

**Revitalizing Healthcare Staffing: Tactics to Address Burnout and Burden within
Anesthesiology and Chronic Pain Management**

by

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Abstract

My time with UPMC's Department of Anesthesiology and Perioperative Medicine provided nothing short of invaluable, project-based experiences where I grew not only as a student, but as a professional. While working towards my Master of Health Administration at the University of Pittsburgh, I was able to partner with UPMC and immerse myself in countless projects involving CRNA workforce operations, OR staffing, and many areas of the Chronic Pain Department. UPMC provided me opportunities to interact with multiple executive leadership levels and support the vision of being a national anesthesiology, perioperative, and pain medicine leader through a culture of compassion, teamwork, learning, discovery, and innovation (University of Pittsburgh, 2023). The outcomes of the following projects revolve around changing the culture of the healthcare workforce by taking the burden off administrative staff, physicians, and other leaders, as well as creating an environment of employee appreciation and career promotion. The competencies developed throughout my work with the Department of Anesthesiology closely aligned with those of the Master of Health Administration and will allow me to join the hospital operations workforce with a confident mindset.

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1.0 Introduction

The Department of Anesthesiology and Perioperative Medicine serves over 300,000 diverse patients at over 20 clinical sites. Anesthesiology at UPMC is much more than providing sedation to patients while undergoing procedures. The department includes multiple divisions, including Acute and Chronic Pain Medicine, Cardiothoracic Anesthesiology, Perioperative Echocardiography, Perioperative Medicine, and Obstetric and Women's Anesthesiology throughout their clinical sites. They employ 480 CRNAs and 220 faculty members, including Executive Administrators and Director of Operations within Chronic Pain. All these influential leaders helped guide me through the series of projects and tasks that I contributed to the department. The Department also includes a highly ranked residency program that supports research opportunities and continuing education (University of Pittsburgh, 2023). Throughout my time with UPMC and this specific department, learning and continued improvement were always kept at the forefront of everyone's mind, contributing to a successful department. This theme also helped create a sense of purpose in the workplace and promote faculty development.

The projects of focus in this portfolio all support the overarching theme of addressing staffing, whether that be administrative burden, burnout, or issues with resignation and retention. In terms of personnel issues, there have been increased efforts to hire more staff or keep current staff satisfied. We also focused on decreasing administrative burden, so implementation of the following projects aims to address the UPMC workforce as a whole. Staffing shortages have been exacerbated by the Covid-19 pandemic, and all healthcare systems are heeding this burden. The U.S. News and World Report estimated 1.5 million healthcare jobs were lost when the Covid-19 pandemic originally started. These staffing shortages are not only exacerbated in the nursing field,

but with lab workers and paramedics as well. With fewer jobs being filled in health systems, practitioners are responsible for a greater number of patients and experiencing extreme burnout because of this. While deaths directly due to Covid-19 have decreased since March of 2020, staffing issues are not in the clear. In February 2022, over 1,000 workers in the healthcare field stated they would be likely to leave their jobs soon because of the burnout (Johnson, 2022).

People in the workforce, especially healthcare and nursing, have been leaving the system, either indefinitely, or to contract with a travel agency to increase their hourly pay. UPMC has experienced first-hand the “Great Resignation”, especially within the CRNA workforce. While U.S. News & World Report ranked Nurse Anesthetists as #8 best paying jobs, these high salaries were not enough for some, leading to the increase in contracts with travel agencies. This may be due to the fact that nurse anesthesia ranks above average for stress level and below average for flexibility (Bratcher, n.d.). People made the decision that if they are going to do challenging work, they should have an increase in pay, which is what a locum position can provide. Staff Care Agency is just one example of a company that contracts out locums, where their hourly pay ranges from \$103-\$145 (Staff Care, 2021).

I worked closely with the CRNA Senior Director on research and development factors affecting our CRNA staff. This not only included the SRNA Tuition Assistance Program, but analytics on leaves, pay rates, hiring, and many more statistics to provide a clear, comprehensive view of the current staffing. In order to remain in control of these issues, we found it ideal to track, share, and study this data, creating a transparent and educational environment where providing support for staff is key.

1.1 Relieving Administrative Burden for Chronic Pain Access Staff

1.1.1 Problem Statement

The department of Chronic Pain within UPMC's Department of Anesthesiology utilizes access staff to bill for patient procedures. However, there have been many discrepancies within the day-to-day operations, which leads to staff experiencing difficulties achieving a stress-free workplace. The department does not have a concise, functional resource that provides effective billing and coding communications that access staff can utilize for our chronic pain patient's and decrease their day-to-day administrative burden.

