



Pediatric Critical Care Fellowship

3

Mary Glas Gaspers

Choosing the Right Career

I remember the moment I realized that pediatric critical care (PICU) was right for me – it was a busy PICU call night over the winter holidays during my second year of residency at AI duPont/Thomas Jefferson, and a PICU attending made a comment to me that he thought I seemed to “get it,” regarding acuity, care, and treatment. That simple comment stuck with me. It made me realize that coming home after a busy PICU day was the best-feeling exhaustion I’d ever experienced. The range of ages, the physiology, the acuity, the hands-on nature of critical care, and even the difficult conversations and situations – they were right for me and my career choice.

If you’re reading this chapter, you may dislike clinic days and be bored by the well child. Of course, you have fun with healthy kids, just like all pediatricians, but it’s not your passion. You may strive for more continuity than you can get in the Emergency Department though you love the rapid pace of resuscitation, the anticipation of what is coming in next, and the readiness to perform needed procedures. You may be looking for more variety

M. G. Gaspers (✉)
University of Arizona, Tucson, AZ, USA
e-mail: mgaspers@peds.arizona.edu

of diagnoses or more interactive relationships with your patients than what you will find in the NICU. But critical care is only right for you if you like the whole package. There are other hands-on careers with interesting physiology, like cardiology or pulmonology, though single-organ system focus may not be your main interest. Occasionally, doctors with similar interests decide to complete anesthesia residency instead of fellowship. Critical care is not an easy path, but it is rewarding.

We in pediatric critical care have the honor and responsibility of holding a child's life in our hands, to provide the best possible resuscitative and supportive care in settings of tragedy or abuse, post heart surgery, post-transplant or during cancer care, during a severe infectious process, and in so many other complex medical situations. We practice family-centered care and take care of the child and caregiver at the same time. We have to manage the stress and emotions of parents and extended family, the needs that come with having a critically ill child.

How does one decide? Examine how you feel about the types of patients you are treating. What level of intellectual curiosity do you find in an extreme premature baby versus the range of ages found in a PICU? How do you feel about the process of rounding and the people with whom you interact? Do you enjoy the detailed yet concise systems-based approach to the PICU rounding process? Or do you prefer the rapid approach in the Emergency department – start the diagnostics *de novo* and triage to home or hospital? No one can decide on a career for you, and you are likely affected by family, geographical, and financial decisions. Fortunately, there are many options after training in PICU that can create a great work life and family life in your future.

Pediatrics Residency

First and foremost, PICU doctors are pediatricians. The pediatrician thinks of the future potential of their patient, not just the current situation. We think about the stages of development and safe environments for learning and growth, even while we care for their intercurrent illness. Just because you may have already iden-

tified an interest in pediatric critical care, you still owe it to yourself to become the best possible pediatrician that you can. Learn about the latest information on the disease process and treatment of your own and your coworkers' patients, examine everyone on the service, learn how to manage your time and be efficient, and learn how to develop rapport with patients and families – including how to give good and bad news with clarity and compassion. You will be expected to take and pass your boards, and the medical knowledge will only help in your further training.

Set Yourself Up for Success

Three years of residency will pass by in a flash, and there is much to learn, but in addition to the usual curriculum, there are other things that could help with critical care applications and training. It's ok if you are starting at a small residency program – PICU has a small network where people tend to know each other from their training. Get to know your PICU faculty through rotations and mentorship. Some faculty will have ongoing projects related to research or quality improvement that a resident can join – just ask to get involved. This experience can be educational as well as helpful for applications. It doesn't have to be a PICU project – any academic work will be great. Consider away rotations at other PICUs to learn about disease processes that may not be treated at your center. Also try to arrange your elective blocks to learn high-yield information. Procedural electives are fun and can build confidence, but be assured that most fellowship programs assume that you probably don't have a great deal of experience with procedures. Cardiology, pulmonology, infectious diseases, hematology/oncology, and neurology are our most common consultants, so spend some time with them during residency to learn about their approach to patients and diagnosis. Read journal articles in the critical care literature with every clinic patient – think about the treatment of the worst-case scenario in each patient you see. Still having trouble deciding? If you were sent to a remote village on a medical mission, what one journal or reference would you bring with you? What do you prefer to pick up and learn more about?

Applying for Fellowship

Fellowship for PICU involves the match, and the process involves a personal statement, a letter from your program director, and a couple faculty recommendations, as well as your choice of programs to send your application. Not all of your letters have to come from PICU faculty, but it's a good idea to have at least one from a critical care attending. Ideally, you will have a faculty member who has well-read research or is active in national committees – it's a small world and knowing people can only help. It can be a competitive match, but every year is different, depending on multiple factors. Many applicants prefer to cast a wide net, while others might be more selective geographically for family or financial reasons.

