Setting up and running a community IV therapy clinic

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The challenge of providing safe and effective care closer to home for patients requiring intravenous (IV) therapy but who are not housebound can be achieved by developing community clinics. However, it is imperative that governance procedures are in place to protect the patient and the organisation. It is also recommended that medicine management is effective, infection control processes are reliable, and clinical audit is performed. Community nurses have a wealth of knowledge and experience which can be used to deliver the government’s promise of community care, provide patients with a choice of where to receive their care and deliver effective treatment in an ever-changing NHS.

**KEYWORDS:**
- IV therapy
- Nurse-led
- Antimicrobial treatment
- Infections

Moving care to the community has been a UK-wide health and social care priority for more than a decade (Royal College of Nursing [RCN], 2013). With an ever-aging population and the reduction in the number of hospital beds, more care needs to be provided in the community setting.

To respond to this national target at a local level, a community nurse-led intravenous (IV) therapy clinic was developed in Dudley, West Midlands. This clinic houses two separate services: an oncology outreach clinic for cancer patients with central venous catheters that require line flushing, blood sampling, exit site dressing and removal of cytotoxic infusers; and an IV antibiotic clinic for patients receiving outpatient parenteral antimicrobial therapy (OPAT).

Patients with the following specific conditions can be treated in this nurse-led community clinic:
- Cellulitis, including skin and soft tissue infections
- Complex urinary tract infections including pyelonephritis
- Diabetic foot ulcers with or without osteomyelitis
- *Pseudomonas* infections in patients with bronchiectasis
- Osteomyelitis
- Septic arthritis.

**BACKGROUND**

In April 2011 as part of the government’s ‘transforming community services programme’, adult community services in the author’s locality were merged with acute services to form the Dudley Group NHS Foundation Trust. The management team scoped local services to see which could be transferred into the community to improve the capacity within the hospital setting and provide care for patients closer to home.

**Challenges**

The author was tasked with developing the community clinics with support from both management and the transformation team. As a district nurse specialist practitioner with previous hospital experience...
In some rare cases (approximately between 1–5 in 10,000) the patient can experience a severe and potentially life-threatening allergic reaction to the antibiotic known as anaphylaxis. Symptoms include:

- Rapid heartbeat
- Breathing difficulties caused by swelling of mucus membranes
- Sudden anxiety
- Sudden drop in blood pressure
- Unconsciousness.

Anaphylaxis is potentially a life-threatening medical emergency and requires immediate treatment.

Source: www.nhs.uk

in all forms of IV therapy, the job of developing the clinics was an exciting challenge.

The clinic building is situated on the ground floor of a large health and social care centre, which is in a central location for the borough, less than five miles away from the hospital. The clinic building has free car parking facilities for patients and is close to a main bus route. The non-urgent ambulance transport service also assists in bringing patients to and from the centre.

**Governance**

To ensure that the care delivered in the community clinics was as good as that in the hospital, it was imperative that the governance procedures were effective and fit for purpose (Figure 1).

As recommended by Hatchett (2008), key stakeholders, including members of the clinical commissioning group; managers; medical consultants; pharmacists; clinical skills facilitators; and infection control nurse specialists, were consulted. Comments included that having support from multidisciplinary professionals is invaluable when setting up nurse-led services.

Operational policies, clinical guidelines and a standard operating procedure were written and sent for consultation to the key stakeholders before the ratification process. These documents then went through a rigorous governance procedure and were ratified by the drug and therapeutic committee, policy group and the risk and assurance committee, before becoming operational.

The risk of patients receiving IV therapy in a community clinic was thoroughly looked into and the risk assessments logged at trust board level.

Systems were also put in place to ensure patient safety, including a patient information leaflet describing care of the vascular access device for both oncology and OPAT patients. The oncology patient information leaflet reiterated the need for patients to check their temperature at least daily, as well as who they should contact if their temperature rose above 37.5°C. The OPAT patient information leaflet described symptoms of allergic reaction and what to do in the case of allergic symptoms (see Red Flag box above). The leaflets and patient appointment cards also had the telephone contact numbers for the community IV team, which were available 24 hours per day, 365 days per year.

To further reduce the risk of allergic reactions, patients received their first dose of IV antibiotic in hospital and their allergy status was checked and recorded before they began the OPAT service and at each patient visit thereafter (National Institute for Health and Care Excellence [NICE], 2016). There was also an anaphylaxis kit in the community clinic alongside the associated resuscitation equipment and all the community IV nurses were trained in intermediate life support. OPAT patients were always asked to wait for half an hour after their IV drug administration to make sure that they felt well enough to leave the clinic and this was also documented.

**MEDICINE MATTERS**

The close working relationships

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**Figure 1.**

A clinical governance matrix.
between specialist principle pharmacists, prescribing clinicians and the community nurses who would actually be administering the medications allowed any issues surrounding medicine management to be discussed and resolved.

To promote central venous catheter patency, sodium chloride pre-filled syringes were classed as a medical device (rather than a prescription-only medicine due to the way in which the sterile sodium chloride was packaged) and a patient group directive (PGD) was written for the use of heparinised sodium, which was also administered to promote catheter patency if the catheter was not in daily use. A PGD was needed because patients with central venous catheters could not be individually identified before they presented for treatment (NHS, 2016).

To instruct the community nurse to administer prescribed medication, a drug authorisation form was devised. This form contains patient identifiable demographic details, including:

- Name, NHS number, date of birth, etc
- Details of any known allergies
- Weight
- Drug to be administered

Patients requiring OPAT have their IV antibiotic medication prescribed and dispensed through hospital pharmacy, however, all diluents (diluting agent) and flushes are kept as stock in the clinic. Metal lockable cupboards were obtained to store the stock of medications and the specialist principle pharmacists performed a site visit to check that the cupboards complied with the trust’s medicines management policy.

