# In Pursuit of Accurate Pathology Workforce Counts - Why Undercounts Matter

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**Julie McDowell:**

Recent US physician workforce counts have understated by about 40% the number of actively practicing pathologists. CAP members outlined in an article published recently in the Journal of the American Medical Association Network Open in this CAPcast interview, two CAP member leaders, past president Dr. Stanley Robboy and Governor Dr. Donald Karcher provide background on the misevaluation, its impact and future policy implications of their new research. Dr. Robboy, first let's begin with you. What led you and other members of the CAP to publish your study in JAMA Network Open?

**Dr. Stanley Robboy:**

Well, Julie, it was not quite a year ago that Dr. David Metter published an important paper in the JAMA Network Open, and he claimed that the number of pathologists in the United States had dropped by nearly 18% since 2007. At the same time, he showed that the number of Canadian pathologists had actually increased. The finding about the American pathologist didn't feel right to me. Indeed, something seemed quite wrong. My colleagues and I found the problem. We thought it important to announce our findings in the same journal

**Julie McDowell:**

And can you discuss your finding?

**Dr. Stanley Robboy:**

Sure. About 10 years ago, I chaired the CAPS workforce that studied the pathology workforce in the United States. It's an area I've continued to study to this day. Our first exhaustive analysis reported in 2013, and it showed that the active pathology workforce was so much larger than what the literature indicated. And by literature I'm referring principally to the reports of the Association of American Medical Colleges or so-called AAMC, that it publishes biannually. Dr. Metter's article, reporting the decline, relied on the AAMC as its data source. In particular, there was one fact I knew that just couldn't be, and that was when the anticipated so-called retirement cliff of practicing pathologists would begin. In the 1960s and 1970s, about 800 new pathologists graduated each year and went into practice. As the poor pathology training programs were forced to close, the number of graduates since about the year 2000 dropped to 600 and has remained stable at that level ever since.

From our work, we calculated the retirement cliff would begin in 2015 and yet Meta had its starting so many years earlier. I'm not going to take you through the long set of analytics we set into motion, but one day suddenly the penny fell into the slot. For me, it was the eureka moment. The answer was so alarmingly simple. Everybody had overlooked the obvious. The AAMC simply was not counting all pathologists. They were not counting any pathologist who had sub-specialized. That is, they were not counting skin pathologist, cytopathologist, hematopathologist, and many other subspecialties. Today, about 97% of all pathology trainees take a fellowship year. And hence the AAMC was not counting any of them as pathologists. In reality, what the AAMC was measuring was the much older pathologists who were all APCP boarded and it was reflecting the retirements. That explained why each and every year the number of pathologists had been falling progressively. If the new entrance to the field weren't being counted, then the number of active pathologists had to fall.

**Julie McDowell:**

Dr. Karcher, how important is it to the CAP to have an accurate count of US pathologists?

**Dr. Donald Karcher:**

Yes, Julie, I'd be happy to. We need an accurate count of practicing pathologists for several very important reasons. First, the government uses physician workforce data for a variety of purposes, such as determining the need for residency and fellowship training slots in a specific specialty, measuring if there are enough physicians in a specialty to meet patient needs, and if not, what other providers can fill the gap, and gauging the overall health of a medical specialty when investing resources in that specialty. Another important need for accurate numbers is to inform advocacy for the specialty by the CAP. The CAP advocates for pathologists and many aspects of pathology practice and must know accurately how many practicing pathologists there are in order to advocate effectively. Finally, we need accurate workforce numbers to continue to attract the best and brightest medical students and graduates to choose pathology as a career. Students need to know that pathology is a vibrant feel with many great career opportunities.

Hearing that a specialty is shrinking in size sends a very negative message to students about pathology as a potential career. We studied the pathologist workforce and job market and actually recently published some very encouraging data on the health of the field and the growing demand for pathologists. There are exciting emerging technologies in pathology practice, including genomic testing, digital pathology, and artificial intelligence. Also, there's recently been very positive press about the critical role pathologists are playing in providing COVID-19 testing nationwide. For all of these reasons, this is a particularly good time to be recruiting students into pathology. We certainly don't want inaccurate workforce data to dampen these students' enthusiasm for pathology as a career choice.

**Julie McDowell:**

Now, Dr. Robboy, while it was unintentional, what has been the effect of prior research that reported an under count of pathologists?

**Dr. Stanley Robboy:**

I've been aware for at least a decade that the AAMC data was flawed but never understood why. As I mentioned just before, when I headed the CAPS workforce analysis, we found that the number of active pathologists was so much greater than the AAMC reported. My only mistake was that my analysis was still slightly lower than the true number. Probably the single most erroneous effect of the AAMC reports was to imply that the field of pathology was slowly dying. And as Dr. Karcher just mentioned, that was a tremendous deterrent to all bright young students who were looking for a promising future. In reality, if the field of pathology suffers, clearly all Americans lose heavily. And as Dr. Karcher just mentioned, the COVID-19 crisis showed the need for diagnostic testing, and that's the prime example of the value of pathologist or healthcare system. It's the pathologists who are helping to devise the newer test and helping people understand the strength and weaknesses of each test. That's another whole important discussion.

**Julie McDowell:**

Finally, Dr. Karcher, what are the future policy implications of your new research?

**Dr. Donald Karcher:**

It's clear that the AAMC methodology is flawed and we believe they're motivated to improve how they count pathologists. This flawed methodology may actually also be inaccurately counting other specialists such as surgical subspecialist, so it's important to correct this methodology for all specialties, not just pathology. So the CAP plans to work with the AAMC and other groups to correct this workforce methodology. In the end, we want to make sure that everyone, including policymakers, government regulators, other physicians and students considering a career in pathology have accurate data regarding the number of practicing pathologists in the US.

**Julie McDowell:**

Thank you both for discussing this important issue. The article referenced in this discussion is entitled Reevaluation of the US Pathologist Workforce Strength by lead author Dr. Robboy. To find the article, go to jamanetwork.com/journals/jamanetworkopen.

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