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Tracking the Rise of Geriatric Emergency Departments in the United States

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Abstract

The traditional model of emergency care no longer fits the growing needs of the over 20 million older adults annually seeking emergency department care. In 2007 a tailored "geriatric emergency department" model was introduced and rapidly replicated among hospitals, rising steeply over the past 5 years. This survey examined all U.S. emergency departments self-identifying themselves as Geriatric Emergency Departments (GEDs) and providing enhanced geriatric emergency care services. It was guided by the recently adopted Geriatric Emergency Department Guidelines and examined domains including, GED identity, staffing, and administration; education, equipment, and supplies; policies, procedures, and protocols; follow-up and transitions of care; and quality improvement. Results reveal a heterogeneous mix of GED staffing, procedures, physical environments and that GEDs' familiarity with the GED Guidelines is low. Findings will inform emergency

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departments and gerontologists nationwide about key GED model elements and will help hospitals to improve ED services for their older adult patients.

Keywords
health, geriatrics, health services

Introduction

The traditional model of emergency medical care no longer fits the growing needs of the over 20 million older adults who annually seek care in U.S. emergency departments (EDs). This volume stems from an appropriate need for emergency care due to the severity of symptoms experienced (Downing & Wilson, 2005). However, emergency care is still generally based on basic acute care principles from 1961 (Wade, Scudder, & McCarroll, 1961), which do not fit the different health care needs, volume, and changing demographics of our current population of older adults (e.g., 16. 5 million older adults in 1960 vs. 49.2 million in 2016). (U.S. Census Bureau, 2017). Rising expectations of efficient, effective, coordinated, and expert care are now demanded from the ED. A model change has been advocated to improve ED care for older adults in the nation's nearly 5,000 EDs (Carpenter et al., 2011). In this context, some hospitals are specifically focusing on their older adult ED population and experimenting to revise their ED model of care to better respond to the distinct medical needs of their older ED patients.

An ED's model of care incudes the ED's decision to either hospitalize or discharge an older patient which defines the course and cost of care (Schuur & Venkatesh, 2012). Yet, these hospitalization decisions and the care older adults receive prior to this decision, remains highly variable among our nation's EDs. Outcomes show increasing morbidity and mortality suffered by older adult ED patients despite the fact that they receive intensified resource use with age including more physician time, diagnostic testing, ED length of stay, and admission rates (Aminzadeh & Dalziel, 2002; Wilber et al., 2006). Solutions to improve the quality of older adult emergency care range from enhancing geriatric training and competencies for ED staff, (Hogan et al., 2010) to provision of specialized ED services (Xu, Nelson, & Berk, 2009), to the physical redesign of existing EDs (Wajnberg, Hwang, Torres, & Yang, 2012) to dedicated GEDs (Hogan, Olade, & Carpenter, 2014).

ED Attention to the Needs of Older Patients

The precise meaning, organization, and naming of this revised ED model focused on older adults is in flux. The concept is loosely analogous to the development of pediatric emergency departments that developed in the 1980s

(Thomas, 2011). Hwang and Morrison (2007) articulated the seminal conceptualization of a GED as a setting focused on the acute care of older adults, utilizing a specially trained staff, modified processes, and an improved physical environment. While the broad concept of a GED was introduced, at this time there were no accompanying standards or accreditation guidelines regarding their naming, staffing, operation, or physical environment.

In 2007, the first self-identified, dedicated GED in the nation was opened by Holy Cross Hospital in Silver Spring, MD. It was called their "Senior Emergency Center" and consisted of eight beds physically located in a separate space, adjacent to both their adult and pediatric EDs along with ED physician training in geriatric emergency medicine, a dedicated geriatric nurse practitioner, a geriatric social worker, interdisciplinary staff training, and updates to triage, screenings, and policies. Since that time, some EDs across the country have been experimenting with changes to their delivery of emergency care to older adults.

The naming or designation of these specialized care activities for older adult ED patients is not standardized and varies widely (e.g., senior emergency center, senior emergency department, etc.). In this article, we use the generic term "geriatric emergency department" (GED) to refer broadly to any self-identified efforts by an ED to provide emergency care specifically tailored for their older adult patients. The term "geriatric emergency department" has been used widely in the literature. However, it must be stressed that specific criteria for designating a GED did not exist previously and that specific criteria for GED accreditation were only adopted in April 2017 by the American College of Emergency Physicians (ACEP; 2017). ACEP's new accreditation of GEDs is based on a three-tiered system of competencies; however, it is not clear how many of the nation's EDs may seek such accreditation. Prior to ACEP's accreditation announcement, the term GED, or more commonly a variant like "Senior Emergency Care," has been used by EDs to self-identify the services they were providing to older adult ED patients. This article examines this period of the emergence of EDs who self-identified as providing specific geriatric emergency care services for older adults.

