How a patient perspective improved IV therapy

**In this article...**

- Key factors of effective intravenous antibiotic therapy
- Challenges of delivering timely IVAB therapy on a busy ward
- How one patient’s proposal improved care for many patients

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Cystic fibrosis (CF) treatment is demanding and includes courses of intravenous antibiotics (IVAB), for which many patients are admitted to hospital. Our 35-bed adult respiratory ward delivers antibiotic doses up to four times a day but time pressures meant most patients did not receive their antibiotics on time. Many adults with CF are expert patients and plan their care with the healthcare team so a patient-nurse partnership was set up to resolve this issue. This article outlines a radical service change, based on a patient’s comments, that was piloted and received positive feedback.

Cystic fibrosis (CF) is an inherited disease with no cure, although early and aggressive therapy has led to a rise in median survival (36.6 years), and few pediatric deaths. However, improved life expectancy has led to a growing burden of treatment (Cystic Fibrosis Trust, 2014). The disease mainly affects the pulmonary and gastrointestinal systems, although comorbidities include diabetes, liver disease, osteoporosis and arthropathies (Balfour-Lynn and Elborn, 2007). Treatment is daily, time-consuming and lifelong. As health deteriorates, requirements increase, often leading to frequent hospitalisation for intravenous antibiotic (IVAB) therapy (Conway et al, 2014; Döring et al, 2012; Cystic Fibrosis Trust, 2011). Foulis Ward at Royal Brompton and Harefield Foundation Trust in London provides care for patients with chronic respiratory conditions, primarily CF. Adults with CF have managed their disease since childhood and are true partners in their care (Madge, 2006). This can be challenging to health professionals who are not accustomed to having their care questioned, but those who embrace this way of working find it rewarding.

Patients with CF, their families and the multiprofessional team work together to maintain health and manage episodes of exacerbation. This group of expert patients are a source of innovation, as is shown by a radical change in nursing practice that originated from a disgruntled patient.

Administration of medication is an important and crucial aspect of nursing practice (Greenstein, 2009). Timing of administration is vital to achieve optimum levels of effectiveness for many drugs, particularly intravenous (IV) medication, increasingly complex and multiple IV medication regimens require:

- Equipment selection;
- Medication preparation;
- Checking;
- Administration, which can be lengthy.

Key factors are outlined in Fig 1. Setting priorities and efficient time management are necessary to execute the care plan safely and effectively (Hall, 2011).

People with CF are regularly admitted with infective exacerbations for targeted and closely monitored pharmacological therapy, attention to nutritional status and airway clearance (Horsley, 2010; Orenstein, 2004). Key in this cocktail of treatments are the increasingly vast numbers of complex

**5 key points**

1. Providing timely care on busy wards is often challenging
2. Patients can offer invaluable suggestions that will improve their care
3. Radical change in nursing practice need not be complex
4. Patient-nurse partnerships can have a positive effect on clinical practice
5. It is vital to pilot and evaluate new systems before they are introduced

Timing of antibiotic administration is vital to achieve effective blood levels.
IVAB therapy did not create the same issues. As a result, the new schedule focused on IV therapy being administered three times a day.

**Administration distribution.** The ward team suggested splitting the thrice-daily delivery into three groups: early, mid, and late. The patients on the ward at the time voted on the options. The schedule was trialled for three weeks (>1,000 doses) to refine the times. The most popular options were retained and grouped (Table 1). Patients were given choice of which option they wanted when admitted to the ward.

### Patient evaluation

The new schedule was piloted for a month with about 50 patients. Those who received IVAB three times a day were asked for feedback, which was positive, and included:

- “Good plan, good option”;
- “I like my IVs early, especially when I’m unwell”;
- “Works well, even if later. Perfect choice”;
- “Works with other plans for the day”;
- “Good time schedule. Good times”;
- “Good timing, especially for body-clock timing”.

### Conclusion

Although partnership in care is often recommended by governments, health services and patient groups, there are few documented examples. Healthcare workers often see patients at a time of crisis and know little about their daily lives. However, in addition to becoming expert in both the clinical and management aspects of their illness, patients with lifelong conditions may also have skills from their employment or hobbies that can contribute to the organisation or delivery of care. Adults with CF are used to forming partnerships for their care management, which is an example of patients and nurses working together to overcome a treatment issue.

This initiative has not only solved a management problem but has also contributed to the cohesiveness of the ward nursing team and boosted staff confidence in responding positively to patient questions. Enthusiasm about their ability to bring about change has resulted in nurses looking at further developments including 24-hour continuous infusions and a change in handover times, both of which allow for improved delivery of care. Patients now know they can be part of a positive change on the ward and nurses understand that change does not have to be complicated or instigated by external forces. NT

*Not patient’s real name*

### References


Cystic Fibrosis Trust (2011) Standards for the Clinical Care of Children and Adults with Cystic Fibrosis in the UK. Bit.ly/CFStandards2011


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**TABLE 1 ADMINISTRATION TIME OPTIONS FOR IV**

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<thead>
<tr>
<th>Group 1</th>
<th>Group 2</th>
<th>Group 3</th>
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<tbody>
<tr>
<td>6am</td>
<td>8am</td>
<td>9am</td>
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<tr>
<td>2pm</td>
<td>4pm</td>
<td>5pm</td>
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<tr>
<td>10pm</td>
<td>Midnight</td>
<td>1am</td>
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**FIG 1. FACTORS IN EFFECTIVE IVAB**

- Patients should be given a choice of medication times to suit their needs
- Intravenous antibiotic therapy
- Timing of IV antibiotic administration is vital to achieve effective blood levels
- Effectiveness has a higher priority to patients than convenience
- Patients have useful ideas on how to manage care delivery

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