Chief Resident Oral History Project

Dr. C. Cameron McCoy, 14 May 2018

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Barr: Good afternoon. Thank you again for participating. This is Justin Barr interviewing Dr. C. Cameron McCoy as part of the Chief Resident Interview Project. We're at Duke University. It's May 14, 2018. Doctor McCoy, Can you talk a little bit about your background, where you grew up, where you went to college, what drew you to medicine?

Dr. McCoy: Sure, I'd be happy to. I am the only son of Glenn and Holly McCoy. My parents met in the army back in the 1970's. Before getting out of the army, they decided they were going to have some children. I was born and grew up in Winston-Salem, North Carolina, relatively close to here, prior to moving to New York City where my dad worked in finance.

We then followed his job around for most of my upbringing from New York, back to Winston-Salem, down to Atlanta, and then finally back to North Carolina. I was the only child, and I grew up with a bunch of folks that had been or were currently in the military in my family and engineers. I thought myself to be an engineer from the get-go, something like maybe I'd build fighter aircraft or a lunar lander one day, much like people in my family had.

I went off to college actually here at Duke in 2002 with the thought of pursuing engineering, but through some opportunities towards the end of high school and early college, quickly came to find that I wanted something with a little bit more humanity. I was big into rock climbing, hiking, things like that and really enjoyed the little medical emergencies we had during those trips. That was actually a job of mine for a while, teaching rock climbing.

Secondly, I actually worked at a veterinarian's office for multiple years throughout high school. I was doing things from counseling families about the euthanasia of their animal to cleaning up stalls, to doing injections, helping with surgery, things like that and thoroughly enjoyed it. At a point in time, I realized I really wanted to not do veterinary school necessarily, but I want to pursue premed. That happened early in college here at Duke. I pursued a biology major here and premed as well. I actually did not do that well in my freshman year of college. I had some Cs and things like that. That what happens when you take organic chemistry and Japanese as a freshman pledging a fraternity. Hindsight is 20/20.

I then basically did my four years in college and waited to apply to medical school. I took a year off, I did much better in school my final years in college and then moved out to Montana with the intent of applying to medical school. I worked in Montana for AmeriCorps, a nation-side peace corps, so to speak. I worked with foster kids. During that time, I also got my EMT and firefighter-1 certification and found I thoroughly enjoyed that work. In applying to medical school, I got into UNC, Emory and a few others. I realized that I'd probably end up being an emergency medicine physician. I matriculated at Emory Medical School in 2007 and then quickly realized that it was trauma for me and not emergency medicine, and I guess the rest is history.

Barr: What made you come to that realization in medical school?

Dr. McCoy: I think I realized that the component of what I enjoyed doing in Montana and enjoyed while I was rock climbing was not the medical emergencies of people having chest pain or primary care concerns. But it was the individuals involved in motor vehicle collisions, doing extrications out of cars as a firefighter, and things like that that I really enjoyed. It was continuing that care that I really wanted to do in medicine, which I found more in surgery and trauma and less so in the emergency department.

Barr: When you were at Duke for undergrad and Emory for medical school, were you involved in any research or have any particularly influential mentors that helped guide your career?

Dr. McCoy: Absolutely. As an undergraduate at Duke, I worked in the lab of Huntington Willard who is the head of, it's now called the IGSP, the Institute for Genome Sciences and Policy here. He was a great mentor at a new institute working on artificial chromosome research, attempting to build essentially synthetic centromeres to attach DNA sequences to then transfect into human or mammalian cells. Then have them persist as additional chromosomes, with the end idea of allowing for gene therapy.

It was himself and one of his post-docs, Joydeep Basu who I worked with for about two and a half years. I wrote my thesis based upon work there. That was my first real entry into biomedical research. In medical school, I got to know two primary mentors. One was a thoracic surgeon, Daniel Miller, there who I worked with extensively in general thoracic surgery, looking at colonic interposition for esophageal malignancy and just really enjoyed his company. I also worked with a trauma surgeon, Jana MacLeod, there at Emory as well, who has since moved on to actually the University of Kenya. She was my first introduction to the coagulopathy of trauma.

Barr: What was your surgery experience like when you were in medical school?

Dr. McCoy: I thoroughly enjoyed my surgery experience. Most of it took place not at Emory but actually at Grady Hospital, which is Atlanta's intercity indigent care hospital and also level one trauma center. As a medical student there both as an MS-3 and MS-4, you got a tremendous amount of independence and ability to do procedures. I

came to my intern year having already done multiple central lines, placed chest tubes, IVs, of course under the supervision of junior residents there.

But there was enough of that going around that you actually got to do a fair amount of procedures, and I really enjoyed that. I really enjoyed caring for a whole spectrum of the Atlanta populous. The homeless person that was a victim of a violent crime, anywhere up to the fellow doctor or Emory faculty member who had been knocked off his road bike and flown in from somewhere. You ran the gamut with those individuals and I found that very rewarding.

Barr: When you were on the interview trail, what was the reputation of Duke at that time when you were talking to fellow applicants?

Dr. McCoy: I was told Duke was one of the best general surgery programs in the country. I did certainly get the idea, I think it was popular at the time that Duke was a fairly hard place to train, it was fairly old school or old fashioned in the sense that you weren't always given a lot of positive reinforcement and you might receive a slightly more negative reinforcement than you deserve. In the end, people came out extremely well-trained. I think the attitude of people that I encountered here during my interview fit with that but also fit with a very professional appearance and approach to things which dovetailed with my upbringing and experiences in the past.

Barr: You clearly came out of medical school as a very strong applicant. Was there anything in specific about Duke that made you rank us really high or just general philosophical alignment?

Dr. McCoy: I think it was a few things. I think Duke's reputation as an excellent training program. I had not yet determined through and through if I was going to do trauma or thoracic surgery. I had met with Dr. [Thomas] D'Amico, my mentor at Emory, Daniel Miller recommended Dr. D'Amico and his colleagues as excellent folks to train under. Also, my family actually at the same time was moving to this area, to the Raleigh area. I found that I really didn't find myself fitting in in a lot of the other major programs, say in places like Boston or San Francisco or Seattle. Having been raised in the southeast, this seemed all very familiar to me.

Barr: In what year did you end up starting your internship and who was in that class?

Dr. McCoy: In July 1, 2011, I started my intern year. I started off with six co-interns, Brian Gulack, Jeff Keenan, Jeff Yang, Emma Neff and Daniel Nussbaum. Those things have been reordered. We lost Emma a few months in for some personal circumstances. Danny stayed back for an additional year of research. Towards the end of that year, George Kokosis became a member of our class as well and then Mithun Shenoi and Mohamed Adam subsequently.

Barr: Any particularly great stories or fun memories from intern year that might be different from the current intern's experience?

Dr. McCoy: Maybe this is all looking back on things. I remember certainly being given a fair amount of independence as an intern. We did a lot of ICU rotations as interns and I did two months in the SICU as an intern, which is fairly uncommon these days. I remember my second night on in the SICU, during my first week. Your first week of intensive care, you'd be usually the only person on at night. There was no PA and the Attending was typically cross covering other services as well.

Barr: How many patients were you taking care of?

Dr. McCoy: They were only 16, but you're an intern with 16, the charge nurse and your critical care nurses, I was going to talk to Eugene Moretti [attending anesthesiologist], whom I had barely begun to get to know. I had worked with him at night so far and he was absolutely wonderful. We had a code that night that came into the SICU, and he was also very busy with some other things, apparently. I intubated the patient, hadn't intubated a lot of people before, but intubated the patient. I think I stuck it down the esophagus the first go around, I stuck it in the trachea the second time. I put a central line in the patient, A-line in the patient, and began resuscitating the patient.

I performed all these procedures by myself as an intern. Then he asked me what my plan was and I rattled off some nonsense about volume resuscitation and pressors and broad-spectrum antibiotics and maybe something else, and he turned to look at me and he said, "Well, Cam that seems a little bit aggressive but that sounds good let's go with it."