Historically, it is not widely recognized that the development of these self-designated GEDs emerged from more than 20 years of attention by emergency medicine clinicians and researchers to the needs of older adult patients. The area is broadly described as geriatric emergency medicine (Wilson, 1984). A formative milestone for the emergency treatment of older adults was the John A. Hartford funded project in the early 1990s resulting in the production of scholarly papers, a curriculum on elders in the ED, and a companion textbook titled Emergency Care of the Elder Person (Sanders, 1996). In the late 1990s, interest groups in geriatric emergency medicine were formed in the Society for Academic Emergency Medicine (SAEM) and the ACEP. In

recent years, scholarly interest and the knowledge base of geriatric emergency medicine care continues to expand (Mattu, Grossman, & Rosen, 2016). On the international front, geriatric efforts included the formation of collaborative international organizations including the International Consortium of Emergency Geriatrics and the International Federation for Emergency Medicine Geriatric Interest Group as well as articles detailing why the world needs more attention to geriatric emergency medicine (Chen, 2014).

The U.S. organizational attention to geriatric emergency medicine reached a tipping point with the March 2014 release of the first set of broad Geriatric Emergency Department Guidelines (Carpenter et al., 2014) which were endorsed by the four major emergency medicine professional associations, specifically the American Geriatric Society (AGS), SAEM, ACEP, and the Emergency Nurses Association (ENA). The stated purpose of the GED Guidelines is to improve care of older ED patients by standardizing practices and improving EDs' ability to identify patients who will benefit from hospitalization versus those who do not require in patient care. These GED Guidelines articulated research and consensus-based best practices which specify broad domains as a template for implementing geriatric emergency medicine in ED settings. The six key GED domains are listed in Table 1 and include the following: (a) Staffing and Administration; (b) Education; (c) Equipment and Supplies; (d) Policies, Procedures, and Protocols; (e) Follow-Up and Transitions of Care; and (f) Quality Improvement. Each domain included background information as well as specific recommendations related to implementing the domain. For example, the Staffing and Administration domain includes recommendations to develop staffing protocols for geriatric-trained providers that include the elements of a GED medical director, GED nurse manager, and the availability of specialist consultations in geriatrics, cardiology, general surgery, gastrointestinal, neurology, orthopedics, psychiatry, and radiology.

Approaches to the care of older adults in the ED continues to evolve rapidly and the growth of self-identified GEDs is rapidly accelerating from Hogan et al.'s (2014) initial report on 24 GEDs in 2013 to the most recent national documentation of GEDs tripling that number exceeding 80 as of 2015 as seen in Figure 1 (Schumacher & Couser, 2015).

As noted above, ACEP, the largest emergency physician professional association, announced plans to introduce a tiered system of accreditation of GEDs that appears to operationalize the GED Guidelines (ACEP, 2017). The research reported on here documents the current state of the delivery of ED services to older adults using the domains of the GED Guidelines (Carpenter et al., 2014) as a guiding framework to report on the characteristics of self-identified GEDs in the United States. Notably, this work directly builds on the original work of

Table 1. Key Domains and Elements of the Geriatric Emergency Department Guidelines.

Staffing and administration	Education	Equipment and supplies	Policies, procedures, and protocols	Follow-up and transitions of care	Quality improvement
GED Medical Director	Involvement of multidisciplinary team	Furniture improvement	Care provider involvement in triage	Clinically relevant information communication	Document and monitor geriatric ED education
GED Nurse Manager	Hospital leadership involvement	Fluid and body warming devices	GED screening tools	Discharge information suitable	Process to identify geriatric visits to ED
Geriatric continuing medical education training	Regular assessment of education needs	Walking aides	Elder abuse and neglect	Follow-up and communication	Tracking ED geriatric volume
Medical specialists consultants	Clinical assessment tools	Hearing amplification	DNR and palliative care	Available community resources for transitions	ED to hospital admission rates
	Atypical disease presentation	Urinary catheters	Sedation in geriatric patient		Readmission rate
	Cognitive impairment	Visual orientation and lighting	Delirium and agitation		ED and hospital mortality rate
	Medication management	Enhanced signage	Falls risk		Completion of screening tools

Note. GED = geriatric emergency department; ED = emergency department.

