

# Chapter 15

## Teaching Geriatrics to Surgeons



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### Introduction

The 1970s is considered by many as the rise of geriatrics as a specialty – what Solomon refers to as the beginning of the “geriatrics renaissance.” [1] At that time, a few individuals recognized the need for improved care of the elderly and the opportunity for a specialty to encompass its principles. Over time, geriatrics has grown into a recognized branch of medicine that has its own society, multiple journals, thousands of fellows, and hundreds of teaching attendings. Now, the ideals that led to this renaissance are spreading into the surgical and medical subspecialties. However, this growth is meeting with some resistance. Many surgeons have the attitude of “I already know how to take care of older patients – that’s half of my practice.” And, many do take care of the aged patient well. However, improvement in the care of the elderly can be realized through utilization of the available resources discussed in this chapter.

Like the pediatric patient, the geriatric patient is unique. The development of a curriculum addressing the perioperative care of the elderly surgical patient needs to embrace the fact that the normal end points of therapy should be adjusted to a population that is nearing the end of life. These patients respond differently and unpredictably to interventions that have been tested primarily on younger patients.

With the work hour restrictions firmly in place and potentially subject to further limitations, one of the challenges facing surgical residency program directors is how to incorporate all that has been the traditional purview of the general surgeon. The addition of new information, including the principles of geriatric care for the surgical patient, complicates the issue. Fortunately, many tools already exist. The John A. Hartford Foundation, the Donald W. Reynolds Foundation, and the American Geriatrics Society in particular have

invested time and money for the development of programs to increase the exposure of surgical residents to geriatric issues.

The goal of this chapter is to serve as a reference for program directors and academicians as they begin modifying their own curriculum by integrating geriatric issues. What follows is a summary of the available resources and content that may be helpful for teaching geriatrics to surgeons.

### Assessment of Need

“What makes me mad is how aging, in our language and culture, is equated with deterioration and impairment. I don’t know how we’re going to root that out, except by making people more aware of it.” – Dr. Erdman Palmore from an interview with the Detroit News, September 5, 2004.

Though the assertion may be made that every surgical resident needs more exposure to geriatrics issues, determining what barriers exist, particularly in the form of subtle, and sometimes not so subtle, “ageism,” is essential when targeting learners for a change in curriculum. Assessing the attitudes of the individual residents will help program directors delineate existing barriers to learning about geriatric issues and to maximize the benefit gained from changes to their curriculum.

Palmore’s publication “The Facts on Aging Quiz” in 1977 is considered by many the landmark effort to address the issue of attitudes towards aging. His survey has been modified by many authors, and additional attitude assessment tools have been developed. Although these have been tested mostly on primary-care residents, they are applicable to residents in the surgical and medical subspecialties.

Palmore’s survey has been updated, most recently by Breyspraak et al., of the University of Missouri-Kansas City, and can be found at the web site <http://cas.umkc.edu/cas/AgingFactsQuiz.htm>. Debate continues as to whether Palmore’s tool and subsequent iterations are valid for research purposes, but the qualification of learner attitude should be helpful when developing a curriculum [2].

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**TABLE 15.1** UCLA Geriatrics Attitude Scale (GAS): answers using the Likert scale 1 to 5

1. Most old people are pleasant to be with
2. The federal government should reallocate money from Medicare to research on AIDS or pediatric disease
3. If I have the choice, I would rather see younger patients than elderly ones
4. It is society's responsibility to provide care for its elderly persons
5. Medical care for older people uses up too much human and material resources
6. As people grow older, they become less organized and more confused
7. Elderly patients tend to be more appreciative of the medical care I provide than are younger patients
8. Taking a medical history from elderly patients is frequently an ordeal
9. I tend to pay more attention to and have more sympathy for my elderly patients than my younger patients
10. Old people in general do not contribute much to society
11. Treatment of chronically ill old patients is hopeless
12. Old persons do not contribute their fair share towards paying for their health care
13. In general, older people act too slow for modern society
14. It is interesting listening to old people's accounts of their past experiences

1=Strongly disagree, 2=somewhat disagree, 3=neutral, 4=somewhat agree, 5=strongly agree

A lengthy and more detailed survey was constructed by Maxwell and Sullivan in 1980 [3]. Subsets of questions from this survey have been abstracted, decreasing the length of the survey but hopefully maintaining the accuracy of the responses to quantify an individual's attitude regarding the elderly.

