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Patient-Reported Outcomes in Medical Device Trials – What We Can Learn From the FDA Guidance

Patient-reported outcomes data are increasingly collected in medical device clinical trials. In their strategic priorities document[1], the FDA's Center for Devices and Radiological Health (CDRH) reported seeing significant increases in medical device regulatory submissions to the agency that included patient reported outcomes data.

As a response to this, the CDRH has published guidance on "Principles for Selecting, Developing, Modifying, and Adapting Patient-Reported Outcome Instruments for Use in Medical Device Evaluation"[2]. This report addresses several areas for which the collection of patient-reported outcomes (PROs) add value to medical device trials.

For example, it stresses the importance of measuring outcomes that are meaningful to patients when participating in medical device trials as well as the importance of including these outcome measures in submissions, when appropriate. From a study design and product planning perspective, PRO data can add value by helping to determine patient eligibility and informing early device design and development decisions.

Crucially, the CDRH report also outlines the regulatory rationale for collecting PROs: These data can be used for risk-benefit assessments as well as labelling claims to communicate the effects of treatment on patient symptoms, functioning, and health-related quality of life (HRQOL).

To enable such decision-making and labelling claims, the FDA set out a number of key areas to consider when selecting a patient-reported outcome measure (PROM) that is "fit-for-purpose". Criteria include: demonstrating that the measure represents a concept that is meaningful to patients, ensuring validation work supports the validity of the PROM in the population of interest, and understanding the place of the PROM endpoint in the endpoint hierarchy.

To select, develop, modify, or adapt a PROM for use in a specific context, the new guidance describes several key considerations:

1. *Ensure and demonstrate that the PROM is measuring something meaningful to patients.* For existing PROMs, this information is often available from the instrument developer or in

the peer-reviewed literature.

2. *Ensure the PROM is understandable to patients.* Again, for existing PROMs this evidence will likely come from instrument development research in patients.
3. *Be clear about the role of the PROM in the protocol and analysis plan.* The role of the endpoint (e.g., primary endpoint vs. supportive exploratory data) may influence the degree of validation evidence needed.
4. *Leverage existing validity evidence.* As identified for points 1 and 2, when using existing instruments, there may be no requirement to generate evidence in addition to that provided by the instrument developer.
5. *Consider Alternative Platforms and Parallel Development for Generating Validity Evidence for PRO Instruments.* Where additional evidence is required, the FDA suggests that real-world data analyses may be helpful in deriving evidence needed to support PROM use.
6. *Pre-competitive collaboration with others.* The FDA encourages sponsors and other stakeholders to collaborate in new activity related to the development, adaptation, or modification of PROMs.

For those involved in implementing patient-reported outcomes in pharmaceutical drug development, this guidance contains no surprises. The content of the guidance, while specific to medical device development, is consistent with previous guidance from other divisions such as the Center for Drug Evaluation and Research (CDER), including the patient-focused drug development guidances[3] and CDER's previous PRO guidance[4].

While study designs and development programs for medical devices often look different to drug trials, the principals around PROM selection and implementation best practices to provide evidence that can support regulatory decision making and label claims remains common.

At Signant Health, our rich experience in supporting the selection, implementation, and interpretation of clinical outcome assessments in clinical research studies makes us the ideal partner for medical device developers.

References

[1] FDA (2017). Value and Use of Patient-Reported Outcomes (PROs) in Assessing Effects of Medical Devices: CDRH Strategic Priorities 2016-2017. https://www.fda.gov/files/about%20fda/published/Value-and-Use-of-Patient-Reported-Outcomes-%28PROs%29-in-Assessing-Effects-of-Medical-Devices.pdf

[2] FDA (2022). Principles for Selecting, Developing, Modifying, and Adapting Patient-Reported Outcome Instruments for Use in Medical Device Evaluation. https://www.fda.gov/media/77832/download

[3] FDA (2022). FDA Patient-Focused Drug Development Guidance Series for Enhancing the Incorporation of the Patient's Voice in Medical Product Development and Regulatory Decision Making. https://www.fda.gov/drugs/development-approval-process-drugs/fda-patient-focused-drug-development-guidance-series-enhancing-incorporation-patients-voice-medical

[4] FDA (2009). Patient-Reported Outcome Measures: Use in Medical Product Development to Support Labelling Claims: Guidance for Industry. https://www.fda.gov/media/77832/download

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