# Supporting frequent attenders to reduce their visits to an emergency department

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#### **Abstract**

Frequent attenders to emergency departments (EDs) are a heterogeneous group who have traditionally been patched up and discharged with little support. This makes them vulnerable to over investigation and they often have a poor experience in EDs, which can cause frustration among the staff who work with them. This article reviews the literature on frequent ED attenders and explores the related issues. It also describes how a multidisciplinary team (MDT) was formed to identify people in this group, evaluate their attendances and notes to understand their individual needs and identify strategies to improve their options and care while in the ED. The rationale for the formation of the MDT, the process of selecting patients and the interventions commonly used are discussed, as well as the benefits to patients, staff and the trust.

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#### **Keywords**

care plans, emergency care, multidisciplinary teams, patients, patient assessment, patient behaviour, patient-centred care, patient engagement, patient outcomes

#### Introduction

Only 3.8%-5% of the population repeatedly attend healthcare facilities, but this small cohort accounts for a disproportionate 17%-28% of total emergency department (ED) visits annually in the UK (Kilian et al 2017). The NHS Patient Service Programme highlights that 16% of patients who attend EDs have been to the same department before with the same issue or condition, of which 5% have reattended in the previous week (Care Quality Commission (CQC) 2018). These patients often have complex medical and psychological needs, chaotic lifestyles, unexplained medical signs and symptoms and are often considered vulnerable (Daniels et al 2017, Moe et al 2017).

Evidence suggests that these patients also access other health and social care facilities frequently, have high admission rates and a significant burden of chronic disease (Kilian et al 2017, Royal College of Emergency Medicine (RCEM) 2017). Further, frequent attendance at EDs can negatively affect ED staff causing feelings of frustration towards these patients and anxiety about occult diagnoses associated with multiple visits (Daniels et al 2017). The RCEM (2017) advises careful consideration of this cohort of patients due to their risk of increased mortality.

Some studies demonstrate that patients with personalised care plans have reduced ED use and subsequent hospital admissions (Grimmer-Somers et al 2010, Stokes-Buzzelli et al 2010, Hudon et al 2016). However, this reduction does not correlate to increased primary care activity (Kilian et al 2017), which suggests that patients follow the signposting and advice associated with personal support plans and access appropriate services.

## Issues associated with frequent attenders

The effect of frequent attenders on EDs is a growing issue in the UK and elsewhere (LaCalle and Rabin 2010). Research highlights that this group also accesses other health and social care services more frequently (RCEM 2017) and often have complex and diverse needs (Neale et al 2017), such as chronic medical problems which are associated with mental health issues and complicated social problems (Kilian et al 2017).

Hospital and ED alcohol-related admissions have doubled in the UK in the past eight years (Blackwood et al 2017) and frequent attenders may have contributed to this increase because of the prevalence of substance addiction in this group compared to the general population

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(Sandoval et al 2010, Doupe et al 2012, Neale et al 2017, Nambiar et al 2017). Frequent attenders pose challenges for many reasons, including risk to health and increased risk of death (Moe et al 2015) as patients may have unmet medical needs that need to be addressed in EDs. This may be because they cannot register with a GP due to homelessness or cannot make and keep appointments due to chaotic lifestyles. There are cost implications associated with multiple ED attendances and medical admission tariffs, and the lack of additional financial resources to manage this cohort of patients can deter ED clinicians from addressing individual patients' issues.

The definition of a frequent attender and how many visits they accrue is variable and difficult to characterise (Moore et al 2009, LaCalle and Rabin 2010, Shi-En Chan et al 2017), which makes the development of individualised targeted interventions challenging (Locker et al 2007). This article uses the RCEM (2017) definition, which describes frequent attenders as patients who attend an ED five or more times a year. However, it does not specify if this should be with the same complaint so is open to interpretation.

Frequent attenders present at EDs for urgent or non-urgent care during a mental, physical or lifestyle crisis for which they can feel unable to access primary care or other healthcare or support networks (Skinner et al 2008). These patients are treated for their acute presenting complaint only in emergency settings without holistic assessment and ongoing management of long-term conditions, whether physical or psychological. According to Tyrer (2015) most doctors are not trained to recognise stress and anxiety, only to exclude conditions within their own specialty. This means that these patients' social needs are also ignored.

