



NATIONAL COMMISSION ON FORENSIC SCIENCE



Increasing the Number, Retention and Quality of Board Certified Forensic Pathologists

Type of Work Product

Policy Recommendation prepared by the Medicolegal Death Investigation Subcommittee.

Recommendation

The National Commission on Forensic Science requests that the Attorney General of the United States approve policy recommending that:

- Medical schools and pathology training programs receiving federal funds should be required to assist in the recruitment of forensic pathologists by: (1) in the case of medical schools, providing exposure to forensic pathology, i.e. a minimum of two hours of instruction, during pathology education and offering elective rotations in forensic pathology; and (2) in the case of training programs in anatomical pathology, requiring a one month rotation in a medicolegal office where forensic autopsies are performed.
- All municipal, county, state or federal entities which receive federal grant money for their police agencies or crime laboratories require that all forensic autopsies performed under their authority be performed by a forensic pathologist.
- Loan forgiveness for forensic pathologists in full time practice for ten years since completion of their training in forensic pathology, and Forensic pathologist salaries be made competitive with other medical specialties
- There be recognition that Forensic pathologists operate as *autonomous, and neutral scientists* separate from law enforcement, and Forensic pathologists be available for prosecuting (or plaintiff) and defense attorneys in both criminal and civil law cases arising from their official death investigation duties as well as on independent consultations.

Statement of Issue

Forensic pathology is a pathology subspecialty that is largely practiced on behalf of the public. Forensic pathologists support the public health, public safety and criminal justice systems as well as provide critical information to the families of decedents and their treating physicians. Because there is a shortage of forensic pathologists in the United States, many communities lack the valuable information that these physicians provide. Forensic autopsies are being performed by individuals not qualified to perform them or autopsies are not being performed when they should

be. The shortage involves not only an inability to recruit forensic pathologists but an inability to retain these individuals in practice.

Recommended Implementation Strategy

The implementation strategy includes measures directed at the following:

- Ensuring through policy that medical schools and pathology training programs provide adequate exposure of medical trainees to forensic pathology
- Enforcing professional standards which require that medicolegal autopsies be performed by forensic pathologists
- Providing federal funding to increase the pool of potential forensic pathology trainees at all points of the pipeline and providing federal incentives to improve the salaries and compensation of forensic pathologists
- Providing for, through statute or policy, the independence of forensic pathologists and their availability to prosecutors (plaintiff) and defense attorneys in both criminal and civil law cases

Background

Medicolegal death investigation offices cannot perform quality investigations, examinations and testing without Forensic Pathologists (FPs). In fact, the National Research Council 2009 report on Forensic Science (Strengthening Forensic Science in the United States: A Path Forward), specifically recommends that “All medicolegal autopsies should be performed or supervised by a board certified forensic pathologist” (1). Unfortunately, there is currently an insufficient number of Board Certified Forensic Pathologists (BC-FPs) in the United States to meet national needs with some areas having limited or no access to forensic pathologists. (2-3)

The forensic pathologist should be an independent, autonomous, and neutral physician independent of political, and law enforcement officials. The work of the Forensic Pathologist should be performed in a modern, nationally-accredited medicolegal system independent of political and law enforcement control. Independence and good work environment will help attract and retain forensic pathologists.

Although, no specific workload numbers exist, in 2013, Weinberg et al published a study examining the characteristics of medicolegal death investigation offices accredited by the National Association of Medical Examiners (4). In their study, they found that in accredited offices, there is an average of 3.7 forensic pathologists per 1 million population conducting an average of 222 autopsies per pathologist which is within the annual case load limits established by the National

Association of Medical Examiners (250 autopsies and autopsy equivalents per year per pathologist (5). Utilizing the data obtained by Weinberg et al, it can be extrapolated that between 1100 and 1200 BC-FPs are required nationally to conduct forensic autopsies. These numbers would include fellows in training and take into account FPs such as Chief Medical Examiners and others who would perform a reduced autopsy load to accommodate other activities such as administration or research. Unfortunately, instead of 1100 to 1200 practicing FPs in the U.S, there are estimated to be only 500 Board Certified forensic pathologists currently practicing forensic pathology fulltime with an average age of 52 (2,6).

Between 2007-2013, a total of 290 individuals were trained in FP, an annual average of 41 per year (7-8). Hanzlick and Haden-Pinneri conducted a study of 190 individuals who did a forensic pathology fellowship during the years 2000-2005 (8). Of these, approximately 67% currently practice full time forensic pathology; 21% do not practice at all; 7% practice part time; 3% only do forensic pathology consulting; and 2.6 % did not complete the fellowship. Additionally, they found that only 67% of those who train in Forensic Pathology go on to obtain board certification, and only 78% of those practice forensic pathology full-time (8). Thus, of the 41 individuals training in FP each year, approximately 27 will become board certified with only 21 of those eventually practicing forensic pathology full time.

