Enhancing the Outpatient Staff Experience at UPMC Department of Medicine

by

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Abstract

Hospitals and clinics have faced significant challenges in maintaining sufficient staffing for decades; staff shortages have continued to rise since the onset of the COVID-19 pandemic in 2020 due to employees leaving their professions. The increase in COVID-19 cases resulted in a heightened demand for healthcare services, coupled with a decrease in available staff, limited resources, and a continual reduction in usable clinical space. As healthcare facilities became overwhelmed, employees found themselves being forced to extend their working hours, fighting a highly contagious illness for which no cure was readily available. Given the nature of their work, frontline staff members were exposed to increased risks while caring for these patients, leading to many falling ill and needing to quarantine themselves further limiting staff levels.

The heightened workload, compounded by sleepless nights and the constant exposure to patient mortality, has prompted many frontline staff members to resign, due to mental health issues and severe burnout. Additionally, some clinical employees are hesitant to return to work, deeming the compensation and benefits insufficient to justify the daily risks they face. Although the pandemic is now under control and clinical appointments are returning to in-person care, the lasting effects are evident in the shortage of frontline clinical staff. Many employees remain absent due to burnout, a lack of work-life balance opportunities, safety concerns, career dissatisfaction, insufficient recognition and support, a problematic organizational culture, and, most significantly, inadequate compensation for the demanding work. To achieve proper staffing levels, we must first
address and combat the underlying systemic issues within our healthcare system, such as access to care, health disparities, cost, and preventive health measures.

This essay aims to connect the following three projects, all undertaken to enhance the outpatient experience for employees within the DOM. These projects include implementing a Physician Educator Position for all Outpatient Centers within the DOM, training outpatient medical Assistants to perform Venipuncture, Injections, and Immunizations in hospital-based clinics (HBC) and improving the outpatient Rheumatology staffing model.
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1.0 Introduction

![Table: Outpatient Visit Volume Comparison]

**Figure 1. Current State of Department of Medicine Outpatient Services**
1.1 Project 1: Implementing a Physician Educator Position for all Outpatient Centers within DOM

1.1.1 Problem Statement

The DOM is currently facing challenges in its billing and coding processes which leads to reduced revenue. While outpatient services are administered by a range of healthcare professionals, including Physicians, Advanced Practice Provider (APP), Nurses, Physician Assistants, and Medical Assistants, only physicians and APPs are authorized to bill for these services. Providers are required to swiftly determine the appropriate billing level (ranging from level 1 to 5) for each patient, contingent upon factors such as case complexity, services rendered, time spent, medical history, and any special circumstances pertaining to the patient. Due to a lack of standardized education (no standardized resource) in making these determinations, providers often end up billing at the incorrect level, commonly under coding patients. “When coding is incorrect, services may be undervalued, leading to underpayment. Inadequate reimbursement affects the financial stability of healthcare organizations, leading to revenue loss and potential difficulties in meeting operational expenses” (Collins et al., 2022). These mistakes also cost staff time and resources as many of these errors must be corrected and resubmitted. As I learn while gaining my green six sigma belt; to solve problems is good but to prevent them is better.

1.1.2 Purpose Statement

Effectively navigating the intricate processes and regulations associated with medical coding and billing is a challenging, yet essential, responsibility for providers. Accurate billing and
documentation of evaluation and management (E&M) services play a crucial role in a hospital's financial health. Incorrect coding or billing can lead to inaccurate compensation for physicians and healthcare providers. To address this challenge, the DOM is introducing the role of a Physician Educator to oversee all outpatient settings in the Department of Medicine. The Physician Educator will be responsible for training all billing providers, developing content and presentations for high-level executives, conducting audits of all providers and external reports, implementing Federal guidelines, providing patient safety training, conducting annual compliance training, offering continuing education credits, and collaborating with the medical records department to establish accuracy and standardization across the department.

