Geriatric Emergency Medicine

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March 24, 2017
Outline

- The Challenge

- The Tools to address
  - Delirium
  - Care transition
  - Fall Evaluation and Mobility
  - Pain control

- Implementation and Dissemination
The Challenge: Demographics

Population Aged 65 and Over: 1900 to 2050

The Challenge: Demographics

![Graph showing population age 65 and over and age 85 and over, selected years 1900–2010 and projected 2020–2050.]

**NOTE:** These projections are based on Census 2000 and are not consistent with the 2010 Census results. Projections based on the 2010 Census will be released in late 2012.

Reference population: These data refer to the resident population.

The Challenge: Cost

Figure 4
Actual and Projected Net Medicare Spending, 2010-2026

NOTE: All amounts are for federal fiscal years; amounts are in billions and consist of mandatory Medicare spending minus income from premiums and other offsetting receipts.
SOURCE: Congressional Budget Office, Updated Budget Projections: 2016 to 2026 (March 2016); March 2016 Medicare Baseline.
Italy

- Most rapidly aging population in all of Europe and also the lowest birth rate in all of Europe.

- It is predicted that 15% of the Italian population will be over the age of 80 years old in the year 2050.
US pyramid

Data Source: US Census Bureau
Italy Demographics

Data Source: US Census Bureau
The Challenge: ED Structure
### Why is Geriatric EM a Challenge: Different Paradigm

<table>
<thead>
<tr>
<th>Non-geriatric ED Patient</th>
<th>Geriatric ED Patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single complaint</td>
<td>Multiple problems</td>
</tr>
<tr>
<td></td>
<td>Medical</td>
</tr>
<tr>
<td></td>
<td>Functional</td>
</tr>
<tr>
<td></td>
<td>Social</td>
</tr>
<tr>
<td>Acute</td>
<td>Acute on chronic, subacute</td>
</tr>
<tr>
<td>Diagnose and treat</td>
<td>Control symptoms, maximize function, enhance quality of life</td>
</tr>
<tr>
<td>Rapid disposition</td>
<td>Continuity of care</td>
</tr>
</tbody>
</table>
Geriatric patients and Emergency Medicine

- EM focuses on chief complaints to identify life or limb-threatening issues and urgent disease

- Aging population have less specific/localized complaints

- More cognitive impairment

- Increased morbidity and mortality in general in this vulnerable population

- Multiple clinical, social, psychological factors
Challenges of Caring for Elderly in the Emergency Department

- Busy rooms
- Meet patients for first time
- Complex medical history
- Unique responses to medications
- Atypical presentations
- Polypharmacy
- Decreased functional reserve
- Living situation
  important/support systems
- Importance of functional/baseline status
Older adults and the ED

- ED likely disproportionately affected by aging population

- Older ED patients
  - Have emergency conditions
  - Hospitalized
  - Longer ED stays
  - Higher charges
  - 27% have ED revisit, hospitalization, death within 3 months (Hwang, 2007, JAGS)
ED Crossroads of Inpatient and Outpatient care

Self-Referral, Emergency Medical Services

Self-Referral, Ambulatory

Physician Office

Emergency Department

Urgent Care or Walk-in Clinic

Nursing Home or Assisted Living

Hospital
• 60% Admissions Age ≥65
• Tension of admissions for hospital revenue ↔ 31% national health care spending
• ED is expensive decision maker (admit vs. discharge)
• Role for care coordination
Tools
Self-Awareness

"The fish will be the last to discover the water."

www.feelingoodfeelinggreat.com
Confusion Assessment Method

Feature 1: Acute onset of mental status changes or a fluctuating course

And

Feature 2: Inattention

And

Feature 3: Disorganized Thinking OR Feature 4: Altered Level of Consciousness

= DELIRIUM

http://jajsamos.files.wordpress.com/2011/03/cam-delirium-flow-chart.jpg
Two step Delirium Screen

Delirium Triage Screen (DTS)
Flow Sheet

Altered Level of Consciousness
RASS

RASS = 0

Inattention
"Can you spell the word 'LUNCH' backwards?"

