Geriatric and Emergency Medicine: The Demographic Imperative

The geriatric population represented 4.1% of the United States population in 1900, 12.4% in 2000, and will be 20.2% by 2050.1 Society labeled the surging birth rates in the post-World War II world the “baby boomer era.” Population experts advised subsequent generations that as the baby boomers matured into old age, multiple aspects of society would be challenged in unprecedented ways. The young specialty of emergency medicine contemplated these challenges in the 1980s, including the increased demand for pre-hospital services and the need to develop a geriatric emergency medicine curriculum.2,3 Researchers also began to assess the unique emergency department (ED) epidemiology of the older adult at this time.4,5

Concurrently, outside of emergency medicine, the American Geriatrics Society (AGS) noted that the number of geriatricians needed to effectively provide health care for aging baby boomers was grossly inadequate.6,7 Furthermore, the capacity of each specialty to educate medical students and resident trainees about aging principles and geriatrics was half of what was required.8 In the early 1990s, the John A. Hartford Foundation addressed this geriatric training and expertise shortfall via the Geriatrics for Specialists Initiative (GSI), which provided the Society for Academic Emergency Medicine (SAEM) with pilot funding to formally assess older adult ED care in 1991. Research supported by these grants and other funding led to several important findings. One GSI-funded study found that geriatric patients perceive the ED as a frightening and confusing place and often depart the ED after prolonged evaluations, dissatisfied with their understanding of the care received.9 Older adults had substantially increased risk for functional decline after discharge from the ED compared with younger populations.10 In addition, older adults were more likely to arrive by ambulance, have laboratory and imaging ordered, and be admitted after longer ED stays than younger populations.11,12 A geriatric curriculum for emergency medicine residents was proposed.13 In response to this rapid expansion of geriatric emergency care knowledge, the John A. Hartford Foundation awarded SAEM a larger grant that facilitated more longitudinal studies. Additionally, the funding led to publication of a comprehensive textbook of geriatric emergency care, *Emergency Care of the Elder Person,* in 1996.14 Subsequent studies reported practice guidelines for preventing falls15 and an evaluation of those guidelines’ effectiveness,16 the epidemiology of case-finding for occult cognitive impairment17,19 and other geriatric syndromes,20,21 assessment of geriatric depression,22,23 and longitudinal trends for older adults’ use of emergency services.12
Investigators in Canada and the United States also developed instruments to risk-stratify undifferentiated geriatric ED patients into subsets at increased risk of short-term, post-ED adverse outcomes such as functional decline, institutionalization, preventable ED returns, or hospital readmissions.\(^{24-27}\)

The history of the establishment of geriatric emergency medicine is briefly outlined in Table 1.\(^{28}\) The major organizations within emergency medicine, including ACEP and SAEM, worked together with others to create educational materials, a curriculum, and textbooks to improve the care of older adults.\(^{28}\) ACEP and SAEM co-produced a series of freely available geriatric emergency videos on topics including falls, functional assessment, polypharmacy, and end-of-life issues.\(^{29}\) SAEM and the University of Toronto separately launched free interactive websites with continuing medical education credit available.\(^{30,31}\) The challenges of caring for older adults in the ED was recognized around the world, leading to the birth of the International Consortium for Emergency Geriatrics.\(^{32}\) Through the support of the GSI and the guidance of early leaders, the concept of geriatric emergency medicine has attained a scientific foundation, curricular resources, funding priorities, and organized medicine support upon which to promote high-quality ED care for this vulnerable population.

### Executive Summary

- Over the next few decades, there will be tremendous growth in the elderly population. At the same time, there will be a major shift in reimbursement and emphasis on quality measures. Guidelines for improved care for older adults have been established, as well as recommendations for specialized geriatric areas within EDs.
- The physical structure of a geriatric ED can be as simple as a single designated bed or an entire unit. Recommendations include thick mattresses or the use of reclining chairs, low stretchers, and a clutter-free environment.
- Walkers and hearing assistance devices should be available. Discharge instructions should be printed in a large font, and sites should consider follow-up phone calls to these potentially vulnerable patients. Foley catheter use should be limited as much as possible, as it is associated with urinary infections and delirium.
- In some communities, strong outpatient support has allowed some patients with conditions such as cellulitis and diverticulitis to be cared for at home. Providers should screened for falls, elder abuse, and other vulnerabilities when feasible.

