Title: Hydrant Project - 27th January 2012

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Summary
The pilot of the Hydrant on Jupiter ward has been received positively by patients. There is a strong perception from patients and staff alike that it improves patient hydration.

The success is based on a small sample of patients for a limited timescale. Greater validation of its benefits would be obtained through expanding to other patient groups and for a greater timescale.

Results from a recent CQC inspection have raised areas of concern regarding the consistency of recording and documenting patient fluid levels, which the rollout of the Hydrant may assist with in the future.

Recommendations:
1. The approval of £5,000 to purchase approximately 300 additional hydrant bottle ,daily replacement hoses and accessories direct from supplier
2. The allocation of a dedicated Project Manager to ensure a structured approach to expanding pilot to additional areas
3. The allocation of data analysis resource to understand wider impacts of the Hydrant to other patient outcomes.

Background

Dehydration is globally recognised as a serious healthcare issue among acute and primary healthcare trusts. Evidence shows that adult patients are being admitted for clinical intervention due to lack of water. This includes;

- More than 10,700 patients in the UK had a primary diagnosis of volume depletion
- More than 70% of these patients were admitted, taking up a total of just under 83, 500 'inpatient' bed days
- 85% of these patients admitted, were over the age of 59[1].

Adequate hydration is as vital to hospital care as medication and other types of treatments. Dehydration causes not only physical distress to individuals but also enormous costs to the health care system (Sansevero, 1997, 3). It has also been shown to increase the mortality of patients admitted to hospital (Water UK, 2005, 4). Better hydration can improve wellbeing and could reduce the volume of medicines required. It could also reduce many hours of hospital admission time by preventing further illness/disease or contributing to it and remove some of the costs of professional involvement needed to prescribe and administer treatment (Taylor,2005, 5).

It has also been identified that the elderly, trauma patients, and acutely ill are among the most 'at risk' groups of patients that become dehydrated (Madden, 2000, 1

For patients admitted to hospital, especially the elderly, their requirement for adequate hydration becomes more demanding as they may be weak and require acute/chronic interventions due to their illness or disease.

Further to this within a patient stay, there is a potential risk of dehydration due to inappropriate assessment, staff not having enough time to monitor fluid intake, or lack of staff '46% of nurses say there are not enough staff to ensure patients get the help they need to eat and drink' (RCN, 2007, 2).

Currently within The Great Western Hospitals NHS Foundation Trust, the use of plastic water jugs as a means for patient hydration. This method of hydration has the following challenges in both administration and quality of product
1. Difficulty to determine accurate measurements
2. Leaking water jugs creating spillages.
3. Does not support patient's independence

The Hydrant is an easy to use drinking system that solves the problem of reaching or holding drinks simply by clipping, hooking, or hanging almost anywhere and giving instant access to the user. By doing this it:

[1] Hospital Episodes Statistics, 2004/2005

- Enables patients to drink independently at any time day or night
- Helps reduce the chance of dehydration
- Helps patients help themselves in their recovery
- Enables accurate monitoring of fluid intake
- Allows staff to easily check if patients are drinking or not
- Helps to reduce length of stay by helping patients recover more quickly as a result of always being properly hydrated.

Based on the evidence on the importance of hydration for patients and the issues with the current water jugs; it was decided that the Trust would undertake a trial of the Hydrant to see what benefit it would have on patient hydration and whether the Hydrant was more effective than the current practice.

The Hydrant Trial started on Jupiter Ward in October 2011, led by ward sister Zara Norman and supported by the Productive Ward Team. Jupiter ward is a 41 medical bed ward, and usually the patients who are treated on this ward are care of the elderly.

Mark Moran, the designer of the Hydrant system provided the training for the Jupiter nursing staff on how to use the system; and the ward also designed an assessment tool to determine whether patients were appropriate to trial the Hydrant against traditional methods (see Appendix A).

To measure the patient experience and feedback of the trial, a patient questionnaire was designed; as well as staff questionnaires to understand practical implications of using the Hydrant compared to traditional methods. In addition, further statistical information regarding infection rates, Length of Stay is also being sourced.

Financial implications

A breakdown of the costs of an IV Cannula with a Drip versus a Hydrant has been established.