1.1.3 Introduction and Background

This Physician Educator will train, educate, and standardize operations within the entire outpatient side of the DOM. Current complaints from providers that bill includes a lack of education in proper practice and the differing systems located within our clinics. On the other hand, administrators complain about incorrect and late billing from providers impacting reimbursement and direct revenue levels. (Burks et al., 2022) states, “The most common reasons for inaccurate or inappropriate billing were a lack of formal education within residency curriculum, inadequate clinical documentation supporting level of billing, and lack of a feedback system aimed to correct billing errors”. This lack of formal education during medical school is why most UPMC billing providers have a lack of understanding in what they are billing, let alone its importance and how it impacts their own income as well as the organization. “They also found that incomplete and disorganized clinical documentation and lack of good communication with clinicians impacted on the quality of clinical coding” (Shepheard et al., 2020). This quote from the Health Information
Management Journal shows how standardization and support from another clinical source is integral to making the most accurate processes possible. Currently UPMC billing providers have no one to go to for assistance in billing/coding decisions and this has led to many claims being left in the queue and unbilled.

The introduction of a similar position in the Department of Surgery resulted in a significant reduction in billing errors, decreasing from 40% to 10%, and uncovered over $1 million in missed revenue. Proper coding ensures that healthcare providers receive accurate reimbursement for the services they provide. Incorrect coding can lead to underpayment or, in some cases, overpayment, both of which can have financial implications for healthcare organizations.

As written by (Conifer Health et al., 2022), “Healthcare providers need a best-practice approach to coding that maintains accuracy throughout the subtle and not-so-subtle changes in how the system in the U.S. delivers and finances patient care”. This Physician Educator will not only be responsible for teaching the best billing and coding practices but also must stay abreast of all regulatory and systemic changes within the healthcare landscape. Adhering to correct billing and coding practices is essential for compliance with healthcare regulations and failure to comply with regulations can result in penalties, legal issues, and reputational damage. Accurate coding ensures that the data generated from healthcare services is reliable, allowing for accurate and informed decision-making by healthcare providers, administrators, and policymakers. The Physician Educator will also perform annual audits on providers to check for errors and discrepancies and if a provider falls above a certain error threshold (e.g., 30%) they must obtain additional training. Compensation for this position will be determined based on factors such as coding certification type, compliance experience, auditing experience, coding and billing expertise, education level, proficiency in Excel, knowledge of electronic health records (EHR),
familiarity with Federal documentation guidelines, and experience with Medicare and HIPAA. The typical pay range for this position is between $26 and $42 per hour, or $54,000 to $87,000 annually.

1.1.4 Methods

To substantiate the justification for this position, I conducted a financial analysis, demonstrating quantitatively the material impact of billing errors on the department over 6 months, potentially amounting to hundreds of thousands of dollars. This involved establishing the average charge per level (1-5) and comparing charges for new versus established patients within each division (Figure 2). The data for this analysis was extracted from a physician billing report available in a PowerBI sheet created by the data analytics department within the DOM. Utilizing these billing levels, I identified divisions that were either under or over billing, then calculated the projected revenue that could have been preserved with accurate billing in at least 30% of these instances. Subsequently, I compiled a comprehensive scope, executive summary, and individual billing reports for each of the eleven divisions, accompanied by a detailed overview of the Department of Medicine as a whole.

1.1.5 Results and Discussion

After conducting these analyses, it was revealed that the outpatient rheumatology division exhibited the highest degree of underbilling for new patients. A calculation showed that for the period of January to July 2023, $189,223 in unclaimed revenue could have been realized if 30% of the level 3 patients were accurately billed at a level 4. Similarly, in the case of established
patients, the outpatient General Internal Medicine division emerged as the most significant underbilling at the highest level within the department, with 15% more level 3s billed than level 4s. The potential lost revenue for this division during the same period was calculated at $487,179, assuming a 30% correction in billing for level 3 patients to a level 4 (Figure 3). A comprehensive analysis across the department highlighted that 52% of new patients were billed at a level 4, with an average cost of $338, while 56% of established patients were billed at a level 4, with an average cost of $207 (Figure 4). This thorough examination, coupled with the identification of unbilled revenue, provided the grounds to advance this proposal to our executive administrator.

This analysis shows the considerable financial and operational impact of inaccurate billing and coding practices, leading to the annual loss of millions in unclaimed revenues for the outpatient division of DOM. Observing the profound effects of this analysis, our inpatient counterparts have been inspired to conduct a similar examination on the hospital side, aiming to identify the extent of revenue loss. Data accuracy could be compromised in this analysis, given the absence of comprehensive data on the total number of incorrectly billed claims as we currently do not provide extensive audits for all of our billing providers. This issue can be addressed with the introduction of the Physician Educator as well. Because of potential inaccuracy, our calculations are based on a conservative 30% improvement in the error rate rather than a complete correction of 100%.

