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FORUM
translating research into quality healthcare for Veterans

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Veterans Health Administration
Health Systems Research

Commentary

VA Emergency Medicine: Using Evidence to Inform Policy and Improve Access to Effective Emergency and Urgent Care for Veterans

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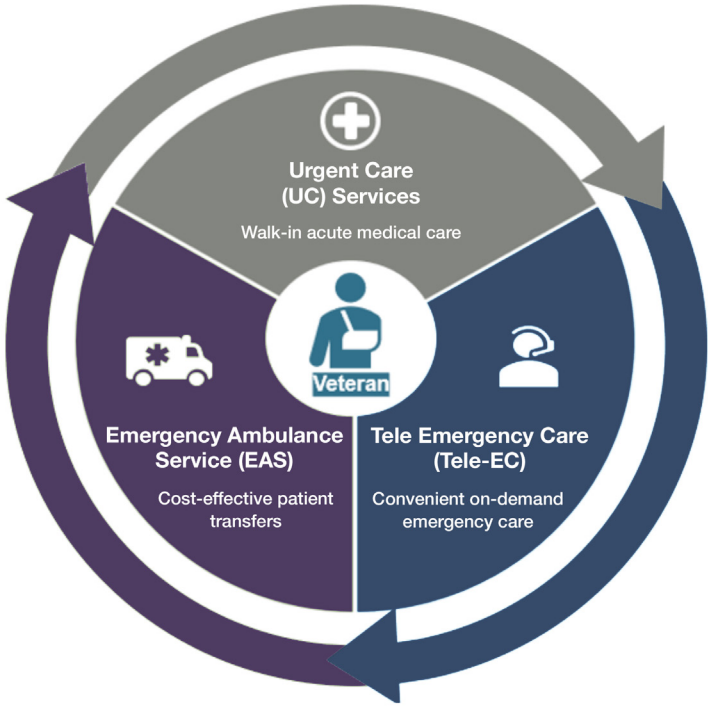
VA Emergency Departments (EDs) and Urgent Care centers (UCs) are responsible for over 2.3 million Veteran clinical encounters annually. As venues for immediate, on-demand access to care for Veterans, VA EDs and UCs stand ready to provide emergent and urgent care during all hours of operation. This includes maintaining a posture of continuous readiness to successfully manage a wide variety of medical, surgical, and behavioral health emergencies. While the above can be said of most emergency and urgent care sites in the United States, VA EDs and UCs are particularly adept at meeting the unique healthcare needs of the Veteran population. For example, we recognize that Veterans tend to be older and have a higher burden of mental health diagnoses than the average U.S. population. Furthermore, many of our Veterans reside in geographically remote areas with limited VA and community healthcare access.

It is imperative that we develop a deeper understanding of the ways in which the acute care needs of Veterans differ from the general population, including evaluating strategies, practices, and policies that promote improved healthcare outcomes for Veterans. Indeed, work in this space has already informed us that Veterans transported by ambulance to VA EDs have a significantly lower risk of mortality than Veterans transported to a non-VA ED.[1]

This finding, in combination with other work demonstrating relatively favorable patient outcomes with VA-based care helps motivate a core strategy to enhance access to high-quality, integrated, and reliable emergency and urgent care for Veterans.

As illustrated by the infographic below, the National Emergency Medicine Office (NEMO), which has clinical oversight responsibility for VA EDs, UCs, Emergency Ambulance Services (EAS), and Tele-Emergency Care, views each of the clinical programs under its purview as playing a critical role in enhancing access to immediate medical care for Veterans. While increasing timely access to care is a necessary first step towards promoting positive healthcare outcomes among Veterans suffering from acute illness and injury, further inquiry and investigation is needed to answer

Figure 1. VA Emergency Medicine



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DIRECTOR'S LETTER

Emergency Care and Innovation in Health Systems Research

Emergency care is the "canary in a coal mine" when it comes to identifying healthcare access barriers and emerging public health threats. For individuals with limited incomes, Emergency Departments are also a principal source of care. In the Oregon Medicaid Experiment randomized trial, emergency care visits increased up to 40 percent among those randomized to receive Medicaid insurance compared to those not randomized to receive insurance. This effect persisted over time, indicating the continued importance of emergency care services in communities.

VA Emergency Care includes both purchased (community) care and VA-provided services, which makes effective coordination and optimization of best practices especially complex. The proportion of emergency care provided by community providers has doubled for Veterans in the last few years. The dual role of VA as a payer and provider of emergency care services opens new opportunities for research focused on value-based community care, innovations in care efficiency and coordination, and application of emerging technologies to ensure Veterans get the care they need. This FORUM issue focuses on new areas of research that hold the promise of making emergency care more accessible, equitable, and effective for Veterans, including older patients with dementia, mental health issues, those living in rural settings, as well as Veterans with lower incomes in urban settings with limited transportation options.

The VA National Emergency Medicine Office and other VA program offices and policymakers have focused on ways to improve the quality, efficiency, and experience of emergency care for Veterans regardless of location or provider. Working together also creates opportunities to forge research-operational partnership collaborations across VA, including Integrated Veteran Care and the VA Center for Care and Payment Innovation (CCPI) to co-design high-impact research in this area. Established under the Maintaining Systems and Strengthening Integrated Outside Networks (MISSION Act; Sect. 152), CCPI identifies and tests new financial and service delivery models. The MISSION Act further authorizes VA, subject to congressional approval via joint resolution, to waive statutes and regulations that govern Veterans' benefits related to healthcare, including emergency services. This enables CCPI to pilot innovations in payment, care, and business operations to improve Veteran care, leveraging its unique waiver authority as needed. Potential research areas include developing and validating value-based payment models for community care, including emergency care that rewards providers on quality of care, and alternative models of service delivery such as community outreach workers or virtual emergency services.

