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Optimisation and performance of an interactive (CARA) dashboard. A user research protocol

Submission date
16/10/2023

Recruitment status
No longer recruiting

Registration date
02/01/2024

Overall study status
Ongoing

Last Edited
25/11/2025

Condition category
Other

[X] Prospectively registered
[X] Protocol
[_] Statistical analysis plan
[_] Results
[_] Individual participant data
[_] Record updated in last year

Plain English summary of protocol
Background and study aims
Collaborate, Analyse, Research, Audit (CARA) set out to develop a data-visualisation platform to help general practitioners develop a deeper understanding of their patient population, disease management and prescribing through dashboards. To support the continued use and sustainability of the CARA dashboards, their performance and engagement have to be optimised. User research places people at the centre of the design process and aims to evaluate the needs, behaviours and attitudes of users to inform the design and development of a product. This study aims to explore how different initial key messages impact the level of engagement with a CARA dashboard. The study will provide evidence of the use of traffic web sources to improve and sustain interaction with CARA dashboards.

Who can participate?
Healthcare professionals at general practices in the Republic of Ireland

What does the study involve?
Participating general practices can upload their practice data for analysis and visualisation in CARA dashboards. Practices will be randomised to one of three different initial landing pages: the full dashboard or one of two key messages and subsequent continuation to the full dashboard. The user research explores which landing page is most attractive and encourages engagement which is measured through the number of ‘clicks’, ‘viewings’ and ‘sessions’. Dashboard usage data will be collected through Google Analytics.

What are the possible benefits and risks of participating?
This study will improve our understanding of how GPs engage with the CARA dashboard and if different initial key messages impact the level of engagement in the CARA dashboard. The benefit is a tailored dashboard which will provide GPs with immediate information on their practice and/or prescribing. There are minimal risks involved with taking part in this project.

Where is the study run from?
University College Dublin (Ireland)

When is the study starting and how long is it expected to run for?
March 2026 to May 2027

Who is funding the study?
Research Leader Awards (RL) 2020, Health Research Board (Ireland)

Who is the main contact?
1. Miss Nathaly Garzon, nathaly.garzonorjuela@ucdconnect.ie (Ireland)
2. Prof. Akke Vellinga, akke.vellinga@ucd.ie

Contact information

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Additional identifiers

Study information

Scientific Title
CARA dashboard user research protocol

Acronym
CARA

Study objectives
Do different initial key messages impact the level of engagement with the CARA dashboard?

Ethics approval required
Ethics approval required

Ethics approval(s)
Approved 12/05/2023, Human Research Ethics Committee – Sciences (HREC-LS) (University College Dublin, Belfield, Dublin, D04 V1W8, Ireland; +353 1 716 7777; research.ethics@ucd.ie), ref: LS-LR-23-97-Orjuela-Vellinga

Primary study design
Interventional

Study design
Randomized user research study

Study type(s)
Other

Health condition(s) or problem(s) studied
Dashboard engagement - Audit

Interventions
This user research will not have a separate information sheet leaflet but will use the general GP agreement of the CARA project. In this user research, practices are NOT allocated to different dashboards. They all receive the same dashboard and have access to identical information. Our aim is to improve design and first impressions. As the information provided is not different, it is important to obtain an independent measure of engagement.

General practices will be invited to join the CARA network through social media and direct mailing through the Irish College of General Practitioners. Registration with the CARA network is open to all general practices. Once registered and after confirming terms and conditions, the general practice receives a link to CARAconnect (to de-identify, extract and upload data) and views their practice data in the CARA dashboards

General practices will be randomised to one of three different initial landing pages (group A, B or C): the full dashboard or one of two key messages. Randomisation will be at the practice level and will be performed using a computer-generated system, which will allocate to either group A, B or C using a 1:1:1 randomisation ratio.

All practices have access to the same dashboards and view identical information but two groups will be shown a key message before they can continue to the full CARA dashboard.
Group A: full CARA dashboard, an online visualisation tool which includes charts of antibiotic prescribing (i.e. red (non-preferred) and green (preferred), antibiotic prescribing for the top ten conditions, duration of antibiotic prescription, antibiotic prescribing over time. Interactive features include the comparison with other practices, generation of audits and demographic information of the patient population
Group B: CARA dashboard with key message 1: comparison of practice green and red antibiotic prescribing compared to the average of all other practices. After access to the CARA dashboard similar to group A.
Group C: CARA dashboard with key message 2: comparison of practice green and red antibiotic prescribing compared to practice data of the same month last year. After, access to the CARA dashboard similar to group A.

Intervention Type
Behavioural

Primary outcome(s)
Engagement measured as the number of ‘clicks’, ‘viewings’ and ‘sessions’ in the CARA dashboard after 1 month of dashboard usage data collected through Google Analytics

Key secondary outcome(s)
There are no secondary outcome measures

Completion date
30/05/2027

Eligibility

Key inclusion criteria
Health professionals at general practices that confirm the terms and conditions

Participant type(s)
Health professional

Healthy volunteers allowed
No

Age group
Mixed

Lower age limit
18 Years

Upper age limit
65 Years

Sex
All

Total final enrolment
0

Key exclusion criteria
Not meeting the participant inclusion criteria

Date of first enrolment
01/03/2026

Date of final enrolment
30/09/2026

Locations

Countries of recruitment
Ireland

Study participating centre
GP practices in the Republic of Ireland
Ireland
None available

Sponsor information

Organisation
University College Dublin

ROR
https://ror.org/05m7pjf47

Funder(s)

Funder type
Government

Funder Name
Health Research Board

Alternative Name(s)
Health Research Board, Ireland, An Bord Taighde Sláinte, HRB

Funding Body Type
Government organisation

Funding Body Subtype
National government

Location
Ireland

Results and Publications

Individual participant data (IPD) sharing plan
The dataset generated during and/or analysed during the current study will be available upon request from Nathaly Garzon nathaly.garzonorjuela@ucdconnect.ie or Professor Akke Vellinga akke.vellinga@ucd.ie. This dataset is anonymous and the dashboard usage data will be clustered by the three different initial landing pages (1 month of collecting data).

IPD sharing plan summary
Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Protocol article		20/05/2024	20/05/2024	Yes	No
Participant information sheet			26/10/2023	No	Yes
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes
Study website	Study website	11/11/2025	11/11/2025	No	Yes