<u>Away Rotation: Duke University Hospital</u> Hsuan Yen

Spring Term: Metabolism and Endocrinology (Medicine 428C)

Attending Dr. Tracy Setji/Fellow Dr. Abby Abisogun/Resident Dr. Myles Nickolich

Mornings started with pre-rounds, at 8 AM. As the team would only assign one new patient to me each day, I had ample time to go over the patient's new data, go to the patient's bedside to see how he or she was doing, then type up my progress note.

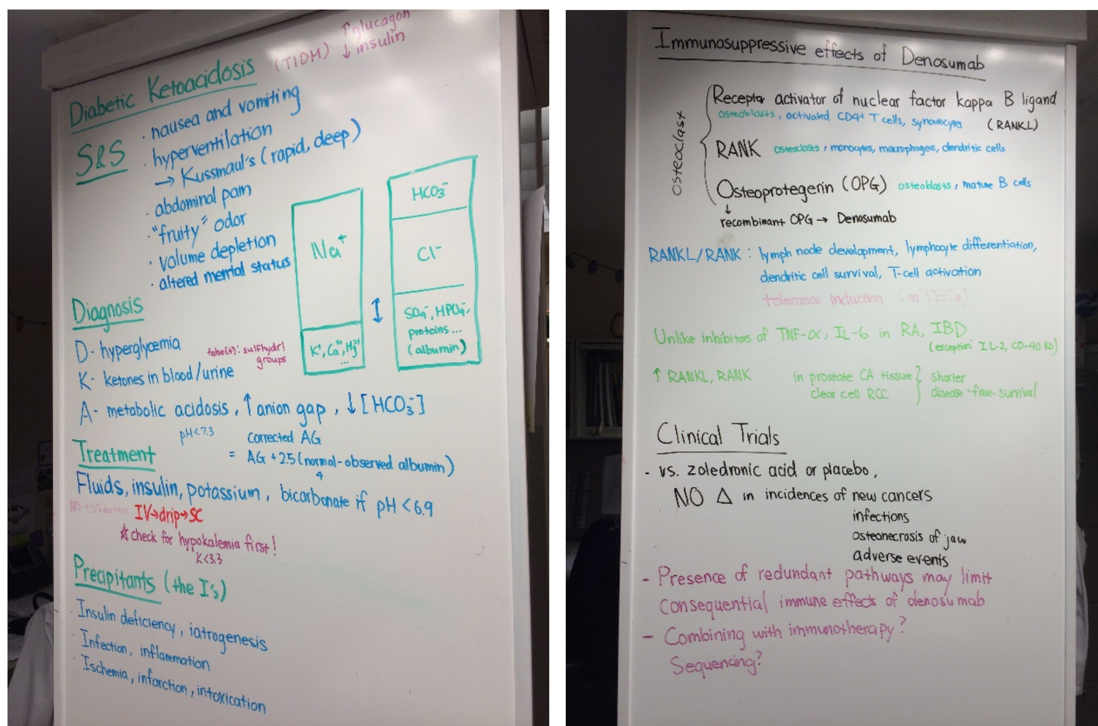
With two nurse practitioners to take care of the more straightforward diabetic patients, I was allowed to take care of patients ranging from the African-American girl with diabetes insipidus after a car accident to the middle-aged male with pheochromocytoma as the cause of his hypertensive emergency.

The hospital was a bit different from Taiwanese ones in that insulin drips were commonly seen in regular wards. The fact that insulin drips (along with hourly blood sugar checks) could be administered so widely speaks to the adequate nursing staff numbers. Every morning, besides seeing patients, I would also work on "blood sugar sheets" with the fellow Abby, tracking how the patient's glucose levels fluctuated throughout the day with the use of an insulin pump or injections. By being able to focus on just the one issue of glycemic control, I was able to gain a better understanding to how and when to administer different insulin treatments. Abby also taught me a lot of the basic questions to ask diabetes patients, such as if they saw a podiatrist every year (a profession I'm not sure exists in Taiwan!), as well as their immunization history. The physical examination included looking for lipohypertrophy ("lumps and bumps") caused by not alternating sites of insulin injection.

