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CONCEPTS

Geriatrics

# Developing a novel integrated geriatric palliative care consultation program for the emergency department

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## Abstract

With the aging of our population, older adults are living longer with multiple chronic conditions, frailty, and life-limiting illnesses, which creates specific challenges for emergency departments (EDs). Older adults and those with serious illnesses have high rates of ED use and hospitalization, and the emergency care they receive may be discordant with their goals and values. In response, new models of care delivery have begun to emerge to address both geriatric and palliative care needs in the ED. However, these programs are typically siloed from one another despite significant overlap. To develop a new combined model, we assembled stakeholders and thought leaders at the intersection of emergency medicine, palliative care, and geriatrics and used a consensus process to define elements of an ideal model of a combined palliative care and geriatric intervention in the ED. This article provides a brief history of geriatric and palliative care integration in EDs and presents the integrated geriatric and palliative care model developed.

**KEYWORDS**

emergency medicine, geriatric medicine, integrated care models, interdisciplinary care, palliative care, palliative medicine

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## 1 | INTRODUCTION

The population is aging, and by 2030, 1 of every 5 individuals living in the United States will be over the age of 65.[1] The aging of our population brings unique challenges to our health care system related to older adults living longer with multiple chronic conditions, frailty, and life-limiting illnesses.[2–8] This population shift has a significant impact on the emergency department (ED) given that older adults and those with serious illness have high rates of ED use,[9–15] high rates of inpatient hospitalization,[8,15] and high overall costs of ED and inpatient care.[16,17] Unmet palliative care needs are associated with higher rates of death during the ED visit and inpatient hospitalization.[18] Furthermore, the care provided in the ED may not align with the goals and values of older adults and those with a life-limiting illness.[19,20] Interventions to address the unmet needs of these populations are critically needed to ensure goal-concordant, high-value care.

In response, new models of care delivery have begun to emerge to address both geriatric and palliative care needs in the ED. However, to date, these programs have remained separate and distinct, existing in silos without efforts to coordinate care delivery. Existing models have aimed either to augment the primary palliative and/or geriatric care skills of the primary ED team or to embed a geriatrics or palliative care specialist clinician in the ED. Little or no attention has been given to the significant overlap between the unmet needs of these 2 populations, and the many services that would benefit both. To our knowledge, there are no EDs with an integrated geriatric and palliative care clinical delivery program. In order to develop a new combined model, we assembled stakeholders and thought leaders at the intersection of emergency medicine, palliative care, and geriatrics and used a consensus process to define elements of an ideal model of combined palliative care and geriatric intervention in the ED.

In this paper, we provide a brief history of geriatric and palliative care integration in EDs in the United States. Next, we describe the consensus process we undertook to develop a new combined model. Finally, we introduce the integrated geriatric and palliative care model we developed and propose metrics for evaluation and strategies for sustainability.

### 1.1 | ED-based geriatric models of care

One of the earliest ED-based geriatric models of care is embedded geriatric case management. Studies in the 1990s and 2000s demonstrated that dedicated case management may decrease hospitalization rates at the index visit and improve patient and caregiver satisfaction for geriatric patients but variably changed ED revisit rates.[21] Subsequently, the first wave of geriatric EDs in the United States emerged in 2008, with significant variation in staffing and care processes.[22] To standardize care practices among geriatric EDs, the Geriatric Emergency Department Guidelines were published in 2014, followed by establishment of the Geriatric ED Accreditation program by the American College of Emergency Physicians in 2018.[23] The number of accredited geriatric EDs has grown rapidly under this program, and there are now over 300 accredited geriatric EDs in the United States.[24] There are 3 levels of geriatric ED accreditation, based on staffing, care processes, and equipment.[23,25] With respect to staffing, the lowest level of accreditation requires a physician and nurse champion. The next level adds dedicated case management as well as 2 of the following 4 disciplines: social workers, physical therapists, occupational therapists, and pharmacists. The highest level must have case management and all 4 of those disciplines.[23,25] Geriatric assessments in accredited geriatric EDs may be performed by specially trained emergency nurses[26–30] or former military medics and corpsmen,[31,32] or in a geriatric consultation model with geriatric advanced care practitioners (APPs)[33,34] or physicians.[35,36] Studies evaluating the impact of these programs typically focused on health care use and have demonstrated that geriatric care models may decrease hospital admissions at the index ED visit,[29,31,34,37] hospital length of stay, 30-day hospital readmissions[28] and overall Medicare costs at 30 and 60 days after the ED visit.[38] Few studies, however, have evaluated the impact of geriatric EDs or specialized geriatric staffing models on patient-oriented outcomes,[39] though there is evidence that consultations by geriatric nurse practitioners may improve patient experience and documentation of advance care directives.[33]

