

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

<b>Submission date</b> 25/02/2020	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered <input checked="" type="checkbox"/> Protocol
<b>Registration date</b> 27/02/2020	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
<b>Last Edited</b> 22/10/2021	<b>Condition category</b> Mental and Behavioural Disorders	<input type="checkbox"/> Individual participant data <input type="checkbox"/> Record updated in last year

## 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  
lgoldsmi@sgul.ac.uk

**Study website**

<https://decisionstudy.org/>

## Contact information

**Type(s)**

Public

**Contact name**

Dr Lucy Goldsmith

**ORCID ID**

<http://orcid.org/0000-0002-6934-1925>

**Contact details**

Population Health Research Institute  
St George's, University of London  
Cramner Road  
Tooting  
London  
United Kingdom  
SW17 0RE  
+44 (0)208 7250167  
lgoldsmi@sgul.ac.uk

**Type(s)**

Scientific

**Contact name**

Dr Lucy Goldsmith

**ORCID ID**

<http://orcid.org/0000-0002-6934-1925>

**Contact details**

Population Health Research Institute  
St George's, University of London  
Cramner Road  
Tooting  
London  
United Kingdom  
SW17 0RE  
+44 (0)208 7250167  
lgoldsmi@sgul.ac.uk

## Additional identifiers

**EudraCT/CTIS number**

Nil known

**IRAS number**

256406

**ClinicalTrials.gov number**

Nil known

**Secondary identifying numbers**

NIHR HS&DR 17/49/70, IRAS 256406

## 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

## **Study design**

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

## **Primary study design**

Observational

## **Secondary study design**

Longitudinal study

## **Study setting(s)**

Hospital

## **Study type(s)**

Treatment

## **Participant information sheet**

Not available in web format, please use contact details to request a participant information sheet.

## **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 measure**

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)

## **Secondary outcome measures**

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)

#### **Overall study start date**

01/03/2019

#### **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

#### **Age group**

Adult

#### **Sex**

Both

#### **Target number of participants**

The study uses aggregate service use data across the 24 months preceding and 24 months following the launch of the psychiatric decision unit for each site. As such, there is no specific target for participants.

#### **Key exclusion criteria**

None

#### **Date of first enrolment**

01/11/2012

#### **Date of final enrolment**

31/03/2020

## **Locations**

#### **Countries of recruitment**

England

United Kingdom

**Study participating centre**

**St George's Hospital**

St George's University Hospitals NHS Foundation Trust  
Blackshaw Road  
Tooting  
London  
United Kingdom  
SW17 0QT

**Study participating centre**

**Springfield Hospital**

South West London and St George's Mental Health NHS Trust  
61 Glenburnie Road  
London  
United Kingdom  
SW17 7DJ

**Study participating centre**

**Lincolnshire Partnership NHS Foundation Trust**

Unit's 8 & 9  
The Point  
Lions Way  
Sleaford  
United Kingdom  
NG34 8GG

**Study participating centre**

**Lincoln County Hospital**

United Lincolnshire Hospitals NHS Trust  
Greetwell Road  
Lincoln  
United Kingdom  
LN2 4AX

**Study participating centre**

**Birmingham and Solihull Mental Health NHS Foundation Trust**

Unit 1  
50 Summer Hill Road  
Birmingham  
United Kingdom  
B1 3RB

**Study participating centre**

**Queen Elizabeth Medical Centre**

University Hospitals Birmingham NHS Foundation Trust  
Trust HQ, Po Box 9551  
Edgbaston  
Birmingham  
United Kingdom  
B15 2TH

**Study participating centre**

**Sheffield Health & Social Care NHS Foundation Trust**

Fulwood House  
Old Fulwood Rd  
Sheffield  
United Kingdom  
S10 3TH

**Study participating centre**

**Royal Hallamshire Hospital**

Sheffield Teaching Hospitals NHS Foundation Trust  
Glossop Rd  
Sheffield  
United Kingdom  
S10 2JF

**Study participating centre**

**Kingston Hospital NHS Foundation Trust**

Galsworthy Road  
Kingston Upon Thames  
United Kingdom  
KT2 7QB

**Study participating centre**

**Sandwell General Hospital**

Sandwell and West Birmingham Hospitals NHS Trust  
Lyndon  
West Bromwich  
United Kingdom  
B71 4HJ



# Sponsor information

## Organisation

St George's, University of London

## Sponsor details

Cramner Road  
Tooting  
London  
England  
United Kingdom  
SW17 0RE  
+44 (0)208 266 6866  
jmontebe@sgul.ac.uk

## Sponsor type

University/education

## Website

<http://www.sgul.ac.uk/>

## 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

## Publication and dissemination plan

Protocol paper: 01/04/2020

Pilot Study Results (South West London Interrupted Time Series) 01/12/2020

Interrupted Time Series Results 01/04/2021

Synthetic Control Study Results 01/04/2021

## Intention to publish date

31/12/2021

## Individual participant data (IPD) sharing plan

Current IPD sharing statement as of 19/02/2021:

ITS study data generated during and/or analysed during the current study are not expected to be made available due to the non-disclosure policies of the individual trusts providing the data. Synthetic control study HES data is available from NHS Digital <https://digital.nhs.uk/data-and-information/data-tools-and-services/data-services/hospital-episode-statistics>.

Previous IPD sharing statement:

The datasets generated during and/or analysed during the current study will be stored in a non-publically available repository

## IPD sharing plan summary

Not expected to be made available

## Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Protocol article</a>	protocol	23/04/2020	27/04/2020	Yes	No
<a href="#">HRA research summary</a>			28/06/2023	No	No