







Populations are increasing and we are not.

- US population grew an average of 0.8% per year (+2.6 million)
- ~17% increase in physicians
- ~17% decrease in pathologists
- Trickled down into a critical workforce shortage for forensic pathology.



We need more than twice the number of board-certified FPs than we currently have



A 2013 report predicted that the US requires approximately 1100 board certified FPs



Estimates show there are less than 500 board certified FPs working full-time.

Medical students do not choose pathology

- In 2019, the National Resident Matching Program (NRMP) had an all-time high of medical school registrants applying for residency match
- Pathology residency is available at 162 programs, offering 601 positions
 - 569 positions
 - 21 programs failing to fill their available positions
- Pathology accounted for 1.1% of all matched US seniors



Residents and fellows do not choose forensics

- Of all ACGME Pathology residents pursuing fellowship in 2018
 - 9% (49) were board certified in forensic pathology; 10% increase over the previous years (44, 2014-2017)
 - 41 forensic fellows sat for their board examination in 2019 (~16% decline)
- In two studies on forensic fellowship training programs in 2011 and 2014
 - Only 2/3 of fellows practice full-time; more than 20% do not practice at all
- Only 2/3 of fellows become board certified; only 3/4 practice full-time.
- Of 49 fellows board certified in 2018, only 38 are projected to practice full-time.
- Attrition is expected to far exceed recruitment:
 - retirement, death, and career changes, and burnout.
- Based on reports from 2012, the average age of a FP was 55; and likely now closer to 60.

We are struggling to keep case numbers down.

- There should be approximately 3.7 FP per 1 million population served.
- Optimal caseload for a FP is 250 – 325 cases per year.
- Wayne County Medical Examiner's Office should employ 7 full-time FPs.
 - In reality, we need 8 – 10
- Spoiler alert—we don't have 7 FPs.
- Wayne County has 6.3% increase in caseload per year
- Wayne County is not alone.



Our sacrifices are keeping us afloat

- The elasticity of the remaining workforce has kept it from falling apart.
- The individual cost has been great: stress, fatigue, burnout, lost research opportunities, and perhaps critical errors which have gone, so far, unnoticed.
- It will, unfortunately, take a catastrophic failure to draw enough attention to this issue.



Dr. LokMan Sung, MD

The current situation is tenuous at best

Bottom line is simple:

- 1) Medical Student do not go into pathology
- 2) Only half of BC-FP fellows practice full-time
- 3) The average FP is of retirement age
- 4) Caseload are large—and growing.

It will take decades for these trends to re-align.



WCMEO is a teaching center

- Wayne State University School of Medicine
- Multiple Departments of Pathology
 - University of Michigan
 - Henry Ford Hospital
 - Beaumont Hospital
 - Ascension St. John Hospital
- Eugene Applebaum College of Pharmacy and Health Sciences at Wayne State University – Pathologists' Assistant Masters Program

WSU PA program is comprehensive



- Established in 1989, the Wayne State University Masters in Pathologists' Assistant is one of thirteen accredited programs
- Upon completion of their 2 years of training, they are expected
 - *"to provide accurate gross examinations and dissections of human anatomic pathology specimens; perform postmortem examinations, train pathology personnel, medical students and pathology residents; instruct in anatomy, physiology, gross pathology, gross dissection, and autopsy techniques; photograph surgical and forensic specimens; and assist in, perform, and conduct research."*



PA Program incorporates an 8-week rotation through the Wayne County MEO

- Training includes:
 - Prosection and external and internal examination including in situ and ex situ examination of organs
 - Proper collection and submission of trace evidence, serology kits, specimens for toxicology and histology
 - Forensic photography
- They attained significant proficiency in completing a low-complexity postmortem examination
 - Many assisting in high-complexity cases

WCMEO Hired Two Pathologists' Assistants

- In 2018, there were extended discussions
 - Not possible to perform 8-12 autopsies per day and manage:
 - Courtroom responsibilities, safety and accreditation, quality improvement / quality assurance, teaching responsibilities, administrative and logistical needs
 - Existential reflections about the long-term effect this might have
- We hired two of our very best PA students, full-time
- Bottom line—Necessity wins.



Kayla Dill
Andrea Jaworski

With time comes experience

- Today, our staff of three forensic PAs assist in a wide range of essential tasks, not limited to:
 - Postmortem examinations (toxicology, histology, serology, cultures) – When Needed
 - Teaching rotating medical students and residents
 - Administrative and logistical tasks
 - Management of SOPs
 - Research projects
- All their responsibilities are performed under appropriate supervision by staff pathologists.



Breanna Kinder

The PA is a significant and underutilized resource

- Improvement in turn-around-times, educational experiences for our students and residents, and improved organization of resources
- Allows FP to address many other vital needs, including prioritizing complex cases
- Has not jeopardized the quality or integrity of our service

We need to safeguard our position in forensic investigation

The board-certified FP remains the ultimate authority on the postmortem examination.

A PA, or any other physician extender, should never function with the autonomy and license afforded to the physician through years of education, certification, and experience.

Only with appropriate supervision can a physician extender provide proper and defensible service.

So, what now?

- Utilization of physician extenders needs to be formally and directly addressed and regulated with clear and concise language
 - Consider forensic certification of PAs
 - Discussion of what will constitute appropriate supervision
- Failure to take this step now may result in forfeiture of this opportunity
- This is how we protect our profession, credentials, and expertise.

Realities of employing a PA

- No effect on caseload
- Employing a PA costs money
- If you employ a PA, they will eventually get a subpoena
 - Testify to the collection of objective facts present in the autopsy report
 - No role in the interpretation of observations or physical evidence, or the formulation of an anatomic diagnosis, cause of death, or manner of death.





Conclusions

- The autopsy is a vitally important tool essential in medicine, public health, and law – and we control it.
- FPs and our national organizations should take this opportunity to ensure that the integrity of the autopsy is not compromised by the inevitable inclusion of physician extenders.
- This is our opportunity to appropriately utilize, standardize, and regulate pathologists' assistants—not fear them.

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