

## Multiple Chronic Conditions on the Increase

Recently, I came across the US Centers for Disease Control and Prevention publication *Preventing Chronic Disease: Public Health Research, Practice, and Policy*. I was struck by the great variation in applicable indicators and the range of key components mandated for the diagnostic assignment of what constitutes a chronic condition.

Duration with respect to the persistence of a chronic condition ranges from > 3 months or > 1 year to permanent. Some definitions acknowledge that the condition could not only fluctuate in severity over the course of the disease, but also be slowly progressive or not amenable to cure. The majority of definitions state that functional impairments are key, while others stress the need for ongoing medical care.

To advance understanding and to identify avenues for intervention to impact population health, the Office of the Assistant Secretary for Health, US Department of Health and Human Services selected 20 chronic conditions by diagnostic criteria or their respective International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) codes, including hypertension, congestive heart failure, coronary artery/ischemic heart disease, cardiac arrhythmias, hyperlipidemia, stroke, arthritis, asthma, autism, chronic kidney disease, chronic obstructive pulmonary disease, dementia, depression, diabetes, hepatitis, HIV, osteoporosis, schizophrenia, and substance abuse disorders.

The National Health Interview Survey in the US that was conducted over 10 years ([cdc.gov/nchs/nhis/index.htm](http://cdc.gov/nchs/nhis/index.htm)) addressed 10 of the originally selected 20 chronic conditions and, with exception of the study year 2001, arthritis was comprised of arthritis, rheumatoid arthritis, gout, lupus, and fibromyalgia. The gathered data generated a measure of the distribution of multiple chronic conditions based on whether adults had been told by a doctor or their health professional that they had any of the 10 conditions included in the survey.

The 10-year survey revealed a statistically significant increase over time among US adults for the prevalence of 2 to 3, and 4 or more, chronic conditions being either present overall or in both men and women separately. The fact that one-fifth of US adults are affected by 2 to 3 conditions and about one-twentieth by 4 or more cannot be dismissed. For men aged 18 to 44 years of age, the prevalence for 2 to 3 chronic conditions being present was 6.3% (95% confidence interval [CI] 5.57–7.11) while for women it was 8.0% (95% CI 7.26–8.91). The high prevalence of chronic conditions has bearing on the group of diseases and disorders addressed by the *Journal of Oral & Facial Pain and Headache* both in terms of disease phenomenology and etiopathogenesis, as the presence of persistent health conditions must influence mechanistic processes that affect vulnerability to or resiliency against health conditions of interest. Furthermore, defining disease within a limited topographic domain and by a narrow set of diagnostic criteria without acknowledging the potential effects of persistent coexisting health conditions that are often stressful to the patient may in all likelihood result in omitting critical detail of individual significance. HIV treatments and progress with immunotherapies and “cell-cycle blockers” in the treatment of cancer increase the range of health conditions that fit the current diagnostic label of a chronic condition to include HIV and possibly cancer. Deeper understanding of the biologic mechanisms that underlie the persistence of disease, as well as insights into the vulnerability mediated by coexisting disease, now established as being highly prevalent in society at large, are needed. The question remains: What makes a health condition “chronic”?



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