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Multidimensional Geriatric Assessment: Back to the Future

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Cycling of events, modes, and cultural movements pervades history and art. Almost every time a new idea emerges, we are prompt to spot the roots of its inspiration in the past. Theories and practices once widely popular fade for decades until they are rediscovered, almost always with a different flavor or viewed from a different angle. Of course, because of improved experience, knowledge, and technology, the old and pale idea often turns into a modern and glamorous motif. Geriatric medicine is no exception: We can trace the origin of Comprehensive Geriatric Assessment (CGA) to the experience of the Sepulveda Geriatric Evaluation Unit (1), perhaps the single most important experiment in modern geriatrics conducted well over two decades ago.

The demonstration that CGA conducted by an interdisciplinary team on a subacute hospital ward could yield large improvements in outcomes of frail elderly patients, including increased survival, improved functioning, and decreased nursing home placement became almost a mantra in every scientific meeting, and caused a burst of enthusiasm and optimism for the prosperity and growth of geriatric medicine as a science and a specialty. The effect in geriatrics was akin to dropping a large rock into a small pond. Among the ripples propagated were 1) a new focus on classification, identification and intervention in older persons whose decline could be prevented, delayed, or reversed; 2) invigorated attention to development and application of multidimensional health status measures relevant for older persons generally and in specific clinical contexts; and 3) improved scientific standards for the conduct of clinical and health services research in geriatrics toward improving the evidence base for clinical care. We will not expand further on details, our readers know quite well what GCA represents, and the history and accomplishments of CGA programs have been extensively reviewed (2). It is fair to say that, in spite of these successes, the implementation of CGA in clinical practice was at best patchy and not long-lived.

It would be easy to conclude that, because the early enthusiasm surrounding CGA has largely dissipated after a few years, it was perhaps unwarranted. In reality, the implementation of CGA faced different challenges. First, some of the numerous subsequent self-identified studies have been negative. At the same time, there have been few attempts to ‘‘replicate’’ successful CGA trials: The health systems contexts, the interventional elements, and patients themselves are so complex that individual trials—while able to attain internal validity—are hardly ever reproducible or their findings generalizable. This has been a major limitation for systematic reviews and for development of multicenter randomized trials (3–5). Thus, the messages became mixed, at best. Moreover, geriatricians and allied health professionals with specialized training became more and more rare, and payment for health care continued to skew to acute and procedural medical care not well suited to frail elderly or older patients with multiple

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morbidities (6). Nowadays, in the U.S., units like the one at Sepulveda exist only in the Veterans Affairs (VA) system—most of those in modified form—and geriatric interdisciplinary team care is seldom encountered except in the VA and in settings such as the Program for All-Inclusive Care of the Elderly (PACE).

Fortunately, enough of the principles of CGA, including the use of problem lists and care plans that involve multiple providers/disciplines and reach out to family and community resources, remained as an unconscious legacy—beyond our shores and even beyond geriatrics. The time is ripe now to reexamine this legacy at work in current research, and revisit multidimensional geriatric assessment (MGA) in the special section of the present issue.

The studies collected herein show the continuing themes and increasing diversity of CGA/MGA research. Four reports describe three randomized controlled trials (7–10). Two of these studies had the added objective of formal cost-effectiveness analysis, which, in time of economic recession, is an element essential to implementation and has been rare in this literature (7–9). Echoing past experiences, the first of these two Dutch home visit trials showed positive effects on functional status and mental well-being and indicated that the program was cost effective (7,8), while the other showed none of the hypothesized impacts on health-care utilization or associated costs (9). These and many other trials are included in an updated systematic review of geriatric preventive home visit programs, also in this issue (11).

While the common concern of home visit programs is the identification of at-risk older persons in their homes, prevention of functional deterioration, and preservation of the community tenure, the systematic review reveals heterogeneity of both programs and effects characterizing even this narrowly defined program type. Importantly, in meta-regression analysis, programs that included clinical examinations in the package of multidimensional assessments (i.e., something more akin to CGA) were found to be effective in reducing functional decline while programs lacking this characteristic were not effective (11). However, this feature does not account for the variability in survival or community tenure outcomes. Again, myriad highly variable but unmeasured system, program, and patient factors underlie the outcome variability. The reviewers renew the appeal for more completely described programs as well as preplanned individual person data meta-analyses to forestall continued reliance of *post hoc* exploration of trials to deduce elements responsible for effectiveness.

