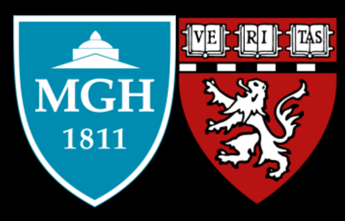


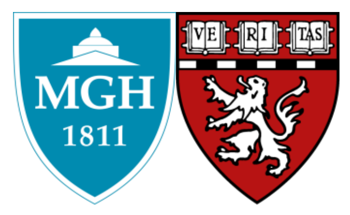
Geriatric Emergency Department

Overview & Updates

Maura Kennedy, MD, MPH
Division Chief, Geriatric Emergency Medicine

November 3, 2023

National Acute Care for Elders Conference



Disclosures

- Serve on Board of Governors for ACEP’s Geriatric Emergency Department Accreditation program
  - Volunteer position
  - Remuneration for certain activities and/or grants

Overview

- “Why Geriatric EDs”
- Nuts and Bolts of Geriatric ED Accreditation
- Evidence for Geriatric EDs

Why Geriatric EDs?

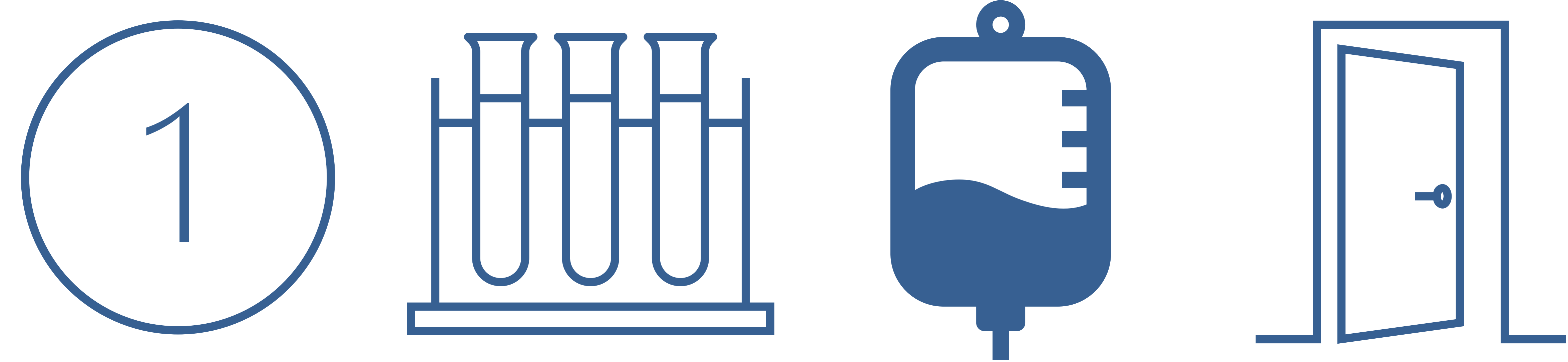
Model of care

Environment of care

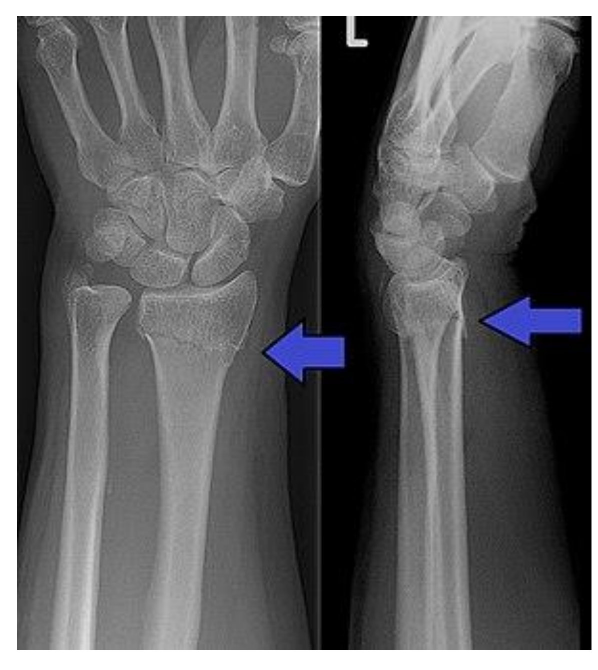
Why Geriatric EDs?

- Model of care
- Environment of care

Traditional Emergency Model of Care



GEDs: The model of care argument

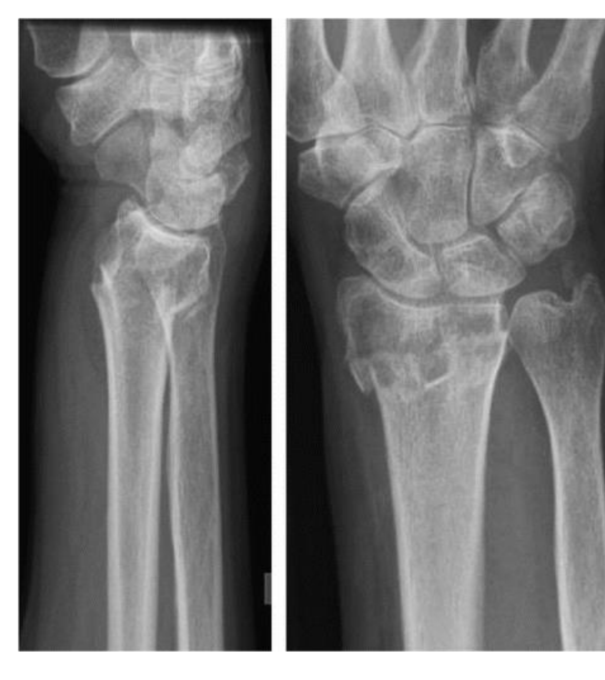


45-year-old healthy female:

- Reduction if needed
- Splint
- Analgesia
- Referral to orthopedics
- Discharge

https://upload.wikimedia.org/wikipedia/commons/thumb/e/e3/Collesfracture.jpg/600px-Collesfracture.jpg

GEDs: The model of care argument



85-year-old healthy female:

- Reduction if needed
- Splint
- Analgesia
- Referral to orthopedics
- Discharge ?