### Table 1: Evolution of Geriatric Emergency Medicine

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1974</td>
<td>First EM Residency</td>
</tr>
<tr>
<td>1982</td>
<td>Initial EM studies on geriatric populations</td>
</tr>
<tr>
<td>1991</td>
<td>Hartford GSI grant awarded to SAEM</td>
</tr>
<tr>
<td>1996</td>
<td>Geriatric EM textbook</td>
</tr>
<tr>
<td>2001-2003</td>
<td>SAEM Geriatric Task Force and ACEP Geriatric Section formed</td>
</tr>
<tr>
<td>2009</td>
<td>Initial geriatric EM quality improvement metrics published</td>
</tr>
<tr>
<td>2010</td>
<td>EM residency geriatric core competencies published</td>
</tr>
<tr>
<td>2013</td>
<td>Geriatric ED Guidelines published and approved by ACEP, AGS, ENA, and SAEM</td>
</tr>
</tbody>
</table>

### Geriatric Emergency Department Guideline Synopsis

Between 2007 and 2013, 30 self-designated geriatric EDs (GEDs) were established, although their mission, protocols, staffing, and infrastructure varied considerably.\(^{33}\) For example, 87% of GEDs screened for at least one geriatric syndrome (dementia, delirium, functional status, polypharmacy), but only 57% had fall-prevention strategies and only 40% had policies to address appropriate Foley catheter use or delirium.\(^{33}\) Consequently, ACEP, Emergency Nurses Association (ENA), AGS, and SAEM convened a working group of community and academic emergency medicine and geriatric physicians, an emergency nurse, and an ED architect to develop the “Geriatric Emergency Department Guidelines” in 2012.

The GED Guidelines were formally approved by the ACEP, ENA, AGS, and SAEM Boards of Directors by February 2014 and published in Annals of Emergency Medicine, the Journal of the American Geriatric Society, and Academic Emergency Medicine in the spring of this year.\(^{34,35}\)

The GED Guidelines represent recommendations for older adult evaluation, management, and disposition from the ED setting. These do not mandate every ED to incorporate every element of the guidelines. Instead, these principles should be tailored for every individual adult ED in alignment with their patients’ needs and available resources within their health care setting.

The GED Guidelines are freely available online on several websites (http://www.saem.org/docs/education/geri_ed_guidelines_final.pdf?sfvrsn=2; http://


