ISRCTN11904779 https://doi.org/10.1186/ISRCTN11904779

Frequent users of the emergency department: improving services

Submission date
20/03/2023

Recruitment status
No longer recruiting

Registration date
28/04/2023

Overall study status
Completed

Last Edited
18/12/2024

Condition category
Other

[ ] Prospectively registered
[ ] Protocol
[ ] Statistical analysis plan
[ ] Results
[ ] Individual participant data
[ ] Record updated in last year

Plain English summary of protocol

Background and study aims
Approximately 2.5% of Emergency Department (ED) users account for 10% of total attendances. Many frequent users (FrUs) suffer from mental health and social problems. Services for FrUs have developed recently in a piecemeal fashion and evidence of the effectiveness of interventions is weak.
In previous work the researchers found 80/170 EDs with FrU services with four different service types.
This study aims to describe the current patterns and costs of frequent use of urgent and emergency care (UEC), the services for FrUs, identify predictors of high-cost patterns of attendance, and the impact of FrU services on attendance. The researchers will identify which interventions appear to work for which types of FrUs and why, test these findings by in-depth case studies of four different service types, and disseminate an implementation framework for FrU services to improve planning and optimise care.

Who can participate?
Service users and staff of FrU services

What does the study involve?
The researchers will study current service delivery for people who attend urgent and emergency care on a frequent basis. The interventions of interest are services that have been established with a specific aim to help people who attend urgent and emergency care on a frequent basis. The aims are to characterise services, identify and describe what type of interventions are being delivered for what kind of frequent users, and identify what type of interventions work best for which groups of patients.

What are the possible benefits and risks of participating?
There are no specific benefits for participants apart from that of taking part in research, and potentially some therapeutic value in talking about their experiences. The researchers do not anticipate that there will be any onerous burdens or risks for clinical staff who participate in the research as staff will not be asked to divulge any personal information and will be asked solely about work and professional matters. The main risk for service users is the potential for distress following the discussion of sensitive experiences either seeking or receiving help for their

problems. The researchers have considered this carefully and have developed a risk escalation plan and protocol.

Where is the study run from?
University of Leeds and University of Sheffield (UK)

When is the study starting and how long is it expected to run for?
March 2022 to February 2025

Who is funding the study?
NIHR Health and Social Care Delivery Research (HSDR) (UK)

Who is the main contact?
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Additional identifiers

Integrated Research Application System (IRAS)
312761

Central Portfolio Management System (CPMS)
55426

National Institute for Health and Care Research (NIHR)
132852

Study information

Scientific Title
Frequent users of the emergency department: improving services and standardising services: a qualitative study study

Study objectives
Describe current patterns and costs of frequent use of urgent and emergency care (UEC), the services for FrUs, identify predictors of high-cost patterns of attendance, and the impact of FrU services on attendance. Identify which interventions appear to work for which types of FrUs and why, and test these findings by in-depth case studies of four different service types. Disseminate an implementation framework for FrU services to improve planning and optimise care.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Approved 08/03/2023, West Midlands - Solihull Research Ethics Committee (Equinox House, City Link, Nottingham, NG2 4LA, UK; +44 (0)207 1048191; solihull.rec@hra.nhs.uk), ref: 23/WM/0055

Primary study design
Observational

Study design
Observational; Design type: Qualitative

Study type(s)
Treatment

Health condition(s) or problem(s) studied
Emergency department

Interventions

A mixed methods study programme of frequent users of the emergency department (ED) and the services provided for this group of patients. The study is not a trial but a naturalistic evaluation of current clinical services in the NHS in England for people who frequently attend ED.

The project consists of four workstreams:

Workstream (WS)1: cross-sectional mapping of the current extent of services for FrUs of UEC networks in England, and a mixed methods study to characterise 20 representative FrU services (five each from four different types). From this the researchers will develop early ideas about how interventions may work for different subgroups of FrUs (i.e. safely reduce UEC use +/ - additional help and support).

WS 2: Large data study (years 2016/17 to 2020/21) using two complementary datasets. The CUREd dataset links the UEC network (ED, 111 and 999) data for Yorkshire and Humber Region. Hospital Episode Statistics data will be linked to ED attendance for the whole of England.
The researchers will:
1. Identify patterns of frequent use and sub-groups of frequent users
2. Examine how FrUs access the whole UEC network including multiple EDs
3. Study healthcare costs of FrUs to understand where costs are generated and the potential for reduction
4. Conduct interrupted time series analysis of the impact on ED FrUs of (a) the introduction of FrU services, and (b) the COVID-19 pandemic.

WS 3: Realist synthesis to identify and test programme theories about how interventions for subgroups of FrUs produce outcomes. This includes a literature review, the early ideas from WS1 and additional in-depth case studies of four ED sites, each with a different type of FrU service. Conceptually, it will draw on relevant theoretical models and take a whole systems approach across the urgent and emergency care network at micro, meso and macro levels.