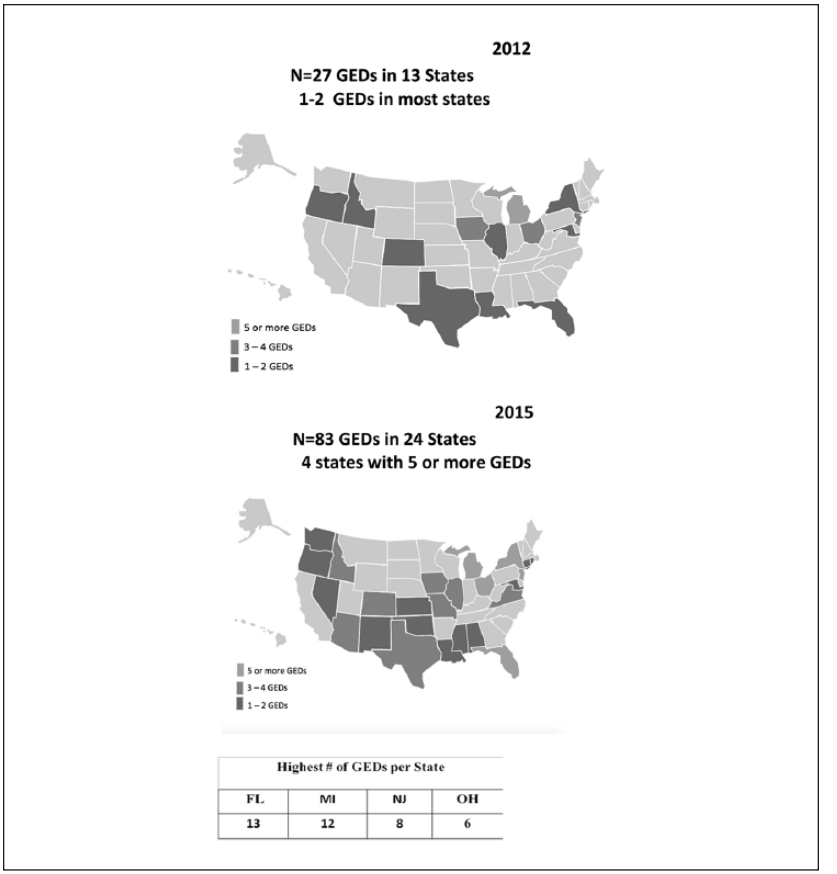

Figure 1. Distribution of GEDs nationwide 2012 vs. 2015.
Note. GED = geriatric emergency department.

Hogan et al. (2014) and provides a current and much expanded look into the GEDs to better inform clinicians, hospital administrators, policy makers, and accrediting bodies about the dynamic state of GEDs in the United States.

Method

Study Protocol and Population

The study was conducted by an interdisciplinary research team including a social gerontologist with survey methodology training, three emergency physicians, and an emergency medicine nurse with administrative responsibility and

clinical experience supervising GEDs. As a rapidly emerging model of care there are no recognized lists of GEDs operating in the United States. Thus, a list of GEDs in the United States was constructed using a multipronged strategy that began with a follow-up of the 24 GEDs first identified by Hogan et al. (2014). To update this list and capture newly emerging GEDs, in March 2015 researchers conducted systematic Web searches on Google using the following terms: geriatric emergency, geriatric friendly, senior emergency, senior friendly, and emergency care of elders. Search results including hospital websites, press releases, promotional materials, and news stories were reviewed to identify hospitals promoting specialized ED care for older adults. Potential GED sites were also identified by querying members of the geriatric emergency medicine interest groups in the two major emergency medicine professional associations of ACEP and SAEM. Notably, this identification strategy may undercount or miss GEDs that are not promoting their GED services in any ways. However, such Internet searches have been cited in the medical literature as one method for identifying specialty care centers, such as GEDs (Boynton & Greenhalgh, 2004). Furthermore, due to the highly competitive health care market, hospital ED offering services tailored to older adults have a very strong incentive to actively promote, publicize, and market such services to differentiate their hospital and capture market share which increases the likelihood of their inclusion in the study.