Then he promptly left the unit, and I really didn't know what to think. I thought he would tell me what to do and instead, he said, “well, I don't know, Cam, I guess so” and left. That was my first taste of independence in clinical practice. That's really an inflection point in your training, I think.

Barr: People say that the second year, the JAR year, is one of the more challenging aspects of our program. Did you find that to be true in your experience or how did you find the second year of residency?

Dr. McCoy: Well, entering it, I found the ability to independently evaluate patients and work with attendings directly was actually really enjoyable. But I found I was probably a busier my second year than I ever had been during my first year. Actually, I would say the experiences were kind of book-ended by two things. On one end, I actually shared the JAR responsibilities with Dan Nussbaum out at [Duke] Regional, back when I think they had half an attending operating there on a weekly basis. Georgia Beasley was our chief and we routinely went out for lunch and routinely had nothing to do and despite that could still not get our NRSA applications in on time that fall.

That was rather enjoyable having come out of a busy intern year. I think it was in November of that year. On the other end was the craziness of the trauma JAR/2222 rotation at the time, arriving at 4:45 in the morning, leaving between 9 and 10 PM and that was your schedule because you used to have to do duplicating white and Pink

Sheet Consult Notes, handwritten. Handwritten H and P's. The E-browser system which would routinely freeze as you're trying to admit someone.

It was a different time and I also very much warmly remember driving the PEG cart around the neuro ICU or various places routinely traching and pegging multiple people per day with people like Val, Judson, and Turley.

Barr: What did you end up doing for those two years in the lab after you got the NRSA?

Dr. McCoy: Unfortunately my NRSA was not accepted. I had reached an inflection point where I had to decide between thoracic oncology or trauma. I was looking at the research opportunities within thoracic oncology and really just did not feel a fit with oncologic research and that care paradigm.

That cemented my commitment to trauma surgery. Unfortunately, no one within the trauma division here really had a large basic science presence or translational research presence, but Dr Jeff Lawson within the vascular surgery department kind of took me under his wing as his lab was focused not only upon his Humacyte graft, which was a bioengineer vascular graft but also upon all sorts of research related to bleeding and resuscitation.

I found that really worked quite well with my interest, having done a little bit in trauma, coagulopathy. I found kind of a home there with him and his Ph.D., Jim Otto, where I spent two years.

Barr: You've done a lot of work on bleeding and coagulopathy and even served on the transfusion committee for this hospital. One of the items we consistently discuss in M & M is the challenge of getting the 1:1:1 transfusion actually implemented in many of these cases of massive bleeding. How did you see the 1:1:1 system being rolled out at Duke? What are some of the ways we've done that really well and what are some of the challenges that we still face?

Dr. McCoy: I think when I first came to Duke, I remember people bringing up this idea of a massive transfusion protocol, which we had in place basically for people in the trauma bay. That was a subset of coolers that would be delivered in a relatively timely fashion. That would provide essentially what is known as kind of whole blood equivalent. Over the course of a cooler, a patient would essentially receive the equivalent of a certain volume of whole blood through multiple blood components. Then you would subsequently attempt to draw serial labs and maybe alter those transfusion ratios or provide things like tranexamic acid to better address things like fibrinolysis or other degrees of coagulopathy.

I remember early on a lot of surgeons within that department commenting that, well, what if I got into heavy bleeding while I'm doing my hepatectomy or while I'm doing my colectomy or in the ICU, but this is a general surgery patient? What do I do? Do I have to order two and two or do I order one and one and one? What do I do? It was actually one of the more rewarding parts of the transfusion committee was working

with Dr. Shapiro, Dr. Bandarenko, Dr. Guinn and Dr. Ian Welsby was actually totally revamping the transfusion protocol so that any provider – medicine, surgery, whoever -- could enact what was then called the exsanguination protocol that will not only provide roughly the same cooler delivery system but also provide an order set of labs to be sent off including not only traditional coags but also rotational measures such as ROTEM. It would also get you 24/7 365 someone from hematology or the bloodbank on the phone to interpret those results with you and advise the addition of other components. Such as, say in OB bleeding, the addition of things like Cryo or fibrinogen heavy transfusion which those patients seemed to need or also the addition of things like PCCs, recombinant factor VII or other things that, to be honest, the most surgeons when things are going crazy in the OR, can't take the time. Typically that anesthesiologist is also overwhelmed in that situation. I think that was a big victory.

