

# CAT Implementation Study

Introducing CAT testing into glaucoma clinics at a leading tertiary eye hospital in the US to enhance patient care.<sup>1,2</sup>

## Summary

The glaucoma quality of life CAT “GlauCAT™” was implemented in glaucoma clinics at a leading tertiary eye hospital in the US using the PROMinsight platform.

The goal of the pilot project was to test the feasibility, acceptability and effectiveness of integrating PROM data using CATs into routine clinical care for patients with glaucoma.

## Implementation of GlauCAT™



A feed forward model was employed, where patients were invited upon registration to complete six GlauCAT™ tests measuring:



Activity limitation



Mobility



Emotional well-being



Concerns



Treatment inconvenience



Ocular comfort



Patients completed the GlauCAT™ tests on an internet-enabled tablet via a password-protected web portal.



Targeted approaches were used to increase patient uptake of the system and encourage clinicians to engage with the GlauCAT™ results during consultation.



The quality of life data were synthesised into a summary report showing overall scores for each domain plus a list of low-scoring items, interpretation of results, details of referral services, and trends in scores over time.

## Results

Our pilot implementation project produced very promising results, with hundreds of satisfied patients taking the GlauCAT™ tests at clinic before seeing their doctor. Results were immediately available for doctors to view, optimising short consultation times.

With fast and easy to use CATs and high response rates, the PROMinsight system is pioneering the implementation of PROMs in healthcare and supporting the push towards value-based care.

## Key Figures



4 clinicians during 2 clinic sessions per week



216 patients, 89% response rate



80% completed without assistance



Median **2 mins** to complete each CAT test



Patients' mean satisfaction scores were 3.5 out of 4, with >95% of patients willing to recommend GlauCAT™ to others



100s of patient-doctor conversations initiated

## Insights & Future Plans

### Insights

- The optimal workflow is for patients to answer GlauCAT™ before attending clinic
- Full integration of GlauCAT™ scores into patients' medical records is key to streamlining the inclusion of PROMs in healthcare and promoting usage



### Future Plans

- The next phase will trial the feasibility of sending an automated message to patients 1 day prior to their glaucoma appointment with a secure link to the PROMinsight platform and relevant GlauCAT™ tests.
- The next phase will automate data flow from the PROMinsight platform to the EMR system using API (Application Programming Interface).

## Insights

- Targeted provider engagement approaches and a clinician 'champion' are essential to encourage uptake of the PROMinsight system in clinical care and increase satisfaction among providers



## Future Plans

- Future work will explore barriers and facilitators to engagement and develop and evaluate interventions to increase uptake.

## Summary

The findings and insights from this pilot implementation project have demonstrated the feasibility of implementing CAT technology for PROM assessment in routine healthcare, highlighting the importance of the PROMinsight platform and associated CAT testing suite in facilitating the push towards value-based medicine

## References

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2. Roldan-Vasquez A, Halawa O, Meshkin S, Zebardast N, Fenwick E, Lamoureux E, Friedman D. Implementation of the Glaucoma Computerized Adaptive Testing System (GluCAT™) to measure the quality of life (QoL) among glaucoma patients in a tertiary eye care setting. Association for Research in Vision and Ophthalmology (ARVO). Virtual meeting; 2021.
3. EK Fenwick, AM Roldan, OA Halawa, RS Meshkin, N Zebardast, V Popov, P Lis, DS Friedman, EL Lamoureux. Implementation of an Online Glaucoma-Specific Quality of Life Computerized Adaptive Test System in a US Glaucoma Hospital. *Transl Vis Sci Technol.* 2022. 11(2):24.
4. OA Halawa, A Roldan-Vasquez, RS Meshkin; N Zebardast, EK Fenwick, EL Lamoureux, DS Friedman. Factors associated with glaucoma-specific quality of life in a US glaucoma clinic in a pilot implementation of an online computerized adaptive test (GluCAT™). 2022. *Br J Ophthalmol.* *In press.*

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