



## PAAs in Cardiology

Founded on the concept of collaborative practice, the PA profession is a natural fit for today's team-oriented cardiology models. In cardiology practices and departments, PAs increase patient access and contribute to improved quality by providing medical care and care coordination. PAs are a cost-effective resource for meeting patients' medical needs.<sup>1,2</sup>

### EDUCATION AND CERTIFICATION

Comprehensive master's degree programs provide PAs with a broad, generalist medical education. Programs typically last 27 months<sup>3</sup> and employ an intensive curriculum modeled on that used in medical schools.

The classroom phase covers basic medical sciences, including anatomy, physiology, pharmacology, physical diagnosis, behavioral sciences, and medical ethics. 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,

pediatrics, obstetrics and gynecology, emergency medicine, and psychiatry. Students may elect cardiology rotations. PA students complete at least 2,000 hours of supervised clinical practice by graduation.<sup>4,5</sup>

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

PAs are lifelong learners who seek additional training for varied reasons such as to practice in a particular specialty, to demonstrate competence for credentialing or to gain expertise in a focused clinical subject. For example, a PA may participate in simulation training to learn invasive cardiovascular procedures. There are six postgraduate PA programs focused on cardiac care – two in cardiology, one in cardiac critical care, and three in cardiothoracic surgery.

### PA WORKFORCE

Cardiology is the largest internal medicine subspecialty for PAs. Nationally, approximately 2,300 certified PAs practice in cardiology. An additional 2,100 PAs practice in cardiac and thoracic surgery.<sup>7</sup> With the number of PAs expected to increase over the next decade, these numbers are likely to increase.<sup>8,9</sup>

PAs are valuable assets in private practice settings, hospital cardiology services and any other setting where cardiology care is provided. A 2009 cardiovascular workforce analysis identified PAs as an "efficient and underutilized resource in cardiology practice." Practices with more than 10 cardiologists employed at least

#### PA education by the numbers

27 continuous months  
75 hours of pharmacology  
175 hours in behavioral sciences  
400+ basic sciences  
580 hours clinical medicine  
2,000+ hours in clinical rotations

one PA or nurse practitioner (NP). Some groups reported that their PAs and NPs generated gross revenues three to four times greater than their incomes.<sup>10</sup>

A 2012 survey of PAs in cardiology<sup>11</sup> found nearly half (48%) are group-practice based and one-third (33%) are hospital based. Most (77%) provide inpatient and out-patient care. The most common cardiology subspecialties are general cardiology (85%), heart failure (75%), interventional cardiology (68%), invasive cardiology (68%), electrophysiology (64%) preventive cardiology (59%), and peripheral cardiovascular medicine (58%). [This summary of survey findings](#) provides more details.

## PA SCOPE OF PRACTICE IN CARDIOLOGY

PAs provide a broad range of medical care to cardiology patients, with varied clinical duties depending on the subspecialty and setting. PAs take medical histories, perform physical examinations, order and interpret laboratory and diagnostic tests, diagnose illness, develop and manage treatment plans for their patients, prescribe medications, perform procedures (e.g., cardioversions, insert temporary pacemaker wires, adjust and remove balloon pumps), and assist in surgery.

PAs administer key tests, including cardiac stress tests, tilt table tests, and diagnostic cardiac catheterizations. In hospitals, PAs perform admissions, take call, make daily rounds, provide patient education, and coordinate discharges. Their knowledge of pathophysiology, cardiovascular drugs, ventilator management, and cardiac devices facilitates treatment of inpatients and outpatients with cardiac conditions.

### Findings from 2012 workforce survey<sup>11</sup>

#### Most common outpatient duties

- Clinical follow-up care
- Initiate and titrate medications
- Patient education
- New patient consults

#### Most common inpatient duties

- Hospital rounds
- Admission H&Ps
- Cardiology consults
- Discharge summaries

#### PAs commonly provide care for

- Coronary artery disease
- Hypertensive heart disease
- Heart failure
- Dyslipidemia

#### Most common procedures

- Aortic balloon pump removal
- Elective cardioversion
- Central line placement
- Swan-Ganz placement

The peer reviewed medical literature provides a window into an impressive range of PA roles including providing cardiac intensive care,<sup>12,13</sup> serving on dedicated heart valve teams,<sup>14,15</sup> performing diagnostic cardiac catheterizations including coronary angiography,<sup>16</sup> and staffing chest pain evaluation centers within emergency departments.<sup>17</sup> In many cases, PAs focus on specialty areas such as valve repair, congenital heart disease, robotic, and minimally invasive procedures or transplantation.<sup>18</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 at a uniform rate of 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. Those include services provided in an office or clinic, any department of a hospital including the emergency department, a skilled nursing facility, an ambulatory surgical center and a patient's home. All 50 states and the District of Columbia cover medical services provided by PAs under Medicaid.

The Center for Medicare and Medicaid Innovation includes PAs as providers who can prescribe exercise and establish individualized treatment plans under its cardiac rehabilitation incentive payment model. The episode-based model will test the impact of providing an incentive payment to hospitals where beneficiaries are hospitalized for a heart attack or bypass surgery, who then use cardiac rehabilitation services in the 90-day care period following hospital discharge.

Nearly all commercial payers reimburse for services provided by PAs, however, they do not necessarily follow Medicare guidelines. 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/>.

## CONCLUSION

Many studies attest to the high quality of care PAs provide, favorably comparing it to physician care.<sup>19-21</sup> One national study based on 650,000 cardiology patient encounters concluded that care provided by teams with PAs or NPs was equivalent to or better than care provided by physician-only practices.<sup>22</sup> In addition, patient satisfaction with PAs is very high. With a PA on staff, access to the care team improves, wait times decrease, and patient satisfaction rises.<sup>23-25</sup>

The American College of Cardiology (ACC) supports team-based care as a way to increase access and expand services to underserved populations and geographic areas.<sup>26,27</sup> In its 2015 policy statement on the role of advanced practice providers, ACC acknowledged the significance of team-based care for meeting future cardiovascular disease (CVD) demands.<sup>28</sup> Although death rates from CVD are declining, CVD still accounts for 1 in 3 deaths in the United States, and deaths from heart disease are expected to more than double by 2050. With a rapidly aging population, rising obesity rates, and predicted cardiology workforce shortages, cardiology care teams that include PAs will be essential to increasing access, improving quality and outcomes, and holding down costs.

***“Cardiovascular team-based care is a paradigm for practice that can transform care, improve heart health, and help meet the demands of the future.”***

— From ACC policy on cardiovascular team-based care and the role of advanced practice providers. [Brush 2015](#).

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