**BC/WC ICU Training Cases**

Case #1: Laurel Rodgers

* Summary: Ms. Laurel Rodgers is a 67 y/o female who presented to the ED as a level 1 trauma following a fall from standing Bystanders report she was walking her dog when she fell, hitting her head on the concrete. She sustained extensive injuries, including a right subdural hematoma, multiple facial fractures, and multiple extremity fractures. She was intubated at the scene because of her low GCS , was evaluated in the trauma bay, and is now admitted to the ICU.
* GTOS on admission: 14% risk of mortality during her admission and a 17% chance of discharge to a SNF, LTAC, or hospice.
* Outlook
  + Day 1
    - Event: (none, admission)
    - Best Case, Narrative: She will probably stay intubated while we finish up her CT scans. Hopefully her head bleed will be stable on CT, we can start weaning her sedation, and work to get her off the ventilator, maybe tomorrow morning or afternoon. During this time she'll get splints and some more X-rays from orthopedics and if she is doing well we can get her out of the ICU to a general care floor for recovery the rest of the week. She will go to the OR with plastic surgery likely the following week once her facial swelling is improved enough. Throughout this time she will start aggressive physical therapy, which will be difficult and painful, but if she does really well we can probably get her out of the hospital after a week and to a nursing home for more rehab for a few more weeks. I think she'll be able to go home, but she will probably need a good amount of help there for at least several months.
    - Best Case, Graphic aid text:
      * Breathing tube out tomorrow
      * Surgeries for her hip and face
      * Physical therapy, ~1 week in hospital
      * Nursing home for ~2 weeks, then home with help for a few months
  + Day 2
    - Event: head bleed worse-->brain surgery
    - Best Case, Narrative: Well, unfortunately with her worsened head bleed and the surgery to relieve the pressure she probably has a higher chance of death now than she did yesterday. I think her best case now is that her brain swelling improves as she recovers from her surgery and that she doesn't need as much medication to keep her blood pressure up to where we can be off of those medications by the end of today. We'll be able to lower her ventilator settings overnight and lighten her sedation in the morning, and when we test her movements she won't have any lasting deficits from the worsened brain bleed. Hopefully we'll get her extubated over the next two days, after which she'll ultimately get to a regular hospital bed, start her rehab, and have her facial fractures fixed. I think she will be in the hospital for another two weeks after, and when she leaves she'll definitely need to go to a rehab facility for a month or two before going home where she will need a great deal of help, maybe indefinitely.
    - Best Case, Graphic aid text:
      * Recover from brain surgery well, no deficits
      * ICU ~1 week, breathing tube out
      * Surgeries, rehab, hospital for ~2 weeks more
      * Nursing home 1-2 months, home with lots of help
  + Day 3
    - Event: agitation, delirium
    - Best Case, Narrative: I think, again, her outlook is a bit worse than her initial GTOS predicted given her worsening delirium. She's been difficult to wean from the vent too. However, I think if everything goes well we'll get her extubated tomorrow or the day after and hopefully with the tube out she will be less delirious. She'll stay in the ICU for another day or two after that as we get her respiratory status stabilized, and she'll go to a general care floor. If we're lucky, we won't have to readmit her to the ICU during the rest of her hospital stay, and she'll start the long journey toward recovery…lots of painful PT and OT work. I think she'll probably be in the hospital for another week or two, maybe three weeks after the she leaves the ICU, and then she'll need to go to a nursing home for several months for more rehab. I am worried it's going to be very difficult for her to be independent and live by herself again, even if she does really well with PT and OT.
    - Best Case, Graphic aid text:
      * ICU until next week, breathing tube out
      * General care, surgeries, hospital for ~3 weeks more
      * PT, OT, nursing home several months
      * Never independent again