At 10 AM, Dr. Setji would walk in the endocrinology work room, saying "All right, it's time for our five-minute talk!" These daily talks ranged from the basics of polycystic ovary syndrome to the future of using contact lenses to monitor blood sugar. She would always ask first what I already knew about the topic, such as "how do you diagnose diabetes," then proceed to expand on my answer. Even with a tiny bit of free time during rounds, she would murmur to herself, "Hmm, what can I teach in one minute?" In this manner, I gleaned many gems of knowledge throughout the course of two weeks. I often find that one whole hour of class is too much for me to absorb at once, but Dr. Setji's bite-sized knowledge was quite palatable.

On the consult team, fellow and medical students alike give a comprehensive presentation, including not only the history of present illness (HPI) and assessment and plan, but also finer details such as social history. Accustomed to service teams where physicians often had to hurry to their clinic or lab, I gave a very brief presentation on my first day. After a moment of silence, Dr. Setji replied, “That’s it?” It was only later that I learned that at Duke, unlike in Taiwan, physicians do not have primary care patients and consult patients to see at the same time, and thus have the luxury of more time to devote to less patients. Needless to say, I gave detailed presentations thereafter!

Once a week, it was my turn to give a short presentation, on a topic of my choosing. I usually presented topics related to patients I was taking care of, such as diabetic ketoacidosis or the immunosuppressive effects of Denosumab, a monoclonal antibody used to treat osteoporosis. We had found case reports using Denosumab for the management of malignancy in patients who were refractory to bisphosphonate therapy, but were unsure of its side effects. By giving this presentation, I was not just rehashing information that the other doctors already knew, but rather, we were learning together.



Without the need to create a formal Powerpoint, I limited my presentation space to one whiteboard. Succinct!
American sense of humor: “I’m sorry, I don’t think I can read your handwriting! It’s too neat!”

Even as a medical student, there was always room for discussion with the rest of the team. It was not just the attending or fellow doing all the teaching (although they certainly did a lot of that)! The resident Myles also got assigned only one new patient a day, and likewise engaged in teaching on the fly, asking questions such as, “Do you know the difference between a pheochromocytoma and paraganglioma?” (A paraganglioma arises outside of the adrenal glands). Or, looking over a diabetic patient’s data, “What would make you think this sodium level is false?” (Hyperglycemia causes water to shift from the intracellular to the extracellular space, causing a relative hyponatremia).

Rounding usually ended at noon, during which time we could partake in the internal medicine lectures (and free food!) set up for the internal medicine residents. Topics ranged from “old men diseases,” as the speaker put it (erectile dysfunction and benign prostate hypertrophy), to nephrology board review classes.

Afternoon provided ample time to see a new patient, write up the medical record, and come up with a plan. The fellow Abby wrote the official note, so comparing my unofficial note with hers was an effective way to learn. The attending Dr. Setji would also write an addendum, which provided an additional source of learning. The two experienced nurse practitioners (NPs) Brittany and Liz were great sources of information for everything diabetes related, as well as for directions around the labyrinth of Duke Hospital! Abby used the afternoon to give me feedback on my presentation, as well as give me tips on which topics I could read up on first.

