Geriatric Patients

While there have been specialized pediatric courses for many years, only recently have we begun to recognize important issues with our geriatric patients. These patients account for a large percentage of our runs and pose some important challenges in patient care. This article highlights some of these issues as they pertain to our day-to-day care of geriatric patients in the field.

**Every call is an opportunity for prevention**

Many years ago, the fire service began prevention activities and saw a significant decrease in fires and lives lost due to fire. If EMS were to embrace prevention on geriatric calls, we could literally add years to the lives of our patients, reduce suffering and save millions in healthcare costs.

Jumping down from the soapbox, let’s look at how EMS prevention activities can make a difference in the geriatric population.

Falls are a leading cause of injury-related emergency department visits across all age groups. In the geriatric population age 75 and older, falls account for 75% of accidental deaths. Ninety percent of hip fractures result from falls. Even falls from a standing height are associated with significant morbidity and mortality in the elderly.

Falls occur for a number of reasons. Some are due to changes associated with aging, including reduced senses (hearing, eyesight), physical conditions (arthritis, osteoporosis) and poor balance. External factors, such as poor lighting, inappropriate footwear and throw rugs, also increase the risk of falls. Finally, medications can cause dizziness, drowsiness or confusion, further increasing the risk of falls. It is not unusual for some patients to have many, if not all, of these risk factors.

EMS providers can perform injury prevention on any call—not just when called for a fall. If you are treating a patient with a medical complaint and you notice a hazard, this is the time for prevention. These hazards may include an unsecured throw rug or a stubborn patient
who refuses to use a walker. Prevention might mean advising a patient to get up more slowly to prevent dizziness and subsequent falls. The list below offers some prevention tips and observations to make on your next call.

**Fall Prevention in the Elderly**

**Look for:**

- Throw rugs that are loose, slippery or turned up. Throw rugs should be removed or fastened to the floor with carpet tape or tacks.
- Slippery shoes or slippers. Shoes should have non-slip soles.
- Stairs without handrails. Stairs should have handrails on both sides.
- Electrical cords in travel areas of the home. Don’t place electrical cords across any area that could cause a fall.
- Lighting. The house should be well-lit, including room lights and nightlights in commonly traveled areas.

**Your patients should:**

- Be advised not to wax their floors, or to use a non-skid wax.
- Sit up for a minute when getting out of bed to allow their blood pressure to adjust and prevent dizziness.
- Use a cane or walker if so advised by their physician. Many patients are hesitant to use these devices.
- Have their hearing and vision checked regularly.

**Bodies change with age**

Bodies gradually change through adulthood and into the geriatric years. Systems that were once efficient are no longer so. These inefficiencies result in signs and symptoms of injury and illness earlier and more frequently than seen in younger patients. For example, decreased lung elasticity and increased chest wall stiffness will cause shortness of breath with a lower level of exertion than in a younger patient. The list below describes some of the changes that commonly occur in the elderly patient.

**Physiologic Changes in the Elderly**

**Decreased body water, Increased body fat, Decreased lung elasticity, Increased chest wall stiffness, Increased BP with left ventricular hypertrophy, Decreased baroreceptor function, Decreased beta-adrenergic responsiveness, Brain atrophy, decreased muscle mass, Decreased density of bone, Decreased liver function, Decreased gastrointestinal motility, Ineffective glucose metabolism**
Be aware of polypharmacy

Many geriatric patients take multiple medications. This is referred to as polypharmacy. The term may also imply that the combination of medications may not be ideal or could cause harm to a patient. It is not uncommon for an elderly patient to have hypertension, type II diabetes, arthritis and prostatic hypertrophy—all requiring medications.

Polypharmacy may result in problems caused by interactions between medications prescribed by different physicians. Compliance with medications is also an issue when elderly patients are easily confused or forgetful. EMS recently treated an elderly patient with an altered mental status whose daughter came in several times per week and placed her mother’s medications in a container with four compartments for each day of the week. Instead of taking medications out of the container from top to bottom, the patient went across the top, taking morning meds four times per day for almost two days. She had taken dangerously high doses of medications for hypertension, diuresis and depression. (This is another opportunity to help with prevention strategies.)

