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## INTRODUCTION

*Joseph LoCicero III, MD, FACS; Ronnie A. Rosenthal, MD, FACS;  
Mark R. Katlic, MD, FACS; Peter Pompei, MD\**

Welcome to the supplement to update the only research agenda that addresses the quality of care for elderly patients who may require a surgical procedure and who are cared for by specialists in surgical disciplines and related medical fields. The original research agenda, entitled *New Frontiers in Geriatrics Research: An Agenda for Surgical and Related Medical Specialties*,<sup>1</sup> was written by specialists in selected surgical and medical disciplines who reviewed the scientific knowledge of each discipline that is focused on the perioperative experience of older adults and made recommendations about what new research would best advance our knowledge of common surgical conditions in elderly patients, influence surgical outcomes, and improve perioperative management. The proposed research questions ranged from simple observational studies to complex randomized trials. The agenda revealed that we have only a minimal understanding of the basic physiology of certain surgical diseases in the older adult. The three main objectives of the research agenda and its supplement are to fill obvious gaps in knowledge in each specialty area, clarify inconsistencies in the existing literature, and point to possible resolutions of ongoing controversies.

### THE SCOPE OF THIS RESEARCH AGENDA

As in the original agenda, the ten specialties addressed herein include five surgical specialties: general surgery, orthopedics, otolaryngology, thoracic surgery (separated into cardiac issues and general thoracic issues), and urology. Two other specialties are included that are predominantly surgical but have a significant element of medical practice: gynecology and ophthalmology. Three related medical specialties are also included: anesthesiology, emergency medicine, and physical medicine and rehabilitation (physiatry). Altogether, these ten specialties encompass the perioperative course of most surgical patients.

### THE AGS–HARTFORD FOUNDATION PROJECT

*New Frontiers* describes in detail the development of this project and its many accomplishments since its inception in 1994 (see pp. 2–5). In brief, The John A. Hartford Foundation of New York (Hartford Foundation) awarded an initial planning grant to the American Geriatrics Society (AGS) in 1992. The successful project that grew out of that seed money, Increasing Geriatrics Expertise in Surgical and Related Medical Specialties (Geriatrics for Specialists), entered its fourth funding phase on July 1, 2005, with a grant that runs through June 30, 2009.

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\* LoCicero: Director of Surgical Oncology and Chief of Thoracic Surgery, Maimonides Medical Center, Brooklyn, NY; Rosenthal: Associate Professor of Surgery, Yale University School of Medicine, Chief of Surgical Service, VA Connecticut Healthcare System, New Haven, CT; Katlic: Director of Thoracic Surgery, Geisinger Health System, Wilkes Barre, PA; Pompei: Associate Professor, Department of Medicine, Stanford University, Stanford, CA.

In planning this project, the AGS and The Hartford Foundation were guided by the belief that the most effective way to help all surgical and related medical specialists do a better job of caring for older patients was not to contribute to the further fragmentation of the target specialties by creating subspecialties in geriatrics. Rather, Geriatrics for Specialists made a commitment to the following broad objectives, which continue to guide the project today:

- To improve the amount and quality of education in geriatrics received by medical and surgical residents.
- To identify and support specialty faculty interested in promoting geriatrics training and research within their own professional disciplines.
- To assist professional certifying bodies and professional societies in improving the ability of their constituencies to care for elderly patients.
- To enhance the knowledge and expertise of practicing surgeons and related medical specialists in the geriatrics aspects of the care of their older patients through maintenance of certification and continuing medical education.

This project was launched at the right moment. Several factors combined to require a concentrated focus on the geriatrics components of the surgical and related medical specialties. These included the rapid expansion of the older population and particularly the oldest-old segment, the increasing ability of surgeons to operate successfully on older patients, the unique vulnerability of older people under stress, the surgeon's traditional role as the primary responsible physician for surgical patients, and, finally, insufficient education regarding geriatrics in medical schools and residencies.

The success of phases I and II of the project was due largely to its deliberately multi-level, "customized" approach, which sought to stimulate geriatrics-related activity among both established leaders and younger "grassroots" faculty in anesthesiology, emergency medicine, general surgery, gynecology, ophthalmology, orthopedics, otolaryngology, physical medicine and rehabilitation, thoracic surgery, and urology by employing the following strategies:

- Identifying and developing leadership,
- Developing and disseminating curriculum and training materials,
- Supporting educational symposia and special interest groups,
- Supporting resident research seed grants and senior investigator awards,
- Encouraging change of Residency Review Committee special requirements and board certifying examinations.

