The History of Geriatric Emergency Medicine

Teresita M. Hogan, MD, Lowell W. Gerson, PhD, Arthur B. Sanders, MD

ABSTRACT

Excellent emergency care does not happen by chance. The standard emergency approach that excels in the young, fails in older patients. Older adults experience unnecessary morbidity and excess mortality in our emergency departments. This article describes the pursuit of excellent emergency care in the historically challenging older adult population. A pivotal point occurred once emergency physicians recognized older patients as a distinct population in need of unique evaluation and treatment.

In the early 1990s, a group of geriatricians, philanthropists, and emergency physicians joined forces to improve older patient care. Geriatric Emergency Medicine (GEM) emerged as a subspecialty as these individuals systematically identified its distinctive knowledge, skills, competencies, literature, champions, research, fellowship programs, service lines, staffing, accredited geriatric emergency departments, and now its own journal. Early GEM advocates recognized that a legion of older patients would overwhelm providers lacking the training and resources to deliver adequate care for the aging population. They created education and grant programs, developed leaders, and overcame barriers of ageism, ignorance, and indifference. A review of this progress can inform new strategies and innovations providing a future of excellence in the emergency care of older adults.

INTRODUCTION

Emergency Medicine (EM) now identifies older adults as a population with unique needs requiring distinctive diagnostic and treatment pathways. This article describes how EM progressed from the simple recognition of older patient differences to the knowledge and skills defining competency in Geriatric Emergency Medicine (GEM). Leaders and organizations used key funding opportunities to focus early career researchers and educators on older emergency care. EM organizations starting with the Society of Academic Emergency Medicine (SAEM), and the American College of Emergency Physicians (ACEP) soon moved to the full-fledged support of GEM. They created task force sections and academies, updated residency curricula, developed GEM fellowships, and evaluated GEM knowledge.

GEM grant funding evolved from a few foundation grants to multiple NIH mechanisms in a portfolio of topics. The publication of clinical care recommendations known as the Geriatric Emergency Department Guidelines (GEDG) led to hospital and system-wide improvements. The GEDG enabled ACEP to define and accredit Geriatric Emergency Departments (GEDs). Accredited GEDs now offer externally validated excellence in the emergency care of older adults.

THE EARLY YEARS

Bortz described emergencies in senior citizens in 1957. Stevens discussed geriatric emergencies. A decade later Stevens discussed geriatric emergencies. The new subspecialty of Pediatric EM developed in the 1980s. Despite these facts, EM pioneers did not recognize or define the specialized knowledge and skills necessary to optimize...
older adult care. EM neglected the structures, staffing, workflows, or priorities needed to systematically improve the emergency care of older adults.

1980s

In the 1980s most publications on geriatric emergencies appeared in geriatrics publications3-8 or other specialty journals such as psychiatry9 and trauma.10 Surgeons Fischer and Miles first predicted the population impact of older trauma patients.11 The first EM specialty-specific publication on older adults appeared in 1982 when Gerson, an author of this article, and Skvarch discussed older adult emergency medical services (EMS) utilization.12 Then in 1986 Lowenstein, Crescenzi, and Kern described ED presentations of older adults noting 45% were true medical emergencies. They documented older patients had more hospital admissions and greater ED length of stay than younger patients.13 Also in 1986, Jones, Dougherty, and Cannon described the first geriatric curriculum for EM trainees.14 Their educational framework recognized diseases and injuries presented a different clinical picture in older age. They helped strengthen EM attitudes toward older adults. In 1989, emergency nurses presented their geriatric educational program,15 and Eliastam issued the earliest warning of the growing numbers of older adult ED visits.16 Also in 1989, Tresch asked if older adults should be resuscitated after out-of-hospital cardiac arrest,17 and Murphy detailed a 3.8% survival in this cohort.18

1990s

Building on this early work, clinicians and researchers launch focused GEM efforts. The timeline depicted in Figure 1 shows the key elements in GEM’s history. (A glossary of terms for the below figure is available in Attachment #1 of the Appendix.)

