

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

Submission date 28/03/2017	Recruitment status No longer recruiting	<input checked="" type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
Registration date 29/03/2017	Overall study status Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
Last Edited 27/10/2022	Condition category Other	<input type="checkbox"/> Individual participant data

Plain English Summary

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

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Contact information

Type(s)

Scientific

Contact name

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Additional identifiers

EudraCT/CTIS number

IRAS number

ClinicalTrials.gov number

Secondary identifying numbers

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 hypothesis

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

Secondary study design

Cohort study

Study setting(s)

Community

Study type(s)

Prevention

Participant information sheet

No participant information sheet available

Condition

Public health

Interventions

20mph speed limits are introduced 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 measure

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.

Secondary outcome measures

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

Overall study start date

01/03/2017

Overall study end date

31/08/2020

Eligibility

Participant 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

Age group

Adult

Lower age limit

18 Years

Sex

Both

Target number of participants

60

Participant exclusion criteria

Not living or working in Edinburgh or Belfast.

Recruitment start date

01/05/2018

Recruitment end date

31/01/2019

Locations**Countries of recruitment**

Northern Ireland

Scotland

United Kingdom

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

Sponsor details

ACCORD
Queen's Medical Research Institute
47 Little France Crescent
Edinburgh
Scotland
United Kingdom
EH16 4TJ

Sponsor type

University/education

ROR

<https://ror.org/01nrxf90>

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

The results of the analyses will be disseminated in a number of ways: through workshops (Work package 3), academic conference and journal articles, policy briefings, and lay summaries.

Intention to publish date

31/08/2021

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?
Interim results article	Results of Belfast focus groups	01/07/2021	02/09/2021	Yes	No
Results article		01/09/2022	27/10/2022	Yes	No