In Phase III, Geriatrics for Specialists established the Section for Surgical and Related Medical Specialties and introduced the Dennis W. Jahnigen Career Development Awards Program and the Geriatrics Education for Specialty Residents Program. In Phase IV, Geriatrics for Specialists is maintaining and strengthening the successful programs of Phases I, II, and III, which worked toward long-term collaboration between geriatrics and the specialties, including the following:

**The AGS Section for Surgical and Related Medical Specialties.** Past programs include The Surgical Patient: Strategies for Improving Outcomes; Challenges in the Care of the Geriatric Surgical Patient; The Pre-Surgical Evaluation and Management of the Older Patient; Surgical Issues in Older Adults: Research Updates from the Specialties and Clinical Case-Based Discussions; Insights into the Difficult World of Surgery for Older Adults; and From Bench to Bedside, Adventures in Perioperative Geriatrics. The 2008 program will be presented on May 3, 2008, in Washington, DC.

**Council of the Section.** This group, a working unit of national specialty leaders committed to improving care of the elderly patient, was originally formed as the Interdisciplinary Leadership Group (ILG) in 1998. In 2000, the ILG issued the Statement of Principles: Toward Improved Care of Older Patients in Surgical and Medical Specialties, which has been published in the *Journal of the American Geriatrics Society*<sup>2</sup> and in journals of several of the specialties. The ILG has evolved into the Council of a new Section for Surgical and Related Medical Specialties in the AGS. The Council provides governance for the Section. Leadership of the Council is now moving into the hands of the specialists.

**Jahnigen Career Development Scholars Program.** These competitive 2-year awards of \$75,000 per year (plus a required minimum institutional support of \$25,000 per year) are designed to support education and research training for specialty faculty who seek to launch academic careers in the geriatrics aspect of their specialty. These emerging leaders are vital to developing knowledge of geriatrics and improving geriatrics education in the specialties. Developing such scholars is a continuing investment that is critical to the viability of all that has been accomplished to date. For informational purposes the latest awards, supported by The John A. Hartford Foundation and The Atlantic Philanthropies, are posted online at <http://www.americangeriatrics.org/hartford/jahnigen.shtml>.

**Geriatrics Education for Specialty Residents Program.** This initiative provides important opportunities for residency program directors to enrich their curricula through collaborations with geriatricians from their own institutions. This program has been expanded to provide support for 25 programs in years 2007, 2008, and 2009. Although the deadline for the next set of awards has passed, the request for proposals remains online, for information only, at [http://www.americangeriatrics.org/specialists/gsr\\_program.shtml](http://www.americangeriatrics.org/specialists/gsr_program.shtml).

**Geriatrics Syllabus for Specialists.**<sup>3</sup> A short, useful guide geared toward surgeons caring for older patients, this publication was designed to provide vital information easily and quickly. Although it is currently not available, an update is under consideration.

**Maintenance of Certification (MOC).** This initiative was added to the mission since the publication of *New Frontiers*. It was recognized that the majority of physicians involved in perioperative care of older patients fall into the category of practitioners trained before this educational effort began. Incorporating geriatrics into MOC programs is a fitting and logical next objective for the initiative, given the number of physicians already in practice.

***New Frontiers in Geriatrics Research: An Agenda for Surgical and Related Medical Specialties.***<sup>1</sup> The first research agenda assists faculty in the specialties who have decided to pursue academic careers focused on the geriatric aspects of their specialty by clarifying the state of knowledge at present and pointing out wide-open opportunities for valuable research. This supplement is a logical extension of the first research agenda.

## USING THIS BOOK

### CHAPTER STRUCTURE

In *New Frontiers*, each chapter presents the key elements of the literature review for that specialty, and the reports discussed are listed in the references section at the end of the chapter. Chapters are organized in sections, each devoted to a major clinical topic. At the end of each topic, the pertinent research agenda items are gathered and highlighted; each item has a unique number to facilitate cross-referencing and citation. Each chapter ends with a discussion that focuses on the issues of greatest concern in the care of older patients by practitioners in the discipline. Three Key Questions are identified, that is, those having the highest priority in the opinion of the experts participating in the project, and examples of hypothesis-generating and hypothesis-testing research needed to address each Key Question are provided.

In this supplement, the specialty authors began with the research questions, including the Key Questions, posed in *New Frontiers* and critically reviewed the relevant literature that was published subsequently. They looked for general and specific studies addressing questions, studies that fully or partially answered the questions, and studies that raised additional questions or that highlighted the need for additional data. With this information, the authors of supplement chapters make recommendations about keeping, eliminating, or modifying the original research questions. In addition, because many developments have occurred since the literature searches for *New Frontiers* were completed, the authors were also asked to address the need to add new questions to the agenda.

In *New Frontiers*, a junior author worked as content expert with a senior author within each specific specialty field to produce cogent research questions. In this supplement, many of the junior authors have acted as the senior author, and new content experts, who were Jahnigen research scholars, were enlisted, bringing a force to the project not previously possible.