Figure 1: Geriatric Emergency Medicine Timeline

<table>
<thead>
<tr>
<th>1990s</th>
<th>2000s</th>
<th>2010s</th>
<th>2020s</th>
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<tr>
<td>1993 JAHF Funds ED Elder Needs Project</td>
<td>1996 Emergency Care of Elder Person textbook/training manual published</td>
<td>2008 First known GED opens</td>
<td>2014 GEDC forms</td>
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<td>1994 Seed grants for GEM research</td>
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<td>2009 GEM quality indicators published</td>
<td>2016 Breeson Awards continue under NIH</td>
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<td>2009 SAEM Forms Academy of GEM</td>
<td>2018 GEAR formed</td>
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<th>2020 Journal of Geriatric Emergency Medicine Launched</th>
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<td>2021 1st GEAR papers published</td>
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<td>2022 AGEM 10th anniversary</td>
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<td>2023 ACEP targets 900 total accredited GEDs</td>
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<td>2023 GEDC targets providing 10,000 clinicians with GEM resources</td>
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<td>2023 Strategic planning</td>
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In 1990, the American Geriatrics Society, (AGS) and the John A. Hartford Foundation, (JAHF) sought to empower nationwide geriatric expertise through specialty-specific education and research. Donna Regenstreif, Ph.D. of the JAHF approached leadership of SAEM and its Executive Director, Mary Ann Schropp to perform an “Elder ED Assessment.” This was the formal start of EM’s path to improved older patient care.
In 1990, Emergency Medicine Clinics devoted an entire issue to GEM topics. In the first known publication of the term Adams and Wolfson discussed ethical issues in “Geriatric Emergency Medicine.” Also in 1990, Jones and Srodulski described the aging EKG, and Spaite et al., discussed geriatric injuries. In 1992, Strange, Chan, and Sanders, detailed ED use by older patients and predicted the surge in older patients. Simultaneously, two articles delineated the differences in ED visits between geriatric and younger patients. Sanders detailed that the disease-oriented EM model was not appropriate for older adults. McNamara, Rousseau, and Sanders surveyed practicing emergency physicians finding their colleagues were uncomfortable with older patients, and this may reflect the inadequacies of training, research, and continuing education.

**Milestone #1: Geriatric Task Force Formed**

In 1991-2, JAHF awarded SAEM a $90,000 grant to define the quality of emergency care for older patients. To complete this work SAEM created the Geriatric Task Force (GTF), chaired by Arthur Sanders an author of this paper. See Attachment #2 of the Appendix for the members of the original GTF. The GTF identified systemic failures of emergency care of older adults and produced six original research papers, an annotated bibliography, an introduction, and the following conclusions/recommendations. These were presented to the funders and published in a focused issue of the Annals of EM in July 1992.

**Table 1: GEM Need Assessment Results**

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<th>Condition</th>
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<tr>
<td>Little attention has been paid to the special needs of elderly persons in EDs.</td>
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<td>Emergency health care professionals feel less comfortable caring for elderly than for nonelderly patients.</td>
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<td>The social and personal concerns of the elderly frequently are not addressed in ED encounters.</td>
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<tr>
<td>There is a paucity of research and education in GEM.</td>
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<td>Overall principles of care for elderly patients seeking emergency care have not been defined as they have for other special populations such as children.</td>
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<tr>
<td>The disease-oriented model used for caring for nonelderly adult patients in EDs may not be appropriate for elderly patients.</td>
</tr>
<tr>
<td>Although the elderly are the fastest-growing segment of the population, little or no planning is ongoing to meet the emergency health needs of the elderly in the future.</td>
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These findings enabled a much larger grant. In 1993, the JAHF approved a $960,000 grant titled The Care of the Elderly in Emergency Departments: Meeting the Needs. The project consisted of first developing a textbook and teaching manual promoting education in the unique clinical needs of older patients for dissemination to residency and graduate medical education programs. Second, they funded seed grants stimulating research and developing a cadre of researchers in GEM. Finally, the project formed a clinical practice guideline for the ED management of falls in older patients.

The GTF wrote the first GEM textbook Emergency Care of the Elder Person published in 1996. The GTF produced a Teaching Manual and presented “Train the Trainer Workshops” at national EM meetings. This increased emergency physician geriatric expertise and created a national consortium of our first GEM educators. Participation in these workshops indicated the growing GEM interest. At the 1996 SAEM annual meeting, the GTF held the first national GEM course. Over the next few years, these educational materials spread to EM residencies and to other national meetings.