### 1.2 | ED-based palliative care models

Concurrently, growing recognition of the importance of ED-initiated palliative care has fueled growth in ED-based programs addressing palliative care needs, albeit again with heterogeneity in staffing and care processes.[40,41] A program of ED-triggered inpatient palliative care consultations demonstrated that early palliative care consultation may result in decreased hospital lengths of stay and costs of care.[42,43] Other programs have assessed ED palliative care consultations with different staffing models, including APPs, social workers, and a multidisciplinary palliative care team.[41,44,45] The impact of these programs was typically measured by the effect on health care use; few studies measured patient-oriented outcomes.[41,44]

The COVID-19 pandemic resulted in further growth in ED palliative care services. During the first year of the pandemic in the United States, many hospitals integrated palliative care in their EDs to facilitate rapid goals of care conversations for critically ill individuals.[46] Some programs used embedded consultants[47] and others used telemedicine to provide palliative care support for EDs during the pandemic.[48] At our academic medical center, emergency clinicians valued having embedded palliative care clinicians in the ED and emphasized the importance of having these consultants immediately accessible in the ED.[47]

### 1.3 | Rationale for an integrated ED-based geriatric and palliative care model of care

Despite the growth in both geriatric and palliative emergency care models over the past decade, there is little integration between these programs, with only 15% of accredited geriatric EDs

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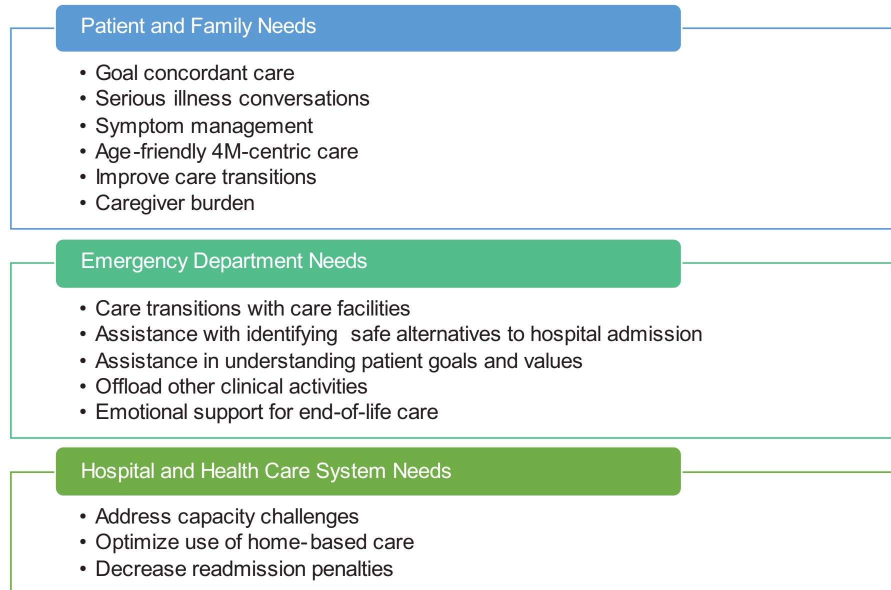


