**Required Skills and Competencies Reflections**

**1. Measure blood pressure - e.g. As part of Nutrition Assessment (initial or F/U); As part of Health/Wellness fair**

On July 24, I observed bedside blood pressure (BP) monitoring in the Intensive Care Unit (ICU). This procedure is outside the scope of practice for RDs at St. Luke’s, so observing is the best approach to understand their involvement in patient care. Medical Doctors (MD) and Registered Nurses (RN) are responsible for conducting this procedure. The RDs rely on these vitals to inform initial and follow-up nutrition assessments.

The patient I observed had presented for worsening shortness of breath. The RN taking the vitals mentioned that she prioritizes taking the blood pressure reading first, to guarantee accuracy, as following care tasks can temporarily raise BP and cause incorrect results. The BP cuff was placed around the patient’s arm to obtain an accurate reading. It was interesting to see vitals being taken in real time.

**2. Conduct waived point-of-care laboratory testing (such as blood glucose or cholesterol) - e.g. As part of Nutrition Assessment (initial or F/U); As part of Health/Wellness fair**

On July 18, I observed the point-of-care (POC) glucose testing in the MedSurg unit. This procedure is also outside the scope of practice for RDs at St. Luke’s, so observing is the best approach to understand their involvement in patient care. MDs and RNs are responsible for conducting this procedure.

For this test, the patient was presented with confusion and lethargy. I observed the RN conducting a fingertip prick to check for blood glucose levels. The nurse took proper infection control precautions and made sure the patient was as comfortable as possible throughout the procedure. I noted that she took the lancet and pricked on the side of the fingertip. When I asked her the reason for this, she mentioned that the sides of the fingers have more blood vessels closer to the surface, which makes it easier to obtain reading. She also mentioned that it’s a less painful for the patient if taken from the side, as opposed to taking it from the center of the fingertip

Observing both the blood pressure (BP) and POC glucose testing gave me a deeper understanding of how clinical data is collected and used in patient care. Although RDs do not carry out these duties, they must be skilled in analyzing test results and blood pressure patterns in order to evaluate the nutrition-related condition and general health of both inpatients and outpatients. I also gained a greater appreciation of the collaboration between RNs and RDs in managing patient care.

**3. Recommend and/or initiate nutrition-related pharmacotherapy plans (such as modifications to bowel regimens, carbohydrate to insulin ratio, B12 or iron supplementation) - e.g. As part of conducting Nutrition Assessment (initial or F/U); providing nutrition counseling in clinical facility; completing the NCP; working w/ the inter-disciplinary healthcare team in clinical facility**

One of the patients I saw was admitted for open wounds at the lower left leg and ankle. She also had Sjogren’s and told me during the interview that she had trouble swallowing her food because of it. Due to that, her meal intakes were low and she wasn’t meeting nutrition needs. Keeping her wounds, dry throat, and low intakes in mind, I asked her if she had heard of Juven. As she hadn’t, I provided education on why it’s beneficial to take for wound healing. Then I asked her if she would be open to having it while at the hospital, to which she agreed. I also offered her a couple of coupons to buy the nutrition supplement after she got discharged. She was grateful for the information and this bolstered my confidence in providing recommendations in nutrition-related pharmacotherapy.

This rotation has probably helped me the most in terms of dealing with different kinds of people, improving my communication skills, and just providing nutrition-related education on all kinds of topics, from low-fiber to diabetes education. When I first started this rotation, I was at a loss whenever I would look at a patient’s medication list, as I didn’t know what most of the medications were used for and why the patient was on them. Now I’m more comfortable discussing nutrition supplements and diet orders with patients and making adjustments to their prescriptions as needed.

**4. Provide instruction to clients/patients for self-monitoring blood glucose; consider diabetes medication and medical nutrition therapy plan - e.g. As part of conducting Nutrition Assessment (initial or F/U); providing nutrition counseling in clinical facility; completing the NCP**

One of the patients was admitted for uncontrolled blood glucose levels. He was type 2 diabetic and was off his insulin medication for a while because he had no insurance for it. When conducting my nutrition assessment, I asked him whether he had been given any diabetes related education. He mentioned that he was told about it but not in detail. I asked him if he would be open to receiving education, to which he agreed. I then spent a few minutes telling him about carbohydrate counting and the high and low glycemic index of foods, among other things. I wasn’t able to instruct patients on the use and monitoring of blood glucose, but I was able to see my preceptor do that with another patient in the Intensive Care Unit (ICU). It was interesting to see her talk about it and made me want to work harder to get better at giving education to patients with diabetes and other diseases as well.

**5. Explain the steps involved and observe the placement of NG or nasoenteric feeding tubes - e.g. As part of conducting Nutrition Assessment (initial or F/U); providing nutrition counseling in clinical facility; completing the NCP; working w/ the inter-disciplinary healthcare team in clinical facility**

At St. Luke’s hospital, this procedure is outside the scope of practice for a Registered Dietitian (RD). There were no patients requiring an NG-tube placement during my clinical SEL rotation, so I was unable to observe it. However, I have observed the video module/simulation in my Master's program during my Physiological Basis Nutrition semester. The following is the reflection of what I observed from the simulation.