In other work, Wofford, Schwartz, and Byrum explained the critical and growing role of EMS in older adult care. They noted high utilization rates, poor care coordination, and systemic inadequacies for older adults. In 1994 emergency nursing documented the needs of older ED patients. Tueth discussed behavioral syndromes and dementia in older ED patients.

**Showing that older adults benefit from a different ED focus, the authors emphasized geriatric-specific issues and proactive ED screening. The detection of non-chief complaint issues became a topic of research and clinical care. This was a departure from the standard EM focus on the chief complaint.**
Anecdotally, many in EM denied the value or appropriateness of ED screening. The GEM literature slowly shifted toward proactive detection of geriatric issues such as delirium, and innovations such as case finding, liaison services, and comprehensive geriatric assessments to improve older adult emergency care.

**Milestone #2: The American Geriatrics Society and Philanthropy Form the Geriatrics for Specialists Initiative**

In 1994, the AGS formed the Geriatrics for Specialists Initiative (GSI) to administer the near one-million-dollar JAHF grant. The GSI mission was to increase geriatric expertise among various medical and surgical specialties. The initial participating surgical specialties were anesthesiology, EM, general surgery, gynecology, ophthalmology, orthopedic surgery, otolaryngology, physical medicine and rehabilitation, thoracic surgery, and urology. A Specialty Council was formed to direct GSI activities. Geriatricians Dennis Jahnigen, Jane Potter, and John Burton lead the Specialty Council and the AGS's Janis Eisner and Nancy Lundebjerg provided organizational support. Later subspecialty leaders George Drach - Urology, Joe LoCicero - Surgery, Jeffrey Silverstein – Anesthesiology and Andrew Lee – Ophthalmology led the council. Each member subspecialty appointed a specialty council representative. ACEP and SAEM shared in funding the council and appointed two EM representatives Lowell Gerson and Teresita Hogan. This GSI Specialty Council encouraged education through the Geriatrics Education for Specialty Residents (GESR) program. The GESR program supported 29 residency programs for the integration of geriatrics, encouraged and inspired the development of curricular content, and helped to develop faculty leaders. The GSI provided significant research funding to multiple projects. Also in 1994, the Paul B. Beeson Physician Scholars in Aging Research Program started. Emergency Medicine scholars focused on geriatric emergency grants.

General EM textbooks began to include chapters on geriatric clinical issues. Research in GEM grew so that annual SAEM and ACEP meetings since 1996 have presented GEM research abstract sessions. In 1995 before sepsis became a topic, Marco elucidated serious infection in older adults. She described the GEM theme that “absence of abnormal findings does not reliably exclude serious issues in older patients.” By 1997 separate publications by Bernstein and McCusker detailed problems of older adult repeat ED visits. Jones updated his work on older adult abuse. By 1999 GEM articles were disease-oriented, typical of the younger patient model. Researchers continued to push the paradigm that older adult care was an opportunity to prevent future problems rather than to simply treat existing complaints. They expanded the traditional chief complaint ED model to a more patient-centered focus. McCusker et al, led an advance in screening, with the identification of seniors at risk, (ISAR) a widely used screening tool to detect patients who may have adverse outcomes after ED discharge.

**2000s**

Hohl, Dankoff, et al, detailed adverse drug issues in older patients and the inability of emergency physicians to identify them. Aminzadeh and Dalziel reviewed older adult ED use and adverse outcomes noting the effectiveness of specific interventions. Hastings and Heflin sought interventions to improve ED discharge. The disease-specific work continued in topics such as older adult pulmonary, cardiovascular, abdominal, infectious, and psychiatric issues. In 2002-2003, the Dennis W. Jahnigen Career Development Award (JCDA) which was named for a prominent geriatrician leader, was added to the Beeson. The JCDA was part of a 5.2-million-dollar grant from JAHF, the Commonwealth Fund, and Atlantic Philanthropies. The JCDA program committee was led by geriatrician Paul Katz from 2001-2009 and then by anesthesiologist Jeffrey Silverstein. Both the Beeson and Jahnigen awards were presented to early career faculty for focus on the healthcare of older persons. Applications were peer-reviewed considering the effect of the proposed research, evidence of departmental and institutional support and strength of the research environment.
and qualifications and commitment of the identified mentors. Each applicant was required to name mentors from their specific specialty and from geriatrics. Seventeen junior EM faculty received Jahnigen awards and three received the early Beeson including two who received both. Attachment #3 of the Appendix lists these grant awardees. Support funded attendance to the AGS Annual Meeting where scholars not only presented their work but also met to discuss ideas and plan collaborative projects with colleagues from all ten specialties. These relationships were crucial to GEM’s progress.