1.1.6 Recommendations

After taking this position to our Executive Administrator I recommended posting the job internally first for UPMC employees. Posting this job internally first fosters loyalty between the employees and the employer, which is important in an organization with a high turnover. This also increases the efficiency and speed of the hiring process as onboarding time and education regarding
the understanding of the organization is decreased. This job position would be stated as follows, “Assists the outpatient side of the chairs office in the Department of Medicine in the development of educational materials for Physicians/APPs pertaining to compliance and documentation needs, auditing each of the billing providers and re-educating them based on the nature of the results. Provides category one patient safety Continuing Medical Education credit for all educational sessions. Coordinates and implements annual compliance training for all faculty and providers within the Department”. (UPMC 2023). These tasks will not only save money but staff, time, and resources as well, which results in higher employee satisfaction.

1.1.7 Competency Development

This project helped me develop multiple competencies in systems thinking, performance management, and information technology management. This project dove into systems thinking by comprehending the inter-relationships among the individual departments within the organization (UPMC 2023), “…recognizing the differences between top-down and bottom-up dynamics as well as accounting for indirect unintended consequences” (Competencies). Performance management competencies were utilized and developed as I was able to monitor how current providers are billing and coding. Here I demonstrated the ability to “select appropriate measures of performance, measuring organization success, and determining staffing requirements and service implications” (Competencies). Information technology management was employed as I used my understanding of Electronic Health Records (EHRs) and other clinical apps to help improve current processes. I demonstrated the ability to “advocate for integrated systems, understanding how information technology tools are related to regulatory compliance, and becoming familiar with current technology for billing, records and reimbursement management”
(Competencies). I also used cost/benefit and ROI analyses to identify the potential outcomes of the recommendation.

1.1.8 Attachments and Exhibits

![DOM Billing Levels 2023 Jan-July
New vs Established](image)

**Figure 2. DOM Current Billing and Coding Volume**
Financial Impacts Rheum Outpatient (NEW patients)

Using a patient population of 5,128

Improving error rate by 30%

- 1539 patients move from level 3 to level 4
- Avg level 3 bill = $230
- Avg level 4 bill = $353

Calculations

- 5128 patients @ 230 = 1,186,668
- (1538 @ 353) + (3590 @ 230) = 117,9440
- 1,186,668 - 117,9440 = $1,068,728 in unclaimed revenue

Figure 3. New Patient Financial Impacts (Rheumatology Outpatient)

Financial Impacts GIM Outpatient (EST patients)

Using a patient population of 24,605

Improving error rate by 30%

- 7382 patients move from level 3 to level 4
- Avg level 3 bill = $138
- Avg level 4 bill = $204

Calculations

- 24605 patients @ 138 = 3,382,669
- (7382 @ 204) + (17224 @ 138) = 3,395,490
- 3,382,669 - 3,395,490 = $12,821 in unclaimed revenue

Figure 4. Established Patient Financial Impacts (GIM Outpatient)
1.2 Project 2: Training Outpatient Medical Assistants to Perform Venipuncture, Injections, and – Immunizations

1.2.1 Problem Statement

Medical Assistants (MAs) employed at non-hospital-based clinics (HBCs) within UPMC are allowed to conduct tasks such as administering injections, immunizations, and phlebotomy procedures for their patients. In contrast, their MA counterparts working in HBCs have not been granted the authority to perform these services. Despite both positions requiring the same day-to-day tasks and skill levels, HBC Medical Assistants find themselves restricted from fully utilizing their capabilities. Consequently, this restriction places an added burden on Nurses and other clinical providers at HBC locations who must now assume the responsibility for administering these services themselves, thereby increasing their workload. “Our findings support the assertion that burnout and low employee engagement contribute to turnover among primary care clinicians” (Willard-Grace et al., 2019).

