Acute Care of the Frail Elderly
An ED perspective

Peter Archer
13% of Aust. Population over 65
20-30% of ED presentations
35% of ambulance presentations and increasing
43% of admissions and increasing
48% of ICU admissions
51% of transfers

Compared with younger persons older adults use emergency services at a higher rate
Their visits have a greater level of urgency
They have longer stays in the ED
They are more likely to be admitted or have repeat ED visits
They experience higher rates of adverse outcomes.

Dissonance between training, research and what we do?
Problem

- inadequate prioritization of the elderly in acute health??

Why? Hard Work!

- Complex patients
- Present with multiple problems (mean of 3, more if institutionalized)
- Longstanding co-morbidities
- Different pathophysiology
- Pharmacologic nightmare
- Cognitive, sensory & physical deficits
- Social and accommodation issues intertwined
- Often takes multiple attempts and multiple people to give a history
Major resource users

- Large proportion health dollar in final few months of life
- more investigations
- more pharmaceuticals
- use 50% more ancillary services
- take more medical/nursing/Allied Health time
- Not adequate benefits

Major resource users

- BEDBLOCK
- Delayed access to care facilities
- NEAT 4 hr targets ??
- Good or not
- Increase in admissions
- “Inappropriate admissions”

- Barriers to management at home or in less acute facilities
Difficulties at many levels

- Ready carer may not be available
- Relatively simple issues can trigger a decompensation and ED attendance
- Delayed ambulance transports as they can’t articulate “the problem”
- Under triaged
- Often skipped over on waiting list
- Lie on trolleys for hours (previously days) and don’t complain
- Public specialists are often above them—“registrars patients”
- Many private hospitals don’t want them
- Lengthy delays to outpatient review
- Traditionally lengthy delays to IP Geriatric review
How do we address these problems?

- Awareness of those issues in the acute health
- Elderly friendly ED design / teams
- Different approach to assessment of the elderly
- Individualized approach
  - Individuals comorbidities
  - pathophysiologic changes of aging
  - pharmacologic issues
  - psychosocial problems
  - patient wishes
- understanding of common presentations
- understanding hazards of hospitalization vs hazards of going home
- different timing/ funding models which allows for thorough workup of illness in the elderly
- rewards for outcomes/satisfaction rather than “doing stuff” (procedures)

Elder friendly EDs
ED evaluation/ acute stabilisation
ABC DEFG

Can we get some info first

- **Airway**  What’s an airway?
  Where’s the dentures? Where’s lunch? RSI = RSK
  +CX Spine  Cx collars? Immobilise but what’s the risk vs the cost
- **Breathing** Oxygen Good or bad?
  Dentures in for BVM ventilation
  Bedside US cn assist accurate assessment and mx
  New Wheeze isn’t always bronchospasm?
- **Circulation**  HR/ BP/ cap refill can be misleading, bedside echo
  Fluids too little vs too much?
- **Disability**  GCS what’s their normal/ does less than 9 mean intubate?
- **DEFG**
- **Temperature** often meaningless, but a warm blanket means so much
- **Monitors/ Lines / catheters** really needed??
- **Analgesia** elderly often Stoic- Oligoanalgesia common,
  but risks of too much, too little analgesia

ED evaluation

- **Mistakes by not listening, looking, feeling and moving!**
- **History**: be creative and thorough
- **Don’t take YES for an answer**
- Hearing loss, speech impairment, visual problems memory
  & cognitive deficits can create misunderstanding
  (Not always the greatest beneficiaries from Medical Triage)
- **Check with relatives, carers ,LMO**
- **Consider environment, functional capacity & supports**
- **Fall risk, continence, mobility, nutrition, dentition**
- **ADLs**
- **Financial concerns, Social networks**
- **Advanced care preferences**
- **Medications/compliance**
Examination:
- Be thorough
- Vital signs may mislead (postural BP, Pulse, Temp)
- Physical signs may be absent but often aren’t looked for
- Full secondary survey
- walk test is best (but hip imaging can be better)
- Falls Risk
- Pressure ulcers
- MMSE cognition and mood
- Where’s the dentures?? Where are the aids?

ED management

**Investigations:** investigate hard
- as long as the patient wishes it
- & you’re going to act on it!
- Can the patient tolerate the test?