0 or 1 error

DTS Positive
Confirm with bCAM or CAM

DTS Negative
No Delirium

RASS, Richmond Agitation-Sedation Scale
Copyright © 2012. Vanderbilt University.
Two step Delirium Screen

If physicians do both, 82% sensitive, 95% specific, Han 2013 Ann Emerg Medicine
From: Delirium, Dementia, and Other Mental Health Disorders of the Elderly
Care Transitions
Community Dwelling Older Adults from the ED are Vulnerable for Poor Outcomes:

- About half to 2/3rds of older adults are discharged after their ED visit
- About 23% are at risk of an adverse health event in the following month
  - 10% return to the ED, 11% are hospitalized, 1.4% go to a SNF, and 2% die

Risk factors for poor outcomes
- Age, Medicaid, multiple-comorbidities, recent ED/ hospital use, barriers to obtaining follow up care, and ED discharge diagnosis of a chronic condition.

7) BMJ 356, 2017 *epub*
Identification of Seniors at Risk (ISAR)

**ISAR screening questions**

1. **Before the illness or injury that brought you to the Emergency Department,** did you need someone to help you on a regular basis? 
   - Yes/No
2. **Since the illness or injury that brought you to the Emergency Department,** have you needed more help than usual to take care of yourself? 
   - Yes/No
3. **Have you been hospitalized for one or more nights during the past six months** (excluding a stay in the Emergency Department)? 
   - Yes/No
4. **In general, do you see well?** 
   - Yes/No
5. **In general, do you have serious problems with your memory?** 
   - Yes/No
6. **Do you take more than three different medications every day?** 
   - Yes/No

**Score of 2 or more may indicate increased risk.**

*Figure 4* The Identification of Seniors at Risk (ISAR) screening tool.

**Note:** Data from McCusker J, Bellavance F, Cardin S, Trepapier S, Verdon J, Ardman O. Detection of older people at increased risk of adverse health outcomes after an emergency visit: the ISAR screening tool. *J Am Geriatr Soc.* 1999;47:1229–1237. 69

Geriatric Emergency Medicine Nurse
Top 5 Causes of Falls

**Impaired Vision**—Cataracts and glaucoma alter depth perception, visual acuity, peripheral vision and susceptibility to glare. **Solution:** Add color and contrast to identify objects, such as grab bars and handrails.

**Medication**—Many drugs (i.e., sedatives, anti-depressants) reduce mental alertness, affect balance and gait and cause drops in systolic blood pressure while standing. Mixing certain medications increases these effects, causing falls. **Solution:** Have a home care professional carefully monitor medications and interactions.

**Weakness, Low Balance**—Weakness and lack of mobility leads to many falls. **Solution:** Exercise regularly to boost strength and muscle tone.

**Home Hazards**—Most homes are full of falling hazards. **Solution:** Add grab bars in the bathroom, install proper railings on both sides of stairways, improve the lighting, remove loose rugs and fix uneven or cracked sidewalks.

**Chronic Conditions**—Parkinson’s, heart disease and other conditions increase the risk of falling. **Solution:** Enlist specially-trained caregivers to ensure that patients follow their treatment plans, assist them to doctor appointments and recognize red flags.

- 30%: 10-20% of people who fall suffer moderate to severe injuries. These injuries can make it hard to get around or live independently.
- 1 IN 3 adults age 65 and older fall each year, yet less than half talk to their healthcare providers.
- 15: Every 15 seconds across America, a senior citizen is sent to the E.R. for a fall-related injury.

**BrightStar**

*MAKING MORE POSSIBLE* 
LIFECARE | KIDCARE | STAFFING
To prevent falls, providers should focus **FIRST** on these modifiable risk factors:

- Lower body weakness
- Difficulties with gait and balance
- Use of psychoactive medications
- Postural dizziness
- Poor vision
- Problems with feet and/or shoes
- Home hazards
Mobility Assessment: Get Up and Go

Shaula Forsythe, Class of 2014, measures “Get Up and Go” time at the GIG Gait and Balance Screening.
Medication Management

- Beers Criteria
- Geriatrics Cultural Navigator
- GeriPsych Consult
- Guide to Common Immunizations
- Management of Atrial Fibrillation

**LithiumOL**

**Geriatric Dosage**
150 - 1,000 mg/d (therapeutic level 0.5 - 0.8 mEq/L)

**Adverse Events**
Nausea, vomiting, tremor, confusion, leukocytosis, gait ataxia

**Comments**
Poor tolerability in older adults; toxicity at low serum concentrations; monitor thyroid and renal function

*Approved by FDA for treatment of bipolar disorder, OL = Off-label
Pain Management

- Pain is undertreated in older adults
- Patients >75 yo
  - 1/3\textsuperscript{rd} with severe pain not given analgesic
  - 19\% less likely to receive pain meds than pts aged 35-54 years