Another commonly used and validated assessment tool for determining the attitude of a resident towards geriatric issues is the UCLA Geriatrics Attitude Scale (GAS) [4]. Like the Maxwell and Sullivan survey, the GAS uses the Likert scale but consists only of 14 questions. Initially published in 1998, Dr. Reuben and colleagues have evaluated this device for validity and reproducibility, publishing their results in 2005 [5] (see Table 15.1).

Once the attitude of the residents towards the elderly have been established, determining the geriatrics knowledge base of the residents can provide a starting point for program directors when making curriculum changes. In order to better gauge what that knowledge base is, the University of Michigan has developed a questionnaire consisting of 20 items that range from acute abdominal pain to palliative-care options and appropriate pain control. This test can be found at <http://www.med.umich.edu/geriatrics/educationalprograms/gme.htm>. Table 15.2 lists the topics covered by this test.

Krain et al. from the University of Michigan utilized the UCLA's Geriatrics Attitude Scale and the University of Michigan's Geriatrics Clinical Decision Making Assessment tools to determine the effectiveness of their faculty

**TABLE 15.2** University of Michigan's Geriatrics Clinical Decision Making Assessment quiz topics

1. Postoperative pain management
2. Constipation
3. Metastatic abdominal pain
4. Analgesia in presence of confusion
5. Assessment of in-hospital mortality
6. Competency and patient wishes
7. Delirium diagnosis
8. Reducing subsequent hospital utilization
9. Causes of incontinence
10. Medical management-only requests
11. Recognition of depression
12. Prevalence of mood disorders
13. Elder abuse suspicion
14. Postoperative respiratory distress
15. Return of ambulatory function predictors
16. Evaluation of syncope
17. Foot pain following immobility
18. Postoperative delirium and agitation
19. Medication-induced acute renal insufficiency
20. Evaluation of alcohol withdrawal

development program [6]. The program was designed to increase the knowledge and to improve the attitude of the nonprimary-care residents towards the elderly. This was accomplished by identifying faculty within the nonprimary-care departments and giving them resources to incorporate geriatric issues into their curriculum. The program demonstrated an improvement in both knowledge and attitude toward the aged.

Establishing the attitude and knowledge of the residents prior to initiating any new curricular changes, and then measuring the effects of the interventions, can help guide whether the changes were successful or other changes are needed. Additionally, these tools can be used in completing research, as shown by Krain et al. [6].

## Integrating Geriatrics into a General Surgery Curriculum

Many difficulties exist to insert geriatrics into an already overloaded general surgery curriculum. What is the best approach? What is sufficient time and coverage? How do you assess the effectiveness of the modality chosen? While there are many different approaches and tools such as didactic lectures in multiple formats, small group discussion tools, case-based simulation, and others, how best to integrate these tools into the tight educational schedule is a challenge.

To try to help surgical and medically related training programs (Emergency Medicine, Anesthesia, and Physical Medicine and Rehabilitation) meet this challenge, the

American Geriatrics Society in partnership with the John A. Hartford Foundation introduced a grant program, titled Geriatrics Education for Specialty Residents (GSR). Beginning in 2001, as a part of the larger Geriatrics for Specialists Initiative, the GSR began funding programs to develop educational models to improve the care that residents in surgical and medical subspecialties give to elderly patients. Every 2 years, a new round of grants was given to these specialty programs. To find out more about the Geriatrics Education for Specialty Residents, such as descriptions of projects that have received grants, please go to The American Geriatrics Society home page and follow the link to the Geriatrics for Specialists section. The web site address is <http://www.americangeriatrics.org/specialists/gsr/default.asp>.