On my side of things, my second year on transfusion committee they polled the committee for targets for the next year in terms of projects for the community to address. I threw up the idea of educating trainees and nurses on this protocol and on 1:1:1, things like that. I thought that since I was the only resident on the committee, that my idea would be poo-pooed and they would elect some professor emeritus' idea to do something, and instead they chose my idea.

Over two years, finally this year has resulted in a developed module that's available and actually required for certain staffers, to be done on LMS, the education system, regarding not only how to appropriately check blood both in the OR and on the floor to ensure patient safety but then also to utilize the transfusion protocol. That's available for pretty much anyone in the Duke University Hospital system and is required for quite a few people to do.

Barr: That's an impressive accomplishment. You were saying that when you were a JAR, you were doing all these notes by hand, but when you came out of the lab, Duke instituted its electronic medical record system, Epic. What was it like to transition to electronic medical records and how do you think that's influenced your experience as a resident?

Dr. McCoy: Well, I think in the very much short term I definitely was a little bit fearful emerging from the lab, coming back into a system where honestly I couldn't put in orders. I basically went around a couple of days before I came back from my research year and sat down with interns and asked them to show me epic. It took a while. Initially you pined for e-browser and the efficiencies of being able to write an H&P while interviewing a patient.

But in the long run I've come to realize that with the ability to visualize a patient's entire hospital course over the past 24 hours on one computer screen to then review the labs on your phone and even look at its imaging on your phone, that it's really been a boon. I've really enjoyed having those capabilities, I think it's been great.

Barr: When you came into the program, I believe, Dr. Jacobs was the chairman and Dr. Migaly was not yet program director. As you leave as a chief, Dr. Kirk is chairman. What changes have you seen since Dr. Kirk has assumed the chairmanship?

Dr. McCoy: We met very briefly with Dr. Jacobs as junior residents when I first began. He was always very collegial and warm with us, but I don't think his one of his main focuses was on the residency program. I think he left that to the program director, who was Dr. [Brian] Clary at the time. I really looked up to Dr. Clary as a junior resident. He was very focused on education, in a slightly different model than Dr. Migaly, but was always very supportive, especially with the senior residents. It was really important to him that senior residents place well. Then of course he moved on, and then eventually went on UCSD's chairman position.

Dr. Kirk came on, Dr. Migaly came on. Really from the get-go Dr. Kirk seemed to take a really strong interest in the program as a whole. He almost seemed to be serving as sort of a second program director in some regards. I really didn't know what that meant until I became a chief resident and began meeting with him on at least a weekly if not daily basis. That relationship has actually been invaluable to me, personally, as a young physician, and also as a leader within the department. I think I've been amazed by how much attention he can put upon the residency program in addition to all his other responsibilities, especially the role model he serves as when you're chief resident.

Barr: Now that you are a chief resident, you're having a very different experience than you're days as an intern or a second year, so what's it like to be a chief resident at Duke Surgery in 2018, and any particular good stories from this year?

Dr. McCoy: I've thoroughly enjoyed this year. You definitely do a lot of reflection during your chief year looking back over your entire residency. You definitely come together as a class. I think you see this as an opportunity to become a more polished junior surgeon, junior faculty member as opposed to just resident. I look back and realize when I came out of the lab, my SAR-1 year was the opportunity to learn how to run a service, and begin how to operate. Your SAR-2 year is just so busy. You just try to do as many cases as possible, and you really capitalize your progression as a technical surgeon.

