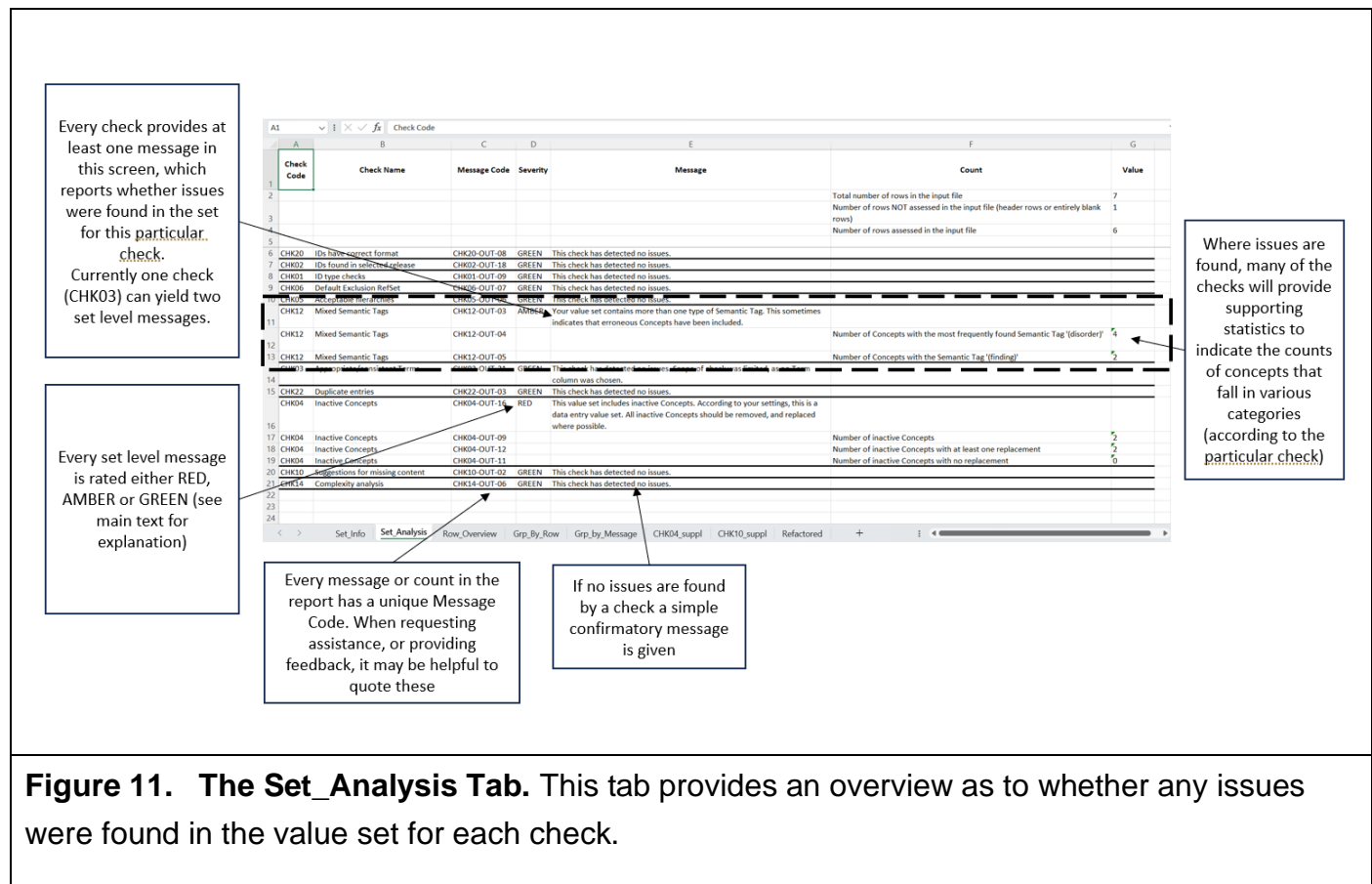
! There are external hyperlinks from Concept IDs to the [NHS SNOMED Term Browser](#) on many of the tabs. Note that due to the capabilities of the Term Browser **these are always to the current version of the UK release**, regardless of the release selected in the application.

3.2 Set Info Tab

	A	B	C
1	Value Set Name	CHK12_test_set	
2	Value Set Purpose	Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.	
3	Date Checks Run	17_Apr_2024__12_34_41	
4	Input File Name	CHK12_no_recognisable_tag_examples.xlsx	
5	Excel Output File Name	CHK12_test_set_vsmt_setchecks_output_17_Apr_2024__12_35_08.xlsx	
6	Context	Data entry value set for Primary Care purposes	
7	Mode	Set checks (Single SNOMED CT Version)	
8	SNOMED CT Version	UK Monolith edition : 20240313	
9	User email	jeremy.craven1@nhs.net	
10	Run identifier	7e481382-fb3a-4434-92ce-31831c0d4761:17_Apr_2024__12_34_41	
11	Software Version	762b243f	
12	Environment	TEST	
13			

Figure 10. The Set_Info Tab. This tab contains general information about the input file, SNOMED release, date etc.

3.3 Set Analysis Tab



3.4 Row Overview Tab

There is a column in this grid for each check that analyses for issues at a row-level. Checks that report on only set-level issues (such as suggested missing content) are not shown here.

