



## PAAs in Orthopaedic Surgery

With a broad medical and surgical education PAs are adaptable, skilled professionals who provide a cost-effective team-based approach to the complex demands of orthopaedic care.<sup>1,2</sup> PAs provide medical care, including procedures such as joint injections and fracture care; assist in surgery; cover call; round on hospital inpatients, and provide musculoskeletal care in emergency departments and urgent care centers. They also serve as care coordinators, communicating closely with patients and referring practices. Because patients are happier with ready access and excellent communication, PAs often raise patient satisfaction scores.

### EDUCATION AND CERTIFICATION

Comprehensive master's degree programs provide PAs with rigorous generalist medical and surgical education. Programs average 27 months<sup>3</sup> and employ curriculum modeled on medical school. During the classroom phase, PA students take more than 75 hours in pharmacology, 175 hours in behavioral sciences, more than 400 hours in basic sciences and nearly 580 hours of clinical medicine. This is followed by clinical rotations in family medicine, internal medicine, general surgery, obgyn, emergency medicine, pediatrics, and psychiatry. Students may elect rotations in orthopaedics. PA students complete at least 2,000 hours of supervised clinical practice by the time they graduate.<sup>4,5</sup>

#### PA education by the numbers

27 months

75 hours of pharmacology

175 hours in behavioral sciences

400+ basic sciences

580 hours clinical medicine

2,000+ hours in clinical rotations

After graduation, PAs must pass a national certifying exam and obtain a state license. To maintain certification, PAs complete 100 hours of continuing medical education (CME) every two years and pass a national recertification exam every 10 years.<sup>6</sup>

### PA WORKFORCE

Orthopaedic surgery is by far the largest surgical specialty for PAs. Of 140,000 certified PAs, 11.5 percent (16,000 PAs) practice in orthopaedics. The next largest categories are general surgery and neurosurgery, with 2.7 percent, or 3,800 PAs each.<sup>7</sup>

Far more orthopaedists work with PAs than any other surgical specialty, with a rate of 560 PAs per 1,000 orthopaedic surgeons. By comparison, in neurosurgery, the rate is 390 PAs per 1,000 neurosurgeons, and in general surgery, the rate is 115 PAs per 1,000 surgeons.<sup>8</sup>

### PA SCOPE OF PRACTICE IN ORTHOPAEDIC SURGERY

Whether practicing with highly specialized or general orthopaedic surgeons, PAs provide a range of evaluation and management medical services and procedures, including joint and trigger point injections, wound debridement and closure, tendon repair, and fracture management. Many assist in surgery.

In the hospital, PAs conduct rounds, write orders, take calls for inpatient consults and the emergency department, help formulate and implement therapeutic treatment plans, and perform discharge duties.

Peer reviewed medical literature provides a window into an impressive range of PA roles.

***Innovation for Hand Patients*** The Cooper Advanced Care Center—an innovative practice in Camden, New Jersey—uses group visits for its adaptive hand pain clinic, improving access and lowering costs for underserved, urban patients. PAs and nurse practitioners (NPs) provide care and patient education. The open room enables providers to move easily from one patient to another without having to wait for room turnover. Patients learn from one another and express high levels of satisfaction.<sup>9</sup>

***Keeping Intra-articular Joint Injections in the Ortho Department*** Personnel at Blanchfield Army Community Hospital in Fort Campbell, Kentucky, and Madigan Army Medical Center in Tacoma, Washington, theorized that they could use ultrasound to perform intra-articular hip injections, resulting in improved outcomes, greater productivity and lower costs by avoiding sending patients to radiology for the injections. Their subsequent study of 50 ultrasound-guided intra-articular hip injections performed in the orthopaedic clinic setting by physicians or PAs found the procedures were “accurate, efficient and patient-friendly.” Avoiding referrals to radiology prevents potential delays in patient care, preserves the patient-provider relationship, allows immediate feedback regarding symptom relief, and enables the orthopaedic clinic to capture the productivity and financial benefit.<sup>10</sup>

***Community-based care for Veterans*** In 2012 the Veterans Administration Medical Center in Houston tested using PAs in community-based outpatient clinics (CBOCs) to improve access to orthopaedic care. Resulting data showed orthopaedic patient visit volume increased 31 percent during the demonstration —10 percent at the VA medical center and 21 percent at the five CBOCs. The five PAs managed 28 percent of all orthopaedic encounters over one year; only 3.2 percent of clinic visits required referral to the medical center.<sup>11</sup>

