

Comprehensive Geriatric Assessment: Lessons in Progress

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When geriatrics entered the mainstream of medicine in the late 1970s, directors of training programs were confronted with a question: what contribution can the field of geriatrics make to the well-being of elders? This was another way of asking why a specialty of geriatrics was needed. The answer was found in the teachings of many esteemed British geriatricians and the few pioneers in academic geriatrics in the United States. They emphasized the differences between managing and curing conditions, between disease and functional status, and between medicine acting alone and medicine as part of an interdisciplinary team effort. The work of academic geriatrics in the United States, in my view, had the greatest impact on shaping the discipline. From a series of comparative studies, the main “technology” – Comprehensive Geriatric Assessment – has emerged. As one of my mentors expressed it, “Geriatric assessment is the heart and soul of geriatrics” [1]. This paper will describe the evolution of CGA in the United States as well as approaches for conducting multi-dimensional assessment in the community.

The evolution of CGA in the USA

The 1987 National Institutes of Health consensus conference on CGA defined it as “a multidisciplinary evaluation in which the multiple problems of older persons are uncovered, described, and explained, if possible, and in which resources and strength of the person are catalogued, need for services assessed, and a coordinated care plan developed to focus on interventions on the person’s problems” [2].

Various settings and formats for CGA have been reported, including inpatient geriatric evaluation units, inpatient geriatric consultation, ambulatory geriatric assessment clinics, and in-home assessment programs. Most reports of effectiveness have been institution-based, and randomized controlled studies have demonstrated important benefits [3]. However, even in academic settings, persons targeted and the personnel involved in the assessment process have not been uniform. Studies of effectiveness have demonstrated significant benefits, such as improvement in diagnostic accuracy, placement, functional status, affect, cognition and survival, as well as reduction in medications, use of hospital services, nursing home days, and overall medical costs. The benefits were not demonstrated in every study. The inconsistencies of findings have been postulated as due to the following limitations:

flaw in study design, small sample sizes, homogenous settings of patient populations where many of these studies were conducted, selection criteria for the study population, patient gender, different levels of and type of care in control groups (ranging from usual care by attending physicians to enhanced care similar to CGA), adherence of participants and/or their providers, and training and continuing competence of professionals responsible for the process. Recent evidence has suggested that the latter is a critical factor in obtaining positive outcomes.

In addition, there have been differences in the interventions, which make comparisons of reported studies difficult. These include: the timing of the intervention, variable patient length of stay for delivery of the intervention in the hospital, assessment approaches such as geriatric units as compared with consultation teams, strategies aimed at restorative treatment as contrasted with prevention of functional decline, and the intervention itself. Some studies offered recommendations only, while others have implemented recommendations, and still others have provided specialized follow-up care. All these differences were resolved except for in-home assessment by meta-analysis reported by Stuck and colleagues in 1993 [4]. This analysis demonstrated that CGA with strong long-term management is effective for improving survival and function in elders. Most recently an updated meta-analysis of randomized trials on preventive home visits showed favorable effects on mortality, nursing home admissions, and functional status [5]. Interventions including three components were significantly associated with more favorable outcomes. These included: a) use of multidimensional geriatric assessment as the initial evaluation method, b) giving recommendations to elders, and c) extended follow-up of the intervention with subsequent home visits. The issue of targeting the multidimensional process remains unresolved, in part, because of the conceptual expansion of the process to include the objective prevention of loss of independence. The initial objective of CGA was to identify elders at high risk and develop programs combining rehabilitation and improved care coordination. The whole process focused on the special needs of all frail elders who, because of the complexity of their clinical presentations and needs, required a special approach to their assessment and care, most often not available in regular care settings. When assessment is primarily targeted at identification of risk factors for functional decline and development of interventions to prevent or delay impairment, there is now evidence that these efforts need to be addressed in low risk elders. It has

CGA = comprehensive geriatric assessment

been shown that for high risk elders, preventive assessments and interventions have no favorable effects on outcomes. Studies identifying those predictive criteria for identifying elders who would clearly benefit from either of these assessment strategies are needed [5].

Geriatrics has focused primarily on the management of acute and chronic conditions in frail elders with less emphasis on promotion of health and prevention of disease than in younger populations. The growing body of knowledge about disease/problem prevention in later life suggests a valid basis for strengthening efforts in preventive geriatrics. Assessment of risk factors is an important element of such a strategy.

Implementation of CGA

Multidimensional assessment allows healthcare professionals to identify problems and develop preventive, treatment and rehabilitation strategies designed to improve or maintain function and health status. Multidimensional assessment extends beyond the traditional medical evaluation of older persons' health to include assessments of mental, functional, and social status. Other domains frequently included in the assessment are the patient's economic status, characteristics of the home environment, and a discussion of patient preferences regarding advanced directives.

Multidimensional assessment of older persons may be conducted by individual practitioners or by a multidisciplinary team of healthcare professionals (CGA). Fortunately, the majority of older persons do not need an extensive multidimensional evaluation. Simple probes for the presence of common problems may suffice. More extensive evaluation, such as comprehensive geriatric assessment, should be reserved for those who are frail or at high risk for functional decline or nursing home placement.

Structuring the office visit

If multidimensional assessment is to be readily incorporated into primary care and internal medicine practices, the process must be streamlined. When properly organized, healthcare providers can conduct brief multidimensional assessments and render comprehensive care without spending an inordinate amount of time on the patient visit. Although every office setting is unique, some basic guidelines can be helpful.

• *Information gathering*

Much of this information can be obtained from old records, other professional or non-professional staff, or by self-report from patients or family members completing forms. Moreover, the amount of time the physician spends taking a medical history has been demonstrated to be inversely correlated with patient satisfaction [6]. In contrast, time spent conducting the physical examination, discussing treatment, and providing health education has been found to be positively correlated with patient satisfaction. A structured pre-visit questionnaire that gathers information on past medical history, medications, preventive measures, and functional status (including information on who helps when the patient is functionally dependent) can markedly reduce the time needed to conduct an initial assessment. If a patient is unable to

complete the questionnaire, usually a family member or a caregiver can do so [7].

• *Screening*

When case-finding for geriatric problems, trained office staff can administer screening instruments for many of the important dimensions. This approach enables the clinician to spend only a short time reviewing the results of these screens and then deciding which dimensions, if any, need further evaluation.

• *Record-keeping and communication*

Offices should take advantage of computer technology to improve record-keeping. Even in the absence of an inter-relational database electronic medical record system, templates generated on word processing programs can be used effectively. For example, a dictated previous note that has been saved in a word processing program and is available to the physician can be retrieved and updated ("cut and paste") to reflect the current office visit. In this manner, time spent keeping records is reduced, and records are kept current and legible. Essential components of each updated note include a problem list, preventive history, and current medication list.

• *Treatment plan and delegation of duties*

Many elements of the treatment plan can be delegated to other health professionals. Follow-up telephone calls from office staff or health educators can reinforce instructions and improve adherence with recommended treatment. Each dimension should be systematically, if only briefly, evaluated to determine whether more in-depth assessment is necessary.

Assessment instruments

The use of instruments can facilitate assessment, although, if used inappropriately, can reduce efficiency and undermine the provider-patient relationship. Instruments cannot substitute for good clinical skills and judgment, including the skill of eliciting important items from the patient's history and physical examination. However, information obtained from assessment instruments can be used to focus the clinician on issues that are particularly germane to an individual patient. Instruments can also allow providers to dismiss certain dimensions as not needing further assessment. To ensure that potential problems are not overlooked, assessment instruments should have high sensitivity, even if specificity is low. If optimal test characteristics have not been determined, clinicians would be wise to use a low threshold to indicate the need for further evaluation.

If instruments are to improve the efficiency of the evaluation, properly trained, non-professional personnel should administer them. For example, an office assistant might conduct a brief cognitive screen and, if abnormal, the physician would conduct a more extensive mental status evaluation. Several groups have demonstrated the feasibility and yield of utilizing office staff to administer case-finding and screening instruments that assess many of the dimensions described above. This approach can dramatically improve practitioners' efficiency and increase the