Input File Row Number	IDs have correct format (CHK020)	IDs found in selected release (CHK021)	ID type checks (CHK022)	Default Exclusion RefSet (CHK023)	Acceptable hierarchies (CHK024)	Mixed Semantics Tag (CHK025)	Appropriate / Consistent Terms (CHK026)	Duplicate entries (CHK027)	Inactive Concepts (CHK028)	Issues identified	User Notes	ID	Term	Date added	Initials
Row 2												23012005	Contact dermatitis due to solv	20/03/2022	AP
Row 3												252531004	Contact sensitivity test	20/03/2022	AP
Row 4												402258000	Danthron erythema	16/02/2023	JC
Row 5												7838811000001101	Dermatix gel	16/02/2023	JC
Row 6												238568000	Grease contact dermatitis	20/03/2022	AP

The "i" symbols indicate that there is an issue for the concept on this row in a particular check. The symbols are internal hyperlinks to the line of the Grp_by_Row tab that gives more detail about the issue.

The right hand columns contain ALL the data (including column headers) from the Input file. This includes columns marked as "Other".

Figure 12. The Row_Overview Tab. This tab contains indicators for whether issues were found for each row (for every row in the input file).

3.5 Grp_by_Row Tab

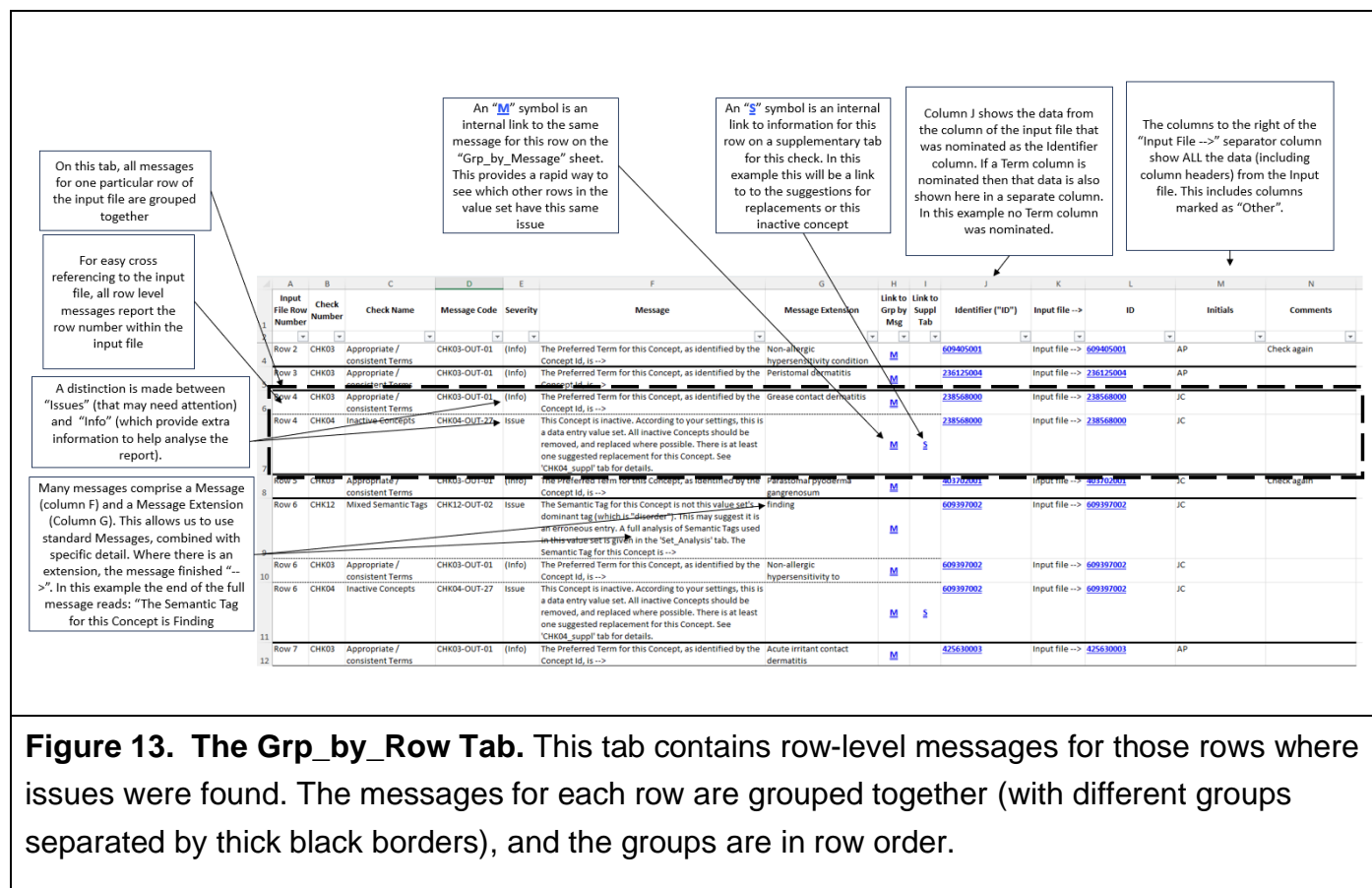
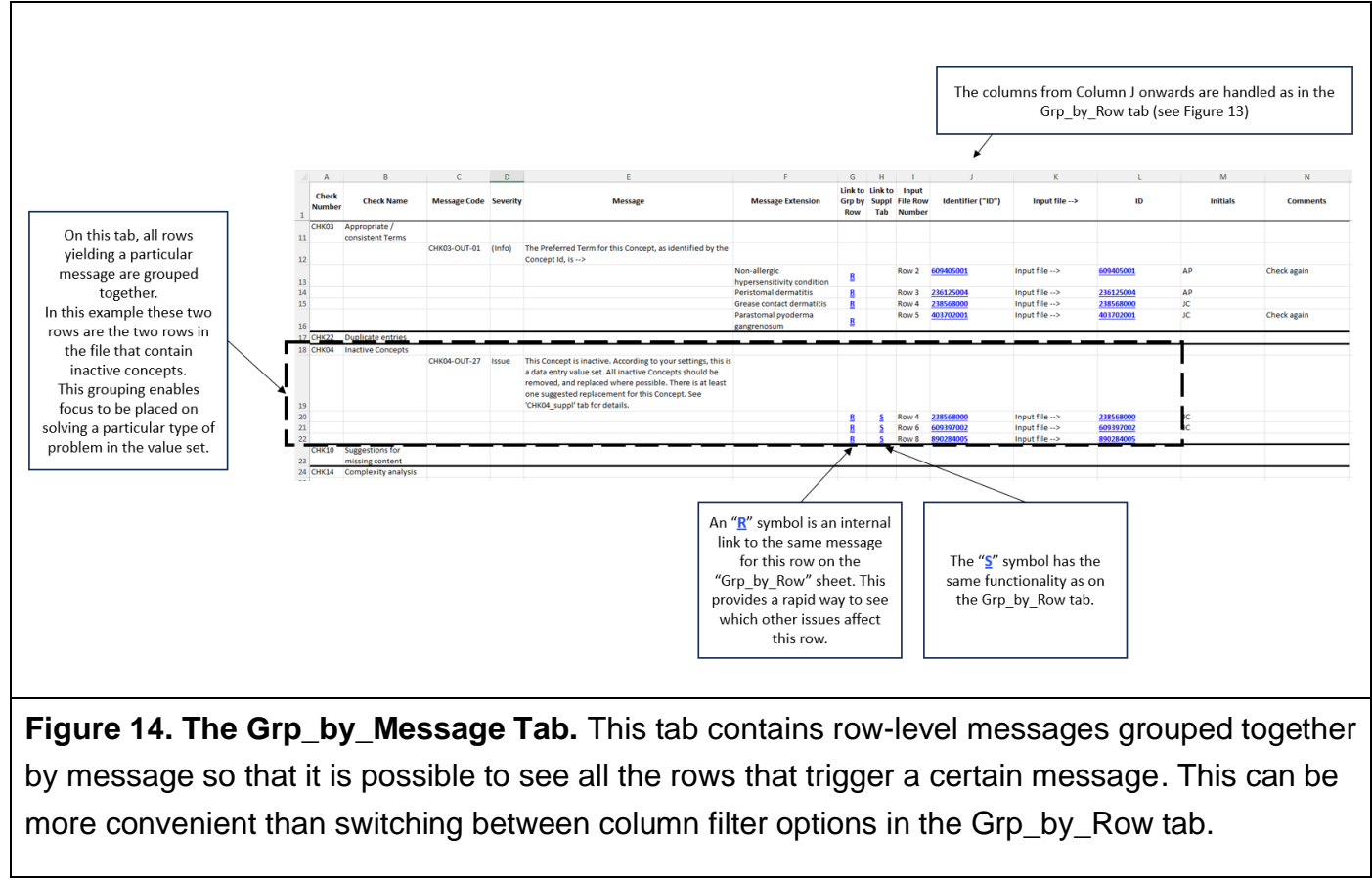