Choosing a Fellowship Program

Just like for residency, programs are accredited by the Accreditation Council for Graduate Medical Education (ACGME) and have specific educational requirements and objectives (easy to find on their website). You should consider how you learn best and what your ultimate career goals are, as well as what your interests are for research and patient types. Large programs (>1500 admissions/year) are heavy on experience, with less time for thinking and reading; medium programs (1000–1500 admissions/year) are a mix of seeing and doing; small programs (<1000 admissions/year) will require extra reading but may also have less fellows to compete for experience and procedures. Ultimately, if the program is ACGME-approved, you will get a good training.

Talk to recent residency graduates that went on to fellowship. How do the PICU fellows like working at that center? Keep in mind: if you ask a marathon runner (during the race) when their next marathon will be, they might just spit in your face. So, with a grain of salt, ask objectively – are they learning, are they doing procedures, are they teaching, do they have research opportunities, are their colleagues supportive, or is there mentorship? The

answer to all of that is probably yes. Ultimately, all of the guidelines and hands-on time will allow you to be ready for PICU attendingness, no matter where you go. Pick the brains of your faculty about programs you should consider, then research them on their websites. All of the legwork will allow for better questions during your interview process.

During your interviews, you will again need to have some goals and interests in mind. Research is a big part of your 3 years, so having a research interest to talk about will be a plus. Programs will be looking for applicants that have common interests and clearly defined goals, with a clear reason for applying to their program.

During Fellowship

Eat when you can, drink when you can, pee when you can, and sleep when you can. Lean on your friends and mentors and provide that support right back when you can. Brace yourself, because the training can be intense. You may want to quit, maybe in the middle of a shift or after a tough code. I went through this and got to the other side by remembering *why* I chose PICU in the first place. Fortunately, most children will do well after a critical illness, and you are passionate about this goal to help support them and get them playing again. Academic centers that have fellowship programs will be high-volume, high-acuity, quaternary centers of critical care pediatrics, and you will see kids die. News flash: it doesn't get easier as you get older. You will always question your decisions when the outcome is bad – this is part of being a good doctor. No one knows everything and you cannot improve without self-reflection. If you did the best for the patient and they still die, you can carry their family through the process and make a difference even in death. You learn to cope and learn more every day as you practice your art of medicine.

In order to succeed in fellowship, start with a broad knowledge of pediatrics and a working knowledge of when procedures are needed. You will need to read a ton – background information to start, and then recent published guidelines and ongoing research

into a topic. Experience as much learning as you can and work hard (within the allowed work hours) while at work. Then go home and have some fun; exercise; participate in your spiritual life; read a fun book; keep in contact with partners, family, and friends; and be a normal person. Allow the mind to relax. Let me be a mom here – also try to eat healthy, minimize alcohol, sleep enough, wear your seatbelt, and don't text while driving.

Looking for a Critical Care Job

Look how amazing you are! You survived the rigorous schedule of PICU fellowship, and now you get to apply for an attending job. Academic or private? Rural or urban? The world is your oyster. Local economic output of any given city, existing faculty complement and patient census/demographics, among other factors, will determine who is hiring. Talk to recent graduates about what to expect and have your career goals solidly in mind when you go to interview. The Society of Critical Care Medicine (SCCM) posts a list of centers that are hiring, and it's also ok to email the PICU physician leader to express your interest even if they haven't advertised a position. On the interview trail, be ready to ask questions about clinical schedule, expectations for nonclinical time, how to be promoted, how consultants work with PICU, and any questions you have about research, teaching, or anything else. You want to be happy where you are, since the work will still be rigorous. Lifelong learning is essential in pediatric critical care medicine, and you are lucky to be involved in a continuously growing and expanding field – this is one of the attractive attributes of pediatric critical care medicine.

Part of your critical care career could involve research, and mine has involved participation in Pediatric Acute Lung Injury and Sepsis Investigators (PALISI) for clinical research projects. Three of my friends from fellowship and I have enjoyed this collaboration together, especially the bi-annual conferences. We are pictured here in New Orleans in March 2020 enjoying beignets during a break. I'm the one on the right. Lifelong learning and lifelong friendships have been a nice side effect of my rigorous

fellowship in pediatric critical care, and I hope you also find your passion. Thanks to Simi Jeyapalan, DO, for her thoughts about this chapter – she’s in the flowered shirt below. Also pictured are Shira Gertz, MD (left), and Katri Typpo, MD MPH (right center).