The JAHF and Specialty Council leaders arranged continued support for GEM work as philanthropic grant support ended. They helped establish two NIH funding mechanisms to permanently sustain GEM research, with the help of National Institutes of Aging advocates Susan Zieman, and Basil Eldadah. These grants are the Grant for Early Medical/Surgical Specialists’ Transition to Aging Research (GEMSSTAR) which replaced the Jahnigen grant. They kept the Paul B. Beeson name with federal funding. These awards now permanently fund qualified GEM research through the National Institutes of Health (NIH). Rosen and colleagues reported the productivity of these scholars.

In 2007, JAHF and Atlantic joined forces for another grant totaling $5,288,887 over seven years. Also in 2007, the SAEM Board directed the GTF chaired by Lowell Gerson, PhD, to address competencies in older patient care for residents and to develop corresponding instructional material. In 2009 Dr. Gerson petitioned the Board to form an Academy. The SAEM Board of Directors approved the Academy of Geriatric Emergency Medicine (AGEM). AGEM provides a forum for the collaborative exchange of ideas among EM researchers, educators, clinicians, and trainees. The AGEM mission is to improve the quality of emergency care received by older patients through advancing research, education, and faculty development. AGEM participation is open to all SAEM members.

Figure 2: SAEM Board Posting on the SAEM Website

“The approval of AGEM recognizes the special challenge that older patients present in the ED. These patients require more time and resources while in the department and are admitted to the hospital and to critical care units more often than are their younger counterparts. Older patients increasingly will affect emergency medical care over the next half-century as the number of older persons continues to rise. Moreover, the oldest old (85 years) is the most rapidly growing proportion of the overall population. Older patients now comprise 15% of all ED visits. This proportion, based on population projections, will increase to 25% in the next 30 years. It is likely that ED use in the 65 and older age group will be higher as their visit rate is increasing more than that of any age group.”

Proving the accuracy of these statements the older patient population increased by 26% from 1993 to 2003. Older adults may represent as much as 33% of ED patients by 2030.

In 2007 Hastings began to discuss the important topic of pharmacotherapy in older adults discharged from the ED. In 2009 Caterino discussed geriatric ED infection management. In 2009 Terrell, Hustey, and the GTF published Quality Indicators for Geriatric Emergency Care, helping set standards for GEM quality improvement efforts. Terrell, et al described a computerized decision support that reduced inappropriate medications to older patients.

Also in 2003, ACEP formed the GEM Section, with the direction of David John, the first section chair. Members hold monthly discussions and gather at national meetings. Their objectives are to:

- provide a forum for the discussion of the special needs and issues which relate to the care and treatment of the older ED patient.
- monitor, abstract, and disseminate literature concerning the older patient (where relevant to emergency medical care.)
- better understand the physiology of the older and frail patient, especially as that knowledge relates to patient safety, reduction of adverse drug events, dosing implications, and the like.
- support efforts to prevent injuries and illnesses in the older adult.
- stimulate research in the emergency care of the older adult.
take a systematic approach to the ED care of the older adult, with an attitude of profound respect for the geriatric patient and a desire to continuously improve ED training and cultural attitudes towards aging, policies, protocols and guidelines, risk stratification, risk management issues, special equipment, prevention of illness and injury, and the impact of the ED environment of care. Attachment #4 of the Appendix lists the original and present leaders of the ACEP GEM section. GEM resources are found at https://www.acep.org/geriatrics/resources/.

2010s

This decade focused on accepted geriatric principles in EM such as geriatric syndromes. Carpenter, Goldberg, and Gettel, published a wealth of work on Falls. Carpenter, Cameron, and Liu recognized ground-level falls in older adults as a sentinel event. Preston and O’Caomh noted the importance of frailty in ED patients. LaMantia, Han, and Carpenter published on delirium and dementia.

