



April 2020

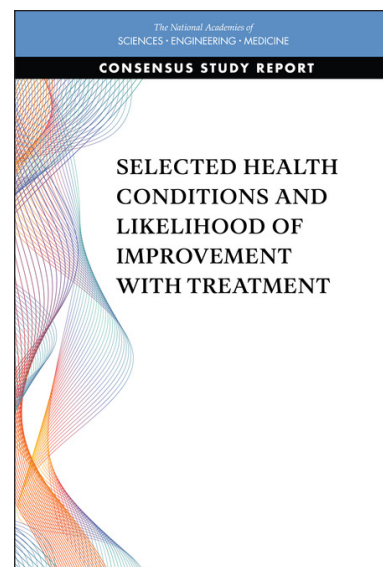
Selected Health Conditions and Likelihood of Improvement with Treatment

In response to a request from the Social Security Administration (SSA), the National Academies of Sciences, Engineering, and Medicine (the National Academies) appointed a committee to conduct a study on identifying disabling medical conditions in adults that are likely to improve with treatment. Of particular interest to SSA were long-lasting conditions (12 months or more) in the categories of cancers, mental health disorders, and musculoskeletal disorders.

Within those three categories, the committee was asked to identify and define professionally accepted, standard measurements of outcomes improvement for medical conditions covered by SSA. Additionally, the committee was asked to:

- a. Describe the professionally accepted diagnostic criteria, and the average age of onset and the gender distribution, for each condition;
- b. Identify the types of medical professionals involved in the care of a person with the condition;
- c. Describe the treatments used to improve a person's functioning, the settings in which the treatments are provided, and how people are identified for the treatments;
- d. Describe the length of time from start of treatment until the person's functioning improves to the point of which the condition is no longer disabling and specific ages where improvement is more probable;
- e. Identify the laboratory or other findings used to assess improvement and, if patient self-report is used, identify alternative methods that can be used to achieve the same assessment; and
- f. Explain whether pain is associated with the condition and, if so, describe the types of treatment prescribed to alleviate the pain (including alternatives to opioid pain management such as non-pharmacological and multi-modal therapies).

The findings of this study will assist the SSA in the administration of its programs that provide disability benefits.



THE COMMITTEE'S APPROACH

In response to SSA's charge, the committee organized itself into three groups: cancer, mental health, and musculoskeletal. Each group had experts in the specific disease category that was being studied, in addition to a health outcomes researcher and/or a biostatistician or epidemiologist. The committee primarily relied on clinical practice guidelines and systematic reviews, when available. Staff conducted targeted literature searches to gather information from relevant texts, scientific journals, professional societies, and federal sources.

CANCER

Cancer is the second leading cause of death in the United States and a major cause of disability. Cancers are a diverse class of medical conditions with disability and recovery processes that are hard to generalize over the course of the disease.

The committee developed three overall conclusions regarding their review of specific selected cancers. First, cancers within a particular organ system can have variation in their ability to improve with treatment — not only by stage, but also by cancer cell type and its molecular and genomic characteristics. Second, success in cancer treatment does not predict improved functional outcomes. In fact, cancer treatments themselves often cause functional impairments that have their own trajectories, treatments, and treatment response considerations. Finally, cancer is a dynamic process, and the length of time from the start of cancer treatment until a person's functioning improves to the point at which the condition is no longer disabling involves two timeframes: (1) the time to remission of the cancer, and (2) the time to recovery from functional impairments caused by the cancer or the treatment. A cancer patient's disease status, more so than the cancer site and stage, is an appropriate indicator of whether the patient's functional status should be assessed for improvement.

The committee notes the following cancers are likely to be disabling for a length of time (usually around the time of diagnosis) but have also seen promising advances in their treatment and in the management of the impairments they cause:

- breast cancer
- melanoma
- renal cancer
- head and neck cancers
- advanced epithelial ovary cancer
- non-small-cell lung cancer
- diffuse large B-cell lymphoma.

The committee also acknowledges that other cancers might fit the criteria.

MENTAL HEALTH DISORDERS

The committee selected eight mental health disorders for inclusion in this report: major depressive disorder, bipolar I disorder, bipolar II disorder, obsessive compulsive disorder, posttraumatic stress disorder, panic disorder, generalized anxiety disorder, and social anxiety disorder. Those mental health disorders are highly prevalent, are associated with significant functional impairment, and may respond to treatment.

The committee found that there is a deficiency of data on the length of time from start of treatment until the person's functioning improves to the point where the mental health disorder is no longer disabling. Overall, there are certain limitations to accurately describe time to functional improvement by drawing from the existing data has important limitations, including:

- efficacy data that is focused on symptoms, not functional outcomes;
- disorders that are often recurrent, making linear improvement assessments difficult;
- a complex relationship between changes in symptoms and level of function;
- concurrence with other psychiatric disorders, chronic pain, and medical conditions; and
- under-recognition and frequent lack of availability of effective treatments, particularly evidence-based psychotherapies.

The committee made several conclusions regarding time from the start of treatment to improvement in functioning for a variety of mental health disorders. However, it is important to note that full remission of mental health disorders, particularly when already determined as disabling, is seldom achieved.

MUSCULOSKELETAL DISORDERS

Musculoskeletal disorders are a diverse set of conditions affecting bones, joints, muscles, and connective tissues. The SSA noted three categories of musculoskeletal disorders in its request to the National Academies: disorders of the back, osteoarthritis, and other joint disorders. Based on the committee's clinical expertise and knowledge of the medical and research literature on musculoskeletal disorders, the committee determined that those disorders encompass the most disabling musculoskeletal conditions. Chronic pain and a loss of function are the primary mechanisms through which musculoskeletal disorders lead to disability and work loss. The committee identified chronic low back pain, osteoarthritis, and inflammatory arthropathies as the disorders that are likely to be disabling for a length of time but might improve with treatment.

- **Chronic low back pain** is highly prevalent in all adult age groups and is the top cause of years lived with disability. This condition is sometimes associated with pain that radiates through the limbs in a characteristic distribution (sometimes called "sciatica"). Many treatments have been shown to be effective in improving function in chronic low back pain, including exercise therapies, behavioral/psychologic therapies, and manual therapies.
- **Osteoarthritis** is a disease that destroys synovial joints over time. There is no known cure or method of reversing this process. It is associated with chronic pain and joint stiffness, and is most common in older people. Progressive osteoarthritis may result in reduced mobility as well as further complications like immobility and muscle loss. There is significant evidence suggesting exercise therapy and psychosocial interventions can be effective for relieving pain and improving patient function.
- **Inflammatory arthropathies** are conditions characterized by inflammation of the joints and often other tissues. Rheumatoid arthritis and psoriatic arthritis are among the most common inflammatory arthropathies and are important causes of disability in adults. Those conditions are an important cause of work-related functional impairment. Many existing pharmacologic treatments for rheumatoid arthritis and psoriatic arthritis have been found to improve physical functioning. However, the extent to which those therapies can improve work-related functional capacity among individuals with such severe impairments as to qualify for Social Security benefits remains uncertain.

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To read the full report, please visit
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