Pain Management

- Strategies for treating pain
  - Involve patient and the family in treatment options
  - Consider non-pharmacologic approaches
  - Scheduled acetaminophen
  - Start low and titrate slow with opioids and avoid preparations with acetaminophen
  - Anticipate side effects (especially constipation, nausea, tiredness) if going to prescribe opioids
  - Ensure close follow-up
  - Regional blocks for hip fractures

Dissemination
With the aging of the population and the demographic shift of older adults in the healthcare system, the emergency department (ED) will be increasingly challenged with complexities of providing care to geriatric patients. The special care needs of older adults unfortunately may not be aligned with the priorities for how ED physical design and care is rendered. Rapid triage and diagnosis may be impossible in the older patient with multiple comorbidities, polypharmacy, and functional and cognitive impairments who often presents with subtle clinical signs and symptoms of acute illness. The use of Geriatric Emergency Department Interventions, structural and process of care modifications ad-

may help to address these challenges and thereby improve the quality of care of elderly people in the ED.

OLDER ADULTS AND THE ED

Although the aging population will affect all areas of health care, the ED is likely to be disproportionately affected. In 2002, approximately 58% of 75-year-olds had at least one visit to an ED, as compared to 39% of those of all ages, and ED use increased with increasing age. Once in the ED, older patients are more likely to have an emergent or urgent condition, be hospitalized, and be admitted to a critical care

• Paradigm shift of ED physical design and care (Pediatric, Psych EDs)
• Geriatric ED Interventions (GEDIs) –
• No “Geriatric EDs” or “Senior EDs” at time of press (2007)
Senior Emergency Departments

Senior ER℠ at St. Joseph Mercy Ann Arbor

Michigan’s First Senior Emergency Department℠

All aspects of your Senior Emergency Department℠ experience are designed with your long-term health and wellness in mind. At St. Joseph Mercy Ann Arbor’s Senior ER℠, we’ve enhanced our geriatric clinical training, enabling our staff to spend more time evaluating your health and medical condition to ensure we’re meeting your total needs. A team of board-certified, specially trained physicians, nurses, pharmacists and other clinical staff, including a dedicated care coordinator will assess your personal medical situation and help to identify and address your physical, emotional and spiritual needs.

Our specially equipped area has 12 treatment rooms, with the ability to expand to flex up to 22 beds with access to sophisticated care and aftercare resources. St. Joseph Mercy Ann Arbor’s Senior Emergency Department℠ is the first program in Washtenaw county exclusively dedicated to meeting the needs of patients age 65 and up, their caregivers and family. During the triage (assessment) process, a nurse interviews the patient to determine if senior emergency care℠ is right for you. As the program is personalized, you determine if you want to be treated within the Senior ER℠ environment.

We’ve transformed the physical space in our Senior ER℠ as well to optimize your comfort and safety in a
Geriatric ED Guidelines
• Template for staffing, equipment, education
• Protocols
  □ screening geriatric patients
  □ use of urinary catheters
  □ geriatric medication management
  □ geriatric fall assessment
  □ dementia/delirium
  □ palliative care
• Recommendations for follow up care
• Performance improvement measures
Geriatric Emergency Departments

Physical plant:
- Lighting
- Noise
- Beds that do not lead to bed sores
- Ways to communicate with nurse
Staff Education

- All ED clinicians care for elderly
- However, no specific geriatric curriculum in emergency medicine training
- Most important component of a geriatric ED is educating staff
Geriatric EM Fellowships

- SAEM approved
- Mount Sinai Hospital
- University of Toronto
- New York Presbyterian
- University of North Carolina
- Others
- University of California Davis
- William Beaumont Hospital
Editor’s Note: In our Feb. 19 Health AGEnda post, the team we’re informally calling the Hartford Geri EM Champions shared information about the first two Geriatric Emergency Medicine Boot Camps and a meeting hosted by the John A. Hartford Foundation in late January to discuss new opportunities to improve acute care of older adults. Today, in the second of two parts, our EM experts discuss why our current system is...
Geriatric Emergency Department Collaborative

1. **Build** GEDC learning collaborative

2. **Build** the evidence of GED impact

3. **GEDC DATA** infrastructure

4. **Sustainability** planning

5. **Partnership** building
Thinking About Inventing Your Own Geriatric ED?
Here’s your “Must-Do” List