VA's Health Systems Research portfolio (formerly HSR&D) offers a key example of how research can address complex health system needs and is poised to support investigators to conduct innovative and impactful research in emergency care. HSR supports groundbreaking science focused on the organization, financing, and delivery of healthcare to improve Veteran outcomes and advance VA as a national Learning Health System. HSR seeks to improve **Veteran Quintuple Aim goals**: access, outcomes, equity, experience, and value (Matheny, NAM 2019; Cahan, 2020; Nundy 2021) using foundational **Learning Health Systems (LHS) methods** (Friedman, 2022, Lannon et al., 2020; Friedman et al. 2024), including implementation, data, engagement, systems, and policy sciences. These foundational LHS methods also represent tools to improve health and healthcare for Veterans (e.g., direct implementation) that are relevant to HSR's Quality Enhancement Research Initiative (QUERI) program, thus enabling investigators to respond to scientific research priorities with pragmatic solutions the VA healthcare system can use immediately.

The latest HSR priorities are based on VA leadership and end-user input as described in the VA Strategic Plan and include Veteran-focused legislative and congressional priorities, and ORD priorities that address crucial questions pertaining to emergency care for Veterans.

- **Connect Veterans to the soonest and best care:** optimize Veteran access, quality, efficiency, experience, and equity of care across in-person, virtual, and community care services.
- **Implement value-based care solutions:** design and refine value-based care models and tools to ensure care provided in the community leads to improved quality of care and outcomes for Veterans.
- **Build an integrated delivery network to meet the diverse and changing needs of Veterans:** identify efficient staffing and care models for primary care, specialty care, and mental health services across different regions and healthcare settings.
- **Retain, invest in, and support VA employees:** implement and evaluate programs focused on employee health and well-being, education, psychological safety, zero harm, innovation, leadership development, and technology training.
- **Drive a culture of learning, knowledge translation, and innovation:** identify opportunities where emerging technologies (e.g., artificial intelligence (AI), virtual reality), predictive models, and other promising innovations can make VA services more efficient and reduce provider burden associated with burnout.
- **Prevent Veteran suicide:** prevent Veteran suicide using a public health approach e.g., outside the clinic walls, partnerships with community service organizations.
- **Address health disparities:** ensure at-risk, underserved, and older Veterans receive early interventions and supportive services to address social determinants of health and preventable harm.

Additional information on HSR and QUERI funding opportunities will be posted soon at https://www.research.va.gov/funding/rfa.cfm

Amy Kilbourne, PhD, MPH, Director, HSR

Rising to the Challenge: VA Health Systems Research Is Uniquely Positioned to Reimagine Unplanned Care for Veterans

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The delivery of emergency care in the United States continues to be in a state of flux. Long wait times and crowded conditions have been the norm for decades, along with steady increases in overall patient volumes and in the number of patients waiting to be admitted. And just when conditions seemed like they could not get worse, the COVID-19 pandemic exacerbated what many have called the "canary in the coal mine" of the U.S. healthcare system: its emergency departments. Despite workplace violence, fractured clinician and staff wellness, complex coordination between hospitals and modalities of care, and worsening boarding (the practice of holding admitted patients in the emergency department while they await an available inpatient bed), the U.S. emergency care system plays a vital role in the delivery of healthcare, particularly for the most vulnerable patients.

The commentary by Dr. Patel underscores the changing dynamic of emergency care for Veterans and the Veterans Health Administration (VA). No longer is emergency care simply about the heart attack patient nor the traumatically injured patient. Today's emergency care system, and particularly the system within VA, attempts to be responsive to patients' unplanned care needs. The make versus buy question that the CHOICE and MISSION Acts have evoked further compounds today's emergency care challenges for both VA and Veterans. Non-VA emergency care and subsequent hospitalizations now comprise over $500M in expenses per month and are the leading cause of non-VA care expenditures borne by VA. Multiple studies have demonstrated that the quality of VA healthcare is as good, if not better than, civilian healthcare; however, there are only 110 VA emergency departments compared with the more than 5,000 non-VA emergency departments, 1,800 retail clinics, and 10,000 urgent care centers in the United States. Delivering emergency care that is Veteran-centric and that incorporates the three Rs – right care at the right place and at the right time – while also being sustainable, is an enormous challenge that requires the interplay of both key operational and research partners. VA's Health Systems Research (HSR) is exceptionally well positioned to be one of these key partners.

In 2022, then VA HSR&D (Health Services Research & Development Service) conducted the State of the Art (SOTA) XVI Conference on VA Emergency Medicine (SAVE) focusing on Veteran emergency care. The SOTA focused on three priority populations within Veteran emergency care: geriatrics, mental health, and non-VA care. *Academic Emergency Medicine*[1] published the SAVE proceedings in an April 2023 special issue, which included the history of VA emergency care, the rationale for the SOTA,[2] and the SOTA's research and policy recommendations.[3] The research priorities by workgroup are presented below.

Non-VA (Community) Emergency Care Workgroup

1. Examine how the expansion of community emergency care impacted emergency department utilization, access, and costs.
2. Understand the follow-up needs among Veterans who have received community emergency care or urgent care.
3. Compare the quality, safety, and Veteran experience between VA and community emergency care.

Geriatric Workgroup

1. Examine the variation in care for older Veterans in the emergency department, and how variation affects outcomes.
2. Identify and develop successful strategies to improve the quality of emergency department discharges.
3. Examine the quality, safety, and effectiveness of telehealth to support care of older adults with emergency care needs.
4. Examine the impact of geriatric emergency department (GED) initiatives.
5. Improve implementation of geriatric assessment tools in the emergency department.

Mental Health Workgroup

1. Enhance the reach of effective suicide interventions.
2. Develop and rigorously evaluate interventions to manage substance use disorder.
3. Identify and examine safe and effective practices to manage acute psychosis.

Beyond these three priority populations, the SOTA identified cross-cutting themes impacting Veteran emergency care including telehealth, implementation science to refine multicomponent interventions, care coordination, and data needs from both VA and non-VA sources. HSR has responded with not only the SOTA and the special journal issue but has also recognized emergency medicine as a priority topic area within healthcare system organization and delivery science.

