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Evaluating mental health decision units in acute care pathways (DECISION): an interrupted time series and synthetic control (ITS) evaluation

Submission date
25/02/2020

Recruitment status
No longer recruiting

Registration date
27/02/2020

Overall study status
Completed

Last Edited
10/02/2026

Condition category
Mental and Behavioural Disorders

[_] Prospectively registered
[X] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol

Background and study aims
Many people experiencing a mental health crisis go to A&E and wait a long time for assessment. They may be admitted to a psychiatric ward unnecessarily because of a lack of proper assessment. People not signposted to the most appropriate aftercare might repeatedly attend A&E and be admitted to hospital. New Psychiatric Decision Units (PDUs; also called mental health decision units [MDHUs]) are designed to address this. PDUs are short stay units with a high staff: patient ratio delivering in-depth assessment of individual support, aiming to reduce unnecessary hospital admissions and attendance at A&E, and to improve experiences of crisis care.

The researchers will work with PDUs in four different locations in England and examine the effects of the PDU on a wide range of outcomes, including changes to the number, pattern and rate of: inpatient admissions to psychiatric wards, compulsory admissions, number of short (0-5 day) admissions, average length of inpatient stay, attendances at A&E in mental health crisis, number of 4 hour psychiatric ED breaches, average length of ED wait, number of 12 hour trolley waits, number of admissions to an acute bed, arrival at the ED by ambulance and police. These variables are measured for 24 months before and 24 months following the opening of the psychiatric decision unit in each of the four geographical areas involved in the study. The synthetic control method will allow us to compare to what is happening elsewhere in England in order to control for national changes in service use trends over time. The researchers will use routinely collected aggregate data. The DECISION research team includes people who have used mental health services and the research is coproduced.

Who can participate?
Patient records for 24 months before and 24 months following the opening of the psychiatric decision unit in each of the four geographical areas involved in the study will be used to gather data. A sub study involves qualitative interviews with strategic managers.

What does the study involve?
Patients records will be analysed to investigate outcomes in the PDU as described above. In a sub study members of PDU staff will be interviewed.

What are the possible benefits and risks of participating?
It is unlikely that there are any risks in taking part. It is possible that some people may find some of the issues discussed in the interviews sensitive or uncomfortable to talk about. Participants do not have to discuss anything that you find difficult to talk about, and it is OK to not answer any of the questions. If difficult issues come up during the interview participants are free to stop the interview at any point to take a break, rearrange or end the interview, or withdraw from the study. There are no consequences to doing so for participants.

Where is the study run from?
1. St George's, University of London (UK)
2. St George's Hospital (UK)
3. Springfield Hospital (UK)
4. Lincolnshire Partnership NHS Foundation Trust (UK)
5. Lincoln County Hospital (UK)
6. Birmingham and Solihull Mental Health NHS Foundation Trust (UK)
7. Queen Elizabeth Medical Centre (UK)
8. Sheffield Health & Social Care NHS Foundation Trust (UK)
9. Royal Hallamshire Hospital (UK)
10. Kingston Hospital NHS Foundation Trust (UK)
11. Sandwell General Hospital (UK)

When is the study starting and how long is it expected to run for?
March 2019 to February 2021

Who is funding the study?
National Institute for Health Research (NIHR) (UK)

Who is the main contact?
Dr Lucy Goldsmith
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Contact information

Type(s)
Public

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Additional identifiers

Integrated Research Application System (IRAS)
256406

Protocol serial number
NIHR HS&DR 17/49/70

Study information

Scientific Title
Evaluating Mental Health Decision Units in acute care pathways (DECISION): An Interrupted Time Series and Synthetic Control (ITS) Evaluation

Acronym
DECISION

Study objectives
To establish the effects of psychiatric decision units (also known as mental health decision units) in England on service use outcomes in order to inform potential national scale up.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Approved 12/08/2019, NRES Committee: East Midlands – Leicester South Research Ethics Committee (The Old Chapel, Royal Standard Place, Nottingham, NG1 6FS; +44 (0)207 104 8310; NRESCommittee.Eastmidlands-LeicesterSouth@nhs.net), Ref: 19/EM/0226

Primary study design
Observational

Study design
Multicentre longitudinal observational design using both interrupted time series and synthetic control (ITS) methods

Study type(s)
Treatment

Health condition(s) or problem(s) studied
Mental health crisis / Psychiatric crisis

Interventions
This is an observational study investigating an intervention which is already part of clinical practice. The intervention is 'mental health decision units' (also known as psychiatric decision units).

Interrupted time series study: This part of the research looks at outcomes including number of informal psychiatric admissions and number of mental health presentations at A&E in the two years prior to and the two years following an MHDU opening in order to estimate the impact of opening MHDUs on service use and cost. The researchers use aggregate data only for this (e.g. total numbers of informal psychiatric admissions to a mental health NHS Trust each week) and do not access any individual patient data. The researchers will acquire this data from NHS Trusts in aggregate form only. To support interpretation of the interrupted time series data the researchers will conduct qualitative interviews with strategic managers: (n=5 at each site). These will be held with strategic leads for crisis care in Mental Health NHS Trusts, A&E departments and local mental health commissioners to understand the wider policy and service delivery context in which MHDUs have been introduced.