An audit of pharmacy stock is performed monthly and further stock is requisitioned from the hospital pharmacy. In addition to stock medication, patient-specific medication or wound care dressings are prescribed using FP10 by the non-medical prescribers within the community IV nursing team. The patient’s GP is informed by fax of any ingestible medication prescribed, for example when a patient is switched from IV to oral antibiotics or when analgesia and aperients (drugs used to relieve constipation) are prescribed for oncology patients.

INFECTION CONTROL

The lead infection control nurse assessed the clinic room before the services were launched. The clinic room has hand-washing facilities, suitable flooring and ventilation systems. It is serviced twice-daily by a dedicated cleaning company and waste is segregated into non-clinical bins, clinical waste bins and sharps containers. It is the responsibility of the cleaning company to change the bins, but the nursing staff are responsible for assembling the sharps bin, ensuring sharps are disposed of in these bins, locking them when three-quarters full and disposing them in a double-locked container.

The nurses’ infection control processes are audited monthly and electronically collated by a national system. As these results are returned to the trust’s infection control department, the trust can be confident that any patients seen in the community clinic to date have received 100% harm-free infection control procedures.

CLINICAL SKILLS AND COMPETENCE

Linking with the trust’s clinical skills facilitators enabled community nurses to be up-skilled in all areas of IV therapy. All of the community nurses were already competent in Hickman line care (a central venous catheter used for the administration of medications, as well as the withdrawal of blood and phlebotomy. However, revision of IV drug administration and cannulation improved the professional development of the community nurses. Training logs and completed competency documents ensured that treatment given in the community clinic was identical to that given in the hospital.

In accordance with Nursing and Midwifery Council (NMC) requirements, the community nurses’ professional portfolios are examined during their annual appraisal and the lead nurse ensures that mandatory training is up to date by consulting the trust’s mandatory training report on a monthly basis (NMC, 2009, 2015).

AUDIT

It has already been mentioned that infection control and medicine’s management is audited monthly, but even before the clinics became operational it was accepted that the new systems would require auditing to prove their effectiveness to the organisation.

A secure quantitative database was produced and populated to detail each patient that was treated in the community with IV antibiotics. The database collates patients’ details and diagnoses, the referring clinical commissioning group (CCG), the amount of days the patient was treated in the community and how many days of hospital bed capacity this freed-up. The database also records if a patient is readmitted, thus capturing treatment failure. This...
data can be triangulated for accuracy by checking it against community nursing documentation and NHS Care Records Service (NCRS) data.

The NCRS data reports help to confirm the amount of patient referrals and amount of nurse to patient contacts, as well as collating the treatment coding for each contact. However, all of these statistics are worthless if patient experience is not examined. A joint policy between the Department of Health (DH), NHS Commissioning Board and Queen’s Nursing Institute (QNI) (DH, 2013) stipulated that enhancing the patient experience was fundamental to the way that community nursing teams work to ensure that services are fit for purpose and deliver high-quality care for local people.

It is therefore imperative that the community nurses’ work with the trust’s clinical audit and communication departments to examine the patient experience of these new services. This is evaluated using a paper questionnaire, which can be translated into various languages if required.

In the first year, there was a successful return of 76% and the results were positive, with 100% of patients agreeing that they were satisfied with the service overall and that it was very convenient for them. The questionnaire is now sent out each year to a randomly selected cohort of patients.

The audit statistics as well as the qualitative patient comments from the questionnaire form the community IV clinic annual report. This report is circulated throughout the trust and forms part of the trust’s annual report. The service is growing month-on-month as the capacity within the acute hospital service is increased.

**SIGNPOSTING**

Another and probably less-reported benefit of the community IV clinic is that patients are treated as individuals, holistically assessed and then signposted to other services, which may be run by the NHS, the council or linked to voluntary organisations. By having experienced district and community nurses working in the clinic, knowledge about the local community can be shared with patients or family, to ensure that patient-focused and compassionate care is delivered.

**THE FUTURE**

Although it can be demonstrated that community nurse clinics enable patients to be treated closer to home, the future of these services is difficult to predict. There is little evidence to show that there is an increase in investment in community services or workforce (RCN, 2013) and the numbers of qualified district nurses continues to fall (QNI, 2014).

However, government policy does encourage more care within the community. Perhaps it is time for district and community nurses to properly publicise the innovative care they are delivering in the community and which benefits patients and the NHS overall.

**CONCLUSION**

This article has demonstrated that community nurse-led IV clinics provide patients with a choice of environment in which to receive their care. The author’s service has delivered high levels of patient satisfaction and increased the bed capacity within the local acute hospital.

In spite of this, clinicians need to demonstrate adherence to clinical governance, medicine management and infection control if they are to harness innovation and provide multidisciplinary collaboration in care.

**REFERENCES**


**KEY POINTS**

- The challenge of providing safe and effective care closer to home for patients requiring intravenous therapy but who are not housebound can be achieved by developing community clinics.
- It is imperative that governance procedures are in place to protect the patient and the organisation.
- It is also very important that medicines management is effective, infection control processes are reliable and clinical audit is performed.
- Community nurses have a wealth of knowledge and experience which can be used to deliver the government’s promise of community care.
- Community nurses can provide patients with a choice of where to receive their care and deliver effective treatment in an ever-changing NHS.


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