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Title Page

Evaluation of pilot service to support frequent attenders of urgent care services: a case management approach

Abstract

BACKGROUND: Currently we are experiencing record numbers of visits to Emergency Departments (EDs) in England with an increase of 4.1% from last year. This is also alongside the worst performance for treating patients within 4 hours of arriving at an Emergency Department (Gardner, 2019). A new Frequent Service User Manager (FSUM) service was set up in West Kent to address the issue of those frequently attending EDs and support the well being of these patients.

AIM: To evaluate a new service to address Frequent Service Use of Urgent Care Services

METHODS: Service data on demographics, loneliness, anxiety, quality of life, and urgent health care usage was obtained for those most frequently attending (n=22) a West Kent Emergency Department. Interviews were carried out with a sample of these patients (n=4) to capture their experiences of using the service.

RESULTS: The main presenting symptoms for attending the Emergency Department were pain and alcohol related conditions. After 12 months, loneliness, anxiety and use of urgent care services had reduced. Quality of Life improved from baseline to 4 months but then stabilised at 12 months. The results highlight the important role FSUMs can play in supporting those that frequently attend Emergency Departments.

KEYWORDS: CASE MANAGEMENT, FREQUENT ATTENDERS, URGENT CARE

INTRODUCTION

Frequent Service Users (FSUs), Frequent Attenders (FAs) or High Intensity Users (HIUs) make up a marginal proportion of Emergency Department (ED) visits but are considered to impact on cost and workload and are often not well managed within healthcare settings (Soril et al., 2016). Indeed, Patel et al. (2015) note that FAs account for 38% of all primary care attendance and within NHS Lanarkshire it was identified that around 8,000 patients per month self-referred to an ED at a cost of around £8 million per year (McGuigan & Watson, 2010). Investigations in this area are hampered by a lack of agreement about what constitutes frequent service use with regards to duration (e.g. 6 month or 12 month period), frequency, and type of use (e.g. out-of-hours, NHS 111, Minor Injuries Unit). Indeed, it has been shown that this varies across studies from as low as 3 and as high as 10 visits to an ED over a period of 12 months (Van den Heede & Van de Voorde, 2016).

In terms of characteristics, the age groups linked to higher users are: 32-46, 36-40 and 21-25 (Locker et al. 2007; Moore, Deehan, Seed & Jones, 2009; Daniels, Osborn, Davide & Hill, 2017). Other associated factors with frequent attendance are having a physical or mental health condition; medically unexplained symptoms (MUS) (Locker et al. 2007; Soril et al. 2016, Daniels, Osborn, Davis & Hill, 2017; & Ablard, Coates, Cooper, Parry & Mason, 2017), substance misuse or intoxication (Locker et al. 2007; & Neale, Parkman, Day & Dummond,

2017); pain; late shifts (e.g. Milbrett & Halm, 2009); and low levels of health literacy (Ownby, Acevedo, Jacobs, Caballero, and Waldrop-Valverde, 2014).

Whilst there have been various approaches taken to address Frequent Attenders that have been successful (including CBT, goal setting & peer-to-peer counseling) case management has been the most common intervention employed (see Althaus et al. 2011 review, Bodenmann et al. 2016; & see Hudon, Chouinard, Lambert, Dufour & Krieg. 2016 review). Case management is an approach that contains a number of activities to support patients but these activities can widely differ. The Kings Fund (Ross, Curry & Goodwin, 2011) note there are commonalities to taking a case management approach with the overall aims being to reduce expensive hospital use, improve patient care outcomes and experiences. The following aspects have been identified as core to taking a case management approach by the Kings Fund (Ross et al. 2011): case finding, assessment, care planning, care co-ordination, and if time-limited, case closure. Case management has been shown to be a cost-effective solution for reducing ED visits (Althaus et al. 2011 & Hudon et al. 2016) and admissions (Hudon et al. 2016). Furthermore, other researchers have found it useful for improving patients' navigation of the health care system (Bodenmann et al. 2016 & Kahan et al. 2016) as well as supporting practical needs and providing advocacy (Kahan et al. 2016).