BUT

- why did she fall in the first place?
- what if she lives alone & uses a cane to walk?

https://online.boneandjoint.org.uk/cms/10.1302/2058-5241.5.190060/asset/images/medium/2058-5241.5.190060-fig1.gif

The model of care argument

1

≠

- Mind
- Mobility
- Medications
- Multicomplexity
- Matters most

Why Geriatric EDs?

Model of care

Environment of care

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https://nypost.com/2019/12/09/mount-sinai-hospitals-emergency-department-is-a-war-zone-workers-say/

Most geriatric un-friendly & delirium-inducing environment?

https://nypost.com/2019/12/09/mount-sinai-hospitals-emergency-department-is-a-war-zone-workers-say/

Other drivers

<18 years | 18–44 years | 45–64 years | 65+ years

Rate per 100,000 Population

58,000
56,000
54,000
52,000
50,000
48,000
46,000
44,000
42,000
40,000
38,000
36,000
34,000
32,000
30,000

54,371
56,803
43,252
47,022
39,757
38,552
35,823
33,042

2006 2007 2008 2009 2010 2011 2012 2013 2014 2015
Year

U.S. Population Ages 65 and Older, 1960 to 2060 (Millions)

100
80
60
40
20
0

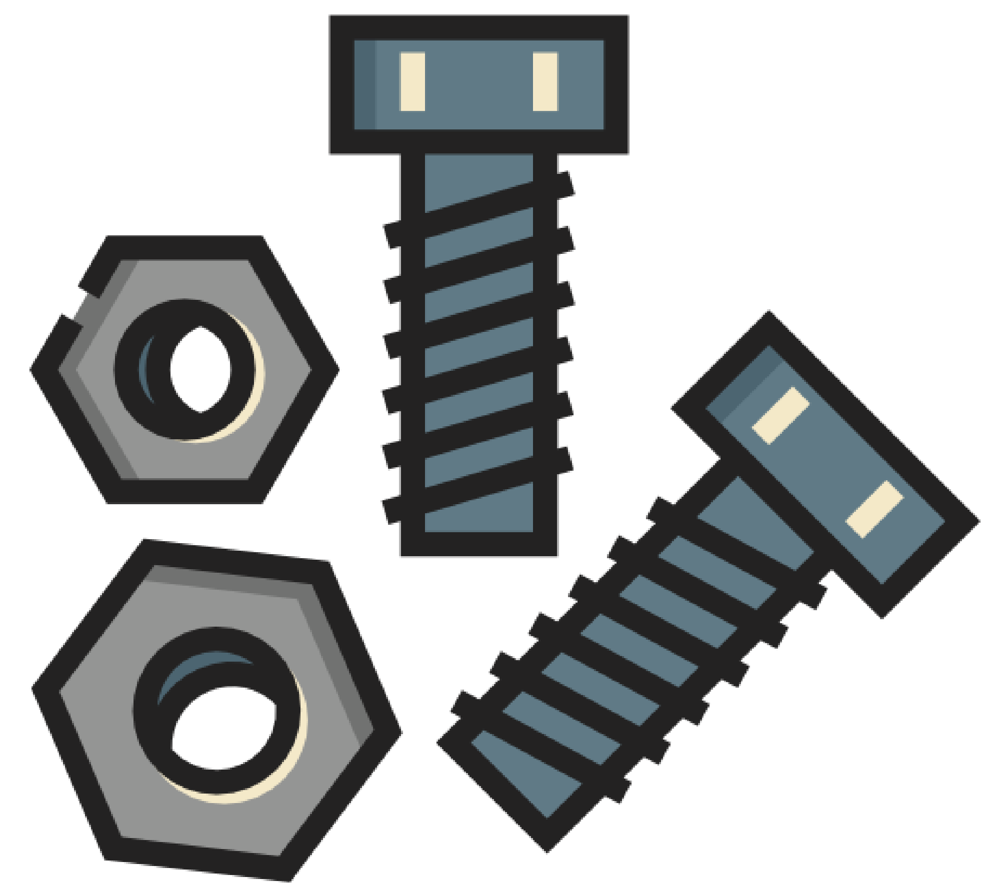
98 Million
46 Million
Ages 65–84
Ages 85+

1960 1970 1980 1990 2000 2010 2014 2020 2030 2040 2050 2060

https://www.hcup-us.ahrq.gov/reports/statbriefs/sb238-Emergency-Department-Age-Payer-2006-2015.jsp

Pop Bulletin 70 (2) Dec 2015
AHRQ Stat Brief #497 Nov

Nuts and Bolts of Geriatric ED Accrediation



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History of Geriatric Emergency Departments

- 1st Geri EDs opened in 2008
  - Some motivated by mission
  - Some motivated by market
  - Tremendous variability among early GEDs

https://www.stjosephshealth.org/newsroom/archive/item/1719-focused-care-geriatric

Geriatric ED Guidelines

- Published 2013
- Endorsed by SAEM, ACEP, AGS, ENA
- Domains
  - Staffing
  - Education
  - Care processes
  - Environment and Equipment
  - Quality improvement

2023: Revised criteria and new care processes & outcomes

Ann Emerg Med. 2014 May;63(5):e7-25.
doi: 10.1016/j.annemergmed.2014.02.008.

