



Baxter

Equilibria

FLUID OPTIMIZATION

Equilibria Fluid
Optimisation Programme:

Helping you take the lead

A guide to lead improvement
in fluid management

Introduction

As part of the Equilibria fluid optimisation programme, this guide has been developed in collaboration with an expert advisory panel help you implement intravenous (IV) fluid management guidelines in your organisation.

Step-by-step guidance

Implementing change in fluid management within your organisation will be an ongoing project. As the Fluid Lead, you will drive the implementation process locally. Also, forming a team of key stakeholders at the start of the project – who support the activities you're implementing – can be a huge advantage.

Before starting the project, it is important to collect benchmark data. This information can be used to set realistic objectives and plan short- and long-term targets that help keep the implementation process on track. In the long-term, this will ensure the standards are maintained.

Changing processes in your organisation may appear challenging, but by breaking the process into six key phases, you can achieve change.

Kick-off phase	p3
Strategy phase	p5
Preparation phase	p8
Education phase	p10
Implementation phase	p12
Post-implementation phase	p13

Top tip

Use the summary checklist on page 14 to track your progress

Kick-off phase

Step 1: establish a team

To implement and maintain best practice, your organisation will need a multidisciplinary team of key individuals to ensure full support.



Examples of people you may wish to include:

- Renal physicians
- Pharmacists
- Surgeons
- Anesthetists
- Intensivists
- Practice Development Nurses
- Quality Improvement Leads
- Patient Safety Officers

Top tip

Engage with the Director of Medicine and Surgery and the Director of Nursing to help appoint appropriate individuals to your fluid team

Step 2: set objectives for a baseline assessment

Collecting baseline data can be used as a benchmark to set strategic goals. Outline initial assessment objectives to understand the current situation in your organisation and to set benchmarks for improvements.

Examples of objective questions:

What is the objective/driver for the change, e.g. reduce the incidence of AKI?

Is current fluid management and prescribing aligned with best-practice guidelines?
If so, which ones?

Where will change be most effective and who is in a position to make these changes?

Step 3: run a baseline assessment

Ensure that your assessment includes all the information you require to support your objective for change, as well as data that will be collected during periodic assessments and reviews to monitor ongoing changes.

You may be able to piggyback onto existing assessments within your organisation. Be sure to engage with your fluid team, as they will be able to help recommend topics and data to cover and assist with the assessment process.

Examples of items to include in the baseline assessment:



- Fluid prescriptions over 24 hours
- Prescription data from pharmacists: fluid use graphs, litres per occupied bed day, litres per month and cost



- Biochemical data at the population level to use as surrogate markers for change: blood test results, mean sodium, mean creatinine and chloride



- The mechanics and logistics of fluid prescribing to identify any problems, such as lack of pumps or difficulties weighing patients
- The amount of critical incident reporting



- The use of fluid charts



- Mortality review

Top tip

Collect data from different clinical areas (for example, look at 5 patients per clinical area) to ensure an organisation-wide snapshot

As well as quantitative data collection, your assessment should include qualitative data. Ask key groups about their understanding and current views towards fluid management throughout your organisation – this will help identify the need for education and training.



Refer to the assessment guidance and template for further details on conducting an assessment.

Step 4: present the assessment results

The evidence for supporting a need for change in fluid management should be presented to prescribers and management (e.g. MMC committees) to gain support that will drive the implementation.

Tips for presenting the results:

- Use a simple format, e.g. Microsoft PowerPoint®, and avoid detailed statistics
- Share and pool results across the organisation to demonstrate current practice
- Present results alongside examples of successful change at other organisations, if available
- Ask interested HCPs to help prepare the presentation
- Present results to relevant stakeholders at meetings, such as:
 - Clinical meetings; to get it added to the risk register and make it easier to write a business case report for change
 - Ward staff; to directly educate those prescribing fluids
 - Mandatory assessment meetings

Strategy phase

Step 5: set goals for change

Identify the short- and long-term changes that are required using the baseline assessment results and set goals for change. Break down the goals into a series of bitesize chunks to make them more manageable.

Examples of goals to set:



Every patient will get the appropriate fluid at the right time by mm/yyyy



Fluid balance charting will improve in x% of nurses by mm/yyyy



Critical incident reporting will increase on x% of wards

Step 6: identify the drivers and barriers for change

For change to happen, it is important to consider what drives change in your organisation and any barriers that may arise. This will assist in thinking about the approach to implementation and help ensure you are better prepared to address any further issues.

Some key drivers to consider:



- **Accountability:** assign clearly defined roles. If possible, give someone ownership of fluid management on every ward



- **Demonstrate a need for change:** educate staff on the definition of a critical incident and encourage more reporting
- **Education:** encourage constructive feedback and concise education to understand the problem



- **Environmental restructuring:** introduce mandatory steps that make the prescribing of correct fluids easier
- **Restriction and compliance:** to reduce incorrect behaviour, encourage the reporting of all errors, as a high error rate will motivate prescribers to act



- **Getting influential people on board:** engage with individuals who are in a position to facilitate change and reduce barriers
- **Modelling:** the Fluid Lead is (and other key individuals) used as a role model to promote positive behaviour changes and encourage change



Some key barriers to consider:

- **Culture/habit:** organisations or wards may have recurring habits, making it easy for fluids to be given unnecessarily
- **Time pressures:** staff are already under pressure to manage their workloads, so fluid charting may not be carried out correctly
- **Knowledge differences:** different staff will have different levels of understanding and awareness of fluid therapy
- **Staff priorities:** there may be a lack of responsibility for IV fluid management and other drugs may be prioritised
- **Organisational priorities:** fluid management may be seen as a relatively harmless intervention, the consequences of which are not fully understood
- **Financial misconceptions:** IV fluid bags are relatively inexpensive, so the perception may be that there is no financial need to manage fluid therapy
- **Segmented care:** there may be different/inconsistent fluid management practices when a patient is moved from the operating room to the ward

Step 7: identify who to target

Identifying who should be targeted and with what messages is an important step when setting out to achieve your goals. Different messages resonate with different audiences, so be clear about who you are trying to educate.

Use the 'if...understood...then' approach, for example:

- If prescribers *understood* physiology and the harm they could cause by mismanagement of fluids *then* they would think twice and prescribe correctly
- If prescribers *understood* the importance of the fluid chart *then* completion of fluid charts would be more accurate and this would help doctors to prescribe the right fluids

Preparation phase

Step 8: get ready

To ensure everything is prepared to implement the changes needed:

- Work closely with the pharmacy to ensure that the correct fluids are available
- Identify what resources are needed (for example, training and education)
- Review the current fluid chart and any organisation guidelines, and update if needed

Top tip

Contact external people for support and ideas to help you prepare, especially those with experience of implementing organisation-wide fluid management policies

Step 9: identify champions and collaborators

It is important to identify champions and collaborators to assist in implementation and ongoing management. Engaging with these stakeholders helps to drive change, influences the social environment and can help to gain momentum by setting a good example to other teams in the organisation.

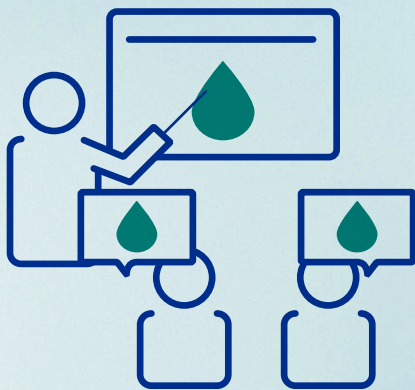
Existing infrastructure and resources:

- Use your network connections
- Identify patient safety leads in each clinical area
- Identify key people from patient safety groups and clinical governance groups
- Get the document ratification and medical illustration groups on-board
- Speak to the postgraduate department to get on the teaching programme
- Establish alliances, such as with the acute kidney injury group

Step 10: publicise the current state and the plans for change

To convince the rest of the organisation and make everyone aware of the planned changes, advertise what is being done and why.

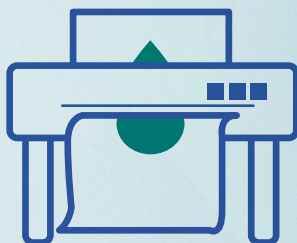
Publicity ideas:



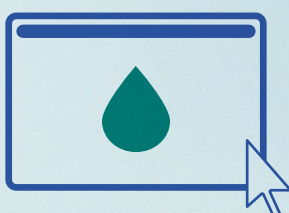
- Run lunchtime educational meetings about poor fluid management and the need for change
- Present assessment results and the associated goals for change at surgical and anaesthetist meetings
- Talk to department heads about the planned changes
- Inform patient groups about the planned changes and expected outcomes



- Send out any new organisational guidelines and fluid charts for consultation via the Medical Director, inviting feedback



- Produce posters to raise awareness about the upcoming changes and put these up in wards and elevators
- Create and send out leaflets about the changes and why they are necessary



- Use your organisation intranet to raise awareness and promote upcoming training and educational meetings – refer to Step 11

Education phase

Step 11: establish training and educational tools

Nurses, junior doctors, pharmacists and consultants/attending physicians, both prescribers and non-prescribers, all need to be educated. Publicise the training using the tools in Step 10.