Initial contact of the potential GEDs was done by a doctoral level graduate research assistant who telephoned each ED to confirm the self-identified GED's existence, identify a GED coordinator and/or ED director, and collect contact information. Settings were excluded if they denied the existence of a GED or reported it closed. A mailed letter introducing the study was sent to each identified contact person and included a link to the web-based GED survey. Next, 5 days after sending the letter an email describing the study and also containing the link to the web-based survey was sent to the same contact person. Email and phone follow-up of nonrespondents continued with a minimum of four attempts at phone and email contact for each site by the research assistant and first author. During follow-up, if individuals were reached by telephone, their survey responses were collected and directly entered into the online survey platform. The search strategy above identified 83 hospitals nationwide self-identifying as GEDs and promoting their GED services. Repeated follow-up efforts yielded 54 completed surveys for a response rate of 65%.

Measurement and Data Analysis

The survey instrument was designed using published best practice survey research principles and recommendations for surveying health care staff (Boynton & Greenhalgh, 2004; Burns et al., 2008; Stone, 1993). The survey

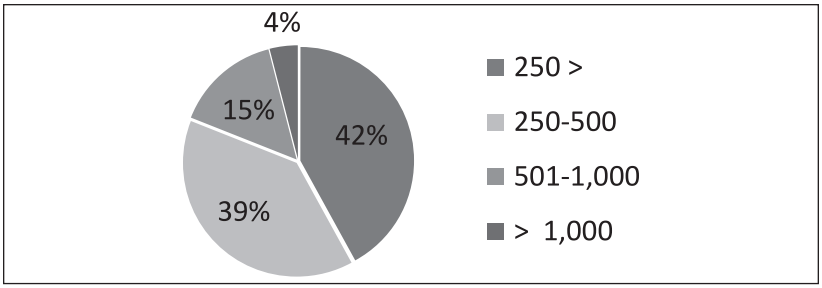

Figure 2. Hospital bed size ($N = 54$).

instrument modified Hogan et al.'s (2014) instrument and survey modifications were guided by the new GED Guidelines (Carpenter et al., 2014) with the goal of developing more precise, reliable, and detailed information about the structure and operation of the self-identified GEDs. The final instrument was pilot tested in three hospital EDs, by three practicing emergency medicine clinicians, with specific expertise in geriatric emergency medicine and unconnected to the study. Survey questions focused on hospital demographics and the GED Guideline domains of staffing and training, procedures, policies and equipment, physical environment, quality improvement efforts, and overall outcomes tracked. For reference, web links to the national GED Guidelines were provided to all survey participants at the end of the survey instrument. Survey data were collected using the online Qualtrics Survey Software platform and data collection was open from April 1, 2015 to July 30, 2015. Data analyses were conducted using SPSS Statistics version 23 (IBM SPSS, Armonk NY; "IBM SPSS Statistics for Windows," 2015). This study was approved by the Institutional Review Board of the University of Maryland, Baltimore County (UMBC) and written informed consent was obtained.

Results

Hospital and ED Characteristics

Regarding the respondents' total number of hospital beds, most were smaller with 42% reporting having 250 or fewer beds as seen in Figure 2. Reported hospital admissions in Figure 3 revealed 84% admitted fewer than 50,000 patients annually. In terms of identity, most hospitals, 49%, identified themselves a "community, teaching hospital" while 42% self-identified as a community nonteaching hospital. Just 9% identified as university/academic medical centers.

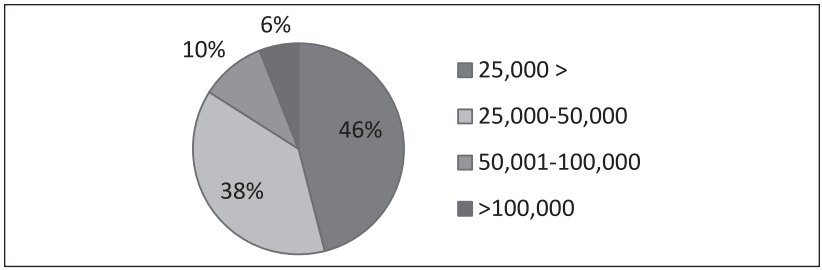

Figure 3. Annual hospital admissions ($N = 54$).