Milestone #3: The Geriatric Emergency Department Guidelines (GEDG)

In 2014, the GED Guidelines (GEDG) provided recommendations for institutions and departments seeking to establish geriatric emergency care improvements. Leaders from ACEP, SAEM, AGS, and the Emergency Nurses Association (ENA), developed the guideline recommendations. These leaders included Christopher R Carpenter, Marilyn Bromley, Jeffrey M Caterino, Audrey Chun, Lowell W. Gerson, Jason Greenspan, Ula Hwang, David P John, William L Lyons, Timothy F Platt-Mills, Betty Mortensen, Luna Ragsdale, Mark Rosenberg, and Scott T Wilber.

The GEDG list 33 recommendations identifying best practices in older adult emergency care. The paper was an unprecedented multidisciplinary collaboration supported and simultaneously published by ACEP in Annals of EM, SAEM in Accad EM, AGS in JAGS, and the ENA posted an announcement.

These recommendations were foundational to GEM. They served to identify a group of best practices or goals in emergency older adult care. This listing enabled care improvements throughout the country, resulted in enhanced older adult care service lines at hospitals nationwide, and enabled the formation of the Geriatric Emergency Department Collaborative (GEDC). The GEDG led to the criteria used for accreditation of GEDs throughout the nation and to countries around the world. Work continues to move beyond these expert consensus guidelines of 2014 to updated evidence-based recommendations.

Milestone #4: The Geriatric Emergency Department Collaborative (GEDC)

Using the GEDG as a base, a group of GEM experts consisting of leaders Kevin Biese and Ula Hwang, with Chris Carpenter, Teresita Hogan, Michael Malone, Don Melady, and Adam Perry, presented a session termed a “GED boot camp” to help a hospital system implement geriatric care improvements in three EDs. The goal was to promote the dissemination and implementation of the GEDG. The concept links GEDG recommendations to a hospital’s ongoing quality improvement efforts. The work funded by JAHF and the Mary and Gary West Foundation, served to ignite emergency older adult care improvements in initially dozens and eventually hundreds of EDs. ACEPNow published news of this work, and Kreshak later detailed its effect. Participating hospitals implement improvements specific to their sites and to fit their individual needs. Then GEDC experts and member hospitals collaborate to continue/improve/share existing projects and add new initiatives.

The GEDC hosts a website of educational information, webinars, quality projects, and other materials at: gedcollaborative.com. Anyone can log on to find GEM education and improvement ideas. Hospitals can join the collaborative to gain expert guidance, individual and staff education, as well as ideas, and support in all manner of emergency older adult care improvements. Certified geriatric emergency continuing medical education is available at GEDC online learning.
Endings the 2010s, Brown and Harrison continued work to improve ED prescribing of inappropriate medications. Stevens and Hastings published better prescribing through Enhancing Quality of Provider Practices for Older Adults in the Emergency Department (EQUiPPED). EQUiPPED provides a useful tool for the difficult problem of medication management. Rosen, Stern, et al, led work on older adult abuse and neglect. Carpenter, Heard, and the GTF, helped set research priorities for quality GEM care. Proactive screening work increased led by Carpenter, et al. Crudzen and Richardson demonstrated geriatric ED initiatives reduced ICU admissions.

**Milestone #5: ACEP Accredited Geriatric Emergency Departments (GED)**

The concept of a GED was first proposed by Hwang and Morrison 2007. In November 2008 Kevin Sexton, CEO of Holy Cross Hospital Silver Springs Maryland, opened the first self-identified GED in response to the poor care received by his own mother during an ED visit. Under ED director James Del Vecchio the Holy Cross ED physical plant became age-friendly. More importantly, EM physicians and nurses were trained in GEM, and a full-time geriatric social worker guided older patients’ care. The second GED opened under the leadership of Mark Rosenberg, at St. Joseph’s Hospital in Patterson New Jersey in April 2009. Dr. Rosenberg’s mother and her friends consulted on the 15-bed ED built around their needs. Patients and ED staff developed clinical protocols guiding care. The resulting GED was located on the third floor, with special staff and doctors, lighting, and flooring. Patients were happy with the care, and favorable press releases increased older adult volumes. This led to the formation of a 20-bed GED continuous with the main ED. Soon geriatric protocols were applied to all older adults in the entire ED, and specialized staff moved to each bedside as needed.

Guided by these successes, all manner of hospitals began to self-identify and market their EDs using terminology including silver emergency room, senior ED, geriatric-friendly ED, and others. These so-called senior EDs featured improvements that ranged from a box containing a hearing aid and reader glasses to an entire ED staffed with physical therapists, social workers, and geriatric-trained ED nurses. Hogan described these programs in 2013, detailing the lack of consistency and the great heterogeneity of services provided.

In 2017, ACEP recognized the need to help regulate the confusing claims of improved older adult care for the public. They also wanted to support ACEP members in implementing geriatric initiatives at EDs around the country. ACEP tasked GEDC leaders and the framers of the GEDG to develop criteria for the accreditation of GEDs. Kevin Biese led the team composed of Christopher Carpenter, Teresita Hogan, Ula Hwang, Marianna Karounos, David Larson, Don Melady, Anthony Rosen, Mark Rosenberg, Manish Shah, Christina Shenvi, and Michael Stern, with ACEP staff Sandra Schneider and Nichole Tidwell providing oversight and organization. In May 2018, ACEP launched The Geriatric Emergency Department Accreditation Program (GEDA). Clear criteria detail three levels of accreditation, mirroring the more familiar trauma center designations. The highest is a Gold or Level 1 GED as its own geographically distinct section, served by multiple disciplines such as social work, physical therapy, and geriatric nursing. Other level 1 GED’s bring special processes into all geographic areas of the ED. Bronze or level 3 GEDs are attainable by almost any hospital as they implement a single process to improve older patient care.

The first ACEP accredited GED was Ascension Columbia St Mary’s Hospital Ozaukee approved on November 5, 2018. ACEP accredited over 400 GEDs as of February 2022. Applications are growing every month and 900 accredited GEDs are targeted in the next few years. Maps existing GEDA sites worldwide.

In 2018 Hwang, Dresden, and Rosenberg, et al, detailed proof of concept of GED Innovations. Papers by Southerland, Lo, et al, Hwang and the GED WISE Investigators, and Kennedy, et al, all listed the reach and adoption of GED accreditation. These papers served as early proof of concept detailing the successes of such departments. Hwang, Dresden, et al, showed that receipt of ED-based...
geriatric treatment was associated with lower Medicare expenditures. Southerland, Savage, et al, showed equipment and personnel costs for comprehensive geriatric assessment in the ED are financially justified by revenue generation and improvements in patient safety.

Large systems such as the Veterans Administration, Advocate-Aurora Health, the University of California Health, Northwell Health, and the Healthcare Association of New York State have each developed system-wide accredited GEDs at multiple sites as detailed by Liberman, Roofeh, et al, Schumacher and Melady published a textbook on creating a GED in any ED. Additional papers described how GED accreditation improved geriatric screening, and older adult abuse detection.

Other notable advances happened in the 2010s. Terry Fulmer and Mary Tinetti announced the “Age-Friendly Health System” in 2017. The system links better older adult care from the ED and throughout the hospital, using a framework of evidence-based practices known as the 4M’s (what matters, medication, mentation, and mobility). By 2019 Hughes, Freiermuth, et al, did a systematic review of older adult ED interventions, showing two or more strategies had the greatest effect on clinical and utilization outcomes.

**Milestone #6: The Geriatric Emergency Care Applied Research Network (GEAR)**

Targeted GEM research supported by a partnership of The Gary and Mary West Health Foundation, JAHF, and the NIA was created in 2018 to advance the science of geriatric emergency care as an interdisciplinary research infrastructure. Lead by Christopher Carpenter, Ula Hwang, Cindy Brandt, Nicki Hastings, William Hung, Raymond Kang, and Tim Platts-Mills, GEAR looks to identify research gaps in GEM and support research and evaluation of these areas. Attachment #7 of the Appendix lists the GEAR leadership team. GEAR 2.0 – Advancing Dementia Care is focused on optimizing and advancing care for persons living with dementia and their care partners through a transdisciplinary network. GEAR also works on ED care, transitions, cognitive impairment, social needs, falls and their prevention, older adult abuse screening and interventions, and, led by Scott Dresden, delirium prevention detection and treatment in the ED. Funding for GEAR exists from 6/2020-6/2025. See [https://gearnetwork.org](https://gearnetwork.org) for more detail about accomplishments and how you can participate.

**2020s**

The COVID-19 pandemic was a true geriatric emergency. Over 90% of COVID deaths occurred in those over 65 years. ACEP featured a frequently updated web page for the latest in geriatric covid care: [https://www.acep.org/corona/COVID-19-alert/covid-19-articles/covid-19--geriatric-patients/](https://www.acep.org/corona/COVID-19-alert/covid-19-articles/covid-19--geriatric-patients/). Malone, Hogan, et al, detailed emergency care of COVID in older adults. COVID accentuated classic GEM principles that older patients are more vulnerable, present differently -especially with delirium, require specialized care, need attention to social isolation and loneliness, are discriminated against for research, and benefit from palliative care. A discussion of ED geriatric COVID is beyond the scope of this paper.

Also, in 2020 Schumacher and Hogan wrote an updated description of common GED services. Geriatric Emergency Department Innovations/Initiatives (GEDI’s) became increasingly more common throughout the country. Kennedy, Webb, et al, addressed the complicated issue of ED delirium. Shenvi, Kennedy, et al, developed the ADEPT tool to help manage delirium and agitation in older ED patients.

**TEN YEARS OF AGEM CELEBRATED**

The 10th-anniversary AGEM gala was delayed by COVID. The gala happened in 2022 as part of the SAEM Annual Meeting. Manish Shah, Teresita Hogan, Ula Hwang, and Christopher Carpenter were honored as Pioneers of GEM. Art Sanders, Lowell Gerson, Scott Wilber, and Jeff Jones were recognized for contributions to establishing GEM as a subspecialty. Important acknowledgments were
given to: Ula Hwang for Mentorship, Maura Kennedy for Education Career Achievement, Jill Huded for Early Career Achievement, and Cameron Gettel for Excellence in Research. They and the initial Jahnigen and Beeson Scholars form many of the champions in GEM. These individuals assisted colleagues and mentored students and residents encouraging them in GEM careers. They shared their knowledge and enabled grant funding and job placement for new colleagues. The cooperative nature of these early adopters cannot be underestimated. It was crucial.

LESSONS LEARNED

In retrospect, there were important key experiences in the journey. The four topics of problem definition and recognition, education and research, establishment of champions, and improvement in clinical practice were the cornerstones of change used to develop GEM.

**Figure 3: Lesson Learned Rise of GEM**

<table>
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<tr>
<th>Lessons Learned Rise of GEM</th>
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<tr>
<td><strong>Problem Definition/Recognition</strong></td>
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</table>
| Needs Analysis: ............YES we have a problem! | Observational Articles Controlled Studies Guidelines Research Network | Inside and Outside of EM  
  •Organizations  
  •Leaders/Influencers |
| Focus on important clinical issues and outcomes | Med School and Residency Training GEM Fellowships | Career Development Grants  
  •Funders/Philanthropies  
  •NIH Mechanisms, Program Officers  
  •GEAR |
| Lived stories ED staff and patients | Curriculum development and dissemination Residency Leaders (CORD) | ACEP Geriatrics Section |
| Numbers of failures in data | Competencies ABEM Testing | SAEM Task Force and Academy |
| External Support:  
  •AGS, •Hartford, •Atlantic  
  •Gary and Mary West Foundation | GEDC  
  •GEAR | Hospital Leaders and System Changes |
| | | National Accreditation GEDs |

**Problem Definition and Recognition**

Before any group of professionals unites to a common goal, a problem must be identified and recognized by a critical number of people. GEM began by identifying the systemic failures of geriatric emergency care, including increased morbidity and mortality, ageism, and the poor preparation of our students and clinicians. Leaders recognized the oncoming surge of older patients. Clinicians and patients experienced care failures and, with the help of grant organizations and champions, researchers documented these failures and the approaches that might correct them.