There are growing crowding pressures on UK EDs which can threaten patient safety (CQC 2018). The number of emergency attendances to hospitals has risen by 16% over the past five years and EDs are struggling to meet four-hour performance standards, with greater numbers of patients waiting longer in EDs than in previous years (NHS England 2018). There are significant staff retention and recruitment challenges, particularly in EDs. The Royal College of Nursing (2018) estimates there are around 40,000 vacant nursing posts in England. A potential solution may be proactive case management of frequent attenders, which can improve patients' wellbeing and the cost effectiveness of healthcare visits and reduce ED attendances (Shah et al

2011, Murphy and Neven 2014, Burns 2017, Moe et al 2015).

In the author's ED this has been achieved by sharing information with primary care (Hansagi et al 2001) and case management in which patients undergo medical evaluation and multidisciplinary team (MDT) meetings are held to address their healthcare needs (Peddie et al 2011). Cost savings from tariffs associated with patient attendance and admissions can be reallocated to teams who will manage this cohort of patients more effectively. However, Soril et al (2015) found this approach to be labour intensive and to reach only a small number of patients. Arguably this is another cost challenge, but the long-term savings associated with proactive management of this patient cohort, for example saving on admission tariffs and improving patients' experiences, can be significant.

Interdisciplinary team approaches that address individuals' needs are the most commonly evaluated intervention models (Lee and Davenport 2006, Phillips et al 2006). Although their effectiveness is reported in the literature, there are limitations in terms of what interventions were offered and the outcomes (Kumar and Klein 2013). The mixed results might be explained by a lack of definition of frequent attenders, variation in case management approaches, small sample sizes and variation in study design. International studies can also blur results as other country's healthcare models and settings vary.

The RCEM (2017) guidance on ED frequent attenders recommends taking a multidisciplinary approach with a clinical senior decision maker reviewing attendances and developing management plans that are accessible to all healthcare staff in the hospital. Managing frequent attenders in this way is labour intensive and some studies show that it only benefits small numbers of patients (Ablard et al 2017).

### High-impact users' group

In April 2015 the University Hospitals Bristol NHS Foundation Trust (UHB) high-impact users' (HIU) group was formed to manage this cohort of patients proactively. The primary driver for the service was the need to address the 'revolving door' attendance of some of the regular attenders managed by ED staff. Evidence suggests that EDs are well placed to address issues associated with frequent attenders, including those with unexplained medical signs and symptoms (Jacob et al 2016).

Common signs and symptoms in patients who make multiple ED attendances include chest pain, shortness of breath and abdominal pain, which are associated with a diagnosis of medically unexplained signs and symptoms (Jacob et al 2016). UHB ED staff frequently undertake repeat and unnecessary investigations in this cohort of patients and refer them to inpatient teams or clinics for further investigation. The term HIU used throughout this article refers to patients who are frequent ED attenders and whose attendance has a great effect on the department in terms of their behaviour, for example verbal aggression.

The HIUs who attend UHB's ED often present with drug/alcohol problems, have mental health issues and are homeless. A minority have physical signs and symptoms and it is exceptionally rare for one of these patients to have only a medical problem as a cause of their frequent presentations.

The aim of the HIU group was to share specialised clinical knowledge to support individual patients to make better decisions about their health by addressing their specific issues and formulating a personal support plan. The personal support plan template was designed by the HIU group and aims to capture the relevant information. The aim was that individuals' attendances would reduce as their health and social care issues were addressed. Figure 1 illustrates the members of the HIU group.

All members of the HIU group undertook this work on top of their existing workload which was a huge challenge and meant that they could only look at small numbers of HIUs at first. In 2017, following the submission of a business case, the HIU group received

Figure I. High-impact user multidisciplinary group members



funding from the trust's division of medicine to appoint a part-time HIU nurse coordinator and fund a small amount of the ED consultant's time. This has enabled the group to work more effectively and produce more personal support plans, attend more MDT meetings in and outside the trust, and focus on the needs of, and write more detailed plans for, complex patients.

