Do 20mph speed limits reduce casualties and increase cycling, walking, and liveability in the general population?

Submission date	Recruitment status No longer recruiting	[X] Prospectively registered		
28/03/2017		☐ Protocol		
Registration date	Overall study status	Statistical analysis plan		
29/03/2017	Completed	[X] Results		
Last Edited	Condition category	Individual participant data		
27/10/2022	Other			

Plain English summary of protocol

Background and study aims

20mph speed limits aim to encourage more considerate driving, leading to safer streets for all road users. Lower speeds can reduce the risk and severity of road collisions and related casualties. Reducing traffic speed can also help make people feel more confident about being on their streets on foot or by bike, and may help children and elderly people to travel independently and safely. Calmer roads may encourage people to walk and cycle more which, in turn, contribute to less traffic congestion, better health, less noise, more social interaction and stronger communities. There are a range of different ways of introducing 20mph speed limits including the use of signage, street markings, enforcement, and physical traffic calming measures (such as speed humps). In both Edinburgh and Belfast this relies primarily on laws, signage and road markings. This makes it cheaper to introduce than physical calming methods and also reduces maintenance costs over the long term. The aim of this study is to evaluate the effects of these new 20mph speed limit policies on public health.

Who can participate?

Adults living in or regularly travelling into Edinburgh or Belfast who mainly travel using a motorised vehicle (e.g. car, van, motorcycle, moped)

What does the study involve?

20mph zones are introduced into certain areas of Edinburgh (Scotland) and Belfast (Northern Ireland) by law. People living in or regularly travelling through those areas are asked to fill in a short survey about their views of the 20mph zones and if it has changed their travel behaviour or to take part in a discussion group (focus group) where they are asked about their views of the 20mph zones and if it has changed their travel behaviour. Information is collected at a number of timepoints over a period of 18 months.

What are the possible benefits and risks of participating? There are no direct benefits or risks for those taking part in the study. Where is the study run from?

- 1. Scottish Collaboration for Public Health Research and Policy (UK)
- 2. Physical Activity for Health Research Centre, The University of Edinburgh (UK)
- 3. Centre for Public Health, Queen's University Belfast (UK)

When is the study starting and how long is it expected to run for? March 2017 to August 2020

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

Who is the main contact? Dr Ruth Jepson ruth.jepson@ed.ac.uk

Contact information

Type(s)

Scientific

Contact name

Dr Ruth Jepson

ORCID ID

https://orcid.org/0000-0002-9446-445X

Contact details

SCPHRP
20 West Richmond Street
Edinburgh
United Kingdom
EH15 1AY
+44 131 6511592
ruth.jepson@ed.ac.uk

Additional identifiers

Protocol serial number

15/82/12

Study information

Scientific Title

Is 20 plenty for health? Evaluation of the 20mph speed limit networks in Edinburgh and Belfast on a range of public health outcomes

Study objectives

The aim of this study is to evaluate, and understand, the processes and effects of city-wide 20mph legislation in Edinburgh and city-centre wide in Belfast.

Ethics approval required

Old ethics approval format

Ethics approval(s)

Not provided at time of registration

Study design

Observational cohort study

Primary study design

Observational

Study type(s)

Prevention

Health condition(s) or problem(s) studied

Public health

Interventions

20mph speed limits are introducted across the cities of Edinburgh and Belfast relying primarily on legislation, signage, education and road markings.

The study uses a combination of routinely and locally collected quantitative data, and primary collected quantitative and qualitative data. There are four work packages, each employing different research designs and methods of data collection.

Work Package 1: Before-and-after (controlled where possible) studies of Edinburgh and Belfast. As well as identifying matched (geographic) controls, synthetic controls may be derived from the routinely collected data. We will be collecting data on: speed and volume, casualties, walking and cycling, perceptions of the 20mph, and liveability. Data will be collected by a range of organisations including Edinburgh City and Belfast Councils; Sustrans; and Living Streets. Data will be collected at baseline and at various time points post implementation (depending on the outcome being measured). Follow up of all outcomes will be at least 12 months, with some outcomes (e.g. casualties) being analysed at 18 months.

Work Package 2: Stakeholder interviews and focus groups with members of the public in Edinburgh and Belfast.

Work Package 3: Key informant interviews and workshops across the UK.

Work Package 4: Cost utility analysis supplemented with partial cost benefit and cost consequence analyses.

Intervention Type

Behavioural

Primary outcome(s)

Casualty data is taken from STATS19 accident records (collected nationally by the police) at multiple time points pre and post implementation (up to 18 months) of the 20mph zones.

Key secondary outcome(s))

1. Walking is assessed through automatic fixed pedestrian counters (collected by Sustrans) and using Route User Surveys (collected by Sustrans) at multiple time points before and after (up to 18 months) implementation of the 20mph zones

- 2. Cycling is assessed through automatic fixed cycling counters (collected by Sustrans) and using Route User Surveys (collected by Sustrans) at multiple time points before and after (up to 18 months) implementation of the 20mph zones
- 3. Public transport use is assessed through routine bus data (collected by the bus companies) at multiple time points pre and post implementation (up to 18 months) of the 20mph zones
- 4. Attitudes towards 20mph zones are collected through the Edinburgh Household Survey at baseline and 12 months post implementation of the 20mph zones
- 5. Traffic and speed volume is collected through a survey at baseline and 18-months post implementation
- 6. Perceptions of public support, behaviour and compliance are collected through a survey at baseline and 18-months post implementation
- 7. Liveability is assessed using street audits (by Living Streets) at baseline and 12 baseline and 18-months post implementation

Completion date

31/08/2020

Eligibility

Key inclusion criteria

- 1. Living in Edinburgh, Scotland and Belfast, Northern Ireland or travelling regularly into the cities for the purpose of work, study or other reason.
- 2. Aged 18 years and over
- 3. Primarily travel using a motorised vehicle (e.g. car, van, motorcycle, moped)

Participant type(s)

Mixed

Healthy volunteers allowed

No

Age group

Adult

Lower age limit

18 years

Sex

All

Key exclusion criteria

Not living or working in Edinburgh or Belfast.

Date of first enrolment

01/05/2018

Date of final enrolment

31/01/2019

Locations

Countries of recruitment

United Kingdom

Northern Ireland

Scotland

Study participating centre
Scottish Collaboration for Public Health Research and Policy
20 West Richmond Street
Edinburgh
United Kingdom
EH8 9DX

Study participating centre
Physical Activity for Health Research Centre (PAHRC)
The University of Edinburgh
St Leonard's Land

Edinburgh
United Kingdom
EH8 8AQ

Study participating centre Centre for Public Health, Queen's University Belfast

Institute of Clinical Sciences, Block B Queens University Belfast Royal Victoria Hospital Belfast United Kingdom BT12 6BA

Sponsor information

Organisation

University of Edinburgh

ROR

https://ror.org/01nrxwf90

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

The current data sharing plans for the current study are unknown and will be made available at a later date.

IPD sharing plan summary

Data sharing statement to be made available at a later date

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article		01/09/2022			No
Interim results article	Results of Belfast focus groups	01/07/2021	02/09/2021	Yes	No
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes