

Scientific Progress in Geriatric Syndromes: Earning an “A” on the 2007 Report Card on Academic Geriatrics

Fifteen years have elapsed since the first “report card” on American academic geriatrics was published.¹ The grades on that assessment were decidedly mixed, with several A’s in areas such as progress in geriatric graduate medical education and fellowship program development and the robust budgetary health of the National Institute on Aging, but B’s and C’s in other areas, notably in leadership development, recruitment of the most competitive candidates to our fellowships, and the strength of our science in the academic marketplace. Or as summarized, “a la Rodney Dangerfield, we just don’t get much respect.”

The same report threw down the gauntlet to the leaders of our fledgling field.

Earn respect for geriatrics in competing on the highest plane via the classical dual academic strategy of vigorous leadership and rigorous science. Forge an upward spiral through the excellence of our science, . . . which will attract the strongest academic physicians and scientists to our programs . . . who in turn will draw the “best and the brightest” fellows to train in our field . . . who in turn will serve as Pied Pipers to medical students, residents, and future fellows . . . who through their own successful academic careers will rise to positions of professional leadership and influence . . . and so forth, ever upward and onward.

Gratifyingly, although a 2007 report card would continue to acknowledge major ongoing challenges, it would also feature more A’s and fewer C’s in recognizing substantial progress along the road to respect. Twin, mutually reinforcing examples of such progress receive prominent attention in the present issue in the special article, entitled, “Geriatric Syndromes: Clinical, Research, and Policy Implications of a Core Geriatric Concept”² by Sharon Inouye, Stephanie Studenski, Mary Tinetti, and George Kuchel. Not only does this article elegantly summarize scientific advances (and remaining challenges) in this area of defining importance in Geriatrics, but its authors themselves are also exemplars of its validity. They comprise a distinguished quartet of geriatric leaders—all promising fellows and junior faculty in 1991—who have in the interval successfully ascended the academic spiral staircase to their present positions of power and influence. Indeed, now at mid-career, they are still on the ascending limb of their career trajectories toward the apogee of the classical career arc of academic leaders in American medicine.

DOI: 10.1111/j.1532-5415.2007.01157.x

Presented at a symposium at the 2006 meeting of the American Geriatrics Society (AGS) sponsored by the AGS Research Committee, this article carefully subjects the elusive, often ambiguous, yet classically core concept of the “geriatric syndrome” to critical examination in four dimensions.

First, in this exercise, they examined geriatric syndromes according to the complex model proposed by Tinetti et al.³ that refers to such problem complexes as “multifactorial health conditions that occur when the accumulated impairments in multiple systems render [older] persons vulnerable to situational challenges.” They also accept summary characterization of geriatric syndromes as “phenotypes,” perhaps most compellingly described in the growing research on frailty pioneered by Fried and her colleagues,⁴ although at this juncture, the authors suggest a cautious, rigorous, incremental approach to the definition of geriatric syndromes through careful review of the evidence supporting such classification, development of preliminary criteria, and their continuous refinement in an iterative process. This approach follows the successful example of professional organizations in the fields of rheumatology and Alzheimer’s disease, in this instance with the central role to be played by the AGS. Dynamic, rolling definitions generated in such exercises would continuously inform critical research in geriatric syndromes in a self-reinforcing cycle of progressive precision and incremental advances in their understanding and management.

Second, the present article also examines the unifying hypothesis that geriatric syndromes, given their complexity and pathophysiological convergence in a final common pathway of increased vulnerability, will have in common certain risk factors. This hypothesis was critically examined using analysis of the impressive, growing body of peer-reviewed, evidence-based world literature that has been published largely since the appearance of the initial report card on the state of geriatric science in 1991. This review specifically examined five geriatric syndromes (pressure ulcers, incontinence, falls, functional decline, and delirium) and identified four risk factors shared across all of them: older age (generally ≥ 65), functional impairment, cognitive impairment, and impaired mobility. Additional risk factors were reported for some but not all of these syndromes and included several that are features of the complex model of frailty proposed by Fried et al.⁴ This analysis thus confirmed the hypothesis of shared pathophysiological features while validating the central role of advancing age in their convergence along final common

pathways to vulnerability, decline, and demise as the upper limit of the human lifespan is approached. Such elegant and complex conceptualization will fuel more basic, reductionistic, mechanistic, hypothesis-driven, classical research that will earn increasing respect for geriatric science in such domains as the roles of, for example, inflammation, malnutrition, oxidative damage, and sarcopenia are probed. This will fuel development of yet-more-ambitious research agendas such as one recently articulated for frailty in older adults produced from a conference on that issue sponsored by the AGS and the National Institute on Aging.⁵ Such exercises will also identify opportunities for insightful parallel clinical studies that will evaluate the efficacy not only of innovative pharmacological and technological approaches but also of such practical but often more-challenging human interventions as reorientation for cognitive improvement and exercise, balance training, and mobilization to reduce functional and mobility impairment.