More recently in the UK, a High Intensity User (HIU) Programme continues to be rolled out and within England is already running in 81 health systems with many others in development. The programme was developed in Blackpool with the primary aim to lower frequent attendance at EDs but is thought to lead to reductions in use of other urgent care services. The central element of a HIU programme is to provide personalised care, de-escalating situations and managing relapses by assigning a health professional to identify crisis and pre-crisis triggers in order to reduce or eliminate their occurrence (NHS RightCare,

2019a). There is the challenge here in distinguishing between avoidable ED attendances due to convenience or choice from those resulting from genuine medical need.

FREQUENT SERVICE USER MANAGER - SOUTH EAST ENGLAND

West Kent created their own pilot service in 2017 to address the unmet social, medical, psychological and emotional needs of those frequently using urgent care services, moving away from the medical model of care. This includes: an initial assessment; listening to patients' concerns; acting as a liaison between the patient and other services; building relationships with other stakeholders within and outside of the urgent care system (e.g. charities, mental health trusts, social care, and GPs); and in line with the HIU programme, identifying crisis triggers leading to a co-developed self-management plan. Individuals are encouraged to make contact by phone before a crisis develops. Patients are not formally discharged from the service but, in general, their need for the service reduces over time as their needs have been addressed. This allows patients to re-engage with the service if needed. This fits in line with the King's Fund (Ross et al. 2011) description of a case management approach, with the aim of reducing expensive hospital visits and supporting individuals to self-manage. Patients are identified through the Acute Business Intelligence (BI) Team querying the Emergency Department database for the most frequently attending patients. These patients are triaged for suitability and consented by the ED Specialty Doctor until 25 patients are identified. The information for the consented patients is then passed on to the FSUM. The evaluation aimed to capture the local characteristics of the first cohort of 25 patients that frequently attended EDs, to capture the experiences of those using the service, and to look at patient outcomes and urgent health care service use.

METHOD

Patient and public involvement

The evaluation methods and materials were developed with feedback from the FSUM and the CCG, who provided information on the attendances. Obtaining patient involvement from the service users was challenging due to being a pilot and identifying sufficient suitable and willing patients. Two patients have provided feedback including sense checking the themes and one patient contributed to the write up of this evaluation.

Participants and procedure

From the first cohort of 25 individuals one individual was excluded from the service due to moving out of area, which left 24 individuals at baseline. During the evaluation, two individuals passed away within 4 months (for reasons unrelated to the service), leaving 22 individuals after this time point. As part of the service patients completed quality of life, loneliness and anxiety measures at baseline, 4 months and 12 months. Urgent health care usage is also routinely collected at baseline, 1-4 months, 5-8 months and 9-12 months. Additional to the routine service, interviews were carried out to understand the experiences of those using it. For these interviews, individuals were screened by the FSUM as suitable with eligible individuals being required to have the capacity to consent, have a contact number, be medically well enough, and be willing to be interviewed. Four individuals were willing and interested in being involved and were asked to complete a Contact Details form, which was given to the lead author who then made direct contact. The lead author is part of the same NHS Trust but external to the clinical service and therefore conducted the interviews, which were all over the phone. The interviews were semi-structured, followed a broad topic guide and were digitally recorded, lasting 10-28 minutes.

Ethical considerations

A service evaluation protocol was submitted to the Clinical Audit and Research Team at Kent Community Health NHS Foundation Trust. They confirmed using the HRA decision toolkit that this project comes under evaluation and therefore does not require NHS ethical review. All participants were given the opportunity to ask questions and informed of their right to withdraw at any time without given a reason. Participants had the opportunity to ask questions before giving written consent and participating in interviews. Participants were informed that only the evaluation team would have access to their data and no identifiable information would be reported. Names and telephone numbers were held separately in a password protected Excel file. Electronic data were stored on a password-protected database at the Centre for Health Services Studies (CHSS), University of Kent; hardcopies were stored in a locked filing cabinet at KCHFT.

Design

Mixed method formative evaluation was employed to investigate the early implementation of the new FSUM service. This was considered to be the most suitable approach to assess at the initial stage how the pilot was running and identify areas for further investigation and improvements.

Materials / Measures

The EQ-5D-5L (Herdman et al, 2011) is a self-reported measure of health-related quality of life, developed by EuroQol group, and covers the five domains of mobility, self-care, usual activities, pain/discomfort, and anxiety/depression. Each domain has five statements,

which the respondent ticks against the most relevant one to them. In addition, it has one visual analogue scale asking for a rating of current health status from 'worst imaginable health state' to 'best imaginable health state'. The values range from -0.285 (most serious issues on all domains) to 0.950 (no problems on any of the domains) with values lower than 0 indicating a state of health that is considered to be worse than dead.

