Depression Working Group
Presented at the Ninth Annual PRO Consortium Workshop – Silver Spring, MD – April 25-26, 2018

PRO CONSORTIUM
CRITICAL PATH INSTITUTE

Background

Rationale for the Depression Working Group (WG)
- PRO Consortium members and FDA advisors identified depression as a priority area
- It was unclear whether any existing PRO instruments were 'fit-for-purpose' as an efficacy endpoint measure in major depressive disorder (MDD) treatment trials
- The WG concluded that there was no PRO instrument for use in MDD clinical trials developed in accordance with the FDA PRO Guidance

Goal of the Depression WG
- To assess the adequacy of existing PRO instruments for capturing important depressive symptom information from the patient's perspective and, if there is an unmet need, to either modify an existing instrument or develop a new depression symptom inventory
- Based on reviews of qualitative and PRO instrument-related literature, input from expert panelists, and findings from the concept elicitation interviews, the WG decided to develop a new instrument (i.e., the *Symptoms of Major Depressive Disorder Scale [SMDDS])*

Targeted Labeling Language
- Patients treated with [*Drug X*] reported clinically significant reductions in severity of major depressive disorder compared with treatment [*YY*]. (*Based on group comparisons of means*)
- Compared with [*YY*], significantly more patients treated with [*Drug X*] reported clinically significant reductions in severity of major depressive disorder. (*Based on group comparison using responder analysis*)
- Compared with [*YY*], patients treated with [*Drug X*] reported significantly fewer days with depression symptoms. (*Based on group comparison of number of days to clinically meaningful response*)

Milestones

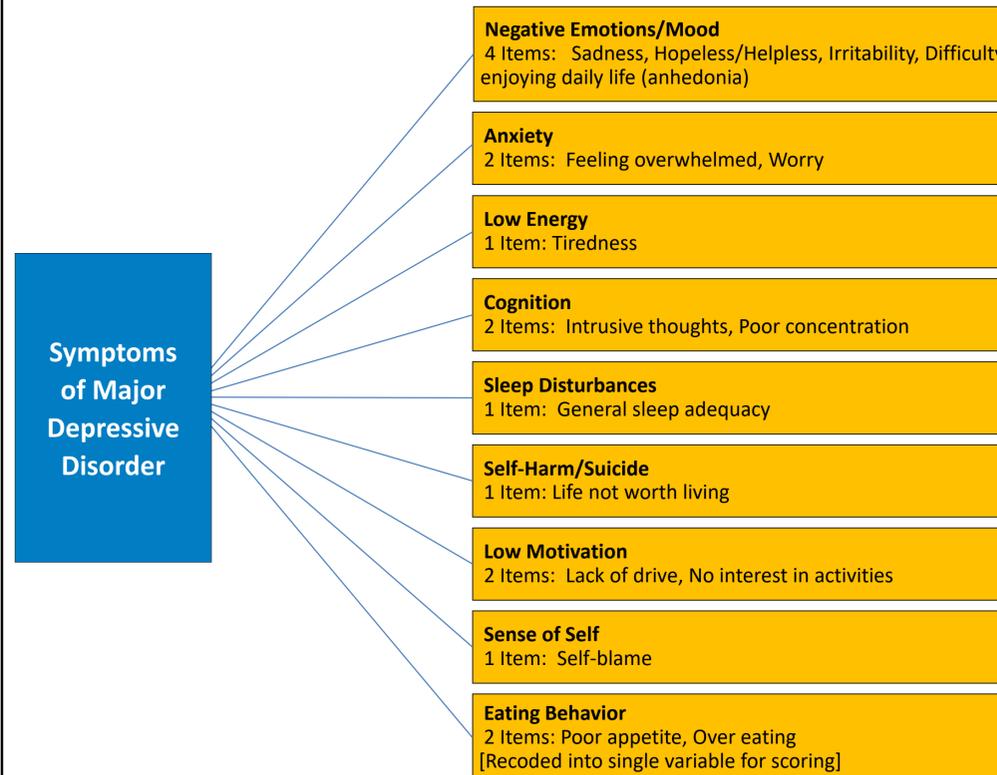| Milestone	Completed Date
Vendor selection and contracting	OCT 2011
Background research (Literature Review and Expert Panel Meeting)	MAY 2012
Draft Instrument: Complete initial qualitative research and generate items (concept elicitation interviews, item generation, expert panel input, and initial round of cognitive interviews)	AUG 2013
Submit Qualitative Research Summary Briefing Document to FDA for review and feedback	SEP 2013
Receive and respond to written comments from FDA	NOV 2013 APR 2014
Receive and respond to additional written comments from FDA	JUN 2014 JUL 2014
Complete quantitative pilot study	DEC 2015
Face-to-face meeting with FDA: instrument refinement and reduction	JUL 2015
Complete data analysis and Quantitative Pilot Study Report	APR 2016
Submit Qualification Briefing Package to FDA for exploratory use of *SMDDS*	MAR 2017
Qualification statement issued for use of *SMDDS* in exploratory studies	NOV 2017

