News from NIH: effective behavioral treatments for patients with multiple chronic conditions

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While about half of US adults have at least one chronic health condition, 28 % or 141 million Americans have two or more chronic conditions [1]. A person's risk of having multiple chronic conditions (MCC) increases with age, with 73 % of Americans over 65 having MCC [1]. With the aging of the population, the number of Americans with MCC is projected to increase further. Patients with MCC are often seen by a range of specialists within a fragmented health care system [6]. Many factors confound the care of patients with MCC, including an uncertain evidence base for treating multimorbidity, added care complexity (resulting from multiple guidelines and registries, and difficult comorbidities such as psychiatric disorders and substance abuse), polypharmacy, and a poor care coordination culture. In fact, a study by Østbye and colleagues [4] examining the time required for physicians to appropriately manage chronic conditions indicated that almost half of every day (3.6 h) would be spent on disease management with patients whose diseases were considered well-controlled, including working with patients on enhancing health behaviors (e.g., proper diet, activity, and adherence). When the study looked at poorly controlled health conditions, the number of hours required would result in an average work day of 10.6 h.

CONCEPTUAL AND RESEARCH CHALLENGES

Given the increases in the prevalence of MCC and the time required to manage these conditions with the current guidelines, there is an interest in developing MCC treatment guidelines that feature approaches that target biological or behavioral clusters rather than single disease states [3]. Because 40 % of preventable morbidity is associated with behavior [5], and improving health-related behaviors (e.g., diet, physical activity, mental health symptoms, adherence to

treatment recommendations, tobacco and substance use and abuse) is a major component of most chronic disease management, developing new approaches for changing multiple co-occurring health behaviors to improve patient outcomes in MCC is needed.

Hints of progress in developing new MCC treatment models come from ongoing efforts by the Department of Health and Human Services to develop a Multiple Chronic Conditions Strategic Framework (<http://www.hhs.gov/ash/initiatives/mcc/>). This effort documents current work and needs in this area. It also highlights the importance of behavior change as a factor in improving the health and quality of life in people with MCC. In addition, voluntary health organizations have been combining their efforts to enhance health behavior in people with multiple chronic conditions. For example, the American Cancer Society, the American Diabetes Association, and the American Heart Association launched a joint venture to address common behaviors—tobacco use, poor diet, and insufficient physical activity—that contribute to cardiovascular disease, cancer, and diabetes. These diseases account for two thirds of all deaths in the USA and about 700 billion dollars in direct and indirect economic costs each year [2].

NIH EFFORTS IN MCC

For the past 3 years, a trans-NIH working group has been exploring ways to address the challenges of integrating health behavior change for people with MCC into primary care. Because overlaps in diseases, public health needs, and behavioral interventions cut across the mission areas of multiple institutes and centers, representatives from across the NIH have been committed to this effort. The group held a workshop in April 2010 (http://obsr.od.nih.gov/scientific_areas/health_behaviour/Integrated_health/index.html) with experts in behavior change in medical settings. This meeting began to chart a course toward nurturing the

science to integrate health behavior and general health, especially in primary care where most patients with MCC are managed.

Discussions during the meeting highlighted the fact that, while the evidence of effectiveness is substantial for chronic disease management approaches that address *a single disorder or health condition* (e.g., asthma, hypertension, diabetes, obesity, alcohol or substance dependence, smoking, and/or depression), development of management approaches for *multiple behavior change in people with MCCs* has been minimal. The problem is especially dire for interventions designed to work for people with MCC in primary care where the challenge is to find approaches to deliver multiple behavioral interventions concurrently and effectively. Because there is overlap in health behaviors that influence multiple conditions, and in the active ingredients of interventions targeting different behaviors, there may be reduced patient burden, increased provider ease, and cost efficiencies to be gained in the use of bundled interventions. The potential gains from bundling may also be key to enhancing patient adherence and provider and health care system adoption of efficacious approaches.

These discussions led to the development of a trans-NIH 2012 funding opportunity announcement entitled “Behavioral Interventions to Address Multiple Chronic Health Conditions in Primary Care” (<http://grants2.nih.gov/grants/guide/pa-files/pa-12-024.html>). The goal of the announcement is to encourage science that targets multiple health behaviors in people with MCC. Applicants are encouraged to test a practical, multi-disease or health condition care management intervention in primary care practice settings. The following points should be taken into consideration:

- Interventions should be practical and have potential, if successful, for implementation in primary care (e.g., in terms of cost of training, staff, office space, and patient burden);
- Treatments should test a behavioral intervention in a primary care setting that targets health behaviors in three or more related chronic diseases or health conditions;
- Applications should include the most rigorous design and methodology possible, given the populations and settings in which the study is taking place.
- Applicants should describe and justify the components of the intervention to be used and the specific eligibility criteria for the patients to be enrolled;
- Researchers should elicit input from key stakeholders, including providers and consumers, to maximize implementation feasibility and sustainability potential;
- Applications should specify the primary behavioral outcomes and how they will be measured, as well as to assess health outcomes (e.g., blood pressure, cholesterol levels, BMI, viral load in HIV, or HbA1c) that should be affected by behavior changes;
- Designs may include care management decision support tools to optimize medication management and disease care management activities;
- Applicants are encouraged to include measurement of the intervention characteristics and contextual factors that affect implementation (e.g., necessary personnel, training, feasibility, staff and/or leadership acceptance) and adoption.

With continued efforts to incorporate research on health behavior and behavior change for people with MCC into primary care, it is likely that we can see improvements in the prognosis and quality of life for people with multiple chronic conditions.

Conflict of interest: The opinions expressed herein and the interpretation and reporting of these data are the responsibility of the author(s) and in no way should be seen as an official recommendation, interpretation, or policy of the National Institutes of Health or the US Government.

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