Funding from the GSR has been used by several recipients to develop projects focusing specifically on how to integrate geriatrics into a surgical curriculum. One such example comes from Dr. Cox et al. at East Carolina University, which in 2002 used the grant to include geriatric issues into the 4th edition of the *Surgical Residency Curriculum*, published by the Association of Program Directors in Surgery. The authors provide a “structural basis for increasing resident expertise in caring for the special needs of elderly patients.” Specific curriculum goals include understanding the principles of normal aging, pathophysiology in the elderly patient, preoperative assessment, operative management, and perioperative care of the aged patient, long-term recovery and rehab, financial and reimbursement issues, and lastly, analyzing outcomes of the geriatric surgical patient. To achieve these goals, each section of the curriculum has “geriatric objectives” associated with it and is clearly delineated in the table of contents where those objectives can be found within that specific section. This curriculum can be found at the web site of the Association of Program Directors in Surgery.

The curriculum mentioned above provides an outline of specific goals to obtain competence in caring for older patients. However, other grant recipients of the GSR have developed products to teach the specific geriatric issues. Bell et al. at the University of South Carolina designed “Top Blade,” a simulation, case-based project used to cover the major geriatric topics at the learner’s own pace. The learner is given a scenario and asked to develop an evidence-based response to complete the task. The solution to the scenario, which is to be written as if it is to be published as a case presentation, is reviewed by a faculty member with an interest in geriatrics who then provides feedback to the resident. There are a total of 22 different Top Blade cases to choose from. This type of integration takes a fair amount of time from one individual faculty member to review the cases but can be completed by the residents in between their clinical duties and does not use valuable conference or lecture time. Each time the project has been completed, feedback has been

received from the residents that has been, overall, positive. To access Top Blade, please go to <http://topblade.med.sc.edu> and request a password to begin.

In another effort, also supported by the AGS and the Hartford Foundation, Sharon Levine, MD, at Boston University Medical Center, in association with the Association of Directors of Geriatric Academic Programs (ADGAP), has developed an intensive 2 and a half-day program for chief residents of nonprimary-care specialties, known as the CRIT (Chief Resident Immersion Training) program. This program, which is conducted off campus at an attractive location in one weekend, allows specialty chief residents to combine some time with family with concentrated interactive learning of geriatric principles with enhancing leadership skills and teaching skills. By the end of the weekend, the residents will have designed a simple project to bring geriatrics education back into their training programs. Information about the CRIT program can be found at <http://www.americangeriatrics.org/adgap/crit/default.asp>.

Individual universities have also developed their own programs to teach geriatric issues. The University of Chicago has made available its Curriculum for the Hospitalized Aging Medical Patient (CHAMP) program, which is described below. Also included is the E-Learning for Licensed Professionals from the University of Iowa, the Texas Tech Medcast series, and the Elder Care project from the University of Iowa.

## Champ

The CHAMP Program (Curriculum for the Hospitalized Aging Medical Patient) is a 12-week faculty development program aimed primarily at primary-care faculty to help teach geriatric issues. However, each module has been separated out from the program and is available at <http://champ.bsd.uchicago.edu>. The topics covered include Foley catheter use, delirium/dementia/depression, drugs and aging, falls, wound care, identifying frail elders, nausea, deconditioning, palliative care, pain control, advance directives, nursing-home care, and discharge plans. Also included is a module on teaching techniques and a module regarding OSTEs (Observed Structured Teaching Exercise). Each module has a PowerPoint slide presentation, a bedside teaching triggers section, a pocket teaching card (where applicable), references, links, and a session evaluation form.