Figure 13. The Grp_by_Row Tab. This tab contains row-level messages for those rows where issues were found. The messages for each row are grouped together (with different groups separated by thick black borders), and the groups are in row order.

3.6 Grp_by_Message Tab



3.7 Supplementary Tabs

Information about the inactive concept that is provided on a row of the input file

Information about a possible active replacement for this concept

The Effective Time for the concept that has been inactivated. This is most likely the date on which the concept was inactivated

These are three possible active replacements for the concept on one row of the input file

A	B	C	D	E	F	G	H	I	J	K
Input row number	Provided Identifier (Inactive)	Identifier Type	Corresponding Concept Id (if applicable)	Preferred Term	Equivalence of Suggested Concept to Provided Concept	Suggested Concept Id (Active)	Preferred Term	Already in set	Effective Time (Inactive Concept)	
1										
Row 17	157169007	Concept Id		Fracture	--> No ambiguity	125605004	Fracture of bone	No	20020131	
Row 34	127946007	Concept Id		Entire subregion of abdomen	--> Loss of precision	123960005	Entire subregion of trunk	No	20200731	
Row 34	127946007	Concept Id		Entire subregion of abdomen	--> Loss of precision	818983003	Abdomen	No	20200731	
Row 35	4598311000001107	Concept Id		Gabapentin 600mg tablets and Gabapentin 300mg capsules	--> Definite ambiguity	323014008	Gabapentin 300 mg oral capsule	No	20060501	
Row 35	4598311000001107	Concept Id		Gabapentin 600mg tablets and Gabapentin 300mg capsules	--> Definite ambiguity	323021008	Gabapentin 600 mg oral tablet	No	20060501	
Row 35	4598311000001107	Concept Id		Gabapentin 600mg tablets and Gabapentin 300mg capsules	--> Definite ambiguity	36061711000001108	Gabapentin 600mg tablets and Gabapentin 300mg capsules	No	20060501	
Row 36	902237007	Concept Id		[V] Alcohol use	--> No ambiguity	219006	Current drinker	Yes	20020131	

This indicates the degree of certainty in, or the quality of, the substitution. (See main text)

This indicates whether the substitute concept is already in the value set

Figure 15. The CHK04_suppl Tab. This tab accompanies CHK04. For each inactive concept it provides suggested active replacements. The column titled “Equivalence of Suggested Concept to Provided Concept” uses information from the [History Substitution Table](#) (HST). The HST ISAMBIGUOUS field is mapped as follows: 0→”No ambiguity”; 1→”Possible ambiguity”; 2→”Loss of precision”; 3→”Definite ambiguity”.

