

Evaluating the Safety and Performance of an AI Tool for Post-Cataract Surgery Follow Up

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Introduction

- DORA, created by Oxford company Ufonia, is an AI tool used to automate the post op cataract check up
- DORA calls the patient at a certain timepoint (e.g. 14 days) post cataract surgery and asks the following questions/symptoms:
 - Significant redness
 - Significant pain
 - Vision problems
 - New floaters
 - New flashing lights
 - Disagreed with symptom summary
 - Has question about eye
 - Is expecting second eye
- DORA is able to interact with the patient to stratify the symptoms; e.g. if there is redness, DORA will ask if this is just a small area of redness or redness all over
- This generates a **PASS** or **FAIL**
- PASS** patients will be discharged without any appointment
- FAIL** patients will receive a nurse phone call to manage concerns and/or book an in-person doctor review
- Ashford & St Peter's Hospitals NHS Foundation Trust (ASPH) have adopted DORA for post op cataract check ups for over 1 year

Aims

- To evaluate the safety of DORA
- To evaluate the efficiency of DORA in reducing clinician workload
- To evaluate potential improvements to optimise DORA's implementation

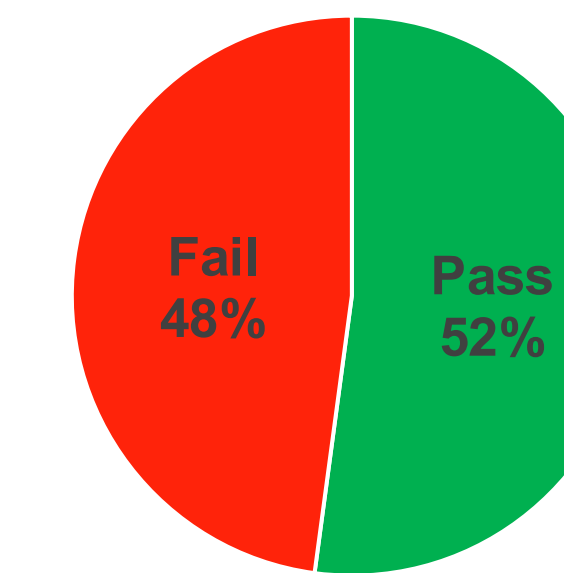
Methods

- Retrospective analysis
- Inclusion criteria: all DORA phone calls in January and February 2025 (189)
- 1 patient excluded: duplicate call
- Total sample size: n = 188
- Data was collected using Millenium EPR, Evolve, and MediSight to look at clinic letters, Cerner entries, operation notes, and patient correspondence