Since the SOTA, several key operational changes have enhanced the prominence of emergency care within VA. The establishment of the National Emergency Medicine Office (NEMO) as a national VA program office with an operational budget and oversight of clinical programs provides emergency medicine with needed resources for clinical program delivery and administrative oversight to enhance the quality of and access to care. Other key initiatives include the national launch of the Tele-Emergency Care (TeleEC) program, along

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The Changing Landscape of Veteran Emergency Care: Implications for Policy and Practice

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VA stands at a critical juncture, facing budgetary constraints amidst escalating costs and shifting care paradigms. The dramatic increase in Veterans utilizing community care poses a threat to the integrity of VA's direct care system, potentially resulting in clinic closures, service reductions, or hiring slowdowns if not addressed.

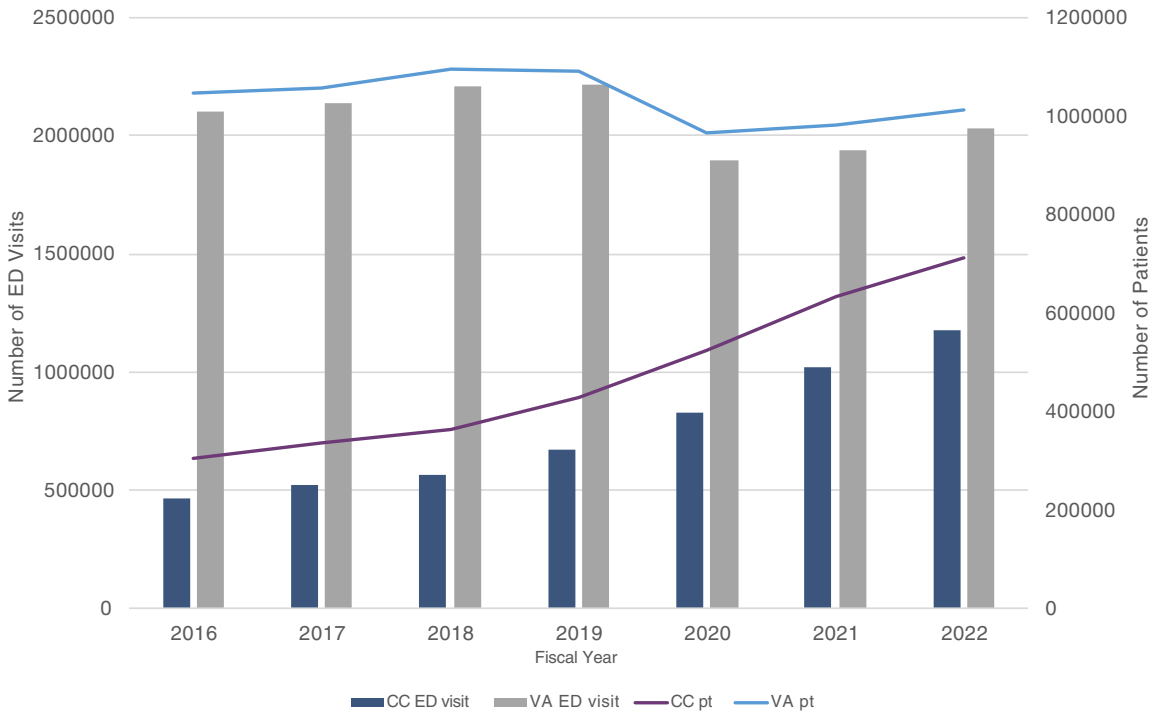
VA spending on community care surged from $7.9 billion in 2014 to $18.5 billion in 2021, now constituting a third of the medical care budget. This increase raises valid concerns about the program's long-term sustainability. Notably, emergency care represents the largest portion of this expenditure, encompassing over one third of the total community care budget.

Challenges and Considerations in Emergency Care. Accessing emergency care within the VA system presents challenges for many Veterans, especially those in rural or underserved areas, due to the limited geographic coverage of VA emergency care facilities. Consequently, Veterans often turn to community emergency departments (EDs). Implementation of the MISSION Act and concomitant changes in emergency care payment authorities, notification processes, and reimbursement rates have also simplified the process of approving and paying for community emergency care. In turn, VA has witnessed an unprecedented surge in demand for community-based emergency care, which has emerged as the primary contributor to VA community care spending, with community ED visit expenditures rising by 46 percent since 2020.

Key Points

- Emergency care has emerged as the primary contributor to VA community care with the proportion of emergency department (ED) visits occurring in the community versus VA increasing from 18 percent to 37 percent between 2016 and 2022.
- Among Veterans, conditions such as septicemia, heart failure, acute myocardial infarction, stroke, and COVID-19 were among the top reasons for community ED visits resulting in admission, while conditions with the highest charges were hip fractures, conduction disorders, and septicemia.
- The observed surge in community care ED visit costs may be partially attributed to demographic shifts, particularly the increasing proportion of elderly Veterans; another explanation could be a phenomenon known as payer-shifting.

Figure 1. Number of Community Care (CC) and Veterans Affairs (VA) Emergency Department (ED) Visits and Unique Patients, Fiscal Years 2016 to 2022



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Insights from a Recent Study. In our retrospective analysis spanning from 2016 to 2022, we found the annual number of community ED visits increased 154 percent, from 465,253 in 2016 to 1,180,106 in 2022, while the number of unique users of community emergency care increased by 134 percent, despite a relatively stable Veteran population.[1] The proportion of all ED visits that occurred in the community versus VA progressively increased from 18 percent to 37 percent during this time. Total community care ED payments, adjusted to 2021 dollars, rose from $1.18 billion in 2016 to $6.15 billion in 2022. These costs, driven primarily by rising admission rates, underscore the evolving landscape of emergency care utilization among Veterans. Notably, conditions such as septicemia, heart failure, acute myocardial infarction, stroke, and COVID-19 were among the top reasons for community emergency visits resulting in admission, while conditions with the highest charges were hip fractures, conduction disorders, and septicemia.

