

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

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<b>Registration date</b> 02/01/2024	<b>Overall study status</b> Ongoing	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
<b>Last Edited</b> 25/11/2025	<b>Condition category</b> 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?  
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

## Study design

Randomized user research study

## Primary study design

Interventional

## 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](mailto:nathaly.garzonorjuela@ucdconnect.ie) or Professor Akke Vellinga [akke.vellinga@ucd.ie](mailto: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?
<a href="#">Protocol article</a>		20/05/2024	20/05/2024	Yes	No
<a href="#">Participant information sheet</a>			26/10/2023	No	Yes
<a href="#">Participant information sheet</a>	Participant information sheet	11/11/2025	11/11/2025	No	Yes
<a href="#">Study website</a>	Study website	11/11/2025	11/11/2025	No	Yes