***Dedicated Urgent Care Centers Improve Care, Increase Revenues*** Leaders of Reno Orthopaedic Clinic—a 26-physician, 11-PA practice in western Nevada—hypothesized that dedicated orthopaedic urgent care centers could “safely improve orthopaedic care for ambulatory orthopaedic injuries, decrease volume for overburdened emergency departments, reduce wait times and significantly decrease the cost of care while improving access to orthopaedic specialists.” In June 2014, the practice opened its first dedicated orthopaedic urgent care in the Reno area, staffing it with PAs overseen by orthopaedic surgeons. In its first year, clinic staff treated 12,722 patients. Wait time in the clinic averaged 17 minutes compared to 45 minutes in the emergency department (ED). Total visit time in urgent care was 43 minutes compared to 156 minutes in the ED. Wait time to be seen by a specialist was 1.2 days for urgent care and 3.4 days for ED patients. The average charge for urgent care was \$461, compared with \$8,150 for ED care. First year clinic revenues totaled \$2.57 million; revenue from follow-up care totaled \$7.65 million.<sup>12</sup>

## **THIRD PARTY REIMBURSEMENT**

Medical and surgical services delivered by PAs are covered by Medicare, Medicaid, TRICARE, and nearly all commercial payers. The Medicare program covers services provided by PAs in all practice settings (including inpatient, outpatient, operating rooms and EDs, nursing facilities, private offices, clinics, patients’ homes, and ambulatory surgicenters) at 85 percent of the physician fee. Generally, all services for which Medicare would pay if provided by a physician are also covered when performed by a PA, in accordance with state law. All 50 states and the District of Columbia cover medical services provided by PAs under Medicaid. Nearly all commercial payers reimburse for services provided by PAs. Because of variation in claims submission, it is important to verify each payer’s specific coverage policies for PAs. For more information about third party coverage, visit <https://www.aapa.org/reimbursement>.

## PA VALUE

When effectively deployed, PAs increase patient volume, generate revenue, and increase Relative Value Units.(RVU)

PAs in the department of orthopaedics at West Virginia University traditionally worked with physicians in a shared clinic model, an approach created for training resident physicians. PAs and orthopaedists in the department theorized that the resident model, in which an attending physician evaluates all patients, provides excellent teaching opportunities but may not be the most effective use of PAs.<sup>13</sup> In order to determine optimal use of PAs in an academic teaching hospital, the orthopaedics department set up a six-month pilot study utilizing PAs in a “split” or “parallel” clinic, rather than a traditional “shared clinic,” to see if it would decrease wait times for appointments, increase access to care, increase revenue generated by PAs, maintain or increase revenue generated by physicians, improve resident physician education by allowing them more one-on-one time with attending physicians, and decrease the number of no-show patients and non-operative patients scheduled with physicians.

In the old shared model, the physician and PA were in clinic together two days a week. In the new split model, the physician kept clinic two days a week but reduced patient volume by 20 percent. The PAs, in turn, had a clinic 3.5 days per week and assisted in the operating room the rest of the week. The result was a 41 percent increase in new patient volume and a 16 percent increase in return patient volume. No-shows on the physician schedules decreased by 14 percent. In the split clinic model total volume of patients seen by PAs increased by more than 700 percent, payments increase by more than 600 percent and RVUs increased by more than 500 percent. Physicians averaged the same number of operative cases, while their overall patient volume decreased by about 20 percent. However, physician operating projections were 33 percent higher than projections under the shared clinic model, which could result in higher RVUs.

## PAS ARE HIDDEN PROVIDERS

The value PAs bring to the healthcare system cannot be measured by direct billings alone. When a PA bills for care using his or her own National Provider Identifier (NPI), resulting revenue is easily tracked and credited to the PA, but many private insurers require PAs to bill under a physician’s name and NPI, and Medicare allows “incident-to” billing.<sup>14,15</sup>

A Medical Group Management Association report found practices that used PAs and NPs typically performed better financially and generated higher physician incomes than those that did not.<sup>16</sup>

Hospital studies frequently attribute cost-reduction, quality and patient satisfaction outcomes to PAs. Staten Island University Hospital postsurgical home visits reduced readmissions by 41 percent and saved an estimated \$39 for every dollar spent.<sup>17</sup> Baylor Scott & White Health credits the addition of two PAs to the orthopaedics department with increasing the case mix index for inpatient orthopaedics, from 2.15 to 2.40 and shortening average length of stay from almost four days to 2.5 days.<sup>18</sup>