Figure 15. The CHK04_suppl Tab. This tab accompanies CHK04. For each inactive concept it provides suggested active replacements. The column titled “Equivalence of Suggested Concept to Provided Concept” uses information from the [History Substitution Table](#) (HST). The HST ISAMBIGUOUS field is mapped as follows: 0→”No ambiguity”; 1→”Possible ambiguity”; 2→”Loss of precision”; 3→”Definite ambiguity”.

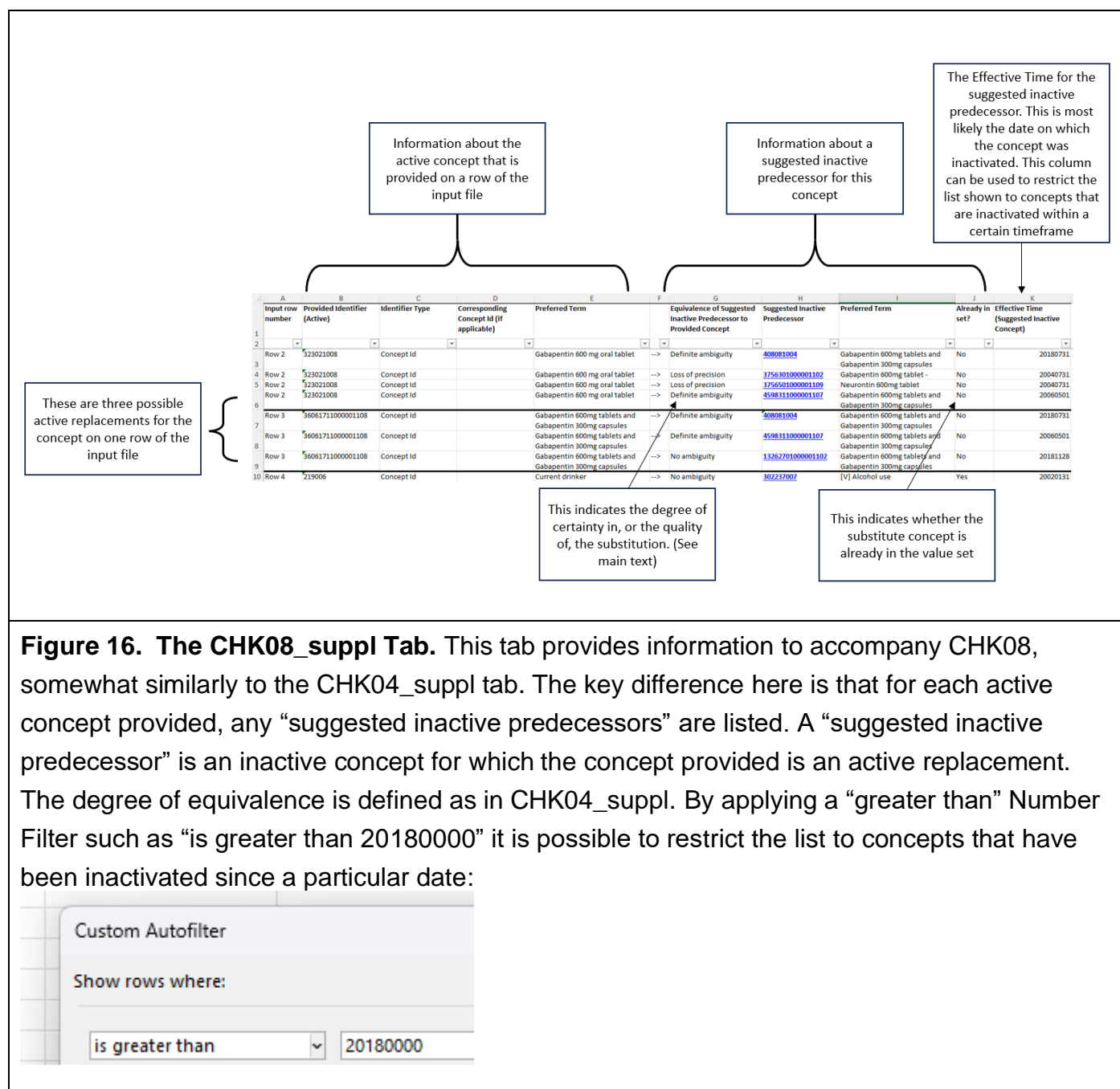
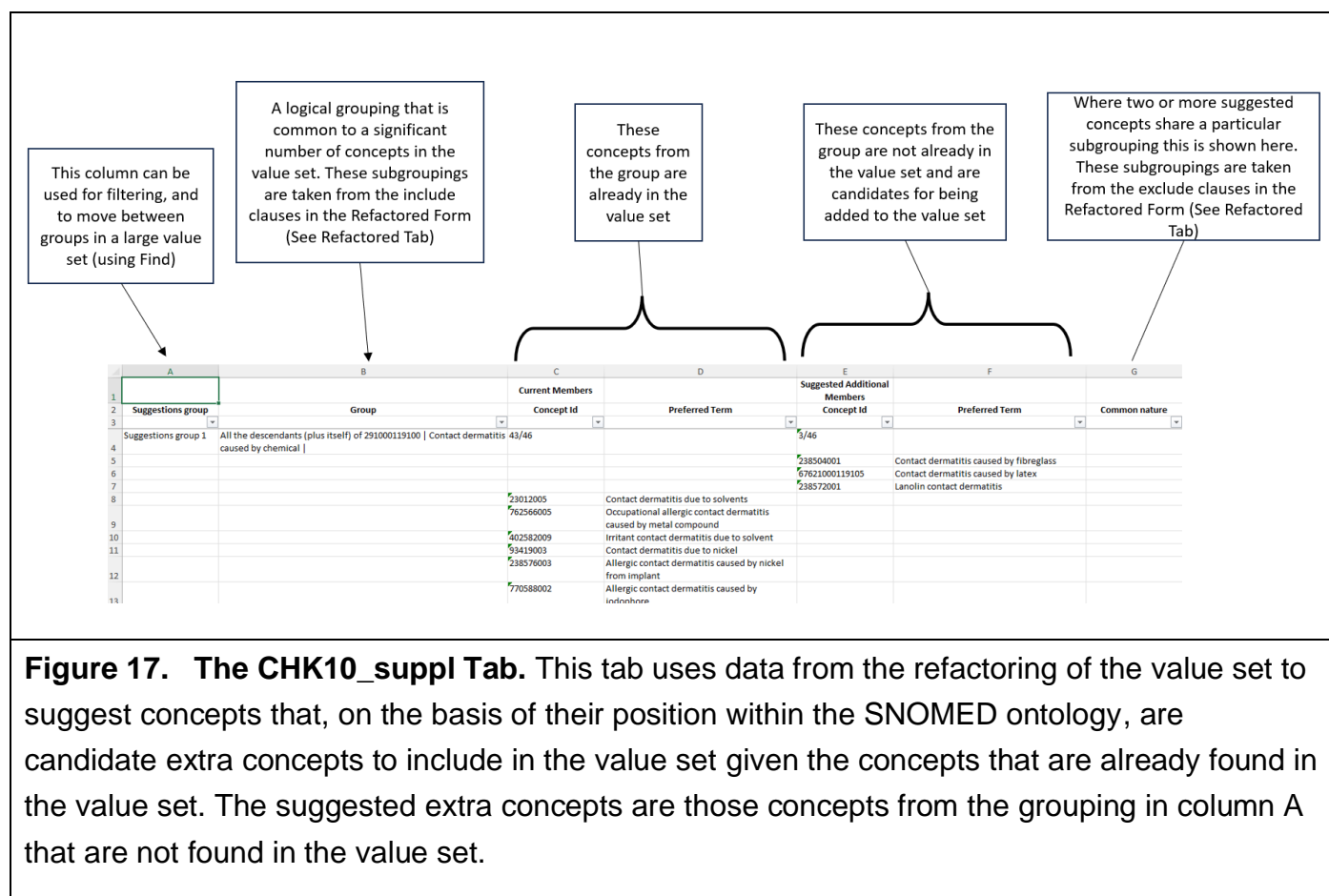


