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# One Solution for Managing Risks During Cutbacks in Residency Training Programs

Patrick Knott & Kathleen Ruroede\*

## Introduction

With the recent changes in both the medical environment and health education, a number of physician residency programs are being downsized or eliminated. This causes problems within many major teaching hospitals that depend on resident physicians to help manage their patients. This article reviews the potential risks associated with cutbacks in residency training and provides one model solution. Although the model discussed was developed in response to a program cutback in Orthopaedic Surgery, it is applicable to other clinical specialties as well.

## The Changing Environment of Healthcare Education

Recent studies from the Pew Health Commission and the Institutes of Medicine suggest that the U.S. trains an excessive number of physicians for the needs of the health care system. It is estimated that there will be an excess of approximately 165,000 specialist physicians in the U.S. by the year 2000. It is also reported that between 1991 and 1996, the number of resident physicians rose from 34 per 100,000 population to 37 per 100,000.<sup>1</sup> Both committees recommend that continual increase in specialist training must stop.

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<sup>1</sup> See Marvin R. Dunn & Rebecca S. Miller, *United States Graduate Medical Education*, 278 J. Am. Med. Ass'n 750, 750 (1997).

Since about 1995, numerous studies concluded that there is an oversupply of physicians in the U.S. workforce and that measures must be taken to curb the growth.<sup>2</sup> The growth of graduate medical education training positions and training programs ultimately determine physician numbers. In 1996-1997, there were a total of 7,787 residency programs nationwide, 130 more programs than the previous year.<sup>3</sup> Despite the large number of physicians, there is still a shortage of them in primary care. As such, much of the focus since 1995 centered on decreasing the overall number of physicians, particularly specialty physicians, while encouraging future physicians to go into primary care. One way to achieve this result has been to impose new rules on graduate medical education (GME).

In 1996, six major professional associations called for a reduction in Medicare support of GME training to bring the number of residency training programs into closer alignment with the population's needs. Changes were seen soon after, as the Accreditation Council for Graduate Medical Education's (ACCME) annual survey of GME programs in 1997 concluded that the number of first-year residents in most medical/surgical specialties and subspecialties declined overall by 10%.<sup>4</sup>

The Balanced Budget Act of 1997 substantially changed GME funding by affecting direct and indirect reimbursements for GME. This Act altered the formulas by which Medicare subsidizes GME by imposing a cap on the number of residents that Medicare will support. Medicare and Medicaid provide approximately 77% of the total direct GME costs, 11% is from the Veteran's Administration (VA), and the remaining 12% is from state and local appropriations and faculty practice plans.<sup>5</sup>

Medicare subsidizes GME costs through two explicit payments for education to teaching hospitals — direct and indirect. Direct Medicare Education payments compensate teaching hospitals for costs directly

<sup>2</sup> See American Medical Association, *Proceedings at the House of Delegates* (1997).

<sup>3</sup> See Dunn & Miller, *supra* note 1, at 751.

<sup>4</sup> See *id.*

<sup>5</sup> See Frank C. Wilson, *The Funding of Graduate Medical Education*, 18 *Orthopaedics* 1141, 1141 (1995).

related to the training of residents. The Indirect Medical Education adjustment is a percentage add-on to the basic Diagnostic Related Group (DRG) payment made to a teaching hospital for each Medicare patient to help offset the higher Medicare population inpatient costs. The Direct Medicare Education costs approximately \$1.8 billion annually, and the Indirect Medical Education costs reached \$4.2 billion for an annual total payment of \$6 billion.<sup>6</sup>

In addition, the Balanced Budget Act of 1997 introduced a new way of counting residents that eases the financial consequences of reducing the number of training positions, but penalizes hospitals for any further increases under the cap. In order to limit growth, the Act also gave hospitals the option to participate in a residency downsizing program that encourages hospitals to decrease the number of residents by 20–25% by the year 2001. In exchange for the reduction, a diminishing fraction of the medical education payments would be made for the terminated positions during the transition period.

