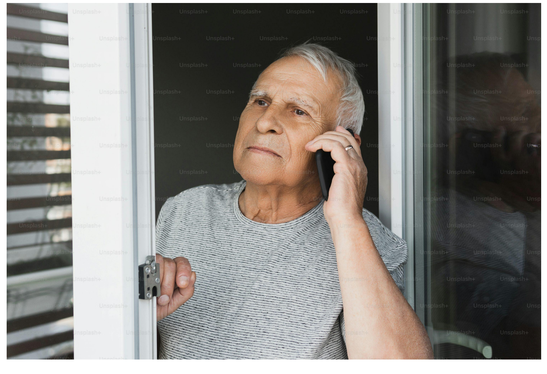
Streamlining the pre-assessment pathway for cataract surgery using a conversational clinical artificial intelligence

Khaled Jama[1], Shafak Toufeeq[1], Louisa Stacey[2], Evgenia Anikina[1], Aisling Higham[2]
1. Royal Berkshire Hospital NHS Foundation Trust, Reading, Berkshire 2. Ufonia Limited, Oxford

Introduction

- Can artificial intelligence (AI) streamline the surgical pre-assessment process?
- We explored this question within the cataract surgery pathway-a high-volume, resource-intensive service that could benefit greatly from optimisation.

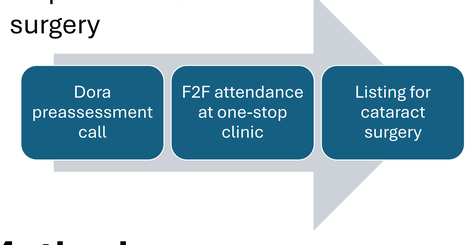


What is Dora?

Dora (Ufonia Limited, Oxford, UK) is a natural-language automated telephone voice assistant, which carries out calls to both pre- and post-operative patients.

Aims

- To evaluate whether Dora, an AI-powered telephone system, can accurately identify patients during pre-assessment calls who are unlikely to want or need cataract surgery.
- National guidelines recommend that at least 95% of patients attending a one-stop clinic should be listed for cataract surgery

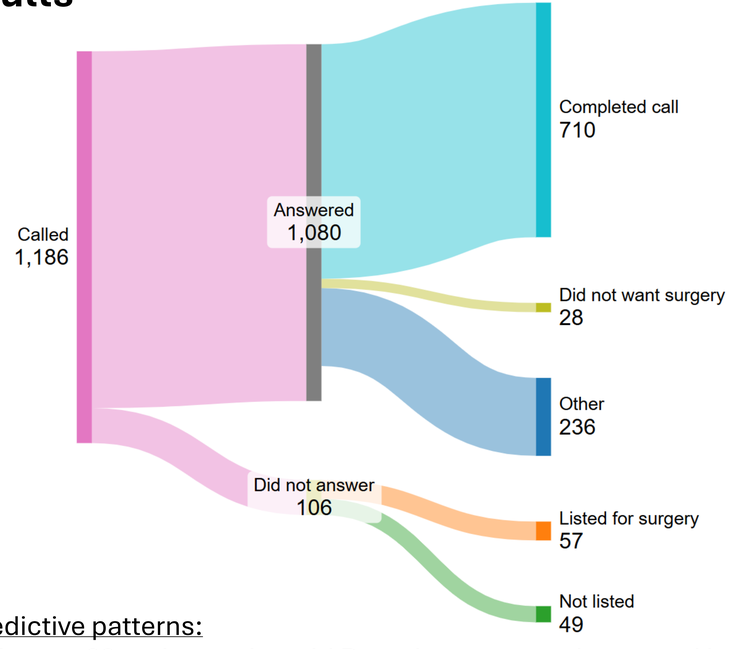


Methods

- Inclusion criteria: all patients called by Dora between Oct 2023 and May 2024
- Our analysis focused on:
  1. Those who did not answer Dora's call
  2. Those who expressed uncertainty about proceeding with surgery.

By tracking these patients' outcomes at face-to-face clinics, we aimed to identify ways to improve the efficiency of the cataract pre-assessment pathway

Results



Predictive patterns:

- Among **28** patients who told Dora they were not interested in surgery, **only 1 patient (3.6%)** was listed for surgery after F2F review.
- Notably, for the **106 patients (9.8%)** who did not answer Dora's ca we saw a dramatically reduced conversion rate **of 54% (57 patients)** listed for surgery

Conclusions

- Dora can reliably identify patients who are unlikely to proceed with cataract surgery, helping to avoid unnecessary face-to-face appointments and improve pathway efficiency.
- There is a clear correlation between non-response to Dora calls and a lower surgical conversion. This allows us to plan clinic schedules better
- Overall, the use of Dora helps use clinical time and resources more effectively.

