

# Position Statement: The Role of Physician Assistants in Interventional Radiology

Stefanie M. Rosenberg, MS, PA-C, David A. Rosenthal, MHP, PA-C, Dheeraj K. Rajan, MD, Steven F. Millward, MD, Richard A. Baum, MD, James E. Silberzweig, MD, Catherine M. Tuite, MD, and John F. Cardella, MD; with the American Academy of Physician Assistants

J Vasc Interv Radiol 2008; 19:1685–1689

**Abbreviations:** IR = interventional radiology, NP = nurse practitioner, PA = physician assistant, RA = radiologist assistant, RPA = radiology practitioner assistant

DURING the past decade, interventional radiology (IR) has been transformed from a referral-based to a clinically based subspecialty. This has resulted in a fundamentally different type of workload for the practicing interventional radiologist. During this same time period, the scope of procedures provided by interventional radiologists continued to expand. A result of this decade of robust growth is a shortage of properly trained and qualified professionals. We now face a dilemma in not only how to keep up with procedural demand, but also how to provide clinical care for pa-

tients before and after procedures. It is clear that the recruitment of additional clinical support staff into the “IR team” is needed (1–3).

Today, modern IR divisions resemble surgical subspecialties, providing the full spectrum of clinical care. Patients are seen in ambulatory clinics before and after procedures and on admitting and consultation services while in the hospital. Although the care we provide to patients is similar to that in other clinical services, the personnel we utilize to provide this care is not (4,5).

The most frequently used physician extenders are physician assistants (PAs), nurse practitioners (NPs), radiology practitioner assistants (RPAs), and radiologist assistants (RAs). Each has different training, background, qualifications, and scope of practice, and not all can bill for their services (Appendix). To make matters even more complex, these differences are state-, provider-, and hospital-specific. It is therefore critical to understand these differences before deciding to hire a physician extender (6–10). This position statement will delineate the potential roles of PAs in an IR practice.

## REGULATIONS

PAs must graduate from a nationally accredited PA educational program, pass the national certification examination administered by the National Commission on Certification of PAs, and obtain a state license to prac-

tice. Federally employed PAs must meet the first two criteria, but need not be licensed. PAs are eligible to obtain their own Drug Enforcement Administration number for prescription writing (11,12) and their own National Provider Identification number (as described later in the billing options for PAs). PAs on the medical staffs of hospitals are subject to similar credentialing requirements as physicians. Their responsibilities must conform to institutional policy and state regulations. State and hospital requirements vary in terms of prescriptive authority, use of ionizing radiation, level of physician supervision, and credentialing. More information regarding state laws governing PAs is available on the American Academy of Physician Assistants Web site (13).

## BILLING/CODING

Employers of PAs are eligible for reimbursement from Medicare for physician services provided by PAs working with the supervision of a physician. Fees generated by PAs may partly offset or completely cover the cost of their employment (5,14,15). PAs should obtain their own National Provider Identification number for Medicare billing.

Under Medicare, PA services are reimbursed at 85%–100% of the physician fee. “Incident to” billing allows physicians to bill at 100% in the outpatient office or clinic setting provided certain physician involvement and in-

---

From the Department of Radiology (S.M.R.), Lutheran General Hospital, Park Ridge, Illinois; Division of Angiography and Interventional Radiology (D.A.R., R.A.B.), Brigham and Women’s Hospital, Boston; Department of Radiology (J.F.C.), Baystate Health System, Springfield, Massachusetts; Division of Vascular and Interventional Radiology, Department of Medical Imaging (D.K.R.), University of Western Ontario, London, and Peterborough Regional Health Centre, Peterborough, Ontario, Canada (S.F.M.); Department of Radiology (J.E.S.), St. Luke’s–Roosevelt Hospital Center, New York, New York; and Department of Radiology, Division of Interventional Radiology (C.M.T.), University of Pennsylvania Medical Center, Philadelphia, Pennsylvania. Received August 7, 2008; final revision received August 29, 2008; accepted September 4, 2008. **Address correspondence to** S.M.R., Department of Radiology, Lutheran General Hospital, 1775 Dempster St., Park Ridge, IL 60068; E-mail: stefanier@comcast.net

None of the authors have identified a conflict of interest.