**FIGURE 1** Potential areas of impact for a combined embedded geriatric and palliative care model in the emergency department

providing access to palliative care consultation,[23] reflective of how geriatric medicine and palliative medicine are structurally siloed in our health care system.[49] However, there are many commonalities between geriatric medicine and palliative care, including comprehensive symptom and psychosocial assessments that incorporate attention to caregiver needs, routine evaluation of patients goals and values, and a central intention to incorporate these stated goals and values into individually tailored care plans.[49,50] Given that these programs have overlapping domains and complementary skill sets, we recognized the potential to develop an integrated model in our ED to ensure our patients have reliable access to both geriatric and palliative care consultation. We identified the potential for this program to improve patient care, while addressing ED, ED staff, and hospital operational goals (Figure 1).

## 1.4 | Consensus conference

To inform the development of an embedded ED geriatric and palliative care program, we convened a group of experts in geriatric emergency medicine and ED-based palliative care. Participants for the consensus conference were identified through homogeneous purposive sampling technique and a subsequent snowball sampling of experts in the field.[51] Participants were invited via email by the study team and every participant who was approached agreed to an interview. We included geriatricians, palliative care clinicians, experts in geriatric emergency medicine, and clinicians who have provided geriatric and/or palliative care consultations in the ED. The primary objective of the conference was to identify a prototype for the content of a consult that could be conducted by a consultant palliative care and geriatrics APP, with a focus on the highest impact assessments and interventions that are scoped to the specific context of the ED. Specific attention was given to the ways in which geriatric and palliative care tasks might be combined in synergistic and potentially novel ways. Therefore, the scope of this program was focused on the assessments and interventions for an embedded APP that can take place in the ED at a large quaternary care academic medical center.

The study team held 60-minute semistructured interviews with 11 participants to elicit content domains and areas of focus in advance of the consensus conference. The interview guide was created collaboratively by our interdisciplinary study team (Appendix A). These interviews included a review of the palliative care and geriatric interventions that participants had previously led at their own institutions, as well as suggestions they had for creating a new program. The primary focus for this work was to identify the specific palliative care and geriatric tasks that have had the highest yield within the context of the ED. The interview guide, however, also includes questions related to patient identification and key lessons learned from their own programs. These interviews were recorded and analyzed using a 2-step rapid qualitative inquiry. This method was chosen to analyze information via a team-based approach with the aim of informing future implementation.[52] In the first step, 1 team member led the interview while a second non-facilitator member of the study team observed the interview and transposed the discussion into a structured template designed to follow the interview guide. In the second step, the study team then reviewed these written responses and used a matrix to identify common themes and key findings. Disagreements were resolved by consensus. Authors M.S., M.K., J.R., M.R., and E.A. conducted these interviews in pairs.

The conference was held as a half-day virtual meeting on April 1, 2021. A total of 23 participants attended the session, including 10 geriatrics specialists, 5 palliative care specialists, 3 emergency clinicians, and 3 dual-trained clinicians (2 emergency medicine and palliative care, 1 geriatrics and palliative care). The structure of the meeting included

