Successful Integration of an Advanced Practice Provider into a Specialty Practice

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Prepared for: Vector Medical Group

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Executive Summary

With an aging population, pending physician retirements, and skyrocketing burnout rates, the AAMC predicts a shortfall of up to 139,000 physicians by 2033, and consumers are already reporting challenges with access to care. According to a 2019 Public Opinion Strategies Research Report, 35% of voters had trouble finding a doctor in the last 2-3 years, an increase of 10% from 2015.[1] It is imperative that we remain, "all hands-on deck" as we aim to ensure every member of the care team is working to the top of their education. This includes successfully integrating highly skilled advanced practice providers (APPs) as autonomous caregivers within organizations.

Practices and hospitals have been bracing for the impact of access shortages by investing in APPs, but many organizations have not successfully optimized their performance and realized their full economic value. There are two keys to successfully integrate APPs into a practice. The first key is a consistent operational infrastructure that promotes full integration. The second key is a cultural alignment that supports the utilization and independence of APPs.

The first key, operational infrastructure, of an APP program must begin with addressing an enhanced onboarding process that includes a deliberate clinical curriculum and pathway to obtain knowledge. Furthermore, it also must align the compensation of APPs to the business goals of the organization. Finally, consistent internal processes must be implemented to support APP autonomy.

The second key to a successful APP program is an organization's cultural alignment around the benefits and methods of incorporating APPs into the care team. The cultural alignment includes educating physicians, setting expectations and establishing dedicated-governance within the APPs. Addressing these key points will allow APPs to function as independent caregivers to improve access to care and profitability.

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Background

Advanced Practice Providers (APPs) is an umbrella term used to describe both Physician Assistants (PAs) and Nurse Practitioners (NPs). These healthcare providers can add value to a practice both in return on investment (ROI) and return on health (ROH) for communities.

The first Physician Assistant program was developed by Duke University in 1965. Training has matured and standardized to a two-year curriculum and 2,000 hours of supervised clinical practice, culminating in a national certifying exam. Additionally, signaling the level of knowledge, as of 2020, all PA programs now award Master's degrees following their completion.[2] Similar to PAs, NPs also have a national certifying exam, but programs can either be for a Master's degree or PhD, beyond the registered nurse certification.[3]

With predictions of an impending physician shortage, it is necessary to expand the core healthcare team to include PAs and NPs to avoid the critical challenges with care access. 44.9% of active physicians are older than 55 and within the next two years, as many as 1 in 5 physicians plan to retire, and 1 in 3 doctors, APPs and nurses intend to reduce their work hours in the next 12 months.[4] By 2033, due to both an aging patient population and an aging physician workforce, the US could experience a physician shortage up to 139,000. This shortage affects both primary care and specialty practices. In 2020, Merritt Hawkins white paper demonstrated this in outlining specialties with the top "absolute demand," as calculated by the number of openings to the total number of physicians, with gastroenterology ranking third.[4] To address these impending challenges, practices should embrace the role APPs can play and encourage them to work to the top of their education in order to increase accessibility while continuing to offer high quality healthcare.

Barriers

Advanced Practice Providers have become increasingly common employees for hospitals and health practices. However, many locations struggle to fully integrate these providers as autonomous caregivers. There are recurring themes with regards to the barriers practices face to fully integrate APPs. These perceived barriers include quality concerns, malpractice risk, training and regulatory requirements.

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Quality Concerns

There have been multiple studies to address APP quality concerns. A systematic review published in 2017 showed that the outcomes of nurse practitioners were comparable and can even exceed that of physicians, while also reducing cost. [5] The National Ambulatory Medical Care Survey found that the quality of care provided by both NPs and PAs was comparable to primary care physicians in a community health center. [6] Ultimately, quality concerns can be alleviated through proper training and the appropriate distribution of patients, resulting in improved outcomes and meeting or exceeding quality metrics.

