CASE 1

A 78 yo female is brought to the ED by EMS after a fall. Her chief complaint is a right wrist injury. She tells you she went out to get the mail, slipped on some ice, and landed on her outstretched hands. She has no other complaints of pain, and denies dizziness, light-headedness and palpitations prior to the fall.

PMHx: HTN, NIDDM, Hypothyroidism; Meds: Ramipril,

SHx:
Lives alone for last two years since her husband's death 3 years ago
No close family, and her friends are 'all struggling to look after them own selves'

On further questioning she reveals that she has been having a lot of fatigue lately, and her activities are limited to meal prep and shopping. She continues to be independent with her personal care, but finds cleaning to be burdensome. She has recently started using her late husband's walker as she 'feels safer with it'. She admits to having lost 20 lbs. in the last year.

On examination: BP 110/70, HR 90, Sat: 96%. You find her to be neurologically intact, with a GCS of 15 and no focal neuro deficits. There is no evidence of head injury.
Her cardio-respiratory exams are unremarkable, however you note she is thin with protruding ribs.
Her abdomen, pelvis and hips are unremarkable apart from protruding boney prominences.
Her left arm is normal. Her right arm reveals a dinner fork deformity of the right wrist, as well as tenderness along her right shoulder.

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1. What investigations would you like to do? Why?

Part 2:
Her work-up is unremarkable, including ECG, CXR, orthostatic VS and bloodwork, apart from a mildly displaced distal radius fracture which you splint and arrange orthopedic follow-up for.

As you are arranging her discharge paperwork the patient asks to speak with you. She has some concerns regarding her discharge as with her cast she is unsure how she will use her walker, get dressed, bathe and drive her car. She is also concerned about getting home as she was brought in by ambulance in her dressing gown and slippers.

2. Aside from "Wrist fracture" what is your discharge diagnosis?
3. How do you respond to her comments? Who else might you involve at this time in the ED to assist in disposition planning? How might each team/person help?

Discussion Points for Case 2:

The goal of this case is to address the four-part ED assessment of falls – cause, consequence, safe disposition, and prevention

Part 1

1. X-ray of wrist: consequence
2. Some work up of cause of the fall and of weight loss and of functional decline – ECG, metabolic screen (TSH, NIDDM), metastatic screen?,

Part 2:

1. Discharge Diagnosis: Distal radius fracture; Functional decline
2. Others involved around safe disposition and prevention:
    a. Case management – coordinate/oversee services below, referral to outpatient programs (e.g. Falls Clinic or Geriatric Assessment Clinic)
    b. PT – exercises to increase strength/prevent further loss of muscle
    c. OT -- (assess her function /adapt walker -- maybe she can use a cane?, arrange for home assessment as patient may benefit from grab bars, raised toilet seat etc.
    d. Social work (Meals on Wheels), PSW for assistance with groceries/cleaning/personal care, provide resources for day programs to reduce social isolation, assist arrangement for alternative transportation (WheelTrans etc)
    e. Pharmacist – likely not necessary in this case, but always worth considering if concerns regarding polypharmacy
    f. Contact with PCP – how are you going to relay this situation back to other HCPs?

CASE 2

A 76 yo female presents to the ED after a fall. The fall occurred in the hospital while she was taking an escalator for an outpatient appointment. She has been well recently without prior falls, and is embarrassed that she fell in front of everyone. She says he didn't hit her head, denies LOC and only complains of right ankle pain. Her glasses were broken during the event.

PMHx:

- RA (on long term steroids),
- recent DVT (on warfarin) (patient unclear of cause),
- HTN,
- hyperlipidemia and
- NIDDM (oral therapy only).

Exam: VS – T 37'C, HR 80, RR 15, BP 150/90m 98% on RA
Neuro – Alert, oriented, GCS 15. No boney tenderness to head nor evidence of HI.
Cardio-resp – unremarkable.
Right ankle – diffuse swelling with bimalleolar tenderness. No proximal fibula/hip/pelvis tenderness or deformity. Right foot NVI.

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1. What other information would you like to know about the patient?

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2. What investigations would you like to do? Be specific (i.e. not just 'bloodwork'). Discuss your reasoning.

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3. How will you manage this patient? What are the disposition options?