1.1.2 Purpose Statement

UPMC's Chronic Pain division had been experiencing discrepancies in billing and coding for procedures. Billing is handled differently at each site, leading to inconsistencies and unanswered questions for how to proceed with unique patient situations or procedures. For every singular billing situation, there are multiple processes that can exist, including whether the patient was treated as an inpatient or outpatient, if the procedure was provided by the physician or an advanced practice provider, or what kind of insurance the patient has. It can take a significant amount of time out of the workday to search for answers to solve certain discrepancies. With this manual, we hope to provide a guide for all UPMC sites with a chronic pain department to bill for procedures in the same manner and allow individuals who are handling the billing at each site to utilize the guide to answer any questions that may come up on their day to day.

1.1.3 Introduction and Background

Billing for procedures through Epic is an extremely complicated process that includes communications with insurance companies, providers, and administrative access teams. The access lead that I partnered with throughout this project is deeply knowledgeable about this subject, but that has led to her being overwhelmed with questions and concerns from other employees to help with their encounters. With the use of this manual, we hoped to create an environment where our access team members are able to independently solve their encounters and answer their questions using the guide.

Billing is based on CPT codes that are related to different procedures or medical terminology. CPT codes are used by healthcare professionals and facilities to represent services performed so the insurance company can recognize what they are being charged for. These codes are maintained by the American Medical Association (American Medical Association, 2022). Different billing scenarios require utilization of multiple codes and categories. Category I includes procedures, services, devices, and drugs, including vaccines, to be billing to the insurance company. Category II includes performance measures and quality of care codes. Category III includes services and procedures using emerging technologies. These are especially difficult when it comes to billing because it is dependent on whether or not an insurance company will cover these types of services, and notoriously, they do not.

Other codes include PLA codes to cover lab testing, and HCPCS codes. PLA Codes (Proprietary Laboratory Analyses) are a type of CPT code that are used to hyper specify the type of lab or manufacturing testing (American Medical Association, 2023). HCPCS stands for Healthcare Common Procedure Coding System, and these are based on the American Medical Association's Current Procedural Terminology (Centers for Medicare & Medicaid Services,

2022). These codes are made to bill Medicare, Medicaid, and other third-party payers. Currently, UPMC operates with two levels of billing, level one is based on CPT codes, and used for services and procedures offered by healthcare providers. Level two covers health care services and procedures that are not performed by healthcare providers. This includes medical equipment, supplies, and ambulance services.

Errors occur within Epic billing processes multiple times a day, and these can arise from a multitude of different factors. For example, certain errors may produce a bill that has been denied by an insurance company for a patient who was treated for a headache. Headache treatment can be billed using two different codes, but insurance companies may deny one code over the other. It is up to the access team member to resolve this error and change the code to what would be acceptable for the insurance company. Errors can also arise if the billing provider is incorrect. Even if a procedure is given by an APP, the billing provider needs to be the physician.

Due to the fact that there are so many discrepancies and different scenarios that can exist within Epic while billing for procedures, we thought a manual would be the best resource in the long run. Rather than communicating through email when a change comes through or creating a class for access employees to attend, a physical copy allows us to keep it up to date as time goes on and new billing methods come through, as well as allow access team members at each site to refer to the manual at their own convenience.

1.1.4 Methods

Coming into this project without any previous knowledge about billing and coding, the most important initial step was to observe an access lead at UPMC Mercy. These experiences allowed me to follow the day-to-day situations that an access team member might come across and

see how they solve encounters. I spent a significant amount of time watching this employee work through Epic, while she showed me different errors that arise, how to edit encounters, and authorization requests. The most important thing for me to eventually produce an organizational, physical product was to take notes on every action she made and absorb as much as possible. We went through encounters that were billing multiple different insurance companies, including UPMC For You, Aetna, and Medicare or Medicaid.

While spending time at UPMC Mercy was extremely helpful by allowing me to gain initial insight into billing practices, I also found it useful to do my own research through our Chronic Pain Team site that houses multiple different reports about billing changes, codes, and tax information. This helped me get an idea of what information was already available to staff, but also see how I could improve the ease of accessing this information.

While collecting all this information, I was able to start creating a rough outline of the manual. I knew it would be useful to have a section with information split up by insurance company, where I could include common notes for each. For example, it is typical for every injection to need an authorization when a patient has Cigna insurance. This way the access employee utilizing the manual can keep that in mind when they see an encounter that deals with a Cigna patient. This section includes links to direct staff to the correct site where they will be able to submit an authorization if needed, as well as any important information regarding worker's compensation and how to bill for services rendered under this coverage.

Using my notes and multiple communications between myself and the access lead at Mercy, I was able to organize directions into the manual on how to request an authorization, what happens if an authorization is denied, as well as sections for both inpatient and outpatient billing

directions. These sections also included common errors and how to resolve them, based on previous encounters.

The most essential information, in my opinion, to add to the manual was resources and contacts for employees. Because we are hoping for this guide to be used in years to come, there is no viable way for me to include every scenario and solution. By including contacts and resources, UPMC employees can direct themselves to the solution they are looking for, either by communicating with the correct person, or following a link to an insurance companies' site.