Geriatric patients may have reduced hepatic function, which slows clearance of medications. While liver function and drug clearance can vary even in younger patients, caution should be used in the emergent field setting when administering medications such as lidocaine to the elderly. Lidocaine is metabolized primarily in the liver and, as such, should be administered in reduced doses to those with reduced hepatic function.

Mind Those Meds

Many elderly patients suffer from what EMS providers call "bag-o'-meds" syndrome, or
"meds in a shoebox." You may recognize this from a call you’ve been on where it seems every medication you’ve ever heard of is in the patient’s home. It is important to note that many meds are kept in weekly organizers that don’t show the medication name/dose/strength or regimen. Many times, a family member, visiting nurse or aide sets this up for the patient. Bring it along. Another note about medication bottles: Often, the medication in the old, worn bottle with the label half gone is not what it says it is. The reasons vary as to why the patient reuses the same bottle: It’s easier to open, easier to remember, or easier to recognize the color/size/shape. Check every bottle. The patient may have the same prescription from different doctors and/or different pharmacies that are unaware the patient is taking multiple doses.

Check all possible locations for prescription and nonprescription bottles. Take them all with you and don’t forget any vitamin supplements or herbal remedies. Many elderly patients who take a large number of pills use pillboxes poured out by their home health aide or other visiting nurse service. Take this with you, as well, as it can indicate whether they have been taking the prescription.

Commonly prescribed medications can cause side effects in the elderly patient. These include: aspirin (gastrointestinal bleeding), digitalis preparations (toxicity, depression), antidepressant medications (altered mental status, cardiac, seizures), loop diuretics (incontinence), OTC sympathomimetics (urinary retention), medications for hypertension (dizziness, syncope), benzodiazepine sedatives (falls) and narcotic analgesics (altered mental status, constipation/impaction).

**Multiple medical conditions pose diagnostic challenges**

We have heard much about the different presentation of myocardial infarction in elderly patients, who may not feel the classic pain patterns. There are many other confounding factors like the following example:

You are called for an elderly patient complaining of altered mental status. On assessment you find an afebrile patient with a blood sugar of 202, blood pressure of 102/58 and pulse of 56, who has become incontinent of urine. None of these factors have anything to do with the patient’s current problem. In this case, he has been (unknowingly) experiencing elevated blood glucose, and he also takes medications for hypertension and angina (which lower his pulse and blood pressure) and has benign prostatic hypertrophy causing slight incontinence. His current complaint of altered mental status is caused by sepsis—brought on by pneumonia and worsened by the fact that his lungs no longer expand well. (Remember that many elderly patients with infection will not present with fever.)
Yes, his blood sugar will need to be regulated and his pulse may be bradycardic, but these aren’t the problems today. It is common for providers to uncover myriad diagnostic information. The challenge is to place the relevance appropriately to the patient’s acute complaint.

One clue to differentiating expected changes of aging from a pathology is by determining the onset. Age-related changes progress slowly in most cases. Medical conditions generally present more acutely. Eyesight will deteriorate with age; however, a sudden change in eyesight or in the field of vision may indicate a more acute condition, such as stroke.

**Trauma is devastating to the elderly**

Trauma isn’t fun at any age, but to the elderly patient with decreased bone density and paper-thin skin that tears easily, even a standing fall that would be a mere annoyance to a younger person can be truly life-threatening. Falls consistently rank in the top 10 leading causes of death in the elderly and are first in accidental causes.

