The Faculty of Intensive Care Medicine

FICM Stabilisation for Neurological Testing (Adults)

QI Companion

Why this project is important

Lack of adequate stabilisation frequently leads to delays or the inability to diagnose and confirm death using neurological criteria (DNC). The FICM Stabilisation for Neurological Testing (Adults) is for use once sedation is discontinued and DNC is considered a possibility. Its purpose is to act as a cognitive aid or aide memoire for ICU staff highlighting common pitfalls and how they can be avoided.

The most common pitfalls which prevent or delay neurological clinical testing for DNC include: haemodynamic instability, diabetes insipidus and electrolyte abnormalities, unrecognised and untreated hypothermia.

Aims of the QI Companion

This document has been developed to help implement the Stabilisation Aid using a QI framework. Below are suggested considerations for each stage of the Plan-Do-Study-Act cycle; these can be used by teams to facilitate its introduction. These are not exhaustive and are to encourage engagement with the QI process. Additional QI tools can be found in the QI section of the FICM website.

Planning

- **What could be the specific improvement aims?**
  - Reduce the frequency of patients who did not have neurological testing for DNC owing to inadequate stabilisation.
  - Reduce the frequency or length of delays to neurological testing for DNC owing to inadequate stabilisation.
  - In patients who may proceed to organ donation, prevent organ damage which may occur from inadequate stabilisation by reducing the frequency and severity of:
    - Low blood pressure
    - Very high sodium
    - Negative fluid balance
- **How will your local context influence implementation?**
  - How frequently do you admit patients from this population?
  - Who currently manages this patient population?
  - Is there a guideline or protocol that is followed?
  - Is local guidance concordant with the stabilisation aid?

- **When managing patients leading up to clinical testing for DNC what is your current practice and why is this your current practice?**
    - Are CVCs universally inserted?
    - How frequently is vasopressin used?
    - What is the usual threshold for recognising diabetes insipidus and beginning ddAVP and is this standardised?
    - How are blood tests monitored and corrected in preparation for clinical testing?
    - How is temperature monitored (central or peripheral)?
    - How regularly is temperature monitored?
    - What warming methods are used and when are they instituted?
    - How is the importance of stabilisation communicated at handover to the nurses, doctors and ACCPs responsible for that patient's care?

Doing

- **Who are the relevant stakeholders in the project?**
    - Which staff groups will interact with the stabilisation aid?
    - Who will be supportive/unsupportive, why?
    - Do you require permission to make a change?
- **Implementation planning**
    - How will the tool be integrated with your current workflow?
    - What specifically will trigger the use of the tool?
    - Is training required?
    - Who needs to be notified to use the stabilisation aid?
    - What is the best way of communicating the change with all stakeholders?
    - Where will the stabilisation tool be kept?
    - Will it be available on paper or electronically?
    - Who will be in charge of this?

Studying

- **How will you know the stabilisation aid is being used?**
- **What could be measured to show improvement?**
    - Frequency of missed opportunities for diagnosing death using neurological criteria.
    - Proportion of patients whose DNC diagnosis was delayed due to inadequate stabilisation?
    - Frequency of (or proportion of time spent with) a low blood pressure
    - Frequency of (or proportion of time spent with) excessively high sodium.
    - Frequency of other electrolyte abnormalities
    - Frequency of (or proportion of time spent) with temperatures out of range.
- **What is the measurement plan?**
    - Is there an operational definition for each measured variable?

- Do you have measures that include outcomes, processes and unwanted effects of your change (balancing measures)?
- **How will you show that an improvement has occurred?**
  - Comparison of patient cohorts before and after the practice change?
  - Run charts for individual measured variables?
  - Absence of predicted unwanted effects after the practice change?

Acting

- **How will the work be presented and publicised?**
  - Departmental M&M
  - Staff education sessions
  - Organ donation meetings
- **How could lessons learned be spread?**
  - Through organ donation network
  - Critical care network meetings
  - Regional PGME events
- **Who will be responsible for sustaining the cognitive aid?**
  - Is ongoing education required and who is responsible for this?
  - Who will be responsible for supplying and distributing the stabilisation aid?
- **How will you know that an improvement has been sustained?**