FACT SHEET
The AuSCR Fever Sugar Swallow (FeSS) Dataset

This fact sheet contains information on the optional AuSCR dataset to collect information on the use of the Fever, Sugar, Swallow (FeSS) Protocol at hospitals which are currently participating in the AuSCR. Use of this dataset commenced on July 1st, 2019.

The AuSCR currently collects information on swallow screening and assessment prior to oral intake. However, additional information on the treatment of fever and glycaemic control can now be captured with the FeSS dataset. .

What is FeSS?

The Quality in Acute Stroke Care trial demonstrated that patients who had received care in a stroke unit with protocols to manage FeSS had a 16% reduction in death and dependency at 90 days post stroke,[1] as well as reduced longer-term mortality.[2]

Stroke Foundation Clinical Guidelines

The clinical guidelines for stroke management 2021[3] use the best available clinical evidence to provide a series of recommendations to assist decision-making in the management of stroke and transient ischaemic attack (TIA). The following guidelines cover recommendations aligning with the FeSS protocol.

Pyrexia (fever) management
All stroke patients should have their temperature monitored at least four times a day for 72 hours[1].

Glycaemic Control
All stroke patients should have their blood glucose level monitored for the first 72 hours following admission, and appropriate glycaemic therapy instituted to treat hyperglycaemia (glucose levels greater than 10 mmol/L), regardless of their diabetic status[1].

Dysphagia
People with acute stroke should have their swallowing screened within four hours of arrival at hospital and before being given any oral food, fluid or medication[4].

What variables will be captured in the FeSS dataset? (Table 1)

The AuSCR datasets already collect data on swallow screening and assessment prior to oral intake. If you collect this information as part of your AuSCR data collection, then these stay the same. The additional optional variables in the FeSS dataset will relate *only* to fever and hyperglycaemia. These questions are also part of the Stroke Foundation acute clinical audit and so may be familiar to some users.

References
1. Middleton S, McElduff P, Ward J et al (2011). Implementation of evidence-based treatment protocols to manage fever, hyperglycaemia, and swallowing dysfunction in acute stroke (QASC): a cluster randomised controlled trial. *Lancet*, 378(9804):1699-706.
2. Middleton S, Coughlan K, Mnatzaganian et al (2017). Mortality reduction for Fever, Hyperglycemia and swallowing nurse initiated stroke intervention. *Stroke*, 48(5):1331-1336.
3. Stroke Foundation (2021). Clinical Guidelines for Stroke Management. Melbourne Australia.
4. Bray BD, Smith CJ, Cloud GC et al (2017). The association between delays in screening for and assessing dysphagia after acute stroke, and the risk of stroke-associated pneumonia. *Journal of neurology, neurosurgery, and psychiatry*, 88(1):25-30.

Table 1: Summary of variables in the FeSS dataset

Fever
- Temperature recorded ≤4 times on day 1 of admission
- Development of fever ≥37.5^0 within 72 hours of admission
- Paracetamol administration for first elevated temperature within 1 hour

Sugar
- Finger-prick blood glucose recorded 4 times on day 1 of admission
- Development of finger-prick blood glucose ≥ 10mmols/L within 48 hours of admission
- Insulin administration within 1 hour of first elevated finger-prick blood glucose

Swallow *
- Formal swallow screen date/time
- Swallow screen pass/fail
- Swallow assessment by Speech Pathologist date/time
- Swallow screen/assessment performed before oral medication
- Swallow screen/assessment before oral food/fluids

* Also collected in the AuSCR admitted patient datasets

What are the benefits of using the FeSS dataset?

These new variables have been added to the AuSCR to better capture the provision of evidence-based care in line with the current clinical guidelines for stroke.[3] FeSS data can be used to drive local quality improvement projects.

Completing the six new questions which comprise the FeSS dataset is optional. The way that you choose to use the dataset is flexible. You can use it for all of your AuSCR eligible patients, a subset of your patients or for a defined period of time. Use of the AuSCR FeSS dataset will be ongoing.

Does my hospital need any new approvals to use the FeSS dataset?

No amendments to current Human Research Ethics Approvals or local Research Governance Office approvals for your hospital are required.

What changes will I see when I log into the AuSCR? How do I create a FeSS record?

When you log into the AuSCR, you will see the tabs for all of the programs in which your hospital participates. This will now include an AuSCR FeSS tab. If you cannot see the FeSS tab, your hospital may not yet be participating in the FeSS dataset. If you would like your hospital to use the FeSS dataset, please contact your AuSCR State Coordinator or the AuSCR Office (admin@auscr.com.au).

Once a patient has been entered into the AuSCR, the record can be expanded to enter the new FeSS variables relating to fever and glycaemic control (Figure 1).

Figure 1: Expanding a patient record to collect the new FeSS variables

1. Find the AuSCR record, then in the 'Patient record view' screen, expand the record to AuSCR FeSS.

2. Tabs for the variables for both programs will then be visible. If you wish to see only the Fess variables, click on 'Show/hide programs' and unselect AuSCR Red, then click on 'Apply'.

3. Then only the tabs for the variables required for the FeSS program will be shown.

Alternatively, import templates are also available that include the FeSS variables and automated upload systems may be updated to include the variables.

