Database Starter Guide for the Medication Safety Self Assessment® for Australian Hospitals

Purpose of the MSSA Database

To assist with the reporting and analysis of your results the Clinical Excellence Commission provides hospitals with access to an online database. The MSSA Database has been developed by ISMP Canada and has been adapted for the Clinical Excellence Commission to support hospitals conducting the self-assessment. The database makes analysis of your results easier by:

- Allowing you to enter and retain a record of your results online.
- Displaying your results in graphical form so you can visualise where you are performing best.
- Allowing you to visualise your improvement over time.
- Reporting weighted aggregate scores for each key element and core characteristic.
- Allowing you to compare yourself against other hospitals (in a deidentified way) according to demographic variables you select.
- Allowing hospitals to be grouped and compare themselves in 'collaboratives', and allowing a super-user to have oversight of collaborative results.

Accessing the MSSA Database

The MSSA Database can be accessed via the database portal at https://mssa2.cec.health.nsw.gov.au. You will need a username and password for your hospital to enter data. If you do not already have an account and would like to apply for one, email cec-mssa@health.nsw.gov.au with the name of the person responsible for the MSSA at your hospital, the official hospital name, and the address of the hospital.

Entering data into the MSSA Database

- Login to the MSSA Database with your username and password.
- Under the 'Assessments' heading on the left side of the screen select 'Start New Assessment'. Once this heading is clicked it will change into the month/year you started the assessment.
- Complete all the data fields in all tabs of the self-assessment. Each tab will be highlighted with a tick when you complete all items within it.
- Once you have completed all the data fields select 'save' at the bottom of the page (see figure 1). You will be prompted to submit the results if all fields are completed.
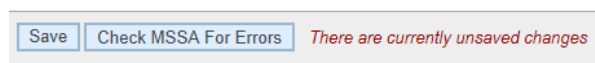

Figure 1. Saving your results

Saving progress and continuing an incomplete self-assessment

- At any time during the data entry process you can select 'save' to store the currently completed data fields.

- When returning to the database you can continue an incomplete assessment by clicking the month/year under the 'Assessments' heading. If the assessment is not submitted or incomplete the month/year will be **bold**, if it is submitted it will be in normal font (figure 2).

- To know which items you still need to complete you do not have to scan the entire self-assessment. Clicking on 'check MSSA for errors' at the bottom of the page (see figure 1) will prompt you to the items that remain uncompleted (see figure 3).
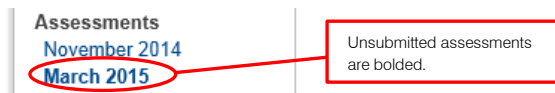

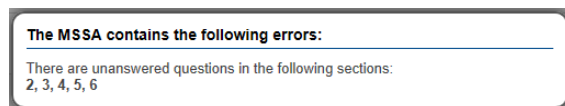Figure 2. Identifying complete and incomplete assessments.

Figure 3. Prompt to incomplete items. If there are only a few items you will be prompted to the item number, not only section numbers.

How the scoring system works

Each item in the self assessment has been assigned a weighted score in consultation with the Institute for Safe Medication Practices. The maximum score attainable for each item differs according to the following:

- Items that score a maximum of 16 often have a forcing function and/or a long lasting impact on safety.
- Items that score a maximum of 12 have a slightly lower impact or long lasting effect on medication safety than items that score 16.
- Items that score a maximum of 8 are of intermediate importance or impact.
- Items that score a maximum of 4 do not carry as long lasting an effect or impact than other categories. They usually involve human tasks.

The online database aggregates the individual scores for each item to provide a total score, and reports a percentage for each core characteristic and key element.

Reports available

- Once a self-assessment is submitted it will cease to be in bold (see figure 2). This means you can now analyse the results.

- Click on the month/year of the self-assessment you wish to analyse. You will be provided with 3 options (figure 4):

  o 'View Assessment'- this is a read only view of the online form you entered the data into.

  o 'Print Results' – provides a detailed breakdown of your results with aggregate scores for each section and individual scores for each item presented.

  o 'Graph Results' –provides a histogram of your results as a percentage of the total possible score. It is graphed against the average according to the comparator you select. The default comparator is all hospitals.

- You can also compare how your results have changed over time, using the 'Compare Own Data' option directly above the 'Assessments' section on the left hand navigation column.

Assessments
November 2014
  View Assessment
  Print Results
  Graph Results
March 2015

Figure 4. Different options for looking at the results.

Understanding your graphs

The graphing function of the MSSA Database provides an interactive means of navigating your data. Figure 5 gives an example of what your graph will look like. The yellow bars represent your score, whereas the blue bar shows the average score for the comparator group. By default the comparator group is all other hospitals that have completed the MSSA. You can change the comparator group by selecting the appropriate filters which are immediately below the graph.

The tabs across the top of the page show the different graphs you can select (figure 5). The default tab is 'key elements'. You can also look at a graph of the 'core characteristics', or any one of the 10 key elements denoted in roman numerals.