**Table 2: Sample Recommendations from the Geriatric Emergency Department Guidelines**

<table>
<thead>
<tr>
<th>General Category</th>
<th>Recommendation</th>
<th>Specific Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Staffing and Administration</strong></td>
<td>ED availability of geriatric-trained physician and nursing leadership, including GED medical director who completes ≥ 8 hours of geriatric CME every 2 years</td>
<td>GED medical director serves as liaison with hospital staff and outpatient care partners, identifies needs and resources for staff geriatric education, reviews and approves all hospital geriatric policies and procedures</td>
</tr>
<tr>
<td><strong>Follow-up and Transitions of Care</strong></td>
<td>Transition of care protocols will facilitate timely communication of clinically relevant information appropriate for the level of geriatric syndrome (dementia, acute illness severity, frailty, sensory impairment) associated disability of the individual patient</td>
<td>Discharge instructions available in large font that provide HIPAA-compliant information to family/care provider, long-term care facilities, and surrogate decision makers</td>
</tr>
<tr>
<td><strong>Follow-up and Transitions of Care</strong></td>
<td>Establish and maintain relationships with key community resources to access as needed in transition from ED to outpatient care</td>
<td>Medical home, case managers, home safety assessment by occupational therapy or homecare nursing, medical transportation services, meal assistance programs, prescription assistance</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td>Continuing medical education programs will increase physician and nursing staff awareness of unique geriatric emergency care needs, policies, and procedures</td>
<td>Multidisciplinary nature of effective geriatric health recovery and maintenance, evidence-based geriatric syndrome screening instruments and interventions, atypical disease presentations balanced against over-utilization of resources and goals of care, palliative medicine opportunities</td>
</tr>
<tr>
<td><strong>Quality Improvement</strong></td>
<td>Geriatric QI program will be developed and monitored by the Geriatric Medical Director and Geriatric Nurse Manager</td>
<td>Semi-annual reviews targeting geriatric syndrome prevalence of injurious fall screening rates and sequelae as well as patient-centric outcomes; delirium screening and management; catheter-associated urinary tract infection prevention efforts; and inappropriate high-risk medication prescribing</td>
</tr>
<tr>
<td><strong>Equipment and Supplies</strong></td>
<td>Physical infrastructure shall accommodate patients with mobility, continence, sensory, or cognitive impairment</td>
<td>Reclining chairs rather than gurneys to enhance comfort and minimize pressure ulcers; walking assist devices and hearing aids at the bedside; patient-controlled lighting; enhanced signage</td>
</tr>
<tr>
<td><strong>Policies, Procedures, and Protocols</strong></td>
<td>Department policies for prevalent geriatric syndromes should be developed by and readily available for staff</td>
<td>Delirium screening protocol, elder abuse assessment strategy, urinary catheter placement criteria, transitions of care priorities, palliative care triggers</td>
</tr>
</tbody>
</table>

Reprinted with permission from ACEP Now, March 2014.
post-ED adverse outcomes, as well as validated and ED-feasible screening instruments for geriatric syndromes like delirium, polypharmacy, falls, and dementia.

Checklists have been developed for hospital administrators and ED leadership to use to assess the degree to which their emergency care is “geriatricized” (see Table 3).37

Research supports many of the key recommendations from this checklist. For example, emergency medicine resident education improves knowledge acquisition.38 Similar geriatric-focused results have been demonstrated with nursing education.39 However, knowledge acquisition does not consistently translate into bedside care. For example, the rates of inappropriate Foley catheter use and chemical sedation remained the same pre- and post-educational intervention in one study.38 The disconnect between knowledge and action is the basis for implementation science, which is needed to understand the complex relationships between bedside providers and the context, opinion leaders, fidelity, adaptability, and sustainability of evidence-based interventions that reshape the standard of care.40-42

Implementation science, otherwise known as “knowledge translation,” is defined by the National Institutes of Health (NIH) as the creation of generalizable knowledge that can be applied across settings and contexts.43 In other words, implementation science is the process of moving from evidence to action. Therefore,

