British Heart Foundation

LEARNING POINTS

for successful introduction of IV diuretics in the community setting

FIGHT FOR EVERY HEARTBEAT

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Introduction

The British Heart Foundation funded and evaluated a two year project with 10 NHS organisations across the UK to determine whether funding a home or community based intravenous (IV) diuretics service is safe, clinically effective, cost effective and well received by patients and carers. It was also anticipated that the intervention had the potential to help prevent the often reported "revolving hospital door" of avoidable hospital admissions in people living with heart failure (HF).

The programme was led by heart failure specialist nurses (HFSNs) working within existing HF teams. This builds on existing evidence that HF patients under the care of an HFSN are five times less likely to be hospitalised compared to all HF patients.[1, 2]

HF is a common chronic condition affecting about 550,000 people in the UK[3] with increasing prevalence due to the combined effects of improved survival after heart attacks and an ageing population.[1, 4] Annually HF accounts for around 2% of the total NHS budget (approximately 70% of this cost is due to the costs of hospitalisation), more than 1 million inpatient bed-days per year and accounts for 5% of all emergency medical admissions.[1, 4]

Evidence summary

- ✓ The intervention has been successfully implemented
- ✓ The intervention has been successfully replicated
- ✓ The intervention is linked to NICE guidance, NICE quality standards and National Heart Failure Audit in England and Wales
- ✓ The intervention is supported by several national organisations
- ✓ Evaluation of the effects of the intervention has been carried out
- ✓ There are publications relating to the interventions

The Evidence – Delivering IV diuretics in the Community will:

- ✓ Reduce hospital admissions
- ✓ Support early discharge
- ✓ Provide a better experience for patients and carers
- ✓ Educate patients and carers about heart failure
- ✓ Enhance patient self-management
- ✓ Empower the patient and carer to manage the condition more actively
- ✓ Review and improve the patient's wider care planning
- ✓ Support people when their condition becomes more advanced
- ✓ Enable people to have choice to remain at home during end of life care[5]

Findings

The project generated a great deal of learning about what is required to set up and deliver a successful service:

- A dedicated resource is a significant enabler to developing and initiating a service (the pilot sites had a part time post which was sufficient)
- Allow six months for the development and start-up phase – this includes defining and gaining agreement to protocols, raising awareness of the service and up-skilling staff in the use of cannula and infusion pumps.
- Community-based IV diuretics will not be suitable for every patient; consider integrating the service with other complementary services such as community-based subcutaneous diuretics, delivery of parenteral diuretics in ambulatory units or delivery of other community-based IV services such as antibiotics – this will also help support service sustainability.
- The average length of intervention was seven days, but some interventions will take considerably longer. This will need to be taken into account with regard to workload planning, logistics and capacity.
- A seven day service is not essential to provide an effective home based IV diuretics service; the majority of pilots delivered their service over a five day period with patients reverting to oral medication over weekends.
- Sharing roles and responsibilities for the service across the team can help minimise capacity challenges.
- Where possible consider integrating with other teams to spread the workload even further and ensure a robust community mechanism is in place.
- The logistics of offering home-based IV diuretics in rural communities are more challenging than in an urban setting; a team approach is essential to ensure service delivery and to make it a viable treatment option.
- Fewer patients may be treated than expected - not all patients are suitable for IV diuretics at home; in addition, in some cases, the comprehensive assessment and optimisation of HF treatment undertaken in the work-up for IV diuretics in the community may avoid the need for this intervention.
- Given relatively low patient numbers, maintaining competence in cannula insertion can be a challenge; staff need to be regularly involved in delivery of this treatment to maintain competence, and where possible it is helpful to have back-up clinical support who can be called upon when staff encounter difficulties with inserting cannula.
- Defining optimal diuretics dosing and treatment duration is outside the remit of this evaluation – this is individual to each patient. However this project demonstrated that higher doses (up to 250 mg of furosemide) can be safely administered in a home setting.

10 reasons to introduce IV diuretics in a community setting

1. Aligns with the NHS policy direction of locating services as close to the patient as possible, and supports delivery of key outcomes such as the Cardiovascular Outcomes Framework.
2. Aligns with most patients' and carers' preferred place of care, can be delivered to patients who live alone and supports patient centred care at end of life.
3. Is safe, and appears to present no additional risks compared with in-patient IV diuretics; however, clinical governance arrangements need to be robust.
4. With robust clinical governance arrangements in place, community based IV diuretics administration is safe, with risks equivalent to those associated with in-patient therapy.
5. Avoids hospital admission for many HF patients and may have the potential to facilitate early supported discharge.
6. Is considerably less expensive to deliver than hospitalisation for similar treatment.
7. Encourages the development of an integrated approach to care.
8. Acts as a catalyst for proactive and holistic management of HF patients, including optimising treatment and ensuring wider care needs are assessed and met.
9. Improves patients' and carers' knowledge about HF and supporting them to self-manage their condition more effectively.
10. Further develops the skills competencies and knowledge of community Heart Failure Nurse Service teams and of other associated community based teams (e.g. district nursing).

1. National Heart Failure Audit 2013. www.ucl.ac.uk/nicor/audits/heartfailure
2. The British Heart Foundation and Big Lottery Fund heart failure specialist nurse services in England – full report: https://www.bhf.org.uk/publications/about-bhf/g234-heart-failure-nurse-services-in-england---full-final-report-2008
   The British Heart Foundation and Big Lottery Fund heart failure specialist nurse services in England – exec summary: https://www.bhf.org.uk/publications/about-bhf/g235-heart-failure-nurse-services-in-england---executive-summary
3. BHF Cardiovascular Disease Statistics 2014.
4. National Institute for Health and Care Excellence (2010) chronic heart failure: Management of chronic heart failure in adults in primary and secondary care. NICE clinical guideline 108. http://www.nice.org/guidance/cg108
5. Brightpurpose. Evaluation of IV Diuretics Pilot for British Heart Foundation. Final Report. June 2014.

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