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Designing Health Care for the Most Common Chronic Condition—Multimorbidity

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The most common chronic condition experienced by adults is multimorbidity, the coexistence of multiple chronic diseases or conditions. In patients with coronary disease, for example, it is the sole condition in only 17% of cases.[1] Almost 3 in 4 individuals aged 65 years and older have multiple chronic conditions, as do 1 in 4 adults younger than 65 years who receive health care.[2] Adults with multiple chronic conditions are the major users of health care services at all adult ages, and account for more than two-thirds of health care spending.[2]

Despite the predominance of multiple chronic conditions, however, reimbursement remains linked to discrete *International Classification of Diseases* diagnostic codes, none of which are for multimorbidity or multiple chronic conditions. Specialists are responsible for a single disease among the patient's many. Quality measurement largely ignores the unintended consequences of applying the multiple interventions necessary to adhere to every applicable measure. Uncertain benefit and potential harm of numerous simultaneous treatments, worsening of a single disease by treatment of a coexisting one, and treatment burden arising from following several disease guidelines are the well-documented challenges of clinical decision making for patients with multiple chronic conditions.[3,4]

To ensure safe and effective care for adults with multiple chronic conditions, particularly the millions of baby boomers entering their years of declining health and increasing health service use, health care must shift its current focus on managing innumerable individual diseases. To align with the clinical reality of multimorbidity, care should evolve from a disease orientation to a patient goal orientation, focused on maximizing the health goals of

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individual patients with unique sets of risks, conditions, and priorities. Patient goal–oriented health care involves ascertaining a patient's health outcome priorities and goals, identifying the diseases and other modifiable factors impeding these goals, calculating and communicating the likely effect of alternative treatments on these goals, and guiding shared decision making informed by this information.[4]

Changes Needed in Quality Measurement, Health Care Delivery, and Payment

The National Quality Forum (NQF) recently released its framework for multiple chronic conditions,[5] perhaps a prelude to replacing the myriad disease process and outcome-based quality measures with a manageable set of patient-centered quality measures appropriate for individuals whether having 2 or 20 conditions. As proposed by the NQF, these measures should focus on activities such as optimizing function, ascertaining patient-important outcomes, and avoiding inappropriate, nonbeneficial care.[5]

Initiatives by the Centers for Medicare & Medicaid Services (CMS) and private insurers designed to pay clinicians for quality, not merely quantity, of services hold promise for individuals with multiple chronic conditions. However, the initial CMS hospital-based metrics foster adherence to disease-specific (eg, myocardial infarction, community-acquired pneumonia, heart failure) or procedure-specific (eg, surgery) processes. These metrics encourage continuation of fragmented disease-centric care.[6] None of the measures specifically address issues faced by patients with multiple chronic conditions. CMS and private insurers should eventually link payment in their value-based purchasing initiatives to metrics relevant to multiple chronic conditions, such as those proposed by the NQF.

Health care delivery innovations such as accountable care organizations and patient-centered medical homes encourage integration across settings and coordination of care among clinicians. Currently however, they do not address the treatment burden or potential harm of caring for a patient with several diseases. As for value-based purchasing, the majority of the initial set of 33 quality measures chosen to judge accountable care organizations (and to determine part of the payment) focuses on treatment of discrete conditions. For example, 6 measures are related to diabetes and 4 are related to cardiovascular diseases. None address necessary care processes such as decision making across conditions or measurement of outcomes appropriate for patients with multiple chronic conditions such as function or symptoms.[7] To encourage appropriate care for patients with multiple chronic conditions, health care delivery innovations need to ensure integration and coordination across conditions as well as between clinicians and settings. Otherwise, fragmentation based on setting and clinician will merely be replaced with fragmentation based on disease.

The process for assigning responsibility for providing clinical care also needs redesign, perhaps beginning with a systematic process for determining which clinician should have primary responsibility for helping patients make decisions. When a single disease dominates a patient's health problems, a specialist may be the optimal primary decision maker[8] (eg, an oncologist is the logical primary decision maker for patients with cancer undergoing aggressive cancer therapy). Most often, a generalist with expertise and experience in caring

for complex patients with multiple chronic conditions may be best equipped to supervise care that requires integrating across all conditions within the context of each patient's health goals and priorities. The term *generalist* fails to capture the breadth of skills and expertise required. A term such as *comprehensivist*, which better conveys the nature of caring for patients with multiple chronic conditions, is needed.

Regardless of the physician designated as the primary decision maker, caring for patients with multiple chronic conditions requires coordinated input from multidisciplinary health care teams assembled to meet each patient's needs. Systematic criteria are needed to determine the combination of health professionals best suited to provide appropriate and efficient care. Health care delivery and payment reform should include financial and other incentives to form these teams and to investigate their optimal structure and interrelated functions.

Changes Needed in Clinical Decision Making

Physicians recognize the limitations of focusing on management of individual diseases in the care of patients with multiple chronic conditions.[9] In addition to restructuring how care is delivered and paid for, physicians need new tools and appropriate data to make the right decisions for individual patients with multiple chronic conditions (eg, appropriate guidelines, evidence of harms and benefits of treatments in individuals with multiple chronic conditions, and clinically feasible approaches to incorporating patient goals and priorities in to decision making).[4]

Research and regulatory organizations such as the US Food and Drug Administration and the National Institutes of Health encourage appropriate research to generate evidence in this population. To rapidly obtain this evidence for clinicians and patients, systematic effort by research funding bodies and industry is imperative. Furthermore, these organizations must ensure that the research generates evidence that accurately informs decision making for patients with multiple chronic conditions. Knowledge of average benefit for a disease-specific outcome generated from clinical trials involving ideal samples of patients is insufficient. Evidence of a treatment's net benefit or harm within the context of an individual's particular set of risks, coexisting conditions, and goals is needed.

As this evidence becomes available, point-of-care risk calculators will be required to synthesize it to determine the best options for each patient. Electronic health records will be essential for integrating this information for patient-specific recommendations. To facilitate clinical decision making for these individuals, electronic health records should include systematic ascertainment of patient goals as well as cross-disease universal outcomes such as function, symptom burden, and health-related quality of life.

Compelling arguments can be made against goal-oriented care of patients with multiple chronic conditions. There is understandable concern that patients may not understand the concepts of priorities and tradeoffs, much less absolute harms and benefits, and may not want to participate in this decision making. This individualized approach conflicts with the current move to reduce variability by measuring deviations from guideline-driven disease-specific processes. The potential for chaos inherent in individually tailored decision making

can be mitigated, but not eliminated, by systematically applying evidence obtained from patients with multiple chronic conditions within the context of individuals' health risks, conditions, and goals. Although the concerns and complexities are real, the present approach to patients with multiple chronic conditions is expensive, burdensome, of unclear benefit and potential harm, and unsustainable. What is good for an individual condition may not be good for patients with multiple conditions.

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