### THE LITERATURE REVIEWS

The basic approach for all the literature reviews is described here. Unique features of individual literature reviews are presented in a methods section in each specialty chapter. Because the objective was to define the current knowledge base, the focus was on recent literature. The general plan was to conduct an English-language search, limited to the human, using MEDLINE (through PubMed). All searches included the terms *65 or older* or *aged* or *geriatric*, followed by a list of content topics of importance in each specialty. In *New Frontiers*, the time period covered was from January 1982 to October 2002, though the earliest year searched varied, from 1980 to 1994. For this supplement, the search was from October 2002 to December 2005; for some topics, important research findings that are more recent are also included. The full list of titles of papers resulting from the initial search was sent to the content expert, who selected titles meeting relevance criteria and then obtained abstracts of them. Following this, the content experts chose the papers to examine in full. In general, case reports and letters were excluded at this stage.

### AGENDA ITEMS

Each agenda item is tagged with an abbreviation that indicates the specialty field (eg, “Ophth” for ophthalmology, “GenSurg” for general surgery) and a number, starting with

the Arabic 1 in each chapter. The number is not meant to indicate importance or priority; it is provided simply to allow for easy cross-reference and citation. Agenda items from *New Frontiers* are discussed first in each chapter under headings referring to “Progress” in the topic in question. New agenda items added with this supplement are gathered at the ends of chapters under the heading “New Horizons” in the topic; the numbering of new agenda items in any chapter starts with the next Arabic number after the last item from that chapter in *New Frontiers*. In a few chapters, new Key Questions or modifications in original ones are proposed. The new Key Questions are assigned unique numbers.

Immediately following its identifying tag, each agenda item is also labeled with a letter from A to D, designating the type of research design and the clinical priority or importance of the proposed study. The word *level* is decidedly not intended to imply degrees of quality. The definitions for A-level through D-level studies, as explained in *New Frontiers*, are as follows:

- **Level A** identifies important studies with hypothesis-testing intent, using such designs as randomized controlled trials, certain nonrandomized controlled trials, or those cohort studies that focus on a single hypothesis.
- **Level B** identifies important studies with hypothesis-generating intent. Designs would include exploratory, multi-targeted cohort and case-control studies; retrospective or prospective analysis of large databases; cross-sectional observational studies; time series; outcome studies; retrospective case series; or post hoc analyses of randomized controlled trials.
- **Level C** identifies hypothesis-testing studies judged by the content experts to be of lesser importance and priority than those labeled A.
- **Level D** identifies hypothesis-generating studies judged to be of lesser importance than studies labeled B.

Proposed A (or C) studies generally must be preceded by B (or D) studies since research literature on geriatrics aspects of the specialties is today generally deficient in information that would allow for construction of the most efficient and cost-effective controlled trials. The research agenda items are almost entirely focused on clinical research. Where basic science investigations are critically needed to precede any clinical investigation, we have indicated that, but we have not suggested details regarding the design and execution of such studies.

## CROSS-CUTTING ISSUES

*New Frontiers* ended with a chapter entitled “Cross-Cutting Issues,” which covered topics that are relevant to many if not all the other chapters. (See *New Frontiers*, pp. 369–419.) This supplement does not cover these questions (agenda items CCI 1 through CCI 73). A second supplement is planned that will review recent research in these issues (physiologic changes in aging, stress response in aging, wound healing, pharmacology, outcomes assessment, preoperative assessment, perioperative clinical pathways, health-related quality of life, and models of care delivery).

## INDEX

All elements in *New Frontiers* and this supplement are thoroughly indexed by topic: discussions of the literature in all the specialty fields and for each cross-cutting issue,

specific studies by name; tables and figures; the agenda items and Key Questions, descriptions of research design, project history and methods, and more. Wherever the reference in the index is to an agenda item, the page number is bolded, which allows readers to look up a specific topic of particular interest (eg, postoperative delirium) and find all the agenda items in the book that relate to that topic. Index references to tables are signaled by the letter t after the page number; figures are likewise referenced with the letter f after the page number. The indexes for *New Frontiers* and its supplement have been merged. All index references to text, tables, figures, and agenda items in this supplement are followed by the tag S1. When a topic might be referred to by any one of several synonyms, we index it under all the various terms.

## REFERENCES

1. Solomon DH, LoCicero J, 3rd, Rosenthal RA (eds). *New Frontiers in Geriatrics Research: An Agenda for Surgical and Related Medical Specialties*. New York: American Geriatrics Society, 2004 (online at <http://www.frycomm/ags/rasp>).
2. The Interdisciplinary Leadership Group of the American Geriatrics Society Project to Increase Geriatrics Expertise in Surgical and Medical Specialties. A statement of principles: toward improved care of older patients in surgical and medical specialties. *J Am Geriatr Soc*. 2000; 48:699-701.
3. Katz PR, Grossberg GT, Potter JF, Solomon DH. *Geriatrics Syllabus for Specialists*. New York: American Geriatrics Society, 2002.