

WHAT POPULATIONS AND PATIENTS ARE MOST SUITABLE FOR COLLECTION AND USE OF PRO DATA, AND HOW CAN EHRS SUPPORT IDENTIFICATION OF SUITABLE PATIENTS?

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A few points

- Advances in EHR technology:
 - Allow for tailoring and automating outreach
 - Support real-time use of data capture
 - Support reporting initiatives
- Our focus is from the provider/system perspective
 - Patient involvement in design and implementation key
 - Regular analysis of PRO data important

Organization

Populations targeted for PRO Capture

Option 1. All patients for whom provider/system is accountable

Option 2. Patients presenting for care in a given setting (e.g. primary care, behavioral health, etc.)

Tailored approach based on patient need

Option 3. Patients with a defined condition (e.g. Parkinson's disease, heart failure, etc.)

Option 4. Patients who receive a specific treatment

Populations targeted for PRO capture

Option 1. All patients for whom provider/system is accountable

Advantages:

- Creates culture
- Establishes workflow
- Supports reporting for QI and population health initiatives
- Provides an opportunity to incorporate screening measures

Disadvantages:

- Timing of PRO assessment is not tied to a specified event
- Scripted approach without direct tie to patient care
- Additional effort needed to tie measurement to specific conditions

Populations targeted for PRO capture

Option 2. Patients presenting for care in a given setting

Advantages:

- Creates culture*
- Establishes workflow*
- Supports reporting for QI and population health initiatives*

Disadvantages:

- May result in added burden to patients receiving care across multiple settings
- Not closely tailored to individual patients
- Requires population norms for broader interpretation of data

Case Study #1

Use Case Example 1: Population Driven PRO Capture: A health care system wants to screen all members for depression to ensure comprehensive care is provided. Screening occurs through routine collection of the Patient Health Questionnaire (PHQ-9), a widely used instrument for screening, diagnosing, monitoring, and assessing the severity of depression in clinical practice. Screening occurs for all annual well visits. For appointed visits, a PHQ-9 questionnaire is programmed and automated through the EHR-linked patient portal where individuals can complete the questionnaire online prior to their scheduled appointment with their health care provider. Patients who have not completed the questionnaire prior to the visit are asked the PHQ-9 questions at the point of care by the medical assistant. Automated scoring provides immediate results to the health care provider with recommended actions for treatment, including referral for care for patients with scores indicating depressive symptoms. An algorithm built into the EHR system schedules subsequent questionnaires based on results, including an annual recheck for patients with no signs of depression and a 3-month recheck for patients identified as needing additional attention.

Tailored approach based on patient need

Option 3. Patients with a defined condition (e.g. Parkinson's disease, heart failure, etc.)

Advantages:

- Allows for a targeted measurement strategy
- Anchor events (e.g., initiating new treatments, set time points following diagnosis) for initiating PRO questionnaires may be clear
- Existing evidence on clinically important differences established

Disadvantages:

- Some conditions may not have well-validated PROs
- Need to have specific inclusion criteria linked to EHR data
- Patients with multiple conditions may be overburdened
- Need to have timely identification of conditions

Tailored approach based on patient need

Option 4. Patients who receive a specific treatment

Advantages:

- Allows for a targeted measurement strategy*
- Existing evidence on clinically important differences established*
- Supports the ability to trend data on patient-reported domain
- May support benchmarking

Disadvantages:

- Some conditions may not have well-validated PROs*
- Need to have specific inclusion criteria linked to EHR data*
- May require additional resources for follow-up if PRO assessment is required independent of the health care visit
- Limits comparisons to other treatments patients might receive

Case Study #2

Use Case Example 2: Tailored PRO Capture: A surgical practice wishes to assess symptoms and functional outcomes after total hip replacement, and to identify patients whose recovery is not as expected and may need additional care. They administer the Hip disability and Osteoarthritis Outcomes Score (HOOS) questionnaire upon referral for a surgical consult to establish a baseline score. Patients complete the survey electronically through a kiosk located in the surgical practice. The survey is administered prior to the surgical consult, allowing for automatically generated scores to be transmitted to the patient's EHR. Results of the HOOS and other clinical data are assimilated and used by the surgeon and patient as part of shared decision-making about surgery versus conservative treatment. After the visit and a decision to proceed with surgery, follow-up surveys are scheduled for the patient to receive and complete online at 6 and 12 months after surgery. Patients completing the HOOS questionnaire after surgery with results that show incomplete restoration of function are scheduled for a follow-up visit and may be referred for additional physical therapy. In addition to patient care, the data are viewed and benchmarked quarterly as part of a national registry, to identify opportunities to improve the quality of care provided to patients.

Outstanding research questions

- Research on populations completing PRO measures
 - Are certain populations excluded?
 - Is there a meaningful difference between those who participate in PRO measurement?
- Research on best methods for data analysis
- Research on workflow implications
 - Does PRO administration in clinical workflows change or bias patient responses, compared to administration in a research setting?
 - What PRO implementation strategies are most effective for managing patients with multiple chronic conditions?

Useful Resources Tools

General Resources

- Lavalley DC, Chenok KE, Love RM et al. Incorporating patient-reported outcomes into health care to engage patients and enhance care. Health Affairs 2016 Apr; 35 (4): 575-582.
- Lohr KN, Zebrack BJ. Using patient-reported outcomes in clinical practice: challenges and opportunities. Qual Life Res 2009 Feb; 18(1): 99—107.
- Wu AW, Jensen RE, Salzberg C, Snyder C. Advances in the use of patient reported outcome measures in electronic health records. 2013. Available at: <http://www.pcori.org/assets/2013/11/PCORI-PRO-Workshop-EHR-Landscape-Review-111913.pdf>.

Population Specific Resources

- Ayers DC, Zheng H, Franklin PD. Integrating patient-reported outcomes into orthopaedic clinical practice: proof of concept from FORCE-TJR. Clin Orthop Relat Res 2013 Nov;471(11):3419-3425.
- Crane HM, Lober W, Webster E, et al. Routine collection of patient-reported outcomes in an HIV clinic setting: the first 100 patients. Curr HIV Res 2007 Jan;5(1):109-118.
- Snyder CF, Blackford AL, Wolff AC, et al. Feasibility and value of PatientViewpoint: A web system for patient-reported outcomes assessment in clinical practice. Psychooncology 2013 Apr; 22(4): 895-901.