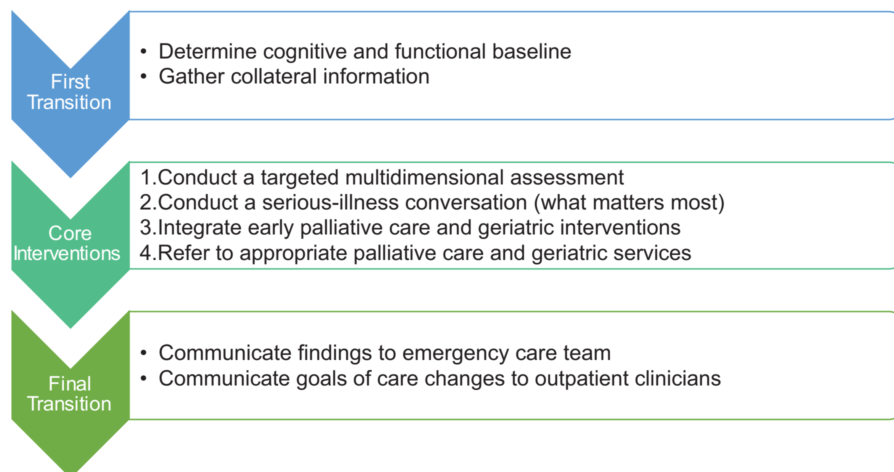


**FIGURE 2** Consensus model of core components for emergency department-based geriatric and palliative care consultation

the following: a large group initial component that included the presentation of the key themes identified in the preinterviews and the introduction of a preliminary protype for the selected core geriatric and palliative care tasks; small group breakout discussions facilitated by guides with participants separated by discipline to review and critique the proposed model; a second facilitated small group discussion with disciplines mixed to consider areas of overlap and redundancy; and a final large group discussion was meant to present the proposed changes to the model and generate consensus. This refined consensus model was then circulated with all the convening participants via email after which further input was solicited and further refinement was made to the model. The final model was then circulated electronically to all participants.

## 2 | FINAL MODEL

The consensus building process resulted in the identification of 6 distinct components: initial transition into the ED, 4 core clinical tasks, and final transition out of the ED (Figure 2). This final model aligns with the Age-Friendly Health System framework[53] of high-quality care for older adults known as the "4Ms": What Matters, Medication, Mentation, and Mobility. It also aligns with the recently published best practice guidelines for primary palliative care in the ED.[54]

### 2.1 | Initial transition: Understanding the context

A clear point of consensus between palliative care and geriatrics clinicians was the importance of conducting a comprehensive evaluation of a patient's prior functional and cognitive baseline, as well as a specific evaluation of contributing factors to the patient's presentation to the ED that goes beyond what a busy ED clinician is typically able to complete. A key component of this task is to gather adequate collateral information (eg, from family members, staff from referring long-term care facilities, or relevant outpatient clinicians). This information helps to inform appropriate geriatric interventions, as well as to provide context for potential goals of care discussions. It was also noted by participants that a robust effort to go beyond a narrow focus on the chief complaint and seek to better understand the broader presenting context of the patient can help to build trust with the patient and their family, which can sometimes be difficult to otherwise foster within the context of a busy ED.

### 2.2 | Core intervention 1: Conduct a targeted multidimensional assessment

The first core clinical task identified was to complete a focused, multidimensional assessment of the patient. This should include physical symptoms, psychosocial issues, and an adaptation of the 4M framework of Age-Friendly Health Systems with mobility, mentation, medications included under this intervention and what matters most included in the second core intervention. "Mistreatment" or risk for physical, emotional, or financial abuse was suggested as a fifth M during the consensus session and was ultimately agreed upon by participants as an essential task within the specific scope of screening within the ED. For each of these domains the group considered several assessment tools, with the goal of balancing competing goals of efficiency and comprehensiveness. Final questions for the multidimensional assessment are presented in Figure 3.

### 2.3 | Core intervention 2: Conduct a serious-illness conversation (what matters most)

The second core clinical task identified was to conduct a focused serious-illness conversation. Though specifically adapted to the clinical context of the patient, these conversations should include the following components: (1) assessment of illness understanding; (2) delivery of relevant prognostic information; (3) review of relevant goals and

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**Physical Symptoms**

1. Current pain score: (0-10)
2. Previous pain history: *free text response*
3. Last BM: *free text response*
4. Other pertinent symptoms: *free text response*