ED characteristics are listed in Table 2 and the number of ED beds was relatively evenly split across the three bed categories. The number of annual ED visits primarily clustered in the category 25,001 to 50,000 with a 40% endorsement level. In terms of patients aged 65 and older, 38% of GEDs treated between 5,000 and 10,000, and 32% saw between 10,001 and 20,000 patients annually.

Naming of Geriatric Focused Emergency Care Activities and GED Guideline Awareness

When asked the specific name used to describe their GED activities, nearly 80% of respondents reported using some variation on the words "Senior Emergency Department" and "Senior Emergency Room." In contrast, less than 20% of respondents used a variation on "Geriatric Emergency Department" or the word geriatric to refer to their setting.

GED settings were asked about their awareness of the GED Guidelines endorsed by professional associations and simultaneously published in 2014. Less than 50% of participating GEDs reported any awareness of or consultation to the GED Guidelines regarding the operation of their GEDs prior to participating in this research.

Staffing, Administration, and Education

Dedicated GED staffing was described by 33% of respondents with the majority indicating this referred to their nursing related GED staffing rather than physician staffing. Staffing models were heterogeneous ranging from GEDs assigning nurses to designated GED beds to assigning GED trained nurses to follow identified older patients to whichever ED bed he or she was assigned.

Table 2. ED Characteristics ($N = 54$).

	%
No. of ED Beds	
25>	32
25-50	37
>50	31
Total ED visits	
25,000 ⩾	19
25,001-50,000	40
50,001-75,000	15
>75,001-100,000	26
ED patients age 65 and older	
5,000>	12
5,000-10,000	38
10,001-20,000	32
20,001-30,000	13
>30,000	5

Note. ED = emergency departments.

Fully 83% of sites stated that ED staff nurses had undergone special education on geriatric topics. The ENA Geriatric Emergency Nursing Education (GENE) and Nurses Improving Care for Health System Elders (NICHE) training were most frequently mentioned as the training provided to these staff members with 48% reporting GENE training and 38% reporting NICHE training. Much lower reports of other GED dedicated staffing were seen for Social Work GED staffing (11%) and Case Manager GED staffing (4%). Physician education was reported in the context of physician participation in on-site, dedicated interdisciplinary team training in geriatric emergency medicine rather than stand-alone formal continuing medical education training in other venues. When asked the degree to which the geriatric emergency medicine educational resources met their needs just 50% indicated their needs were being met. The most preferred training format was online with 76% agreement while 60% preferred on-site in-services and just 22% endorsed educational opportunities at professional conferences.

Equipment and Supplies

In terms of the physical environment, 41% reported the GED occupied a distinct physical space separated from the main ED by a door or hallway.

Table 3. GED Screenings and Policies ($N = 54$).

	%
Screenings	
Functional Status Screening	54
Cognitive Status Screening	50
Medication Screening	50
GED Specific Triage Process	43
Policies	
Falls Prevention Policy	67
Foley Catheter Policy	52
Restraint Use Policy	37
Delirium Management Policy	28

Note. GED = geriatric emergency department.

However, the majority of GEDs, 56%, did not report separate GED treatment space and used existing space in a variety of ways including designating specific beds in the main ED as GED beds. The most frequent environmental changes these GEDs made including pressure ulcer reducing mattress upgrades (83%), flooring (74%), lighting changes (70%) to improved access to toilet facilities (39%).

Policies, Procedures, and Protocols

In terms of policies, 67% of the GEDs reported a falls prevention policy and 52% had a Foley catheter policy as seen in Table 3. Delirium management policies were much less frequently reported with 28% of GED addressing delirium with policies. Under one half of respondents, 43%, reported a distinct GED triage process in their GED. Examining the use of specific GED procedures with their older patients, less than 54% of GEDs reported screening for functional status, cognitive status, and medication management issues. In addition, a specifically named screening tool (e.g., MMSE) for cognitive issues was rarely reported.

Follow-Up and Transitions of Care

Phone follow-up of GED patients is relatively common and reported by 63% of respondents; however, only 30% indicated that all GED patients received this follow-up. A large variety of criteria for callbacks was reported such as positive risk assessment scores, type of visit, physician request, and randomization.

Table 4. GED Quality Improvement and Outcomes Tracked ($N = 54$).

	%
Admissions and revisits	
Hospital admissions	52
Hospital 30-day readmission	50
ED revisits	50
GED length of stay	48
Clinical measures	
Urinary tract infections	19
Adverse drug events	17
Delirium diagnoses	13

Note. GED = geriatric emergency department; ED = emergency department.

