IMPLEMENTING QUALITY-OF-LIFE MEASURES INTO GLAUCOMA CLINICAL TRIALS

What are the next steps?

BY GREGORY L. SKUTA, MD; RICHARD K. PARRISH II, MD; AND LORRAINE M. PROVENCHER, MD


GREGORY L. SKUTA, MD, AND RICHARD K. PARRISH II, MD

Glaucoma clinical trials have historically focused on measurable visual function with an emphasis on visual acuity, visual field (VF) performance, IOP, and optic nerve/retinal nerve fiber layer–related parameters. However, over the past 20 to 30 years, increased attention has appropriately been given to considering and evaluating quality-of-life (QOL) measures.[1-3] Guidelines established by the European Glaucoma Society emphasize that "the goal of glaucoma treatment is to maintain the patient's visual function and related [QOL] at a sustainable cost."[4,5]

The Collaborative Initial Glaucoma Treatment Study (CIGTS) was one of the first glaucoma clinical trials sponsored by the National Eye Institute (NEI) to embrace the importance of assessing QOL as a major element of the study.[2,3] Although a detailed review is beyond the scope of this article, Dempster et al more recently summarized at least 20 vision-specific QOL measures used in glaucoma research.[4]

As we consider the next steps in implementing QOL measures in glaucoma clinical trials and identify what we wish to evaluate, it is crucial that we remember what is important to patients. Being able to read and acquire information, navigating (eg, driving and walking outside and on stairs), and effectively recognizing and

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interacting with others appear to be high priorities for patients.[6] In keeping with the World Health Organization's definition of QOL, it is also important that the measures address the full spectrum of emotional, social, and physical functioning.[4]

In designing and refining instruments to assess QOL in glaucoma-focused studies, it would be appropriate for these tools to be as glaucoma-specific and concise as possible. (As one example, the NEI Visual Function Questionnaire-25 [NEI VQF-25] is not glaucoma-specific.) From a QOL perspective, the experience of a patient with age-related macular degeneration may differ considerably from that of a patient with moderately advanced glaucoma.

It will also be important for the instruments used to assess QOL to require a minimal amount of patient (and physician and staff) time. A tool called the Health Utility for Glaucoma-5 dimensions, or HUG-5, was recently developed to assess five QOL measures (visual discomfort, mobility, daily life activities, emotion, and social activities) using five response levels (none, slight, moderate, very much, and severe) and takes less than 2 minutes for patients to complete.[7] Additionally, Musch et al evaluated an 18-item Symptom and Health Problem Checklist in comparison to the original 43-item Symptom and Health Problem Checklist used in CIGTS and reported that it was a "reliable, responsive, and psychometrically sound measure of patient-reported, glaucoma-related symptoms."[8]

Dempster et al described the potential value of an individualized approach to QOL measurements in glaucoma-related studies to ensure that it is truly QOL and not simply health status that is assessed.[4] However, the authors also acknowledged that one challenge could be comparing scores over time and recommended a "head-to-head comparison of individualized and predetermined [QOL] instruments … among people with glaucoma."

QOL measures in future glaucoma clinical trials will require concise, glaucoma-specific instruments that are as individualized as possible but can still assess the full spectrum of emotional, social, and physical function for change over time. Above all, these tools must effectively address what matters most to the patients we serve.

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LORRAINE M. PROVENCHER, MD

Glaucoma research outcomes have long attached success to traditional objective measures of disease, including visual acuity, IOP, and VF indices. These criteria, although undeniably important, may fail to fully capture the burden of glaucoma or the impact of treatment on QOL. As we broaden our view of success to formally incorporate patient-reported outcomes (PROs) into clinical trials (for MIGS, in particular), a few obstacles still must be overcome.

PROPER INSTRUMENTATION

Many disease-specific health-related QOL (HR-QOL) instruments exist, but a validated, reliable PRO measure that is tailored to capture the impact of MIGS is needed. In the wake of a procession of new MIGS options, Verana Health, the FDA, AAO, and AGS have joined forces to develop the Glaucoma Outcomes Survey, a PRO instrument designed specifically for MIGS clinical trials.[1] The development of a standardized instrument will facilitate the use of PROs in future clinical trials, allow for study cross-comparison, and create language for PRO-based decision-making and patient counseling.

PRACTICALITY

PRO measures also have the potential to supplement how glaucoma is monitored both in clinical trials and eventually in the clinic. Severe-stage glaucoma, glaucoma confounded by ocular comorbidities, and glaucoma in the poor test taker can be challenging to monitor. In these difficult scenarios, a patient's perception of functional decline may be a valuable indicator of progression. Multiple cumbersome glaucoma-specific instruments have been studied but have yet to be effectively implemented into clinical practice, as practicality is paramount to the real-world success of a PRO instrument. Early work has shown that the 9-item NEI Visual Functioning

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Questionnaire (NEI VFQ-9), a short form of the NEI VFQ-25, correlates with visual acuity, VF parameters, and OCT and can easily be used in a busy glaucoma practice.[2] The longitudinal utility of the NEI VFQ-9 has yet to be determined, but practicality was prioritized in its design.

MINDSET SHIFT

Once suitable PRO instruments are implemented in clinical trials, the real-world value of PROs must be embraced by clinicians. Too often, HR-QOL results are minimized in discussion while more traditional objective measures take center stage. Perhaps this is due to the comfort of familiarity. The QOL realm requires physicians to consider the patient experience outside the office and venture into more holistic and complex territory. Expansion of the traditional IOP-centric mindset is the final frontier when it comes to in-the-trenches application of PROs. A change like this takes time, and glaucoma specialists must strive as a field to underscore the importance of PROs.

SUMMARY

Innovation and the MIGS revolution have catapulted glaucoma care into an era in which we can incorporate the patient's perspective without sacrificing control of more traditional disease parameters. In essence, the best of both worlds is more realistic than ever before: Today's well-informed patients expect to be heard and involved, and the most optimal medical care comes when the patient's perspective is at the center of all efforts. Although hurdles will arise in the quest to find harmony between PROs, a growing arsenal of glaucoma treatments, and physician expertise, it is a challenge worth pursuing ardently. ■

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RICHARD K. PARRISH II, MD
- Edward W.D. Norton Professor, Bascom Palmer Eye Institute, Department of Ophthalmology, University of Miami Miller School of Medicine, Miami
- Associate Dean for Graduate Medical Education, University of Miami Miller School of Medicine, Miami
- rparrish@med.miami.edu
- Financial disclosure: Editor-in-Chief, *American Journal of Ophthalmology*

LORRAINE M. PROVENCHER, MD
- Glaucoma specialist, Cincinnati Eye Institute, Ohio
- lprovencher@cvphealth.com; Twitter @DrLorraineEyeMD
- Financial disclosure: Allergan, MicroSurgical Technology

GREGORY L. SKUTA, MD
- President and CEO, Dean McGee Eye Institute, Oklahoma City, Oklahoma
- Edward L. Gaylord Professor and Chair, Department of Ophthalmology, University of Oklahoma College of Medicine, Oklahoma City, Oklahoma
- greg-skuta@dmei.org
- Financial disclosure: Board of Directors (Ophthalmic Mutual Insurance Company)