From Insights to Impact: How the Patient Perspective Changed the Major Depressive Disorder Open-Source Value Model

L. Raines, R.H. Chapman, M. Cheng Center for Innovation & Value Research, Alexandria, VA, USA

INTRODUCTION

Major depressive disorder (MDD) is a leading cause of global disease burden and a major contributor to low quality of life and productivity loss.

The complexity and heterogeneity of MDD and its treatment highlights the importance of incorporating patients' lived experience of the disease into economic models.

Active participation from patients, caregivers, and other stakeholders can help ensure economic models reflect real-world complexities.

OBJECTIVE

To explore the role of patient engagement in health economic model building and its impact on developing the Major Depressive Disorder (MDD) Open-Source Value Model (OSVM).

RESULTS

METHODS

A multi-stakeholder advisory group comprised of 20+ clinicians, health economists, patients, payers, purchasers, and researchers was established to provide input on configuration of the MDD OSVM through a series of meetings and key informant interviews. Patients were financially compensated for their time and input and were kept informed as to how their input changed the development of the model.

Webinars and public comment periods were also conducted at various stages of model development over a 3-year period to collect wider feedback on various aspects of the model (**Figure 1**). In addition, to inform the model on MDD patient preferences, a patient-level discrete choice experiment was conducted.

Figure 1. Patient and Multi-Stakeholder Input Process for Development of the MDD Open-Source Value Model

All Stages: In partnership with Multi-Stakeholder Advisory Group, as well as small group sessions, surveys, key interviews, and other partner outreach activities.

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Notes

- * Public Comment Period
- 1. Model Initiation: Organizer identifies topic and purpose of the model, secures resources, and recruits Advisory Group and research partners
- 2. Conceptual Framework: Formalizes model goals and research questions
- 3. Model Scope: Articulates model objectives, population and treatments, key outcomes, early assumptions and features
- 4. Model Protocol: Technical outline of model structure, analytic methods, and data sources
- 5. Construction: Systematic literature review and data analyses, model programming, software and user interface development, testing and validation, documentation

Feedback from MDD patients and patient advocates identified gaps in the model that emphasized the need to address patient priorities in several key areas (Figure 2).

The input received was evaluated by the advisory group and clinical and technical experts to explore the feasibility of incorporating these changes into the model. Key changes to the model included adjusting the user interface, including additional cost variables such as transportation costs, and adding additional subgroups to race and ethnicity.

Figure 2. Patient Feedback Impacts on the MDD Open-Source Value Model

Model Population

- Changed model's focus from treatment-resistant depression to MDD more broadly.
- Added additional subgroups to include race and ethnicity.

Model Interventions

- Modeled treatment pathways along with individual treatment comparisons.
- Included placeholder input for treatment lines, allowing users to input their own data or test hypothetical scenarios.

Model Inputs

- Included additional variables (e.g., transportation costs, absenteeism, and presenteeism).
- Modeled relapse as a function of both degree and timing of initial treatment response to better mirror real-world experience.
- Incorporated treatment gaps to more closely reflect reality, allowing for periods between treatments where patients receive no care.

Model Outcomes

• Expanded outcome measures beyond traditional metrics (e.g., life years, quality-adjust life years) to include outcomes such as time to first response, number of relapses, etc.

Model Interface

• Contributed to design and testing of user interface to ensure accessible and user-friendly for technical and non-technical users, including patients.

CONCLUSIONS

Capturing and implementing the patient perspective in the MDD Open-Source Value Model facilitated open communication between health economists and patients, ensuring the model was patient-centered and provided transparency.

Further research on MDD is needed to address data gaps that are important to patients, such as caregiver burden, societal costs, and equity.

REFERENCES

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CONTACT INFORMATION

Richard Chapman: rick.chapman@valueresearch.org