Complicating the workforce demographics is the fact that of the 33% of the Forensic Pathology trainees that do *NOT* obtain Board Certification, 44% still practice forensic pathology full-time resulting in practitioners who often lack the competence to meet accepted standards of practice (8).

Considering an annual creation rate of 21 FPs per year, and given the current work force of 500 FPs, it would take approximately twenty five years to create enough FPs to serve the current US population, assuming no population growth during that time. Compounding this issue is the fact that the workforce is also annually decreasing due to attrition from retirement, death, and other factors, including job dissatisfaction because of the stressful nature of political, legal and media encounters, poor working conditions, the nature of the work and/ or low salaries.(2)

In addition to the issues discussed above, the National Research Council's 2009 report on Forensic Science also recommended research in Forensic Pathology be a priority for both the practitioners and the offices that employ them (1). To enable time for such research, the number of forensic pathologists needs to be increased.

Needs

Exposure to Forensic Pathology

The forensic pathologist supply problem starts earlier than forensic pathology fellowship programs and involves the discipline of pathology as well. Approximately 17,500 medical school students

graduate each year (9). Of those, approximately 3% of graduates will train in pathology with 7% of pathology trainees then training in FP (9-10). The College of American Pathologists believes that the current numbers of pathologists in training will not match the nation's need for hospital based pathologists (10). Consequently, there is the potential for increased competition for the limited number of pathology residents between hospital based subspecialties and forensic pathology.

There needs to be a coordinated effort to recruit more medical students into the fields of pathology and forensic pathology. In order to accomplish this, Forensic Pathology should be introduced in the Medical School curriculum within the first two years, as this is a prime time to attract future FPs. The curriculum should dedicate a minimum of a 2 hour block of time to a lecture on forensic pathology. In addition, autopsy case material should be presented by a FP in association with trauma and natural disease clinical course material. In the third and fourth year, elective rotations in Forensic Pathology should be offered. Since Medical schools receive extensive federal funding, a suggestion as to establishment of a block of time to lecture on forensic pathology as well as the establishment of elective rotations in Forensic Pathology would likely be honored if proposed in a strong manner.

In addition, individuals engaged in an anatomic pathology residency should be required to complete a minimum of 4 weeks of training in Forensic Pathology. The ACGME requires that all anatomic pathology training programs provide their residents with exposure to forensic pathology. This requirement is not always being met. Anatomic pathology residents should be required to spend at least four weeks in a medicolegal death investigation office accredited by the National Association of Medical Examiners assisting board certified forensic pathologists in the performance of medicolegal autopsies. If there are no such opportunities locally, arrangements should be made with a medicolegal office to provide such a rotation. Forensic pathologists not on the regular pathology department faculty should be compensated for their mentorship.

Autopsy Performance by Forensic Pathologists

A forensic autopsy performed under the authority of a municipal, county, state or federal agency should be performed by a licensed physician, who had been certified in forensic pathology by the American Board of Pathology (ABP) following training in forensic pathology or has successfully completed a training program in forensic pathology that is accredited by the Accreditation Council on Graduate Medical Education (ACGME) or its international equivalent and has been officially "qualified for examination" in forensic pathology by the ABP for no more than two years since completion of training. A forensic autopsy may also be performed by a physician who is a forensic pathologist-in-training (resident/fellow) at an institution designated by the ACGME for training in forensic pathology and performs autopsies under the direct supervision of either of the two prior cited categories of physicians.

Funding of Training and Improvement of Forensic Pathologist Compensation

There are currently 36 Forensic Pathology training programs accredited by the Accreditation Council on Graduate Medical Education (ACGME) (7,11). A recent survey showed that in 2014, these 36 programs had a total of 78 ACGME-approved positions only 54 (69%) of which were funded, and only 42 of the funded positions were filled (7). While it has been proposed to increase the funding and the number of positions available for training, since only 78% of funded programs were filled, recruitment must increase prior to increasing the number of positions available. Once recruitment into the field has increased, it is recommended that all of the ACGME-approved positions be funded. This would be possible by providing incentives for training to local jurisdictions as well as offering grant funding. In addition, programs should focus on accepting candidates who demonstrate a strong propensity to be successful in the field and whom demonstrate a desire to practice full-time FP upon completion of training.

To retain individuals in the field of forensic pathology, we must make Forensic Pathology salaries more competitive with hospital/academic pathology and other medical specialties. A survey by the College of American Pathologists revealed that the average compensation of full-time pathologists is approximately \$335,000 annually when base salary, incentive pay, deferred compensation, and other income are considered (10). In comparison, a study by Dr. Kemp recently showed that the average salary of a Medical Examiner is just under \$185,000 (12). The salary is only slightly better for Chief and Deputy Chief Medical Examiners who have average annual incomes of approximately \$220,000 and \$190,000 respectively.