By late 1997, the ACCME survey found that voluntary reductions in first-year resident positions had begun and that federal mandates would accelerate this downward trend. The American Medical Association also concluded that: (a) there is a recognition that residents completing certain programs had difficulty finding positions for two consecutive years; (b) there is a modest relationship between year one's downsizing program and the density of physicians within the respective state; (c) more reduction has been seen in programs that self-report lower pass rates on board certification exams than in programs with high pass rates; and (d) anticipation of Medicare cuts and reductions in GME funding has prompted the self-fulfilling prophecy.<sup>7</sup>

These new rules caused decreases in the size of many residency programs across the nation, thus resulting in the intended effect of producing fewer specialty physicians. However, the sudden reduction of residency programs also resulted in an unintended consequence. Since teaching hospitals rely on their residents to provide care for high-acuity patients in their wards, some hospitals suddenly found themselves with a serious shortage of manpower. Many of these

<sup>6</sup> See *id.*; Karen Sandrick, *Cut to the Quick*, 69 *Hospitals and Health Networks* 36, 40 (1995).

<sup>7</sup> See Dunn & Miller, *supra* note 1, at 754.

hospitals support Level I Trauma Centers and must provide in-house coverage for each specialty around the clock. Without enough residents, the hospitals may not have an appropriate care giver for the high-acuity patient, the remaining residents must work longer hours under tougher conditions, and if coverage is not maintained, the hospitals may lose their Level I designation.

The effect of difficult working conditions on resident physicians became apparent in the mid 1980s, following a fatality at a New York teaching hospital where the long working hours and insufficient supervision of residents were alleged to be contributing factors. This event precipitated legislation limiting resident work hours in New York State. Yet despite legislative efforts, a recent American Medical Association committee<sup>8</sup> studied the effects of these changes on residency programs and found that conditions are once again worsening. It was reported that in 1996, the mean number of hours worked per week during the first year of physician residency was 58.1 hours (standard deviation, 16.2 hours).<sup>9</sup> It was further noted that the maximum of consecutive hours a resident may work during their first year averaged 24.5 (standard deviation, 11.6 hours). Long working hours not only adversely effects patient care, but also compromises the quality of education in residency programs<sup>10</sup>

### The Physician Assistant Model

How can the number of specialty trained physicians be reduced without adversely effecting the residency programs and the teaching hospitals that train them? One solution gaining popularity is the development of parallel residency programs for physician assistants (PA). PAs are mid-level practitioners whose profession has been around since the late 1960s.<sup>11</sup> It is documented that PAs can provide the same type of high-quality, cost-effective care as residents in the tertiary care environment.<sup>12</sup> While PAs traditionally trained in primary care, many

<sup>8</sup> See generally American Medical Association, DME Rep. 11-A-98 (1998).

<sup>9</sup> See Dunn & Miller, *supra* note 1, at 752-53.

<sup>10</sup> See American Medical Association, *supra* note 2.

<sup>11</sup> The first PA program graduated from Duke University in 1967. See American Academy of Physician Assistants website at <<http://www.aapa.org>>.

<sup>12</sup> See generally James F. Cawley, *The Cost Effectiveness of Physician Assistants*, in *The Physician Assistant in a Changing Health Care Environment* (Gretchen E.

are now interested in specialty medicine and desire the additional training offered by specialty residency programs.<sup>13</sup>

Rationale for using mid-level practitioners such as PAs include the lower cost of providing health care, reduced physician stress, higher levels of patient satisfaction, and improved quality of care resulting from the team approach.<sup>14</sup> Federal and state health reform efforts, threats to GME, increasing health care costs, evolving reimbursement systems, along with marketplace competition provide the impetus for increasing use of mid-level practitioners in the workforce.<sup>15</sup>

A PA residency program in Orthopaedic Surgery, such as the Illinois Bone and Joint Institute Physician Assistant program affiliated with Finch University of Health Sciences, is an example of how well this innovative parallel residency program can work. When faced with severe cutbacks in its traditional physician residency program in early 1997, the largest orthopaedic groups at the institution began to look for a solution to their manpower problem. In a center with twelve busy attending orthopaedic surgeons, a reduction in manpower would be disastrous.

By teaming up with the PA Program, the institution developed a postgraduate PA residency program that was very attractive to new PA graduates. The twelve-month PA Residency Program provides graduates with an opportunity to obtain advanced training in orthopaedic surgery that would not be possible in the community

Schafft & James F. Crawley eds., 1987); J.P. Hansen et al., *Cost Effectiveness of Physician Extenders as Compared to Family Health Care Environment*, 28 J. Am. Med. Ass'n 211 (1980); Sandra McGraw, *Physician Extenders Can Enhance Your Practice*, 39 American Medical News 19, 19-20; Roberta Riportella-Mueller et al., *The Substitution of Physician Assistants and Nurse Practitioners for Physician Residents in Teaching Hospitals*, 14 Health Aff. 181 (1995); James Vam Rhee, A Study of the Cost Effectiveness of a Physician Assistant Service in Comparison to an Intern/Resident Service at a Large Teaching Hospital (1997) (unpublished MS thesis, Finch University of Health Sciences/The Chicago Medical School) (on file with the Finch University of Health Sciences, Physician Assistant Department).