Where do I find the definitions of the variables contained within the FeSS dataset?
The FeSS variables are included in the AuSCR Data Dictionary, available from the 'AuSCR Resources' section on the AuSCR website (www.auscr.com.au with password 'auscrhospital'). You can also contact your AuSCR State Coordinator to obtain an electronic copy of the latest AuSCR Data Dictionary.
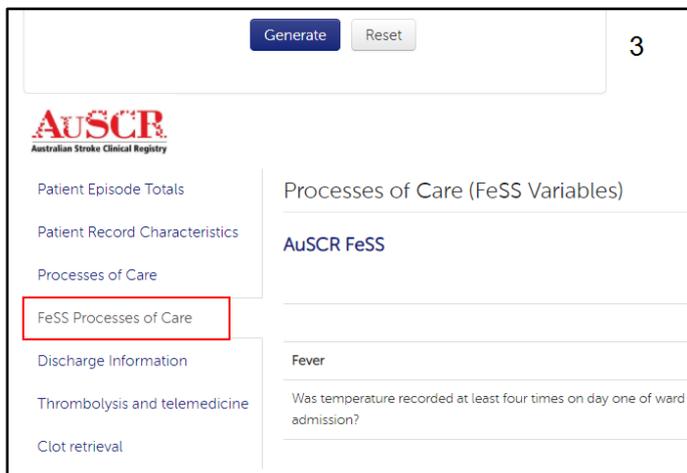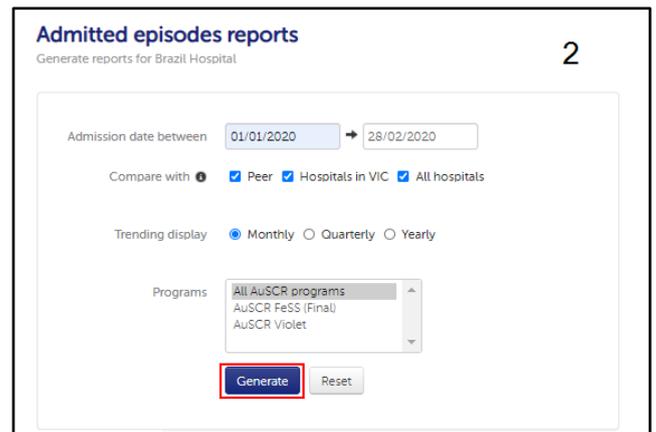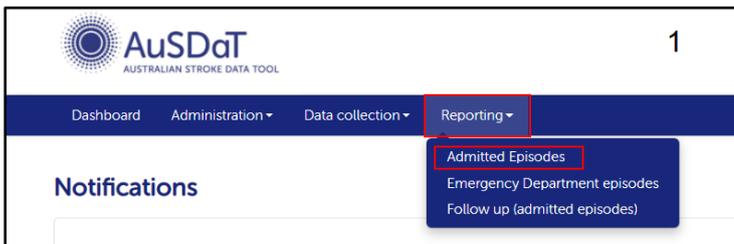
How do I access my FeSS data?
You can export all data from the FeSS dataset at any time in the same way as you currently export your AuSCR data.

On the 'Patient record management' page, select the 'AuSCR FeSS' program tab and then click on the data export button.

FeSS live reports can be found under the 'Admitted Episodes' live reports (see Figure 2). These allow for comparisons between your hospital, and peer, state and all other AuSCR hospitals
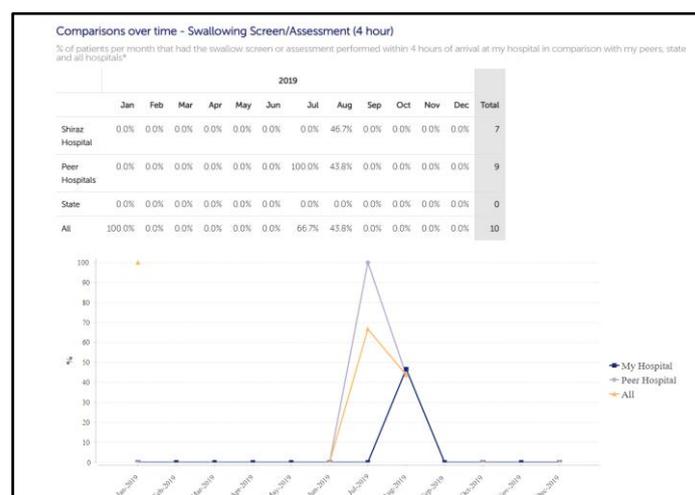
Figure 2 Viewing the FeSS live report

1. On the patient management screen, under the reporting tab, select 'Admitted Episodes'.
2. Select the date range you are interested in, select to compare with peer, state or all hospitals, and select either 'All AuSCR programs' or 'AuSCR FeSS'. Then click 'generate'.
   Note: if you select 'All AuSCR programs' the swallow section of the FeSS live report will include the swallow data from all patient records in the specified date range, and not just the records which have been expanded to FeSS.
3. Select 'FeSS Processes of Care' from the list of reports.

A range of metrics collected in the AuSCR FeSS dataset will be displayed including whether a swallow screen or assessment was performed and the proportion of these screens/assessments which were conducted within four hours of arrival (Figure 3).

Figure 3 Proportion of swallowing screens/assessments conducted within 4 hours of arrival

Interpretation of FeSS live reports swallowing screen/assessment within 4 hours

The live reports will display 'swallowing screen performed within 4 hours of arrival' and 'swallowing screen or swallow assessment performed within 4 hours of arrival'. Please note for these time metrics:

- Patients transferred to your hospital are **<u>excluded</u>**.
- Only patients who received a swallow screen and/or a swallow assessment are included, i.e. of those that received a swallow screen or assessment, the proportion that were completed within 4 hours are shown.
- Where ED arrival details are missing in an episode, admission details may be used in its place for this calculation. If both ED arrival and admission details are missing, this record will be included in the 'unknown' count.
- This metric for in-hospital strokes will be calculated based on stroke onset details.
- If a patient had both a swallow screen AND a swallow assessment, they will only be counted once for the "swallowing screen or swallow assessment within 4 hours of arrival" metric.

For more information or support on the FeSS dataset, please contact your AuSCR State Coordinator.