Reflection

I always considered NG tube feeding to be a complex topic when I was studying it during one of my Bachelor courses. It most certainly is complex but that goes for basically every medical process as it has a direct or indirect influence on our body. It's a topic that confused me a lot which was probably due to the lack of video simulations and other visual aids at my disposal. I never studied the type of placement techniques, tube tip verification methods, and securement

approaches which I feel is necessary to understand what I did actually study which was the

process of creating enteral feeding solutions.

There were several important things I learned during my read through of the article and by watching the simulation video. One thing that surprised me was that acquiring ethics approval

isn't necessary if a study is categorized as a "quality improvement study". I was always under the

assumption that ethics approval is mandatory for every type of research study. Another thing that

struck me was the amount of training needed to be eligible for IRIS tube placement. Direct vision requires expert-level training to safely interpret the guidance. This would require the operators to be experts on interpretation of anatomical characteristics which could be challenging.

The video does a great job at showing the entire preparation, insertion, and verification process without prolonging it. As someone who understands and retains information better with visual aids, watching the nurse insert the tube, secure it properly and confirming the tube's position by taking the gastric aspirate in a 60mL syringe and checking its pH was very fascinating. The video helped clarify the gold standard for placement techniques, tube tip verification, and securement.

One thing I found interesting while reading the article was how images of the various organs were captured during tube placement and how the anatomy of various organs (nose, pharynx, respiratory tract and stomach etc.). was identified. For example, the research article mentions that entry into the pharynx is seen as pale mucosa with blood vessels that blanch on impact and the stomach is first seen as a cavernous space with the mucosa appearing as cobbled large folds. Having expert knowledge on the anatomy of these organs and being able to differentiate organ boundaries and identify where the tube is positioned in real time will greatly help prevent NG tube misplacement.

**6. If available, assist in the process of placing NG or nasoenteric feeding tubes - e.g. As part of conducting Nutrition Assessment (initial or F/U); providing nutrition counseling in clinical facility; completing the NCP; working w/ the inter-disciplinary healthcare team in clinical facility**

See above reflection on NG tube placement. At St. Luke’s hospital, this procedure is outside the scope of practice for a Registered Dietitian (RD).

**7. Conduct a swallow screen - e.g. As part of conducting Nutrition Assessment (initial or F/U); providing nutrition counseling in clinical facility; completing the NCP; working w/ the inter-disciplinary healthcare team in clinical facility \*\*video module/ simulation are also in place in ND 609 (MNT) and ND 602 (Physiol Basis of Nutr II) for background information**

At the St. Luke’s hospital, the swallow screens are conducted by the speech-language pathologists (SLP). This procedure is no longer under the scope of practice for RDs. Due to this, I was only able to shadow the SLP at St. Luke’s Carbon campus, rather than conducting it myself.

I shadowed two swallow studies on July 22, one for an 85-year-old woman and the other for a 48-year old woman. I observed the SLP preparing different food items and mixtures to be tested on the patients. The barium was mixed in pudding, since it properly dissolves in liquid. Then it was mixed into applesauce, nectar thick liquid and coated on a nutrigrain bar and a piece of turkey sandwich. The speech-language pathologist always starts with thin liquids for all patients and then works her way up depending on how well they tolerate it.

The SLP asked each patient about their meal intakes, whether they have difficulties with chewing or swallowing foods and if so, which types of foods, and whether or not they crush their pills. The first patient was given the following food items in this order,

1. Regular water
2. Applesauce
3. Nutrigrain bar
4. A piece of bread
5. Half a pill with applesauce
6. Nectar thick liquids

After assessing her swallowing, she still recommended the patient be kept on a thin liquid diet, as she was still having trouble with swallowing. The half pill she had taken with applesauces got stuck and took her several swallows to clear. She was also not given a piece of turkey sandwich because she had trouble with chewing.

The second patient was given the following food items in this order,

1. Regular water
2. Applesauce
3. Nutrigrain bar
4. Shortbread cookie
5. A piece of turkey sandwich
6. A fake pill to swallow with water

This patient didn’t have trouble swallowing all of these foods except the fake pill. This was due to the patient having hiatal hernia, so her esophagus was constricted. She had to take it again with applesauce to clear it.

It was very interesting observing all of this from the monitor screens. The screening is completed quickly, and the findings are immediately available. The SLP then meets with the family to go over the findings and suggestions. I had fun watching the swallow studies. I’ve often seen SLP notes on the EPIC EMR software whenever I’d look through patient’s charts and they would have diet orders for nectar thick liquids or pureed diet. This observation gave me a complete picture of how to interpret patient charts.

**8. Refer to the appropriate health care professional for full swallow evaluation when needed - e.g. As part of conducting Nutrition Assessment (initial or F/U); providing nutrition counseling in clinical facility; completing the NCP; working w/ the inter-disciplinary healthcare team in clinical facility**

During the interdisciplinary rounds, my preceptor mentioned that it’s the MDs who would usually refer to the SLP about a swallow study or discuss the need for one. At St. Luke’s, it isn’t in an RDs scope of practice to refer to SLPs for swallow evaluation. However, they are able to interpret results and prescribe the formula for the patients. My preceptor is almost always in constant communication with the SLPs at the St. Luke’s hospital, to discuss nutrition care plans for patients with dysphagia.