<sup>13</sup> See Brian Hennig & Vicki Fishfader, *Physician Assistant Student and Faculty Perceptions of Physician Assistant Residency Training Programs* (1999) (unpublished MS thesis, Finch University of Health Sciences/The Chicago Medical School)(on file with the Finch University of Health Sciences, Physician Assistant Department).

<sup>14</sup> See Dolores Sheppard, *Physician Extenders in Managed Care: Reducing Risk through Supervision and Credentialing*, 14 J. Healthcare Risk Mgmt. 12, 12 (1994).

<sup>15</sup> See *id*; Barbara Harty-Golder, *Physician Extenders*, 82 J. Fla. Med. Ass'n 417 (1995).

practice setting. The education program is co-sponsored by the orthopaedic group and the PA Program while the physician group entirely funds the PA Residency Program. The faculty from the physician group and the University cooperate in the education of PA students and PA residents. Completion of the program results in a certificate rather than an advanced degree. Four PA residents were hired in July 1997, and worked side-by-side with the remaining physician residents. The result was a program that met the needs of the hospital, the attending physicians, the residents, and most importantly, the patients.

### Analysis of Potential Risks

Given this program's structure and orthopaedic specialty, it is important to review some of the most common risks and liability exposures associated with orthopaedic surgery. This discussion will be followed by a review of the theories of liability associated with the training of residents, educational considerations for resident training programs, and risk management steps to reduce potential liabilities.

Part of establishing a PA orthopaedic residency program should include positioning these residents with insight and information about the malpractice lawsuit history of their specialty. Fore-warned is fore-armed with knowledge and tools to proactively prevent future occurrences of potentially liable events. Valuable insight such as this will assist young PA residents with developing communication skills and competencies to deliver excellent medical care within the health team structure, while engaging behaviors commensurate with reducing the likelihood of a potential lawsuit.

There are various factors known to cause an orthopaedic patient to file a malpractice suit. Physician Insurance Association of America (PIAA) conducted a closed claim analysis of orthopaedic claims paid out by 20 physician-owned insurance companies. Findings from this study, which relate to orthopaedic claims, were reported by the American Academy of Orthopaedic Surgeons (AAOS) in 1996. This study represents the largest claims analyses of insured physicians' litigation experience across all specialties. This paper concentrates on findings from the PIAA study, which related to orthopaedic claims,

that were reported by AAOS in 1996. The insurance companies with a relationship to the PIAA reported on closed claims data from 351 orthopaedic cases. The claims involved foot and ankle surgery, spine surgery and spine fusion, total hip and knee replacements, knee arthroscopy, carpal tunnel surgery, and fractures of the hip, femur and tibia.<sup>16</sup>

In the claims, the most common allegations involved “poor surgical performance” by the physicians.<sup>17</sup> Other common allegations included failure to diagnose the patient’s condition, postoperative infection, failure to diagnose or properly manage a complication, and technical complications. Spine surgery was the most expensive to defend with an average attorney cost of \$49,837, while all other claim costs ranged from \$3,500 to \$24,000. Furthermore, spine surgery (other than fusion) resulted in the highest indemnity payments to claimants for economic and non-economic damages, with an average of \$431,455. The spine fusion indemnity average was \$195,000. Lowest indemnities were paid for tibia fractures at an average cost of \$9,000.

This study found that the range of time from when the claim was filed until final resolution ranged from 6-15 years. In addition, 88% of the cases were resolved prior to trial via involuntary dismissal, settlement, or voluntary dismissal by the plaintiffs. Of the cases that were tried, 9.1% resulted in defense verdicts, and 2.6% resulted in plaintiff verdicts.

The reasons cited as to why patients most commonly sue their physician related to patient issues and anger. Anger arose from patients’ inability to effectively communicate with the physician and his/her staff.<sup>18</sup> Informed consent issues and system problems within the hospital were also noted to frequently prompt litigation.

