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A study of the impact on wellbeing of HS2

Submission date	Recruitment status	[X] Prospectively registered
28/06/2021	Recruiting	[X] Protocol
Registration date	**Overall study status**	[ ] Statistical analysis plan
16/07/2021	Ongoing	[ ] Results
Last Edited	**Condition category**	[ ] Individual participant data
13/05/2024	Mental and Behavioural Disorders	[ ] Record updated in last year

Plain English summary of protocol

Background and study aims
Little is known about the impact of large transport projects on people's mental health and wellbeing and what we do know is mainly about transport projects once they are finished, focusing on people who use the new transport system. We know less about how the planning and construction of these projects may affect mental health and wellbeing, particularly for people who experience the inconvenience of planning and construction stages but do not benefit by using the transport system.
Without understanding how large transport projects might affect mental health and wellbeing it is difficult to know how to support people who live near them. HS2 is a good opportunity for learning about how these projects may affect mental health and wellbeing because phase 2 of the project is only just starting so different stages can be studied, and there will be people who are potentially affected by the route but are unlikely to use HS2 because there will be no station close to them.

The aim of this study is to understand how the High-Speed Rail 2 development (HS2), a large national transport project, might affect the mental health and wellbeing of people who live near the railway line. We will investigate whether any impacts on mental health and wellbeing vary by groups within these communities, including people who already have mental health conditions.

Who can participate?
Adults aged 18 years and above who are registered with a GP practice and live situated within an area defined as "exposed" to HS2 or "unexposed".

What does the study involve?
We will look at how HS2 may affect mental health and wellbeing over time from initial planning to the point where it is being used by passengers. We will do three things:
(i) survey people asking questions about their physical and mental health and wellbeing, including things that may affect this like having a job or good relationships with friends and family;
(ii) group meetings and interviews with people who complete the survey and local GPs and nursing staff to discuss issues raised in the survey in more detail;
(iii) analysis of anonymous information that GP practices provide to the government about the health and wellbeing of their patients. We will do this multiple times during the development of HS2.

This information will tell us whether the mental health and wellbeing of people living near HS2 changes over time (during planning, construction, and use), and we will compare this to changes in other communities that are very similar apart from not being near HS2. If changes over time are the same no matter how close people live to HS2 then this suggests it is not the cause of any changes.

What are the possible benefits and risks of participating?
None

Where is the study run from?
RAND Europe (UK)

When is the study starting and how long is it expected to run for?
June 2021 to May 2031

Who is funding the study?
High-Speed Two Ltd. (UK)

Who is the main contact?
Dr Katherine Morley, kmorley@randeurope.org

Contact information

Type(s)
Scientific

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Additional identifiers

Integrated Research Application System (IRAS)
302856

Study information

Scientific Title

Wellbeing Impact Study of HS2

Acronym
WISH2

Study objectives
The overarching research question is whether individuals and communities exposed to HS2 experience positive or negative MHW impacts, focused specifically on anxiety, depression, and general wellbeing. We will address the following research questions (RQs):
RQ1: What are the positive and negative MHW impacts of HS2?
RQ2: Do these impacts change over time and what explains them?
RQ3: Are impacts felt differently across groups within a community?
RQ4: What are the health economic implications of the MHW impacts of HS2?

Ethics approval required
Old ethics approval format

Ethics approval(s)
Approved 24/01/2023, East of England – Cambridgeshire and Hertfordshire (Meeting held by video-conference via Zoom; +44 (0)2071048096, (0)207 104 8102, (0)207 104 8265; cambsandherts.rec@hra.nhs.uk), ref: 22/EE/0292

Primary study design
Observational

Study design
Combined longitudinal and repeated cross-sectional study with qualitative interviews and focus groups plus analysis of administrative data

Study type(s)
Quality of life

Health condition(s) or problem(s) studied
Mental health and wellbeing

Interventions
This is an observational study of a natural experiment – the planning, construction, and operation of a major rail infrastructure project – over a 10-year period. Data will be collected from participants in three waves over the project lifetime. Participants will be recruited into the study during year 1, at which point they will complete a survey and give consent for access to their medical records. A subset of participants will be invited to participate in interviews or focus groups. This data collection will be repeated twice more during the 10-year follow-up period: at years 4/5 and years 9/10.

Intervention Type
Other

Primary outcome(s)
Self-reported mental wellbeing measured using the Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) via a survey (mail and online), collected in three waves over the ten years (at approximately years 2, 4, and 9)

Key secondary outcome(s)
1. Self-reported health-related quality of life measured using the EuroQol-5D via a survey (mail and online), collected in three waves over the ten years (at approximately years 2, 4, and 9).
2. Self-reported long-term mental health problems as measured in the GP Patient Survey, collected from participants in three waves over the ten years (at approximately years 2, 4, and 9). Also available at GP practice level from 2010 onwards.
3. Diagnoses of anxiety and/or depression or prescriptions for anti-depressants, collected from review of patients notes at follow-up (approximately years 4 and 9).
4. Referral and attendance at Improving Access to Psychological Therapies services, collected via linkage to administrative data at follow-up (approximately years 4 and 9, but with access to data from whole period).

Completion date
31/05/2031

Eligibility

Key inclusion criteria
1. Be registered with a GP practice situated within an area defined as "exposed" to HS2 or "unexposed"
2. Live at an address within an area defined as "exposed" to HS2 "unexposed" (only one participant per address will be recruited)
3. Be aged 18 or over
4. Have capacity to consent

Participant type(s)
All

Healthy volunteers allowed
No

Age group
Adult

Lower age limit
18 Years

Sex
All

Key exclusion criteria
1. Not registered with a GP practice
2. Living at a registered address outside the "exposed" or "unexposed" geographical areas

Date of first enrolment
01/04/2023

Date of final enrolment
30/09/2029

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
RAND Europe
Westbrook Centre
Milton Road
Cambridge
United Kingdom
CB4 1YG

Sponsor information

Organisation
RAND Europe

ROR
https://ror.org/037pk1914

Funder(s)

Funder type
Government

Funder Name
High-Speed Two Ltd. (administered by NIHR)

Results and Publications

Individual participant data (IPD) sharing plan
The datasets generated during and/or analysed during the current study will be stored in a publically available repository. Data collected directly by the study team or collated from publically available sources by the study team will be made publically available in a repository in an anonymised format. The study will also involve the use of administrative data obtained via

NHS Digital. Storing these data in a publically available repository may be not permissible. Further details will be made available in a data sharing plan – I am happy to share this when it is available.

IPD sharing plan summary

Stored in repository

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Protocol article		29/02/2024	13/05/2024	Yes	No
HRA research summary			28/06/2023	No	No