Training ideas and educational tools

- Induction in fluid management, including a practical test such as completing a fluid chart
- Collate and present an overview of fluid prescription errors made to highlight the problem
- A short presentation for education directly on the wards
- Weekly lunchtime training meetings
- Educate pharmacists to carry out routine checks of fluid prescriptions
- Educate consultants/attending physicians on what the guidelines say



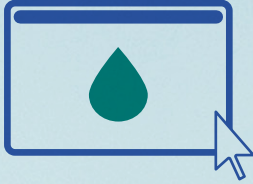
Refer to the Equilibria: The 11 Essentials of Fluid Management education presentation and adapt as needed

Paper-based tools to consider:

- Create a credit card-sized pocket reference guide for all ward staff
- Create and distribute ward signage/posters on fluid best practice
- Produce patient information materials to reinforce the message that patients can and should drink up to the appropriate cut-off time before surgery, and that relatives of patients should be encouraged to stay and help with food and drink*

*Ensure you are aligned with your organisation guidelines, and that information is specific to the various surgeries and patient groups where required.

Online courses to consider:



- Develop a basic 10–20 minute online course or application for prescribers covering the guidelines and topline information on fluid prescribing and basic physiology. Randomise questions and keep it short and concise
- Develop an in-depth course that covers fluid compartment physiology in more detail and can be done at peoples' leisure. Refer to the **Equilibria: The fundamentals of Fluid Management** education presentation as a guide

Step 12: enforce and monitor training

Online courses to consider:

- Take steps to make training compulsory
 - Get medical and nursing directors on-board
 - Include in new starter IV training
 - Collaborate with associated universities or colleges to include education (medical, pharmacy and nursing)
- Link training to electronic staff records to show whether it has been completed
- Award certificates when courses are completed

Top tip

Always provide feedback as part of any training to reinforce the messages and provide motivation to improve

Implementation phase

Step 13: fluid chart testing

When ready to implement the new fluid management practices, begin by testing any new fluid charts being proposed for use.



Refer to the fluid chart guidance and templates for ideas of what to include and how to design a new fluid chart.

Recommended process for fluid chart testing

Test the charts on a couple of different clinical areas, such as orthopaedic, surgical and medical wards

Refine the charts based on any feedback and test again

Repeat test and refine steps above. This may take a few rounds until the final fluid chart is produced

Step 14: fluid chart roll-out and monitoring

- Educate staff on the changes and the use of the new fluid chart. Reinforce the importance of using it correctly by reminding them why the changes have been made. Use the educational tools established in Step 11
- Roll out the new chart across the organisation
- Monitor the use of the new fluid chart, and adapt or update it if needed



Refer to the Equilibria: The 11 Essentials of Fluid Management education presentation and adapt to include the details of your new fluid chart.

Post-implementation phase

Step 15: run follow-up assessments

To assess initial outcomes post-implementation, the baseline assessment should be repeated **within 6 months** – refer to Step 3.

Include a review of the use of the new fluid charts and any initial issues

Obtain and address any feedback for improvements

Review the outcomes of the follow-up assessment:

- Against the goals set originally (refine the goals if necessary)
- With departmental champions working to identify any discrepancies between current behaviour and goals

Present the results to reinforce the need for change and keep staff aware of the actual outcomes – refer to Step 4

Run assessments periodically to monitor any ongoing changes

Top tip

Talk to appropriate stakeholders (e.g. pharmacists and pathologists) about obtaining monthly prescription and biochemical data, so you can monitor ongoing changes and the impact post-implementation

Step 16: establish ongoing education

It is important to continue to remind existing staff of the new fluid therapy practices and why they are necessary, and to educate all new staff.

Summary checklist

Kick-off phase

- ✓ **Step 1:** establish a team
- ✓ **Step 2:** set objectives for a baseline assessment
- ✓ **Step 3:** run a baseline assessment
- ✓ **Step 4:** present the assessment results

Strategy phase

- ✓ **Step 5:** set goals for change
- ✓ **Step 6:** identify the drivers and barriers for change
- ✓ **Step 7:** identify who to target

Preparation phase

- ✓ **Step 8:** get ready
- ✓ **Step 9:** identify champions and collaborators
- ✓ **Step 10:** publicise the current state and the plans for change

Education phase

- ✓ **Step 11:** establish training and educational tools
- ✓ **Step 12:** enforce and monitor training

Implementation phase

- ✓ **Step 13:** fluid chart testing
- ✓ **Step 14:** fluid chart roll-out and monitoring

Post-implementation phase

- ✓ **Step 15:** run follow-up assessments
- ✓ **Step 16:** establish ongoing education



Helping you take the lead

Resource pack



Many useful resources are available.
You can contact our Clinical Education
Therapy Team about training and support
in your hospital.