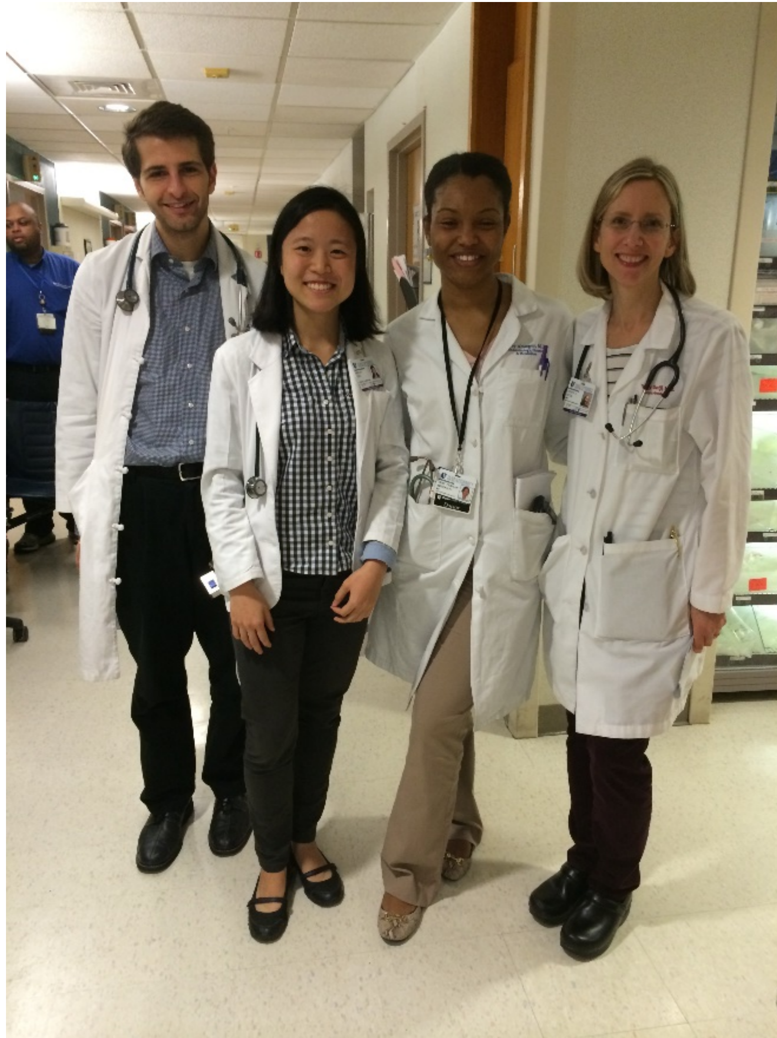
After the first two weeks of inpatient service, I then participated in two weeks of outpatient Endocrine clinics. By working with a different faculty member each half day, I was exposed to a wide variety of endocrinology issues, from hyperlipidemia to thyroid nodules. Many of the attendings allowed me to go in first and obtain a history and physical examination first. I would report my findings before going in again with the attending physician. In this manner, I became even more familiar with the questions to ask diabetics, such as if they received a (dilated) eye exam every year, or if they were taking statins, even with normal cholesterol levels. Having only worked in the inpatient setting up until then, I normally did not ask such detailed questions about pre-existing diseases. The attendings were very thorough with their physical examination, explaining to me and the patient simultaneously what each test meant. The residents here had a much more clinic-heavy training than in Taiwan, participating in clinic starting their intern year.

During the third week, it was time for my presentation. Every Tuesday morning, there was a one hour case conference given to the whole Endocrinology department, usually presented by fellows. I arrived early. The head of the department asked me how I was doing, to which I replied honestly, “Nervous!” He replied, “Don’t be! This is just a discussion!”

As I presented our patient with hypercalcemia, I did realize that this was not a one-way presentation, but truly a discussion. The staff seemed genuinely interested in the case, and when I raised the question of whether Denosumab could be used in this patient to help lower his calcium, various attendings contributed their experiences. Thankfully, there was no pimping!

During my presentation, the audience jumped in anytime with questions. For instance, when I stated that the symptoms of hypercalcemia could be remembered by the rhyme, “Stones, Bones, Groans, Moans, Thrones, and Psychiatric Overtones,” one attending asked, “Bernice, could you tell us what thrones means?” I explaining that sitting on a porcelain throne (the toilet) could then be associated with polyuria.