**Table 3: Checklist to Evaluate Geriatric Attributes of Individual EDs**

<table>
<thead>
<tr>
<th><strong>Education</strong></th>
<th><strong>Geriatric Appropriate Transitions of Care</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Education of ED staff (physicians, physician extenders) in elder-friendly ED care</td>
<td>• Discharge planning of vulnerable elderly adults from ED to community</td>
</tr>
<tr>
<td>• Educational initiatives exist for nursing and allied health professionals</td>
<td>• Nurse or nurse clinician for supportive discharge planning</td>
</tr>
<tr>
<td>• Educational initiatives exist for ED physicians</td>
<td>• Medication reconciliation at discharge</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Elder-Friendly Physical Environment and Design Principles</strong></th>
<th><strong>Linkages Between ED and Relevant Community Care Services</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Prepared environment (e.g., clutter-free environment, noise-reduction methods, appropriate lighting and signage)</td>
<td>• Primary care physicians</td>
</tr>
<tr>
<td>• Adaptive furniture that promotes function and safety (e.g., low stretchers, thick mattresses, upright and reclining chairs)</td>
<td>• Home care services</td>
</tr>
<tr>
<td>• Access to adaptive equipment (e.g., walkers, canes, hearing amplifiers)</td>
<td>• Rehabilitation and convalescence services</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Presence of Staff with Geriatrics Expertise</strong></th>
<th><strong>Geriatric outpatient clinic or day hospital services</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Designated clinical coordinator or team leader for ED-based geriatric care — on site</td>
<td>• Social worker — on site</td>
</tr>
<tr>
<td>• Advanced practice nurse or nurse clinician providing geriatrics assessment and management support — on site</td>
<td>• Physiotherapist or occupational therapist — available</td>
</tr>
<tr>
<td>• Social worker — on site</td>
<td>• Pharmacist — available</td>
</tr>
<tr>
<td>• Physiotherapist or occupational therapist — available</td>
<td>• Geriatrics consultation service — available</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Screening and Management Protocols for Geriatric Syndromes Using Validated Tools</strong></th>
<th><strong>Ongoing Evaluation of ED-Based Geriatric Care Processes</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• High-risk screening tools to identify vulnerable elderly adults</td>
<td>• Hospital admission rate</td>
</tr>
<tr>
<td>• Cognitive, functional, and mobility assessments</td>
<td>• ED and hospital lengths of stay</td>
</tr>
<tr>
<td>• Medication review and reconciliation</td>
<td>• ED repeat visits and subsequent hospital admission rate</td>
</tr>
<tr>
<td>• Standardized protocols for identification, prevention, and management of delirium, falls, functional decline, dehydration, incontinence, and pain</td>
<td>• Patient, caregiver, and provider satisfaction with service</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Geriatric Appropriate Transitions of Care</strong></th>
<th><strong>Linkages Between ED and Relevant Community Care Services</strong></th>
</tr>
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<tbody>
<tr>
<td>• Discharge planning of vulnerable elderly adults from ED to community</td>
<td>• Primary care physicians</td>
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<td>• Nurse or nurse clinician for supportive discharge planning</td>
<td>• Home care services</td>
</tr>
<tr>
<td>• Medication reconciliation at discharge</td>
<td>• Rehabilitation and convalescence services</td>
</tr>
<tr>
<td>• Transfer of clinical information to primary care physician</td>
<td>• Geriatric outpatient clinic or day hospital services</td>
</tr>
<tr>
<td>• Transfer of clinical information to home care services</td>
<td><strong>Ongoing Evaluation of ED-Based Geriatric Care Processes</strong></td>
</tr>
<tr>
<td>• Key information given in writing/explained to older patients and caregivers at discharge</td>
<td>• Hospital admission rate</td>
</tr>
<tr>
<td></td>
<td>• ED and hospital lengths of stay</td>
</tr>
<tr>
<td></td>
<td>• ED repeat visits and subsequent hospital admission rate</td>
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<tr>
<td></td>
<td>• Patient, caregiver, and provider satisfaction with service</td>
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although ample online geriatric emergency medicine educational resources exist for physicians, physician extenders, and nurses, education alone is usually inadequate to alter bedside management, and implementation science will serve a key role moving forward. For example, engaging nursing leadership and case managers to facilitate efficient post-ED transitions of care by initiating focused geriatric assessments in the ED are key attributes related to improving older adult outcomes. One protocol to operationalize these concepts is telephone follow-up by nurses. Many older adults do not understand or remember their ED course of care or post-ED management recommendations. Communication between ED providers and geriatric patients may be impeded by occult cognitive dysfunction or impaired health literacy.

One pilot study assessing nurse telephone follow-up within three days of ED care demonstrated increased likelihood of compliance with scheduled primary care appointments, but no effect on ED returns or hospital admissions at 30 days. Patient advocacy groups recognize the importance of safe, reliable, and effective geriatric emergency care with efficient transitions of care. For example, HealthinAging.org recently released a list of 10 things that every patient (or family caregiver) should seek to identify in the geriatric-appropriate ED, based primarily on the GED Guidelines. Nonetheless, the individual recommendations have yet to be prioritized and formally tested in most cases. Early research into the effectiveness of geriatric-focused ED care has yielded inconsistent results, but the absence of evidence is not synonymous with evidence of absence. An evolving array of novel older ED care models like the Hospital at Home, Geriatric Emergency Nurse, Frailty Unit, Geriatric Observation Units, non-nurse/non-physician “Geriatric Technician” screening, and Mobile Acute Care for the Elderly (ACE) programs have been conceived to fit the needs of certain populations using the resources available within their health care system. Palliative care models are also being incorporated into routine ED management of older adults.