**Education and Research**

In the first study of EM geriatric education in 1992 Jones, Rousseau, Schropp, and Sanders found a need for better-focused more intensive geriatric training in EM residencies.\textsuperscript{136} In 1997, the GTF published how to develop and evaluate GEM curriculum.\textsuperscript{137} Yet in 2008 GEM training still remained low among resident and staff physicians.\textsuperscript{138} Prendergast published a GEM residency curriculum,\textsuperscript{139} and Hogan, et al, developed the GEM competencies that marked a milestone in the dissemination of geriatric topics for emergency medicine residency programs.\textsuperscript{140} A white paper by Ringer, et al, targeted improved
directions in GEM education. Fellowships in GEM are now successfully recruiting and graduating future GEM leaders, who experience high degrees of career and clinical satisfaction. The Geriatric Emergency Department Collaborative began “boot camps” at hospital sites to implement GEDG recommendations into routine clinical care. This work links essential recommended improvements to quality metrics.

Establish Champions

Geriatric leaders and philanthropy empowered the development of internal champions building a cohort of GEM-focused educators, researchers, and clinical/administrative leaders. GEM used the support of EM organizations, worked collaboratively, and formed a supportive cohort of individuals united in the mission of improving emergency care for our older patients.

Clinical Practice

The mission of excellence is all about a better way to deliver care. ACEPs establishment of GED Accreditation guides centers of excellence in the delivery of better older adult care. These centers improve the ED experience for patients and staff and serve to demonstrate which interventions are linked to better outcomes. What remains is for GEM to prove that its initiatives result in specific outcome improvements. The heterogeneity of current initiatives and metrics is preventing this verification.

FUTURE OF GEM

In the last 30 years, GEM has evolved into a subspecialty of EM. Textbooks and residency programs address the special needs of older patients. Research opportunities abound, new leaders are graduating from GEM fellowships, and milestone guidelines/criteria now define our accredited centers of excellence. Yet GEM still seeks to establish the patient outcomes that will determine its future direction. In a systematic review, Berning, Oliveria, et al, described heterogeneity in tools used to diminish progress in measurements of patient experience and outcomes. Significant heterogeneity in methods, intervention content, and reporting of outcomes, limits evidence of GED intervention effectiveness.

Magidson and Carpenter point out that emergency physicians consistently fail to proactively identify or document dementia, delirium, falls, malnutrition, depression, or other older patient vulnerabilities. A paucity of geriatric-specific education continues to cause discomfort in EM residency graduates. GEDs frustrate the traditional ED model of one place to care for everyone all the time. Finally, definitive proof of superiority of GED care does not exist. Despite advances in diversity, inclusion, and equity ageism is prominent in today’s ED. Ageism still poses a threat to the well-being of older patients, and to appropriate GEM research.

Current GEM leaders know that many EDs nationally are still not prepared for optimal care of this growing population. Emergency Medicine News described “EM’s Next Priority: Geriatric ED Care.” This article details state laws in Massachusetts, New York, and New Hampshire requiring hospitals to have plans for caring for dementia in acute settings. It may be time to perform a new ED needs assessment for older patients. This will allow leaders to chart new directions and continue improving the care of older patients in the emergency medical care system. Please refer to Table 2 on the next page for questions from the patient needs assessment.
LIMITATIONS

Although the authors lived through this history and extensively reviewed the literature, some important events and individuals may have been missed. Authors are also more likely to cite events with which they are familiar. Some sources are known to contradict each other such as the AGEM website naming 17 EM Beeson Scholars,67 and AGS listing, but not naming, 14 EM Jahnigen Scholars.66 In such cases both items are reported and cited.

CONCLUSION

The subspecialty of GEM was developed by those who identified the poor state of older patient emergency care, became GEM educators, researchers, and leaders, and linked champions to ongoing funding and organizational support. GEM continues to evolve.139 GEM literature increases in prominence driven by the COVID-19 death toll of older patients150-152 and the development of its new robust research network. The need to improve emergency older adult care is real. As long as older patients need better ED care GEM champions will keep pushing this subspecialty into the future.

KEYWORDS

Emergency Medicine, Geriatrics, History, New Subspecialty

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CONFLICTS OF INTEREST

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Table 2: Patient Needs Assessment

- What matters to patients, families, and caregivers? (satisfaction/goals of care)
- What prevents hospital admissions?
- What makes or saves the most money?
- How will payers fund older adult care delivery?
- Can GEM demonstrate superior outcomes worthy of higher reimbursement?
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