## E-Learning for Licensed Professionals

The University of Iowa Geriatric Education Department has developed a variety of tools to advance geriatric education.

Under the heading of E-learning, five different types of products are available. The first is GeriaSims. GeriaSims is an interactive case-based tool that has a virtual mentor who guides you through the care of a geriatric patient, focusing on a specific topic of interest. Topics of interest to surgeons include delirium, functional assessment, polypharmacy, and palliative care.

The second product is a video streaming lecture series with slides that covers a variety of geriatric topics. Pain control, delirium, peripheral arterial disease, polypharmacy, pressure ulcers, and renal failure among many are presented here.

The third product consists of didactic modules from the Geriatric Consult Service Inpatient Curriculum at the University of Iowa. The residents that rotate on this service must complete these modules. Nutrition, delirium, adverse drug events, and an overview of aging are included in this product. Adobe Acrobat Reader is required for these modules.

The last two products deal with oral hygiene and train the preceptor in functional assessment. By going to the following web site, <http://www.healthcare.uiowa.edu/igec/index.html>, the user has access to the E-learning products as well as other resources. Many of the individual products can also be accessed through portals such as POGOe (see below).

### ***Texas Tech Medcast Reynolds Geriatrics Series***

This is a series of podcasts that covers subjects from polypharmacy, falls, incontinence, and functional assessment of the elderly. They come with a fact sheet as well as the podcasts themselves. These can be found at POGOe.

### ***Elder Care***

The University of Arizona has a series of articles in a journal format that review contents such as delirium/depression/dementia, urinary incontinence, falls, elder abuse, and health literacy. These are succinct and concise explanations of these topics. Access to these can be found at POGOe.

These are a few broad examples of how to begin integrating geriatrics into a surgical curriculum. However, once a program director has completed a needs assessment and has evaluated what the specific residency program may need, or if an academician or resident decides that a certain issue needs to be addressed, there exist topic-specific resources. The following section describes, in general, where these resources can be found, such as POGOe, and then lists specific products based on the disease process.

**TABLE 15.3** Seventeen frequent and preventable hazards

1. Acute renal failure
2. Adverse drug events
3. Inappropriate bladder catheterization
4. Deconditioning and immobility
5. Dehydration
6. Delirium
7. Depression
8. Electrolyte disturbances
9. Falls
10. Functional decline
11. Incontinence
12. Infection
13. Malnutrition
14. Pressure ulcers
15. Stress-induced gastrointestinal ulceration
16. Thromboembolism
17. Untreated or undertreated pain

## **Resources**

The John A. Hartford Foundation and the American Geriatrics Society, along with representatives from ten surgical and medical subspecialties, compiled a list of the 17 frequent and preventable hazards of the inpatient care of the elderly (see Table 15.3) [7]. Educational resources have been developed to facilitate the recognition, treatment, and most importantly, the prevention of these occurrences. Included in this section is a discussion of the broad resources available for improving geriatric education followed by specific geriatric issues and the tools that are available for each one.

## **General Online Resources**

The internet has become an easily accessible repository for educational materials. The geriatrics community is amassing a set of portals to access these educational tools. The Portal of Geriatric Online Education (POGOe), developed by the Mount Sinai School of Medicine in partnership with Vanderbilt University School of Medicine, is a free resource of educational materials that cover the gamut of geriatric topics. Many are evidence-based and are relevant to surgical and medical specialty patients. Many of the products listed below can be found on this site, located at <http://www.pogoe.org/front2>. Access to the site requires registration, which is easily completed at no cost.