PAs are particularly valuable to orthopaedic teams because in addition to conducting their own clinics, generating revenue in their own right, they can provide preoperative and postoperative care—covered by global fees—that surgeons would otherwise have to provide, freeing surgeons to perform additional surgeries or to see new patients. PA contributions open access to more patients while maintaining high-quality care and improving patient satisfaction.<sup>19-21</sup>

## CONCLUSION

PAs on an orthopaedic team increase productivity and patient access. PAs can carry their own patient

schedules, seeing new patients and performing procedures. They assist in surgery and provide some of the work covered by global payments, freeing surgeons to generate additional income. PAs coordinate care, enhance communication with referring practices, and improve outcomes. Many studies attest to the high quality of care PAs provide, favorably comparing it to physician care. With a PA on staff, access to the care team improves, wait times decrease, and patient satisfaction rises.

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## REFERENCES

- <sup>1</sup> Althausen PL, Shannon S, Owens B, et al. Impact of hospital-employed physician assistants on a level II community-based orthopaedic trauma system. *J Orthop Trauma*. 2013;27(4):e87-e91.
- <sup>2</sup> Anderson TJ, Althausen PL. The role of dedicated musculoskeletal urgent care centers in reducing cost and improving access to orthopaedic care. *J Orthop Trauma*. 2016;30(12 Suppl):S3-S6.
- <sup>3</sup> PAEA. *Program report 34: By the numbers. Data from the 2018 program survey*. Washington, DC; 2019.
- <sup>4</sup> American Academy of PAs. What is a PA? <https://www.aapa.org/what-is-a-pa/> Accessed July 6, 2020
- <sup>5</sup> AAPA. PA education-Preparation for excellence. [Issue Brief]. Alexandria, VA; 2020. <https://www.aapa.org/download/61328/> Accessed July 6, 2020.
- <sup>6</sup> NCCPA. Maintaining certification. <https://www.nccpa.net/certificationprocess>. Accessed July 6, 2020.
- <sup>7</sup> AAPA. 2020 AAPA salary survey. Unpublished data. AAPA, Alexandria, VA.
- <sup>8</sup> NCCPA. *2018 statistical profile of certified physician assistants by specialty*. St. Johns Creek, GA. 2019.
- <sup>9</sup> Patel YM, Kaufman S, Fuller DA. Musculoskeletal hand pain group visits: An adaptive health care model. *J Outcomes Management*. 2017;24(2):71-6.
- <sup>10</sup> Balog TP, Rhodehouse BB, Turner EK, et al. Accuracy of ultrasound-guided intra-articular hip injections performed in the orthopedic clinic. *Orthopedics*. 2017;40(2):96-100
- <sup>11</sup> Reed DO, Hooker RS. PAs in orthopedics in the VHA's community-based outpatient clinics. *JAAPA*. 2017;30(4)38-42.
- <sup>12</sup> Anderson, *ibid*.
- <sup>13</sup> Randolph TL, McDonough SB, Olson ED. Using physician assistants at academic teaching hospitals. AAPA poster session abstract. AAPA Annual Conference May 14-18, 2016. San Antonio, TX. *JAAPA*. 2016;29(10):1-2.
- <sup>14</sup> Kaplan RS, Witkowski ML. Better accounting transforms health care delivery. *Accounting Horizons*. 2014;28(2);365-383.
- <sup>15</sup> Althausen, *ibid*. (2013)
- <sup>16</sup> Finnegan J. Medical practices that add nonphysician staff often see revenue gains. Fierce Healthcare, July 20, 2017. <https://www.fiercehealthcare.com/practices/mgma-for-medical-practices-increased-non-physician-staff-can-translate-to-revenue-gains> Accessed July 6, 2020.
- <sup>17</sup> Nabagiez JP, Shariff MA, Molloy WJ, Demissie S, McGinn JT Jr. Cost analysis of physician assistant home visit program to reduce readmissions after cardiac surgery. *Ann Thorac Surg*. 2016;145(1):225-233.
- <sup>18</sup> Schoolerman S. Staffing changes enhance patient access. *MGMA Connex*. 2014;14(10):34-6.
- <sup>19</sup> Althausen, *ibid*. (2013)
- <sup>20</sup> Smith G, Waibel B, Evans P, Goettler C. A recipe for success: Advanced practice professionals decrease trauma readmissions. 43rd Critical Care Congress of the Society of Critical Care Medicine. *Crit Care Med*. 2013;41(12Suppl):A149.
- <sup>21</sup> CIPHER DJ, Hooker RS, Sekscenski E. Are older patients satisfied with physician assistants and nurse practitioners? *JAAPA*. 2006;19(1)36-44.