The group has since expanded to include a homeless health team funded by the local clinical commissioning group, which works under honorary contracts with the trust. This enables the homeless help team to work in the trust and access its internal services and systems while still having access to the services of their own organisations. This team supports existing workstreams related to patient discharge. The homeless help team includes:

- **»** A nurse specialist with a range of experience in ED and mental health.
- » A GP.
- » An outreach worker.
- » A social worker.

#### **Patient selection**

The trust's IT department can generate a list of patients who attend the ED on two or more occasions in a week. This information, which contains patients' names, unique trust number and presenting complaint, is saved securely on a specially designed workspace available to the HIU group only. The number varies weekly from five to 15 patients. The notes of those who have had two or more attendances are reviewed by the ED matron/HIU group coordinator to identify information about the nature of their attendance and the effect they had on the ED during their attendance. For example, their presentation might have required immediate input from security because of known behaviours, or a male member of staff must manage the patient where possible or they require a specialist team alert on arrival.

The same patients often appear on the weekly returns. Those with the highest attendance – or who are deemed appropriate due to the nature of their attendance and the effect they have while in the ED – are nominated for discussion at the next HIU monthly meeting. Issues that trigger concern that patients are HIUs range from:

- » Unacceptable behaviour, such as violence and aggression.
- » Safeguarding concerns.
- » Complex medical, psychological and/or behavioural issues or staff feedback on concerns about behavioural changes.

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Staff often email the ED matron or consultant if they have concerns about individual patients. A maximum of ten patients are discussed at the monthly meeting due to resource limitation and the work involved for group members. Patients remain on the list until the team agrees they can be removed, either because their attendance has reduced to an appropriate level or because all additional support has been explored and implemented.

#### **Actions**

The HIU group discusses individual patients monthly using a variety of sources of information, including their clinical notes and supporting information from primary care, nurse specialists and other representatives. Detailed management plans are devised to address their needs.

As mentioned above, patients are only removed from the list with the teams' agreement, usually due to successful interventions that have helped to reduce their attendance, their engagement with other services involved, when the interventions identified in the personal support plans are working and sustained, or when patients disengage despite the interventions. Patients who have been on the list can return to it if their attendance increases, at which point their personal support plan is reviewed. Patients who are no longer on the list can be identified on the weekly returns list generated by the IT department.

## **Interventions**

A standard letter is sent to patients and their GPs alerting them to the fact they are deemed an HIU and suggesting they meet to review the issues to try to find a way of improving their health needs and put support in place in primary care. Patients who do not have a GP are not excluded, and those who are homeless are contacted through the homeless help team. If patients are not contactable the team still works for them. Personal support plans aim to address certain behaviours, for example signposting to drug or alcohol services. People who present with physical signs and symptoms and who have undergone multiple investigations with negative results are encouraged to manage these with simple measures, for example mindfulness techniques and joining self-help groups.

Clinicians are empowered to avoid repeat, potentially harmful investigations and hospital admissions by following the personal support plans written by the HIU team and read and agreed by all members.

Other specialties are engaged to risk assess and provide safe management plans for people with chronic medical conditions, for example palliative care hospice outreach, remote cardiac monitoring of implanted cardiac defibrillators with phone support and community matrons supporting people with chronic disease. Other interventions include referrals to the medically unexplained symptoms clinic and the cardiac psychology team.

All personal support plans involve:

- » Patients' specialty consultant, if they have one for an existing condition.
- » The ED consultant.
- » An appropriate nurse specialist, for example drug, cardiac or respiratory and other relevant agencies, such as the community drug team.

The personal support plans are shared with patients and their GPs and uploaded to the hospital's electronic notes computer system with an alert so trust staff can access the plans and manage patients appropriately at any time. The personal support plans are automatically copied to the electronic system used by primary care, mental health services and the ambulance service. The names of patients identified as HIUs, and their personal support plan if appropriate, are shared with other local EDs. The aim is to improve the care patients receive across the city and avoid simply shifting their attendance to a neighbouring trust.

