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Commentary: Chronic Conditions and Disability

Toward a conceptual model for national policy and practice considerations

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Abstract

Chronic diseases and conditions are serious threats to the population's health. Chronic diseases represent seven of the top ten causes of mortality in the U.S. and are major economic drivers underlying burgeoning national health costs. People with disabilities experience dramatically higher rates of some chronic conditions, but only recently has this problem been recognized. We propose a set of contributing factors and a model to help better understand the relationship of disability with chronic disease. The paper summarizes current CDC initiatives to include disability status and considerations in public health surveys and programs, exemplifying a strategy to promote inclusion of people with disabilities in mainstream programs wherever possible; use cross-disability strategies for conditions unique to people with disabilities where necessary; and implement condition-specific approaches where essential. This initial model is intended to invite dialog on a conceptual framework for preventing chronic conditions and additional functional limitations among people with disabilities. Published by Elsevier Inc.

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Dramatic escalation in rates of chronic diseases and conditions make them a major public health problem in the U.S.[1] and globally.[2] We are beginning to recognize the major contribution that chronic diseases make to the poor health of people with disabilities. Among the most significant chronic diseases are heart disease, diabetes, cancer and respiratory problems.[2] The major modifiable risks for these chronic diseases relate to lifestyle behaviors such as smoking, physical inactivity and poor nutrition, and excessive use of alcohol. This paper describes the magnitude of chronic conditions in the U.S. and several initiatives to address them; briefly reviews historical approaches to disability and health; describes potential factors that contribute to poorer health of people with disabilities; proposes a model for understanding chronic diseases in relation to disability; and describes the approach of the Centers for Disease Control and Prevention's (CDC) to improve health of people with disabilities. The paper demonstrates an opportunity to strengthen the connection of public health with clinical practice to improve the health of an important population.

Basic terms

In the broader public health arena outside of disability researchers, writers refer to ''multiple chronic conditions'' in highly variable ways. They vary widely in the number of conditions included and, importantly for disability researchers, often implicitly or explicitly include functional limitations and developmental disabilities within their categorization of chronic conditions. This inclusion of disability as a chronic condition does not allow examination of the health risks posed by chronic diseases to people with pre-existing functional limitations. Because public health approaches to disability and to chronic conditions have been hampered by this variability in definitions,[3] we offer the following nomenclature for this paper:

''Chronic diseases'' and ''non-communicable diseases'' refer to health conditions that are of long duration, slow progression, and not transmittable person to person.[4]

''Chronic conditions'' refer to a broader group of health-related conditions that include chronic diseases, substance abuse and addiction disorders, chronic communicable diseases

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(e.g., tuberculosis, human immunodeficiency virus infection), mental health conditions, and developmental disabilities.[1]

''Multiple chronic conditions'' refers to the co-occurrence of two or more chronic conditions in the same individual.[1]

''Secondary conditions'' are health conditions that are generally preventable, experienced at higher rates among people with disabilities, and are causally linked to the disabling condition.[5]

''Disability'' is used in two ways. In our main discussion, we rely on the WHO[6] conceptualization of disability as defined by impairments, activity limitations, or participation restrictions related to a health condition and as experienced in interaction with the environment in which the person lives (see also Drum, this issue, p. 2). When referring to studies cited within this paper, the definition of ''disability'' is determined by each study and can vary by data source.

''Functional limitation'' refers to restriction or lack of ability to perform an activity or action within a range considered normal[7] regarding vision, hearing, mobility, cognition, and/or need for assistance in activities of daily living (e.g., bathing, eating) or instrumental activities (e.g., shopping, going to the doctor's office). This aligns with recent data collection standards for disability identification.[8]

Discussion: context and initial considerations

Although the roots of public health grew out of the need to control infectious diseases, chronic diseases have surpassed infectious diseases as the major threat to health in the U.S. since the middle of the 20th century.[9] In the U.S., chronic diseases currently represent seven of the top ten most common causes of death[10] and are a contributor to functional limitations among all segments of society. Chronic diseases significantly impact quality of life of those affected and their families, and may increase vulnerability to social determinants of health such as poverty, unemployment, and unmet health care needs.

Chronic diseases are a major driver of health care costs, with attention now focused on people with multiple chronic conditions. The Centers for Medicare and Medicaid (CMS) series of Chartbooks summarize data for Medicare beneficiaries on prevalence and cost of multiple chronic conditions.[11,12] Among the Medicare population (over age 64 and persons with disabilities) in 2008, beneficiaries with multiple chronic conditions represented about two-thirds of beneficiaries and accounted for $260 billion of the total $280 billion spent.[11] The group of people with poorest health, greatest health care utilization, and most complicated care management are those with the most multiple chronic conditions.[12] To improve the nation's health and contain health care costs, national efforts must find ways to reduce and better manage chronic conditions.[13]

Federal actions to address chronic diseases

Responding to this public health threat, CDC established the National Center for Chronic Disease Prevention and Health Promotion at CDC in 1988.[9] Its priorities focus on well-being, health equity, research translation, policy promotion and workforce development. In FY2012, this Center received an appropriation of about $1.2 billion between general appropriations and the Prevention and Public Health Fund, with some of these funds awarded to communities to develop innovative partnerships at the local level to promote select health behaviors and prevent chronic conditions.

Recognizing the escalating challenge of controlling the increase of chronic conditions, the Department of Health and Human Services (HHS) launched a cross-department work group in 2008 to identify options to improve the health of people with multiple chronic conditions. The resulting HHS Strategic Framework on Multiple Chronic Conditions outlines four goals, each with a set of objectives and strategies to: 1) foster health care and public health systems changes to improve the health of individuals with MCC; 2) maximize the use of proven self-care management and other services by individuals with MCC; 3) provide better tools and information to health care, public health, and social services workers who deliver care to individuals with MCC; and 4) facilitate research to fill knowledge gaps about, and interventions and systems to benefit, individuals with MCC.[1]

Improving health of people with disabilities

During the past decade, there has been a juxtaposition of two positions. On the one hand, there has been growing awareness that disability need not be equated with poor health[14]; and on the other, improved data document that people with disabilities are four times more likely to self-rate their health as fair or poor relative to the general population.[15] Research is needed to disentangle chronic disease from pre-existing functional limitation to begin to understand the contributors to this dramatically poorer health and to identify prevention opportunities. Within the field of disability and health, we have seen an expansion in the scope of health from a more exclusive focus on the primary disabling condition, to consider secondary conditions as contributing to poor health, to a more comprehensive view of co-morbid health conditions that include chronic diseases and conditions.[5,16] When the focus is on the primary disabling condition, rehabilitation efforts focus on improving the individual's function through specialty medical services, durable medical equipment and assistive devices. This perspective is still critically important, particularly during acute post-injury phases or for maintenance of function. Beginning in the early 1990's, we witnessed a growing focus on preventable secondary conditions of people with pre-existing disabilities that went beyond rehabilitation.[17] Examples of secondary conditions are decubitus ulcers, pain, and depression secondary to paralysis. This perspective was exemplified in the name of Healthy People 2010's Chapter – ''Disability and Secondary