In specialty practices, where procedures are more common, there are additional concerns regarding the participation of APPs in procedures. However, Kreeftenberg, et al. reviewed outcomes for invasive procedures completed over a year in a mixed-bed ICU, comparing APPs to residents. The study found that not only did the APPs perform more procedures, to include intubations and lines, but with less complications and less attempts.[7] Hollenbeck, et al. has a pre-print article in the Annals of Surgery for 2021 that further reviewed the impact of adding an APP to a single-specialty surgical team. Analyzing a 20% sample of Medicare claims data retrospectively for patients undergoing coronary-artery bypass graft, colectomy, major joint replacement or cystectomy, they found that the year after an APP was added to the team, there was a 17% 30-day and 16% 90-day reduction in post-procedure complications and an 18% reduction in 90-day readmissions as well as a reduction in length of stay. Not only did an APP reduce cost, but they also were able to demonstrate a return on health for patients; the true definition of value. Furthermore, all of the surgeons (general surgery, orthopedics and urology) had an increase in their number of office visits seen per surgeon, thus showing the APP allowed the physician to be more productive. [8]

Malpractice

Another reason physicians may be reluctant to give an APP autonomy is due to liability concerns. However, as a physician's experience with APPs increase, their perception of this malpractice risk decreases.[9] This is likely related to the trust established and the demonstration of knowledge. In a study evaluating the beliefs of urologists, 52% thought delegating a task to an APP would increase their liability, but this has not been consistent with the evidence. From 1991-2007, there were 320,000 claims in the National Practitioner Data Bank and only 1,500 were against a PA and 2,700 involved an NP. Less than 2% of the claims involved an APP. Through active and open communication, guidelines and proper documentation, liability can be limited.[10]

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Training

The next barrier relates to the training of APPs. Some professional societies are active in providing guidance with regards to training and regulations to better support a productive APP practice. The American Urologic Association has a consensus statement and training modules directed at APPs. The American Association for the Study of Liver Diseases also has national training information for APPs, and there are some private publications that focus on the advancement of education for APPs within specialties.[11,12] While NPs may have the opportunity to follow a specialty track in their education, and fellowships for all APPs in various subspecialties are becoming more common, in general, the responsibility for training an APP falls on the practice hiring them and should be done in a systematic and trackable fashion.

Regulatory Requirements

Finally, there are regulatory barriers that, if understand, can be overcome. States license both PAs and NPs, and they vary in their restrictions for APPs to practice medicine. For example, NPs have full practice authority in 20 states but nineteen states require a NP to have a formal written agreement with a physician. There may also be additional practice restrictions involving treating or prescribing. Twelve states require a delegation or supervision agreement for a NP to practice.[13] Forty-three states use the state medical board to oversee the licensing of PAs, while the remaining have an independent regulatory board, and all states require a PA to "practice within the scope of practice of the supervising physician."[9] This variability in oversight and ability to practice needs to be outlined and understood in the context of the state where the APP will practice.

In addition to licensing requirements, billing must be compliant with Medicare rules and regulations. There are three options for how an APP can bill with Medicare:

1. An APP can bill under their own NPI
2. Bill as a shared/ split visit with a doctor (only possible for hospitals), billing under the NPI of the MD
3. Bill "incident to," under the NPI of the MD (only possible in the outpatient setting)

Given the number of guidelines that must be followed to justify billing the visit under the physician's NPI (Table 1), shared and incident-to visits may risk scrutiny by CMS and private payers and should be used judiciously.[2]

The barriers to successfully integrate APPs, quality concerns, malpractice risk, training, and regulations are fraught with misunderstandings. With proper education of the entire organization, these can be overcome, with minimized risk, maximized revenue and a successful and productive career for the APP.

Opportunities

As previously outlined, many of the perceived barriers to a successful integration of an APP into a practice can be overcome with education and the appropriate infrastructure. The goals of integrating APPs into a practice are to address challenges with access to care, provide comprehensive care to improve the health of patients and complement the care team to increase potential revenue.

For years, APPs have stepped up to fill the gaps in areas of physician shortages. With 58 million Americans living in a primary care shortage area and estimates that a NP can manage 80-90% of what a primary care physician does, APPs are a natural fit to overcome this challenge. Research supports APP's ability to contribute to the triple aim, improve outcomes, reduce cost, and improve patient satisfaction.[13] Early, primary care practices mainly saw the advantages in partnering with APPs, but the mental health sector, reaching a critical need, has also been utilizing APPs to address demand. A survey in 2015 showed 62% of PAs evaluated mental health or behavioral disorders weekly. [14] Other specialists are scrambling to follow. However, to succeed at APPs fulfilling the triple aim, there must be an effective integration strategy executed with operational discipline.