Future iterations of the GED Guidelines will be based on higher quality, ED-based research evidence. Feasible instruments now exist to accurately screen for delirium or dementia in the ED, including in rural settings. Other assessments for geriatric syndromes or vulnerable subsets of older adults are more challenging, such as those for falls. This is an important challenge because adverse outcomes after an episode of ED care occur in one-third of discharged older patients. Standing level falls represent the leading cause of trauma-related mortality in geriatric adults, but few ED-based studies exist to guide evidence-based fall risk assessment or fall prevention protocols.

Similarly, assessing “vulnerability” as a predictor of short-term, post-ED discharge adverse outcomes is difficult. Following minor blunt trauma, up to one-third of older adults who are discharged home from the ED will experience significant functional decline over the next three months. The challenges to emergency medicine include identifying which one-third are at risk and what interventions will reduce this risk. The GED Guidelines recommend that emergency providers use the Identification for Seniors at Risk (ISAR) instrument or other validated instruments like the Triage Risk Screening Test (TRST) to identify the subsets at higher risk for functional decline, avoidable ED returns, or readmissions. However, several recent systematic reviews of the ISAR, TRST, and multiple other instruments demonstrate that none of the instruments accurately predict any of these adverse outcomes at any threshold or at any period of time following ED discharge. These instruments also label up to 78% of individuals as “high risk,” which would quickly deplete the individual ED’s resources for interventions to reduce adverse outcomes. The ideal prognostic screening instrument would be both reliable and sufficiently brief, accurately calibrated to those patients most likely to deteriorate after ED discharge, and not require extra time or personnel that are not available in most ED settings. The complexity in assessing the risk of unexpected and suboptimal outcomes such as short-term functional decline, return to the ED, hospitalization, nursing home placement, or death includes confounders at the level of the patient, the community, and the national health care system. Future risk stratification instruments must evaluate and incorporate each layer of complexity. Some examples of these currently unmeasured predictors of post-ED adverse outcomes include social isolation and frailty.

The Business Case for the GED

In making the business case for a GED, hospital leaders need to consider several issues. Hospitals and health care systems must pre-define their specific short- and long-term objectives regarding geriatric emergency care in order for resources and space to be efficiently allocated. Defining the hospital and community need for a GED is the first priority. For example, one hospital’s GED might exist only for functionally independent older adults, whereas another provides emergency services for all seniors regardless of function. In order to attain and sustain geriatric-specific initiatives, local early planning efforts must ascertain the level of administrative support, as well as identify and recruit physicians and nurses. Other early planning priorities include: identification of appropriate older adult patient populations within the community, selecting physical ED locations for geriatric emergency services, including the feasibility of structural modifications within the hospital’s financial constraints, and ensuring funding and tangible learning objectives for ongoing geriatric-relevant education of all staff members in the department.
The GED guidelines establish minimum requirements for an ED to be called a GED. However, a successful GED is more than thick mattresses and soft lighting. Compassionate, reliable, and efficient geriatric emergency care requires a reworking of existing ED resources to provide age-appropriate screening and seamless transitions of care. Geriatric protocols and processes can guide the care for older patients while providing reliable access to emergency services for patients of all ages. Overall, the most important component of a GED is staff awareness of geriatric needs, which includes ongoing geriatric-specific education.

Upfront costs to develop a GED remain an overriding concern of hospital administrators and ED leaders. However, many of the the GED guideline recommendations do not require a substantial investment. Each hospital system should evaluate available resources, current utilization of space, and consider leveraging existing staff both in the ED and throughout the hospital to attain improved geriatric emergency care outcomes. Further discussion of financials related to advocating and funding a GED is divided into three important categories: cost, revenue, and savings.

