

Office of Portfolio Analysis and Strategic Initiatives: Patient-Reported Outcomes Measurement Information System

Through the Patient-Reported Outcomes Measurement Information System (PROMIS), NIH-supported investigators are developing a short and accurate computer-based questionnaire for patients to report their symptoms and responses to therapies. The answers will more accurately reflect the patient's perspective than previously possible.

Lead Agency:

Office of Portfolio Analysis and Strategic Initiatives (OPASI) /
Common Fund, NIH Office of the Director

Agency Mission:

- Strategic planning and implementation of trans-NIH initiatives that seek to transform the way health research is conducted
- Development and distribution of tools and methodologies to NIH Institutes and Centers for analysis and evaluation of NIH programs

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General Description:

The NIH Roadmap funds research that has the potential to transform biomedicine. The **Patient-Reported Outcomes Measurement Information System (PROMIS)** is designed to revolutionize the way patient-reported outcomes are used for clinical research and evaluation of medical practice. PROMIS is improving the precision of patient-reported outcome assessment while reducing the burden on respondents. A problem with many patient-reported assessment approaches is that they are either too broad to capture precise symptoms or too labor intensive for patients to complete. One major goal of PROMIS is to develop measures that can be used for many different conditions so that responses from patients with different conditions can be compared. PROMIS will shorten the assessment that each patient answers by using a computer program to ask only questions most relevant to the previous response of the patient.

The project led by NIH-supported investigators is defining the measures to be used to assess physical function, pain, and cognitive functioning, three critical concerns of seniors. These investigators will contribute their work on two of these measures, physical

functioning and pain, to a larger project that includes teams working on other aspects of outcomes measures to generate the full PROMIS assessment tool. Because PROMIS will be used for many conditions, NIH-supported investigators have assessed many previously used measures for their ability to give insights into different conditions. They have tested their new collection of measures and are now developing a computer-based tool to select from those measures the ones that are relevant to the patient answering the questionnaire. The outcome from this work will be a computer-based questionnaire that adapts to the condition of the patients to obtain the most useful information without burdening the patient with unnecessary questions.

Excellence: What makes this project exceptional?

The PROMIS initiative funds six groups of investigators to work together to develop a new, scientifically rigorous and validated method of measuring patient-reported outcomes. Each group will work in its area of expertise to contribute to the main goal. The work by 2 of the NIH-supported investigators focuses on two areas of deep concern to elders: pain and physical function. These investigators are experts in the assessment of measures of arthritis, making their contribution to the PROMIS especially relevant to seniors. Incorporated into the PROMIS assessment tool, measures in pain and physical function will allow precise measurement of these critical aspects of senior health.

Significance: How is this research relevant to older persons, populations and/or an aging society?

Physical function, pain and cognitive functioning are very important for older people, yet historically difficult to measure.

Effectiveness: What is the impact and/or application of this research to older persons?

PROMIS will allow health care professionals to more accurately assess the conditions of older persons and to develop strategies to improve their lives while reducing the burden on patients to report their outcomes.

Innovativeness: Why is this research exciting or newsworthy?

Patient-reported assessment approaches are either too broad to capture precise symptoms or too labor intensive for patients to complete. Moreover, it is difficult to compare results between different assessment tools. PROMIS is expected to profoundly improve clinical research by making more accurate diagnoses of patient conditions and response to therapies while reducing the burden on respondents. PROMIS has the potential to revolutionize the way patient-reported outcomes are used for clinical research and evaluation of medical practice.