Another discrepancy within billing for procedures is hospital-based billing vs physician billing. Added charges occur for a patient who is seen at a hospital-based clinic, and the CPT codes that correlate to these clinics need to be added accordingly. The manual includes directions on how to do so, as well as a list of hospital-based UPMC clinics, so staff understand when billing with hospital-based codes is appropriate. With physician billing, there may be times when a provider's access needs to be changed, so links and directions are included to help staff navigate those situations. This is done through Profee, another information technology system.

1.1.5 Results and Discussion

This project will be ongoing for access leads within the Chronic Pain Department because there will be so many changes within the insurance sector that affect billing for procedures, long after I graduate and finish my time with the department. Overall, the manual is a concise but well-informed resource that will help employees across all UPMC Chronic Pain sites immensely. With the guide, they are able to easily access directions for different scenarios and problem-solving measures which will be useful when not only orienting new employees to UPMC's system, but also providing veteran staff a resource to regard at their convenience. Included in the attachments

is both a high-level overview of the overall steps taken to achieve an organized manual, as well as the finalized table of contents in the manual.

1.1.6 Recommendations

Overall, this project was highly successful and informative to not only teach me about billing and coding scenarios but to help access team members who need answers or guidance when billing for pain procedures. As for next steps, this manual is to be updated whenever possible. Changes within an insurance company's policies happen quite frequently, including a new website location or different charge capture for a procedure. When these changes come through, the manual will be updated accordingly with the correct information. All access employees will have the right to utilize the manual in their day-to-day work.

1.1.7 Competency Development

Analytical thinking, communication, and information technology management were key competencies that drove my success in this project. I was able to do research, both on my own and in partnership, to understand what information would be most usefully included. I had to extract information from observant situations and organize the manual into sections that would make the most sense when resolving a billing encounter.

Communication was a large part of this project. Not only did I need to communicate with others who were more knowledgeable about the subject of billing and coding, I needed to translate that language into an easy to understand, grammatically correct, presentation of facts.

Information technology was the highlight of this project. Before there were any actionable steps I could take, I needed to fully understand the technology used for billing and coding. This included not only Epic, but any websites that correlate to insurance companies' authorizations or provider information. I needed to understand the everyday operations that exist within Epic and promote its correct use within the manual.

1.2 Improving Provider Access with Epic Redesign

1.2.1 Problem Statement

UPMC Pain Medicine providers utilize Epic templates for their patient appointments. However, these templates are not standardized, creating a lack of consistency for providers when seeing patients. They experience extra burden organizing their schedule and ensuring patients are placed in the correct appointment slot.

1.2.2 Purpose Statement

To improve our patient access initiative, our current Epic templates needed to be cleaned up and reorganized to allow our providers to see as many patients as possible while still providing effective care. In partnership with the Wolfe Center, the overall goal is to redesign provider's Epic templates, improve online scheduling, and align telephone and online scheduling. This will take the burden off of our providers who spend time rearranging their schedules to meet with as many

patients as possible. With an Epic redesign, we aim to remove that administrative burnout that may exist and make the chronic pain treatment process easier for both patient's and providers.

1.2.3 Introduction and Background

The current practice of scheduling includes multiple tools to help appropriately schedule a patient. This includes reasons for visit, subgroups, visit types, block types, block flip or release options, and decision trees. At our call centers at both UPP Chronic Pain and Horizon, there are two separate decision trees that help a scheduler direct a patient into an appointment. Ideally, we hoped to join the decision trees into one, so there is standard practice all around. This decision tree will allow schedulers to more effectively direct a patient into the most suitable Epic slot.

Reasons for visit is a list of purposes that a patient needs to schedule an appointment, whether that be their symptoms or diagnosis, or the overall need for an appointment in the first place. The reason for visit selection determines the slot availability by then establishing the subgroup, visit and block type. Within our reworking of Epic template, we aimed to decrease the reasons for visit into only those that were pertinent and useful.

Within a subgroup is a group of specialized or subspecialized physicians that see patients for the previously selected reason for visit. With the completion of this project, we hoped to make sure all our pain providers were included, as well as ensure they are listed with the correct reasons for visit. Location was an additional factor that needed to be verified in this section. The overall goal here was to confirm an accurate list of pain providers included with their corresponding reasons for visit.

Visit types include the appointment type and subsequent length of appointment. The goal was to streamline our visit types to less than 15, expecting to remove visit types with low utilization

rates. To do so, it was crucial to understand the reasoning for a visit type, if synonymous visit types existed, or differences between provider preference for visit type length. In tandem with visit types, we needed to analyze visit session limits. This functionality works to contain the number of certain visit types scheduled during a session, however, to improve access, this is not recommended. We hoped to remove any existing limits.