1.2.2 Problem Statement

To combat this problem leaders in geriatrics and gastroenterology reached out to compliance in July 2022 to ask for consideration of utilizing MAs in these HBCs. This request was approved in October 2022, and the creation of the HBC MA training program began. The primary objective was to establish a "train-the-trainers" pipeline, enabling these trained MAs to impart their knowledge to UPMC MA staff. The implementation goal of this initiative is to cultivate a continuous cycle of learning and teaching within the DOM, fostering respect and
enhancing job capabilities. This program is anticipated to contribute to the retention of outpatient MAs by boosting job satisfaction and creating opportunities for career advancement. Upon completing the course, both MAs and Nurses are eligible to obtain 11.5 continuing education nursing credits.

1.2.3 Introduction and Background

MAs play a vital role in our healthcare system as we see our system changing to more preventative-based care, MAs are being employed to take on more clinical-based tasks along with their administrative ones. “Increased pressure on primary care practices to lower costs, address patients’ social determinants of health, provide preventive care, and document quality outcomes has spurred interest in redesigning workflows to delegate more tasks to MAs. These changes are being undertaken in hopes of improving patient and population health outcomes, improving access to care, enhancing patient satisfaction, and reducing provider burnout” (Frahmer et al., 2022). Leveraging MAs to carry out these responsibilities’ hinges on a solid trust between the physician and the MAs, as all clinical decisions and actions ultimately reflect on the primary clinical provider. Facilitating an effective trusting relationship is made more efficient by ensuring that MAs receive thorough and high-quality training.

Hiring and training new MAs can be time consuming and costly for practices. “During 2017, MA turnover rate was 59% in the US, and the total estimated cost of MA turnover was $213,000. The per-MA cost of turnover was $14,200, or approximately 40% of the average annual salary of MAs” (Friedman et al., 2020). To address turnover challenges and enhance employee benefits such as compensation and improved work-life balance, employers must ensure that MAs are operating at their full potential. Striving for excellence not only promotes continuous learning
and skill development but also helps to ensure the delivery of high-quality work, contributing to personal fulfillment within the workplace. Expanding the skill set of HBC MAs to include tasks like immunization, injections, and phlebotomy not only meets the professional development needs of MAs but also allows Nurses, who traditionally handled these responsibilities, to reallocate their efforts elsewhere. This reallocation facilitates increased operational efficiency, leading to higher patient volume and improved access within clinics. "According to Pennsylvania state laws, medical assistants can perform any task that has been delegated to them by a licensed provider, but the provider will be held responsible for the delegated task. Medical assistants in PA are not allowed to be delegated triage (American Association of Medical Assistants AAMA)." This citation establishes that, with approval from a licensed provider, MAs in both non-HBC and HBC settings can undertake these tasks in Pennsylvania.

1.2.4 Methods

For this training initiative, my team and I partnered with the Nursing Department within the Community College of Allegheny County (CCAC) to conduct a two-day hands-on course titled Routine Venipuncture/Injections and Immunizations. Participants also had the option to receive phlebotomy training in addition to the injection and immunization coursework. The syllabus explanation of this course is as follows, “This 2-day course is designed to train healthcare workers in providing safer and more effective care to patients/residents. The course will focus on proper routine venipuncture collection, as well as parenteral administration with an emphasis on Vaccination safety peer CDC guidelines” (Figure 5). During this course students were taught how to successfully perform routine venipuncture utilizing an evacuated tube system. This course guides participants in completing lab requisition forms, confirming orders, and engaging in
appropriate patient greetings and reassurance techniques as well as correct patient identification, preparation, and positioning, along with the assembly of venipuncture equipment, students learned to identify and locate the three most frequently used veins for venipuncture and practice vein palpitation, correct tourniquet application, and duration. The course discusses the venipuncture site cleansing procedure and outlines the steps for performing a routine venipuncture using an evacuated tube system. Safe handling and disposal of contaminated needles and supplies are demonstrated, and participants are educated on the required information for sample tube labels and the significance of delivering samples to the lab promptly. Students are also taught to administer injections and immunizations. This part of the course covers parenteral medication administration, including needle selection, safety measures, and practical skills such as withdrawing medication and proper administration techniques. Emphasizing administration adherence to the 5 Rights of Medication and Administration, it also includes safe vaccination practices, documentation, patient scheduling, and education on Vaccine Information Sheets VIS and the Vaccine Adverse Event Reporting System VAERS.