In terms of information governance, the shared information is relevant and communicated on an individual basis between the clinicians involved in patients' care. The information is shared to improve patient management and if it is not shared patients are at risk of overexposure to unnecessary tests/investigations as well as missing the help and support they need.

## **Evaluation**

The trust's IT department collated the ED attendances in year one (April 2015 to April 2016) to identify the top 100 frequent attenders. These patients were then looked at individually to determine if they had a mental health diagnosis, such as bipolar disorder, or a mental health presentation, such as self-harm. This information meant the HIU team could calculate the number of patients presenting to the trust with mental health issues. Other data, such as drug or/and alcohol issues and homeless/housing issues, were also extracted.

Data from year one showed that 80% of patients in the UHB HIU group have mental health problems, which is significantly

higher than other trusts that have reported figures as low as 37% (Skinner et al 2008). Homelessness, drug and alcohol issues are also common issues. Primary medical issues in the absence of substance abuse, mental health problems or homelessness are rare. The annual mortality rate in the UHB HIU group is 15%, which is similar to mortality rates associated with laryngeal cancer (Cancer Research UK 2017).

Of the 100 patients monitored in year one, 87 were actively managed with personal support plans and 40 of these 87 patients were removed from the list when their attendance reduced. There were 13 deaths in the first year, of which nine were likely preventable, and included deaths related to alcoholism, hypothermia and untreated sepsis. A total of 47 patients remained on the HIU list at the end of year one. In year two (April 2016 to April 2017) there were seven deaths of which two were preventable, for example from hypothermia, 15 patients were removed from the list of the top 100 and 27 remained on it at the end of the year.

All deaths in the top 100 of patients were manually checked on the trust's computer system and the patient affairs team was contacted for the date and confirmation of cause of death.

## Benefits of the high-impact users' group programme

Benefits for patients and staff are shown in Box 1. Alongside these benefits the trust has made financial savings. Using five patients as an example, who were identified as HIUs early in year one and had the longest period of follow-up, demonstrates an average reduction in hospital admission from 65 per person per year to 12, and an average reduction in ED attendance from 48 per person per year to four, with an overall reduction of 241 to 45 for all five patients. Taking ED attendance and medical admission tariffs into account, the total annual cost for 2015-16 for these five patients was £93,813. When tracked prospectively through the HIU intervention process for 2016-17 the cost reduced to £16,419 making a saving of £77,394 which could be reallocated to support the HIU group to address patients' medical and psychosocial needs more appropriately.

#### Conclusion

With pressures on EDs unlikely to reduce initiatives like this could help reduce overcrowding and associated costs (Hudon et al 2016) and address the multifactorial issues related to HIUs, who are some of the most vulnerable ED patients (Moe et al 2017). Involving various specialties and the HIU group in the provision of safe personal support plans can help manage patients with a range of issues and either reduce their attendance appropriately or the effect of their attendances on EDs by, for example, not exposing them to unnecessary investigations or disjointed care and communication. For example, patients with chronic medical issues can access 'hot clinics' to prevent reaching crisis point and use remote monitoring and referrals to cardiac psychology teams.

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### Box I. Benefits of high-impact users' group project

### Benefits to individual patients' health include:

- >> Improved experience with each emergency department (ED) visit
- >> Empowered to take responsibility for their own health with support from appropriate sources
- » Reduction in stigma from ED staff
- Description >>> Clear boundaries set by medical staff, for example patients who attend frequently are told their attendance may not lead to hospital admission and that a treatment plan will be followed if their presentation aligns with the personal support plan
- » Consistent approach at each patient attendance to the ED, primary care or contact with the ambulance service
- » Signposting to appropriate services in the community rather than using ED as a main healthcare provider
- » Avoidance of risk of iatrogenic injury, for example repeated computed tomography scans with associated radiation dose