Block types are templates that label certain slots in Epic to restrict visit types. Based on previous usage, we wanted to remove those with low frequency or others that are ineffective, because these block types create restrictive templates and overall decrease patient access. The goal was to decrease block types to less than 15, and only label a block type if it is absolutely necessary. Within block types, Epic is able to either release a block to a blank slot that creates opportunity for other visit types or flip the block to be less restrictive. We needed to analyze the type of blocks that could be either flipped or released and determine a timeframe for this functionality to take place.

The final sector of this module was to analyze our decision trees. A decision tree is a workflow for call centers to ask patients when they are trying to schedule appointments. It guides them through certain questions to ask and helps schedule them in the appropriate slot. This section needed to be last because we needed to understand what remaining visit types, reasons for visits, block types, etc. that we will be working with. The overarching goal of our decision tree work was to ensure that patients are guided correctly into an appropriate visit and create consistency within our department.

The next part of our Epic access initiative was to understand our providers clinical activity and see if there were any opportunities to increase patient capacity per week, adjust clinic times, or templates. And finally, our third module was to address online scheduling.

1.2.4 Methods

For completion of our first module, our chronic pain team met with Wolfe Center coaches on a weekly basis to understand our tasks and review material. Our first step was to analyze a list of all our current reason for visits, and one by one, identify any redundancies or those with low utilization. For example, we removed the “general pain problem” reason for visit, because we hoped to schedule more specific reasons. We also made the decision to remove injections, due to the fact that they are specialized procedures that need referrals and previous visits. We do not want to leave these types of visits up to central call center agents, to avoid any situations where a patient gets scheduled for this type of appointment without having the prerequisites necessary.

For subgroups, we utilized a list of all of our providers and the consequential patients they typically see. We started with subgroups for all our individual providers who see initial chronic pain patients, return patients, same day appointments, medical cannabis patients, patients at Horizon or McKeesport, injection patients, telemedicine patients, as well as subgroups for providers who see patients in the CPC (Center for Perioperative Care). Before our next meeting, I needed to individually review our current subgroups and ensure that all providers were accounted for. To understand what subgroups we needed to add, I had to understand the options already in place. We found that adding subgroups for APP return visits would allow the call center to offer more appointments to patients and felt that our behavioral health sector needed to be addressed as well. To improve ease of access, the decision was made to eliminate specialty subgroups such as same day and injection subgroups. We kept medical cannabis slots, as well as new and return slots for each provider, including APPs by region. To expand our behavioral health sector, we added subgroups for psychiatry and psychology providers.

The next step was to review visit and block types, as well as visit session limits. We found that our current template included some providers on visit types who were no longer active within the department, therefore we removed those. We found that only Horizon's chronic pain department was utilizing session visits, but Greater Pittsburgh was not, which was positive. The collective decision was made to keep certain visit and block types, such as return patient visit type and procedure block type, as they both had high utilization. We eliminated ambulatory visit types and "do not schedule" block types, both had low frequency so we felt it would improve patient accessibility to remove them. Certain visit and block types also needed to be kept because of protocols in place for chronic pain. For example, we kept specific procedure visit types, and added visit type modifiers depending on what provider completed the procedure. Some physicians need only 15 minutes, while others may want a full 60. To streamline behavioral and physical patient scheduling, we kept only one visit and block type for return patients but added modifiers to specify the provider seeing the patient. This is again to support the providers ideal appointment time length.

We started out with four block types that would allow for a flip or release function. We were able to make the collective decision to release all block types into an open block. Depending on the original block type (injection vs new patient), the timeframe in which a block is to be released differs. For example, a return patient slot that is not filled 3 days prior can be released, while an injection slot can be released only 1-2 days prior.

To complete module one, the decision tree methodology needed to be updated. The overall goal is to decrease CRMs that come through, hoping to get the patient scheduled the very first time they call and try to secure an appointment. CRMs are customer relations management reports that have to be filled out if a patient calls the center and is unable to schedule an appointment on their

first attempt. We want CRM's to be as low as possible, ensuring that the first-time patients are calling to schedule an appointment, they are able to get one. Our Wolfe Center coaches provided our team with a decision tree framework, that outlined how to schedule a patient through the phone. When a patient calls, the representative is to first ask them their reason for visit and depending on their answer and our previous clean-up of Epic, it will lead them to certain subgroup options, then visit types, and so on. This framework provided directions for both new and return patients, and how to handle these situations. These decision trees can be used for all patients hoping to schedule with our pain providers and deliver a clear and concise way to lead the conversation with a patient. Included on the decision tree are urgent reasons to not schedule a patient, such as chest pain or shortness of breath, where the representative is to urge the patient to visit the emergency department as soon as possible.

The second part of our access initiative was to address clinical FTE (cFTE) of our providers and see if there were any adjustments, we could make to their individual Epic templates to create more opportunities for patient appointments. To start off, I analyzed all of our APP's schedules in Epic and collected the number of clinic sessions and clinical activities they had per week. This included both physician assistants and nurse practitioners. By comparing the number of clinic sessions with their cFTE, I was able to conclude if there were any gaps in the schedule.