**Psychosocial History**

1. Patient presented from: (independent living, assisted living facility, skilled nursing facility, other)
2. Current home-based services: (none, support from family, professional support)
3. Prior involvement with geriatrics/palliative care services: (yes including the following: *free text response* , No)
4. Social supports: (doesn't have good social/family support, has good social/family support)
5. Additional psychosocial history: *free text response*

**Medications**

1. Recent medication changes: (Yes, including the following: *free text response*, No)
2. High-risk medications identified: (Yes, including the following: *free text response*, No)

**Mentation**

1. History of dementia at baseline: (Yes, No)
2. History of depression at baseline: (Yes, No)
3. Depression screening (PHQ2): (Positive, Negative, Not done)
4. Delirium on admission: (Yes-CAM Positive, No-CAM negative)

**Frailty Screening *(Robust: 0, Prefrail: 1-2, Frail: >=3)***

1. Fatigue: (Yes, No)
2. Resistance (ability to climb a flight of stairs): (Able, Unable)
3. Aerobic (ability to walk a block): (Able, Unable)
4. Illnesses (presence of > 5 illnesses): (Yes, No)
5. Loss of weight (> 5% in the past 6 months): (Yes, No)

**Functional Status ("Mobility")**

1. Preadmission physical function: (bed bound, wheelchair bound, ambulating with assistive device, ambulating without assistive device)
2. ADLs : (dependent with most ADLs, requires assistance with some ADLs, is independent for ADLs)

**Safety Concerns ("Mistreatment")**

1. Has anyone close to you harmed you?: (Yes, No)
2. Has anyone close to you failed to give you the care you need? (Yes, No)
3. *Provider Question:* Concern for abuse or neglect based on observation? (Yes, No)

**Serious-Illness Conversation ("Matters Most")**

1. Assessment of illness understanding
2. Delivery of relevant prognostic information
3. Review of relevant goals and values
4. Delivery of formal recommendations

**FIGURE 3** Content questions for multidimensional assessment and serious-illness conversation. BM, bowel movement; PHQ2, Patient Health Questionnaire-2; CAM, Confusion Assessment Method; ADLs, activities of daily living.

values; and (4) delivery of formal recommendations for the patient's care in collaboration with ED clinicians, specialist consultants and outpatient clinicians as appropriate. When possible, this is done together with the patient and their health care proxy, family member, or other surrogates. The consensus group also noted that though these conversations will not always result in formal changes to care plans within the early trajectory of the ED, they still provide an invaluable opportunity to assess the prognostic awareness of a patient and family and elicit goals and values that can help guide future care decisions; the latter is particularly important if there is an acute decompensation in health.

### 2.4 | Core intervention 3: Integration of high-yield early palliative care and geriatric interventions

The third core intervention identified was to integrate high-yield palliative care and geriatric recommendations within the specific context of the ED focused on symptom management, medications, and mitigating iatrogenic harm. Specifically, symptom management recommendations should be provided with specific, time-based parameters including guidance on reassessment, rather than providing open-ended recommendations.[55] With respect to medications, the clinician should employ a structured approach that supports the early identification of

high-risk medications (eg, Beers criteria medications[56]), especially for older adults at risk for delirium. Best practices to minimize iatrogenic harm should be clearly outlined, such as the use of a delirium order set with non-pharmacologic strategies for the prevention or management of delirium.

### 2.5 | Core intervention 4: Referral to appropriate palliative care and geriatric services

The fourth core intervention seeks to connect patients to appropriate palliative care and geriatrics services within the hospital and in the community. Within the palliative care context, this might involve a referral to the inpatient consult service, outpatient clinic, home-based palliative care team, or direct referral to hospice services. Within the geriatric context, there is typically a much broader list of potential community support services that can be considered such as aging service access points (senior service organizations), adult day health programs, home health organizations, geriatric case management, and the program of all-inclusive care for the elderly. Given this increased complexity, these referrals are typically considered in close collaboration with the ED case manager and/or social worker.