The Consortium of E-Learning in Geriatrics Instruction (CELGI) is also a web site devoted to providing access and awareness of geriatric educational materials on the internet. By going to <http://www.celgi.org>, the user can read discussions regarding advances made in E-learning and also find



**TABLE 15.4** GeriatricWeb topics

1. *Geriatric syndromes* – Dementia, delirium, urinary incontinence, osteoporosis, falls/gait disorders, decubitus ulcers, sleep disorders, failure to thrive
2. *Organ specific disease/syndrome* – Ear, eye, cardiovascular, musculoskeletal, neurological, communicable diseases, respiratory, oral, gastrointestinal, endocrinological, sexual dysfunction and gynecology, hematology and oncology, kidney/prostate, skin diseases
3. *Geriatric psychiatry* – Mood disorders, anxiety disorders, personality disorders, substance-related disorders, memory disorders (nondementia)
4. *Patient care* – Geriatric assessment, hospitalization, emergency medical services, surgical procedures, long-term care, preventive health services, rehabilitation, pain management/palliative care
5. *Aging* – Age distribution/demography, basic sciences, pharmacology/polypharmacy
6. *Economics* – Organizations/Medicare, health service research
7. *Medical ethics* – Advance directives/decision capacity, artificial nutrition/feeding tubes
8. *Miscellaneous topics* – Elder abuse, automobile driving, geriatric medical education

links to other learning resources. CELGI was established with the support of the Miami Jewish Home and Hospital for the Aged, Florida's teaching nursing home and is also affiliated with the VA Medical Center in Miami. Membership in CELGI is free.

GeriatricWeb is a resource for practitioners that have access to guidelines for treating many of the geriatric syndromes. Found at <http://geriatricweb.sc.edu/>, it is a collaborative effort between the Division of Geriatrics at Palmetto Health Richland Hospital and the University of South Carolina School of Medicine and its medical library. It is funded by a grant from the National Library of Medicine. Its web-based geriatric digital library is broken down into eight broad topics (see Table 15.4), and it is free to access.

MedEdPortal is a peer-reviewed resource for general medical information but includes geriatric topics. It is funded by the AAMC and is found at <http://www.aamc.org/mededportal>. Several universities have developed their own web sites with access to geriatric topics.

## Resources by Topic

When making changes to a curriculum, the program director may have identified particular areas of need, or an academician or resident may have a particular interest in a certain geriatric topic. Provided below is a list of specific geriatric issues and the educational tools that are available to learn about them. Each item that follows will contain how to find the tool, a description of the type of learning

method used – lecture vs. standardized patient vs. interactive video presentation, etc., the author and institution where the product originated, and a brief summary of the product.

## Delirium

1. *An Unfolding Case of Delirium, Dementia, and Depression* – University of California at San Francisco; Author – Bree Johnston, MD

This is a problem-based learning exercise in a Word document to be used in small groups. The case explores the concept of recognizing and managing the cognitive impairment in the hospitalized elderly patient and is suitable for learners from medical students to faculty. Find this at POGOe.

2. *Delirium in the Perioperative Elderly* – University of Nebraska Medical Center; Author – Ed Vandenberg, MD

The University of Nebraska Medical Center has two case-based tools that reviews perioperative delirium – diagnosis, pathophysiology, risk factors, prevention, and management. These are designed for M3 and M4 and PGY-1 learners. Find this tool at <http://app1.unmc.edu/geriatricsed/delirium>, or through POGOe – <http://www.pogoe.org/productid/18401>.

3. *Postoperative Delirium in the Elderly Patient* – Saint Louis University; Author – Miguel Paniagua, MD

This is an interactive video lecture series with exercises imbedded in the presentation that expounds on the breadth of the topic of delirium in the surgical patient – from preoperative risk factors to diagnosis and management options. This is found at POGOe – <http://www.pogoe.org/productid/20118>.

4. *Delirious: You or the Patient?* – University of North Carolina; Author – Debra Bynum, MD

This is a lecture presented in a PowerPoint format. The lecture has a few slides regarding delirium in the perioperative patient but with a primary focus on recognition of patients at risk, diagnosis, and management. The lecture can be found at POGOe – <http://www.pogoe.org/productid/18928>.