Callbacks were completed by nurses (24%), social workers (19%), and case managers (13%); however, the largest category was by other (32%) which included administrative staff.

For GED patients discharged to the community, 61% of GEDs reported providing discharge planning as a targeted transition of care intervention. Specific linkage to community programs and services were reported such as referral for durable medical equipment (63%), visiting nurses (54%), home health aides (54%), physical therapy (52%), and meals on wheels (41%). Types of referrals to outpatient clinical programs and services included primary care providers (65%), skilled nursing facilities (63%), acute rehabilitation (54%), geriatric clinics (41%), and other consultation clinics (30%).

Quality Improvement

Table 4 shows key variables tracked by GEDs. Just over half of GEDs reported tracking hospital admissions from the GED (52%), ED revisits (50%), GED length of stay (48%), and hospital readmissions (50%). Far fewer GEDs tracked specific quality improvement outcomes of GED patients including the existence of urinary tract infections (19%), adverse drugs events (17%), and delirium (13%).

Discussion

This research reports on the current state of ED care provided by the rapidly emerging number of self-identified GEDs that specifically promote their care of older ED patients in “senior friendly” or “geriatric” EDs. The results of this

research can inform hospitals who are considering how to respond to their own growing number of older adult ED patients. Using the six domains of the GED Guidelines (see Table 1) as a framework, the self-identified GEDs in this study report relatively low levels of compliance across the GED guidelines. For example, a substantial percentage of hospitals promoting GED care lacked any clear contact personnel with whom to discuss such GED services or the knowledge about the GED contact person was not widely known among front line staff. This raises the question of how a site can operate an enhanced service line for older ED patients without any identified leadership or institutional knowledge of such services. In the area of GED staff education, it appears to be mainly concentrated in the field of nursing and not widely disseminated across the ED workforce, particularly among ED physicians. Hospitals looking to add GED services should begin by clearly articulating its GED's organization, leadership, and staff education plans since high quality staffing, administration, and education are typically a prerequisite to achieving compliance with efforts like implementing a GED model.

In the domain of equipment and supplies, decisions about physical space were heterogeneous and typically driven by the unique contextual factors in each ED. The majority of settings, nearly 60%, did not create separate, purpose built spaces, but integrated the GED into their existing ED environment. Upgrading mattresses, installing nonskid flooring, and low glare lighting were very common physical environment improvements and items that hospitals can consider including in their normal replacement and physical plant renovation schedules. Implementation of GED specific triage, policies, and procedures were surprisingly modest in this group of self-identified GEDs. Just 43% reported a GED specific triage process for older ED patients. Considering the atypical presentation and overall heterogeneity of older ED patients, the lack of tailored ED triage procedures in these self-identified GED appears as a major oversight. Furthermore, with the exception of 67% of GED settings reporting a falls prevention policy no other geriatric related policies (e.g., restrain use, Foley catheter use) exceeded 52% endorsement. Of particular note is the low levels of attention to cognitive status screening at 50% of settings and the abysmally low number of GEDs with a delirium management policy at 28%. Delirium is a known acute and treatable condition in the ED, if it is diagnosed and addressed in a timely manner (Han & Suyama, 2018).

The domains of GED discharge follow-up and transitions and quality improvement reveal similarly modest levels of endorsement in these GEDs. Discharge planning appears to focus on simple referral to community services, yet, research suggests such referrals remain ineffective (Biese et al., 2014). Follow-up and transitional care models have demonstrated efficacy in

outcomes related to inpatient hospital discharges (Coleman, Parry, Chalmers, & Min, 2006). Recent research suggests innovative ED transitional care models show promise (Shah et al., 2018); however, to date the majority of GEDs have not focused on discharge follow-up.

Overall, across the domains of the GED Guidelines it appears many of these self-identified GEDs are not providing care consistent with the guidelines. If these GED Guidelines represent the endorsed views of the major emergency medicine professional associations, our research documents a gap between reported GED practice and the endorsed guidelines. This point also highlights the need for EDs to think comprehensively about how the GED Guidelines and aspirations for accreditation fit into their ED organizational culture. Some research suggests the presence of clinical guidelines alone does not lead to outcome improvement in the absence of clinical leadership and buy in on multiple levels (Chatterjee & Joynt, 2014).