Anxiety was measured using the GAD-7 scale (Spitzer, Kroenke, Williams & Löwe), which consists of 7 statements and asks respondents how often, during the past 2 weeks, they were bothered by each symptom. Symptoms included were feeling nervous, trouble relaxing, restlessness, irritability etc. Respondents can answer with the options "not at all", "several days", "over half the days", and "nearly every day". Each response corresponds to a number score, which is then added up at the end to give a total anxiety score, with the higher the score the higher the level of anxiety. In addition, a final statement is added to the scale to assess the difficulty that some of the symptoms have made for the patient to do work, take care of things at home, or to get along with other people, with response options of "not difficult at all", "somewhat difficult", "very difficult", and "extremely difficult".

The De Jong Gierveld 6-item scale Loneliness Scale (De Jong Gierveld and Kamphuis 1985; De Jong Gierveld and Van Tilburg 1999b) was used to measure loneliness, with 3 statements each on both emotional and social loneliness. Respondents could answer to each statement with the categories of "no", "more or less", or "yes", which will then generate a loneliness score. Neutral and positive responses are given a score of 1 for negatively worded questions (items 1-3) whereas the neutral and negative responses are given a score of 1 for positively worded questions (items 4-6). These can then be summed separately to give a total for emotional loneliness and social loneliness, with scores ranging from (0 not lonely to 3 lonely) The scale can be summed overall to give a range (0) Least Lonely to (6) Most Lonely.

Optum used SUS data to provide information for the following; Emergency Department attendances, conveyances by ambulance, non-elective admissions, and MIU attendances.

Topic guides

Topic guides were developed by the lead author and FSUM, which explored experiences of using the service and the impact of this on their overall wellbeing.

DATA ANALYSIS

Anonymised questionnaire and service use data were entered into SPSS version 24.

Descriptive statistics are presented to show the emerging differences at the different time points up to 1 year. All interviews were digitally recorded, transcribed verbatim and stored in NVIVO 12. A thematic analysis was then carried out. The main author read through the transcripts and carried out the initial coding before developing the main themes. A second member of the team (AS) then coded the transcripts using the developed themes.

Discussions were then had to identify any areas missed and any differences were identified and resolved.

RESULTS

Participants' ages ranged 20-86 years old ($M=50.96$ years, $SD = 20.30$) and they presented to the Emergency Department between 5 – 25 times in the four months prior to the service and seen within 0 - 14 days ($M = 2.80$, $SD = 3.69$) after the FSUM made initial contact. The number of contacts each service user had with the FSUM ranged from 1 to 39 with the mean being 10.56 ($SD = 11.11$). The main presenting health complaint was highest for pain ($N=7$) or

alcohol related complaints (N=7), followed by medically unexplained symptoms (N=4) and mental health (N=4) with one individual having falls and another suffering from respiratory problems. Table 1 outlines the characteristics of those using the service, which highlights that all individuals were of White ethnicity, with the majority being female and unemployed. There was a range of deprivation levels with the highest proportion scoring as living in an area with lower levels of relative deprivation. With regards to self-reported outcomes, Table 2 shows that loneliness and anxiety both continued to reduce over the three time periods and that health related quality of life increased from baseline to 4 months and decreased marginally at 1 year.

| Variable | Response | N | % |
|---|-----------------|----------|----------|
| Sex | Male | 7 | 29.2 |
| | Female | 17 | 70.8 |
| Ethnicity | White | 24 | 100.0 |
| Employment | Employed | 6 | 25.0 |
| | Unemployed | 12 | 50.0 |
| | Retired | 6 | 25.0 |
| National Decile of Area Deprivation* | 1 | 1 | 4.2 |
| | 2 | 1 | 4.2 |
| | 3 | 0 | 0.0 |
| | 4 | 6 | 25.0 |
| | 5 | 1 | 4.2 |
| | 6 | 3 | 12.5 |

| | | | |
|----|---|------|--|
| 7 | 5 | 20.8 | Table 1: Characteristics of patients using the service |
| 8 | 1 | 4.2 | |
| 9 | 6 | 25.0 | |
| 10 | 0 | 0.0 | |