5. *Delirium: An Interactive Learning Experience* – Emory University; Author – Ugochi Ohuabunwa, MD

This is an interactive case presented in a Word format designed to facilitate discussion among small groups. Initially developed for medical students but can be applied to residents as well. This product has been peer-reviewed at MedEdPortal and can be accessed through that portal, as well as POGOe – <http://www.pogoe.org/productid/20184>.

Additional materials on delirium can be found at the CHAMP program and the E-Learning for Licensed Professionals web sites (see above).

## Adverse Drug Events and Polypharmacy

1. *Health Promotion for Older Adults: Drug Use and Misuse* – University of Washington; Author – Shelly Gray, PharmD

This is described as a curricular module that is essentially a very extensive review of drug use in the elderly, looking at the epidemiology of adverse drug events, treatment strategies to prevent these, and a case study and self-study questions to put into practice the concepts presented. This can be found at GeriatricWeb <http://geriatricweb.sc.edu/>.

2. *Management of Polypharmacy in Community Dwelling Older Persons* – Spital Bern Ziegler, Switzerland; Author – Andreas Stuck, MD

Dr. Stuck presents this topic in a PowerPoint presentation that is accessible at GeriatricWeb. He discusses definitions, risk factors, risk reduction strategies, compliance issues, and overall polypharmacy management options. This can be found at <http://www.healthandage.com>.

3. *Geriatric Pharmacology* – Texas Tech University; Author – Kathryn McMahon, PhD

Dr. McMahon provides a case-based exercise for use in small groups to evaluate pharmacology issues in the elderly. There are three segments to this product – a didactic handout, the cases, and then a posttest. This can be found at POGOe – <http://www.pogoe.org/productid/20116>.

4. *Pharmacology Exercises For Small Groups of Medical Students* – University of California San Francisco; Author – Bree Johnston, MD

Initially designed for medical students, this device is made up of three cases. The second and third cases in particular may be of use to surgery residents as they discuss topics such as the impact of renal function on drug clearance and how to compensate for this as well as prescribing concerns. This can be found at POGOe – <http://www.pogoe.org/productid/18817>.

Polypharmacy and adverse drug events are topics also covered by both the CHAMP program and E-Learning for Professionals (see above).

## Renal and Prostate Disorders

1. *Renal Failure in the Older Adult* – University of Iowa; Author – Rebecca Hegeman, MD

This is a video streaming lecture that is available from the University of Iowa Geriatrics Education web site – <http://www.healthcare.uiowa.edu/igec/index.html>, and is one of

many video lectures available from them regarding geriatric issues. This is also available through POGOe – <http://www.pogoe.org/productid/18472>. The lecture addresses four objectives: To describe how to evaluate a patient's GFR from readily available clinical information, to identify the timing of referral to a nephrologist, to understand drug use in chronic kidney disease/end-stage renal disease, and to provide primary care in patients with end-stage renal disease.

2. *Renal and Prostate Disease* – University of Nebraska; Author – William Lyons, MD

Three PowerPoint modules are dedicated to discussing renal and prostate disease, with a focus on the association with elderly patients. Module #1 deals with chronic kidney disease, while modules #2 and #3 are concerned with BPH and prostate cancer respectively. This is not a peer-reviewed resource, but the recommendations are made from evidence-based sources. It is found on POGOe – <http://www.pogoe.org/productid/18990>.

## Urinary Incontinence and Inappropriate Bladder Catheterization

1. *Incontinence and Urinary Catheters for the Inpatient Physician* – University of Colorado Denver; Author – Jeannette Guerrasio, MD

This is a product from Guerrasio et al. that is a “small group, preceptor-mediated, PowerPoint-guided workshop,” designed to educate participants about the indications and pitfalls of catheterization. There are four different sections – one is a PowerPoint lecture, with the other three being devoted to facilitating the small group discussion on incontinence and urinary catheter use. This can be found at POGOe – <http://www.pogoe.org/productid/20296>.