Our online scheduling module consists of three parts: the MyUPMC Online Scheduling, Find A Doc Provider Profile Review, and Find a Doc Online Scheduling. The first step is to ensure all our providers are available on MyUPMC. We identified a number of those who were not enabled on the website, and effectively added them into the Find A Doc website. The future of this project will include creating biographies for all providers and entering those in Find A Doc as well, so patients are able to learn about their providers.

The original UPP Medical Specialty online scheduling process map started with selecting a provider, a reason for visit, location, and visit type. Because chronic pain is a unique department that also schedules procedures and injections, the new process map was made to include these options. An appointment will be made if a return patient hopes to see a specialist but is not seeking a procedure or injection. They can either choose in person or telemedicine visits, to give patients more autonomy in their care decisions. If they are a new patient hoping to see a specialist or a return patient needing an injection or procedure, an appointment request will be submitted for the patient, and the office will contact the patient after review by the provider. See figure 3.

The second part was to identify if our providers are all on Find a Doc. I went to UPMC's Find a Doc website and searched for our pain providers, noting anyone who was not on the website at all, or did not have an identifying picture, specialty, etc. We wanted to increase visibility for patients as well, so we included identifiers on providers such as pronouns, whether or not they provide virtual care, and if they can be scheduled online or by phone.

Online Find a Doc scheduling relates to our previous modules because depending on a patient's selections, slots for the specific reason/visit type will be offered. The goal was to edit scheduling logic to make the process as cohesive as possible, while aligning it with the previous changes to Epic visits. The patient is prompted to answer if they have been seen by the provider or not in the last three years. If they have not, they are considered a new patient, and they will be prompted with common reasons for visit for the provider. Depending on this answer, the available and appropriate visit types will be mapped for the patient. If the patient is a return patient, they will also be presented reasons for visit, but in a different visit type than new patients.

1.2.5 Results and Discussion

Our module one progress allowed us to make profound changes within our Epic templates. We made the decision to remove 152 non-pertinent reasons for visit, either due to duplicity or low frequency. We also added 22 reasons for visit to expand our behavioral health sector and open up opportunities for patients hoping to schedule those appointments. We were able to eliminate eight subgroups but added 17 in an effort to expand our behavioral health options. For visit types, we removed all session limits in Epic that resulted in restrictions. We ended with a visit type reduction of 54%. For block types, we were able to decrease by 65%, We also added 4 block types that would have release functionality within 2 or 3 days prior, making our block flip/release rate 100%. Lastly, we were able to condense our decision tree options into two – one for the Greater Pittsburgh area, and one for Horizon/Jameson area. Rather than adding a separate decision tree for behavioral health, we integrated those question types into both trees.

For module two, after analyzing both physician and APP clinical activity, we found that 80% of our clinical faculty met or exceeded their clinical FTE requirements. To make up for those who were under their cFTE, we added 21 patient slots per week overall, which brought our clinical activity up to 100%. To ensure our sessions we standardized, we had all clinic sessions start by 8:30 in the morning, and sessions were to end by or after three o'clock p.m. By studying our providers schedules, I was able to identify 12 hours of patient access capacity per week to be added on our APPs schedules, and we found 10 hours and 15 minutes of patient access capacity per week for the attendings. This resulted in multiple opportunities to be added on for patient care each day. Module three has allowed us to improve patient satisfaction by improving access to care and cohesive scheduling processes both over the phone and online.

1.2.6 Recommendations

This project was completed throughout many departments at UPMC but being part of Chronic Pain provided us distinctive opportunities within our APP and behavioral health capacity. Because we have certain procedures that can only be scheduled through Pain Medicine, and not at a central call center, we had to make unique decisions on how to address scheduling opportunities. While we identified some challenges along the way such as inactive providers and needing to incorporate behavioral health more intentionally, we were able to successfully clean up our reason for visit and session limit lists. We also created better questions in our final decision trees to guide our patients to the appropriate appointments. Offering patients the option to schedule online also helps with satisfaction and technological advances for the organization. In the future, UPMC Chronic Pain hopes to increase capacity for APP return clinics, as well as overall capacity for both APPs and attendings. Our provider's templates will be monitored to ensure they are meeting their clinical FTE and serving as many patients as efficiently and effectively as possible.

1.2.7 Competency Development

I found this project to support multiple competencies, including accountability, leadership, and communication. However, one of the most prevalent competencies I developed while working on this project was not only organizational awareness but performance measurement and process management. This project was focused on making decisions as a group, so being involved in those decisions, and identifying best practices, allowed me to understand the organization's culture on a larger scale. Especially because there were many departments across UPMC completing the same

type of modules, I was able to observe not only successes other departments had, but their unique challenges and recognize the values carried throughout the different environments.