During both the inpatient and outpatient setting, I truly felt as if I was part of a team. During rounds, Abby would sometimes prompt me to show what I had learned, saying, “Bernice read up on this topic yesterday. She can share with us!” Even when I helped out with small tasks, such as helping make clinic appointments or finding infrequently ordered tests, Abby would always make sure to let the attending know how I was contributing. Throughout four weeks, with a very reasonable workload and ample feedback, I had an enjoyable learning experience.



From left to right: Intern Dr. Sommer, me, fellow Dr. Abby Abisogun, attending Dr. Tracy Setji. Besides being a part of the team, I was always asked, "So what do you want to do with your life?" Physicians were interested in you not just as a medical student, but as a person as well.

Spring Break: MICU

Attending Dr. Tony Huang, Resident Dr. Nick Reid

With two weeks of spring break in between our rotations, the four of us had the opportunity to split our time evenly between the MICU and the infectious disease consult service. The MICU was my one week here not on a consult team, so it was interesting to observe how the ICU team could pinpoint and treat each of the patient's problems. Even with complicated patients, Dr. Huang allowed us to take care of one patient each, and present in the morning. Afternoons were spent with Dr. Huang going over our notes, while tying together clinical symptoms and signs pathophysiology.

I also had the opportunity to see a pulmonology consult patient Dr. Huang had at Duke Regional Hospital, as well as participate in his and the fellows' pulmonology clinic. As in Endocrinology, Dr. Huang allowed me to see the patient by myself first, then together with him. This was quite different from (and more nerve-wracking than!) the inpatient setting in that I had to formulate a presentation of the patient, along with an assessment and plan, immediately, but it was good practice! I could see how, by allowing residents and fellows to participate in clinic from year one, Duke allowed physicians to feel at ease seeing patients in clinic, and correctly analyzing and treating their problems.

Summer Term 1: Clinical Infectious Diseases (Medicine 435C)

Attendings Dr. Luke Chen, Dr. Vance Fowler, Dr. Rebekah Moehring, Dr. Nathan Thielman

Fellow Dr. Austin Chan, Resident Dr. Scharles Konadu, Medical Student Pierre

My second week of spring break was spent with Dr. Luke Chen. Interestingly, he had explained to us that to improve hand-washing rates, Duke had implemented a system where certain hospital employees were chosen to observe who was and wasn't washing his or her hands! The infectious disease department did not have its own patients, but rather only saw consult patients. However, even as consult physicians, they still followed up with patients in clinic. As in the previous clinics, Dr. Chen again allowed me to see the patient on my own first, then together. As he was not on the infectious disease consult service at that time, I spent one morning in Dr. Chen's clinic, and the rest of the week with Dr. Vance Fowler. Dr. Fowler was an expert on *Staphylococcus aureus* bacteremia, having written multiple papers on the subject, each cited hundreds of times.

As in Endocrinology, Dr. Fowler would give me a topic the day before to present to the team. He enjoyed the reasoning process behind each infectious course, and one day invited us to explore, through question and answer, what was the cause of a woman's numbness he had seen years ago. Further questioning allowed us to discern that the woman had the same symptoms as her husband, and that they had just returned from an island vacation. The answer turned out to be ciguatera poisoning, caused by eating certain fish, with the hallmark symptom of "feeling like your teeth are falling out."

But infectious disease was not purely academic; besides a wide amount of background knowledge, they used physical examination extensively as well. I was impressed by how both Dr. Chan and Dr. Fowler would always personally use a fundoscope to look for Roth spots in patients with endocarditis. (The Duke criteria for endocarditis came from Duke University Hospital, and endocarditis patients constituted a large part of the consult service). There was always a dialogue between doctor and patient; I remember Austin going back to see one gentleman after work, as that patient wanted to explain his differing theory about how he had gotten bacteremia.

