Emergency department crowding: Factors influencing flow

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Chapter 10

A flexible acute admission unit to decrease length of stay of admitted emergency department patients: emergency nurses’ perceptions

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SUMMARY

The Medical Centre Haaglanden, the Hague, the Netherlands, has opened a flexible acute admission unit to increase throughput of acute patients. The flexible acute admission unit consists of 15 inpatient beds located on different wards that are set aside for patients from the emergency department when all of the beds on specialty wards are being used. A qualitative evaluation of the flexible acute admission unit has revealed that it has reduced emergency nurses’ workload and allowed them more time to see and treat patients. This suggests that the introduction of flexible acute admission units may address similar problems of emergency department throughput in the United Kingdom.
INTRODUCTION

One of the major causes of overcrowding in emergency departments (EDs) is the need for patients to wait until beds become available [1]. These waits are largely determined by the acute and critical care bed capacity of the hospitals concerned [2].

Long waits in emergency departments are a patient safety risk [3], causes patients to leave without being seen [4] and increases inpatient mortality [5]. Ensuring that inpatient beds are available when they are required is essential, therefore, if emergency departments are to operate efficiently while meeting acceptable levels of risk [6]. Research has demonstrated that overcrowding in emergency departments can be reduced most effectively by moving admitted patients to inpatient settings as rapidly as possible [7].

Measures to decrease the number of admitted patients waiting for beds include the allocation of space in or near emergency departments for use as waiting areas, known as short-stay or acute-admission units [8-11], or the adoption of a full-capacity protocol, by which admitted patients are sent to wait in corridors in other wards until inpatient beds are available [3, 12, 13].

Where the full-capacity protocol is adopted, inpatient wards cease to be shielded from hospital overflow. Finding beds for patients becomes a hospital-wide, rather than an ED-only, problem [14], and doctors and other staff are more motivated to make beds available [15].

The Medical Centre Haaglanden (MCH) emergency department has had overcrowding problems for several years and, as a result, its staff have been under growing pressure to improve patient flow.

Although there has been spare capacity in the MCH, ED staff have experienced difficulties in obtaining inpatient beds because specialists and staff have been reluctant to admit patients from other specialties to ‘their’ beds. Instead, patients have been transferred to other hospitals, and have had to occupy valuable space in the emergency department while they wait for their transfers to other hospitals.

At the MCH, the full-capacity protocol was adapted to create a ‘flexible’ acute admission unit (FAAU), in which at least 15 inpatient beds are allocated daily and out-of-hours on several wards throughout the hospital. Children, pregnant women and patients waiting for admission to coronary care or intensive care units are excluded from the FAAU.
The FAAU is not an ED admissions unit, in which diagnoses have yet to be determined. Instead, FAAU beds are intended for patients whom decisions to admit have already been made, but no standard inpatient beds are available in the appropriate specialties.

The unit is expected to increase bed flexibility; that is, to ensure that beds that are temporarily empty but for which there are sufficient staff and equipment, are allocated for acute admissions. Such flexibility supports the transfer of admitted patients from the emergency department to other floors.

Implementation of the FAAU requires the energetic management of existing hospital resources. An admissions coordinator scouts for empty beds on every floor during the daily bed-management rounds at 3 p.m. Empty beds are changed to FAAU beds from 4 p.m. until 8 a.m. the next day. If possible, patients are transferred during office hours from the FAAU beds to the specialty wards.

Because the influx of patients into emergency departments is reasonable predictable (Greene 2007), the number of inpatient beds needed may be assessed in advance. In the MCH, an average of ten patients a day are admitted out-of-hours to the wards, which means that no more than 15 dedicated FAAU beds are needed during the evenings and nights.

QUALITATIVE STUDY

The authors, who are awaiting the results of quantitative research into the FAAU, undertook a qualitative evaluation of staff experiences of the initiative to identify their opinions, perceived problems and how these can be overcome.

Data were collected by asking all nurses in the emergency department three open questions by email and by including them in a focus group. The three questions were:

- What do you think about the FAAU?
- What are the advantages?
- What are the disadvantages?

These questions were sent to the nurses by email to allow them to comment on anything they thought was important, at any length. The nurses were also given written and verbal explanations of the purpose of the study and how the data would be used.

Of the 42 nurses in the emergency department, 33 (79 per cent), comprising seven males and 26 females, responded to the emails. The lengths of response ranged from 44 to 491 words.
Invitations to participate in the focus group were sent in the weekly emailed newsletter to all 42 emergency nurses. Seven (17 per cent) comprising two males and five females, agreed to take part and the focus group was held on December 21 2009.

The focus group began with an introduction of the informed consent process, including consent to the discussion being recorded for analysis. Confidentiality was maintained and all data were stored securely so that only the researchers had access to it. During the meeting, the researchers asked semi-structured questions to clarify responses to the emailed questionnaire.