2. *Urinary Incontinence in Older Adults for Practicing Physicians* – University of Cincinnati; Author – Gregg Warshaw, MD

There are six segments to this tool, including a PowerPoint didactic lecture, a patient handout, references, and a facilitators guide. This can be found on POGOe.org – <http://www.pogoe.org/productid/19042>.

## Electrolyte Disturbances

1. *Evaluation and Management of Hyponatremia in the Elderly* – The University of North Carolina; Author – Debra Bynum, MD

Dr. Bynum has tackled the topic of hyponatremia in the elderly through the use of a case-based PowerPoint presentation. The recognition, management, and understanding of the etiologies of hyponatremia is the focus of this tool. Find this on the Web at [http://www.med.unc.edu/aging/documents/gercurhyponatremia\\_000.ppt](http://www.med.unc.edu/aging/documents/gercurhyponatremia_000.ppt), or through POGOe – <http://www.pogoe.org/productid/18931>.

## Falls

1. *Falls* – Mount Sinai School of Medicine; Author – Christine Chang, MD

From Mount Sinai School of Medicine comes a teaching tool that has five different components. First is the case of a 70-year-old female presenting in the outpatient setting with arm pain after a fall. To better use this case, a faculty guide explanation is included. Also included is a PowerPoint lecture discussing falls, as well as a resource for other information regarding falls and a comprehensive handout. This can be found at POGOe – <http://www.pogoe.org/productid/20200>.

2. *Falls and Gait Assessment: A Must for the Aging Population* – Ohio State University; Author – Bonnie Kantor, Sc.D

Instead of using a virtual patient or a fictional case patient, this product utilizes a “senior partner,” a patient designated to the learner for which the learner has a list of assignments to accomplish. The learner is required to then go through their findings with the senior partner. The assignments cover the basics of falls and gait assessments, the significance of the findings, management, and prevention options. The concept is to learn about the concept of falls in the context of real-time patient care. This can be found at POGOe – <http://www.pogoe.org/productid/18832>.

3. *Falls and Mobility Problems in Older Adults* – University of Kansas Medical Center; Author – Shelley B. Bhattacharya, DO

Dr. Bhattacharya has developed a PowerPoint lecture that evaluates falls by looking at the 12 ACOVE (Assessing Care of Vulnerable Elderly) indicators. This is the one of the few presentations that uses the ACOVE indicators as the primary teaching tool. Also included is a brief discussion of the epidemiology of falls. Find this at POGOe – <http://www.pogoe.org/productid/20273>.

4. *Falls for the Inpatient Physician: Translating Knowledge Into Action* – University of Colorado; Author – Ethan Cumbler, MD

This is a PowerPoint module that is unique in that it discusses falls primarily in the elderly inpatient. Dr. Cumbler also briefly discusses the barriers to treating complex geriatric syndromes like falls, referencing the concepts of “multiple alternative bias” and “possibility paralysis.” He includes a facilitator’s manual in a Word document that gives suggestions as to how to lead group discussions with the use of the PowerPoint presentation. This can be found on POGOe – <http://www.pogoe.org/productid/20212>.

Both the CHAMP program and the E-Learning for Licensed Professionals have modules regarding falls in the elderly (see above).

## Functional Decline

1. *Functional Assessment in the Older Adult* – University of Cincinnati College of Medicine; Author – E. Gordon Margolin, MD

Included is a case, a detailed discussion of the functional assessment of older patients, including definitions for ADLs and IADLs, and a document that explains the rehab services available at the University of Cincinnati. After the student has learned about the functional assessment, he or she is videotaped interviewing a standardized patient and her daughter, then critiqued by a geriatrician. This can be found at POGOe – <http://www.pogoe.org/productid/18715>.