Levels of Accreditation

Level 3
Good Geriatric Care
Achievable by all EDs

Level 2
Enhanced
Geriatric Care

Level 1
Center of Excellence

Level 1	Level 2	Level 3
	MD & RN Champion	
56 hours CM 4 additional roles	56 hours CM 2 additional roles	
≥20 care process	≥10 care process	1 care process
≥5 outcomes tracked	≥3 outcomes tracked	
	Canes/walkers	
≥10 items of specialized equipment *and more*	≥5 items of specialized equipment *and more*	
	24-hour access to food and beverages	
$15,000	$7,500	$2,500

Level 1	Level 2	Level 3
MD & RN Champion		
56 hours CM 4 additional roles	56 hours CM 2 additional roles	
≥20 care process*	≥10 care process*	**4** care processes*
≥5 outcomes tracked	≥3 outcomes tracked	**3 required care processes*
Canes/walkers		
≥10 items of specialized equipment *and more*	≥5 items of specialized equipment *and more*	
24-hour access to food and beverages		
$15,000	$7,500	$2,500

Baseline required care processes for all GEDs

- Care processes to minimize urinary catheter uses, physical restraints and NPO status

Screening

- Care processes screening for delirium, dementia, function/functional decline, fall risk, elder abuse
- New: depression, social isolation, alcohol use disorders and food insecurity

Medication Safety & Order Sets

- Medication reconciliation by pharmacist, process to minimize use of PIMS, or pain management
- 3 or more geriatric specific order sets

Specialty Consultation or Staffing

- Geriatric psychiatry and palliative care consultations
- Volunteer programs

Care transitions

- Enhanced communication with PCP or patient residential care facilities
- Discharge care: discharge instructions, follow up phone calls, transportation services, paramedicine programs
- New care referrals: home services, outpatient geriatric clinics, transfer to new post-acute care facility

Boarding (new)

- Care process to minimize ED boarding for geriatric patients/sub-group
- Care process to optimize care of geriatric patients/ sub-group who are boarding in ED for extended period

Novel care process (new)

- ED proposes novel care process to improve care of older ED patients

Outcomes Tracked

Metrics related to at least 5 care processes

- # or % eligible receiving intervention
- # or % screening positive
- # of referrals provided and % who completed referral care

Utilization and throughput metrics

- # OA admitted with CC and admit diagnosis
- # OA discharged with CC and ED diagnosis
- # and % OA with repeat ED visits
- # and % OA with re-admission
- # and % of OA staying >8 hours in the ED

ED Boarding metrics (new)

- **Level 1 & 2 required:** ED boarding metrics for geriatric patients with comparison to non-geriatric patients
- Optional metrics for sites with care process related to ED boarding

Environmental Modifications and Equipment

Environmental Modifications:

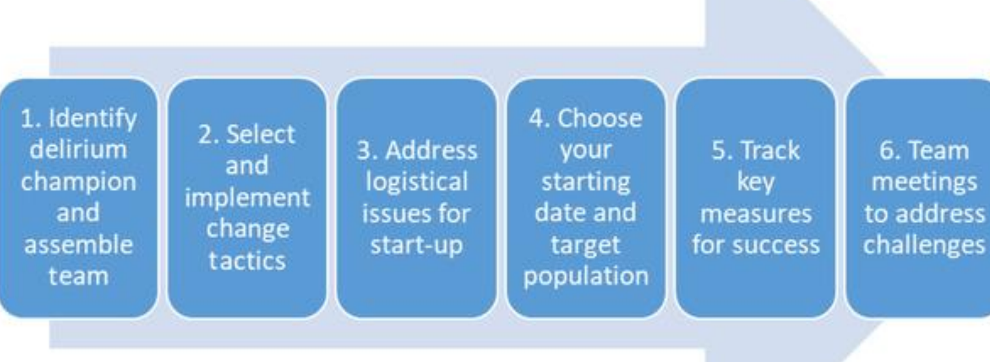
- Easy access to food/drink (all GEDs)
- 2 chairs per patient bed (1&2)
- Large clock (1&2)
- Enhanced lighting
- Efforts at noise reduction
- Non-slip floors
- Adequate handrails
- High quality signage
- Wheel-chair accessible toilets
- Availability of raised toilet seats

Equipment:

- Canes and walkers (all levels)
- Low beds
- Reclining armchairs
- Non-slip socks
- Pressure-ulcer reducing mattresses
- Blanket warmer
- Hearing assist devices
- Bedside commodes
- Condom catheters

Lessons learned from 5 years of GEDA

- Take your time planning!
  - Identify the “whys” your ED should apply for GEDA
  - Develop a roadmap
  - Reach out to GEDA and other GEDs
  - Work on a system level
- Care processes selection:
  - Identify what matters most for patients, your ED, and your institution
  - Consider feasibility
  - Link screening to visible action
  - Try to automate monitoring of processes
- Continued engagement
  - Develop an on-boarding plan for new staff
  - Celebrate and share your successes