**Treatment:** be prompt, don’t 1/2 treat
- avoid unwarranted instrumentation
- do they really need that monitor, catheter, CVC??
- do they need to fast?
- withdrawal of treatment can be done if not sure treat
- consider functionality/reversibility
- dying patients need palliation

**Care:** Really thrive with a feed, water and a dose of kindness
- even if its not from you…..remember the vollies
- Handling personal effects, dentures, gait aids, medications

**Above All** - communicate, respect wishes of patient and family
Consider pathophysiologic changes of aging, patients co-morbidities, & how they affect this specific presentation & treatment

- **CVS:** reduced inotropic response
  - reduced chronotropic response
  - increased PVR
- **Neuro:** reduced BBB function
  - altered autonomic function
  - impaired thermoregulation
- **Skin/mucosa:** atrophy
  - reduced sweat glands
- **Musculoskeletal:** bone loss
  - fibrocartilage/synovial atrophy
- **Immunity:** reduced CMI
  - reduced antibodies

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**Pathophysiologic changes of aging**

- **Resp:** reduced vital capacity/diffusion capacity
  - reduced compliance
  - reduced chemoreceptor response
  - reduced ventilatory drive
- **Liver:** reduced cell mass
  - reduced blood flow
  - altered enzyme activity
- **Renal:** reduced cell mass
  - reduced TBW
  - reduced thirst/vasopressin response
- **Gastrointestinal:** decreased mucosa
  - reduced blood flow
Pharmacologic issues
- Altered pharmacokinetics /pharmacodynamics
- Adverse drug reactions/interactions
- Drug trials often exclude elderly

Polypharmacy “victims” amongst commonest ED attenders
1/9 ED presentations related to medications

Drug Errors In ED
“Told not to bring the pills”
Lost in transport
Patient confused
Confusion generic vs trade names
Compliance issues
GP list out of date
every medicine ever prescribed is brought in?
Our transcription errors go right through the system

Pharmacologic Nasty Awards
- Warfarin
- Insulin and oral hypolycaemics
- Digoxin
- Antiplatelet agents
- NSAIDs
- Opiates
- Benzodiazepines
- Anticholinergics
- Diuretics
- Nitrates
- ACE Inhibitors
- Statins

Special Mentions :
- Triple Block Combo Pack!!!
  Digoxin, B blockers, Ca channel blockers
- Prescribing cascades
Prescribing issues

- START LOW, GO SLOW & TITRATE
- Consider individuals “drug burden”
- Maintain negative drug balance
- Go on, throw them out!!!
- Dosette Box / written instructions
- Consider affordability
- Can involve local pharmacist, RDNS, GP medication review

“Ask your doctor if the pills you’re taking to solve all of your problems are right for you!”

Psychosocial issues

- Psychiatric disease common - atypical
- Depression-anxiety, agitation, somatic complaint
- Dementia-paranoia
- Acute confusional states
- Drug and alcohol dependence - withdrawal
- Cognitive impairment
- Bereavement
- Financial pressures
- Loneliness
- Cant manage be managed at home
- Family conflict/ unrealistic expectations/ guilt

- Then there’s Christmas
ED Disposition

- avoid lengthy delays
  trolleys cause pressure ulcers
  ED chaos increases
  confusion/disorientation
- ED Care coordination and allied health team
- Physiotherapy, OT, social work, dietician, speech pathology, PLN, D&A, Podiatry
- involve family, community supports, RDNS, local council, geriatric teams from the outset
- admission to geriatric units if appropriate??
- aim to preserve independence where possible

Hazards of Hospitalization

- Hazards of Hospitalization begin immediately and progress rapidly
- Functional decline despite presentation problem being fixed “The Operation was a success, but….”
- Problems/complications unrelated to presentation
- Irreversible deconditioning occurs quickly from the ED and continues upstairs!
Hazards of ED Long stay more so than the General Hospital!!

- Dependency-Bed rails up & no place to move around
- Enforced Immobilization
  - Skin Integrity compromised
  - Decline in Muscle strength (5%/day)/Bone Loss
  - Reduced Respiratory Function
  - Vasomotor Instability
  - Incontinence $\rightarrow$ IDC
- Rigid routines- mealtimes
- Sensory overload or deprivation
- Malnutrition
- Fasting/Drugs/Disease states $\rightarrow$ Reduction in plasma volume $\rightarrow$ Falls

Results-Iatrogenic events & Functional Decline

- Adverse Drug Events
- Falls
- Pressure areas
- Incontinence
- Infections (Pneumonia, UTI, Wound infection)
- Confusional states
- DVT/PE’s
Hazards of admission vs Hazards of unsafe discharge vs wishes

- Consider Patient
- Family
- Carers
- Dependents
- Home
- Transport
- Time of Day
- Health practitioners

Preserving autonomy and independence commonly the most important priority for the patient

Specific Problems

- Infections
- Myocardial infarction/Heart Failure
- Abdominal pain
- Trauma
- Falls
- Acute confusional states
- Dizziness
- Incontinence
- End of life care
Infections

- more prone to infection
- immunosensenessence
- predisposing illness
- institutionalisation
- atypical presentations
- absent clinical markers
- pneumonia, UTIs common **but**
  - bacteruria or atelectasis doesn’t mean glasses down
- atypical infections not to be forgotten

Myocardial infarction

- Atypical presentations
  - dyspnoea
  - syncope
  - flu
  - nausea/vomiting
  - confusion
  - weakness
- more likely to be reliant on Rx if borderline cardiac fn
- more likely to bleed
- less nitrate tolerant - reduce starting dose
Heart Failure