In addition to APPs contributing to improved access to care and health outcomes, there is also an opportunity to improve profitability. One way to demonstrate the potential impact on revenue and cost reduction is an evaluation of capacity cost rates ($/minute for clinical staff) and contribution margin. A study published in 2019 by Brooks, et al. demonstrated the capacity cost to be 400 times more for surgeons than their APP. Furthermore, when you compare the daily wages of a physician to an APP in a clinic, despite the 85% reimbursement rate for APPs billing independently, their contribution margin can be substantially more, $1,382.26/day for an APP and $959.36/day for the surgeon (Figure 1).[15] Additionally, in an

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MGMA review of 3,000 providers, they found that practices with an APP:MD ratio of 0.41 or greater, had a higher net income than practices with a ratio of 0.2.[16]

Despite 29% of new jobs being created by the healthcare industry, only 9% of the growth of the US economy is related to healthcare, totaling 18% of the GDP.[17] This imbalance shows a propensity towards wasted capacity within the system, and practices must strive to avoid this within their own organizations. The expansion of the care team to include APPs, if not done within the appropriate operational framework to improve schedule density, can further exacerbate inefficiencies and wasted capacity.

Operational Infrastructure

The mere addition of an APP does not guarantee financial returns, improved access or better outcomes. Unfortunately, many practices and physicians fall into a trap of utilizing an APP to perform tasks well below their level of training. These practices are not realizing the full value of an APP and likely lack the appropriate operational infrastructure to execute this goal, one of the keys in a successful integration. A consistent operational infrastructure includes enhanced onboarding processes to include a standardized clinical curriculum, performance-based compensation and internal processes to promote autonomy.

Standardized Clinical Curriculum

As of 2020, there were 72 postgraduate fellowship programs for PAs in 13 states in the specialty areas of: surgery, emergency medicine, critical care, orthopedics, psychiatry, oncology, primary care, pediatrics and cardiology. On average, these programs are 12 months in duration and typically associated with an academic medical center.[18] However, very few APPs complete a formal fellowship in a specialty and due to the variability of clinical exposure that an APP may have and the lack of exposure to specialties, onboarding to a practice must also include a structured clinical curriculum for the specialty. Some specialty societies have training modules for APPs, but even when utilizing these, training should be deliberate and trackable with organizational goals and expectations. The Children's Hospital of Philadelphia recommends a one year "Transition to Practice Program" and an ongoing advancement where an APP will qualify from being a clinical leader, then a clinical lead expert and finally a clinical lead master. Consistency and support of leadership in this investment was noted to be

invaluable, and APPs reported their desire to participate in this career pathway both for their own professional development as well as for recognition of their accomplishments.[19]

A study published by a gastroenterology group also highlights the importance of structure in training. They cite about 75% of patients being able to be managed in a team-based situation, where an APP can provide continuity, allowing their physicians to see more new patients, perform procedures, and participate in complex chronic care management. Their training prioritized disease states with high prevalence and where APPs could most likely positively impact the patient experience, including irritable bowel disease, functional GI disorder, chronic liver disease and gastroparesis. Additionally, the APP could then be involved in more specialized training, such as the administration of biologic therapy. APPs had independent schedules, and there was an open access endoscopy suite so that patients could be directly referred for a procedure. Within this study, an APP was expected to have an independent schedule by 6 months and reach full productivity by one year.[2] This demonstrated a structured clinical onboarding where the practice was able to realize greater dividends in the long-term, benefiting both the group and the APP.

Ad hoc versions of training are commonly practiced for an APP's clinical onboarding and results in inconsistencies in knowledge, inefficiencies, and increased demands for the physicians responsible for teaching. To ensure success, practices need to design a deliberate clinical onboarding, separate from the operational onboarding of an APP. It is recommended to develop a clinical curriculum, by disease process, with priority to the top ten most likely conditions the APP will treat. The core curriculum should include disease-specific webinars stored in a digital library that the APP can access asynchronously. There should also be links to disease-specific guidelines and reference readings. The APP will shadow the physician to understand the management of the disease and then observe any potential procedures or advanced therapies associated with it. Next, the APP will partake in helping to manage complications of the therapies or procedures. Finally, the APP should see and present 10 patients with this disease to the physician mentor for certification on the disease following the core competencies (Tables 2 and 3). Certification indicates the APP is capable of seeing patients with that condition in their independent clinic. There is an overlay of expected timelines for completion and the physician(s) who will serve as the subject matter experts.