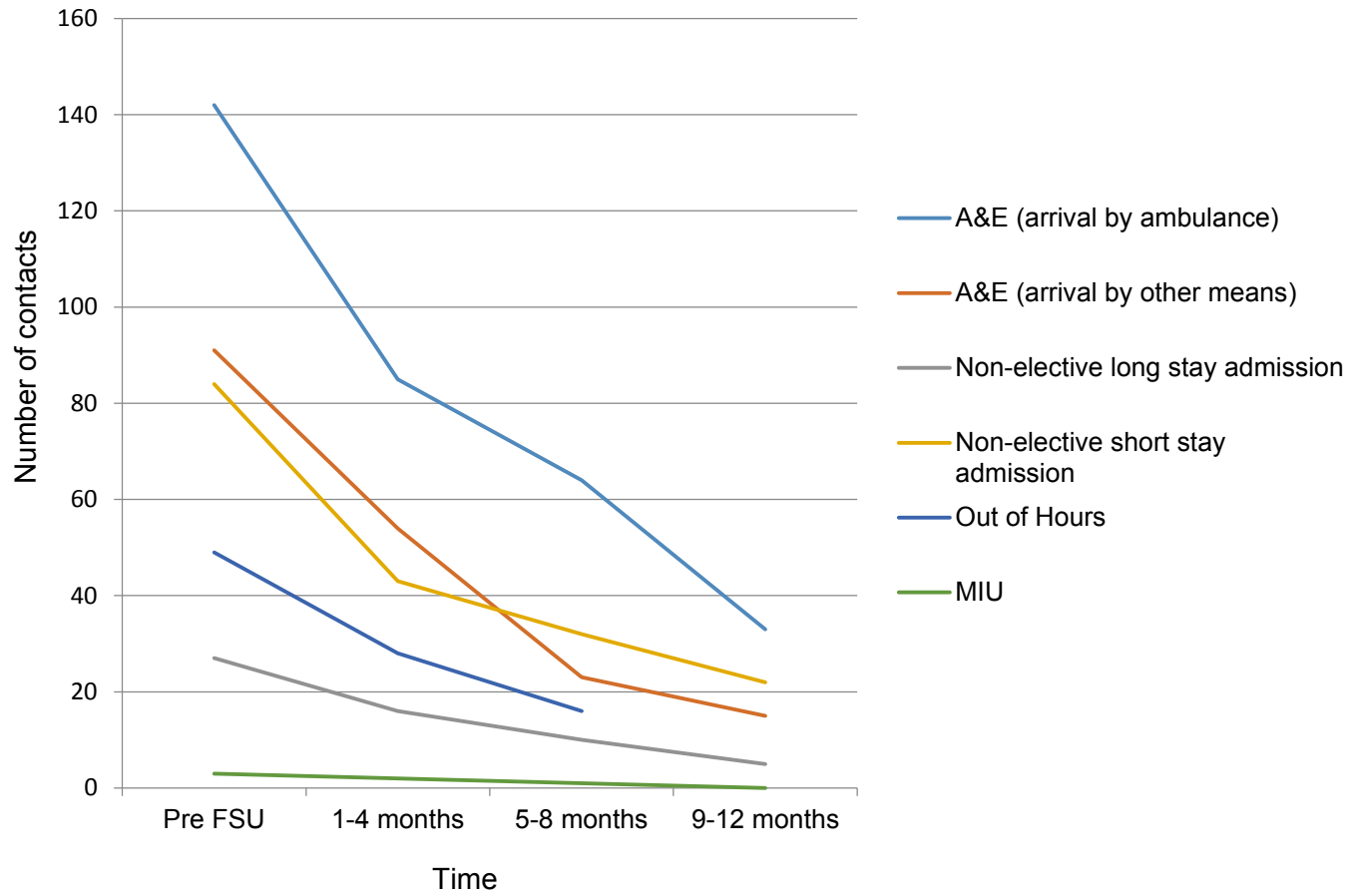
* 1 = 10% most deprived – 10 = 10% least deprived