The observed surge in community care ED visit costs may be partially attributed to demographic shifts, particularly the increasing proportion of elderly Veterans, who may present a higher burden of illness. One explanation for the surge in costs related to community emergency care could be attributed to a phenomenon known as payer-shifting, a concept supported by prior research.[2] MISSION Act-related changes in payment and notifications, particularly reimbursing most community ED claims at 100 percent of Medicare rates, may have inadvertently created incentives leading to a transition in the primary payer for emergency care. This shift, from Medicare or other private payers to VA, has critical implications and raises the question of whether payer-shifting is primarily associated with patient choices or clinician practices, an issue warranting further research. Nevertheless, the rise in community emergency care use is significant given prior research indicating that Veterans have historically been hesitant to embrace community-based emergency care.[3] The juxtaposition of these findings underscores the need for further investigation into the factors influencing Veterans' healthcare-seeking behaviors, as it is conceivable that as Veterans feel more comfortable seeking care in the community, community care ED utilization may continue to rise.

Variations in Care Settings and Patient Needs. Our analysis unveiled noteworthy variations in the types of conditions treated in community versus VA EDs. Veterans appeared to utilize community EDs for more acute reasons, with conditions such as cardiac arrest, stroke, and sepsis featuring prominently. In contrast, over 80 percent of low back pain, other musculoskeletal pain, and upper respiratory illnesses are treated in VA EDs. Proximity to community ED facilities may influence the choice of care settings, particularly for emergencies requiring timely interventions.

Regional and Facility-Level Dynamics. On average, VA facilities purchased 22 percent of ED visits from the community, which increased from 14 percent in 2016 to 32 percent by 2022. Facility-level analyses found associations between facility characteristics and the proportion of emergency care purchased in the community. Lower complexity and higher volume facilities were more likely to purchase emergency care from community providers, underscoring regional differences in care delivery.

Potential Solutions. As VA policy makers grapple with the explosion in emergency care use and costs, they are considering strategies like repatriation, which involves transferring Veterans from community settings to VA facilities after initial stabilization and treatment. This approach carries several potential advantages, such as mitigating care fragmentation and theoretically decreasing costs by capitalizing on VA's comprehensive medical records, and reducing redundant or unnecessary testing. However, these benefits come with inherent risks, including treatment delays, the possibility of incurring additional expenses related to the cost of transport, and other required resources such as staffing. Additionally, the reimbursement model employed by VA to compensate for community admissions may present challenges in realizing cost savings when repatriating patients from community hospitals back to VA facilities after payment has already been rendered. Also, VA facilities vary significantly in their capacity to accept and treat patients from the community (e.g., bed availability, specialist availability). Finally, the repatriation process itself introduces risks such as infection, airway complications, and cardiac arrest. We recommend that future research examine the cost-benefit analysis of repatriation strategies for Veterans admitted to community hospitals.

Our findings underscore a pivotal transformation in the acute care landscape for Veterans, with a pronounced shift toward community-based emergency care, especially following the MISSION Act's implementation in 2019. While this shift likely signifies an enhancement in access to care, it is essential to recognize its potential unintended repercussions. Notably, increased reliance on community emergency care can lead to concerns regarding healthcare outcomes and care coordination, potentially resulting in fragmented patient experiences across care settings. While VA remains the primary source of emergency care for Veterans, it now operates as both a care source and purchaser, necessitating a thorough evaluation of this transformative shift. Future work should focus on assessing the impact of this shift, particularly on the quality of healthcare services delivered in community settings, including patient satisfaction, and health outcomes.

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Shared Decision Making in the Emergency Department for Veterans Living with Dementia

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It is currently estimated that about 10 percent of the Veteran population over 65 years of age has Alzheimer's disease or Alzheimer's disease-related dementias, and as the general Veteran population ages, this number is expected to increase by 22 percent in the next decade.[1] In the general population, about 40 percent of persons with dementia have at least one emergency department (ED) visit per year, and about 30 percent are hospitalized at least once. Overall, persons with dementia have significantly more acute care utilization compared to their counterparts without dementia, and they have almost twice as many ED visits, more costly ED visits, more frequent hospitalizations, and longer inpatient stays. ED visits and hospitalizations often represent sentinel events for persons with dementia, with risk of significant negative downstream impacts on quality of life, including functional decline, increased risk of long-term care placement, and mortality.

ED care for persons with dementia can be challenging because these patients have more co-morbidities and medications compared to their counterparts without dementia, and frequently find the ED environment over-stimulating and disorienting. In many cases, they may not be able to provide a clear story of what brought them to the ED, in which case ED providers often rely on collateral information from care partners or anyone available. This can still pose challenges to their care and disposition, as barriers to good communication – such as care partner availability, reliability of sources, language barriers, and time constraints – are common. Without a good understanding of a patient's baseline mental status, ED providers have limited information about whether a patient is having additional cognitive dysfunction, which might warrant further testing or monitoring in the hospital if the ED results do not clearly demonstrate a need for admission. Limited collateral information on cognition and recent history can lead to more ED testing and hospitalizations.

Admission decisions in the ED are critical and costly. For serious illnesses requiring urgent treatment that can be done only in the hospital, such as a myocardial infarction needing cardiac catheterization or sepsis requiring IV antibiotics, the decision to admit a patient is straightforward. However, in most cases, this decision is not so clear. When considering admission to the hospital during an ED visit, a provider must balance the risk of hospitalization against the risk of inappropriately discharging an older patient; the latter risk includes a potential return ED visit and hospitalization, worsening morbidity, mortality, and poor clinical and patient experience outcomes such as trust in healthcare staff or satisfaction with care. As such, the ED provider's decision to admit the patient to the hospital or discharge them is critical. This "disposition" decision is widely considered to have enormous implications for patient experience, outcomes, and costs of care. Significant variation exists in ED admission rates, by region, EDs, and providers, which suggests that the disposition decision may be partially discretionary. This type of variation represents an opportunity for improving experiences of healthcare delivery.