In addition to the low salaries, the average FP just entering the field also has a great deal of debt from their undergraduate and graduate medical education. A recent study commissioned by the AAMC found that 86% of medical school graduates report having debt, and, in 2012, the median debt of graduating physicians was \$170,000 (13).

Considering the lower than average salaries and the medical school indebtedness most young FPs have, in order to attract and retain individuals into FP the salaries and benefits must be more competitive. This can be done through incentives, grant programs or agreements/ relationships with associated medical schools.

Similar to some clinical medical specialties, some areas of the United States lack access to forensic pathology services and may be considered to be “unserved” populations. Incentives to place forensic pathologists in such areas should be developed, such as loan forgiveness programs similar to the clinical disciplines. Having more options for work locations could attract more people into forensic pathology.

The availability of full time jobs in medicolegal centers with reasonable caseload, salary, and benefits with opportunities for research, advancement, and professional interaction with peers should facilitate recruitment and retention in the field (14,15).

Independence and Availability

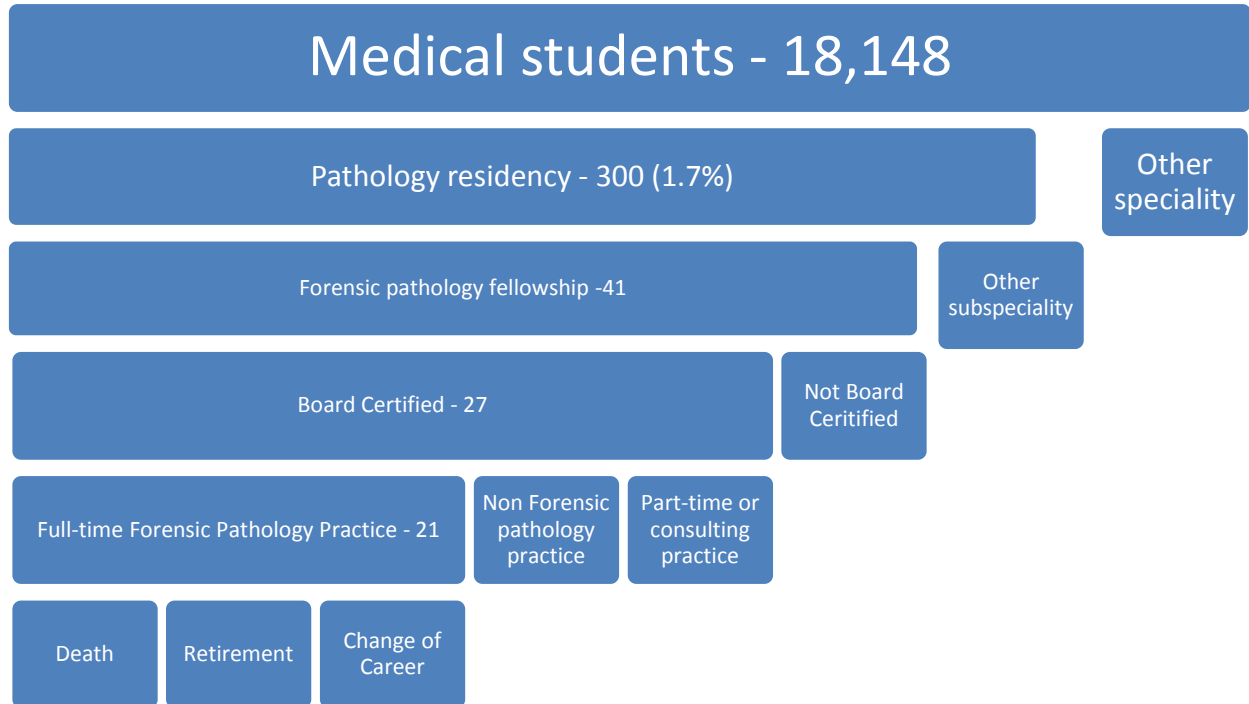
The forensic pathologist should be an independent, autonomous, and neutral physician independent of political, prosecutorial, and law enforcement influences. The work of the Forensic Pathologist should be performed in a modern, nationally-accredited medicolegal system. Independence and good work environment will help attract and retain forensic pathologists. The ability to be available to prosecution (plaintiff) and defense in both criminal and civil cases should also facilitate recruitment and retention in the field.

NAME has stated that it is imperative that forensic pathologists, and medical examiners remain independent officials, and be available for consultation for both prosecuting and defense attorneys outside their governmental employment (16).

Appendix

Progression of Medical Students to Forensic Pathologists 2013

<https://www.aamc.org/download/350998/data/2013gqallschoolssummaryreport.pdf>



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