Results

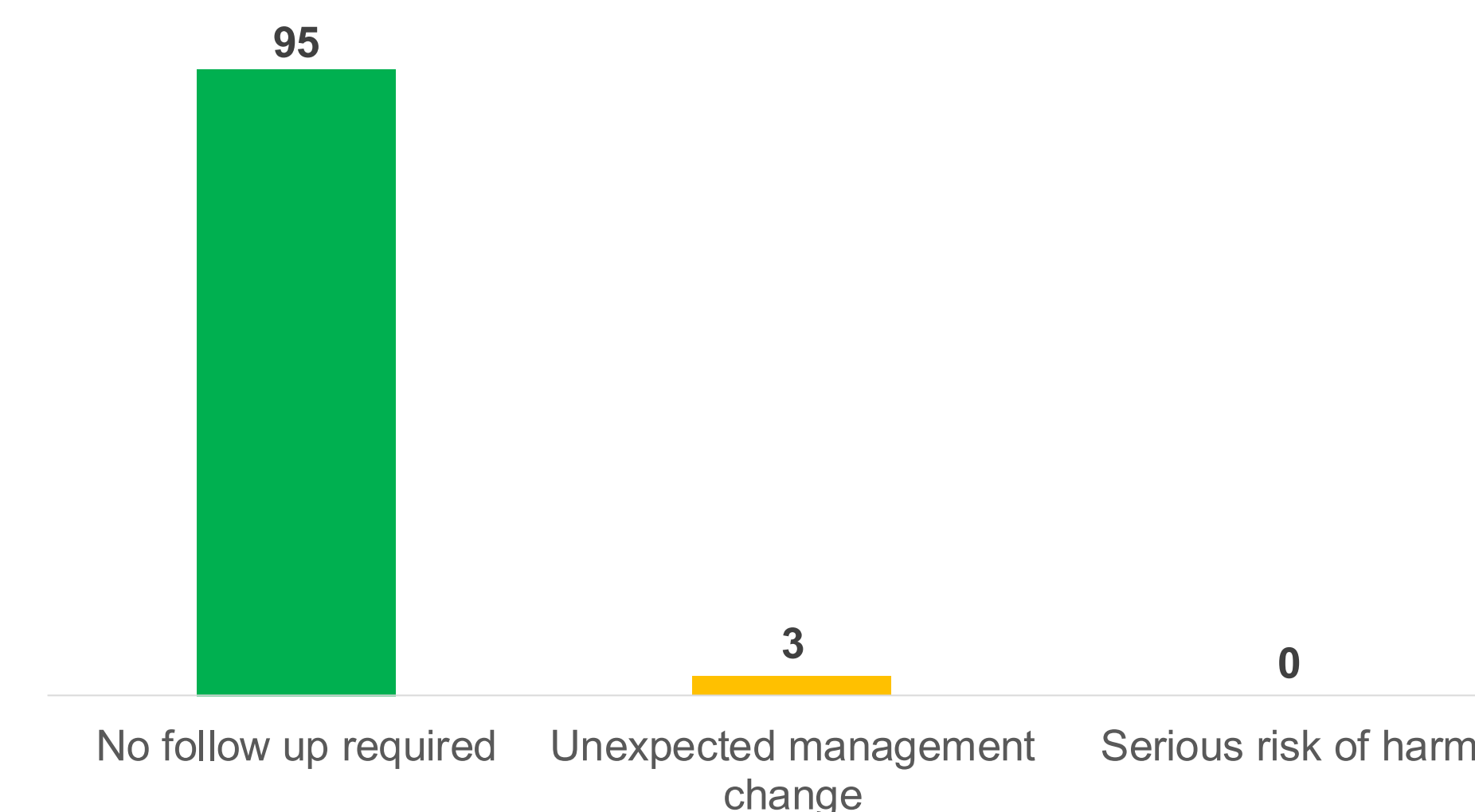
Out of 188 patients; DORA classified patients into

- 98 **PASS** (52%)
- 90 **FAIL** (48%)