© SIR, 2008

DOI: 10.1016/j.jvir.2008.09.004

**Table 1**  
**Medicare Policy Chart for Physician**

Setting	Supervision Requirement	Reimbursement Rate	Services
Office/clinic when physician is not on site	State law	85% of physician's fee schedule	All services PA is legally authorized to provide that would have been covered if provided personally by a physician
Office/clinic when physician is on site	Physician must be in the suite of offices	100% of physician's fee schedule*	Same as above
Home visit/ house	State law	85% of physician's fee schedule	Same as above
Skilled nursing facility/ nursing facility	State law	85% of physician's fee schedule	Same as above
Hospital	State law	85% of physician's fee schedule	Same as above
First assisting at surgery in all settings	State law	85% of physician's first assist fee schedule†	Same as above
Federally certified rural health clinics	State law	Cost-based reimbursement	Same as above
HMO	State law	Reimbursement is on capitation basis	All services contracted for as part of an HMO contract

\* Using carrier guidelines for "incident to" services.

† For example,  $85\% \times 16\% = 13.6\%$  of surgeon's fee.

creased supervision criteria are met. "Incident to" billing is not applicable in the inpatient setting.

Billing for inpatient services differs from billing for services in an outpatient office or clinic. In hospitals, if the supervising physician and the PA treat a patient on the same day, services can be billed at 100% of the Medicare fee schedule if Medicare's shared billing requirements are met, whereas it is 85% if the service is performed by the PA with no direct physician involvement. Private insurers generally cover services provided by PAs. Those services are billed under the physician's name or the PA's name depending on the particular payer's policy (16,17).

More regulatory information on reimbursement of PA, NP, and RPA services can be found on the Web sites of the American Academy of PAs ([www.aapa.org/gandp/3rdparty.html](http://www.aapa.org/gandp/3rdparty.html)), American Academy of NPs ([www.aanp.org](http://www.aanp.org)), and Certification Board for RPA's ([www.cbrpa.org/pdf/CBRPA\\_medicare\\_guide.pdf](http://www.cbrpa.org/pdf/CBRPA_medicare_guide.pdf)), respectively.

As of October 25, 2002, the Centers for Medicare and Medicaid Services issued new rules providing PAs and their physicians increased latitude in hospital and office billing for Evaluation and Management services. The new requirement (Medicare Transmittal 1776) will allow PAs and physicians who work for the same employer/en-

tity to share visits made to patients the same day with the combined work of both billed under the physician at 100% of the fee schedule. That is, if the PA provides the majority of the service for the patient and the physician provides any face-to-face portion of the Evaluation and Management encounter, the entire service may be billed under the physician. This new rule does not extend to procedures or consultations. If the physician does not provide some face-to-face portion of the Evaluation and Management encounter, the service is appropriately billed at the full fee schedule amount under the PA's National Provider Identification number with reimbursement paid at the 85% rate (18) (Table 1).

### MEDICAID COVERAGE

Presently, all 50 states cover medical services provided by PAs under their Medicaid fee-for-service or managed care programs. The rate of reimbursement, which is paid to the PA's employer, is the same or slightly lower than that paid to physicians (19).

### SCOPE OF PRACTICE

As previously discussed, the scope of practice for a PA will vary from state to state. Most states leave the determination of specific procedures

deemed within the PA's scope of practice to the supervising physician and the credentialing committees of individual hospitals. States define the broad, overall practice of PAs and may regulate some specific areas, such as PA use of ionizing radiation, narcotic schedules allowed within a PA's prescriptive authority, and the responsibilities of the supervising physician. (The AAPA Web site [13] describes each state's requirements.)

In addition to the broad scope of practice for PAs defined by state law and regulations (or federal agency guidelines for federal employees), the scope of practice for an individual PA also is determined by delegation from the supervising physician and by the hospital privileging process. Hospital credentialing of PAs is similar to that of physicians. PAs must apply for privileges and submit to the same types of background checks as physicians. As a rule, hospitals will grant PAs only privileges that the supervising physician also holds. Some hospitals grant PA privileges based on the request of the supervising physician, who is responsible for the PA's performance. Others require documentation of competency via physician supervision of a specified number of each procedure before the PA is allowed to perform them without the physician present.