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A way to enhance this approach is by creating efficient workflows and communication, aiding in ensuring quality and consistency throughout the practice. Including Evidence-Based Practices (EBP) in training can also help ensure APPs are offering the highest quality of care while remaining cognizant of costs. EBP is recommended by the US Preventative Services Task Force, Agency for Healthcare Research and Quality, American Association of College of Nursing, and the Institute for Healthcare Improvement (Figures 2).[20,21]

Performance-Based Compensation

To ensure continuity of an APP integration strategy, the APP should have incentives that align with the goals of the company. A flat base salary is typically not motivating for an APP to see acute visits or improve productivity. Practices should compensate the behaviors they would like to encourage. Assuming that the physicians in the group have a compensation plan that aligns with the business goals of the company, the APP compensation plan should also mirror these efforts. It is reasonable to set a minimum productivity expectation based on average MGMA RVUs. A bonus provision of about 20% of the APPs salary and can reflect the weighted priorities of the business, including productivity, patient satisfaction, quality, and citizenship, such as teaching and committee participation (Figure 3).[22]

Internal Processes

In order for practices to reach the full potential of having an APP on the care team, there needs to be consistent internal processes. When left to the individual physicians, APPs often find themselves being underutilized. The Advisory Group estimates that for every primary care visit a physician saw instead of an APP, $49 was left on the table in lost revenue. This does not include the potential opportunity cost of lost cases for surgeons.[22]

One example of a necessary internal process to implement is cost and revenue transparency. For an organization to maximize their return on investment, there must be a high level of understanding with regards to the true costs of care and revenue generated by APPs. Particularly with regards to billing, when an APP bills under a physician's NPI, they risk losing visibility into the APPs absolute productivity. The Medical University of South Carolina created a compliant billing algorithm that defaults to billing under the APP NPI and with explicit guidance on when to use the physician's NPI. In standardizing expectations for billing and having the results be visible to all stakeholders, not only did they reduce any compliance

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risks, but it also allowed APPs to practice to the full extent of their license and experience. This resulted in increased profits and improved patient access. As an example, the RVUs of the APPs in the gastroenterology group increased 132% and revenue increased 188%. To debunk the myth that this would negatively impact physician productivity, all of the specialties evaluated also saw a positive impact in the RVUs of physicians.[15] Not only does an autonomous APP make financial sense, but it also allows for an APP to have greater career satisfaction and less turnover.

Another example of a necessary internal process to support APP autonomy includes algorithms for scheduling patients. These algorithms should account for the following: Does this patient have a highly complex chronic condition that requires the regular oversight of a physician or is it more straightforward and appropriate for an APP? If a patient calls and asks for a particular physician, what is the wait-time threshold beyond which the individual should be offered to see an APP instead? Not only can a delay in care be detrimental to the patient's health, but it also is detrimental to the practice. There is a strong correlation between no-show rates and the lag time from when an appointment is made to its completion. This relationship is strongest for new patients, demonstrated by one study which reviewed over 6,000 appointments and found a 2% rise in the odds of a no-show for every day increase in lag time to the appointment date.[23] Internal promotion of clinical certification within disease states is important to ensure schedulers and physicians know the appropriate patients to refer APPs. Finally, a new APP should be introduced to other referring physicians so they know to expect communication from the APP and to promote the practice having another point of access for a patient to be seen. These are all steps that can improve the schedule density of APPs, while also optimizing the work-product of physicians.

Cultural Alignment

The second component to a successful APP program is an organizational cultural alignment with the goal of promoting autonomy. This requires educating all levels of the company on the superior care that will be offered by the APP team to enhance the patient's journey. Internal perceptions of the role of an APP should be aligned to the organization's goals and its benefits through education and change management. Barriers to full integration

should also be identified and promptly addressed. The integration of APPs needs to be a corporate strategy that can be supported with data and monitored for success.

APPs offer tremendous insights to a practice, and they desire to have their voices heard. Developing dedicated governance is critical to the cultural alignment. APPs are well-educated and can provide clinical leadership on practice-wide initiatives and should be given leadership opportunities to not only help with the growth of the company but to also manage the APPs. This structure allows APPs to lead efforts in training and clinical onboarding and provide representation on committees that impact patient care and their own operational infrastructure. Involvement will create a better sense of community, foster career advancement and job satisfaction, promote buy-in, and enhance communication. Identifying effective communication and promoting a culture of corporate-wide feedback also helps to build trust between the APP and the physicians they work with.[24]

There should be identifiable leadership tracks within the APP community to show clinical advancement and celebrate accomplishments. It is reasonable for this to include a regional APP lead, who can both promote clinical excellence and operational efficiencies as well as encourage an APP culture that supports the vision of the practice.

