IVI INNOVATION AND VALUE INITIATIVE

Incorporating Stakeholder Perspectives into Open-Source Model Building for Major Depressive Disorder

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INTRODUCTION

Health economic model development has traditionally relied on input from clinical and technical expert opinion, which overlooks the perspectives of affected stakeholders such as patients and caregivers.

To address this gap, the Innovation and Value Initiative (IVI) convened a multi-stakeholder advisory group to provide guidance on the research, development and dissemination of an open-source value model evaluating treatments for major depressive disorder (MDD).

OBJECTIVE

To demonstrate the importance of utilizing stakeholder perspectives when developing health economic models to ensure patient-centricity and equitable decision-making.

METHODS

The multi-stakeholder advisory group was recruited at the outset of the project launch phase of the model development process and was comprised of 20+ clinicians, health economists, patients, payers, purchasers, and researchers, as shown in **Figure 1.**

As seen in **Figure 2.** the advisory group was engaged for a 3-year period in the form of meetings, interviews, webinars and public comments.

At each phase of model development, the advisory group was consulted on the model building process and contributed to the overall design, user interface, parameters, patient preferences and decision contexts.

The advisory group also advised on key informants, expert panelists, researchers and patients that should be included in the development of the MDD open-source value model.

In addition, they provided suggestions for real-world applications of the model and responses to external feedback from public comments.

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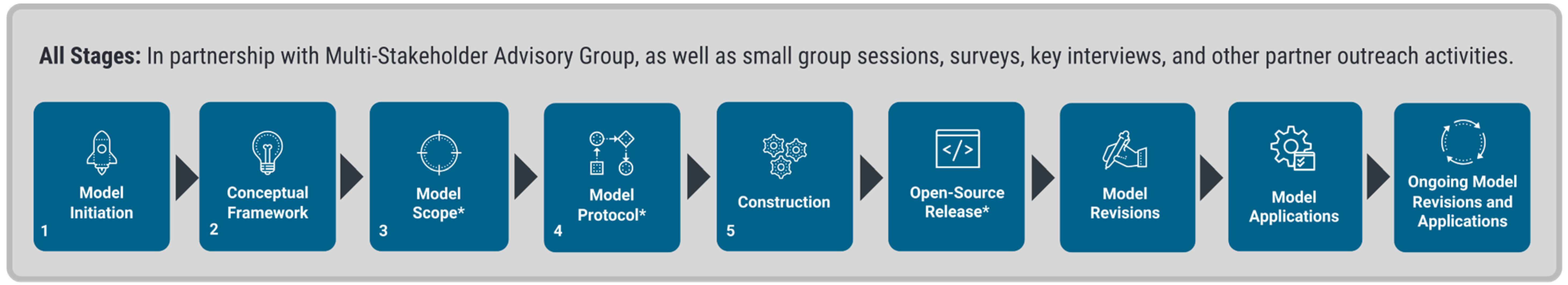
Figure 1. IVI's approach to open-source value model development with multi-stakeholder input



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

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

RESULTS

As shown in **Table 1**, the stakeholder perspective had substantial impact on 3 key areas of developing the MDD open-source value model.

The adoption of stakeholder perspectives into the model over the course of the design allowed for a more patient-centric focus, capturing complexities pertinent to MDD patients such as disparities, economic burden, and societal impacts.

The input received during each phase of the model build allowed for external validation of the model design ensuring its equitable usability as a tool for decision-making not only for clinical and technical users, but also for patients and caregivers.

Table 1. Stakeholder impact on open-source value model development

Key Areas of Impact	Results of Stakeholder Perspective
Foundational Research	• Identified and engaged key partners such as clinical experts, technical experts, and patients • Refined and expanded initial research questions • Determined gaps in MDD research (e.g., around health equity)
Model Framework	• Provided additional model inputs and data sources • Identified outcomes and priorities of affected stakeholders • Feedback on areas of improvement and future considerations
Dissemination and Use	• Aided in design of web-based user-interface with a focus on model accessibility and non-technical user experience • Suggested use cases and real-world applications • Collaborated on effective strategies for model release and findings (e.g., webinars, manuscripts)

Figure 2. IVI's process for multi-stakeholder engagement during the 3-year MDD model development process

Multi-Stakeholder Engagement Overview

CONCLUSION

Integrating stakeholders' perspectives and their priorities was key to making the open-source model a credible and transparent decision-making tool for evaluating MDD treatment modalities.

Inclusion of multiple perspectives in the advisory group ensured the model would be meaningful to patients.

Original graphics

Multi-Stakeholder Engagement Overview

12 Advisory Group Meetings

20 Key Informant Interviews and Individual Meetings

10 Small Group Sessions (Clinical, Patient, Technical)

3 Webinars

3 Public Comment Periods

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