### 2.6 | Final transition: Communicating findings and passing off care

The final recommendation from the group related to the content and structure for consultant recommendations for ED and admitting clinicians. It was strongly agreed that time-sensitive recommendations for ED clinicians should be given via direct, verbal communication whenever possible. Though it was also noted that similar verbal handoffs are also ideal for communication with the admitting inpatient clinician, clearly written recommendations within the consult note are also acceptable. In all situations, it remains important to ensure that the information is captured in the medical record. Additionally, for patients being discharged, it was noted that any critical changes in care plans (such as newly elicited goals and values, changes in medications, or new outpatient referrals) should also be communicated directly to the patient's primary outpatient clinicians.

## 3 | DISCUSSION

### 3.1 | Measuring success and ensuring sustainability

The success of this program using this model will be dependent on addressing the needs of the patient and caregiver, hospital, and ED, and demonstrating financial viability. We have implemented this embedded integrated geriatric palliative care APP model at an academic medical center based on this consensus-driven model and are using the Reach, Effectiveness, Adoption, Implementation, and Maintenance (RE-AIM) framework[57] (an implementation science tool to identify factors that will facilitate or impede program success) to evaluate the program, including which patients are reached by the program and for what indication, and the adoption of the program by emergency clinicians through consultation rates and direct feedback from clinicians. Measuring the effectiveness of the program, with patient-centric measures and alignment with priorities, will be critically important. Additionally, direct input from patient and family representatives will also be important as we look to adapt the model to best meet their needs. Ultimately, continuation of this program will be dependent on the financial viability of the program. Prior research suggests that an APP-led geriatric program may be cost neutral with 7 consultations per day;[35] however, we have found that this can be a challenging target to meet over an 8-hour shift, and, therefore, return on investment and value should also be assessed in other ways, such as consideration of patient, family, and clinician satisfaction; degree to which patients feel heard and understood;[58] improvement in symptom management; and documentation of patients' goals, values, and advance care directives. The potential for this model of care to result in a decrease inpatient admissions and shorter hospital length of stay[29,34,42] will also be critical for institutions that face a high inpatient census that contributes to ED boarding and overcrowding.[59]

### 3.2 | Limitations

One of the major limitations of this model is that it was designed for an academic medical center with robust geriatric medicine and palliative care programs. This structure enables an APP to be embedded in the ED with the support of inpatient geriatricians and palliative care physicians. Community-based EDs with lower ED volumes may not be able to support such a program or may not have geriatric and palliative care physicians to oversee it. However, these tasks could likely be achieved using alternative team-based models, including social workers, nurse case managers, or enhanced support from preexisting geriatric or palliative care consult services. Additionally, ongoing work in cultivating primary palliative care and geriatrics by training existing staff in serious illness conversations or geriatric assessments may be more achievable and impactful. Alternatively, health systems may wish to consider how telemedicine can be used to bring specialized geriatric and palliative care services to multiple EDs in their system.[60] Once operationalized, this model may additionally offer insights into the highest and best use of different aspects of care delivery for this patient population and, ultimately, which focused components could be reasonably adapted into smaller EDs with fewer resources. "Another limitation relates to the lack of explicit screening for falls or fall risk in the functional status component of our assessment. This was in part a result of our approach—attempting to develop a model that addresses commonalities among geriatric and palliative care spheres – and to avoid duplication of falls screening already performed by emergency nurses. This is an omission that will be addressed during the next phase of our work."

### 3.3 | Conclusion

As our population continues to age, innovative approaches to care delivery should be considered to best meet the needs of medically complex older adults. Together with experts from the fields of palliative care, geriatrics, and emergency medicine, we developed a novel combined geriatrics and palliative care model for the ED that we are piloting in an academic medical center. This process revealed there are meaningful overlaps and synergies between the 2 specialties within the context of the ED and that it is feasible to combine them into a singular clinical service. Further studies are needed to evaluate the outcomes and impact of such a consultation program based on this model.

## CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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## SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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