Throughout all the modules, staying on top of performance and progress was key to moving forward. Each step in this project was reliant on the previous decisions, so having our processes mapped out helped us all stay aligned. The overall reason for editing our Epic template was to improve patient satisfaction, hoping to create more opportunities for patients to be seen by our providers at a faster rate, and that was successfully accomplished. Patient satisfaction will continue to be monitored and improved throughout UPMC's Chronic Pain Department.

1.3 Addressing Recruitment Issues within CRNA Workforce with Tuition Assistance

1.3.1 Problem Statement

UPMC Department of Anesthesiology and Perioperative Medicine experienced great recruitment and retention issues within their CRNA workforce.

1.3.2 Purpose Statement

UPMC intends to support its student nurse anesthetists by helping them secure a full-time job before graduation and aiding in the cost of CRNA school. Students from an accredited Nurse Anesthetist Doctoral Program were eligible to apply for an award to help pay off the immense student debts that are associated with CRNA schooling. By creating a tuition ranking system, we

hoped to award highly motivated individuals with up to \$30,000 to aid student loan debt, as well as offer positions with either UPMC Altoona, Children's, or Passavant.

1.3.3 Introduction and Background

In order for UPMC to be an ideal place to work for CRNAs, supporting our staff from the beginning to the end of their career is essential. With all the staffing issues in the nursing sector today, especially within nurse anesthesia, UPMC aims to attract CRNAs starting out in their career and providing them with some assistance in monetary form. By recruiting these CRNAs early in their career, the goal is to shape them into ideal employees, while also providing them an environment to grow professionally.

Hiring CRNAs internally saves the organization incredible costs compared to contracts with travel staff. A \$30,000 investment in one student to pay off debt and accept a job with UPMC is a small price to pay compared to the hourly rate of a travel nurse anesthetist (locum). These locums are contracting with UPMC at \$250 an hour, almost three times what an internal CRNA is making.

Employer tuition assistance programs create countless advantages to an organization, aside from cost savings. These types of programs have also been found to attract more skilled staff, and improve retention rates (Berry-Johnson, 2021). An article published on LinkedIn found that 94% of employees would stay with a company if they invested in their career development (LinkedIn, 2018). Based on this research, it is a safe assumption to say that not only do tuition assistance programs support a culture of employee appreciation, but they also strategically support the organization.

Roy Skillicorn, a senior director at Cisco, supports the strategic initiative for tuition assistance program. He says organizations are being more specific, now than ever, in their objective and outcomes for these programs (Capella University, 2020). Especially with highly specialized skills, such as anesthesia where every day is dynamic, it is crucial to invest in professional development to keep employees fulfilled with the feeling of investment. These factors were at the forefront of not only UPMC, but of the CRNA Director's minds when deciding to contribute to their staff this way.

For this project, there were multiple stakeholders to be involved. Human resources representatives needed to be engaged in the overall hiring process, as well as creating the job description and contracts. The legal department needed to be actively involved to ensure requirements, job descriptions, and other components of the process were up to UPMC standards. Both the Senior CRNA Director and the previous Executive Administrator of UPMC's Department of Anesthesiology and Perioperative Medicine tasked me to help them create the materials needed for this project. The Altoona, Children's, and Passavant CRNA Site Directors were also involved in the interviews and review of applications. As always, to stay on track we needed to create a timeline with deadlines for not only the students to complete their submissions, but to keep our team accountable for reviewing applications, ranking, and making offers. Collaborating with these executives allowed us to determine a timeframe for this process to be completed in, and I was able to create a calendar to share with the committee.

The application process was determined with the help of HR to include CV, undergraduate and graduate transcripts, references from their clinical supervisors and Anesthesia Program Director, case logs, and a written essay explaining why they feel they would be an asset to our Anesthesia Department. Applicants were to have graduated within the last six months from the

time of this project which was started in July of 2022) or before January 31st, 2023. Within three months of graduation from an accredited Nurse Anesthesia Doctoral Program, they were to pass the National Certification Exam. The applicant must hold a PA RN license and have been in good academic standing (GPA of 3.5) during their accredited program. Along with the previous requirements, the applicant was to apply for a position at the hospital they were applying for the award. They must agree to full-time employment with University of Pittsburgh Physicians Anesthesiology as a CRNA for at least three years. These selection requirements supported our team in making decisions about award offers.

1.3.4 Methods

While the applicants were working on their award submissions, my first step was to create a ranking form that would allow everyone involved in the entire process to assess the strength of the application and the individual. In partnership with the Senior CRNA Director, we weighted the application requirements; referrals one, referral two, the essay, and transcript were each weighted 12.5%. The interview was weighted 50%, this was higher to account for the importance of cultural fit that cannot be determined from application documents. Each requirement was scored 1-5. One is failing to meet expectations and five is exceptional qualifications. Applicants could also earn an additional 25% if they had previous employment with UPMC. Per my calculations, this resulted in the maximum score for UPMC employees to be 5.25, and for non-UPMC employees, 5. See figure 4 for ranking form.