Before hiring a PA into a practice, it

is prudent for the supervising radiologist to contact the credentialing committees to determine if there are restrictions that would be relevant to the scope of practice of the position being considered. This is especially important if more than one hospital is covered by the radiologists, as there can be policy differences among hospitals.

The type of procedures covered by the interventional group will directly define the scope of practice for a PA. Within that group, procedures assigned to the PA will be based on physician assessment of the PA's ability to perform those cases safely, as well as the PA's confidence in his or her own ability to do so. As the PA becomes more experienced with procedures and the imaging modalities used to guide them, they can be trained to safely perform more complex cases. Keeping detailed documentation of the specialized training can help to alleviate any medical staff/credentialing committee concerns and address any objections that may arise from others who believe they should be granted similar privileges.

Finally, it is the recommendation of the Society of Interventional Radiology (SIR) that, regardless if state and local hospital regulations have been met, the PA performs procedures independently only after the radiologist and the PA are confident the procedures can be done safely and with high quality. In addition, SIR recommends that, even after the PA is performing procedures independently, the radiologist remains available for immediate consultation should the PA encounter procedural difficulties or adverse situations.

A survey of PAs attending the SIR 2005 Annual Meeting produced a list of commonly performed procedures (Table 2). This list was obtained from a sample of PAs from across the country, but may not include every procedure that is in a PA's scope of practice and may be more extensive than in some practices.

## EDUCATION AND TRAINING

To increase the number of PAs in IR, SIR recommends that an IR rotation be included in PA educational programs. PA students should be exposed to and receive training in procedural and clinical aspects of IR ap-

**Table 2**  
**Procedures/Responsibilities that May Be Delegated to PAs**

---

History and physicals
Rounds/inpatient and outpatient evaluation and management services
Requesting consultations from other medical services
Ordering of laboratory tests and imaging studies
Manage medical/surgical emergencies and initiate appropriate therapies until arrival of physician
Communicating with referring services
Established patient follow-up/evaluation and management billing
Clinic visits/management
Write prescriptions
Admissions/discharges
Patient education
Resident teaching
Obtaining informed consent
First-assisting on procedures
Prescribe conscious sedation (varies by state)
Wound care
Suturing dislodged catheter
Vascular access
Peripherally inserted central catheters
Central venous port placement, removal, and revision
Nontunneled central venous catheter placement
Tunneled central venous catheter placement, exchange, and removal
Biopsies
Drainages
Abscess
Empyema
Seroma
Chest tube placement
Tunneled chest tubes for drainage of pleural effusions
Tunneled peritoneal catheters for ascites drainage
Thoracentesis
Paracentesis
Baker cyst aspiration
Drain exchange/removal
Vein sclerotherapy
Ambulatory phlebectomy
Hysterosalpingography
Lumbar puncture

---

propriate for midlevel practitioners. In most cases, this training will occur in IR departments or sections. Although students may not achieve competency in IR procedures, this exposure to IR while in training will provide a foundation for further training and result in an increased awareness of the specialty among PA graduates.

PA graduates seeking additional training in IR currently receive that training from the IR physicians who supervise them. This training allows PAs to develop proper procedural and clinical skills that are in concordance with the standards expected by the practice or hospital for which they work. There are no formal postgraduate training programs for PAs in IR. Various universities and medical institutions have cre-

ated PA postgraduate programs in specialties such as surgery, orthopedics, obstetrics and gynecology, emergency medicine, psychiatry, and medical oncology in which PAs train in a fashion similar to resident physicians in that specialty (20). Development of PA postgraduate programs in IR in conjunction with interventional radiologists is desirable. This training should be standardized in terms of procedural, clinical, and didactic content.