Other considerations when treating trauma in the elderly patient:

- A medical condition may be the cause of the trauma you are treating. Syncope may have caused a motor vehicle collision. Orthostatic hypotension secondary to a recent change in blood pressure medications may have caused a fall.
- Elderly patients may experience a subdural hematoma after an apparently minor head injury. The brain atrophies with age, causing stretching of veins between the cortex and the dura within the skull that may tear and bleed with much less force than in a younger patient. Aspirin and anticoagulant therapy will worsen the problem. These subdural hematomas are often chronic (rather than acute) and develop over time. The gradual onset (generally 3-20 days) may be mistaken for anything from dementia to normal aging. Signs and symptoms will depend on the extent of the hematoma, but may include alterations in speech, gait and mentation. A careful history will elicit the relatively sudden change and a traumatic event that will distinguish SDH from chronic conditions of aging.
- Trauma to the chest has the potential to be more severe. As mentioned previously, the more rigid chest cavity may result in fracture and severe pulmonary contusions. Even minor injuries may cause pain and prevent full lung expansion, resulting in pneumonia.
- Bony changes in the spine make spinal injury and fracture during trauma more likely, especially in the cervical spine.
Fractures to the hip and other bones are more common because of decreasing bone density.

**Depression is common in the elderly**

Some factors linked to depression include death of a spouse or close friend, decreased quality of life (dependence on others, loss of mobility and/or serious illness) and loss of cognitive function.

Patients who are depressed commonly present with flat affect and other typical "depressed" behaviors. Elderly patients may also present with anxiety and somatic complaints (general weakness, malaise and more specific physical complaints) that are caused by depression.

Medications play a role in depression in two ways. First, side effects of certain medications can cause depression or the appearance of depression (digitalis preparations, narcotics, benzodiazepines). Second, some medications used to treat depression (tricyclic antidepressants) can have significant side effects, which can cause secondary medical issues, as well as intentional noncompliance with medications to avoid the unpleasant side effects—further worsening the depression.

Suicide in the elderly population is surprisingly high. Often fueled by the sequelae that cause depression (loss of quality of life, bereavement, loss of cognitive function), depression is disproportionately high among the elderly. Comprising 13% of the population, those over 65 years of age account for 18% of suicides. The greatest increase is seen in males 85 years of age and older, who are five times more likely to commit suicide than the national average (per the National Institute of Mental Health).

As a prevention note, 75% of the elderly who committed suicide had seen their physician within the past 30 days. Extrapolating this to EMS and the likelihood that an acute illness or exacerbation of an existing serious condition caused contact with EMS personnel provides another opportunity for screening and prevention.

**Elderly patients deserve respect**

No article would be complete without mentioning that, while aging brings changes to the body, there are millions of active, alert and vibrant older people. Regardless of the elderly patient’s condition—and whether active or resident in a skilled nursing facility—all patients deserve our respect and best clinical care.
A corollary to this rule is to make no assumptions. Never assume a patient can't hear or think clearly. Start every call with an attempt to communicate and reassure the patient. If we are lucky, we'll all be elderly some day.

Geriatric patients aren't just "old adults"—they come with their own challenges, which include social, cognitive and physical aspects. As EMS providers, most of our basic patient assessments and interventions need to be tailored for this population. Here are some tips on how to achieve this.

**Assess Your Assessment**

Although the physical-assessment algorithm of the geriatric patient will not differ from that of patients in younger age groups, there are some useful tips you should implement during your interaction.

Some geriatric patients may be reluctant to tell you what's wrong. They may feel they are being a "burden" or that they "don't want to bother you" with their problem. They may have an extensive history they have related so many times they wonder why they should tell you when you'll only be with them for 20 or so minutes, and then they'll have to tell a nurse, a doctor, and the list goes on. Difficulties in communication are frustrating for those who cannot gather their thoughts, enunciate clearly or understand what is being said to or asked of them. Now, add a medical or traumatic injury, or both. It's the EMS provider's job to coax this information out of his patient to be able to initiate appropriate care that can be maintained throughout the rest of the system.