2. *Functional Assessment WebCt Module for Medical Students* – University of New Mexico; Author – Carla Herman, MD

This is a module in PDF format for the third year medical students at the University of New Mexico that defines the functional assessment. Included is a thorough explanation of all aspects of the function assessment, from ADLs to recognizing cognitive dysfunction, and how to use the assessment tools, such as the clock drawing task. This can be found on POGOe – <http://www.pogoe.org/productid/18486>.

## Malnutrition

1. *Involuntary Weight Loss in the Elderly* – Mount Sinai School of Medicine; Author – Beatriz Korc, MD

This is a PowerPoint lecture that discusses the significance of malnutrition for the aged patient. The etiology, management options, and overall importance are expounded upon. This can be found at POGOe – <http://www.pogoe.org/productid/20367>.

## Pressure Ulcers

1. *Pressure Ulcers* – University of Kansas; Author – Shelley Bhattacharya, DO

Using the ACOVE-3 guidelines, Dr. Bhattacharya has developed a PowerPoint presentation focusing on risk factors, prevention, and treatment strategies. This can be found at POGOe – <http://www.pogoe.org/productid/20274>.

## Preoperative Evaluation of the Elderly Patient

1. *Geriatric Anesthesia Modules for Perioperative Evaluation and Management* – University of Nebraska Medical Center; Author – Ed Vandenberg, MD

The University of Nebraska has provided five modules that look at a variety of different aspects of the perioperative evaluation of a geriatric patient, ranging from cardiac evaluation to assessing for delirium risk factors. These can be found at the web site through POGOe – <http://www.pogoe.org/productid/18967>.

2. *Five Practical Tips for the Older Surgical Patient: From a Geriatrician's Perspective* – University of South Carolina School of Medicine; Author – G. Paul Eleazer, MD

Dr. Eleazer has developed a PowerPoint lecture designed to give tips to physicians taking care of the older surgical patient. He describes the change in the physiology of older patients as well as topics such as postoperative delirium, polypharmacy, and fluid management. It can be found at POGOe – <http://www.pogoe.org/productid/18530>.

## Pain Control

1. *Postoperative Pain Management in the Elderly* – University of Nebraska Medical Center; Author – Ed Vandenberg, MD

This is one of several modules from the University of Nebraska Medical Center that addresses perioperative issues in the geriatric patient. In the same format as the other modules, this particular module focuses on postoperative pain control using a case-based approach. The module is broken up into segments. To move onto each segment, the learner must answer a question, which is then given an explanation for the correct answer. At the end of the case are links to topics related to pain control. Also within the module itself are links to related topics. This can be found on POGOe – <http://www.pogoe.org/productid/18774>.

## Summary

As the patient population ages, patients on surgical services will grey and present unique management challenges not commonly seen in a younger cohort. Issues for the elderly are complex, and the margin for error is small. Educators, surgical as well as nonsurgical, have begun to recognize the need to construct an infrastructure to insure that the surgeons graduating from training programs have the knowledge base and skills to recognize and manage these problems. Curricula must be designed to incorporate the problems associated with senescence, the response of the elderly patient to surgical stress, and the special needs of these patients after hospitalization. End-of-life questions and issues concerning palliative care have taken common place in dealing with the elderly surgical patient. Education in these areas cannot be left to chance.

Steps have been taken to begin the acquisition of resources to assist in this process. While the initial efforts are promising, they are far from complete. This chapter has been developed to serve as a general guide, not as a detailed road map. By the time this textbook has been published, additional resources will be available. The links found in this chapter will lead to some of the new materials, e.g., POGOe, but others will be available as well. The Association of Programs Directors in Surgery and the Association for Surgical Education will no doubt continue to develop resources for the education of tomorrow's surgeon that will include geriatric-specific topics. It is hoped that surgical educators will recognize the importance of specific educational curricula for surgical trainees that address the unique needs of an older population, introduce these objectives into their training programs, and develop new programs and ideas that can be shared with the entire surgical community.

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