Figure 16. The CHK08_suppl Tab. This tab provides information to accompany CHK08, somewhat similarly to the CHK04_suppl tab. The key difference here is that for each active concept provided, any “suggested inactive predecessors” are listed. A “suggested inactive predecessor” is an inactive concept for which the concept provided is an active replacement. The degree of equivalence is defined as in CHK04_suppl. By applying a “greater than” Number Filter such as “is greater than 20180000” it is possible to restrict the list to concepts that have been inactivated since a particular date:



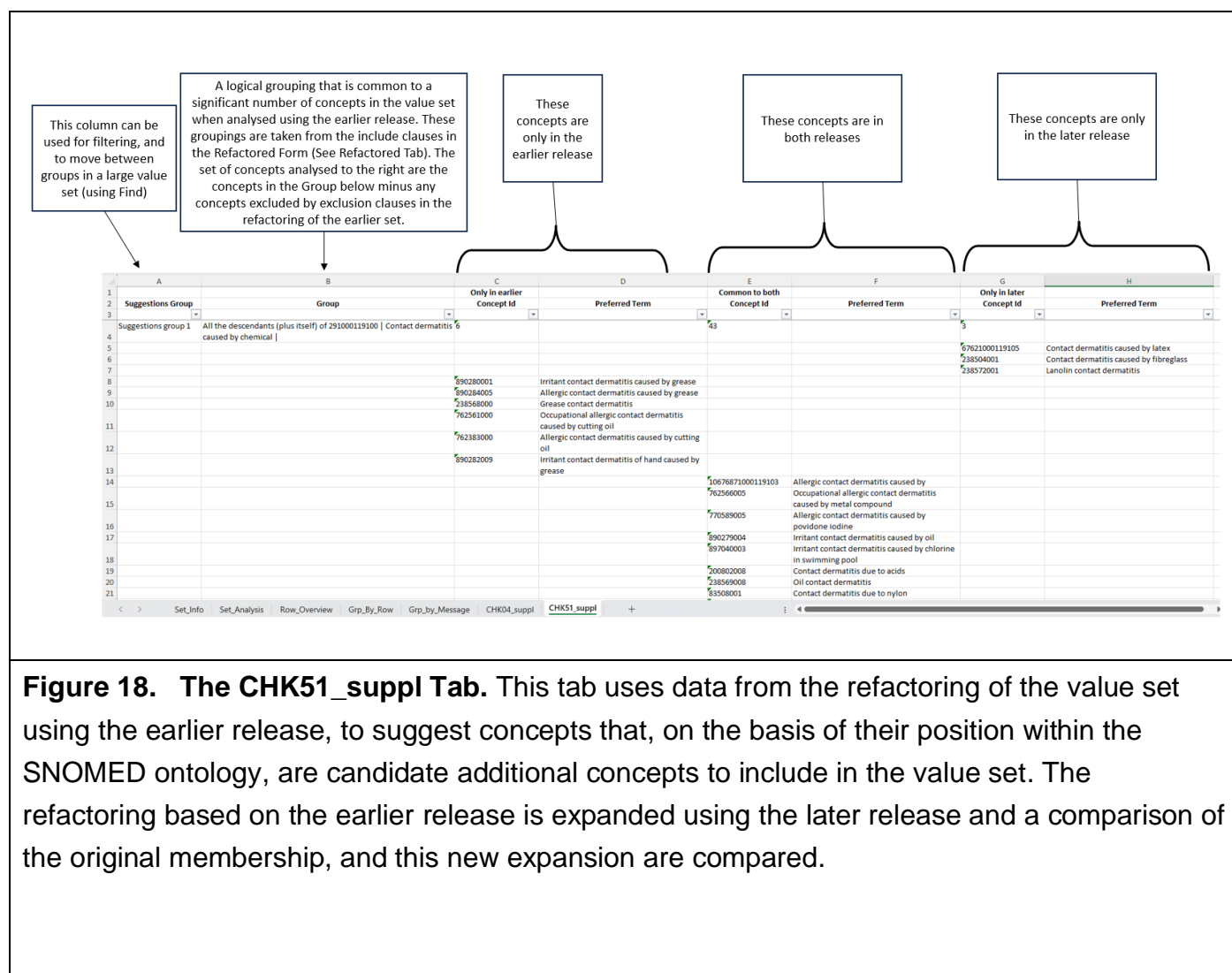


Figure 18. The CHK51_suppl Tab. This tab uses data from the refactoring of the value set using the earlier release, to suggest concepts that, on the basis of their position within the SNOMED ontology, are candidate additional concepts to include in the value set. The refactoring based on the earlier release is expanded using the later release and a comparison of the original membership, and this new expansion are compared.

3.8 Refactored Tab

	A	B	C	D	E
	Include / Exclude	Number of Concepts in Clause	Number of Concepts from Clause in Value Set	Number of Concepts Excluded by Clause from Value Set	Expression Constraint Language (ECL)
1					
2					
3	include	12	10		< 298391004 Cervical spine deformity
4	include	8	8		<< 298493002 Kyphosis of thoracic spine
5	include	4	4		< 366379006 Effect of movement on spine deformity - finding
6	include	4	4		< 281377003 Lordosis finding
7	include	2	2		<< 111268000 Lordosis and scoliosis deformity of spine
8	include	1	1		298591003 Scoliosis of lumbar spine
9	include	1	1		414564002 Kyphosis deformity of spine
10	include	1	1		<< 249716002 Rotational deformity of thoracic spine
11	include	1	1		<< 249732004 Pelvis tilted
12	include	1	1		298382003 Scoliosis deformity of spine
13	include	1	1		298494008 Scoliosis of thoracic spine
14	include	1	1		61960001 Lordosis deformity of spine
15	include	1	1		405773007 Kyphoscoliosis deformity of spine
16	include	1	1		<< 424774003 Spinal curvature convex to the right
17	include	1	1		<< 423430005 Spinal curvature convex to the left
18					
19	exclude	1		1	<< 298396009 Deformity of cervical vertebra
20	exclude	1		1	<< 718186006 Rotational deformity of cervical spine
21					
	Full ECL expression:				(< 298391004 Cervical spine deformity OR << 298493002 Kyphosis of thoracic spine OR < 366379006 Effect of movement on spine deformity - finding OR < 281377003 Lordosis finding OR << 111268000 Lordosis and scoliosis deformity of spine OR 298591003 Scoliosis of lumbar spine OR 414564002 Kyphosis deformity of spine OR << 249716002 Rotational deformity of thoracic spine OR << 249732004 Pelvis tilted OR 298382003 Scoliosis deformity of spine OR 298494008 Scoliosis of thoracic spine OR 61960001 Lordosis deformity of spine OR 405773007 Kyphoscoliosis deformity of spine OR << 424774003 Spinal curvature convex to the right OR << 423430005 Spinal curvature convex to the left) MINUS (<< 298396009 Deformity of cervical vertebra OR << 718186006 Rotational deformity of cervical spine)
22					

Figure 19. The Refactored Tab. This tab shows an intensional definition for the provided value set, derived using the refactoring algorithm as previously implemented in the [Data Migration Workbench \(DMWB\)](#).