**BC/WC ICU Training Cases**

Case #2: Yara Lopez

* Summary: Mrs. Yara Lopez is a 73 year old female who presented to the emergency department yesterday as a level 1 trauma following a fall down one flight of concrete stairs. She was found to have multiple bilateral rib fractures and an intracranial bleed noted on CT. Her neurologic exam revealed right leg weakness. She was intubated due to poor oxygenation and a worsening GCS, a chest tube was placed, and she was admitted to the ICU.
* GTOS on admission: 30% risk of mortality in hospital and 29% chance of discharge to SNF, LTAC, or hospice.
* Outlook
  + Day 1
    - Event: (none, admission)
    - Best Case, Narrative: I think given her age and the number of rib fractures, she'll probably be in the ICU for quite a while…probably at least a week as we try to wean her off of the ventilator. Once we lighten her sedation neurosurgery can come examine her and see if she still has those right leg deficits. Best case is that this was temporary and she regains all her strength. We'll be able to extubate her sometime this week, stabilize her respiratory status, and get her to a general care floor where she will need quite a bit of rehab to get over this long ICU stay. I think in total she'll probably be in the hospital for at least 2 weeks, likely 3 weeks, and if everything goes as we could hope she'll go to a nursing home for more rehab for a few more weeks before going back home. Depending on how strong she is she could be independent again at home or she may need a lot of help moving around; we won't know until we see what she can do.
    - Best Case, Graphic aid text:
      * ICU for ~1 week, ventilator
      * General care, recover for 1-2 weeks
      * Nursing home 2 weeks
      * Maybe home and independent
  + Day 2
    - Event: Strokes on MRI
    - Best Case, Narrative: So I think her risks now are higher than they were the day after admission. The MRI showed us why she wasn't moving her arms and legs much when we turned her sedation down. She is also needing quite a bit of ventilatory support for her rib fractures. Still, depending on how those strokes affected her breathing muscles, I think we could probably get her extubated by the end of the week. The story from there is similar to what it was yesterday, except she is going to need a lot more rehab, specifically neuro rehab with our stroke service, and she will definitely need months of nursing home care. I doubt she will ever be independent again, and will probably need some form of assisted living or intense care at home when she finishes her therapies.
    - Best Case, Graphic aid text:
      * ICU for ~1 week, ventilator
      * General care, recover 1-2 months in hospital
      * Nursing home several months, neuro rehab
      * Never independent again
  + Day 2, Talking with the family
    - Enjoys--(show circle with "likes pepsi" and that stuff)
    - "This is bad news; would you like to know what this means?"
    - Other phrases to be practiced?

Case #3: Yara Lopez--continued

* You have been off service at a conference for the past five days. During that time, Yara has remained in the ICU, struggling to get off the vent. She developed ventilator-associated pneumonia and was started on IV antibiotics. Things seemed to be evening out after that, but two days ago she developed fevers, abdominal distention, pain, and severe diarrhea, which testing confirmed to be a resistant C. difficile infection. Her antibiotic regimen was changed, and she seems to be doing better.

It is now 6 AM on hospital day 7. You have just arrived at work to start reading up on the service when you are paged by the on-call resident about Yara. She was borderline hypotensive for the past hour and developed diffuse peritonitis. The resident ordered fluids and an upright chest XR which shows free air under the diaphragm, consistent with perforation. The resident says, “She’s tanking…I think we need to go to the operating room.”

Clearly things have changed. You now need to go talk with Yara’s family.

How might you approach them about this life-threatening problem? How do you use the graphic aid, developed by your colleague who was covering for you for the last week, to help the family understand Yara’s new reality and options?

* Outlook
  + Day 7:
    - Event: perforated colon
    - Best Case, Narrative: Well, I think Yara's best case unfortunately doesn't look much different from her worst anymore. The pneumonia, the C-diff toxic megacolon, and her neuro deficits are really adding up against her. I think, best case, we take her to the OR and take her colon out. Hopefully the rest of her bowel looks good, and if it does we can close her laparotomy incision. Given her condition, I wouldn't be surprised if she develops a wound infection and abscesses, which will mean more procedures…and overall her hospital course will be rocky with lots of time in the ICU. Perhaps in two months or so we can have her infections treated well enough for her to leave the hospital for an LTAC, but I'm afraid we are likely to see her back here with other complications. Ultimately I think during one of these admissions she will let us know that she has had enough, or we decide together with her family that this is not what Yara would have wanted.
    - Best Case, Graphic aid text:
      * Surgery to remove colon
      * More surgeries and procedures later
      * In and out of hospital often over 2 months
  + BC/WC Decision Aid, Graphic aid text
    - Survival-focused care
      * Best Case
        + Multiple surgeries
        + Infections, in and out of ICU
        + Lots of time in hospital over 2 months
        + Decide not to do this anymore, or dies from infection
      * Worst Case
        + Multiple surgeries
        + Can't control infections
        + Many medicines, machines, tubes
        + Body shuts down; dies in ICU ~1-2 days
      * Most Likely Case
        + Multiple surgeries
        + Infections, in and out of ICU
        + Never leaves hospital
        + Dies in hospital ~1-2 weeks
    - Comfort-focused/palliative care
      * Best Case
        + No surgery, control pain
        + Move out of ICU, more comfortable room
        + Can talk with you, a little delirious
        + Time for family to say goodbyes, ~1-2 days
      * Worst Case
        + No surgery, hard time controlling pain
        + Hard to understand her, very delirious
        + Very little time to say goodbyes, a few hrs
      * Most Likely Case
        + No surgery, OK pain control
        + Move out of ICU, more comfortable room
        + Can talk with her, but more and more sleepy
        + Time for close family to say goodbyes, ~1 day