COMMENTARY

Providing Complex (Rather Than Complicated) Chronic Care

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With health care reform underway, the results of the study by Sharma et al[1] emphasize the foundational role of primary care in our multimorbidity-based chronic care system. They found that the majority of patients with 14 high-cost chronic conditions saw general rather than specialist physicians. They suggest that the level of dependence that this chronically ill population has on primary care may not be appreciated and that the time needed to provide guideline-concordant care to these patients is unachievable. This raises serious issues for future health care delivery.

Should Chronic Care Be the Realm of Specialists?

Because specialists may be more adherent to clinical guidelines than generalists,[2] we might assume that optimal care for a patient with multiple chronic problems would entail a series of specialists, each focusing on to the latest disease-specific guidelines. Specialists are indeed masters of delivering disease-specific care to severely ill patients with a narrowly defined condition. Such care can be a straightforward (simple) process when resources are readily available and the dynamics are predictable (linear). When several such chronic conditions, independent of each other, are present, the level of care becomes more complicated but is still straightforward in terms of implementing guideline-concordant care. Under such conditions, additive care implemented by any number of noncommunicating providers is possible.

But multispecialty care alone is not necessarily good care, even for the complicated patient, because in general specialists are not prepared for or willing to provide primary care.[3] In addition, the sum of single-disease care for multiple conditions rarely adds up to effective care for the whole patient because the complex human condition involves the interdependence of medical conditions (eg, diabetes, chronic kidney disease, hypertension, hyperlipidemia, and depression); the unpredictable (nonlinear) nature of humans, their families, and their undifferentiated health complaints; and the inconsistent availability of resources.

The distinction between "complicated" and "complex" is important here; situations in which attending to many intricate details is necessary for success are "complicated," whereas situations in which attending to the same details will not reliably reproduce success are "complex."[4] Patients with a complicated array of medical problems are indeed "complex" by their very nature. First, each problem and its therapy may interact with other problems and therapies. For example, β-blockers may help ischemic heart disease and hypertension but worsen chronic obstructive pulmonary disorder; nonsteroidal anti-inflammatory drugs may help arthritis but worsen heart failure. Second, the dynamics of less-than-severe medical conditions often exhibit nonlinear dynamics,[5,6] and therefore these conditions respond less predictably. Third, except when hospitalized, patients do not exist in a controlled environment; they are constantly exposed to internal and external influences that affect adherence, adaptability, and illness trajectory. Thus, "primary care physicians might be referred to as 'complex care physicians'"[1]; indeed, in terms of the quantity, variability, and diversity of care provided within a limited period of the office visit, family physicians provide more complex ambulatory care than do cardiologists or psychiatrists.[7]

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Therefore, chronic care for multiple conditions provided by specialists without involvement of a generalist risks failing to attend to the most complex aspect of care in multimorbidity: the patient's overall outcome. Each specialist caring for the patient may be completely justified in their guideline-congruent management of their specific disease, but together the array of specialists may produce a global management plan consisting of polypharmacy with its inherent drug interactions while missing patient-centered factors critical to global quality of life.

How Should We Deliver Complex Chronic Care?

Guided by the Chronic Care Model,[8] family physicians are trained to deliver chronic medical care within the complex environment of ambulatory primary care. They understand nonlinearity, interdependence, and individualizing care while optimizing resource utilization as well as coping with the variability and diversity inherent in providing primary care. For complex patients, clinical guidelines must remain "guidelines" rather than "requirements" if we are to optimize care and overall health outcomes. Thus, many patients will need only a primary care physician to manage their chronic problems. For the patient with severe, complicated medical problems, specialist care can ensure the latest application of evidence to the array of linear trajectories of such problems. But team-based care must be coordinated by a globally focused primary care physician.

Effective chronic care must recognize the interdependence of multimorbid states and the inherent complexity of the ambulatory patient, so optimal chronic care demands flexibility in therapeutic approach, access to resources, team-focused coordination of care, and adequate visit time. Current trends toward increased demands for documentation, rigid adherence to guidelines, formulary and resource restrictions, and increased workload serve as barriers and can only worsen global, long-term chronic care outcomes.

What Does the Primary Care Physician Need to Deliver Complex Chronic Care?

Primary care physicians have a critical role in complex chronic care. Supporting primary care's essential functions in that role means minimizing barriers while maximizing the use of effective resources (eg, group visits). Effectively managing complexity in primary care means anticipating and responding to the sources of complexity: the diversity of patients' knowledge, goals, resources, and family and social contexts. Adaptability rather than standardization should be the cornerstone of complex chronic care.[9] For many patients, this adaptability requires a multidisciplinary team that is tailored to the particular practice and its setting. Such team-based care should be led by primary care physicians if we are to maximize global outcomes. Primary care physicians need to be trained to provide such care *and* to lead such teams. While current residency training does prepare graduates to provide chronic care, it generally does not prepare them to lead multidisciplinary teams. Finally, if primary care is to be the cornerstone of complex chronic care, providing coordination of care via information exchange and resource access, then it must be reimbursed appropriately[10] to enable adequate visit times and ensure an adequate primary care base such that *every* patient has a generalist managing their chronic care.

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