Shared decision making is an important emerging tool in the ED setting. When more than one reasonable option exists regarding a healthcare decision, such as the decision to admit or not, shared decision making (SDM) can be a strategy to facilitate conversations between patients, care partners, and providers. The purpose of SDM is to ensure that patients and care partners are informed and meaningfully involved in decisions about their care, including testing and treatment options, and that these decisions reflect their goals, values, and preferences. Importantly, SDM tools in multiple settings have been found to reduce utilization while remaining aligned with patient and surrogate decision-making priorities. Patient involvement in SDM can take a variety of forms, with varied degrees of "sharing" in the final decision. It is increasingly recognized that healthcare providers underestimate the degree to which patients want and are able to be involved. Prior work in SDM for persons with dementia has typically targeted both patients and care partners. Despite concerns about decision making capacity, patients with dementia can communicate values and preferences, and thus can use SDM tools when designed appropriately.

Key Points

- About 10 percent of the Veteran population over 65 years of age has Alzheimer's disease or Alzheimer's disease-related dementias.
- Shared decision making (SDM) is an important emerging tool in the emergency department (ED) setting, and patients with dementia can use appropriately designed SDM to communicate their values and preferences.
- A recent VA HSR and NIA funded career development award will build an SDM tool to support disposition decisions in the ED for Veterans with dementia that are aligned with patient and care partner goals.

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critical questions that will drive future policy and strategic investment decisions. To this end, we briefly review some of the key issues within each of the core programmatic areas of VA Emergency Medicine.

VA Emergency Departments and Urgent Care Centers

VA boasts 110 Emergency Departments across the enterprise, each delivering state of the art emergency care to Veterans 24 hours a day, 7 days a week, 365 days a year. These clinical units are designed to provide care for any complaint, to anyone, at any time. That said, our ability to rapidly evaluate patients is often beleaguered by capacity constraints in which stabilized Veterans awaiting an available inpatient care bed languish in the ED, sometimes for hours or days on end. The practice of holding admitted patients in the ED – often in hallways – while those patients await an available inpatient bed, also known as "inpatient boarding," has been shown to result in adverse patient outcomes, to increase the risk that patients will leave prior to receiving emergency medical attention, and to contribute to staff burnout.[2] Exploring the impact of inpatient boarding on the Veteran population and investigating effective strategies to decrease or mitigate inpatient boarding in the ED is critical.

The exceptional care provided through VA EDs would not be possible without the professionalism and dedication of thousands of committed clinical staff members. Unfortunately, there has been a rise of interpersonal violence within U.S. EDs, with 70 percent of emergency nurses, and nearly 50 percent of emergency providers and physicians reporting at least one episode of workplace assault.[3,4] It remains unclear to what extent this phenomenon is impacting the VA emergency care workforce, but a better understanding of its prevalence as well as knowledge of effective strategies to mitigate the risk of violence against clinical staff devoted to the care of Veterans is sorely needed.

Tele Emergency Care

Tele Emergency Care is a novel method of allowing Veterans access to a virtual evaluation by an emergency medical provider from the convenience of the Veteran's home. This service allows Veterans to be directed to receive the right care at the right time and right place. In many instances, Veterans can have their acute care issues addressed and successfully resolved through a virtual evaluation alone.

As an emerging modality for immediate care delivery, much information is needed to help inform clinical and policy decisions related to Tele Emergency Care. This includes knowledge about the types of clinical presentations most amenable to successful resolution through a virtual encounter, the ideal professional skillset necessary for effective virtual emergency care, and potential gaps in Veterans' ability to access virtual emergency and urgent care resources. Indeed, there are many critical operational and clinical questions that need urgent investigation to support safe and effective practice in this novel space.

Emergency Ambulance Services (EAS)

The ability to transport acutely ill Veterans to and from VA and community sites of care is a critical element of the continuum of care. Unfortunately, VA and community facilities are faced with increasing delays in being able to access ambulance services.[5] More information is needed about the clinical impact of such delays along with their root causes. In many instances, VA ambulance services can provide this resource in a much more accessible manner. However, data are still needed to help guide effective EAS policy development, equipment and staffing recommendations, and appropriate clinical protocols to best serve Veterans.

Geriatric Emergency Care

VA EDs serve predominantly older populations with Veterans aged 65 and older accounting for 54 percent of all ED visits. In recognition of this, VA Emergency Medicine has partnered with the Office of Geriatrics and Extended Care, the American College of Emergency Physicians (ACEP), West Health Institute, and the John A. Hartford Foundation to promote geriatric emergency medicine programming and accreditation. As a healthcare system, VA has the largest number of geriatric-accredited EDs in the nation. Yet we need further data on Veteran clinical outcomes associated with receiving care in a geriatric-accredited ED, including elucidating programs or initiatives that are particularly impactful in preventing harm or yielding positive health outcomes.

While VA Emergency Medicine has advanced significantly since its initial recognition as a specialty program in 2011, we depend on our research partners to evaluate our current policies and programs and to identify exceptional practices that will help inform future strategic decisions. It is only through such a partnership that we can accelerate VA Emergency Medicine's journey to be the immediate care provider of choice for America's Veterans.

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EQUIPPED for Safe Prescribing in the Emergency Department

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Older Veterans are a vulnerable population at high risk of adverse drug events, especially at the time of discharge from the emergency department (ED). More than half of older adults discharged from the ED leave with a new prescription medication. Multiple studies show that between 6 percent and 13 percent of prescriptions written for older adults at ED discharge represent a potentially inappropriate medication. Prescribing new medications for older Veterans outside their primary care setting increases the opportunity for suboptimal prescribing as well as adverse drug events, both major concerns and contributors to repeat ED visits, hospitalization, and other poor health outcomes.