Recordings of the discussion were then transcribed, and the transcriptions and the emailed responses were analysed using a fundamental qualitative description approach [16].

Two of the researchers extracted, coded and categorised all statements that related to the perceived effects of the FAAU. The data were then organised into seven themes: ED throughput, time, ease, feelings, cultural differences, effects on others, and suggestions. Where there was ambiguity, the final coding was determined by mutual agreement between the researchers.

**Emergency department throughput**

Six of the seven nurses in the focus group said that the implementation of the FAAU had improved ED throughput even though the number of patients had increased and injuries had become more severe over time.

Moreover, because implementation allowed more patients to be admitted to the hospital, waiting times for ambulances to transfer patients to other hospitals had become negligible.

These experiences support Howell et al.'s (2008) [17] findings, that management of available inpatient beds can decrease ED throughput times and ambulance-throughput problems.

However, while finding and allocating beds at MCH has become easier, transfer to the relevant wards can still take a long time, especially to those that have been allocated several patients over short periods of time. In such cases, patients must wait in ED beds and ED throughput decreases.

One nurse claimed that, occasionally, doctors wait until 4 p.m., when FAAU beds are available, before admitting some patients, even though the FAAU was implanted to make the process of admitting patients out-of-hours easier. When doctors wait in this way, ED throughput is unchanged although daytime transfers to other hospitals are reduced.
Time
Hlipala et al. (2005) [18] describe hospital admission processes as ‘fragmented, time consuming and a source of patient and staff dissatisfaction’, and the biggest advantage of the FAAU, according to respondents, is that it decreases their workload and saves them time.

Before implementation of the FAAU, ED nurses were responsible for finding beds, which often meant they had to contact staff in other hospitals and wait for ambulances to transport patients to them. After implementation, however, staff can admit most patients at the serving hospital, if necessary to non-specialty beds. Only intensive care admissions still take as long as they did, but this is because such patients cannot be allocated to FAAU beds and must be monitored carefully until their transfer.

Comments on how FAAU implementation has changed the time taken to transfer patients included:

‘You do not lose hours and hours on the phone,’ Nurse 2.
‘Usually, you can get a patient out of here within half an hour,’ Nurse 7.
‘When you ask the night head nurse for a bed, you immediately know where your patient can go,’ Nurse 4.
‘You can be certain that there are free beds after four o’clock,’ Nurse 1.

Ease
According to Shih et al. (1999) [19], clear rules are needed to ensure flexible bed assignment and to decide which wards should accommodate ED admissions.

All participants in the study said that, after implementation of the FAAU, patients, especially those from the ‘wrong’ specialties, could be admitted more easily.

This is important because, according to one participant, Nurse 5: ‘Sometimes you get neuro patients all night and sometimes you get patients with pulmonary complaints all night.’

Respondents claimed that, before implementation of the FAAU, ward staff could refuse to admit patients even though they had beds available and their reasons for doing so were sometimes unclear. They would say, for example, that they could not ‘handle’ a specific patient or that their manager had decided that ‘no more patients will get in’.

After implementation, however, these situations should not arise. As Nurse 1 said: ‘Now, everybody knows the rules of the game. There is less discussion and, disregarding time-pressed situations, there should be at least 15 beds available on the wards after four o’clock.’
Implementation of the FAAU was a relief to nurses who had experienced high workloads and irritation from discussing patient admissions. Nurse 1, for example, said that cooperation and communication between the emergency department and other hospital wards ‘is better since the rules are clear’.

However, where the rules about patient admission remain unclear, for example when patients must be admitted to specific parts of MCH, nurses still experience problems doing so. Problems can also arise at weekends, when the FAAU does not operate and when hospital ward staff, especially those who are busy or inexperienced, can be reluctant to admit patients.

On this subject, Nurse 3 noted: ‘Good communication is crucial to get as many people as possible admitted without hassle.’

Meanwhile, Nurse 1 said: ‘It is better than it used to be, when we were told that there are no beds and that is that.’

Feelings
Stress among care providers can lead to burnout and loss of skilled staff [20]. In discussing how FAAU bed management affected how they felt about the admission process, respondents’ comments included:

‘Before, sometimes, everything was just full up, and there you were with all your admissions,’ Nurse 2.
‘You know those 15 beds are there,’ Nurse 2.
‘You feel like you always have some room,’ Nurse 5.
‘It is a relief,’ Nurse 3.

Respondents also said that they like to have an overview of the available beds. Even when long periods of time pass until patients leave the emergency department after beds have been reserved, the fact that beds have been made available gives staff a feeling of certainty.

Nurse 3 said of having an overview of available beds: ‘You can attend to other patients.’

Nurse 2 said: ‘You can get it out of your mind. You do not feel the pressure.’