In the midst of the growth of GEDs and in light of the relatively modest adherence to the GED Guidelines the issue of GED accreditation has recently emerged. The GED Guidelines and outcomes literature do supply performance standards that define quality emergency care for older adults which can form the basis for an external accreditation process for GEDs. Toward that end, in early 2017 ACEP declared it will formally define and offer accreditation for GEDs nationally (ACEP, 2017). ACEP is proposing a three-tiered level of standardization for excellence in older adult emergency care. The highest level is a Level 1 GED, which requires staffing, policies, protocols, and procedures (both within the ED and throughout the hospital) providing a coherent system of care targeting and measuring specific ED outcomes for older people. It requires an overall elevation in ED operations and transitions of care both to and from the ED, all coordinated for the improved care of older adults. In addition, identified equipment and physical plant enhancements targeted to improve older adult care are assessed. Level 2 GEDs have fewer specific criteria but have integrated and sustained elder care initiatives into daily operations. They demonstrate interdisciplinary cooperation for delivery of elder services. They have an established supervisor or director coordinating the people who are tasked with the daily performance of these services. Finally, a Level 3 GED is an entry-level accreditation where excellence in older adult care is represented by an ED with one or more specific initiatives that are reasonably expected to elevate the level of elder care in one or more specific areas.

As in any certification or accreditation process, conforming to external review carries both a cost and a reward. It is dependent on each institution to determine if the value provided is worth the price. External review ensures common standards and terminology exist. It is reasonable to expect that

review would improve outcomes as noted in the models of the Pediatric ED, trauma center, chest pain, and stroke center (Saver et al., 2013). Finally, the costs of enhanced care could be supported by preferential payment at certified centers as exists with pediatric EDs and trauma centers. In addition, procedure driven interventions could segment revenues, and decreasing "never events" in areas from complications to readmissions and could avoid penalties or reimbursement failures. However, certification or accreditation compliance increases the burden on providers and EDs to meet time-consuming criteria, leading to the potential neglect of other important program improvements and educational activities.

Limitations

Limitations of this study include potential errors in compiling a comprehensive national list of GEDs as our search strategy may have missed some sites resulting in an undercount. Increasing numbers of missed sites would diminish the overall generalizability of the results. Our search strategy was based on prior successful research by Hogan et al. (2014) and our team included leaders involved in the two major emergency medicine physician associations' efforts in geriatric emergency medicine. It can also be noted that EDs offering GED services have a very strong incentive to widely advertise their older adult specialty services to differentiate themselves in the competitive health care market place. Our search strategy was designed to capture this type of promotion which is expected to increase the likelihood of identifying GEDs through a broad web search. In addition, missing data from our 54 respondents on selected questions (e.g., Tables 3 and 4) also reduces overall generalizability. Another limitation is the modest 65% response rate of the GEDs identified; however, it does fall within the range of acceptable rates for survey medical setting research (Asch, Jedrziewski, & Christakis, 1997). As a web-based, self-administered survey we cannot verify the qualifications of the individuals who submitted the survey.

Conclusion

EDs will continue to serve increasing numbers of older adults. Findings from this GED research can inform hospitals nationwide about their peer EDs who have begun to focus on enhanced caring for their older ED patients. Over 80 EDs nationwide have self-identified and marketed themselves to the public as specialized GEDs. Yet, this research documents among these innovators and early adopters, relatively low levels of compliance with the GED Guidelines endorsed by the major emergency medicine professional associations. Also,

these GEDs generally do not report tracking key quality improvement outcomes (e.g., urinary tract infections, delirium diagnoses) which could lead to measureable improvements in care and outcomes. Based on these findings there is more work to be done to address the needs of older adults in our nation's EDs and the emerging GED model.

To address some of the issues identified in this research, the field of emergency medicine can more fully embrace an interdisciplinary approach to improve care for older patients by involving emergency medicine professionals, geriatricians, nurses, social workers, hospital administrators, and gerontologists, among others. Admittedly, the nation's EDs are extraordinarily heterogeneous across multiple domains including mission, geography, staffing models, reimbursement structure, and patient mix so a one size solution will not fit all ED settings. However, the involvement of an engaged interdisciplinary team can help catalyze innovation of GED care models for serving older adults in the ED. As a first step, interdisciplinary teams in EDs could begin by reviewing the national GED Guidelines and more systematically addressing the specific education needs of their own local ED staff regarding older adult ED patients. With more than 20 million older adults already presenting annually to EDs, the need for concrete action by EDs remains abundantly clear.

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