Table 2: Frequent Service User Anxiety, Loneliness and Quality of Life

| Variable | N T1 | T1 Mean (SD) | N T2 | T2 Mean (SD) | N T3 | T3 Mean (SD) |
|---------------------|-------------|---------------------|-------------|---------------------|-------------|---------------------|
| Anxiety | 17 | 12.59 (7.50) | 14 | 10.00 (6.31) | 14 | 8.57 (7.29) |
| Loneliness | 13 | 3.69 (2.29) | 10 | 3.20 (2.25) | 10 | 3.1 (2.47) |
| EQ5D-5L Mobility | 14 | 2.79 (1.31) | 11 | 2.45 (1.37) | 11 | 2.27 (1.19) |
| EQ5D-5L Self-Care | 14 | 1.93 (1.14) | 11 | 1.72 (1.01) | 11 | 1.73 (1.19) |
| EQ5D-5L Activities | 14 | 2.64 (1.45) | 11 | 2.36 (1.29) | 11 | 2.18 (1.33) |
| EQ5D-5L Pain | 14 | 2.71 (1.54) | 11 | 2.18 (1.40) | 11 | 2.55 (1.37) |
| EQ5D-5L Depression | 14 | 3.43 (1.55) | 11 | 3.09 (1.45) | 11 | 3.00 (1.48) |
| EQ5D-5L VAS | 14 | 46.36 (22.17) | 11 | 50.27 (22.33) | 11 | 50.55 (19.56) |
| EQ5D-5L Index Score | 14 | .321 (.299) | 11 | .504 (.367) | 11 | .502 (.376) |

Graph 1: Use of Urgent Care Health Services during Frequent Service User Service

N=22



THEMES

Four main themes were identified from the interview guides, which were around patients' experiences of other services, their relationship with the FSUM, the support provided by the FSUM and the personal impact of using the service.

Experience of other services

Interviewees talked about their use of urgent care and other health services. There were mixed reports with both positive and negative experiences. On the positive side, this included being in hospital and a GP surgery:

"They've been wonderful...Absolutely wonderful yeah" (Fe03)

"Um, I think you know I think my GP surgery are so brilliant that you know I'm really well covered" (Fe04)

With regard to the negative experiences these were seen as potentially leading to Emergency Department use:

"and um my mental health worker is is a bit useless as well, which is one of the reasons why I was in crisis point" (Fe02)

"Cos I do think that cycle of rejection and services not wanting anything to do with you it does then you know make you more likely to present at A&E as a last resort". (Fe04)

Relationship with FSUM

The relationship that was developed between the FSUM and the patients came up as incredibly important with the feedback being overwhelmingly positive. Individuals talked about how much they held the FSUM in high regard, the trust they had in her, and how they saw her as a reliable source of support. Individuals particularly liked having someone there to talk to, someone that was there at the end of the phone if they needed. It was clear that they felt the FSUM would do her best to help them without judgment or without taking control:

“Yes I do and I think high and I do think highly of her and I wouldn’t really and I don’t think I would be um, I think I would be in a much worse state if she wasn’t around...” (Fe02)

“Really good, like um, not that the power’s been taking away from me but that there’s somebody there to support me, urm so that’s really good, really good” (Fe03)

“yeah, yeah even if she’s not on duty if she’s got the phone she’s not doing anything she will like answer the text I’ve sent so yeah she’s brilliant” (Fe01)

“it just helps me to know that there’s someone in the background” (Fe04)

Support provided by FSUM

It is clear that a range of activities are undertaken as part of the FSUM role and that those using the service really valued the support that was provided:

“She’s just there for me really, which is, which is, which is good. And she will help me as much as she can and if she can, she can do things like go to meetings or attend meetings with me that I might need a bit of support with if she can do it, she’ll be there.” (Fe02)

Individuals talked about support with a range of issues which included visiting them in hospital, attending work or health meetings, giving reassurance, helping to work through problems or challenging situations and giving medical advice:

“...cos I know that she’s on hand and, and you know kind of use her in a number of ways sometimes kinda medical advice and to explain things to me.” (Fe04)

There were also comments on how flexible the FSUM was and how this was appreciated:

Really well, she even like, she’ll come to my house, she’ll like she’ll go out of her way to accommodate me best. Um so she’s brilliant. Yeah, she’s excellent. (Fe03)

Well she’s been there when I need support at the end, end of the phone beyond the call of duty so yeah she’s been really good. (Fe01)

Personal Impact

All 4 people interviewed felt that the FSUM had a positive impact on them and it was clear from the examples that they gave that it improved their personal lives. This came out in different ways for different individuals and included improving and maintaining work life, creating good relations with healthcare services, feeling more positive seeing about the future and to seeing the service as a first port of call in a crisis:

“I am always going to have a problem, I’m always going to have the anxiety, I’m always going to have the probably needed to call someone like that but first of all, I mean, you know, always the first time I always try [the frequent service manager]” (Fe02)

“yeah, more positive, much more positive, once I’ve seen her I’m a lot more positive, I’m I feel like there is a way forward, um which is really good, so it’s really good to know that there’s somebody there.” (Fe03)

“ things I’ve done like getting a promotion at work and um you know I haven’t had a sick day since Feb 2017 so just over a year and a few months so yeah I feel I’ve come a long way um yeah” (Fe04)

DISCUSSION AND CONCLUSIONS

The current findings are in line with other research regarding the demographics associated with Frequent Service Use, with females and those unemployed more frequently attending urgent care services (Milbrett & Halm, 2009). The main presenting complaints were also in line with other research such as alcohol problems (Neale et al. 2017) and pain (Milbrett & Halm, 2009) as well as MUS and mental health issues (e.g. Daniels et al. 2017 & Ablard, et al. 2017), giving further weight that these are key areas for further attention. Interestingly, Neale et al, (2017) found that those frequently attending Emergency Departments for alcohol related reasons also had high levels of unemployment. In contrast to other findings, there was a wider age range locally of 20-86 yrs old, compared to 21-46yrs across other studies (Moore et al. 2009; & Daniels et al. 2017) In addition, there was a lack of ethnic diversity with all patients being White, however this is most likely a reflection of the region, with 2011 Census Data showing that only 6.3% of residents in Kent coming from a Black Minority Ethnic (BME) group (Business Intelligence, 2019) and also found in other studies (Milbrett & Halm 2009).

Although a wide range of deprivation levels were found, the majority would not be considered as living in an area with a lot of deprivation and many came out with have the least relative deprivation. This is unexpected given the link with unemployment.

Psychosocial factors have received less attention with regard to case management interventions. Encouragingly, the results showed that loneliness and anxiety decreased from baseline to 1 year, as did problems with mobility, self care, activities, pain, and depression as rated on the EQ5D. Health related quality of life increased from baseline to 4 months with individuals making a clear shift from being classified as having low quality of life to being classified as having medium quality of life, which then stabilised at 1 year. Encouragingly there were steep reductions in use of all urgent care services especially attending Emergency Department by ambulance. This reflects the premise of the HIU programme that such interventions are likely to reduce use of urgent care services across the board.

All of those interviewed were overwhelmingly positive about the FSUM service and talked about how valuable it had been for them. The FSUM was held in high regard and was seen to support with a wide range of activities and have a flexible working approach. There was some mention of positive care from other health services but also negative experiences, which possibly led to use of urgent, care services. Individuals did not mention having an increased awareness of the health services available but did talk about how they felt more supported to use other services including the FSUM before thinking about urgent care. Indeed, individuals talked about the service providing a good and more positive way forward for their health and life concerns.

There are limitations to the current evaluation due to the small sample size and the pre-post design. Indeed, due the nature of individuals using the service it was difficult to identify many individuals who were suitable and willing to be interviewed. Therefore, it could be that those who took part were those that were most happy with the service. As the service

is now onto cohort 4 it is hoped that a larger project can take place to look at a wider sample of those using the service as well as an economic evaluation. Furthermore, the current findings suggest that unemployment is an area that is important for further investigation especially to see the link with alcohol misuse. Given the rise of the HIU programmes across England it is also of key importance to identify how case management approaches are being defined and implemented and whether done according to the definition provided by the Kings Fund (Ross et al. 2011). Furthermore, the role of the HIU leads / mentors will be important to evaluate as to the skill set along with clinical and life experience which facilitate the success of the role. This is key given the 2019/2020 NHS Planning Guidance that states “CCGs yet to implement a High Intensity User support offer for demand management in urgent and emergency care, will be required to establish a service in 2019/20” (NHSRightCare, 2019b). It is important for FSU / HIU services to keep in mind that there will always be medically legitimate reasons for individuals to attend Emergency Departments and that not every Frequent Service User will be doing so inappropriately. Services are to encourage the appropriate use of urgent care services to reduce system pressures but to also improve the well being of these patients.

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