

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

Submission date 16/10/2023	Recruitment status Recruiting	<input checked="" type="checkbox"/> Prospectively registered <input checked="" type="checkbox"/> Protocol
Registration date 02/01/2024	Overall study status Ongoing	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
Last Edited 28/01/2025	Condition category Other	<input type="checkbox"/> Individual participant data <input checked="" type="checkbox"/> 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?
January 2023 to May 2026

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

Study website
<https://caranetwork.ie/>

Contact information

Type(s)
Public, Scientific

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Additional identifiers

EudraCT/CTIS number

Nil known

IRAS number

ClinicalTrials.gov number

Nil known

Secondary identifying numbers

Nil known

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

Study design

Randomized user research study

Primary study design

Interventional

Secondary study design

Cluster randomised trial

Study setting(s)

GP practice

Study type(s)

Other

Participant information sheet

<https://caranetwork.ie/wp-content/uploads/2023/10/GP-information-sheet-CARA.pdf>

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 measure

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

Secondary outcome measures

There are no secondary outcome measures

Overall study start date

15/01/2023

Completion date

30/05/2026

Eligibility

Key inclusion criteria

Health professionals at general practices that confirm the terms and conditions

Participant type(s)

Health professional

Age group

Adult

Lower age limit

18 Years

Upper age limit

65 Years

Sex

Both

Target number of participants

87 users or practices (29 per group)

Key exclusion criteria

Not meeting the participant inclusion criteria

Date of first enrolment

01/05/2025

Date of final enrolment

30/09/2025

Locations

Countries of recruitment

Ireland

Study participating centre

GP practices in the Republic of Ireland

Ireland

None available

Sponsor information

Organisation

University College Dublin

Sponsor details

School of Public Health, Physiotherapy and Sports Science
Health Sciences Centre
4 Stillorgan Rd
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Sponsor type

University/education

Website

<https://www.ucd.ie/phpss/>

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

Local government

Location

Ireland

Results and Publications

Publication and dissemination plan

The researchers plan to publish the protocol and disseminate their findings widely through academic journals, the study website, and social media.

Intention to publish date

30/03/2026

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?
Participant information sheet			26/10/2023	No	Yes
Protocol article		20/05/2024	20/05/2024	Yes	No