ED-DEL: delirium change package and toolkit
https://doi.org/10.1002%2Femp2.12421

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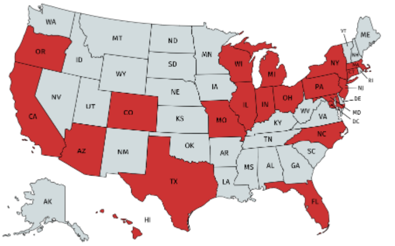
Evidence for Geriatric EDs

American College of Emergency Physicians®

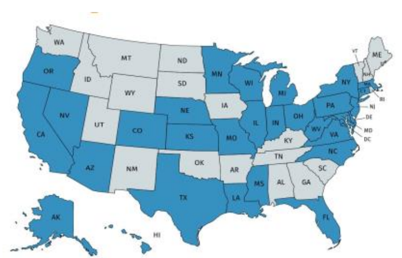
ADVANCING EMERGENCY CARE

Accredited EDs by Fiscal Year

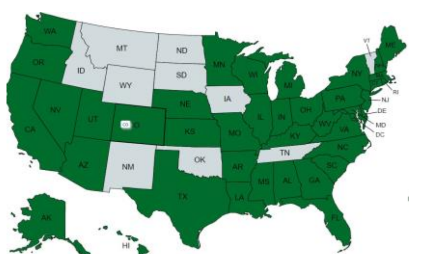
Year 1:
75 EDs accredited



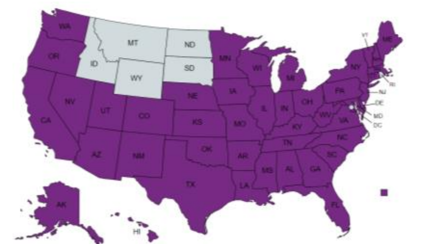
Year 2:
166 EDs accredited



Year 3:
247 EDs accredited

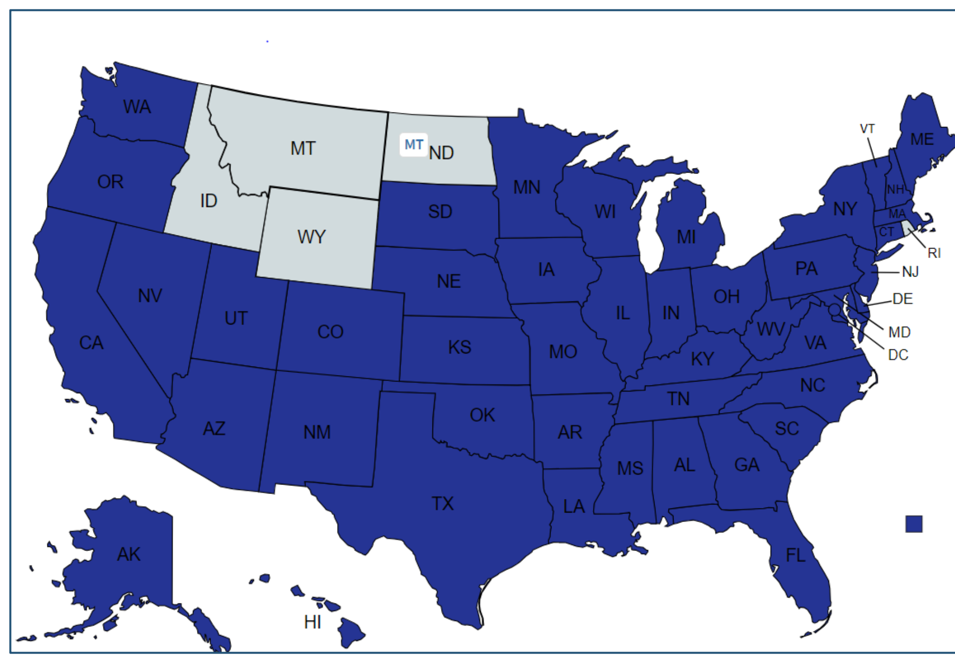


Year 4:
355 EDs accredited

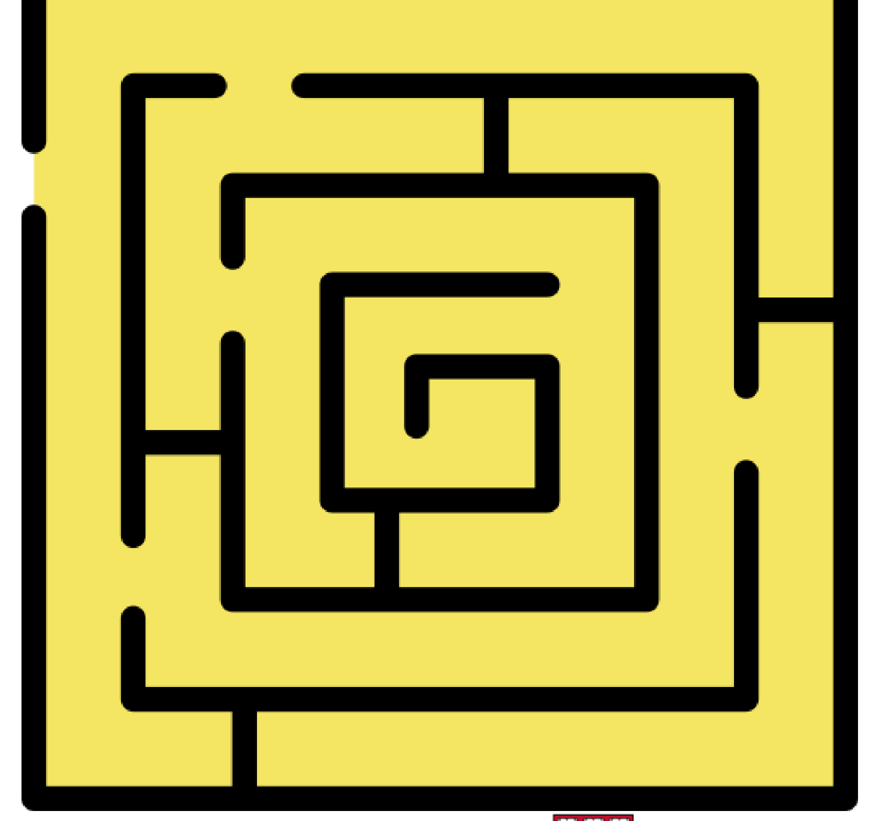


Currently: 461 **EDs accredited**

- 461 U.S. /45 States / 9 international
  - 27 Level 1, 55 Level 2, 379 Level 3
  - Spain, Brazil, Canada, Thailand
- 23 upgraded sites 98 renewals
- 15 expired/canceled sites



“Evolving” Evidence



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GEDI WISE Studies

- Geriatric Emergency Department Innovation in care through Workforce, Informatics, and Structural Enhancement
- 3 urban academic GEDs
- All had transitional care nurse (TCN) program

GEDI WISE Studies

- 10% of patients 65+ had TCN exposure
- Entropy balancing to obtain weighted comparison group