Attrition of the Advanced Practice Provider

After a practice invests in the infrastructure of an APP program, there should be safeguards to minimize the risk of attrition. Intrinsic and extrinsic rewards are linked to higher job satisfaction, which in turn results in a decline in attrition rates. An empiric review on PA satisfaction summarized 29 studies to show a relationship between job satisfaction and autonomy, patient responsibility, physician support and opportunities for career advancement.[25]

Although there are multiple stakeholders to address in the successful integration of an APP, perhaps none are as important as the physician, who has a large impact on their job satisfaction. A survey of more than 300 APPs analyzing the relationship of the leadership style of the supervising physician to APP job satisfaction, determined that transformational physician leaders accounted for the greatest impact on whether the APP experienced over-all job satisfaction. Transformational leaders are those who can build a "follower commitment

toward an organization's mission and goals through motivation, inspiration, empowerment, stimulation, consideration and other equally charismatic and affective leader attributes."[26] This highlights how critical it is to focus efforts on the relationship of the APP and their physician colleagues and to consider leadership training for physicians who work closely with APPs.

Over 1200 APPs completed a survey from four different health systems to identify factors with the highest correlation to burnout. It concluded that job stressors not only had the strongest relationship to burnout, but it also negatively impacted engagement. A work-family balance was found to be protective against job stressors and improve engagement.[27] Furthermore, burnout has been shown to be an independent risk factor for over-all job satisfaction and the intent to alter career plans.[28] Practices need to focus on minimizing unnecessary job stressors and promote a work-family balance in order to encourage employee engagement, reduce burnout, and prevent attrition.

Conclusion

According to the AAMC, the pandemic "magnifies the need to address physician shortfalls."[29] Promoting autonomous practices for APPs will help to address challenges with access to care in primary and specialty sectors. By optimizing the APP workforce, the triple aim can be achieved with evidence of a reduction in wait times while improving outcomes and patient satisfaction and reducing costs, all paving the way for value-based care.[30]

Barriers to the full integration of APPs can be overcome through proper operational infrastructure and cultural alignment and can enhance the careers of APPs and create revenue opportunities for practices. The operational infrastructure should incorporate a standardized clinical curriculum, performance-based compensation and internal processes to promote autonomy. Cultural alignment includes fostering the APP and physician relationship, developing a dedicated governance structure, and identifying opportunities to prevent burnout.

A survey from 2016 reported that one-third of PAs planned to leave their current practice and one in five were going to reduce their clinical hours.[28] Focusing on the well-being of APPs is multi-factorial and critical in reducing burnout and preventing attrition. Improvements in job satisfaction and reductions in burnout can lead to improved productivity and performance and warrant monitoring and attention. Given the upfront investment required in hiring a new APP, practices should have a strategy for ensuring APPs can have a long and successful career within their organization.

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Tables and Figures

Table 1. Summary of Billing Requirements

Independent APP	Shared/ Split	Incident-To
APP sees patient alone	Medical necessity to see both MD and APP	Only established patients
Procedure done by APP (within their scope of practice)	MD and APP must both see the patient on the same day	APP sees the patient for the same medical issue as before (nothing new) and follows treatment plan
APP sees pt and MD does a brief check-in	MD must personally document necessity in the history, exam or assessment/ plan	MD must be on site for consultation and must remain actively involved in care but does not need to see the patient.
APP sees patient and speaks to MD but MD does not document	Must be in a hospital (cannot be a procedure or critical service)	MD and APP employed by the same group
Does not meet criteria for shared or incident-to		Non-hospital, outpatient clinic
		No cosign required but recommended for MD to review
APP NPI	**MD NPI**	**MD NPI**
85% Medicare Reimbursement	100% Medicare Reimbursement	100% Medicare Reimbursement

Table 2. APP clinical onboarding example.