Once applications were submitted, I took the materials for each applicant and combined them into a blind document. This was to prevent any favoritism and ensure the process was completely objective. Once I had done so, I sent the blinded application packets and ranking forms

to each committee member. They were given a week to go through the applications, make sure they were complete, and rank the materials. Once those were returned to me, I combined all scores from that point and sent them back to the committee heads to determine interviews.

The decision for interviews could go one of two ways. We could interview only the top candidates, or we could interview everyone. To make everything as impartial as possible, we took that if one site was choosing to interview all the candidates, then the other sites must do so too. It was concluded that we would interview all applicants, even if we did not have enough slots for everyone, to allow for some flexibility. By doing this, even if someone was not awarded tuition assistance, they could be offered a job at a later date, or if the chosen recipient of the assistance declines, we can move on to the next person.

The committee was given a week and a half to conduct interviews. I was able to join a number of them and observe as the department's Senior CRNA Director and Executive Administrator led discussion, not only asking behavioral questions such as "what is your greatest weakness?" but situational ones such as "tell me about a time when you had to adapt to a new challenge on the job." The interviews were to provide the committee with a sense of how well this person would assimilate into our organization, as well as why they felt they deserved this opportunity, and why they want to pursue a career with UPMC. After all interviews were conducted, the committee members were to provide a ranking for the interview and send to me. Because the applications were blinded, I was the only one aware who "Passavant Candidate 1" was, so I filled in ranking forms accordingly and aggregated scores. Once finalized, I sent back the rankings to our committee heads so they could review. My final step was to draft an offer letter, utilizing UPMC branding and congratulating the applicant on the decision, pending acceptance.

1.3.5 Results and Discussion

Originally, the awards for Passavant were going to the top three applicants. However, the President at UPMC Passavant worked with the board and approved funding for a fourth award, meaning we could accept all four candidates Passavant received. Throughout this process, UPMC as a whole accepted six CRNAs to be internally contracted for a minimum of three years, which is a win for UPMC's staffing model. Providing scholarships shows all staff, including those who were not eligible, UPMC's commitment to continued learning and a supportive workforce. With staff being internally contracted, there is less need for locums, who cost the organization large amount of money and can interrupt the culture.

1.3.6 Recommendations

This project successfully awarded multiple people starting out their CRNA careers an opportunity to start a fulfilling job with a little less financial stress. The primary goal of this project was to support a newly graduated class of CRNAs; based on the thank you's and appreciation we received through email after awards were offered, I would deem the project successful. If UPMC is financially able in years to come, I would highly recommend the continued utilization of these programs. I believe in such a demanding field like nurse anesthesia, offering these opportunities attracts staff that are reliable and dedicated to the field. UPMC could also involve alumna of the tuition program, helping to recruit and interview new classes considering a job with UPMC. Their contribution could potentially influence more students to apply, assisting UPMC fill any vacancies and decrease utilization of travel staff.

1.3.7 Competency Development

Throughout this project, strategic orientation was a major key in finding success. We had to analyze the current environment of the system, including its staffing needs and fiscal availability. I helped address the resource allocation of the awards, as well as develop plans for future staff. As an organization, it was important to identify the limits we could not exceed, ensuring not to overextend the monetary value, which is why we needed approval from the Passavant board at the last minute. My leadership competencies definitely thrived during this project. Not only was I able to take control of the ranking forms and offer letter, but I collaborated with executives and observed their leadership style through interviews.

1.4 Conclusion

Overall, UPMC Department of Anesthesiology and Perioperative Medicine provided me with countless opportunities to evaluate and participate in a multitude of projects. These opportunities allowed me to understand firsthand the unique issues within the organization, how leadership hoped to address them, and what knowledge or time I could contribute to solve these issues. While the state of healthcare has been through rough times due to the pandemic, staffing shortages, financial burden, and other issues, our department kept the focus on education and support. I found myself learning a great deal about not only healthcare systems, but different situations that occur within divisions. I observed multiple leadership styles and was able to pick up on many that I hope to take with me as I transition into my healthcare career.

In today's healthcare climate, it was extremely beneficial to immerse myself in projects involving staffing and burnout, as these issues are at the forefront of healthcare today. Burnout is one of the current priorities of the U.S. Surgeon's General (Murphy, 2022), so addressing these concerns created a meaningful sense of work for my residency. There are countless ways to address burnout, staffing issues, and employee satisfaction, and my residency with UPMC's Department of Anesthesiology allowed me to understand the different solutions that aligned with the culture and tackled these issues.

While the projects described above may not be something on the agenda of a hospital CEO, they allowed me to gain a comprehensive view of the organization. At the same time, these projects created a more specialized daily agenda for someone hoping to get more involved in healthcare operations. After the conclusion of these projects, I found that my internal dialogue changed when it came to addressing a problem in healthcare. I was asking the right questions to get started, identifying stakeholders and problem areas. I believe that my time with UPMC's Department of Anesthesiology has helped shape who I will become in the future, by creating opportunities where I can both observe and act as a leader.