Cost. GED developmental costs focus on structural enhancements and personnel resources. A comprehensive GED can be developed on a small budget. Structural improvements like pressure distribution mattresses, less slippery non-glare floors, sound proofing, and appropriate lighting costs as little as $1500 for a single dedicated room. Renovating a 10-bed space for geriatric patients can be accomplished for less than $20,000.

Launching a GED usually requires enhancement of existing services. Social services, case management, physical therapy, and dietary resources exist in most hospitals, so redesigning and prioritizing work flows may be all that is needed to create the desired geriatric service. For instance, if physical therapy already provides services in the hospital, redesign of their operational hours and system-level objectives can meet the needs of the GED. An ED-based geriatric call-back program can be done during early morning hours when the ED volume is often less demanding. These call-back services increase patient satisfaction and increase the likelihood that patients will return to that ED. Hospital case managers should facilitate difficult geriatric dispositions from the ED. Enhancements include identification of nurse and physician champions, patient liaisons, and a pharmacist.

Revenue. As medicine transitions from a fee-for-service model to one more consistent with health care reform, a shift in financial priorities is evolving. Decreasing the health care costs for patient groups is becoming a higher priority than simple admission rates, which traditional fee-for-service models emphasized. Although empiric research is lacking, anecdotal evidence from existing GEDs indicates that focused geriatric emergency care simultaneously increases ED patient volumes and door-to-doctor times, while reducing ED length of stay. These early findings could translate into increased revenue for health care organizations that invest in these system changes. Each hospital needs to evaluate their competitive environment and decide if a GED makes sense for their community.

Savings. GEDs also create opportunities for cost savings. For example, “Admit to Home” or “Extended Home Observation” programs exist in some locales. These programs focus on non-critically ill, functionally independent geriatric patients with cellulitis, diverticulitis, or pneumonia. Appropriate geriatric patients with one of these conditions can sometimes be managed as an outpatient without significant risk of subsequent admission. For example, a 79-year-old otherwise stable patient

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**Table 4: The GED Triple Aim**

<table>
<thead>
<tr>
<th>Aim 1: Better Health Care for GED Patients</th>
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<tbody>
<tr>
<td>• Improved patient satisfaction (value based purchasing)</td>
</tr>
<tr>
<td>• Improved quality</td>
</tr>
<tr>
<td>- Transition of care</td>
</tr>
<tr>
<td>- Improved core measures</td>
</tr>
<tr>
<td>- Detection of adverse events (e.g., drug interactions)</td>
</tr>
<tr>
<td>• Improved timeliness</td>
</tr>
<tr>
<td>• Improved patient safety</td>
</tr>
<tr>
<td>• Improved efficiency</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Aim 2: Better Geriatric Population Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Address underlying causes of poor health through geriatric screenings</td>
</tr>
<tr>
<td>- Dementia, delirium</td>
</tr>
<tr>
<td>- Nutritional assessment</td>
</tr>
<tr>
<td>- Falls assessment</td>
</tr>
<tr>
<td>• Meaningful use</td>
</tr>
<tr>
<td>- Informatics enhancements, patient tracking, and follow-up</td>
</tr>
<tr>
<td>• Transition of care to further health care</td>
</tr>
<tr>
<td>• Depression and behavioral health assessment</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Aim 3: Lower Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Decrease admissions</td>
</tr>
<tr>
<td>• Decrease readmissions</td>
</tr>
<tr>
<td>• Decrease hospital-acquired conditions</td>
</tr>
</tbody>
</table>
with diverticulitis and a small abscess on CT might be managed at home with antibiotics, liquid diet, and temperature checks every 12 hours, after surgical consult in the ED.96 The GED would reassess the patient daily via telephone. A pre-planned GED re-evaluation within 48 hours provides essential continuity of care as a bridge to outpatient consultant availability. Most of these patients have a straightforward transition of care plan.97 “Admit to home” programs combined with observation programs demonstrate cost-effectiveness.98 In addition, home care services, case managers, and other community resources also improve transition of care from the ED.47,99

