Feasibility of in-home monitoring for people with glaucoma: the I-TRAC mixed-methods study

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Plain language summary

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What is this research about?

The In-home Tracking of glaucoma: Reliability, Acceptability, and Cost study explored whether glaucoma patients who would normally be monitored in hospital could do some monitoring themselves at home, and whether self-monitoring at home would be acceptable or possible for them.

How was the research done?

We delivered In-home Tracking of glaucoma: Reliability, Acceptability, and Cost in four phases by:

1. Surveying expert glaucoma specialists to understand which patients would benefit most from home monitoring.
2. Providing glaucoma patients with an iPad tablet and a device which measures eye pressure to use once a week for 3 months. The patients who participated and the clinical staff delivering the study were interviewed about their experiences.
3. Interviewing researchers with experience of running large studies testing digital technologies to monitor patients' health at home to understand challenges.
4. Reviewing other researchers' work and comparing it with ours to help us understand whether home monitoring of glaucoma could be good value for money.

What did the research find out?

Overall, patients and healthcare professionals were cautiously optimistic about the digital technologies for home monitoring of glaucoma. Most patient participants were able to use the technologies, and half told us they preferred home monitoring. Most clinicians recognised the potential advantages of glaucoma home monitoring but had concerns about the technologies (specifically reliability and the risk of missing disease progression) and how they would fit into routine care. Plans for how to evaluate value for money in a future study were identified. The study did not aim to identify whether the digital technology was better than what happens currently; a different study design with many more patients would be required to answer that question. The study did identify several important questions to answer before designing a future larger study; for example, how to ensure diverse patient participation. These questions should be the focus of future research in this area.

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This article

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