Once litigation was initiated, several problems with defending the claims arose. In large part, the defendants’ strategies were compromised because of deficiencies in the medical record. Since medical records provide the principle defense weapon in medical malpractice cases, inadequate documentation was a common problem.<sup>19</sup> Other

<sup>16</sup> See American Academy of Orthopaedic Surgeons, *Managing Orthopaedic Malpractice Risk* 1, 1 (1996).

<sup>17</sup> See *id.* at 2.

<sup>18</sup> See *id.* at 5.

<sup>19</sup> See generally Illinois State Medical Inter-Insurance Exchange, *Altering Medical*



problems included inappropriate alterations to the record as well as evidence that the providers jostled in the records. In light of this finding, it is interesting to note the responses to a 1994 AAOS survey that asked physicians the question, "Which steps have been taken to reduce the risk of professional liability suit?" The three top actions reported were: (a) keep more detailed, written records; (b) spend more time with patients on patient education and informed consent discussions; and (c) refer complex cases to orthopaedic subspecialists.<sup>20</sup>

The practice of PAs are regulated under states' Medical Practice Act provisions. When orthopaedic surgeons assume responsibility for the education and supervision of PA residents, they are vicariously liable for their residents' actions.<sup>21</sup> Vicarious liability indicates that an agency relationship exists between the supervising physician and the PA resident under the doctrine of respondeat superior, or "let the master speak". This doctrine is applied when a private physician outside the training relationship borrows a resident as an agent.

The doctrine of respondeat superior is now being replaced with an expanded version of liability recognized as the dual-servant doctrine.<sup>22</sup> The dual-servant doctrine becomes applicable when a supervising physician is held liable for the negligent acts of the PA resident and the education program is also liable under the theory of respondeat superior. The dual-servant doctrine would apply when a physician group's PA residency program and its university share liability.

The PA resident in training, under the supervision of an orthopaedic surgeon, is held to the same standard of care as the attending physician. Both physicians and residents must abide by the Code of Ethics for Orthopaedic Surgeons and the Principles of Medical Ethics in Orthopaedic Surgery.<sup>23</sup> In addition, the State of Illinois mandates

Records can be Hazardous to your Health (1996); Randi Kopf, *Are Your Medical Records a Legal Asset or Liability? Legal Documentation Guidelines*, 1 J. Nursing L. 5, 6 (1993).

<sup>20</sup> American Academy of Orthopaedic Surgeons, *supra* note 16, at 47.

<sup>21</sup> See American Academy of Orthopaedic Surgeons, *Medical Malpractice Primer for Orthopaedic Residents and Fellows* 14, 14 (1993); P. Eugene Jones & James F. Cawley, *Physician Assistants and Health Care Reform: Clinical Capabilities, Practices Activities, and Potential Roles*, 271 J. Am. Med. A'ssn 1266, 1269 (1994).

<sup>22</sup> See American Academy of Orthopaedic Surgeons, *supra* note 21, at 15.

that the physicians and PA residents follow the Physician Assistant Practice Act. This Act describes the clinical services that PAs can perform, including evaluation, monitoring, diagnostics, therapeutics, counseling, and referral.

Sponsors must consider the many issues that give rise to potential liability for PAs specializing in orthopaedics. Some of these issues include assuring that PAs function within the scope of their practice and authorization, have effective communication skills with patients and other health care professionals, can effectively manage medical records and informed consent processes, are properly credentialed, maintain competencies, and have appropriate supervision.<sup>24</sup> The following discussion will briefly consider each of these issues. Understanding the rules that govern safe practice will assist in controlling the economic liabilities associated with residents in training.

Scope of practice statements define the expectations, roles, and responsibilities that are part of the practitioner's practice.<sup>25</sup> These practice statements are legally defined by each state under the PA Practice Act. Defining the scope of practice enables the PAs, supervising physicians, and program directors to work with direction and clarity. Departmental policies and procedures, as well as medical staff bylaws, should refer to the scope of practice language for guidance during development. Clearly defined protocols should be established to delineate the circumstances in which PA residents are allowed to provide medical procedures. The protocols also serve as guides to the orthopaedic surgeons and education program administrators who oversee the PA residents' work.