1. Obtain administrative support
2. Delineate the appropriate patient population (community-dwelling older adults, nursing home patients, or both)
3. Identify the physical location for the unit keeping in mind needs of this patient population (quieter surroundings)
4. Assess the financial and logistic feasibility of structural modifications
5. Identify local champions to attain and sustain the initiatives
6. Educate all staff
Organizational Support and Leadership

- ACEP, SAEM, ENA, & AGS collaboration
  - Guidance and influence of the leading EM and Geriatric organizations critical to success
  - Builds from geriatric leadership already demonstrated by all 4 organizations
    - Geriatric ED Guidelines endorsed by these 4 organizations
  - Support for all 4 organizations to support the work of the GEDC

- ACEP is leading Geriatric ED Accreditation
  - 3 Levels
  - Level 3 is for all emergency departments in the United States
Get involved with AGEM:

Leadership, Networking, Mentoring
UNLESS someone like you cares a whole awful lot, nothing is going to get better. It’s not.

—The Lorax
Questions?
## Fall risk factors are categorized as intrinsic or extrinsic.

<table>
<thead>
<tr>
<th>Intrinsic</th>
<th>Extrinsic</th>
</tr>
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<tbody>
<tr>
<td>Advanced age</td>
<td>Lack of stair handrails</td>
</tr>
<tr>
<td>Previous falls</td>
<td>Poor stair design</td>
</tr>
<tr>
<td>Muscle weakness</td>
<td>Lack of bathroom grab bars</td>
</tr>
<tr>
<td>Gait &amp; balance problems</td>
<td>Dim lighting or glare</td>
</tr>
<tr>
<td>Poor vision</td>
<td>Obstacles &amp; tripping hazards</td>
</tr>
<tr>
<td>Postural hypotension</td>
<td>Slippery or uneven surfaces</td>
</tr>
<tr>
<td>Chronic conditions including arthritis, diabetes, stroke, Parkinson’s,</td>
<td>Psychoactive medications</td>
</tr>
<tr>
<td>incontinence, dementia</td>
<td></td>
</tr>
<tr>
<td>Fear of falling</td>
<td>Improper use of assistive device</td>
</tr>
</tbody>
</table>
The Challenge: ED Training

There are known knowns.
There are things that we know that we know.
There are known unknowns.
That is to say, there are things that we now know we don't know.
But there are also unknown unknowns.
There are things we do not know we don't know.
And each year we discover a few more of those.
Unknown unknowns.
It takes 17 years to turn 14 per cent of original research to the benefit of patient care.

E.A. Balas, 2000
Delirium Prevention
Mini-Cog Mental Status Screener

Figure 1. The Mini-Cog scoring algorithm. The Mini-Cog uses a three-item recall test for memory and the intuitive clock-drawing test. The latter serves as an "informative distractor," helping to clarify scores when the memory recall score is intermediate.

http://geriatrics.uthscsa.edu/educational/med_students/minicog_admin_files/image002.jpg
2016 ASMMC ED revisits of high risk geriatric patients: Geri ED vs. Standard Care

9% Absolute Risk Reduction
The Challenge: Precarious outpatient connections
Advance Care Plan Integration
GEDC Advisory Board

- Michael Malone (Geriatrics)
- Albert Siu (Geriatrics)
- Charlotte Yeh (AARP)
- Dawn Specht (ENA)
- Libby Hoy (PFCC)
- Vidor Friedman (ACEP Board)
- Mark Rosenberg (ACEP Board)
- Jennie Porth (SW)
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- Brenda Schmitthenner (SW)
- Jan Busby-Whitehead (AGS Board)
- Sandy Schneider (ACEP)
- Nancy Lundebjerg (AGS)
- James Holmes (SAEM Board)
- Melissa Mordecai (ENA)
- Kevin High (CMO Wake Forest)
- Kevin Biese
GEDC Sites

   Aurora Health Care System (3 hospitals), WI
   Magee Womens Hospital, Pittsburgh, PA

GEDI WISE (2013-2016)
   Mount Sinai Medical Center, New York NY
   St. Josephs Regional Medical Center, NJ
   Northwestern Memorial Hospital, Chicago, IL

GEDC
   University North Carolina, Chapel Hill, NC
   UCSD, San Diego, CA
   Emory Healthcare, Atlanta, GA
   University of Chicago, Chicago, IL
Patient Vulnerability Assessment

Patients at risk of readmission to the hospital can have transitions assessment analysis at intake.

- Triage (with PVA completed at intake)
- Medical & Case Manager Assessment in Parallel
- Disposition Decision with Medical and Case Manager Input