At the conclusion of the course, the program director, students, and nursing coordinator endorsed the syllabus and competency forms, acknowledging the diverse tasks in which students demonstrated proficiency. Students are evaluated on five to seven procedures, each performed four times within a specified time limit, with only a specific average resulting in a passing score (Figure 8). Following course completion and fulfillment of all competencies, MAAs and LPNs are permitted to return to their respective hospital-based clinics. Here, they can perform these learned procedures on both new and established patients. More than half of our cohort actively participated in training other medical assistants at their clinics, establishing a robust train-the-trainer pipeline. This
initiative will continue to contribute to maintaining a standard of working at one’s highest ability, fostering a culture of continual learning, skill development, and job fulfillment.

1.2.5 Results and Discussion

Collaborating with the Community College of Allegheny (CCAC), the training program was successfully executed, empowering MAs to return to their respective clinics and train other MAs in administering injections, immunizations, and phlebotomy procedures. This implementation has also led to the change of the UPMC Medical Assistant Job summary to include “perform phlebotomy, EKGS, and level one labs” as well as “under the direction and supervision of a physician, administer injectable medication and vaccines when appropriate” (Job Description). After the completion of this program, we had a total of fifteen students across all DOM divisions minus Rheumatology, Renal, and Gastroenterology. This training was done for a total cost of $4,500 which includes all resources used, breakfast for the participants and take-home study materials. A post-study survey was given to determine how students felt about the course. The survey resulted in an overall rating of 97.86%. The students really enjoyed the class, the facilities and resources provided, and the instructor who was rated at 98.57% (Figure 6 and 7).

1.2.6 Recommendations

I recommend conducting this training annually or biannually due to its cost-effectiveness in training fifteen clinical staff in new procedures. This approach not only enables staff to acquire new skills but also offers opportunities for career advancement through leadership experience, in turn increasing staff experience and decreasing turnover rates. I propose that current MAs and
LPNs, comfortable with training others, extend their training skills to clinics in divisions not covered in training; Renal, Rheumatology, and Gastroenterology. This initiative will allow each division within the DOM to incorporate the new skill set, alleviating Nurses of certain workloads and creating assess for new patients.

1.2.7 Competency Development

The project has helped me develop competencies in strategic orientation, systems thinking, and performance measurement. I grew in the systems thinking competency as I used my understanding of the MA job scope and the broader DOM landscape and the major challenges it is currently facing including turnover and job dissatisfaction. I did this by, “comprehending and appreciating how social components affect the relationships among layers of the system, and distinguished between induvial and collective goals as they relate to health management” (Competencies). I used the strategic orientation competency by considering the business, regulatory and strategic decisions on the proficiency of the organization. I did this by, “identifying the strengths and limitations of the organizations, identifying strategic goals and plans that address its shortcomings and builds on opportunities” and understanding how to align organizational resource allocation (Competencies). I also cultivated skills in the Performance measurement competency by using training and development methods on current staff, and establishing performance improvement plans for the betterment of the employee and the department as a whole. This was realized by, “selecting appropriate measures or performance to track organizational performance, determine staffing requirements and their service implications, and using constituent satisfaction scores to set organizational priorities and plans” (Competencies).
1.2.8 Attachments and Exhibits

- **Training:** Forbes Tower May 26th and June 2nd from 8:30am-4:30pm including a complimentary breakfast both days

- Phlebotomy training is optional if not performed in specific clinic – but all trainees have the option of learning the skillset

**Figure 5. MA Training and Syllabus**

**Figure 6. MA Training Survey Results**
**What was most beneficial about this course?**

<table>
<thead>
<tr>
<th>Learning new techniques</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receiving hands on experience</td>
</tr>
<tr>
<td>Good refresher for those who have been doing this a while</td>
</tr>
<tr>
<td>Provided specifics on blood draws/immunizations</td>
</tr>
<tr>
<td>Instructor was detailed and personable</td>
</tr>
<tr>
<td>Ability to keep resources</td>
</tr>
<tr>
<td>Tips obtained to help train others</td>
</tr>
</tbody>
</table>

*Figure 7. MA Training Courses Student Responses*
PROCEDURE 51-5 GIVING AN INTRADERMAL INJECTION

Procedure Goal
To administer an intradermal injection safely and effectively, using sterile technique

Scoring System
To score each step, use the following score system:
1=poor, 2=fair, 3=good, 4= excellent

A minimum score of at least a three must be achieved on each step to achieve successful completion of the technique.