The third trial reports some early results of the much anticipated ‘‘Guided Care’’ interventional study (10). Guided Care is an enhanced model of primary care in which specially trained registered nurses paired with primary care physician (PCP) practices provide a variety of additional services to older at-risk patients with chronic conditions and complex needs. The training that guided-care nurses received included comprehensive assessment, among other topics, and the services they delivered—in collaboration with the PCPs—included in-home patient and caregiver assessments, evidence-based care planning, monthly monitoring, management of care transitions, and facilitating access to community services, as well as caregiver support and education, and promotion of self-management and healthy behavior. At 6 months, guided-care recipients were twice as likely as controls to rate their overall care as ‘‘high quality.’’ At 1 year, guided-care PCPs were more likely than control PCPs to register improvements in several dimensions of satisfaction, a measure of knowledge relating to patients’ use of medications, and a trend toward improvement in care coordination rating. We look forward to the longer-term results, including impacts of Guided Care on health and quality of life measures.

One can question the extent to which the Guided-Care model lies within the literature on multidimensional geriatric assessment, rather than the literature on geriatric care management in primary care. While the guided-care nurses perform in-home MGA on targeted older

patients, the overall effectiveness of the model is likely best understood to derive from the full package of enhanced primary care and ongoing care management. The authors themselves cast Guided Care as a version of the Chronic Care Model—an organizational structure and process that encompasses not only continuous care of frail elderly patients but other patients with chronic care needs (12). As we are not attributing paternity, we merely note the multiple areas and elements of overlap between self-identified MGA and geriatric care management models such as Guided Care. Guided Care would not be so well guided if not based on sound multidimensional diagnostic assessments. At the same time, the present trial reminds us (if we needed reminding) that assessments, problem lists, and care plans *per se* accomplish little without quite extensive and sophisticated means of delivering and managing overall care.

The article by Bernabei and colleagues turns attention back to a large body of work that self-consciously extends the multidimensional geriatric assessment literature—that, in fact, claims generational descent (13). That is the sibling group of the Minimum Data Set (MDS) developed by the InterRAI consortium. The authors review useful applications of analyses of databases produced by use of one of these standardized, validated assessment packages (i.e., MDS-Home Care). The examples described derive from the European Union AdHOC (Aged in Home Care) Study (14) and include studies of prognostic factors, interventional outcomes, quality indictors, and cross-national comparison. As in earlier research using MDS data (15), these analyses are based not only on MDS data but on research databases combining information from multiple patient-level clinical and administrative sources. American readers may associate the MDS primarily with the MDS-Nursing Home tool (formerly the MDS-Resident Assessment Instrument), which is required in U.S. nursing homes accepting public payment, or with similar administrative applications such as level-of-care assignment, case-mix determination, and models of reimbursement (16,17). Yet, as the authors mention, the MDS-HC, employed as the core clinical assessment in Italy, has been successfully used as part of a package of community-based team assessment and care management service, shown to lead to reductions in hospitalizations and nursing-home placement compared to usual care (18,19). It is worth mentioning that the Silver Network ‘‘assessment’’ service bears more than passing family resemblance to Guided Care (10).

Finally, the article by Clough-Gorr and colleagues (20) turns to two of the preoccupations manifest in both multidimensional screening and prevention and CGA programs: development of practical measures predictive of outcomes such as general functional decline or progression of particular geriatric syndromes (in this case, falls), and identification of patients to whom preventive interventions can be successfully targeted. In this secondary study of population-based longitudinal research in several European communities, preclinical self-reported mobility-disability status that included information on modifications to task method or frequency is shown to be a predictor of incident falls, independent of falls history and other known falls risk factors. As the authors suggest, if their findings are confirmed, screens employing these questions may be feasible to incorporate into clinical practice. It remains to be demonstrated—but stands to reason—that earlier and more accurate identification of older patients at risk of falling can lead to interventions that reduce rates of injurious falls, or concomitant outcomes.

Overall, what is presented in this special section of the Journal bears testimony that a new chapter in the history of comprehensive geriatric assessment has begun. This new course of research is less shiny and colorful, but perhaps more thoughtful and, hopefully, more likely to be translated in the health care system. In *The Inferno*, Dante Alighieri tells of Ulysses and his voyage past the Pillars of Hercules, which were considered the impassable limits of the mortal world. Ulysses is painted as a madman who sails through tempestuous waters inhabited by frightful creatures in order to gain knowledge of the unknown. Passion and enthusiasm were essential to go beyond the limits, and without them there would be no comprehensive geriatric

assessment. Now the situation has changed. History has revealed that the sea beyond the Strait of Gibraltar is not quite as violent as Dante wanted us believe. The gate is open, only by systematic exploration and accurate charting can we start inhabiting the new territory.

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