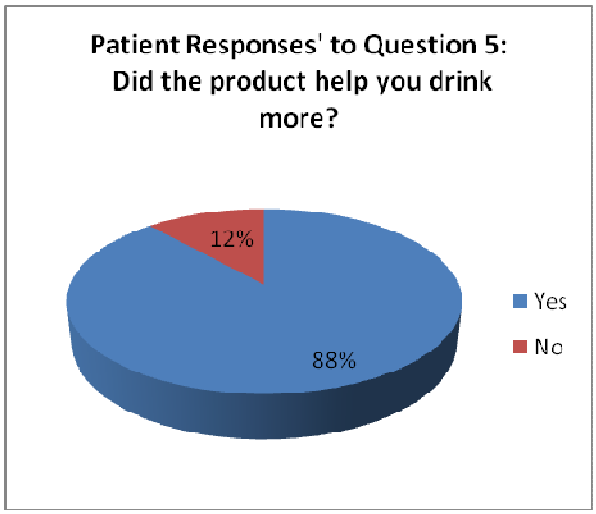
The total cost of an IV Cannula with drip was costed at £6.34, (not including the cost of the nursing staff, infection risk, and patient's pain/dignity). However, the cost of providing a Hydrant was established at £6, plus an additional £1 per day for replacement drinking hose.

An update on progress

Early results from the 3 month trial have been extremely positive. A total of 43 patients and 30 members of staff were asked to complete the patient and staff questionnaires.

Patient Feedback

An overwhelming majority of patients (88%) thought that the Hydrant system helped them drink more.



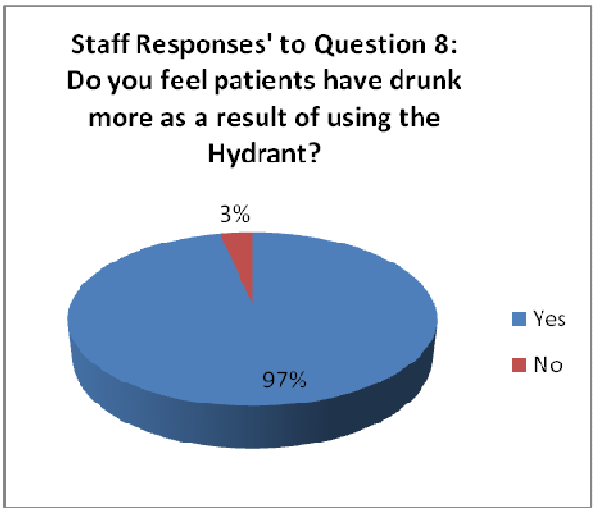
In addition:

- 84% of Patients thought the Hydrant system was easy to use
- 88% of Patients thought that the Hydrant System helped them to maintain their independence
- 93% of the Patients thought the nozzle was easy to control
- 88% of Patients thought that the Hydrant kept their water cool and
- 84% of Patients considered using the Hydrant at home.

- Additionally verbal feedback received on the Hydrant system has also been captured:
  - 'I love it! I found the product easy to use. I have difficulty using my hands and it just clipped on to my nightie, so the nozzle was just below my mouth.'
  - 'It is great! I am relieved that no longer have to bother my family and visitors or the staff whenever I want a drink.
  - 'The new water bottle is a great idea, and I have found it very beneficial.'
  - 'I like the fact that I am a bit more independent'

Staff Feedback

Staff perceptions on the use of the Hydrant was also positive, 97% of the staff felt that patients had drunk more as a result of the Hydrant.



In addition:

- 97% of Staff felt that there were patients who benefited from using the Hydrant
- 70% of Staff felt that the Hydrant saved time helping patients to drink or replenish their water jugs.
- 97% of staff felt confident in using the product and thought it was easy to clean.
- 100% of staff reported that there was no evidence of spillages.

- Positive Staff Feedback has also been noted:
  - 'Should be more widely used.'
  - 'Relatives were enquiring about where they can obtain them at home.'
  - 'Many patients on the ward are unable to feed themselves or lift/glasses and these patients were able to drink when they wanted rather than waiting for a time which was convenient to the staff.'
  - 'Many family members have been impressed with the benefits of using the hydrant.'
  - 'I think it is more accessible for the patients and easier to use.'
  - 'Patients have reported that it is easier to have a drink whenever they want without calling for help.'
  - 'I think it is a really good product and hope to see it used more widely.'
  - 'Can't believe that something so simple which is so effective hasn't been thought of before.'