Materials
Drug order (in patient’s chart), alcohol swab, disposable needle, and syringe of the appropriate size filled with the ordered dose of drug, sharps container.

Procedure

<table>
<thead>
<tr>
<th>Procedure Step: Total Possible Points 48</th>
<th>Practice #one</th>
<th>Practice #two</th>
<th>Practice #three</th>
<th>Final</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time Limit: 15 minutes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Identify the patient. Wash your hands and put on exam gloves</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Check the rights, comparing information against the drug order. *</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Identify the injection site on the patient’s forearm. To do so, rest the patient’s arm on a table with the palm up. Measure two to three finger-widths below the antecubital space and a hand-width above the wrist. The space between is available for the injection</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Prepare the skin with the alcohol swab, moving in a circle from the center out</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Let the skin dry before giving the injection. *</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Hold the patient’s forearm and stretch the skin taut with one hand</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. With the other hand, place the needle—bevel up—almost flat against the patient’s skin. Press the needle against the skin and</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 8. Competency Forms
Comments and Signatures

Reviewer’s comments and signatures:

1. 

2. 

3. 

Instructor’s comments:

CAAHEP Competencies Achieved

1. P. (7) Select proper sites for administering parenteral medication.

2. P. (9) Administer parenteral (excluding IV) medications.

3. P. (1) Prepare proper dosages of medication for administration.

4. A. (1) Verify ordered doses/dosages prior to administration.

AABHS Competency Achieved

9 (I) Prepare and administer oral and parenteral medications as directed by physicians

Figure 8: Competency Forms (cont.)
1.3 Project 3: Improving the Outpatient Rheumatology Staffing Model

1.3.1 Problem Statement

The Margolis Clinic is a rheumatology-based clinic located ten minutes from Presbyterian Hospital that has seen a consistent increase in patient volume since its opening in June 2021. As of the end of 2021 there were 2.69 full time equivalents (FTE) with a staff makeup of the following: two Patient Service Representatives (PSR), two MAs, two Nurses, one infusion Nurse and a mix of five providers. As of September 2023, there was a total of 4.96 FTE with the addition of four more providers and two rheumatology fellows. Within these two years, the volume has increased 54% while the number of MAs (two) stayed the same. “These MAs are responsible for organizing patient flow, assisting patients with various tasks, collecting and documenting patient information, ensuring compliance with privacy regulations, preparing and maintaining cleanliness of patient rooms and equipment, managing inventory, complying with regulatory agencies, maintaining strict confidentiality of medical records, performing medical procedures such as phlebotomy and electrocardiography (EKG), assisting physicians, answering calls, obtaining reports, scheduling appointments, verifying insurance, completing forms, and managing charts” (Job Description). Due to these responsibilities and the substantial increase in patient volume, the rheumatology division administrator determined that they needed an additional MA to assist. However, MAs do not bring in direct revenue, so justifying this position to finance is difficult and often did not get approved.
1.3.2 Purpose Statement

Due to the lack of justifiable means to obtain this MA, I had to produce another way to show MA revenue impact. This involved plotting and forecasting FTE levels within the clinic, along with projected volumes and revenues. Challenges to expanding the MA role include quality and safety assurance, confusion about scope of work, and clinician comfort with expanded MA responsibilities. Additionally, “MAs are among the lowest paid members of the healthcare workforce, also there is a lack of career ladders to provide advancement opportunities for MAs who embrace a larger role on the team. These challenges point to a significant need for training and other implementation support to broaden MA roles” (Figuroa et al., 2022). These challenges underscore the significant need for training and implementation support to broaden MA roles effectively.

1.3.3 Introduction and Background

Adequate staffing is essential in healthcare delivery and the overall functioning of the broader healthcare system. Introducing an additional MA can significantly contribute to patient safety and efficacy, by ensuring that care is not rushed, and the medical team is not overburdened. “The ability of MAs to take on panel management tasks depends on staffing ratios and clinic scheduling. While most practices operate on a 1:1 MA to provider ratio, increasing this ratio to two or more MAs per provider is necessary for handling additional population health tasks” (Framer et al., 2022) The study emphasizes the importance of maintaining an established 1:1 to 1:2 doctor to MA ratio to ensure adequate patient care, especially when assigning MAs additional responsibilities. The UPMC clinic in Margolis transitioned from a 1:3 ratio (1 MA per 3 providers)
at its opening in 2021 to a 1:5 ratio (1 MA per 5) as of September 2023, indicating that the current MA staff may be handling an excessive volume and too many clinical providers.