EQUIPPED (Enhancing Quality of Prescribing Practices for Older Veterans Discharged from the Emergency Department) was initially designed as an innovative quality improvement (QI) initiative to reduce potentially inappropriate medication prescribing for adults aged 65 years and older and is particularly well suited for the busy ED environment. Initially funded by the Office of Geriatrics and Extended Care, the EQUIPPED QI intervention has three components aimed at influencing provider prescribing behavior: a) provider education; b) electronic clinical decision support via specialized geriatric pharmacy order sets at the point of prescribing; and c) academic detailing, including audit and feedback, and peer benchmarking. EQUIPPED is informed by the American Geriatrics Society Beers Criteria®, which indicate drugs that should be avoided in older adults because of the increased risk of adverse drug events. These criteria are widely used by government agencies and supported by research in various clinical settings as a marker of prescribing quality.

Results from four of the initial EQUIPPED implementation sites with in-person academic detailing demonstrated sustained pre-post improvement (reduction) in potentially inappropriate prescribing rates by nearly 50 percent at six months, suggesting the possibility of provider prescribing behavior culture change.[1] The EQUIPPED QI intervention typically involves at least one in-person academic detailing session using audit and feedback with peer benchmarking delivered by a local clinical champion, which is more resource intensive.

VA already uses both passive feedback (i.e., dashboards to report psychotropic medication use in community living center residents) and active feedback (e.g., implementation of a national academic detailing pharmacy program); however, there is little guidance on which strategy is most effective in the emergency department to deliver audit and feedback. To inform the optimal EQUIPPED implementation strategy for improving provider prescribing behavior toward older Veterans in EDs, we conducted a Health Systems Research funded cluster randomized trial comparing EQUIPPED with active provider feedback including academic detailing to EQUIPPED with passive provider feedback using individual electronic reports via a clinical dashboard. We randomized eight VA facilities to implement EQUIPPED with audit and feedback delivered through either passive provider feedback (dashboard sites) or active provider feedback (academic detailing sites).

During the six-month baseline period, the academic detailing and dashboard sites had similar monthly prescribing rates of potentially inappropriate medications. After pausing EQUIPPED implementation due to the emergence of the COVID-19 pandemic, one of the original eight VA sites determined it was not able to continue EQUIPPED implementation. An additional VA ED site was recruited to fill the open study spot and completed implementation of EQUIPPED using the active provider feedback strategy. Comparing 12 months of prescribing data after EQUIPPED implementation, the academic detailing group significantly reduced potentially inappropriate medication prescribing compared to the dashboard group, with 14 percent higher odds that prescribers demonstrated safe prescribing at sites with academic detailing audit and feedback.[2]

Based on the fluctuations in prescribers each month for a given site (i.e., intermittent providers, health professions trainees, deployments during the COVID-19 pandemic), it was not feasible to continually update the audit and feedback reports, thus audit and feedback

Key Points

- Studies show that between 6 percent and 13 percent of prescriptions written for older adults at emergency department (ED) discharge represent a potentially inappropriate medication.
- Initially designed as a quality improvement initiative to reduce potentially inappropriate medication prescribing for adults aged 65+ years, EQUIPPED (Enhancing Quality of Prescribing Practices for Older Veterans Discharged from the Emergency Department) is particularly well suited for the busy ED environment.
- Eight VA EDs successfully implemented the core components of the EQUIPPED program amid the unprecedented challenges posed by the COVID-19 pandemic, suggesting EQUIPPED is tailored to the needs of the ED clinical environment.

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focused on staff providers determined by the site champion at baseline. In an exploratory analysis in which the prescribing evaluation was limited to providers who received EQUIPPED audit and feedback, both groups showed a statistically significant improvement in prescribing safety after EQUIPPED, and there was no statistical difference between the two implementation strategies.

In conclusion, eight VA EDs successfully implemented the core components of the EQUIPPED program amid the unprecedented challenges posed by the COVID-19 pandemic, suggesting EQUIPPED is tailored to the needs of the ED clinical environment. While the academic detailing approach to EQUIPPED audit and feedback was more effective at the group level to improve safe prescribing for older Veterans discharged from the ED, the trial suggests dashboard-based audit and feedback is a reasonable strategy in resource-limited settings.

Since completion of the project, the EQUIPPED provider feedback dashboard continues to be used to provide direct feedback to providers at sites that have opted for this during their sustainment phase.[3] The dashboard approach includes continued automated monthly feedback as well as site champion monitoring depending on each site's desired sustainment plan. More broadly, of the first twenty VA EDs that were accredited by the American College of Emergency Physicians (ACEP) as Geriatric EDs, nine implemented EQUIPPED and used data from the program to demonstrate a commitment to medication safety for older adults.

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with oversight of the emergency ambulance service, and VA urgent care clinics.

Dr. Patel's report on operational priorities highlights critical areas that HSR investigators are well positioned to address. Specifically, the non-VA population aligns with the SOTA priority groups.

The implementation of TeleEC represents an important innovation and studies are needed to understand how cost, access, quality, and outcomes of TeleEC care differ between VA and non-VA settings and how Veterans access non-VA TeleEC care. Particularly in rural settings where VA EDs and urgent care clinics are less available, HSR investigators should address the question of whether VA TeleEC represents an opportunity to engage Veterans. Moreover, studies are needed to examine whether disparities in access, quality, or outcomes of TeleEC care exist for vulnerable Veteran populations (e.g., rural-dwelling, older patients).

An additional facet of access to emergency services is through interfacility ambulance transportation. A NEMO-funded programmatic evaluation is currently being led by Dr. Anita Vashi (Palo Alto VA). There is a dearth of research on VA ambulance transports, including how state laws impact their use, and how their limited capacity should be made available. The need to further examine non-VA emergency care suggests several key questions. What are the non-VA emergency ambulance expenses, particularly for helicopter EMS (which routinely costs over $50,000 per trip)? What proportion of non-VA expenditures are related to helicopter EMS expenses? Do these ambulance services represent an opportunity for expansion, or should VA purchase these services from non-VA vendors?

