Introducing the Quality Aims to Practitioners: A Case-Based Method of Learning

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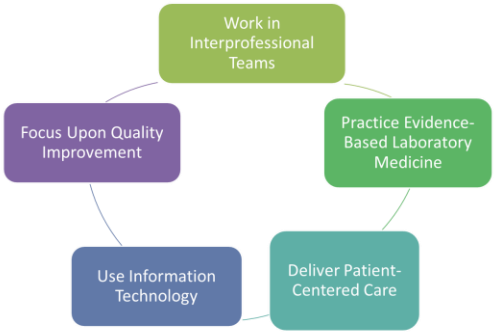
Learning Objectives

- List & describe the quality aims for healthcare.
- Discuss the patient safety competencies for healthcare practitioners.
- Analyze case studies from a patient safety perspective & discuss the laboratory professional's role in each scenario.

Quality Aims

- Healthcare should be:
  - Safe
  - Efficient
  - Equitable
  - Patient-centered
  - Effective
  - Timely

Patient Safety Competencies



"It's Up To Me" Campaign

- SAFE
  - Safe patient care begins the moment a laboratory test is ordered.
  - It is up to me to ensure that accurate test results are reported for the right patient, every time.
- EFFECTIVE
  - Appropriate test utilization is a priority healthcare quality goal.
  - It is my responsibility to assist care providers in selecting the best test for the patient's condition.
- PATIENT-CENTERED
  - Laboratory services respect and enhance the patient care experience.
  - It is up to me to aid patients with answers to questions about laboratory testing.
- TIMELY
  - Providing timely laboratory test information supports quality patient care.
  - It is my responsibility to communicate effectively with the rest of the patient care team.

- EFFICIENT
    - Lives and resources are saved by preventing errors in laboratory testing.
    - It is up to me to look for ways to continuously optimize laboratory testing processes.
- EQUITABLE
    - Every patient deserves quality healthcare.
    - It is my responsibility to provide each patient with quality laboratory testing.

Benefits of a Case-Based Approach

- "Real life" scenarios
- Promotes discussion and critical thinking
- Can be interprofessional

Case #1

John, the MLS on the evening shift in Core Lab received an SST on a 6 year old boy, James G. At the same time, an SST was received on an 8 year old girl, Ella B. Both tubes were centrifuged and set in the rack to be aliquoted. John started to label a tube with James G.'s labels when he received a phone call. He answered the phone, answered all the nurse's questions, then went back to aliquoting the samples. However, when he went back to the bench, he placed Ella B.'s sample in the aliquot tube he had prepared for James G. He received another phone call before aliquoting Ella B.'s sample again, but into a properly labeled tube. Both samples were placed on the instrument and testing was performed. John became concerned when he noticed that James G.'s results indicated increased levels of BUN and creatinine (Ella B.'s past test results indicated elevated BUN and creatinine).

Case #2

Mary, the MLT at the Oncology Laboratory was performing a CBC on Maria Z. At the same time, Nayana, the MLS at the other Oncology Laboratory was manually entering the accession number on patient Susan W. When Mary went to review and release the specimen results, she noticed that results for Maria Z. were already validated with different CBC results one minute prior. Mary was immediately concerned when comparing the results that were entered into the system were drastically different than the specimen she ran on the instrument.

Case #3

Maria sat in the chair in the phlebotomy area of the laboratory, where Jan, the MLS was attempting to explain to Maria's 10 year old son Miguel how to collect a urine specimen. Maria's physician ordered a urinalysis and a urine culture for her, however the laboratory did not have instructions written in Spanish to explain how to collect the specimen in the sterile container. Miguel looked embarrassed when he translated the information that Jan had explained to him. Maria also looked uncomfortable listening to her son.

Case #4

Sean and Kate D. have brought their three year old son Andy to the laboratory to have a sweat test that was scheduled for them by their pediatrician's office. Andy has frequent sinus infections and has had two cases of bronchitis this winter. As the MLS, Cindy, begins to set up for the test, she can see that both parents are very anxious. The doctor has told them that he wants to rule out cystic fibrosis. Kate has many questions about the test, and about cystic fibrosis.

Case #5
Molly, a laboratory service center phlebotomist, welcomed Nicole S. to the laboratory's phlebotomy service center and asked if she had a photo ID and physician orders with her. Nicole responded that she had them and nervously dug through her purse before handing the photo ID and paper laboratory test requisition to Molly. Molly asked Nicole to please have a seat while she completed her registration and completed the required order entry for the tests requested.

As Molly began to register the patient, she noted a patient identification discrepancy. On the paper requisition completed by the physician, the patient's name was Nicholas S. and gender was Male. On the photo ID, the patient's name was Nicole S. and gender was Female. All other patient demographics were identical. Molly reviewed the Master Patient Index on her computer and could see that Nicole S. had received prior services from their laboratory. Concerned over the patient identification discrepancies, she contacted her supervisor, Linda. In a private room, Linda reviewed the name and gender discrepancy with Nicole. In tears, Nicole shared that her physician said he had to order the testing in a manner to obtain biological gender reference ranges instead of her legal female gender ranges. Linda obtained Nicole's permission to contact her physician to provide guidance that would allow her to be registered as Nicole, female and still provide the reference range information requested by the physician. Linda consulted with the physician and explained the facility's transgender registration policy which requires that registration be completed using the legal name and gender of the patient at the time service is provided. Linda also offered to include on the laboratory test report the opposite gender reference ranges for all appropriate tests. After consulting with the physician, Linda reviewed the actions that would be taken to allow her to be registered as Nicole and also provide the clinical interpretive information needed by the physician. Nicole responded, "Thank you so much for caring about me and not just following how the physician wrote my order."