“Finally, the percentage breakdown of FT, PT, and per-diem employees should be determined by the variation in census patterns for the specified unit” (Argonne et al., 2022). Utilizing FTE metrics can play a crucial role in establishing adequate staffing ratios, as this approach directly correlates provider volume with their FTE makeup. The employment of MAs on an FTE need basis is imperative to ensure that each provider receives an adequate level of support. “Recognizing appropriate staffing levels and skill mix is a fundamental prerequisite in the pursuit of enhanced quality, patient safety, positive patient experiences, and operational efficiency” (Al-Amin et al., 2020). The addition of a new MA can contribute to reduced wait times, enhanced continuity of care, increased access for new patients, improved compliance with safety regulations, a more streamlined workflow, and an overall enhanced patient/provider experience.

1.3.4 Methods

To justify the need for this position, I conducted a comprehensive financial and data analysis of the Rheumatology clinic and its providers. Utilizing data from the provider activity sheet in PowerBI, the UPMC EPIC EHR system, and the QlikSense database, I gathered crucial information. Meetings with the Practice Manager and Division Administrator were conducted to gain insights into the clinic's workflow and the daily responsibilities of each staff member. By determining the FTE of all clinical staff and associated volumes, including an estimated volume for a 1.0 FTE MA, I developed a spreadsheet (Figure 9). This spreadsheet illustrated the addition and subtraction of total clinical provider FTE work for both the academic years 2022 and 2023. Calculations were performed to obtain the total FTE MA required to support the clinic based on
its historical performance. Data was also extracted to analyze Margolis revenues and expenses, demonstrating the impact of additional FTEs on the total profit in previous years. Considering the consistently changing provider makeup, which included retirements, new additions, and the inclusion of Fellows since the clinic's inception, accounting for these fluctuations was crucial for an accurate assessment of each provider's FTE status. Upon presenting my findings to the Practice Manager and Division Administrator, we submitted the analysis to the finance department. This submission included a detailed scope of work and a comprehensive presentation that was delivered to the executive team of the chair’s office, providing a thorough overview of the justification for the proposed position.

1.3.5 Results and Discussion

After consulting with the providers, I calculated the number of FTE’s by determining the number of weekly sessions (four-hour blocks) for each provider and dividing this total by 8 (Figure 9). As of September 2023, the practice was comprised of seven providers with a combined FTE of 5.96. Upon analysis, it was found that with the current clinical provider makeup of 5.96 FTE, there is a requirement for 2.61 FTE in clinical support, excluding PSRs, physician assistants, or Nurses. This assessment justifies the addition of a 0.61 FTE MA (Figure 10), augmenting the existing 2.0 MA FTE.

This 1.52 FTE increase is projected to result in an annual revenue increase of $1,259,861, with a projected revenue for 2024 estimated at $4,813,312 (Figure 11). Regarding drug expenses, the anticipated annual expense for 2024 is calculated at $3,716,981 (Figure 12), leading to a projected profit of $1,096,333 for the academic year 2024 (Figure 13). This represents a substantial 35% increase in profit from the previous year. Through this analysis, I established a direct
correlation between the rise in FTE and its subsequent influence on patient volume and clinical revenue, a trend that is anticipated to continue in the future. The examination led to the determination of a financial justification for the addition of a 0.61 FTE medical assistant to the clinic.” While typically performing a range of administrative and clinical duties, the pandemic increased the pressure of this job, forcing a heightened workload for medical assistants. Instead of managing a select handful of patients, medical assistants had to deal with more patients than ever. The pandemic increased the number of patients that were admitted on a daily basis to the hospital. As medical assistants are tasked with recording all of these patients, documenting their data, their paths of treatment, and all the medicine they receive, the job increased in volume dramatically” (Kh et al., 2022).