WS 4: Development of an implementation framework of 'ideal' models of service delivery tailored for the four different service types, with a focus on specific interventions for particular subgroups of frequent use.

The researchers will use both quantitative and qualitative methods to study current service delivery for people who attend urgent and emergency care on a frequent basis. The interventions of interest are services that have been established with a specific aim to help people who attend urgent and emergency care on a frequent basis. There is a great deal of heterogeneity in these services and the aim is to first characterise services, identify and describe what type of interventions are being delivered for what kind of frequent users and identify what type of interventions work best for which groups of patients.

Intervention Type
Other

Primary outcome(s)
Development of an implementation framework of 'ideal' models of service delivery tailored for the different types of frequent user services with a focus on specific interventions for particular subgroups of frequent users. The researchers will use the Consolidated Framework for Implementation Research for systematically examining how interventions are implemented and the TIDieR template as a formal framework for identifying and describing components of the included interventions. Timeline: 31-36 months of the programme.

Key secondary outcome(s)
Timeline: 18-30 months of the programme:
1. Individual patient-level analysis of attendances to identify frequent use within years and over multiple years. Examination of how features relating to patients (e.g. age, gender, deprivation) and attendances (e.g. occasional bursts vs more regular in time or reason for attendance) predict further emergency department (ED) use. Time to next ED attendance and time in frequent user status will be modelled using survival trees. These analyses will be developed in the CUREd database which covers the acute services in the Yorkshire and Humber region and then repeated on a national basis using data derived from Hospital Episode Statistics (HES) to investigate the generalizability of findings. HES data will also enable the tracking of ED use across multiple sites. Analysis within CUREd will also focus on pre-hospital urgent and emergency care use (NHS 111, 999) and compare patterns in ED frequent users compared to others.
2. Costs: Using both HES and CUREd datasets, established costing methods will be applied using national reference costs to HES A&E and inpatient healthcare resource groups (HRGs) (including high-cost unbundled HRGs) and exploring micro-costing approaches to more detailed CUREd data to determine the costs associated with frequent use of urgent and emergency care services and the distribution of costs across users and trusts. Comparison will be made between HES and CUREd to consider the consistency of each source. Determining the distribution of frequent attendance at Urgent and Emergency Care and associated costs for the Yorkshire and Humber region (CUREd dataset) and for the whole of England (HES dataset).
3. An interrupted time series analysis of the impact on ED frequent attendance of frequent user services will be conducted with ED attendance as the main outcome measure. For each current service with a clear confirmed start date, a 12-month implementation phase following the date the service was launched, will be identified. Frequent use over all years prior to implementation and all years (and part years) after the implementation year will be examined. A comparison between EDs with a frequent user service and without will also be carried out with EDs being matched on general characteristics (e.g. pre-service annual throughput, urban/rural). A similar analysis, over shorter time periods, to examine the impact of the COVID-19 pandemic on both total ED use and ED use by frequent users will be undertaken, if sufficient HES data post-pandemic is available.
4. An understanding of the lived experience of people who frequently attend including their reasons for attending, their experience of treatment in urgent and Emergency Care settings, their experience of frequent user services and what interventions they find helpful or unhelpful.

Completion date
28/02/2025

Eligibility

Key inclusion criteria
NHS or third-sector staff:
1. Aged 18 years or over
2. Has been involved in some capacity with a frequent user/high-intensity service, either directly work in the service, or make referrals to the service, have patients who have used the service or have some strategic connection to the service
3. Mental capacity to provide full and informed consent

Service users:
1. Aged 18 years or over
2. Has used urgent and emergency care five or more times in the 12 months prior to receiving an assessment or treatment from a frequent user service.

3. Has been assessed or received an intervention from a frequent user service
4. Mental capacity to provide full and informed consent

Participant type(s)
Mixed

Healthy volunteers allowed
No

Age group
Adult

Lower age limit
18 Years

Sex
All

Total final enrolment
108

Key exclusion criteria
NHS or third-sector staff:
Have no working/managerial/strategic relationship with a frequent user/high-intensity service

Service users:
1. Has had no contact with a frequent user or high-intensity service
2. Lacking the capacity to comply with study requirements
3. Considered by a clinician as currently unsuitable to enter a research study (e.g. too physically unwell, acutely suicidal)

Date of first enrolment
15/03/2023

Date of final enrolment
31/12/2024

Locations

Countries of recruitment
United Kingdom

Study participating centre
-
United Kingdom
-

Sponsor information

Organisation
University of Leeds

Funder(s)

Funder type
Government

Funder Name
NIHR Health and Social Care Delivery Research (HSDR)

Results and Publications

Individual participant data (IPD) sharing plan
The datasets generated during and/or analysed during the current study are not expected to be made available due to Data Sharing Agreements signed with the providers of the datasets.

IPD sharing plan summary
Not expected to be made available

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
HRA research summary			20/09/2023	No	No
Study website	Study website	11/11/2025	11/11/2025	No	Yes