To find out what each column means, scroll over it with the cursor and a description will be provided. This will also display the score you achieved for that column. For instance, scrolling over the third yellow column in figure 5 will display information telling you that it relates to "Communication of Medication Orders and Other Medication information" and that the hospital scored exactly 46.08% for this key element. The "n=" near the title of the graph tells you how many hospitals are included in the comparator group.
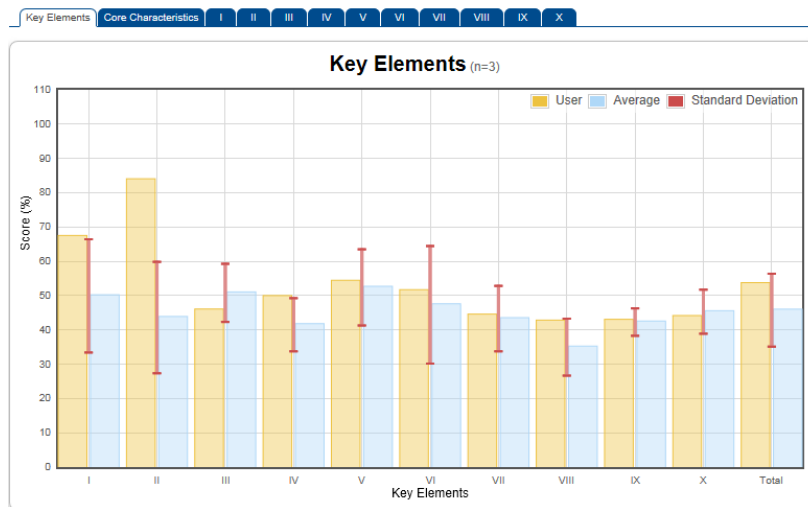

Figure 5. Graphical display of MSSA results

Changing the comparator using filters

The blue bar in figure 5 represents the comparator – that is, the average result of all hospitals entered into the system - while the yellow bar represents the user's results. The online database gives you the option of changing the hospitals included in the calculation of the blue bar. For instance, it is possible to select only paediatric hospitals with more than 200 beds to be included if that is the comparison most important to you. To make these selections use the filter options below the graph (figure 6).
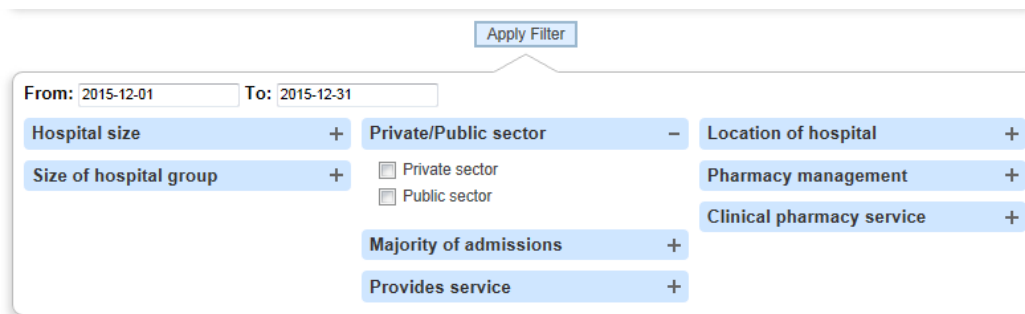
Figure 6. Selecting a comparator using filters

Clicking on the '+' sign at the right of any of the filter headings will provide you with a range of options related to that heading as shown for 'Private/Public sector' above. All filter options are derived from the demographic questions in the MSSA workbook.

The date filter allows you to set a time limit on self-assessment results included in the calculation of the blue bar.

To ensure the data is de-identified, if the filtering process ends up in there being 3 or fewer hospitals, no graph will be displayed and you will be prompted to change the filter selection with the following message: "*There is not enough data to render the graph. Please change your filter selection*".

Repeating the self-assessment

Once you have completed your first self-assessment, you have the option of repeating the assessment in the future to track how your facility's medication safety systems have improved over time. A new self-assessment will need to be created for you to do this. Email your request for a new self-assessment to cec-mssa@health.nsw.gov.au. An officer of the Clinical Excellence Commission will confirm when a self-assessment has been created.

Limitations with the dataset

The Clinical Excellence Commission provides a platform for performing the MSSA which can assist hospitals with the interpretation of their data, and identifying areas for local improvement. While the MSSA Database provides a general overview of a hospital's medication safety systems, it is a self-assessment and therefore is subject to variation in how self-assessment teams are composed, and in how questions and scoring are interpreted between different hospitals.

The Clinical Excellence Commission has no control over how thoroughly the self-assessment is performed by individual hospitals, or the data that is entered into the system by account holders, and therefore cannot guarantee its value for measuring comparative performance or benchmarking.

Further information

Further information about the MSSA is available at https://mssa2.cec.health.nsw.gov.au. If you have queries regarding the MSSA Database, please email cec-mssa@health.nsw.gov.au and an officer will be in contact with you shortly.