2.0 Figures

2.1 Steps Taken to Create Billing Manual



Figure 1. Steps Taken to Create Billing Manual

2.2 Billing Manual Table of Contents

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2.3 New UPP Pain Management Online Scheduling Workflow

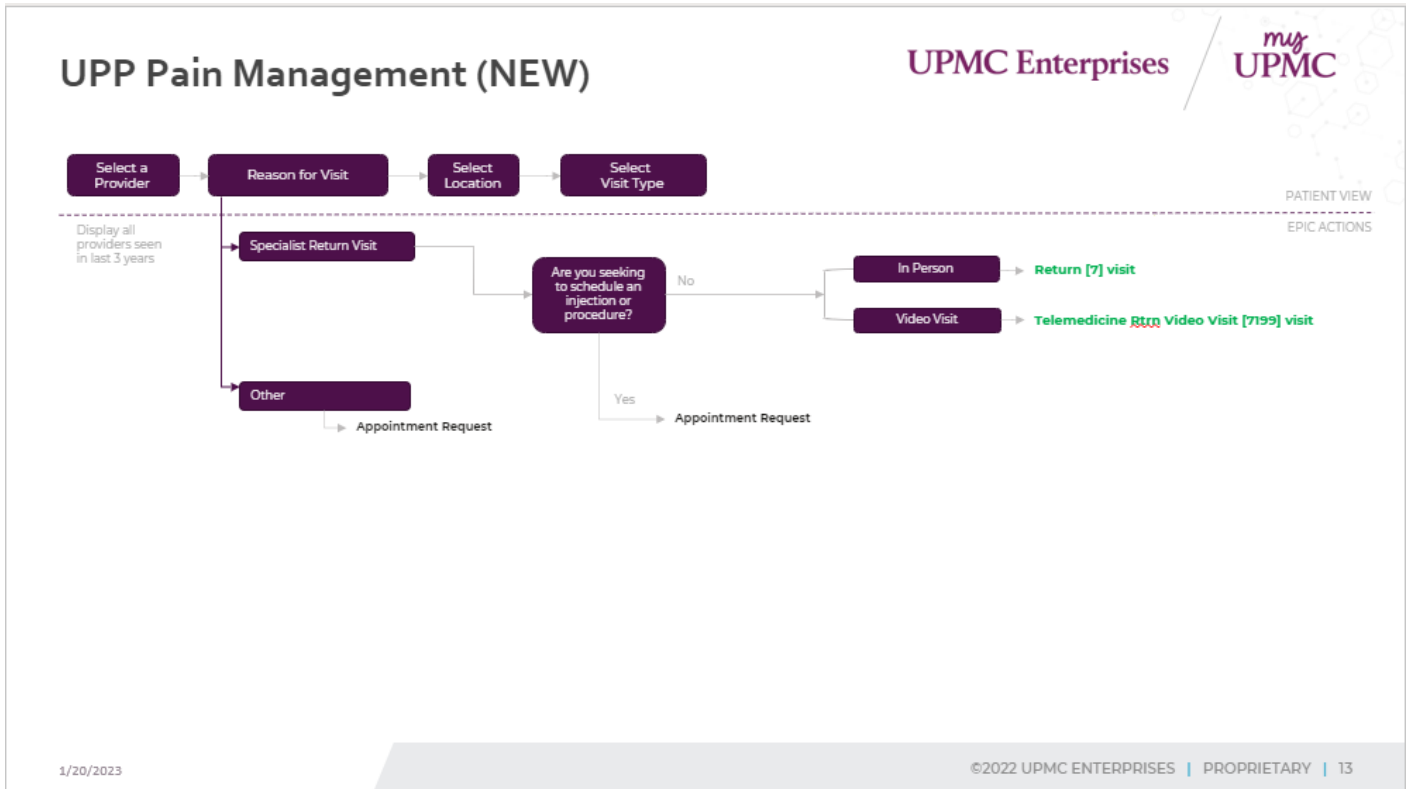


Figure 3. New UPP Pain Management Online Scheduling Workflow

Appendix A Appendices and Supplemental Content

Appendix Table 1. Acronyms

APP	Advanced Practice Provider
cFTE	Clinical Full Time Equivalent
CPC	Center for Perioperative Care
CPT	Current Procedural Terminology
CRM	Customer Relations Management
CRNA	Certified Registered Nurse Anesthetist
FTE	Full Time Equivalent
HCPCS	Healthcare Common Procedure Coding System
HR	Human Resources
PLA	Proprietary Laboratory Analyses
RN	Registered Nurse
SRNA	Student Registered Nurse Anesthetist
UPP	University of Pittsburgh Physicians

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