The contemporary ED has evolved in response to conditions and pressures of the health care system.100 Additional savings may be realized from a hospital-wide global perspective in terms of the timeliness of a geriatric evaluation. The benefit to medical staff, patients, and families may be measured in time needed to complete an outpatient assessment and treatment plan.97 During the ED visit, appropriately comprehensive assessments with labs, imaging, and consultations can provide a diagnosis and plan of care, thereby creating an otherwise nonexistent safety net for this vulnerable population. This is an example of the ED’s response to the changing needs of its patients and demands of health care reform.

In the United States, Medicare is the primary insurance of the senior population. Health care reform is managed through the Centers for Medicare & Medicaid Services (CMS) and affects all Medicare providers of health care. Evolving health care reforms propose withholding reimbursements as an incentive to improve government-defined outcomes in the future.101 The GED, by aligning its goals with the Triple Aim, can positively impact this new incentive structure. (See Table 4.) Core measures, value-based purchasing, readmissions, hospital-acquired conditions, and meaningful use measures102 continue to be phased in as reimbursement incentives.103

The incentive system puts hospitals at risk for up to 8% of the reimbursed health care dollar (see Figure 1).101,102,104-106 The GED improves individual health with fall prevention,59 case-finding,46 as well as medication screening and reconciliation.307 In addition, transitions of care improve,73 while patient satisfaction and objective experience of care both improve.45 GED health care screening also improves population health.66 Focused admission/readmission management also decreases per capita cost.41,44

### Prioritizing the GED Guidelines

Hospital chief executive officers (CEOs) and administrators have questioned whether they need to operationalize all of the guidelines for a GED. This was neither the intent, nor practical, for the majority of EDs worldwide. The next logical question is which components of the GED Guidelines should become the focus of individual ED’s process improvement efforts. Are some elements of a GED more essential than others? For instance, if an ED had all the elements of a GED based on the guidelines but didn’t have a separate space, could they still qualify as a geriatric ED? Physician and nursing leadership from existing GEDs or Geriatric Emergency Medicine (GEM) fellowship programs are currently prioritizing the guidelines.108

The prioritization process will separate the GED guidelines into three levels of a geriatric emergency care capacity. For example, a level three GED would have minimal essential elements required, whereas a level one would implement or incorporate all of the guidelines.

The GED guidelines represent a beginning and require further research to establish value and proof-of-concept.35,36 As such empiric evidence accumulates, the guidelines will be revised and updated.

### Dissemination Efforts

Some hospitals have moved forward with a multidisciplinary approach to providing acute care to their geriatric emergency patients. As the growth of GEDs evolves, the challenge becomes establishing the credentialing process, monitoring outcomes, providing ongoing education and fellowships, and continuing to validate and update the guidelines.35,36 One approach under consideration is a formal credentialing process. Another strategy being explored is the “geriatric emergency department boot camp” to raise awareness of many of the obstacles highlighted in this article, while providing mentorship and resources to local ED, inpatient, and outpatient practice.
opinion leaders. The two-day GED boot camp concept brings the curriculum and expertise to the individual hospital so that local nurses, technicians, physical therapists, case managers, hospital administrators, insurers, community organizations, patient advocacy groups, and physicians from multiple specialties have the opportunity to participate without incurring travel expenses. Based upon site-specific pre-event surveys and individualized geriatric quality improvement projects, every GED boot camp aims to meet the unique needs and objectives of the participating site.

**Rollout and Funding**

Implementation of the guidelines at a given medical center or ED can be streamlined with the assistance of several different modalities. In the state of New Jersey (NJ), in coordination with the NJ Hospital Association, statewide programs are being developed to assist hospitals in GED development and implementation. The first of these programs was scheduled to take place in September of 2014.