- 1st onset wheeze in elderly consider heart failure
- With or without BP/renal impairment
- Specific Rx CPAP start low and titrate
- Diuretics—Consider Low dose or they'll collapse in the corridor tomorrow
- Nitrates—start 5ug/min and titrate
- Digoxin—aim low therapeutic 0.7nmol/l or increase mortality
- Role of bedside Echocardiography

Abdominal pain

- Beware!
- May have few or no findings
- 50-60% surgical causes
  biliary, appendicitis, bowel obstr., hernia, perf.viscus mesenteric ischaemia, AAA, diverticular disease
- Surgical hands on belly useless
- Often extensive investigation required
- Adequate resuscitation and analgesia important
- Admission mandated if ongoing pain
Trauma

- consider circumstances of injury *esp. Single vehicle
- may result from serious medical condition requiring simultaneous Rx
- or potentially preventable cause in future
- limited physiologic reserves require more intense support and monitoring
- don’t forget analgesia
- results in higher mortality, poorer functional recovery
Falls

- Common missed injuries
  - Subdurals
  - cervical fractures
  - C2#
  - Vertebral#
  - colles#
  - pelvic/hip#

- Consider as falls F.I./F.P.
  - How did it happen?
  - HOW CAN WE MAKE SURE IT WONT HAPPEN AGAIN?

Falls

- If fall and not walking / limping then mandatory xray hips and pelvis
- Hip # + pelvic # commonly missed
- Can be asymptomatic if distracting injury or cognitive impairment
- Often Knee Pain
- Can walk on an impacted fracture
- walkthrough is best (but hip imaging is better)
- CT or MRI if still unsure
Acute confusional states

- Multiple causes
  - infection
  - metabolic
  - drugs
  - endocrine
  - electrolyte disturbance
  - hypoxia
  - anaemia
  - neurologic
  - nutritional
  - neoplastic
  - cardiac

Sundown Syndrome
- investigate hard
- admit if unsure (symptoms may fluctuate)
- recovery may take time
- ED Unfamiliar surrounds, chaos noise → sensory overload
- ED corridor not right!
- ED ward rounds if not involving patients encourage paranoia?

Acute confusional states

- Ensure patient safety
- Treat medical emergencies
- Manage underlying conditions, medications, environmental factors
- Prevent harm-High Dependency care
- Reinforce reality
- Involve family if possible
- Psychotropic drugs/ benzodiazepines-few studies show benefit.
- reserve for uncontrollable agitation, insomnia, psychosis
Dizziness

- Need clear description means different things to different people
- Often pathologic & definable causes
- Vertigo-Acute/Chronic/Postural
- Presyncopal lightheadedness
- Dysequilibrium-multiple neurosensory deficits
  - Physical Deconditioning

Dizziness

- Orthostatic Pulse/BP, assess volume status
- CVS-murmurs, bruits, volume status, blood loss
- Thorough Neurologic/ Otologic Exam
- Hallpikes
- Rhombergs
Syncope

- Many causes, often Multifactorial
- Myocardial & cerebral / vertebrobasilar ischaemia
- Seizures
- Postural Hypotension
  age related physiologic changes, drugs, dehydration, autonomic insufficiency or failure etc
- Post prandial hypotension
- Micturation / defaecation syncope
- Carotid sinus hypersensitivity
- Anaemia
- Drugs
- Situational stress

Urinary/Faecal Incontinence

- Delirium
- Restricted Mobility
- Inflammation, Infection, Impaction
- Polyuria, pharmaceuticals
End of Life Issues

- Goals
  - Preserve life
  - Restore health
  - Relieve suffering
  - Limit disability

- Achieved only some of the time
- Respect Wishes Of Patients/Cultural Issues

- Be Realistic

End Of Life Issues

- Involve Family Early.
- Allow in room
- Don’t put resuscitation decisions directly onto family
- Or the answer’s usually do everything!
- Ask what the patient would have wanted?
End of Life Issues

- MET teams/ palliation teams
- Aggressive resuscitation if appropriate prior to terminal event??
- But hopefully we all don’t need to die with an ETT, people pounding on chest, 4 lines and a full arrest team

Future Directions: ED small but important part of spectrum of patient centric aged care

- Admission prevention
- Discharge where possible remains a priority
- Extended hours care coordination, pharmacy and allied health
- HITH for review of borderline discharges
- Family/ Carers / GP/ Community Aged care/ Outpatients /specialists more integrated
- If short term admission is required consider integrated Clinical Decision Making areas with rapid turnover if appropriate
- Direct admissions GEM/ Rehab for appropriate patients
- Advanced Care planning “Having the conversations” “Realistic expectations”
- Challenge as always is volume of work!
- Risk of poor ED integration is poor outcomes/ duplication/ cost
Summary

- Problems for the frail elderly in the ED
- Elderly friendly ED design / teams
- An ED focused individualized approach to assessment of the elderly
- Challenges of Admission + Discharge decisions based on hazards of hospitalization vs hazards of going home vs patient wishes

“What goes around, comes around.”

- Short Greek Philosopher
  Harry Karipis