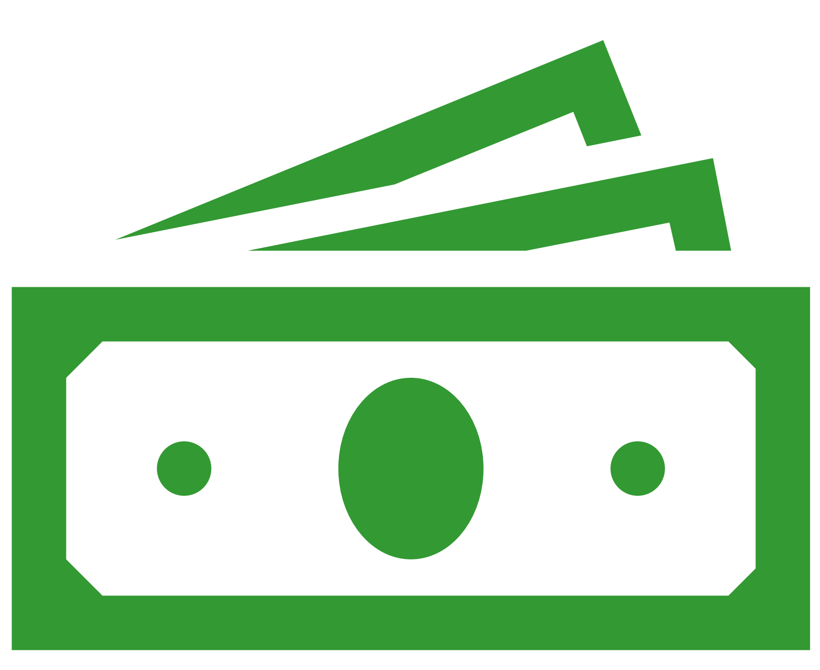
Outcome (Reference Discharged with No Repeat 72-Hour ED Visit[a])	Mount Sinai Medical Center	Northwestern Memorial Hospital	St. Joseph's Regional Medical Center
	Effect of TCN vs Control (95% Confidence Interval)		
Inpatient admission (Day 0)[a]	−9.90 (−12.31 to −7.47)	−16.46 (−18.68 to −14.24)	−4.72 (−7.47 to −1.98)
Discharged with subsequent 72-hour ED visit[a]	1.49 (0.65–2.33)	1.38 (0.65–2.12)	0.37 (−0.53–1.28)
Any inpatient admission (Day 0–30)[b]	−7.79 (−10.33 to −5.25)	−13.82 (−16.07 to −11.58)	−1.38 (−4.04–1.27)

DOI: 10.1111/jgs.15235

Hwang *et al*
doi:10.1001/jamanetworkopen.2020.37334

Original Investigation | Emergency Medicine

Association of a Geriatric Emergency Department Innovation Program With Cost Outcomes Among Medicare Beneficiaries



- TCN vs no TCN exposure
  - 30-day savings:
    - $2436 (95% CI, $1760-$3111)
    - $2905 (95% CI, $2378-$3431)
  - 60-day savings:
    - $1200 (95% CI, $231-$2169)
    - $3202 (95% CI, $2452-$3951)

Likely from ↓ admission & readmissions

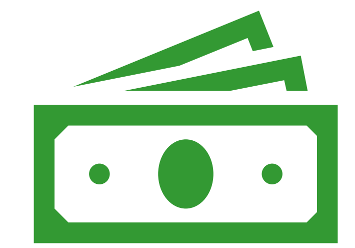
Clinical and financial outcome impacts of comprehensive geriatric assessment in a level 1 geriatric emergency department