Then your chief year is where you get to challenge that on some pretty complex cases, and also with a lot of clinical independence. I figured, at least clinically, going into chief year doing whipples and other complex operations, that the Attendings were going to micromanage you, given the high stakes nature of a lot of the cases being done. But it was actually pleasantly surprising and confidence instilling that a lot of the attendings, you call them in the morning and you'd finish telling them the plans, they would say, "Yes," and hang up. You really developed a lot of confidence and ability to manage a lot of situations which has actually been highlighted this year.

My reflections on being an administrative chief, and what that's been like: It's been an invaluable experience where you get to meet with Dr. Kirk on a daily basis, provide him a report of all basically all operative activity within the health system, things that went awry, review those cases, and see how he really values your opinion. He makes changes to other people's operative schedules based on your review, not only in our department, but in orthopedics and things like that.

It carried a lot of weight. Soon my wife accrued a photo library of me sleeping in various situations, primarily with our children and at home, because you routinely wake up between 3:00 and 3:30 every day, and you go to bed between 11:00 and midnight. You do that for at least a month, and that's the usual schedule, plus on top of being on blue or gold or whatever service. She has pictures of me sleeping next to my one year old son, holding on me, pointing at me, my kids decorating me, my dogs attempting to sleep on top of me, and snuggle with me, and things of that nature which I'm sure will come about more humorous form in the near future.

Barr: Hopefully at chief's dinner.

Dr. McCoy: Exactly.

Barr: What's it been like having a wife and children during the middle of a very busy, challenging surgical residency?

Dr. McCoy: It's been a challenge of itself. I thought early on in residency, I thought my real struggles would be at work, taking care of complex patients. But really, it's kept me quite grounded in realizing that there's quite a bit outside the hospital. I tell my wife that I don't know what I'd do without someone to call me out on all my BS, because I certainly see people around here that I'm like, you need to be called on your BS and brought down to a human level. She certainly has done that role, as well as raise our three beautiful children and three beautiful dogs.

It's been crazy. I certainly feel like, it's funny looking back and it's something I've shared with very few people, but you really have a very finite amount of time as a resident to accomplish things. You want to accomplish not only clinical skills, research, and then all the other logistical things that are required of being a resident in terms of applying to things, taking tests, studying. Then you add a family on top of that, caring for your wife, caring for kids and all things involved in there, and you realize that you will always run out of time at the end of the day. There'll never be a day where you will have excess time.

As a junior resident who was just engaged, there was always extra time. These days, there is never any extra time, and I could always use four or five more hours in a day. I've had to come to terms with the idea of sometimes leaving studying behind, leaving a paper behind, or not being able to return home, and deal with the idea that you will be always be unsatisfied with some accomplishments at the end of the day or the end of the month. That really has bothered me throughout residency, and I wonder, "what if, what if." But I think towards chief year, I've come to peace with the idea that things have turned out fairly well.

I've been lucky to have her, have my family, have this program, and take satisfaction in that.

Barr: It certainly seems like you have enjoyed the time here. No program is perfect. If you could wave the magic wand and make changes, how would you change or consider correcting Duke Surgery Residency?

Dr. McCoy: Before I talk about how to correct things I would give a shout-out, give a great amount of credit to Dr. Migaly and all the changes he's made during my tenure here. When things started out, I had a duty hours issue as a junior resident. I was over hours, I was on something like 2222 and I was told that I needed to correct my hours. That was the talk we had. Literally those lines: "you need to fix those hours." "Okay, thanks, bye."

Nowadays, things are handled very differently, not just because there's an hours rule, but because I think there's a genuine interest in the well-being of residents. Because I think Dr. Migaly and people who work with him recognize that the well-being of the residents means that they will be successful residents. They'll do good research, they'll take care of themselves and their family, and that's ultimately how you achieve success in this field. In terms of things getting better, I think we're still on, an upward slope with regards to overall resident success and well-being. I think we still have issues with people feeling overworked or under satisfied.