The geriatric emergency care population, as noted by Dr. Patel, represents the majority of Veterans seeking emergency care. There has been substantial investment on the part of VA to make VA emergency care geriatric-friendly through the implementation of geriatric emergency departments. However, studies are needed to understand the implementation and outcomes of this investment. For example, variations in the allocation of resources within geriatric emergency departments and the sustainability of those resources are topics that merit further research.

The third priority group mentioned in the commentary but not explicitly addressed regarding potential questions, is the mental health population. Specifically identified in the SOTA conference as a key population served by VA emergency departments, research needs include identifying the effectiveness and reach of suicide interventions, substance use disorders, and the management of acute psychosis in VA emergency departments and urgent care clinics.

The prevention of workplace violence is recognized within the national context as a problem for emergency care nurses and clinicians. While not unique to the emergency department, HSR investigators are similarly well positioned to examine this issue from a systems perspective. What is truly unique to the emergency department? How have other VA and non-VA clinical settings addressed this problem? And how is intervention development and implementation challenged by the clinical context?

Veterans increasingly have a choice about where to seek emergency or unplanned care, and HSR investigators are exceptionally well positioned to study how the structure and implementation of the emergency medicine system impacts that choice and patient outcomes.

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Opportunities to Improve Dementia Care for Aging Veterans

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Increasingly, older adults are turning to emergency departments (EDs) to address healthcare needs. In fact, nearly 1 out of every 2 older U.S. adults (aged 65 and older) will visit the ED each year. Situated at the crossroads of outpatient and inpatient care, the ED is a safety net for lapses in care and an important partner in care coordination. With this growth in ED utilization comes the need to transform our current emergency care model to one that incorporates the unique needs of geriatric patients and reduces complications that commonly arise from ED encounters.

VA Geriatric Emergency Departments: Leading the Way in Progressive Geriatrics Care

VA is one of the largest integrated healthcare systems in the United States, with over a million ED visits made by older Veterans each year. More than 50 percent of all VA ED visits are made by older Veterans 65+ years in age, a figure that is substantially higher than the 15-16 percent of ED visits made by older patients in community EDs. Older Veterans utilizing VA EDs have higher rates of poor physical health, chronic diseases, complicated social needs, and a higher rate of repeat ED visits than non-Veteran older adults in the community. For these reasons, the integration of high quality, reliable geriatric emergency care processes will have a significant impact on the delivery of VA healthcare to older Veterans.

In 2018, partnerships between VA's National Emergency Medicine and Geriatrics and Extended Care Offices created a core team to disseminate age-friendly models of care to standardize use of best practices for geriatric emergency care screening of common geriatric syndromes. Currently, 72 of 110 VA EDs (65 percent) provide emergency care with geriatrics initiatives incorporated, and 63 of these EDs are recognized by the American College of Emergency Physicians (ACEP) for these achievements with Geriatric Emergency Department Accreditation (GEDA). In 2022, ACEP awarded VA its elite system GEDA status as the nation's largest integrated healthcare system with GED accreditation.

To demonstrate the spread of GED care practices in VA EDs, we compared rates of recommended geriatric syndrome screening in VAs with GED accreditation versus those without in an observational study from January 2018 to March 2022.[1] During the study period, there were over 4 million ED visits by Veterans 65+ years in age. Geriatric screens identifying older adults at risk for poor outcomes, delirium, and falls had the highest usage rates within VA GEDs. Veterans seen at GEDs with higher intensity accredited programs (Level 1) had 76-fold greater odds of having a GED screen than at lower level accredited GEDs (Level 3).

VA ED Visits and Undiagnosed Dementia: An Opportunity

Patients with cognitive impairment utilize health services and the ED more frequently and at greater cost than those without cognitive deficits. Diagnosis of dementia or mild cognitive impairment (MCI), however, is a complex and resource-intensive process, typically done in the outpatient setting. Approximately half of older adults with dementia are undiagnosed or unaware of their diagnosis. As such, screening older adults to identify those who would warrant formal testing is an important first step to direct limited resources in this area. While it is established that patients with diagnosed dementia have high rates of ED utilization, we also know that the ED sees a significant number of *undiagnosed* dementia patients, and this trend is anticipated to grow with the aging population. Additionally, serious events or acute illness can precede or even precipitate a diagnosis of dementia. Therefore, the ED may be an opportune setting to facilitate earlier recognition of dementia and MCI.

Key Points

- Given the increase in emergency department (ED) utilization by aging Veterans, VA's current emergency care model must incorporate the unique needs of geriatric patients.
- During a study period when over 4 million Veterans aged 65+ years visited the ED, older Veterans seen at fully accredited geriatric EDs (GEDs) had 76-fold greater odds of having a GED screen (for example for deliriums, fall risk) than at EDs with no geriatric accreditation.
- Veteran ED visits represent an opportunity to enhance recognition of those with missed or undiagnosed dementia, to improve patient care transitions, and to facilitate referral processes for subsequent evaluation, diagnoses, and access to new treatments and trials.

We evaluated patterns of ED visits by older Veterans with dementia diagnoses in the months before and after their diagnoses. We identified many Veterans with a spike in ED visits in the 6 to 12 months prior to their first dementia diagnosis[2] – detection that, in the past, was routinely missed in the outpatient and ED setting. The surge in ED visit encounters shown in Figure 1 highlights the ED visit as an opportunity to enhance recognition of those with missed or undiagnosed dementia; furthermore, the ED visit presents an opportunity to improve patient care transitions, increase safety to and from the ED, and facilitate referral processes for subsequent evaluation, diagnoses, and access to new treatments and trials.