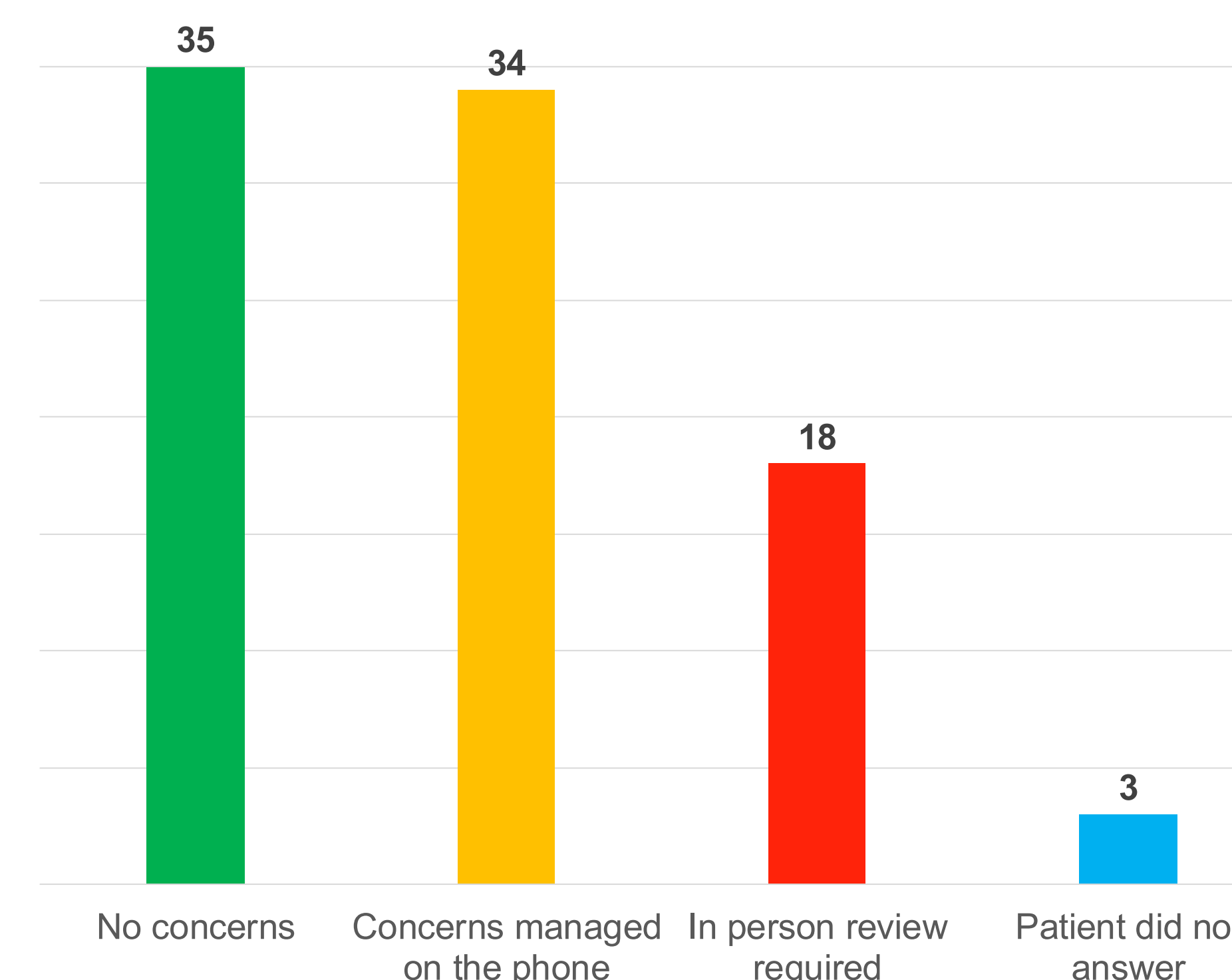
PASS Cohort (n=98)

- 97% required no follow-up
- 3% required future eye casualty review
- 0% experienced serious complications
- DORA is safe**



FAIL Cohort (n=90)

- No concerns on nurse call: 39%
- Managed by phone: 38%
 - Non-clinical queries inc. driving and self-care advice: 6%
 - Clinical mild symptoms inc. mild pain/irritation: 32%
- In-person doctor review: 20%
- Did not answer: 3%
- DORA can be more efficient**



How long after surgery did DORA call?

- Overall average = 12.8 days (range = 8-18 days)
- DORA pass average = 13.1 days
- DORA fail average = 12.4 days
- Statistical analysis with a Mann-Whitney U Test showed $p = 0.058 \rightarrow$ not statistically significant ($p > 0.05$)
- Ufonia recommend calling 3-4 weeks post op, with representatives quoting a national average pass rate of 67%, compared to our trust at a 52% pass rate

Conclusions

- 97% of PASS patients did not require future follow-up $\rightarrow$ DORA is safe and is not mistakenly passing patients
- DORA is useful in decreasing workload on clinicians
- However, DORA can be made more efficient
- 77% of FAILs did not need in-person review $\rightarrow$ strong opportunity to convert some FAIL patients to PASS
- This needs to be done with caution as to not compromise the safety of the tool

Recommendations

- Move DORA call to 3 weeks post-op $\rightarrow$ Likely to reduce number of FAILs with mild symptoms
- Integrate symptom-specific advice $\rightarrow$ Mild blur/redness/pain expected early and provide appropriate safety-netting
- Expand non-clinical FAQs $\rightarrow$ Appropriate driving and self-care advice
- Improve patient education $\rightarrow$ Tell patients DORA can answer questions and assess symptoms
- Improve clinician education $\rightarrow$ Ufonia workshops to ensure staff understand DORA's capabilities