Table 1. Instruments and procedures in office assessment

| | Functions assessed | Administration | Strengths | Weaknesses | Comments |
|---|--|---|---|---|--|
| Katz ADL Scale | Basic self-care abilities | By patient or interviewer, based on judgment and report | Simple assessment of basic skills. Useful in rehabilitation setting | Limited range of activities assessed. Rating subjective | Not sensitive to small changes |
| Instrumental ADL | More complex activities, food preparation, shopping, housekeeping, handling the phone, medications | By patient or interviewer, based on judgment and report | Assesses functions important for independent living | Rating subjective | Higher functions, not sensitive to small changes |
| Tinetti Gait and Balance Scale | Performance-based testing of mobility | By observation of performance | Provides information about risk of falls. Can identify specific abnormalities | No standard cut-off score | Sensitivity not determined |
| Snellen Eye Chart | Vision | By office staff with corrective lenses | Simple | Limited to vision from 20 feet | |
| Audioscope | Pure tone hearing | By office staff | Simple. Reliable in cognitively intact | Instrument costly | Whisper test is alternative. Has to be done by clinician. Limited in specificity. High sensitivity |
| Folstein Mini-Mental State Examination (MMSE) | Memory, orientation, attention, constructional ability | By interviewer | Fairly quick and sensitive | Will not detect mild disability. Needs adjustment for education | Test score <24 considered abnormal but not necessarily indicative of dementia |
| Geriatric Depression Scale (GDS) | Symptoms of depression | By patient | Quick, reliable, avoids an excess of somatic questions | Not evaluated for specificity among medically ill. Use limited in presence of severe dementia | Score >14 on the long form or >5 on the short form indicates depression |
| Cornell Scale | Symptoms of depression | By interviewer to patient and caregiver | Useful in patients with or without dementia. Range of questions suited for elderly patients | Not widely tested. Requires two interviewers | Score > 12 probable depression |

Modified from: Ouslander JG, Osterweil D, Morley JE. Medical Care in the Nursing Home. New York: McGraw-Hill, 1997:43.

number of new and treatable problems detected in their older patients. Published methods reported that 10–22 minutes are required by office staff to administer screening instruments [8,9].

- *What to screen for and how to do it*

The individual provider's office-based multidimensional assessment for community-dwelling older persons should include short screens for the domains important to older persons. Table 1 lists the geriatric screening approaches in primary care settings. In addition to seeking common geriatric conditions, physicians should evaluate non-medical issues that are of particular relevance to the health of older persons (e.g., advance directives, adequacy of social support, economic status, and environmental risks).

- *Other considerations*

Comprehensive geriatric assessment is a process that provides more in-depth evaluations of the dimensions described above and links these evaluations with specific services aimed to restore or

maintain function and health. Although the initial reports of outpatient CGA did not indicate that it was effective, more recent models have achieved health benefits in randomized clinical trials and controlled studies. These models have included utilizing a geriatric nurse practitioner to provide periodic in-home assessments that were subsequently discussed with a multidisciplinary team (geriatric care management in multidisciplinary geriatrics clinics), and linking an adherence intervention to a single geriatrics consultation [10–13].

Some healthcare systems have found outpatient CGA to be a valuable way of organizing services for frail older persons. In the ambulatory setting, a different set of logistic and practical obstacles must be overcome for CGA to be successful. Scheduling difficulties, the labor intensity associated with CGA, and reimbursement issues are major barriers. For example, in the U.S., under the Medicare (federal government-sponsored program for elders and disabled), fee-for-service systems, reimbursement of non-physician team members for their services is often difficult. The low volume of

patients that can be cared for by traditional CGA models, compared to usual one-on-one provider patient care, makes this method of healthcare delivery expensive in all reimbursement systems. Finally, patient fatigue may be a major factor, particularly when CGA is structured as a sequential set of evaluations on the same day, often taking 2–4 hours.

Discussion

In implementing CGA in other health systems, planners should learn from lessons learned, and acknowledge that CGA is a *process* rather than a single intervention. It consists of a multidimensional assessment followed by extended follow-up visits. Targeted to low risk populations, coupled with an appropriate program of a preventive nature will yield the greatest benefits [16]. Communication of recommendations is critical for client adherence and satisfaction. It seems that pre-paid or capitated systems have greater opportunities in the U.S. to implement CGA since they do not have some of the barriers that exist in the American fee-for-service system.

Conclusion

Comprehensive geriatric assessment programs are critically important to the process of matching care needs with appropriate support services to achieve the best outcome for a growing older population. Although it is uncertain which system will dominate American healthcare in the coming decades, it is clear that comprehensive assessment services will be essential to identify the most appropriate treatment plans to achieve optimal clinical outcomes for frail older Americans.

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