Dr. Fowler always concerned himself with my learning. The first day, he told me bluntly that my presentation was subpar, and highlighted what information I had failed to include. I took his recommendations to heart, and after my next presentation, he said, “That was much, much better than your first presentation.” One day, after I said that a patient had aortic regurgitation, he asked me what kind of murmur that would be. Already a bit nervous from already having answered his previous question incorrectly, I couldn’t come up with an answer at that time. Unexpectedly, he asked me the same question the next day, and when I correctly answered, “diastolic murmur,” the usually stern Dr. Fowler gave me a pat on the back, saying, “Good! You looked it up!”

Dr. Fowler himself was always open to suggestions. One day, he mentioned the microbial coverage of a lesser-known antibiotic, part of which turned out to be incorrect. That night, Austin emailed us a paper, writing “Hey team! Just wanted to clarify.” Dr. Fowler replied, “Thanks! Looks like I was mistaken.” The readiness of the fellow to double-check and willingness of the attending to accept his mistake were both striking.

The following two weeks were spent with Dr. Rebekah Moehring. One thing that medical students did here was clarify their role and expectations of the team in the beginning, then ask for feedback halfway through the rotation. In Taiwan, we usually receive feedback at the end of the rotation. Dr. Moehring gave me advice on how to make my presentation more cogent and concise one week into the rotation, and thus I was able to immediately implement that during the second week. She also advised me to take a more proactive role and try to help out before I was asked.

One day, our fellow Austin had gone home, so it was just me and Dr. Moehring. She asked me to see two patients instead of one that day. I quickly saw the patients and wrote up my notes, and was happy to see at the end of the day that she had used my note, including the assessment & plan, as a template for her own official consult note. (Usually, the fellows used only my history of present illness portion)!

My final two weeks on the service were spent with Dr. Thielman. Similar to Dr. Fowler, Dr. Thielman preferred to hear presentations at the bedside, so that patients could hear their history reiterated, and could also add any pertinent points. Memorably, I stated that one elderly lady’s interests were visiting her grandchildren and gardening. Upon hearing this, she exclaimed, “Oh my! You make me sound so boring!”

As the director of the Global Health Pathway, Dr. Thielman was able to teach us about several diseases we would not usually see in the hospital. I was also impressed by the other medical student, Pierre, who was very proactive. He always bought one medical “interesting fact” to share every day, and emailed his notes, asking Dr. Thielman to take a look if convenient. (He also lent me his bike, which made buying groceries much more convenient)!

Austin was always willing to let medical students take a bigger role as well. If someone sent a page concerning a patient we had seen, he would let us return that call ourselves. However, he still gave us only one patient to see a day, saying that he would rather see us do a good job presenting that one patient that struggle to polish two presentations at once. He always went over our presentations with us before we presented to the attending, clarifying any questions we had and pinpointing the important points of the assessment. (He also bought everyone vegetables from his garden)! Most surprisingly, besides giving us feedback on the last day, he also asked if we had any recommendations for him on how to become a better teacher. I saw this spirit of constant self-improvement in various physicians at Duke throughout my time here.

My last week in infectious disease, with attending Dr. Nathan Thielman and fellow Dr. Austin Chan. Interestingly, I never saw these two don a white coat!

Summer Term 1: Gastroenterology (Medicine 435C)

ERCP: Attending Dr. Paul Jowell, Fellow Dr. Danny Cheriyan

Duke North: Attending Dr. Raghubinder Gill, Fellows Dr. Ivan Harnden, Dr. Scharles Konadu