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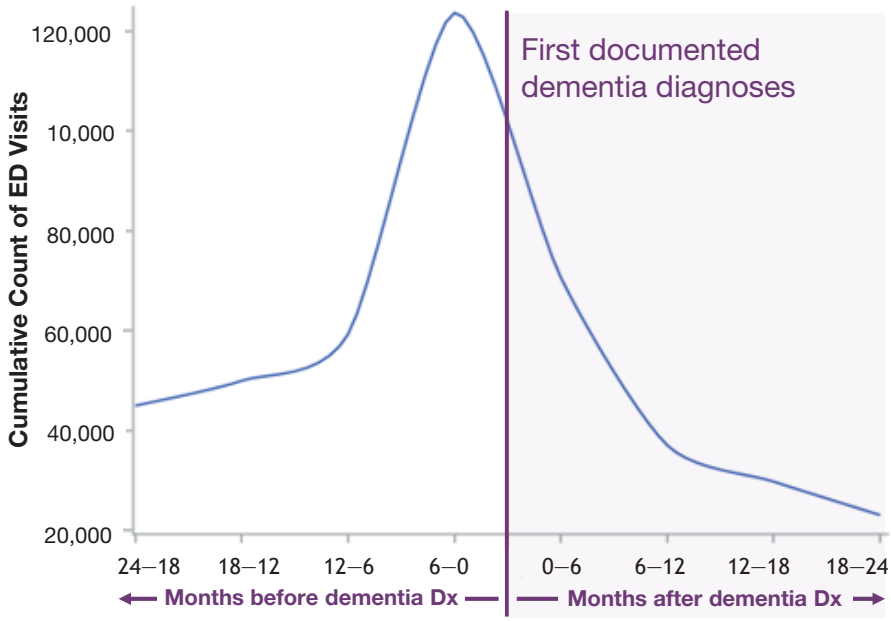
Figure 1. Emergency Department Visits and Dementia Diagnoses



Augmenting Detection of Dementia in the ED

As older Veterans increasingly utilize EDs, there will be greater need to assess them for undiagnosed cognitive impairment and dementia and thus the opportunity to increase detection of these conditions. Reported rates of dementia for Veterans seen in VA EDs (14 percent)[3] are higher than those seen among patients in community EDs (7 percent). With their specific histories and combat exposures (including PTSD, depression, traumatic brain injury [TBI]), it is likely there may be even greater risk of cognitive impairment. Early evidence indicates TBI and exposure from repetitive improvised explosive device blast injuries on the battlefield are associated with a decline in cognitive function. We can leverage the innovation of AI and machine learning tools to augment emergency care recognition of those at risk for dementia. We have successfully tested and implemented dementia risk analysis using temporal event modeling in other large healthcare systems. Our goal is to bring these algorithms and techniques to the Veterans Health Administration.[4]

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SDM is a relatively new tool in the ED setting and has had significant growth in the last few years. A scoping review focused on ED communication strategies among patients with dementia demonstrated that there are many scenarios where SDM is both feasible and appropriate.[2] Barriers to SDM included symptom severity, inadequate decisional capacity, and care partner preparedness to serve as a surrogate decision-maker.

High-quality ED dispositions for Veterans with dementia should involve shared decision making. ED providers lack best practices for making disposition decisions for persons with dementia when the need for admission is not straightforward. To support Veterans, their care partners, and ED healthcare providers to navigate this complexity, a recent career development award, funded by both VA Health Systems Research and the NIA, aims to develop a SDM tool to support disposition decisions that are aligned with patient and care partner goals if they do not have a serious illness that clearly requires admission. This study will employ a sequential design based on the widely used three-step decision aid development process created by the International Patient Decision Aid Standards (IPDAS) collaboration.[3] Briefly, the three-step process involves: 1) understanding users and their decisional needs; 2) developing and refining a prototype decision aid; and 3) assessing its use in a real-world setting. To ensure that this project is relevant to Veterans and the VA healthcare system, the study team will engage an Advisory Group of operational partners, as well as Durham's Center of Innovation ADAPT's Veteran Research Engagement Panel (VetREP) to ensure that participant-facing materials are patient-centered, literacy-tailored, culturally appropriate, and suitable for persons with dementia.

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Effective Communication in Emergency Departments

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Effective communication is essential to high quality medical care and is particularly difficult in Emergency Departments (ED) due to competing ambient sound. Ambient noise levels are high enough to label the ED as a difficult listening situation – presenting a challenge to communication, even for those with intact peripheral hearing.[1,2] For older patients with hearing loss, the likelihood of poor communication with providers and inadequate preparation for post-discharge care may be quite high. After pilot work, we developed a staged randomized clinical trial to first test efficacy and then, effectiveness of a simple, low cost, point-of-care solution for this problem, the Personal Amplifier (PA). PAs have a microphone attached to an amplifier directing the sound into the wearer's ears via wired headphones or earbuds.

We conducted a pilot trial to establish feasibility among 133 Veterans who met criteria for hearing loss based on the Hearing Handicapped Inventory-Screen (HHI-S)[3] and a single item question. Veterans were randomized to receive amplifiers at the beginning (intervention) or end (control) of their ED visit and were surveyed prior to discharge. We conducted phone calls at five and 35 days to assess ED return visits. Feasibility was quite high with over 65 percent of those who screened positive consenting to participate. Veterans were more likely to be able to listen without effort during their visit if they had a PA compared to those who did not have a PA (76 percent versus 56 percent). More importantly, Veterans with the PAs were much more likely to report that they were told their diagnosis during their visit (75 percent vs. 36 percent). Three percent of intervention Veterans reported an ED revisit within three days compared to 9 percent for control Veterans.[4]

Buoyed by these results, we launched and have nearly completed an efficacy trial of 300 Veterans in two facilities (VA NY Harbor Health System and James J. Peters VA Medical Center) and are now extending this work to an implementation trial that will include VA Syracuse Health Care, VA Eastern Colorado Health Care System, VA North Texas Health Care System, and Durham VA Health Care System facilities. We will use a stepwise increase in ED staff responsibility for implementation from 1) in-ED PA delivery and training Veterans how to use PAs during ED visits to 2) hearing loss screening to determine eligibility for PAs. With anticipated completion by the end of 2025, we aim to develop optimal strategies for screening for hearing loss, PA use, and secure storage and maintenance as guidance for all VA ED facilities across the country in delivering better hearing healthcare for our Veterans.

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