Case #6
As Sarah, the Supervisor of the Microbiology laboratory reviewed both the pending list of tests not yet reported and the day's list of positive culture results, she noticed that several of the patients on her list of positive culture results had been discharged. Although the hospitalist who had ordered the cultures was still available to accept a phone call with the results of these positive cultures, she was concerned that these patients would not receive appropriate antimicrobial therapy because no primary care physician was listed in the demographic information. Her laboratory had recently started mailing all laboratory test results for those who were out-patients. Given this situation, Sarah is considering sending the results of microbiology testing, particularly for those situations with positive culture results.

Case #7
Michael J. is a retired school teacher, husband to Sally and father of three daughters. He has 6 grandchildren ages 2-10 that keep him busy with sports events, music recitals and dance competitions. His grandchildren are his world. Last Thursday, while at a teeball game for his granddaughter, Kayla, he suddenly started suffering from chest pain. He fell to the ground and clutched his chest in pain. Kayla ran to the bleachers from the field and a woman sitting near him called 911 from her cell phone. An ambulance was there within 5 minutes to rush him to the nearest hospital. He was triaged and quickly seen by the internist. Specimens were drawn and sent to the laboratory.

The MLS in the Core Laboratory faxed the test results to the Emergency Department (ED) within 30 minutes, well within the established 60 minute STAT turnaround time for the hospital. All of the results were outside of their reference ranges. Actually all of the test results qualified

as critical values, indicating that this was a true medical emergency for Mr. J. The Customer Service Representative in the lab, Susan, called over to the ED to report the critical, but no one answered. She tried again in 5 minutes, but again was not able to reach the ordering physician or anyone at the nurses' desk. The ED was very busy and the fax had gotten mixed up with some other papers that had been faxed over. Mr. J. waited patiently in his hospital bed. A nurse checked in every 20 minutes to let him know his laboratory tests weren't back yet and that they were waiting to proceed with treatment. Susan had forgotten about calling the critical results as she was unable to reach anyone in the ED on her first two attempts. An hour and a half after the specimens were drawn and sent to the laboratory, Mr. J. was found unresponsive in his emergency room bed having never received treatment. The nurse called a code blue and a team rushed in to start CPR.

Case #8

Maggie works in the laboratory in a large hospital and frequently interacts with the Emergency Department (ED) staff. When in the ED recently to help troubleshoot a point of care instrument, she noticed STAT specimens sitting in a bin next to the pneumatic tube system. She asked a medical assistant about this and was told that due to staffing shortages, the ED staff had decided to send the specimens over to the lab 3 or 4 bags at a time in order to be more efficient. She picked up a specimen bag and read one of the requisitions and noticed that the requisition for that particular patient had troponin, creatine kinase and myoglobin tests ordered. She explained to the medical assistant that this patient had STAT orders and may be suffering from a heart attack. The laboratory needs the specimens ASAP in order to reliably meet STAT turnaround times and it had already been sitting for 30 minutes. She explained that the laboratory may turnaround results in 30 minutes from the time received, but if the specimen is sitting for 20 minutes prior to that, the patient's treatment could be delayed, causing the patient harm. The medical assistant responded that he had not thought of STAT turnaround time that way previously. He was thinking of turnaround times as the time that lab takes to get the result back once the specimen is sent over to lab. He said she would be sure to send them over immediately in the future.

Case #9

Jeremy, the Hematology Supervisor, noticed that Dr. Smyth consistently orders a CBC every day for his patients after they undergo surgery. Dr. Smyth is a general surgeon, so there is no consistent diagnosis for each of his patients. Jeremy decides to make an appointment to discuss this with Dr. Smyth. At that meeting, Jeremy discovers that Dr. Smyth is fairly new to this hospital and had not received orientation regarding the standard protocols for ordering CBCs. Jeremy shares the protocol with Dr. Smyth, which states that one CBC may be ordered and analyzed once after surgery, with follow-up CBCs if there is a evidence of hemorrhaging or to evaluate the status of recovery.

Case #10

In recent years, XYZ laboratory has seen a significant increase in Vitamin D testing. Testing for Vitamin D includes much potential for confusion regarding methods, reference intervals, and test selection. While reviewing test ordering patterns, Don W., MLS, noticed that most clinicians ordered primarily 25-hydroxy Vitamin D, which is the appropriate test to screen for Vitamin D deficiency. However, Vitamin D test orders from six clinicians were all for 1, 25 – dihydroxy Vitamin D (the biologically active form of Vitamin D), which is not recommended for screening use. Use of this test is recommended for patients with reduced kidney function or with hypercalcemia. Don used the LIS to review chemistry results for the patients for whom the 1,25 dihydroxy Vitamin D tests were ordered and confirmed that none were hypercalcemic; only a few had evidence of reduced kidney function. Based on this information, he prepared an

informational flyer about Vitamin D testing for the monthly newsletter. Don also emailed it to the clinicians who ordered dihydroxy tests, to tell them that a review of laboratory utilization patterns suggested that they may not be selecting the best test to screen their patients for Vitamin D deficiency.

The ASCLS Patient Safety Committee collectively authored these case studies in 2015-16