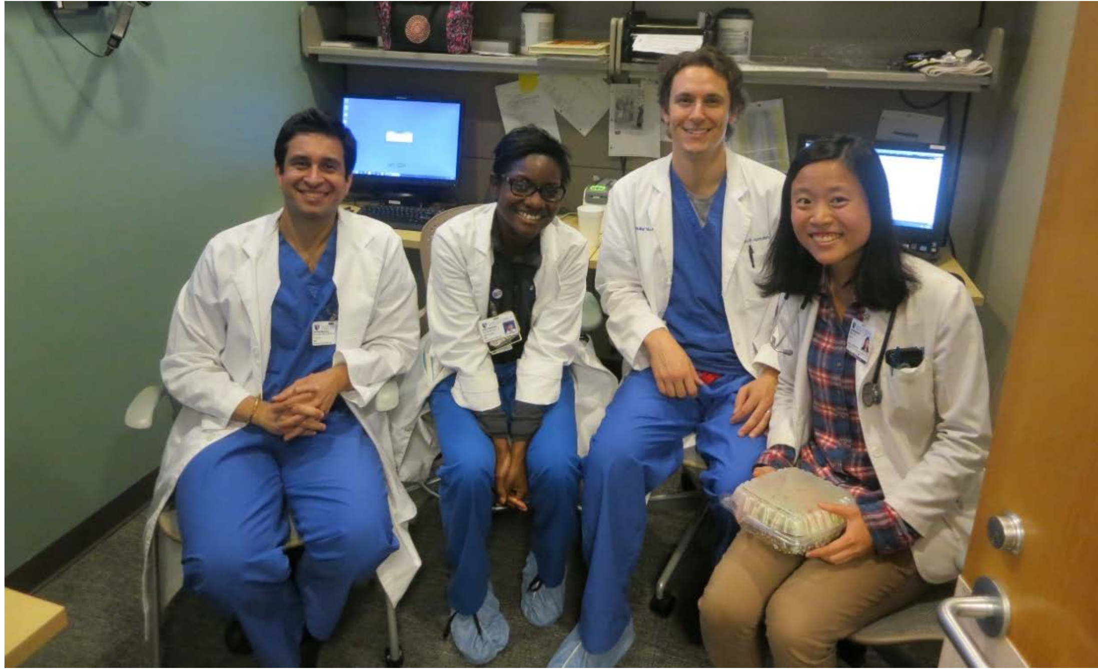
VA: Attending Dr. Jonathan Cohn, Fellow Dr. Gabriel Mansouraty, Intern Dr. Div Patel

Duke North: Attending Dr. Rahu Shimpi, Fellows Dr. Reinaldo Quevedo, Dr. Alyson McGhan, Interns Dr. David Kopin, Dr. Kahli Zietlow

My last rotation was in gastroenterology, with each week spent on a different service. My first week was spent on the endoscopic retrograde cholangiopancreatography (ERCP) service, so I watched Dr. Jowell and Dr. Cheriyan perform procedures throughout the day. I became quite familiar with the biliary system anatomy, then proceeded to the Duke North consult team during my second and fourth week. There were two fellows on the team, and they alternated between performing upper and lower endoscopies and seeing consults. Interestingly, unlike in Taiwan, all patients undergoing endoscopy received some form of sedation. Due to the high volume of patients, I learned to quickly formulate my presentation and present more concisely, hitting just the key points. (Good thing I already rotated through two months of consult teams that had allowed me more ample preparation time)! The fellows still made time for me to present to them before presenting to the attending.

Dr. Shimpi made it a point to ask for my differential diagnoses, especially when patients often had just one or two common causes of upper or lower gastrointestinal bleeding. Even among the high number of consults and procedures, there was always time made for teaching. We made good use of the white board, using it to draw anatomical structures or review the functions of the different gastric enzymes. While the fellows performed the endoscopies, Dr. Shimpi would explain what we were seeing.

My third week was at the Veterans Hospital across the street. As there was often just one or two consults a day, sometimes just the fellow or intern took care of those. The attending Dr. Cohn, upon learning that I had not seen a consult that day, still sought out ways for me to learn. After Div had presented the patient, Dr. Cohn would ask me, “So, would you like to summarize?” Throughout all my rotations, I constantly saw this commitment to making sure students learned, in both fellows and attendings.



Duke North team, from left to right: attending Dr. Gill, fellows Scharles and Ivan, me.

Duke North team (from left to right): resident Dr. Kahli Zietlow, fellow Dr. Reinaldo Quevedo, me, attending Dr. Rahu Shimpi, visiting scholar from China.

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