Synthetic control study: The researchers will collect similar control data from Trusts without MHDUs for comparative analyses (Trusts with and without MHDUs). The researchers will acquire these data from NHS Digital as this is likely to involve data from a large number of Trusts nationally to generate suitable matched controls. Again these data will be in aggregate form only with no individual data accessed for the research.

See also https://www.isrctn.com/ISRCTN53431343

Intervention Type
Procedure/Surgery

Primary outcome(s)
Note: there is a primary outcome for both mental health trusts and acute trusts for each research method.

For both the synthetic control (ITS) study and interrupted time series, the variables are measured both 24 months pre- and 24 months post- the implementation period (with the exception of one site, which uses data for 13 months post-implementation). The analyses use aggregate service-level data.

1. Interrupted time series: changes in the number and pattern in the rate of:
1.1. Informal admissions to mental health trust adult inpatient wards (mental health trusts)
1.2. A&E psychiatric presentations (acute trusts)

2. Synthetic control (ITS) study: changes in the number and pattern in the rate of:
2.1. Admissions to mental health trust adult inpatient wards (mental health trust)
2.2. A&E psychiatric presentations (acute trusts)

Key secondary outcome(s)
Note: there are a large number of secondary outcomes as MHDUs are purported to make a difference to these outcomes; the study will enable these claims to be examined.

For both the synthetic control (ITS) study and interrupted time series, the variables are measured both 24 months pre- and 24 months post- the implementation period (with the exception of one site, which uses data for 13 months post-implementation). The analyses use aggregate service-level data.

1. Interrupted time series and synthetic control study; mental health trust outcomes:
1.1. Total inpatient admissions
1.2. Number of 0-5 day inpatient admissions
1.3. Average length of inpatient stay (bed days)
1.4. Compulsory admissions
1.5. Number of psychiatric liaison episodes at the ED

2. Interrupted time series and synthetic control study; acute trust outcomes:
2.1. Number of 4 hour psychiatric ED breaches
2.2. Average length of psychiatric ED wait
2.3. Number of 12 hour trolley waits
2.4. Number of admissions to acute bed
2.5. Arrival at ED by ambulance and police

3. Additional outcomes for the Interrupted Time Series only:
3.1. Daily mean occupied bed days (mental health trust)
3.2. Out of area admissions (mental health trust)

Completion date
28/02/2021

Eligibility

Key inclusion criteria
Aggregate, trust-wide service level data will be used. For example, the number of attendances at A&E for mental health crisis per month; the number of out of area beds used by a Trust per month etc. The 'recruitment start date' and 'recruitment end date' shown below refer to the data collection period across all 4 study sites.

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Adult

Sex
All

Total final enrolment
42

Key exclusion criteria
None

Date of first enrolment
01/11/2012

Date of final enrolment
31/03/2020

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
St George's Hospital
St George's University Hospitals NHS Foundation Trust
Blackshaw Road
Tooting
London
England
SW17 0QT

Study participating centre
Springfield Hospital
South West London and St George's Mental Health NHS Trust
61 Glenburnie Road
London
England
SW17 7DJ

Study participating centre
Lincolnshire Partnership NHS Foundation Trust
Unit's 8 & 9
The Point
Lions Way
Sleaford
England
NG34 8GG

Study participating centre
Lincoln County Hospital
United Lincolnshire Hospitals NHS Trust
Greetwell Road
Lincoln
England
LN2 4AX

Study participating centre
Birmingham and Solihull Mental Health NHS Foundation Trust
Unit 1
50 Summer Hill Road
Birmingham
England
B1 3RB

Study participating centre
Queen Elizabeth Medical Centre
University Hospitals Birmingham NHS Foundation Trust
Trust HQ, Po Box 9551
Edgbaston
Birmingham
England
B15 2TH

Study participating centre
Sheffield Health & Social Care NHS Foundation Trust
Fulwood House
Old Fulwood Rd

Sheffield
England
S10 3TH

Study participating centre
Royal Hallamshire Hospital
Sheffield Teaching Hospitals NHS Foundation Trust
Glossop Rd
Sheffield
England
S10 2JF

Study participating centre
Kingston Hospital NHS Foundation Trust
Galsworthy Road
Kingston Upon Thames
England
KT2 7QB

Study participating centre
Sandwell General Hospital
Sandwell and West Birmingham Hospitals NHS Trust
Lyndon
West Bromwich
England
B71 4HJ

Sponsor information

Organisation
St George's, University of London

ROR
https://ror.org/040f08y74

Funder(s)

Funder type
Government

Funder Name
National Institute for Health Research

Alternative Name(s)
National Institute for Health Research, NIHR Research, NIHRresearch, NIHR - National Institute for Health Research, NIHR (The National Institute for Health and Care Research), NIHR

Funding Body Type
Government organisation

Funding Body Subtype
National government

Location
United Kingdom

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Not expected to be made available

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	protocol	02/05/2025	10/02/2026	Yes	No
Protocol article		23/04/2020	27/04/2020	Yes	No
HRA research summary	Study website		28/06/2023	No	No
Study website		11/11/2025	11/11/2025	No	Yes