## QUALITY ASSURANCE

Whether the PA who has been hired by a radiology practice is new to IR or experienced, monitoring of outcomes and complications should be documented. This tracking can be accom-

plished through programs such as Hi-IQ. Easily accessible documentation of this monitoring will be critical should a serious complication or adverse event occur. Some hospitals may also require documentation of continual monitoring for privilege renewal. It is strongly suggested that performance reviews be provided semiannually or quarterly, especially in the first 2 years of employment. Most institutions require an annual performance review, but more frequent reviews of the PA's performance can assist in identifying areas of strength as well as those needing further training. Such meticulous documentation also assures hospital administrators and medical staff that appropriate training and monitoring are always being provided.

#### COST EFFECTIVENESS, PATIENT SATISFACTION, AND EXCELLENCE IN PRACTICE

There are currently more than 68,000 PAs in clinical practice within the United States. They work in virtually every medical and surgical specialty and subspecialty. There are 139 accredited PA programs, which produced approximately 4,600 new graduates in 2006. PAs can prescribe medication in all 50 states, Guam, and the District of Columbia. Radiology practices that have hired experienced PAs have found that they bring many useful skills that enhance the overall operation of an IR service (15).

Because the use of PAs in IR is fairly new, there are few studies documenting efficacy of this practice (14). Studies in other specialties have validated the positive impact of the PA's contributions. Miller et al (5) reported on the use of PAs in a trauma center with the following benefits: decrease in length of stay in critical care units, increase in quality of care, and improvement in resource utilization. Further noted was that the cost of hiring the PAs was significantly offset by the reimbursement fees generated (5). Thourani and Miller (4) detailed their 30-year experience with PAs in cardiothoracic surgery and concluded that the usefulness of PAs cannot be overestimated. They were skilled first assistants, provided consistent patient management, and enabled expansion of services (4).

A national survey conducted by Opinion Research Corporation and presented to the American Academy of Physician Assistants in May 2007 (21) showed a high awareness of, and strong positive feelings toward, the PA profession. A majority of the public said they are willing to be treated by PAs (21). A 1994 report by a federal Advisory Group on Physician Assistants in the Workforce (15) similarly found consistently high levels of patient acceptance and satisfaction.

Studies show that PAs practicing as part of a supervising physician's team provide high-quality health care. A 1994 federal study of state practice environments (22) reported, "[w]ithin

their areas of competency, and with appropriate training and supervision, these practitioners may provide medical care similar in quality to that of physicians at less cost." In addition, an American Medical Association survey of approximately 4,000 solo-physician practices (23) found that employing PAs improved productivity. A recent study by a health care research firm (24) found increased patient satisfaction when they are scheduled to see a PA in the office versus other health care professionals.

#### CONCLUSION

SIR supports the utilization of PAs in IR practice. PAs have a proven record of providing high-quality, cost-effective care, which serves to enhance patient satisfaction and the productivity of the practice they serve. As licensed health care professionals with appropriate training, PAs can perform a majority of the minor procedures in an IR practice, allowing the physicians the freedom to concentrate on more difficult and complex cases, as well as increasing the volume of cases performed. PAs are invaluable as first-contact consultants for referring services, greatly enhance continuity and quality of care, and facilitate the scheduling of cases. PA education, training, credentialing, team approach, and ability to bill for services may afford potential significant advantages for many IR practices.

#### APPENDIX: COMPARISON OF PAs, NPs, RPAs, AND RAs

Physician Extender	Education/Degree	Certification	Licensed	Order tests, write prescriptions, make diagnoses	DEA/NPI No.	Services Reimbursed	Perform Procedures
PA	Broad-based general medicine/physician model/BS or MS	NCCPA (national examination, required in all states); recertification every 6 years, 100 h CME/2 y	Yes	Yes	Yes	Yes	Yes
NP	General medicine/MS	AANP/ANCC	Yes	Yes	Yes	Yes	Yes
RA	Radiology/BA, MS	ARRT (10 states)	In some states	No	No	No	Yes
RPA	Radiology/BA	CBRPA (3 states)	No (have RT license)	No	No	No	Yes

Note.—AANP = American Academy of Nurse Practitioners; ANCC = American Nurses Credentialing Center; ARRT = American Registry of Radiologic Technologists; CBRPA = Certification Board for Radiology Practitioner Assistants; CME = Continuing Medical Education; DEA = Drug Enforcement Administration; NCCPA = National Commission on Certification of Physician Assistants; NPI = National Provider Identification.