Physician SME/Mentor	Disease State	Webinar	Text References	Company and Societal Guidelines (Link)	Observe Patient Interactions	Advanced Therapy or Procedure	Complications of Therapies	Present Patients	Certified to Treat
					Dates of 10 patient interactions (5 NP and 5 EP)	Any potential advanced therapies or procedures associated with the disease state		Present 10 patients (Include evaluation, management)	

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Table 3. Requirements for disease-state certification

History and Physical	Obtains essential health information, including pertinent positives/ negatives, past medical, surgical, family and social history. Understands critical components of the physical exam.
Diagnostic Testing	Orders and interprets appropriate radiographic or laboratory testing
Comprehensive differential diagnosis	Exhibits knowledge of "most likely" and "worst case" scenarios for symptoms
Plan	Orders appropriate evaluation, follow-up, and patient education required, including reasons to call for concern
Prescription	Obtains medication and allergy history to review for potential interactions of new prescriptions, review potential side effects of therapies, appropriate expectations of response, and cost implications
Interventions	Recommends, initiates, and/or performs appropriate procedures or interventions. Understands risk/ benefit profile of interventions

Figure 1. Comparing physician vs NP and PA capacity cost and contribution margin at Medical University of South Carolina following implementation of a billing algorithm.[15]

	Surgeon	**NP or PA**	**Scribe**	**Office Assistant**
Total clinic costs	$546,400	$120,000	$51,000	$61,000
Personal capacity (minutes/year)	91,086	89,086	89,086	89,086
Capacity costs rates ($/minute for clinical staff)	$6	$1.35	$0.57	$0.68
Comparing contribution margin at MUSC – the profit or contribution margin is higher in a specialty service when the NP or PA provides the service, even at the 85% reimbursement rate				
All-day Tuesday clinic			**Physician (100%)**	**NP or PA (85%)**
Receipts providing the same level of service (Medicare rate x 28 visits)			$2,079.56	$1,767.63
Wage per day (cFTE salary/260)			$1,120.20	$385.37
Contribution			£959.36	$1,382.26

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Figure 2. Evidence-Based Practice (EBP) Components [21]
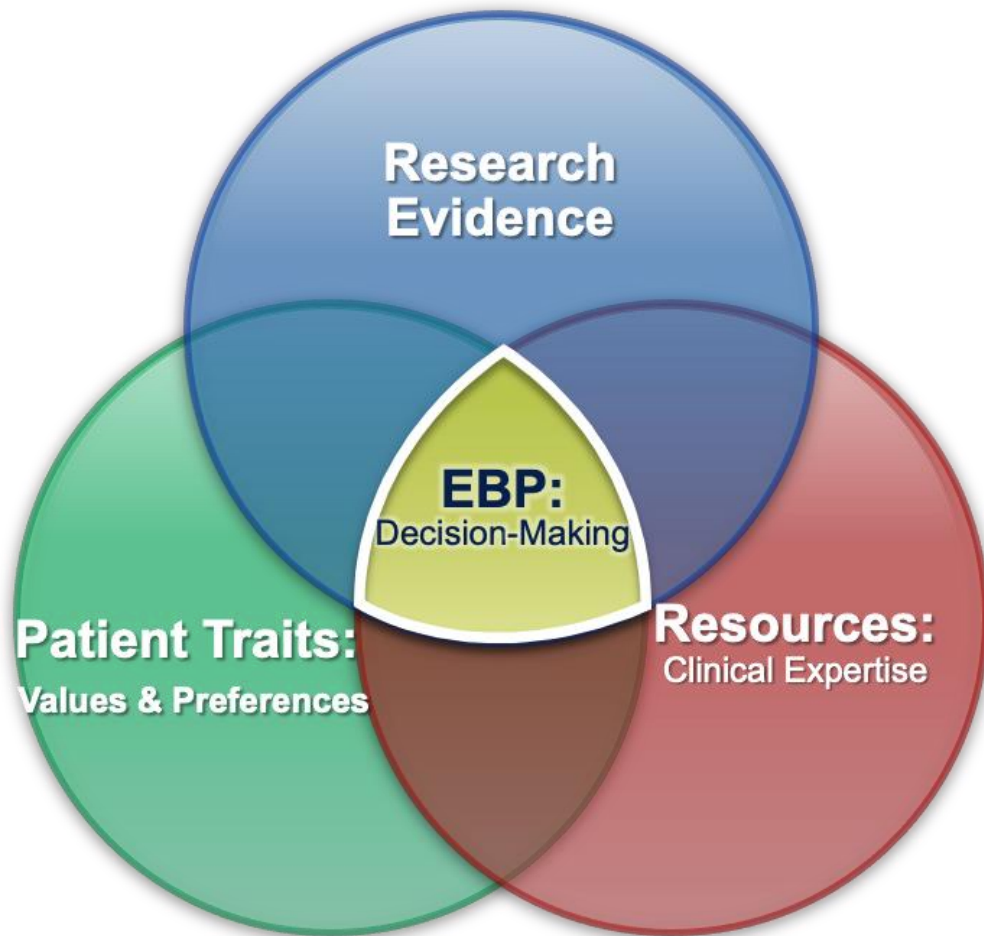