**Summary**

The geriatric demographic challenges imposed by aging baby boomers, in combination with an overwhelmed and understaffed primary care safety net and unprecedented fiscal challenges, place increasing demands on contemporary emergency medicine to develop compassionate, cost-effective systems of care for all populations. The geriatric adult is a potentially vulnerable patient population that represents the proverbial “canary in the coal mine” for our health care system, since any inefficiency or misapplied system issues will inevitably manifest as suboptimal recovery from acute illness or injury in the aged. However, efficient, appropriate, evidence-based geriatric emergency care will promote ED and hospital thoroughfare and more reliable ED access for patients of all ages. The need for a multidisciplinary, multi-organizational document to link nurses, clinicians, administrators, and policy-makers with best-evidence geriatric ED staffing levels, continuing medical education priorities, clinical protocols, and quality indicator metrics has now been addressed via the GED Guidelines. Next, “A paradigm shift is required to improve patient satisfaction and quality of care for the GED patient. This shift requires changes in thought and action through leadership and training. Ultimately, the success of the GED program rests with every staff member.” The process of identifying the geriatric emergency patient’s needs, defining the need, and operationalizing the service takes time, effort, and organization.

**References**


CME Questions

1. Which of the following statements is true in terms of the geriatric population (age > 65 years) and emergency medicine?
   A. Geriatric ED patients are less likely to arrive by ambulance.
   B. Geriatric ED patients are as likely to be admitted to the hospital as younger populations.
   C. In the United States, adults older than age 65 will represent more than 20% of the population by 2050.
   D. The capacity of each medical specialty to educate medical students and residents about key aging principles is and has been completely sufficient.

2. All of the following are recommendations for EDs designed for older adults except:
   A. use of thicker mattresses
   B. use of reclining chairs
   C. clutter-free environment
   D. use of less signage

3. Which of the following is consistent with the GED recommendations?
   A. having walkers and canes available in the ED for patients
   B. having a dedicated geriatric social worker 24/7
   C. completing an advance directive or living will
   D. giving a copy of discharge instructions to family members in all cases

4. Foley catheter use should be limited in elderly patients because of the association with urinary infections and delirium.
   A. true
   B. false

5. Which of the following statements is true?
   A. Adverse outcomes occur in one-third of discharged older patients after an episode of ED care.
   B. Standing level falls are the leading cause of trauma-related mortality in geriatric adults.
   C. Following minor blunt trauma, up to one-third of older adults who are discharged home from the ED will experience significant functional decline over the next three months.
   D. all of the above

6. The Geriatric Emergency Department Guidelines were designed with the intent for every adult emergency department to adhere to all 40 recommendations and design a separate space for older adult emergency care.
   A. true
   B. false

7. Emergency providers should screen older patients for:
   A. elder abuse
   B. falls
   C. vulnerability
   D. all of the above

8. A nurse follow-up call has been shown to:
   A. decrease hospitalization
   B. decrease return ED visits
   C. improve compliance with scheduled follow-up visits
   D. increase costs

9. Which of the following is not a GED aim?
   A. improved supervision in nursing homes
   B. better health for individual geriatric patients
   C. better population health for the geriatric population
   D. lower costs

10. “Admit to home” programs are an alternative to admission. Which of the following conditions is an appropriate patient to consider for this type of program?
    A. an 80-year-old female from a nursing home with delirium and urosepsis
    B. a 70-year-old with CT evidence of diverticulitis, afebrile, eating with difficulty
    C. a 90-year-old with a glucose level of 900
    D. a 75-year-old on warfarin with a small subdural after a fall

Emergency Medicine Reports

CME Objectives

Upon completion of this educational activity, participants should be able to:
• recognize specific conditions in patients presenting to the emergency department;
• apply state-of-the-art diagnostic and therapeutic techniques to patients with the particular medical problems discussed in the publication;
• discuss the differential diagnosis of the particular medical problems discussed in the publication;
• explain both the likely and rare complications that may be associated with the particular medical problems discussed in the publication.

CME Instructions

HERE ARE THE STEPS YOU NEED TO TAKE TO EARN CREDIT FOR THIS ACTIVITY:
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