**Prompts**

Please answer each of the following questions as if you were developing a program to investigate and improve the problem presented above.

1) What would be the aim?

2) What would you measure to assess the situation?

3) Identify one change that might be worth testing:

**Case 1:**

You are a 1st year medical student in the SNaP program acting as a medical assistant at the Doernbecher General Pediatrics Clinic. You are rooming a patient who is there for a 2-year well child visit with his mother. The patient has been generally healthy with the exception of a few viral respiratory infections. As you are about to take his vitals, you realize that he is missing the 24-month MCAT/ASQ developmental screen and was not provided with a copy of this at the front desk. You leave the room and spend time trying to locate a copy for the parents. By the time you come back, the child is agitated and the mom is frustrated, saying “we’ve been waiting for over 30 minutes in the waiting room, and now you have another long form to give me to complete? Why wasn’t this given earlier?” You apologize to the mother and begin to take the child’s vitals. His blood pressure is greater than 99th percentile because he’s crying.

The physician finally enters the room 20 minutes later than the scheduled appointment time, and feels like he was not able to address all of the mother’s concerns with the appointment feeling rushed and the child being agitated.

After the visit, the doctor realizes the child was overdue for his 2nd hepatitis A shot, but this was not given because it was overlooked in the rush of everything. You and him sit back with frustration at these recurring issues. The physician/medical assistant next to you have similar experiences, and everybody wonders how the workflow could be better.

**Case 2:**

You are a 1st year medical student in the SNaP program acting as a medical assistant at the OHSU Internal Medicine clinic. You are rooming a 45-year-old gentleman who is being seen for the first time for his low back pain. He states that his back pain started as a dull, constant ache in his lower back roughly a month ago that has gradually worsened since, with no known associated trauma. Previous documentation in the chart revealed no neurologic deficits, fever, or suspicion for any serious underlying condition such as malignancy or osteomyelitis, rendering a diagnosis of uncomplicated low back pain.

Your preceptor asks you whether you think any imaging is warranted. You do some researching online, and discover the Choosing Wisely Guidelines on Imaging Recommendations for Low Back Pain. It states that imaging for low back pain within the first six weeks is not recommended unless there are “red flags” (ie neurologic deficits, fever, concern for serious underlying condition, trauma). This is because imaging in this setting has not been shown to improve outcomes, and only increases cost. It may also result in unnecessary surgeries as well.

Based on this information, you conclude that imaging would be unnecessary for this patient, and wonder how often unnecessary imaging is obtained in this clinic for low back pain, which is the fifth most common reason for all doctor visits. You raise this question with your preceptor, who agrees with your assessment and also expresses his frustration with the clinic’s suboptimal performance in reducing unnecessary imaging for low back pain. You start to brainstorm ways in which the clinic could reduce waste.

**Case 3:**

You are rotating at the Emergency Department (ED) at a large county hospital. It is one of the first warm days of spring and there have been several motor vehicle and motorcycle accidents…it has been incredibly busy all day. As the only level 1 trauma center in the city, all of these cases are triaged to your center. This makes it exciting, but today has been a constant stream of severe trauma. You are not on the trauma “side” today of the ED, but because of the high trauma volume, several residents, attending physicians, nurses, and medical assistants have assisted with these patients, leaving your section understaffed. You grab the next chart from the rack and see that it is a 58 year old man who received his second round of chemotherapy last week for acute myelogenous leukemia. He arrived at the ED 45 minutes ago with a temperature of 102.5 F and shaking chills. You begin your evaluation of the patient with a strong concern for a neutropenic fever. After a history and physical exam, you order a complete blood count, blood cultures, urine analysis and culture, chemistries, and a chest radiograph. The patient receives some acetaminophen and feels a bit better after 30 minutes.

One hour (and three patients) later, you notice that his blood had been drawn but is sitting in a bag in the “transfer to lab” box. It appears that no one sent the blood to the lab. This is extremely frustrating to you as you know the importance of starting antibiotics quickly in any patient with neutropenic fever (guidelines recommend within 1 hour of arriving at the ED). The patient has now been here for over two hours and you’re still not sure of the diagnosis. You grab the tubes of blood and walk them to the chemistry lab yourself. After 45 minutes, the blood work confirms that he is neutropenic, so you order appropriate antibiotics and start the paperwork to get him admitted to the hospital.

During a brief break, you express your concern about the lapse in diagnosis time to the nurse supervisor. He listens carefully, sighs, shrugs, and says, “Just a busy day…that’s what seems to happen.” You know the system can, and should, work better…but how can you start to work on this?