

## **Patient Reported Outcomes in the era of Precision Medicine**

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The concept of precision medicine (PM) is to enable a new era of medicine through research, technology, and policies that empower patients, researchers, and providers to work together toward development of individualized treatments and care. This new initiative (PMI) seeks to redefine our understanding of disease onset and progression, treatment response, and health outcomes through the more precise measurement of molecular, environmental, and behavioral factors that contribute to health and disease as well as toward the prevention and treatment strategies that take individual variability into account. In addition, PMI will also support the next generation of scientists to develop creative new approaches for detecting, measuring, and analyzing a wide range of biomedical information — including molecular, genomic, cellular, clinical, behavioral, physiological, and environmental parameters.

Furthermore, the initiative taps into converging trends of increased connectivity, through social media and mobile devices, and patients' growing desire to be active partners in medical treatment and research, for example, the active engagement of participants in PMI cohort program with data and information to improve their own health. This empowerment will include patient-reported measures and outcomes to allow both clinicians and patients engaged in the research as well as during the course of treatments and therapy. A key goal of collecting patient reported outcomes (PRO) data is to improve clinical decision-making within the context of data-driven care. The successful integration of PRO measures within PMI requires continuous collection of accurate, valid, accessible, and reusable data in real time to support patient care, clinical research, and quality improvement. This presentation will outline and discuss the role of PRO in the new precision medicine initiative as well as how it may change the future landscape of biomedical research including clinical trials and health care.