Authorization of PAs may also relate to prescription-writing privileges. While in many states PAs may write prescriptions according to the rules of their PA Practice Acts, in other states PAs must demonstrate advanced training and additional certification to have such authority. The drugs that the PAs have authority to prescribe may indicate dependent statutory regulations or independence, given the drug schedules or classifications.<sup>26</sup> A written agreement outlining the

<sup>23</sup> See *id.*

<sup>24</sup> See generally Sheppard, *supra* note 14; Harty-Golder, *supra* note 15.

<sup>25</sup> See Sheppard, *supra* note 14 at 14.

<sup>26</sup> See *id.* at 15-16; Harty-Golder, *supra* note 15, at 418-419.

approved formulary list that the PAs have authority to prescribe should be consistent with institutional policies and procedures.

Effective communication with patients is also critical in establishing a successful physician-patient relationship and to effectively work within the health care team structure. Although litigation usually results from the patient's perception that their medical treatment resulted in a poor outcome, ineffective communication may be the spur for a patient and/or family to initiate legal action. Recall that the PIAA study found that physician communication problems were frequently noted in closed claims' analyses of orthopaedic cases. Good medical care requires effective communication between physicians and patients that is honest, respectful, shows compassion, and keeps the patient involved with decision making.

Managing medical records efficiently and effectively also provides a communication tool that all members of the health care team can collectively use to facilitate a patient's management and progress history. The medical record is a legal document reflecting the quality of care rendered and chronicles a patients' progress throughout the continuum of care. A complete and accurate medical record may prove to be the best defense in a courtroom and may also provide the best evidence regarding the apperency of liability .

Although the generating institution possesses the medical records, the information contained in them actually belongs to the patients. Maintaining confidentiality of the patient's diagnostic and treatment data is the responsibility of the PA residents and all others who have authority to care for that individual. A breach of confidentiality is considered negligent behavior of the provider. Thus, characteristics of a good medical record must include: (a) accurate and acceptable medical acronyms; (b) comprehensiveness; (c) legibility; (d) objectiveness; (e) truthfulness; (f) timeliness; and (g) without alterations.<sup>27</sup>

Informed consent is a legal doctrine that requires a physician to obtain consent for treatment to be rendered, and for an operation or diagnostic procedure to be performed.<sup>28</sup> Informed consent is an ongoing process, not simply a form that must be signed. The law

<sup>27</sup> See American Academy of Orthopaedic Surgeons, *supra* note 21, at 21-24.

<sup>28</sup> See *id.* at 25.

surrounding informed consent requires that the physician shares information with the patient at such a level of clarity and depth that the patient can make an informed decision. As such, the standard by which physicians should determine how much information to disclose is based upon what a reasonable person in the patient's position would want to know under similar circumstances.<sup>29</sup>

Obtaining informed consent takes time and patience for the physician or PA resident to facilitate appropriate dialogue with the patient being counseled. The resident should indicate their training status to the patient. They should also indicate in the medical record any pertinent information conveyed and any discussions explaining the proposed intervention, risks and benefits, potential side effects, complications, alternative options, along with the patients' responses to the dialogue. Again, recall the PIAA closed claims study findings regarding inadequate informed consent allegations, and the AAOS fellows' reported change in behavior related to counseling patients.

Sponsors can also reduce potential liability by ensuring that the PAs are properly credentialed. The PA resident credentialing and validating of general licensing and certification requirements are the dual responsibility of the institute as well as the education training program administrators at the local university. The supervising physicians and the education program are at risk for negligent credentialing if they do not confirm their resident PA's credentials.<sup>30</sup> Generally, the law requires that the PA resident graduates from an accredited Commission on Accreditation of Allied Health Education (CAAHEP) program, is licensed in the state where he or she is practicing, and is either certified by the national certification organization (National Commission for Certification of Physician Assistants) or is board eligible. Furthermore, any other certifications or licenses that the PA resident candidate claims to possess must be verified according to the appropriate documentary evidence.

Ensuring that the PA resident maintains appropriate continuing education requirements is also critical for recredentialing and ongoing competency assessment. The recredentialing cycle should occur

<sup>29</sup> See *id.* at 26.