Austin Haynesworth MAS[1] | Todd P. Gilmer PhD[2] | Jesse J. Brennan MA[3] | Emily H. Weaver PhD, MA[4] | Vaishal M. Tolia MD, MPH[3] | Theodore C. Chan MD[3] | James P. Killeen MD[3] | Edward M. Castillo PhD, MPH[3]

AMERICAN COLLEGE OF EMERGENCY PHYSICIANS
ACCREDITED
GERIATRIC
EMERGENCY DEPARTMENT
LEVEL 1

DOI: 10.1111/jgs.18468

Outcome	Predicted probabilities		Difference (95% CI)	p-Value
	Matched cases	Matched controls		
Admissions at index	36.0% (33.5%, 38.7%)	49.0% (46.1%, 52.0%)	−13.0% (−17.0%, −9.0%)	<0.001
Total admissions through ED within 30-days	42.5% (39.8%, 45.3%)	53.8% (50.8%, 56.8%)	−11.3% (−15.6%, −7.1%)	<0.001
Total admissions through ED within 90-days	47.2% (44.6%, 50.0%)	57.2% (54.2%, 60.2%)	−10.0% (−13.8%, −6.0%)	<0.001
ED Revisits within 7-days	11.3% (9.7%, 13.2%)	10.5% (8.8%, 12.5%)	0.8% (−1.6%, 3.2%)	0.520
ED Revisits within 30-days	24.7% (22.3%, 27.2%)	20.7% (18.5%, 23.1%)	4.0% (0.6%, 7.3%)	0.017



Estimate savings of:

- $2513 at index visit
- $2963 at 30 days
- $2533 at 90 days

Association of a geriatric emergency department program with healthcare outcomes among veterans

Jill M. Huded MD[1] | Albert Lee MD, PhD[2] | Sunah Song PhD[3,4] | Colleen M. McQuown MD[2] | Brigid M. Wilson PhD[3] | Todd I. Smith MD[2,5] | Robert A. Bonomo MD[2,3,5]

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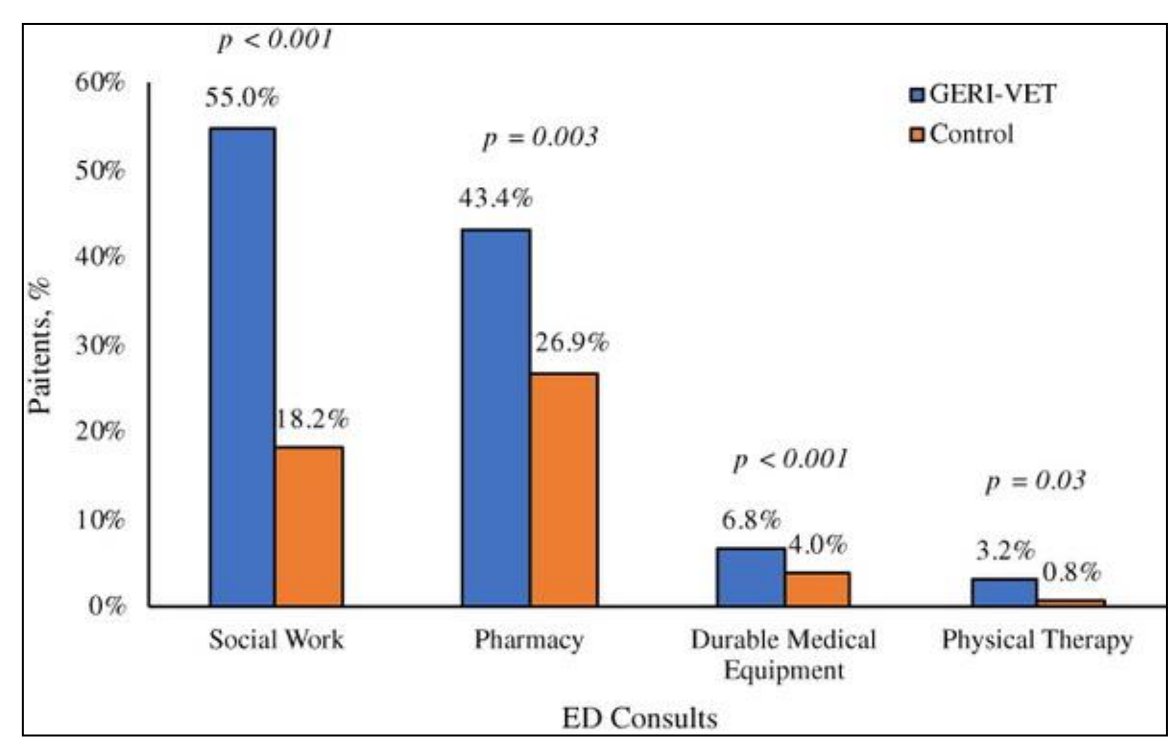
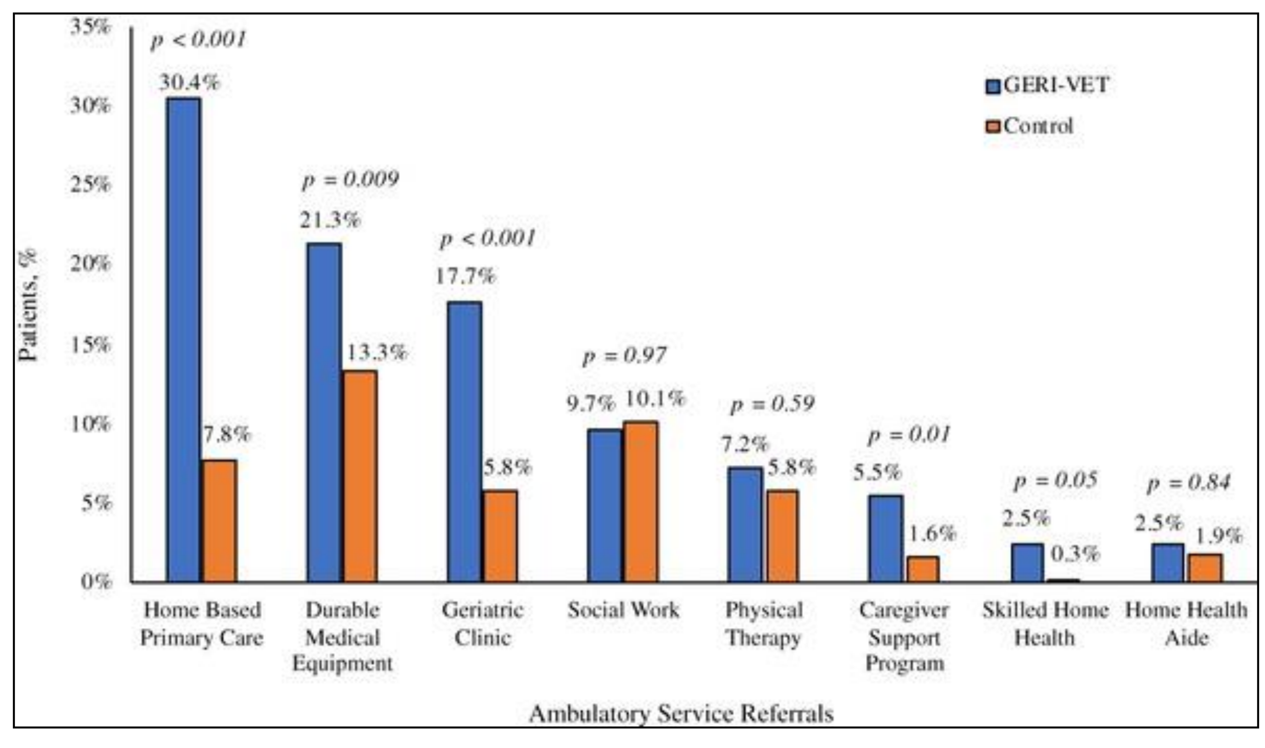
EMERGENCY DEPARTMENT
LEVEL 1