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Figure 3. Sample APP Compensation Model. Base can be connected to MGMA standards and bonus can be weighted, based on the priorities of the practice. For example, productivity may account for 70% of the bonus, while patient satisfaction, quality, and citizenship are each 10% Adjustments may need to be made based on inpatient or outpatient practices. [22]

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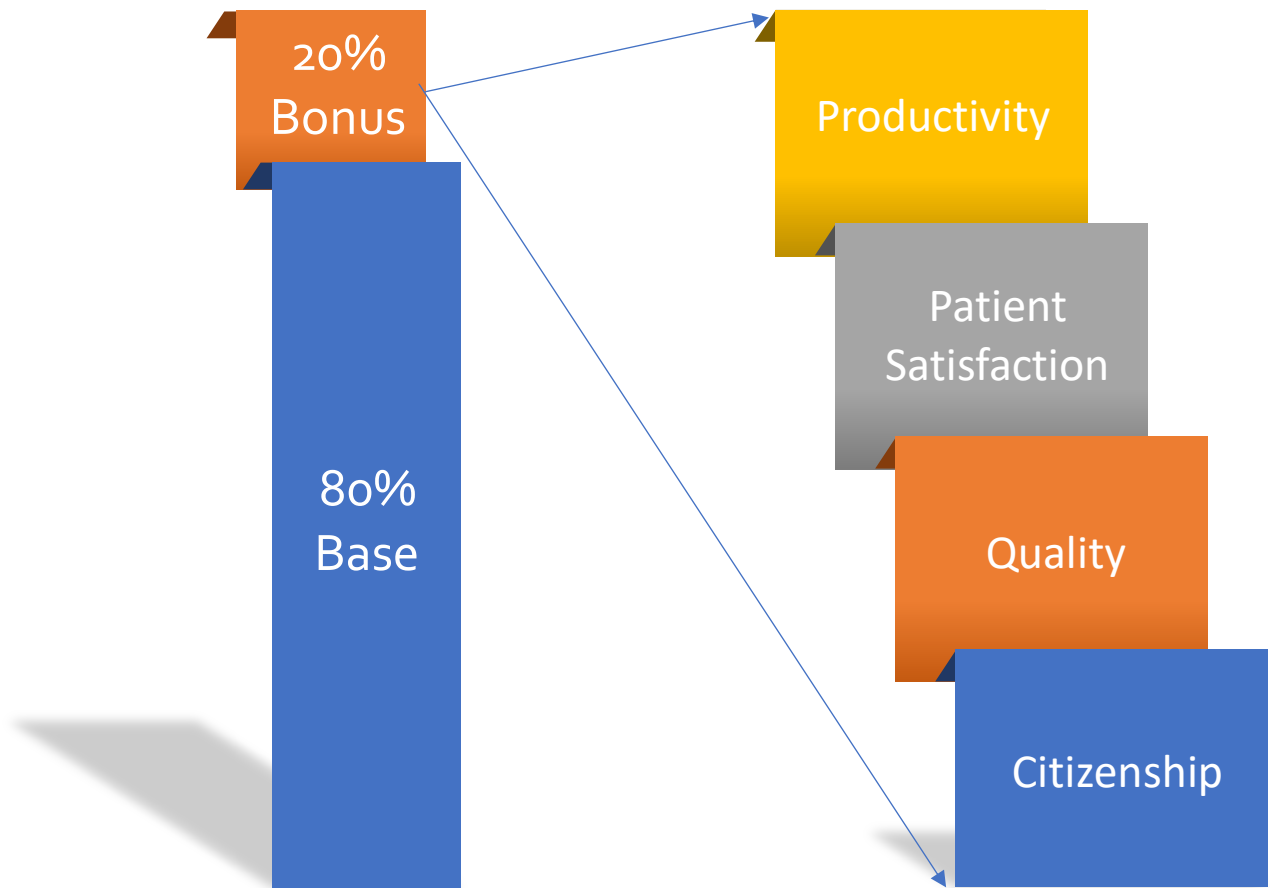
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