Cultural differences
Distrust arising from perceived cultural differences between groups of staff can hinder the patient-admission process. These perceived differences are between staff ‘downstairs’, in the emergency department, and those ‘upstairs’, in other hospital wards. For example, while ED staff must take their lunch breaks if and when they have the time, ward staff take them at the same time and for the same duration every day.
This leads to irritation among ED staff when the ED waiting room is full and patients must be admitted while ward staff are at lunch.

As Nurse 3 said: ‘If the personnel upstairs are eating, it is impossible for them to admit any patients. Like we have time for lunch.’

Emergency nurses sometimes think that ward staff are reluctant to admit patients and hold back available beds. Their excuses for doing so include:

‘The severity of the injuries is too high,’ Nurse 6.
‘Because of sickness of personnel,’ Nurse 7.
‘Because there are agreements with the manager,’ Nurse 3.

These kinds of complaints can be found in the literature. Sorelle (2001) [20], for example, cites an emergency physician’s comment on the overcrowding problem: ‘There are often beds available but emergency nurses cannot get patients into them because someone is hiding them or using them for more financially attractive cases. You can only meet so much and have so many memos written before you get exhausted by it.’

Nurse 1 said of the situation: ‘I keep finding this strange.’ Nurse 4 was more blunt, saying: ‘Upstairs, they cheat.’

Nurse 3, meanwhile, described the wards as ‘a grey area’ and Nurse 2 called them ‘the twilight zone’.

Since the implementation of the FAAU, these problems still arise and vary by day and ward, but, according to Nurse 1, are ‘nothing compared to how it was before’.

The new way of working, Nurse 6 said, ‘keeps everybody involved with the acute admissions’.

**Effects on others**

For patients, there are advantages and disadvantages in the FAAU. It has reduced the number of transfers to other hospitals and ensures that patients are admitted earlier.

However, since patients are admitted to the ‘wrong’ specialty wards, they must often be transferred again, which is inconvenient for them and for staff.

Respondents acknowledged that there are advantages and disadvantages in the FAAU for other ward staff too. In wards with many unoccupied beds, for example, acute admission can be burdensome, especially if several take place during a single evening shift.
Emergency nurses cannot therefore expect ward staff to come to the emergency department to organise patient admissions within five minutes of being called.

When it is clear which beds are unoccupied, ED staff try to spread admissions over different wards.

Ward staff may be unfamiliar with some patients’ symptoms and illnesses, or think that they cannot provide patients with optimal care.

Respondents were uncertain about the importance of this. Nurse 6 said: ‘On the one hand, nurses should be able to turn their hands to anything and be able to ask questions or call out when a patient’s condition changes. On the other, some cases are really complex.’

**DISCUSSION**

**Improvements**

Although all respondents said that they were satisfied with the FAAU, they added that there is room for improvement. The minimum of 15 FAAU beds is not always reached.

Several respondents wanted the number of FAAU beds to be increased, to be ‘on the safe side’; although Nurse 1 said the number ‘usually seems to be enough’. Some respondents said they would like the FAAU to operate at weekends.

For the system to work, everyone involved in it in the emergency department and on the wards must know how it works. Yet, emergency nurses believe strongly that there should be no discussion between them and ward staff about admitting patients to FAAU beds, particularly in time-pressed circumstances.

At the emergency nurses’ request, therefore, signs were put on all FAAU beds to identify them as free for acute admission without any need for discussion. Ward staff, however, thought these were childish and unnecessary, so they were taken down.

Other methods of encouraging ward staff to admit acute patients without discussion were suggested, therefore.
One of these was to ask each ward nurse to spend an evening in the emergency department to see the pressure on ED beds for themselves, and to promote a greater understanding between them and ED staff. This was not followed up because, over time, the FAAU has become well-enough understood by ward staff that far less discussion is needed during admissions.

Another suggestion, that ward nurses should receive extra training in the care of acute patients to overcome their reluctance to admit such patients from other specialties, has been accepted and relevant clinical lessons are being organised.

**Limitations**

The purpose of this study was to record and describe emergency nurses’ views of the FAAU, and to identify perceived consequences, difficulties and suggestions for improvements.

Although the results are specific to MCH, ED overcrowding occurs and can be addressed in many hospitals in a similar way.

In the study, the sample of emergency nurses was not collected randomly. Most of the participants work as head nurses during night shifts and must cope with admission problems regularly. They probably had a special interest in the FAAU, therefore, and may have been more motivated to participate in the study than some of their colleagues.

Although the research sample was small, data saturation was achieved and is indicated by the high level of agreement between the answers. Actual data on throughput were not included in the study. Quantitative data have recently been collected and will be discussed in a separate article.

Emergency nurses identified improvements in the admission process after implementation of the FAAU, but these will not necessarily be replicated in the quantitative results.

**CONCLUSION**

The study’s findings indicate that emergency nurses are satisfied with the FAAU intervention. Their workloads have decreased and, in knowing that beds are always available for acute admissions, they are under less stress. However, mutual understanding among, and communication between, ED and other hospital staff can still be improved.
REFERENCES