Although further analysis is required, to understand the impacts on infection rates, length of stay, and other measures; it is clear that both staff and patients have found the Hydrant beneficial.

Areas for further consideration/action

The trial of the Hydrant has received a significant amount of positive interest throughout the trust from other wards, community hospitals, matrons and governors. In addition, a recent article about the trial was published in the local newspaper.

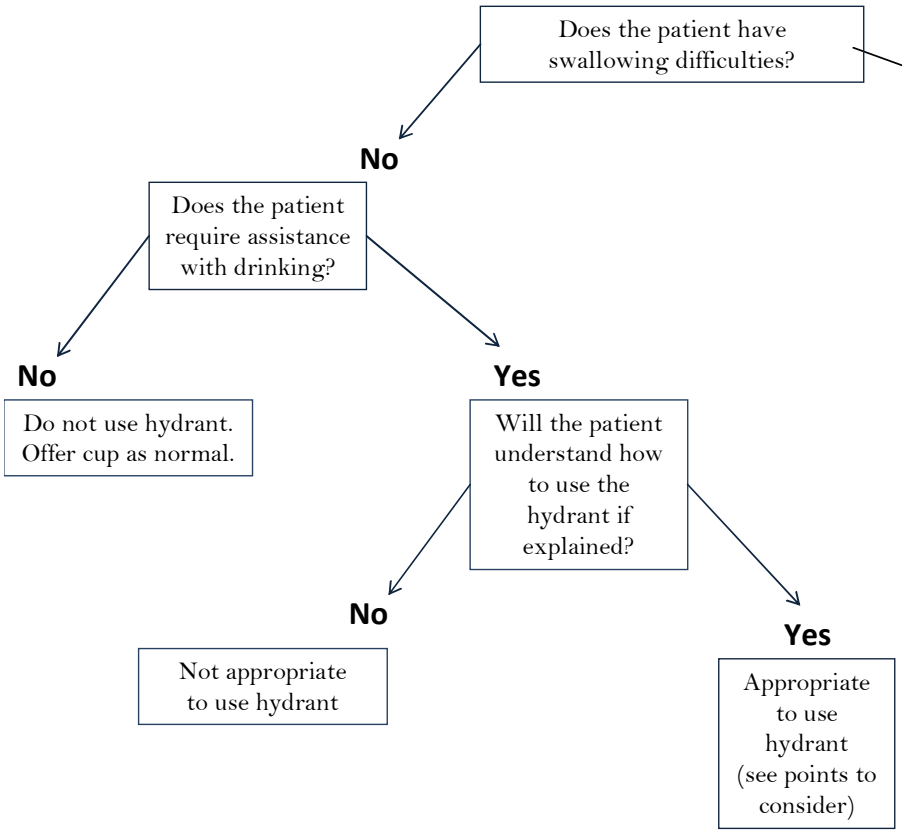
Following a review with the Project team and the Trust's Corporate Programme Office, it was agreed the pilot should be extended to two more additional areas within the trust. This would allow for further analysis of the impact of the Hydrant on patient hydration to different patient group, and it was also suggested to consider using a placebo group to understand whether as improved awareness of the importance of hydration is as effective itself in improving patient hydration.

A formal project structure would therefore be required to ensure that the pilot is conducted in a structured fashion and the results yielded will be sufficient to determine the benefit of a full Trust rollout of the Hydrant.

In December 2011, a CQC inspection raised moderate concerns in relation to patient hydration, as they highlighted a lack of consistency with how the trust measures and records the fluid intake of patients.

Appendix A: Copy of the Jupiter Patient Assessment Chart

Jupiter Ward – Hydrant Assessment



Points to Consider For All Staff

- **Only use for cold fluids**
- **Straw must be changed and dated every 24 hours**
- **Do not place Hydrant on floor**
- **Make sure bottle and cap are cleaned every 24 hours (dishwasher safe)**
- **Ensure blue magnet is placed on productive ward board**
- **Fluid balance still recorded and maintained**

Assessing Nurse ……..

Zara Norman Sister - Jupiter Ward 2011

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