I think we have to make sure we continue to take care of people in the sense of allowing them to have families during residency. Not losing people because they feel like they can't have a family. Supporting both males and females with regards to paternity and maternity leave, and things like that. I think we realize that we operate on such kind of the bleeding edge of human capabilities in terms of taking care of people, hours, the stress of what we do, that I think we have always be sure we are actively addressing these things and not just writing them off to being tough. There is always something to be said for that. We have to take of each other, and I think there is still more to be done there.

Barr: You've mentioned a few names, who do you see as some of your mentors in your residency experience?

Dr. McCoy: As a junior resident I was tremendously supported by Mark Shapiro, who went to Grady hospital from here. From early intern, first working in the unit to a second year working on the trauma service, he was tremendously supportive of me, challenged me, gave me a lot clinical independence where I wasn't given clinical independence by a lot of other Attendings. He also looked out for me from an early career standpoint, got me involved in the transfusion committee, got me to meetings, got me book chapters, and things like that. He always checked in on me. When I had issues with my family or things like that, he was there, he'd have me over, he'd sit down with me and just be available. That was huge as a junior resident, when a lot of Attendings seemed pretty distant,

Then moving forward, Dr. Lawson was a great research mentor. He taught me how to question a lot of the norms and why we do things, especially within coagulation and transfusion. That brought me a lot of insight with research. Honestly these past three years, it would be really hard to identify just one mentor. I would always say, coming off one rotation, "gosh it was great working with Dr. Blazer or Dr. Zani or Dr. Pappas" and then going to the next month, and then realize, oh my God it's great working with Dr. Migaly or it's great working with Dr. Cox, Dr. Long, Dr. Shortell and Dr. McCann. I've been amazed with the quality of our faculty here. I find that it comes from the top

people Dr. Kirk, Dr. Migaly, they really don't tolerate faculty here that are not allies of the residents, especially the senior residents. It really enjoyable to come to work.

Barr: Where are you going from here to fellowship and how do you see your career unfolding?

Dr. McCoy: I will be matriculating July 1, at the University of Texas, Houston, Red Duke Trauma Center for a trauma fellowship. It's two-year fellowship. First year, the AAST Acute Care Surgery and Trauma Fellowship. The second year consists of Surgical Critical Care training. I chose that program because it is the busiest trauma center in the United States by volume. I wanted just a massive amount of operative and trauma critical care experience, because Duke, as we all know, is not the busiest trauma center. Certainly, it is at high level a critical care center. But I just want to pure trauma volume and really sick complex trauma patients, both blunt and penetrating, that they have there.

In addition, I felt a lot of connections with their main program director Brian Cotton. He's good friends with a lot of people we have here like Dr. Shapiro and Dr. Alger. They do a tremendous amount of trauma research there. They were hubs for the 1:1:1 trials, both the PROMMT and the PROPPR, a retrospective and prospective trial, respectively. Dr. [John] Holcomb was the senior lead author on both of those. Then they do a tremendous amount of trauma research. They actually have three Ph.D. scientists that purely do trauma research as part of their group.

The probably the most well-published person in trauma period is out there, a Ph.D. named Charles Wade. They do a tremendous amount of bleeding research as well as a bunch of other trauma research and I thought, no place better to go then where people are basically leading the studies that dictate what we do in trauma these days.

The second part of the question was, where do I think we go from there? I don't know. I've certainly discussed with people idea of coming back here to Duke and I think that would be an amazing opportunity. I've loved my time here, my wife and I both love living in the Southeast. We have a family. In fact, she's originally from California but her family is moving on and it would be great to land here or potentially another place in the Southeast or Texas.

I would just want to make sure it's an academic university center, busy trauma center where I could spend a lot of time educating residents, fellows and doing transfusion and coagulopathy related research.

Barr: Was there anything that I haven't asked you this afternoon that you want to make sure you cover, about your education and Duke surgery?

Dr. McCoy: No. I don't think so.

Barr: Thank you much for your time Dr. McCoy, I really appreciate it.

Dr. McCoy: Thank you.

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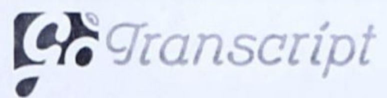

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