## References

1. Brown DB, Gould JE. Building in interventional oncology. *Tech Vasc Interv Radiol* 2006; 9:90–95.
2. Goldberg SN, Bonn J, Dodd G, et al. Society of Interventional Radiology Interventional Oncology Task Force. Interventional oncology research vision statement and critical assessment of the state of research affairs. *J Vasc Interv Radiol* 2005; 16:1287–1294.
3. Hong K, Georgiades CS, Hebert J, et al. Incorporating physician assistants and physician extenders in the contemporary interventional oncology practice. *Tech Vasc Interv Radiol* 2006; 9:96–100.
4. Thourani VH, Miller JL. Physician assistants in cardiothoracic surgery: a 30 year experience at a university center. *Ann Thorac Surg* 2006; 81:195–199.
5. Miller W, Riehl E, Napier M, Barber K, Dabideen H. Use of physician assistants as surgery/trauma house staff at an American college of surgeons verified level II trauma center. *J Trauma* 1998; 44:372–376.
6. Strickland G. Physician extenders: which one is right for you? *Appl Radiol* 2005; 8:23–28.
7. Ellenbogen PH, Hoffman TR, Short, BW, Gonzalez A. The RA: what the radiologist needs to know. *J Am Coll Radiol* 2007; 4:461–470.
8. American Academy of Physician Assistants. Physician assistants and radiology practitioner assistants: guide to new hires. Available at <http://www.aapa.org/gandp/paempguide.pdf>. Accessed October 19, 2007.
9. American Academy of Physician Assistants. Physician assistants and radiology practitioner assistants: the distinction. Available at <http://www.aapa.org/gandp/rpas>. Accessed October 19, 2007.
10. American Academy of Nurse Practitioners. Nurse practitioners as an advanced practice nurse: role position statement. Available at <http://www.npfinder.com/faq.pdf>. Accessed October 19, 2007.
11. American Academy of Physician Assistants. DEA brief. Available at <http://www.aapa.org/gandp/issuebrief/DEA.htm>. Accessed October 19, 2007.
12. American Academy of Physician Assistants. Prescribing authority. Available at <http://www.aapa.org/gandp/rxchart.html>. Accessed October 29, 2007.
13. American Academy of Physician Assistants. Regulatory authorities. Available at <http://www.aapa.org/gandp/state-law-summaries.html>. Accessed October 29, 2007.
14. Stecker MS, Armenoff D, Johnson MS. Physician assistants in interventional radiology. *J Vasc Interv Radiol* 2004; 15:221–227.
15. American Academy of Physician Assistants. Physician assistants in radiology. Available at <http://www.aapa.org/gandp/radiology.html>. Accessed October 19, 2007.
16. Portman RM. The use of physician extenders in radiology. *Interv Radiol News* 2003; 16:3–6.
17. American Academy of Physician Assistants. Reimbursement hospital billing. Available at <http://www.aapa.org/gandp/sharedbilling.html>. Accessed October 29, 2007.
18. Wiskerchen S. Billing basics for physician assistants and nurse practitioners. *J Med Pract Manage* 2004; 1:175–178.
19. American Academy of Physician Assistants. Third party reimbursement for physician assistants. Available at <http://www.aapa.org/gandp/3rdparty.html>. Accessed October 29, 2007.
20. Association of Postgraduate Physician Assistant Programs. Available at [http://www.appap.org/prog\\_specialty.html](http://www.appap.org/prog_specialty.html). Accessed October 19, 2007.
21. American Academy of Physician Assistants. Majority of public say they are willing to be treated by PAs. Available at <http://www.aapa.org/majoritysays.html>. Accessed October 19, 2007.
22. Sekscenski ES, Sansom S, Bazell C, Salmon ME, Mullen F. State practice environments and the supply of physician assistants, nurse practitioners, and certified nurse midwives. *N Engl J Med* 2004; 331:1266–1271.
23. Wozniak GD. Physician utilization of non-physician practitioners: socioeconomic characteristics of medical practice. Chicago: American Medical Association Center for Health Policy Research, April 1995.
24. Doscher C. Visits with PAs have shorter wait times. *AAPA News* 2007; 28:1.