Discussion Points for Case 2:
This case is about expanding the assessment of a geriatric faller beyond the obvious.

Question 1.
Any witnesses to the fall given that she probably can't give an accurate prodromal history.
Detailed read of the EMS record which often contains valuable onsite information

You need a social and functional history

On further questioning you learn the patient lives alone on the main floor of house. There are 5 steps to get to into her suite, otherwise everything is on the same level. She was previously independent of all ADLs and iADLs and continues to drive. She uses no gait aids. She has a son who lives ~20mins away and can assist with groceries.

More about the DVT – who diagnosed? How? cause?

Question 2. Appropriate work up
ECG – (to explore possibility of arrhythmia)first degree AVB, LAD, otherwise unremarkable.
Bloodwork including PT/INR – INR 3.2
Ankle X-Ray – bimalleolar fracture, minimal displacement
CT head – on warfarin, glasses broken – no bleed/fracture
CT C-spine – (because RA on steroids = increased risk of fracture with minor trauma (eg. Hyper-extension) + distracting injury with ankle – negative for acute fracture

In first time fallers, keep the work-up broad (also in increasing frequency of falls).

Question 3:
Apply short leg splint – if fibreglass available consider it as the decreased weight can make a big difference for an older person's mobility. Patient was non-WB, and unable to ambulate safely with crutches.

Options:
1) Rehab direct from ED if available. Possible?
2) Admission for PT/OT and arrange respite/rehab/temporary placement
3) Home? Patient likely a candidate for home in wheelchair with adaptations but will require teaching/equipment for safe transferring etc. Even with well functioning EDs with access to PT/OT this is unlikely to happen imminently, thus a brief admission or respite (son's home? LTC?) stay likely required.

CASE 3

75yo man present to the ED after a standing level fall at home. He arrived alone, and was coherent and communicative several hours earlier, but while in the WR the triage nurse noted a rapid change in consciousness. He became agitated, non-verbal and was resisting care. He is brought to a monitored bed, and when you see him he is unable to tell you what happened, apart from that he fell.

PMHx: AFib, HTN, hyperlipidemia, GAD
Meds: warfarin, Ramipril, rosuvastatin, lorazepam
NKDA

Exam – VS at arrival – T37'C, HR 70, RR 25, 96% on 2l O2
Neuro – eyes open, looking around, PEARL. Bruise to left temple, no bogginess. Alert but confused. Moving all four extremities.
Cardiopulm – normal
Abdo – normal

Bloodwork (CBC, lytes, BUN, creat, CK, TNi, PT/INR) were sent by the triage nurse and are pending.

Q-A. What is your initial management and plan regarding this patient? What investigations do you order?

The patient has an obvious head injury with altered mental status. He is anticoagulated. The main differential at this time is an intracranial event, and this should take priority in regards to investigation, however other differentials should not be ruled out as this patient may have delirium, be intoxicated etc. In older people with falls keep a broad differential!

CT head
ECG
CXR
Call lab to run INR first.
Call the family to establish goals of care.

While the patient is away at CT his initial bloodwork comes back – his HgB is 122 and his INR is 2.9.

The resus nurse informs you that the patients family have been contacted and are on their way to the hospital. The family said that they had spoken to their father earlier, and that he mentioned he had a fall while shovelling snow and had a headache.

You are then called to CT as the patient has become combative and is flailing his arms and legs everywhere. He cannot be calmed. The radiology tech informs you that they were able to get most the images of the scan and tells you there is blood.

How do you proceed with your management? Be specific.

1. Return the patient to the resus room. If no family is present and as goals of care are unclear, you decide to intubate the patient using an RSI and neuro-protective strategies.
    a. PreO2 if possible without putting ptnt at risk
    b. Ketamine+ fentanyl + succinylcholine OR Etomidate + fentanyl + succinylcholine
    c. Control BP (sBP<180) (I would be reluctant to given anti-HTN prior to intubation if intubation is imminent as in this case as may impact peri-intubation risk/arrest)
    d. Target PaCO2 35, sats >95%
    e. Consider reverse Trendelenburg
2. Reversal of Warfarin – vitamin K and prothrombin complex concentrate.
3. Consult ICU, neuroSx
4. Establish GOC with family ASAP