<sup>30</sup> See *id.* at 13; Sheppard, *supra* note 14, at 16; Harty-Golder, *supra* note 15, at 417.

annually when credentialing files must be formally updated with relevant documentation. Quality of care monitoring initiatives assessed by supervising physicians and program administrators also falls under ongoing competency assessment. These quality monitoring activities provide important information for program accreditation, federal and state law compliance, and residency evaluation activities, residency evaluation activities, and perhaps managed care contract requirements.<sup>31</sup>

The supervising physician should also assure that all activities of the PAs are conducted within the scope of their responsibility and are specifically granted as commensurate with their training and experience. Furthermore, the supervisor should assure that all such PA activities conform to the rules, regulations, medical staff bylaws, and policies of the health care facility where patients may be admitted or treated. Finally, all services to patients must meet professional and facility standards of quality and care.<sup>32</sup>

### Management of Risks

Risk management is a process that is employed to decrease potential liability for providers of care and the patients under their aegis. Certain risk management activities that can reduce potential liabilities stemming from credentialing, supervising, and monitoring quality initiatives have thus far been discussed. Risk management that focuses on educational activities include reorientation to the importance of effective communication skills and good documentation habits. Risk awareness of other societal, regulatory, and technical advancements with potential for liability exposures, should be integral considerations for supervising physicians and education program administrators.

The PA resident should access copies of the institute's policies and procedures in order to become familiar with the proper chain of command within the institution. Increased awareness of PA's legal limitations and scope of practice manifests good proactive risk management. Some additional risk concerns that may affect residents cited by the AAOS<sup>33</sup> include: (a) being asked to perform a procedure

<sup>31</sup> See Sheppard, *supra* note 14, at 17.

<sup>32</sup> See *id.*

<sup>33</sup> See American Academy of Orthopaedic Surgeons, *supra* note 21, at 33.

that's beyond the expertise of the resident; (b) encountering a complication that the resident is not yet trained to handle while performing a routine procedure; (c) being asked to participate in or to perform procedures to which the resident is morally opposed; and (d) being confronted with an impaired or incompetent physician who is providing patient care and not being sure how to morally proceed.

PA residents should also become familiar with the risk management staff at the health care organization where the Institutes' surgeons admit patients or render their services. Institutional risk managers are available and willing to provide professional resources, guidance, education, and tools for legal or risk management concerns. Proactively supervising risk management issues as they relate to patient management and the business of health care is in the best interest of PA residents, their supervising physicians, and most importantly, the patients being served. Nurturing risk savvy behaviors and awareness is integral to professional practice and should be developed in tandem with clinical skill development throughout their professional life.

It is advisable that PA residents become familiar with the risk management processes and systems wherever they practice or affiliate. Additionally, it is advisable that PA residents have some familiarity with health care case law, particularly in orthopaedic surgery. Insight into previous litigation scenarios can provide valuable knowledge for young practitioners entering the profession.

The practice of medicine is complicated, particularly in today's health care environment. Thus, the clinical considerations in patient management often raise potential legal and ethical concerns that should be discussed and contemplated as they arise. Situations in which there are potential risk exposures should prompt discussions regarding risk management. Alliances with the risk management staff will foster behaviors and an environment that is not only safe for patients, but also reduces liability exposures for practitioners and their institutions.

### **Conclusions and Recommendations**

The recent and anticipated changes in graduate medical education provided an impetus for physician groups, health care organizations, and education programs to develop methods for coping with workforce

voids induced by reductions in physician residency positions. The introduction of PA residency programs, such as the program in orthopaedic surgery considered in this article, offers relief from the impact of physician residency reductions. Yet incorporating PA residents into the matrix of the Orthopaedic Surgery Institute poses supervisory and administrative issues for the attending surgeons and the education program. The primary mission for any institute and local university is to provide a strong clinical PA residency experience that is infused with a quality of care philosophy. Recognizing the importance of maintaining a safe clinical environment for patients is one method by which an institute can proactively manage risks. Knowledge about a PA's scope of practice, potential clinical risk exposures, previous orthopaedic claims history, and case law can provide some direction for establishing systems and processes that minimizes patient harm potential liability exposures.

In sum, the future health care workforce composition will continue to evolve as GME restructures and mid-level practitioners assume a larger primary care role. As education programs, physician groups, and health care institutions implement creative residency programs, such as that discussed in this article, consideration should be given to studying the effectiveness of PA residents. For example, quality outcomes of patient care, cost effectiveness of PAs, clinical competencies, adverse events, and claims experiences should be explored using appropriate research methods. This evidence is needed to further promote the public's understanding and acceptance of PA professionals and other mid-level practitioners as part of today's health care team.