The intensional definition is derived using the specified release. This intensional definition is guaranteed to expand to the same value set when expanded using that same release. Note that such an intensional definition is not unique: different algorithms may yield different definitions, although they must all satisfy the requirement to expand to the same value set given the release from which they were derived.

For an include clause, the count in column C will be less than that in column B if exclude clauses remove some of the concepts in the clause.

For an exclude clauses, the count in column D will be less than that in column C if some of the concepts specified by the exclude clause are not found in any include clause (i.e. there is only partial overlap between the content of the exclude clause and the content of all the include clauses).

4. Appendix I: Zooming the Browser

As with any web app, you will get the best user experience with the Set Checks app by adjusting the zoom level in your browser as you work.

As an example, Figure Appendix_1.1 shows how the Set Checks app “Settings” page should ideally display in your browser.

If you experience problems as shown in the Figure Appendix_1.2-Figure_Appendix_1.4 then you will need to adjust the zoom level in your browser as explained in the figure legends.

Methods for adjusting (and checking) the zoom level in your browser are given in Figure Appendix_1.5.

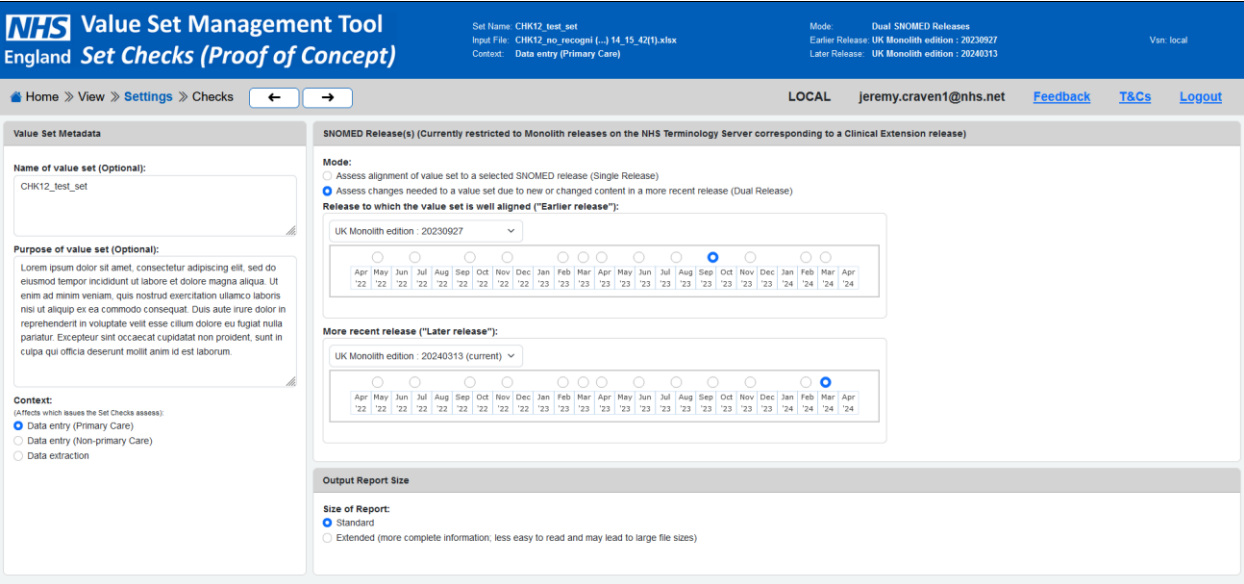


Figure Appendix_1.1 This is the ideal situation where there are no scroll bars and the content largely fills the screen and is a comfortable size to read.

Value Set Management Tool
 England *Set Checks (Proof of Concept)*

Set Name: **CHK12_test_set**
 Input File: **CHK12_no_recogni (...) 14_15_42(1).xlsx**
 Context: **Data entry (Primary Care)**

Mode: **Dual SNOMED Releases**
 Earlier Release: **UK Monolith edition : 20230927**
 Later Release: **UK Monolith edition : 20240313**
 Var: **local**

[Home](#) » [View](#) » [Settings](#) » [Checks](#)

← →

LOCAL
 [jeremy.craven1@nhs.net](#)
[Feedback](#)
[T&Cs](#)
[Logout](#)

Value Set Metadata

Name of value set (Optional):
 CHK12_test_set

Purpose of value set (Optional):
 Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu

Context:
 (Affects which issues the Set Checks assess):
☒ Data entry (Primary Care)
☐ Data entry (Non-primary Care)

SNOMED Release(s) (Currently restricted to Monolith releases on the NHS Terminology Server corresponding to a Clinical Extension release)

Mode:
☐ Assess alignment of value set to a selected SNOMED release (Single Release)
☒ Assess changes needed to a value set due to new or changed content in a more recent release (Dual Release)

Release to which the value set is well aligned ("Earlier release"):
 UK Monolith edition : 20230927

☐ Apr '22 ☐ May '22 ☐ Jun '22 ☐ Jul '22 ☐ Aug '22 ☐ Sep '22 ☐ Oct '22 ☐ Nov '22 ☐ Dec '22 ☐ Jan '23 ☐ Feb '23 ☒ Mar '23 ☐ Apr '23 ☐ May '23 ☐ Jun '23 ☐ Jul '23 ☐ Aug '23 ☐ Sep '23 ☐ Oct '23 ☐ Nov '23 ☐ Dec '23 ☐ Jan '24 ☐ Feb '24 ☐ Mar '24 ☐ Apr '24