DOI: 10.1111/jgs.17572





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EMERGENCY DEPARTMENT
LEVEL 1

DOI: 10.1111/jgs.17572

GERI-VET
Control

Patients, %
70%
60%
50%
40%
30%
20%
10%
0%

$p = 0.003$
50.1%
57.5%
Admission from ED

$p = 0.004$
56.8%
64.0%
30-day Admission

$p = 0.11$
62.3%
66.2%
90-day Admission

$p = 0.25$
3.2%
2.2%
72-h ED Revisit

$p = 0.57$
18.8%
17.7%
30-day ED Revisit

Post-ED Hospitalization and ED Revisit Rates

Implementation of a geriatric emergency medicine assessment team decreases hospital length of stay

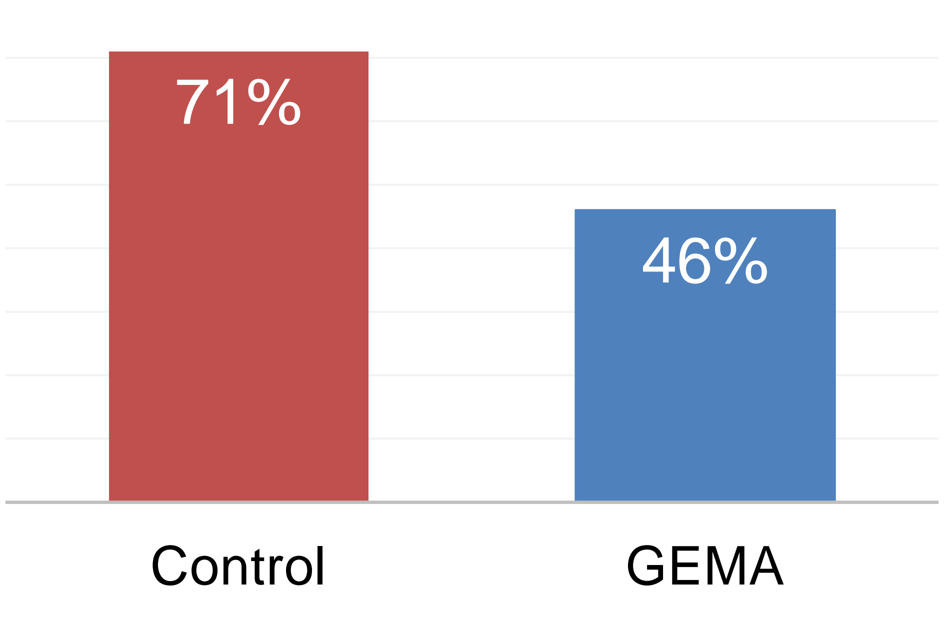
Sarah E. Keene, MD, PhD [a], Lauren Cameron-Comasco, MD [a,b,*]