Highlights

Example Endpoint Model for Treatment of Depression

Endpoint Hierarchy	Endpoint Concept(s)	Endpoint Type
Primary	▪ Symptoms of major depressive disorder	PRO (*SMDDS*)
Secondary	▪ Affect ▪ Disease activity	ClinRO

Target Population
- Patients 18 years and older, being treated in ambulatory settings, with a diagnosis of major depressive disorder (depression) with or without significant disability that impairs productivity in school, workplace, or in other customary activities, that would be expected to reduce patients' quality of life and life satisfaction, and may engender suicidal ideation

Conceptual Framework

Symptoms of Major Depressive Disorder

Negative Emotions/Mood
4 Items: Sadness, Hopeless/Helpless, Irritability, Difficulty enjoying daily life (anhedonia)

Anxiety
2 Items: Feeling overwhelmed, Worry

Low Energy
1 Item: Tiredness

Cognition
2 Items: Intrusive thoughts, Poor concentration

Sleep Disturbances
1 Item: General sleep adequacy

Self-Harm/Suicide
1 Item: Life not worth living

Low Motivation
2 Items: Lack of drive, No interest in activities

Sense of Self
1 Item: Self-blame

Eating Behavior
2 Items: Poor appetite, Over eating
[Recoded into single variable for scoring]

Measure – *Symptoms of Major Depressive Disorder Scale (SMDDS)*
Core Items: 16 items addressing nine symptom domains
Recall Period: 7-day
Response Options: 5-level verbal rating scale
Symptom Attribute: Intensity or frequency as a measure of severity
Data Collection Mode: Web-based data collection used for quantitative pilot study

Working Group Updates

Completed Activities
- Qualification Briefing Package submitted to FDA in March 2017
- Responses to FDA's Information Requests submitted in June and August 2017
- Received qualification of *SMDDS* in November 2017

Information Dissemination
- McCarrier KP, et al. Patient-centered Research to Support the Development of the Symptoms of Major Depressive Disorder Scale (SMDDS): Initial Qualitative Research. *The Patient: Patient-Centered Outcomes Research* 2016; 9:117-134.
- Workshop titled: A Multi-Stakeholder Collaborative Approach to Developing a Patient-Reported Outcome Measure for FDA Drug Development Tool Qualification: The PRO Consortium's Depression Working Group Experience" was presented at the International Society for Pharmacoeconomics and Outcomes Research (ISPOR) 22nd Annual International Meeting on May 24, 2017 in Boston, MA
- Manuscript on quantitative development of the *SMDDS* currently underway for submission to a clinical journal and a separate brief report focused on the methodology will be prepared after the validation manuscript is accepted for publication

COA Qualification from FDA
- The qualification of the *SMDDS* represent a major milestone for the PRO Consortium and specifically for the Depression WG.
- Drug developers are encouraged to discuss with FDA inclusion of the *SMDDS* in their MDD drug development programs.
- For expansion of the qualification of the *SMDDS* for use as a primary or secondary endpoint measure, further evaluation of its longitudinal properties and the interpretation of clinically meaningful within-patient change in score using clinical trial data is needed.

Working Group Participants

Company/Organization	Representatives
AbbVie	Xiaolan Ye, MS, PhD
Allergan	TBD
Eli Lilly and Company	Elizabeth (Nicki) Bush, MHS (Co-Chair)
Janssen	Carol Jamieson, BSc
Pfizer, Inc.	Lucy Abraham, BSc, MSc, CPsychol (Co-Chair)
Roche/Genentech	Fiona McDougall, PhD, ClinPsyD
Sunovion Pharmaceuticals Inc.	Daisy Ng-Mak, PhD
Takeda Pharmaceuticals	Debra Lawrence, MS, PhD
Expert Panel Members	**Affiliation**
Michael Thase, MD	University of Pennsylvania
Madhukar Trivedi, MD	UT Southwestern
Linda Carpenter, MD	Brown University/Butler Hospital
Contract Research Organization	**Research Team**
Health Research Associates (HRA)	Mona Martin, RN, MPA; Donald Bushnell, MA; Kelly McCarrier, PhD, MPH; Talia Miller, MPH, MSW
ePRO System Provider	**Representatives**
ERT (previously PHT)	Cheryl Van Walsh; Valdo Arnera, MD