Third, this intellectual exercise generated a visually captivating conceptual pathophysiological model: the “concentric” model adapted from oncology to the challenging geriatric syndromes, which are generally yet more complex, because their understanding and compassionate management demand simultaneous integration of not only medical but also the social, spiritual, environmental, and economic dimensions often given short shrift in more linear, ruthlessly reductionistic biomedical models. When appropriately incorporated into the daunting research agenda in geriatrics, this concentric model will progressively inform an appropriately complex, multidimensional, integrated investigative approach to these syndromes, one that will demand utmost attention to the interactions between all relevant elements in a multidisciplinary strategy using contributions from a broad array of scientific disciplines.

Finally, the authors critically examine perhaps the most daunting challenge to the field as we scabble uphill on our road to respect: linking research on geriatric syndromes to clinical practice and public policy. Here the authors review the accumulating body of hard-won progress and the many difficult lessons learned in translating promising findings from geriatric syndromes research into the successful demonstration projects and dissemination efforts necessary to effect change in community clinical practice. Here barriers abound at every turn, as richly illustrated in detailed reviews of extensive research in delirium and falls. These barriers include lack of acceptance of the aforementioned common definitions of the syndromes, a paucity of simple, measurable interventions, the need for extensive, expensive provider time and effort to rigorously test interventions in the real world, where reimbursement so greatly drives care and multiple, powerful resisters to change abound. Such inertia is powerfully rooted in the attitudes of leaders, economics, and the fragmented, uncoordinated character of the American healthcare system itself, which is so dysfunctionally out of alignment with the needs of aging patients, in whom the geriatric syndromes will play an ever-more-prominent role.

Predictably, the authors conclude with the undying plea of the geriatric community for revision of Medicare to provide far greater, more appropriate financial reimbursement for the human effort necessary to permit and sustain improved management of the geriatric syndromes that to a

large degree will continue to define the field. To raise this plea to the level of practical politics and public policy, they helpfully furnish a table of concrete approaches to overcome the many barriers to progress enumerated in their treatise.

Will this opus mark passage of an important milestone on the journey along the upwardly spiraling road to success and respect for geriatrics? Only time will tell, of course, but I am optimistic that the delineation of a road map to success contributed by mid-career, proven geriatric researchers featuring the cardinal elements of scientific truth, common sense, and real-world savvy will facilitate progress along that road and validate its predicted seminal effect.

Let us therefore add another A, maybe even an A+, to the 2007 report card on academic geriatrics in the names of this insightful band of rigorous investigators and vigorous leaders. Let us also toast our professional organization, the AGS, that sponsored this exercise and through whose efforts in the realm of public advocacy and policy much of the further progress in geriatric syndromes as a core concept will be made. Here we note the promise and key importance of a study of the state of geriatrics that the Institute of Medicine (IOM) is initiating in 2007 at the behest of the AGS and that a grant from the John A. Hartford Foundation is supporting. This is the third such study of the field by the IOM in the past quarter of a century. The origin of the present initiative was the rigorous strategic planning exercise undertaken by AGS leadership and published in 2006⁵ that underscored the ongoing struggle of the discipline to achieve its appropriate place at the forefront of the increasingly urgent worldwide effort to address the healthcare needs of the approaching tsunami of aging citizens. The present special article on geriatric syndromes is certain to be featured in the IOM report and thereby prove an important milestone along the road to resources, recruitment, and respect, but even as we anxiously await that report, let us pay our final respects and lay to rest, once and for all, Rodney Dangerfield as poster child for our field!

ACKNOWLEDGMENTS

Financial Disclosure: None.

Author Contributions: William R. Hazzard was asked to contribute this editorial and composed it in its entirety.

Sponsor's Role: None.

*William R. Hazzard, MD
Geriatrics and Extended Care
Veterans Affairs Puget Sound Health Care System
Department of Medicine
School of Medicine
University of Washington
Seattle, WA*

REFERENCES

1. Hazzard WR. A report card on academic geriatrics in 1991: The struggle for academic respectability. *Ann Intern Med* 1991;115:229–230.
2. Inouye SK, Studensky S, Tinetti ME et al. Geriatric syndromes. Clinical, research, and policy implications of a core geriatric concept. *J Am Geriatr Soc* 2007;55:780–791.

3. Tinetti ME, Inouye SK, Gill TM et al. Shared risk factors for falls, incontinence, and functional dependence. Unifying the approach to geriatric syndromes. *JAMA* 1995;273:2348–1353.
4. Fried LP, Tangen CM, Walston J et al. Frailty in older adults: Evidence for a phenotype. *J Gerontol A Biol Sci Med Sci* 2001;56A:M146–M156.
5. Walston J, Hadley EC, Ferrucci L et al. Research agenda for frailty in older adults. Toward a better understanding of physiology and etiology: Summary from the American Geriatrics Society/National Institute on Aging Research conference on frailty in older adults. *J Am Geriatr Soc* 2006;54:991–1001.