Furthermore, the addition of this MA is anticipated to alleviate tasks from Nurses, enabling them to assist providers in expanding their schedules to accommodate more patients. The increased patient load contributes to additional revenue for the clinic, further justifying the necessity of this addition. This MA would be assigned to a provider and perform the following tasks: managing schedules and organizing patient flow, accompanying patients to exam/procedure rooms, collecting patient information and vitals, relaying instructions to patients and families, handling medical records in compliance with the Health Insurance Portability and Accountability Act (HIPAA) and other regulations, preparing patient rooms and equipment, maintaining infection control, managing inventory of supplies, complying with regulatory agencies' requirements, ensuring confidentiality of medical records, following UPMC Health System policies, performing phlebotomy, EKGs, and level one labs, assisting physicians with procedures, documenting patient information, answering calls, providing information and patient education, obtaining lab/x-ray reports, hospital notes, and referral information, completing forms/requisitions, scheduling
appointments, verifying insurance coverage and patient demographics, and managing charts to ensure proper filing.

### 1.3.6 Recommendations

My recommendation would be to hire a 0.61FTE-1.0FTE Medical Assistant to assist the current seven providers and other clinical staff with their increased volume. I would post this job internally for current UPMC employees for the same reasons listed for the Physician Educator position. After showing this form of staffing analysis to the head of DOM ambulatory services and the rheumatology/renal Director of Operations they suggested using this template for further staffing analysis to be done in the outpatient setting. Using the FTE method instead of just looking at patient volume ensures a more comprehensive evaluation of workforce needs, taking into account factors such as the intensity and diversity of tasks performed by staff. This method provides a well-rounded understanding of staffing needs, allowing for more informed decisions about resource allocation and ensuring a well-balanced and efficient clinic.

### 1.3.7 Competency Development

In this project, I engaged in analytical thinking, leveraging data to develop an innovative approach for quantifying the FTEs required for clinical support within an existing outpatient setting. This was accomplished by “…seeking out information relevant to the situation, using analytic techniques to identify potential solutions, while anticipating obstacles and planning ahead” (Competencies). I used organizational awareness as I took complaints from administration and clinical staff and used my understanding of the power relationships in the organization to
create a justification for a new position. I did this by, “…considering the priorities and values of multiple stakeholders, defining roles and responsibilities of providers, and assessing different organizational functional designs” (Competencies). I cultivated my financial skills by using historical revenues and cross-referencing them with provider FTEs to determine potential revenue and expense impacts. I did this by “using financial metrics to track organizational success, understanding how to positively affect budgets, and accessing payment system alternatives” (Competencies).

1.3.8 Attachments and Exhibits

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Figure 9. Margolis Clinical Staff FTE Changes 2022-2023
Figure 10. Margolis Current and Forecasted Volume

- There is an expected increase of 3,760 patients with a 1.52% increase in FTE.
- Math:
  - (1600*2.6%+11240=2.61FTE)
  - 2.61FTE=2.6FTE

Figure 11. Margolis Current and Forecasted Revenue

- There is an expected increase of $1,259,881 in revenue with a 1.52% increase in FTE.
- Math:
  - ($5,553,453/4.4%)=807,605.05
  - $807,605.05=5.96 $4,813,314
Figure 12. Margolis Current and Forecasted Drug Expenses

Figure 13. Margolis Current and Forecasted Profit
2.0 Conclusion

The challenges faced by hospitals and clinics in maintaining sufficient staffing, exacerbated by the COVID-19 pandemic, have highlighted the critical need for comprehensive solutions. The strain on frontline staff members, heightened workload, and mental health impacts have led to resignations and hesitancy to return to work, contributing to ongoing shortages in clinical staff. To address these issues, it is essential to combat systemic problems within the healthcare system and ensure adequate compensation, support, and recognition for healthcare workers. Initiatives like the introduction of a Physician Educator (project 1) to standardize billing and coding practices and the expansion of Medical Assistant roles (project 2) through comprehensive training and optimal staffing ratios are steps towards enhancing patient care and staff well-being. By recognizing appropriate staffing levels, providing implementation support, and utilizing FTE metrics (project 3), healthcare organizations can improve quality, patient safety, and operational efficiency. These measures not only address immediate staffing challenges but also contribute to creating a healthcare system that prioritizes patient care, staff satisfaction, and community well-being.
Bibliography


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