**Communicate**

If at all possible, communicate directly with your patient. Although this may seem obvious, you would be surprised how many people listen to the geriatric patient's relative, friend or neighbor, when that patient can and does communicate quite well for him or herself. If the patient uses glasses, hearing aids or even dentures, make sure they are being used—it will make communication a lot easier for both of you.

Always let the patient know everything you are doing—clinically and otherwise. This communication is all the more important in what are unfamiliar surroundings for them. Even when you step behind them in the ambulance (to grab an additional piece of equipment or speak on the radio), let them know you are still there. Remember, you drive around in an ambulance routinely, they don't, and they may be uncomfortable in your environment.

**Manners Matter**

Ask the patient how she would like to be addressed. For example: "May I call you Bernice,
or do you prefer Ms. Smith?” This simple step goes a long way in establishing patient/rescuer rapport. Don’t call them "Pops," "Hon," "Sweetie" or any other cute nickname. They didn’t live through 70 or more years to be treated like that. They grew up in a different time—a more formal one that we need to understand and respect.

Let’s Get Physical

Physical presentation of geriatric patients is different from that of other patient groups. Some basic differences to be aware of are:

- Skin will usually be thinner and more fragile; bruising and tearing are common and it usually takes longer for wounds to heal. Be careful when taking a blood pressure, applying/removing tape, bandaging, etc.
- Significant hearing loss is common. Communicate in a normal tone, but slowly. Speak to the patient face to face. Don’t yell.
- Musculature in general is decreasing and is often coupled with stiff, inflexible joints, as well as arthritis. Movement is slower and can be painful. Be aware and be patient.
- Eyesight tends to diminish with age. Cataracts are prevalent, and surgery to remove them can affect pupil reaction. Vision can be severely limited, even with glasses.

Also remember that in traumatic events, a less significant mechanism of injury (MOI) may adversely affect geriatric patients more than other patients. A fall from a standing height, for instance, may be painful to a pediatric or adult patient, but debilitating to the elderly. Coup/contrecoup brain injuries and breakage of intra-cerebral vessels can occur in lower-speed MVAs with greater ease due to the shrinkage of tissue. Finally, older bones can be completely calcified and prone to snap when less force is applied, especially in older females suffering from osteoporosis.

Give Them the Power

Like most adults, your geriatric patients will want some measure of autonomy. They want to have a say in their own care. We need to work with them, whether it means allowing them to pick their own hat color or lock their own door. Keeping the patient updated on the intervention you will be providing is also important. Instead of saying, "This is an 02 mask" or "This is an IV," tell them “this is some more oxygen; it may help your breathing,” or “this is just some medication/fluid to help your heart.” Communicate with patients on a level they will understand. This can seem silly to you, but it isn’t to them. Giving a geriatric patient autonomy shows respect and goes a long way in building the patient-caregiver relationship.
Lifting the Patient

During the lifting, moving and transportation of a geriatric patient, remember that their normal body cushioning may be diminished, and it is easier for them to get "banged up" than some of your other patients. Using pillows, blankets and linen will help protect them and make the journey more comfortable. Ask what position is most comfortable and adjust appropriately. Conditions like kyphosis and extreme arthritis may require creative padding, packaging or movement techniques.

Inventive Interventions

Prehospital interventions need to be approached from a unique perspective when handling the geriatric patient. Standard splinting techniques may have to be adjusted with more padding. You might need to use a padded short splint to keep an IV in place, or another pillow to help position a patient with a hip fracture. For c-spine immobilization, search out the gaps caused by the patient's unique musculature and fill them with sheets, blankets, etc.

Watch the Weather

Geriatric patients are more susceptible to changes in the weather than some other age groups. Older patients may not feel as comfortable as you do in hot or cold temperatures. Don’t guess--ask the patient about his comfort level. It’s also important to use blankets on elderly patients during winter months and make sure their head and extremities are covered before going outside.

Conclusion

The elderly can be some of the most unique and challenging patients we will see. This group of EMS patients is growing, so you will surely be seeing and treating more of them. Remember, one day, if lucky, we will be one of them.