

## 20 Questions – Geriatric Emergencies

1. Nationally, what percentage of EMS runs involve persons over age 65?
2. Today's top ten 911 calls....What are the top ten reasons for elderly patients to need emergency medical care?
3. Of the elderly patients admitted from the ED, what percent are suffering primarily from a drug interaction / side effect?
4. You are called for a PI, where a 76 year old woman has been hit by a car. She complains of minimal discomfort in her abdomen, and requests transport to Abbott. What do you do?
5. Later in the shift, her husband, age 74, is hit by a car outside the hospital. He is unconscious upon EMS arrival. What is his prognosis?
6. You are called for a fall at a nursing home. The staff states the patient has fallen several times in the past few days, but the personnel there state that "all elderly patients fall", so they weren't too worried about it. Are you?
7. How many elderly patients have chest pain with their MI? How many will have clear evidence of MI on their ECG?
8. You are called to a private residence for a patient who has become 'delirious'. Assuming they are using the term correctly, what does this mean? How is it different from dementia?
9. What is the most common cause of acute abdominal pain in the elderly?
10. You are called to a private residence where a 67 year old male has had back pain for several hours, which he attributes to 'pulling a muscle'. He is somewhat diaphoretic, and his BP is 100/72. What do you suspect is the cause of his pain, and where should you transport him?
11. While evaluating a patient for syncope, you do a fingerstick glucose. The value is 150. Is this patient lying when she says she doesn't have diabetes?
12. "Everybody knows" that resuscitation of elderly patients is futile. True or false?
13. What does young, middle, and 'old' old mean?
14. A patient falls from a standing height on the sidewalk. On average, what percent of these falls result in a major injury?
15. The patient complains of pain in his pelvis. What percent of pelvic fractures in the elderly occur from a fall from standing height?
16. A recent survey asked the elderly what they thought the survival rate from CPR was. What do you think they felt their chances were?
17. You are called for a febrile patient in the nursing home. What percent of elderly patients with fever have a bacterial cause? On your lung exam, you don't hear crackles, yet the ER later tells you the patient was admitted with pneumonia. Do you need a new stethoscope?
18. What is the most common cause of fever in the elderly?
19. What is THE most dangerous drug as far as interactions and mortality is concerned?
20. Responding to a possible stroke you find that a 66 year old woman had R arm weakness, which began a few minutes prior to the 911 call, and is now resolved. How long does a TIA last?

## 20 Answers – Geriatric Emergencies

1. About 30% of EMS runs involve persons over age 65.

2. # 10 – Sepsis, #9 – Mental status changes, #8 – Diabetes complications, #7 – Stroke, #6 – Dehydration or electrolyte imbalance, #5 – Abdominal pain, #4 – Pulmonary edema, #3 – Pneumonia, #2 – Trauma, and the number one cause of elderly patients seeking emergency care is.....CHEST PAIN.
3. Different studies come up with different numbers, but at least 5% and perhaps up to 15% of admissions are primarily related to drug side effects or interactions. This is why it is SO important to have good information from the pre-hospital side, because most of the time the patients just can't remember (the average elder patient is on 5 medications).
4. Elderly patients do VERY poorly after trauma. Their reserve is very limited, thus their mortality for comparable injuries is 3X that of a 30 year old patient. Abdominal signs tend to be very limited, even in the face of major blood loss. C-spine and pelvis fractures are especially common. Remember too, that a 'normal' blood pressure in a patient who is normally hypertensive may represent significant hypotension. Early ICU monitoring and aggressive trauma management have been shown to improve outcomes.
5. Poor. 67% of elderly patients unconscious from trauma at EMS arrival will die.
6. Many elderly do fall, about 35% per year. Interestingly, the more you fall, the LESS likely you are to have a serious injury (39% have injuries). Falls in a patient who has not previously been falling is a bad sign, and requires a full evaluation! So yes, be worried, and evaluate for secondary trauma!
7. Between 65-80 years, about 40% of patients with MI don't have pain, by 85 less than 40% of patients with MI have pain. At least 50% of ECGs are indeterminate. Look for atypical symptoms / signs like dyspnea, altered mental status, abdominal pain, flu symptoms, hypotension, decline in functional status, syncope, dysrhythmias, or neurologic complaints!
8. Delirium is an alteration in mental status that usually occurs acutely, waxes and wanes, interrupts sleep patterns, and usually is associated with an abrupt change in consciousness or level of functioning. Dementia occurs slowly, consciousness is clear (e.g. person is alert and oriented times three until dementia is very advanced), and decline is usually slow and progressive. Delirium in an elderly patient represents infection until proven otherwise, but may represent any number of problems including cardiac, neurologic, endocrine, head bleed, etc.
9. Cholecystitis. 25% of elderly patients with acute abdominal pain require surgery, this rises to almost 50% by age 70!
10. Aortic Abdominal Aneurysm. 10% of patients over 60 have a AAA. Hypertension is a significant predisposing factor. The mortality of a hypotensive patient with a ruptured AAA is 90%. Rapid transport to a facility capable of emergency repair (via interventional radiology or surgery) is critical.
11. No. Values of 135-150 may be normal in the elderly, especially in times of stress. The ability to closely regulate glucose is often impaired as the body (and pancreas) ages.
12. Actually, the return of spontaneous circulation rates are the same across several studies, though the survival to neurologically intact hospital discharge is reduced to 50%. For those that do survive, about 60% are alive a year later. Thus, there is no reason to treat cardiac arrest in the elderly with any more sense of futility than any other arrest.
13. Young old is generally 63-74 years, middle old 75-84, and the old old  $\geq$  85 years. Generally, these categories can be correlated with outcomes, but the BEST indicator of how well a patient will tolerate an illness or injury is their health before it occurred. The average life expectancy of a 75 year old woman is 12 years!
14. In the elderly, 10% of these falls result in a major injury, and 9500 deaths per year are from falls from standing height.

15. 50% of pelvic fractures in the elderly occur after a fall from standing height.
16. 60% of the elderly aren't the only ones with unrealistic expectations of CPR / ACLS, but it may help to explain a few things about DNR/DNI choices. Interestingly, the vast majority of those elders who survived a critical illness in an ICU setting said that they would go through it again if it had the potential to give them even a month of additional life outside the hospital...
17. Fully 90% of elders with fever have a bacterial cause (contrast this to about 20% in the pediatric population). Only 1 in 4 elderly patients with pneumonia will have crackles on exam, so don't feel badly about not hearing them. In these situations, a saturation monitor may be a major diagnostic aid.
18. Urinary tract infection (followed by pneumonia)
19. Coumadin. Coumadin is a life-saver, but also can be a life-taker. The number of foods and drugs that interact with coumadin (either making the blood too thick or too thin) is HUGE! A very common one is the interaction of the quinolones (eg: Cipro) with coumadin, decreasing ability to form clot. Falls in a patient on Coumadin ALWAYS require eval, no matter how well the patient seems to be doing, as a much higher percentage will have significant bleeding, especially into the head.
20. A TIA by definition must resolve completely within 24 hours, though the average duration is about 15 minutes. A TIA is considered an "warning" stroke, and a thorough evaluation and often medication is needed for these episodes. Syncope, near-syncope, and seizure may be mistaken for stroke symptoms, so be careful!

**Take time to stop and smell the flowers – (just not on the way to a call)...**