- Geriatric EM Assessment (GEMA) Team:
  - Geriatric APP (SBT, bCAM, TUG, Katz ADL)
  - Geriatric care manager
  - Pharmacy technician & OT as needed
- Case control study of patients seen 12/1/2018 – 11/30/2019
  - 65+, arrival time M-F 8a-6P, ESI 2-5, “stable” by EM MD
  - Compared assessed vs unassessed
  - Controlled for CCI, ESI, “severe diagnosis” in models

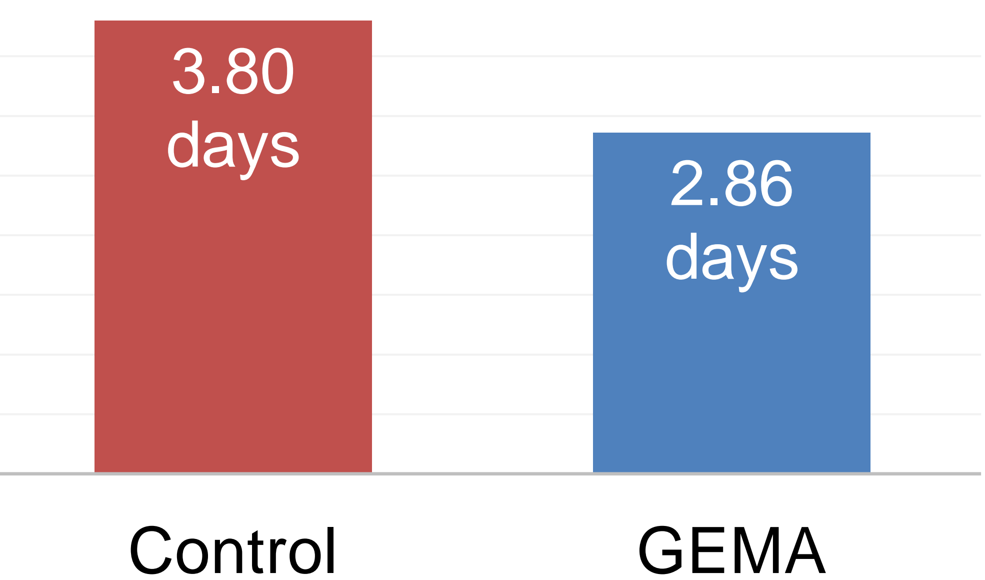
Implementation of a geriatric emergency medicine assessment team decreases hospital length of stay

Sarah E. Keene, MD, PhD [a], Lauren Cameron-Comasco, MD [a,b,*]

Admission Rate
aOR 2.06 (95%CI: 1.73-2.47)



Hospital Length of Stay
adjusted $p < 0.001$



The HEAR-VA Pilot Study: Hearing Assistance Provided to Older Adults in the Emergency Department

Joshua Chodosh MD, MSHS, Keith Goldfeld DrPH, Barbara E. Weinstein PhD, Kate Radcliffe BA, Madeleine Burlingame BA, Victoria Dickson PhD, Corita Grudzen MD, MSHS, Scott Sherman MD, MPH, Jessica Smilowitz MPH, Jan Blustein MD, PhD

First published: 11 February 2021 | https://doi-org.treadwell.idm.oclc.org/10.1111/jgs.17037 |

Patient Experience:

- Better experience across all domains
- ↑ ability to understand what was said
  - 75% vs 56%
- ↑ reporting that clinicians provided explanation
  - 75% vs 36%
- ↓ 72-hour revisit rates
  - 9% vs 3%

Leveraging VA geriatric emergency department accreditation to improve elder abuse detection in older Veterans using a standardized tool

Lena K. Makaroun MD, MS[1,2,3] | Jaime J. Halaszynski MSW[4] | Tony Rosen MD, MPH[5] | Kristin Lees Haggerty PhD[6] | Jennifer K. Blatnik MSW[7] | Ruthann Froberg MPA[6] | Alyssa Elman MSW[5] | Christine A. Geary[7] | Dyan M. Hagy MSW[7] | Crescencio Rodriguez[8] | Colleen M. McQuown MD[9]

AEM
Academic Emergency Medicine

DOI: 10.1111/acem.14646

251 EM-SART Screens

5 positive comprehensive screens (2.0%)

Positive pre-screens:

3 financial exploitation

4 physical abuse

2 neglect

1 emotional abuse

Repeat Screens

- 2 positive → negative
  - One with enhanced transitional care
  - One obtained fiduciary to manage finances
- 1 negative → positive
  - Caregiver present on 2nd visit → positive observational items

- Research into
  - Lower level GEDs
  - Quality of care
  - Patient oriented outcomes
  - Satisfaction

Conclusions

Rapid evolution in geriatric emergency care over the decade

Significant growth in accredited GEDs

- Since 2018 ACEP has accredited >450 GEDs
- Anticipate continued growth across the US

Evidence base is limited

- Most from Level 1 GEDs with a focus on healthcare utilization
  - Advanced staffing models likely decrease admissions and total costs of care
- More data is needed on impact of
  - Level 2 and Level 3 GEDs
  - GEDs on care quality and patient-oriented outcomes

Thank you!

Maura Kennedy, MD, MPH
mkennedy8@mgb.org

Some icons courtesy of flaticon.com