#### Staff benefits include:

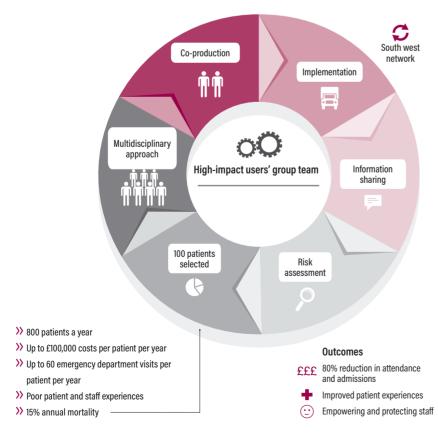
- » Reduction in stress when dealing with potentially challenging patients
- » Provided with risk assessments and clinical guidelines for individual patients formulated by specialist teams in collaboration with patients and primary care staff
- » Protection from risk of violence and aggression or other risk factors by use of detailed personal support plans (managing patients' and staff expectations about what care and interventions need to be delivered and other considerations, for example patients attending for analgesia will know what they will and will not be prescribed for their condition)
- » Referral system for front-line staff to nominate patients they believe would benefit from proactive management by the high-impact users' group

Future considerations include the need for a standard definition of HIUs to support and evaluate the interventions used to support this patient cohort. Various titles are attributed to this group, which can make evaluating and comparing services challenging. UHB ED is planning to review how the top ten patients are identified and is devising a triage system to identify which patients to work with next. This will support the governance of patient selection and make the approach more transparent and will include identifying risk factors, such as homelessness or safeguarding concerns.

The group hopes to explore a method to help identify when patients require no further intervention either because they have been managed to a point that it is no longer required or because there is no meaningful engagement and we cannot support them any further. The author's ED has recently set up a system where ED staff refer patients to the HIU team through the trust's IT system. Staff respond to four questions asking:

- 1. Who the patient is.
- 2. What their concerns are.
- 3. Their unique trust number.
- 4. Who is referring them.

Figure 2. Overview of the benefits of the high-impact users' group team



This system is in its infancy, but has generated some referrals in its first weeks which, interestingly, the HIU group is already aware of and looking to support.

Understanding the characteristics of HIUs and their health needs will:

- » Support preventive interventions.
- » Reduce the risk of harm from unnecessary investigations.
- » Increase patient-centred care.
- » Save on the high costs associated with this group by reducing unnecessary admissions. Designing educational strategies to increase knowledge and awareness of HIUs will help healthcare professionals identify people early so that timely intervention can be instigated and will support a more structured, targeted and multicentred strategy to address these patients' needs. Targeted interventions will help manage patients' complex needs and redirect them in a controlled way to the most appropriate service.

Future considerations include funding and resources to support and expand the HIU team to ensure its sustainability and manage increasing demands. These are important factors to consider if planning a similar service.

The literature is unclear about which interventions offer the most clinically beneficial and cost-effective approach and outcome. For example, care plans compared with case management or nurse-led coordination (Soril et al 2015). What is clear is that interventions, whatever they are, can decrease ED attendances and help improve social outcomes, such as housing (Moe et al 2017).

The approach used in this service improvement project demonstrates that personal support plans and local interventions by an MDT can reduce ED attendances and make cost savings. It also highlights that more work is required to address the variations and approaches associated with this work. A national approach could contribute to improving care on a wider scale and reducing variation associated with patients' geographic locations.

The approach adopted in this project focuses on patients whose attendances have a greater effect on either themselves or the ED team. Using an MDT approach is labour-intensive as it requires staff to invest a significant amount of time in managing patients' multiple issues and involves the wider MDT and community teams to write bespoke personal support plans. This is rewarding for the staff involved, who report great satisfaction in seeing patients' attendances reduce and

hearing from the health community that patients are managing better. The HIU group has also had letters from patients who have been successfully managed through the project.

This project is helping staff to improve standards of care. In 2017 the HIU group won first place in the British Medical Journal Award in the 'prevention' category; was

runner-up in the RCEM annual awards 2017 in the 'patient experience' category; and has been shortlisted for other awards in 2018.

The group is working with the Academic Health Science Network to produce a toolkit that will be disseminated across south west England to support other EDs to set-up groups to support this patient cohort (Figure 2).

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