More recent release ("Later release"):

Output Report Size
 Size of Report:
☒ Standard
☐ Extended (more complete information; less easy to read and may lead to large file sizes)

Scroll bars

Figure Appendix_1.2

Problem

- Content cannot be conveniently viewed as one screenful
- Extra scroll bars have appeared

Reasons

- Zoomed in too far,
- (or) Small screen and no zoom

Remedies

- Use the scroll bar to access all content
- (or) Zoom out until the scroll bar disappears (ctrl and "-")

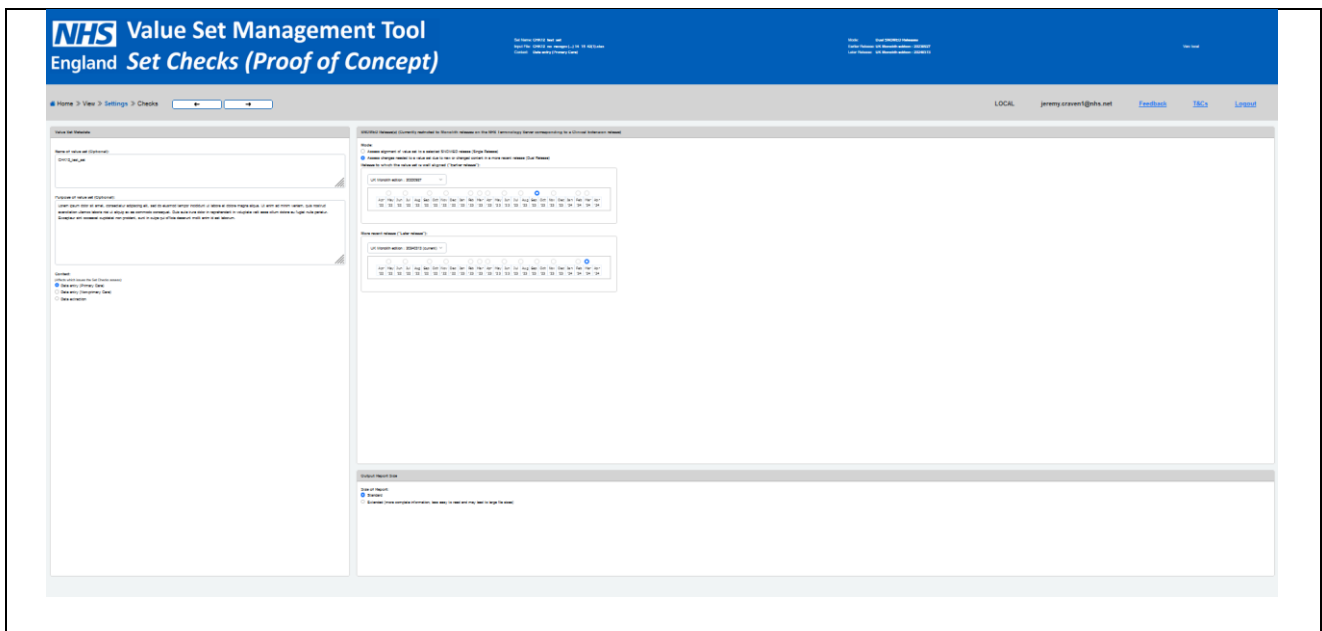


Figure Appendix_1.3

No scroll bars and all content is on screen, but ..

Problems

- Fonts are too small
- Large amounts of unused space on screen

Reasons

- Zoomed out too far,
- (or) No zoom on a very high resolution monitor

Remedies

- Zoom in (ctrl and “+”)

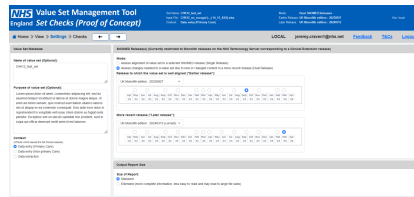


Figure Appendix_1.4

No scroll bars and the content largely fills the screen, but ..

Problem

- Because the screen is small the font size and graphics are uncomfortably small.

Remedy

- Zoom in and accept using more scroll bars as in Case 2

Zooming in web browsers

The universally available methods to zoom the view are

- Use ctrl and “+” (ctrl and plus key) to zoom in and make text larger
- Use ctrl and “-” (ctrl and minus key) to zoom out and make text smaller

However if you have a mouse with a wheel then ctrl and mousewheel is much more convenient

Note that the pinch-to-zoom gesture on a touchpad will most likely NOT zoom the browser, but will simply MAGNIFY everything with no regards to making certain items still fit on the screen.

How to know if your view is zoomed

In Google Chrome and Microsoft Edge

- A magnifying glass symbol appears at the right hand end of the URL box when the view is zoomed.
- If zoomed in there is a “+” in the magnifying glass
- If zoomed out there is a “-” in the magnifying glass
- Hovering the mouse over the magnifying glass symbol causes the percentage zoom to be displayed

Mozilla Firefox displays a box showing the zoom level if the view is not at 100%

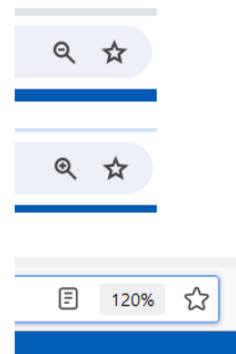


Figure Appendix_1.5. How to zoom the browser.