IMPOSTER **DOCTORS**

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Patients at Risk

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INTRODUCTION

When you experience a medical emergency, you expect to be treated by a licensed physician with expertise in your condition. What happens when you look up from your hospital gurney to find that the doctor has been replaced by a non-physician practitioner with just a fraction of the training and experience? This scenario, which is becoming an increasingly frequent reality in American healthcare, was the focus of *Patients at Risk: The Rise of the Nurse Practitioner and Physician Assistant in Healthcare*, the first—and so far, the only book to focus on a silent but deadly patient safety issue that has been virtually ignored by health policy analysts.

Patients at Risk was released in the fall of 2020 to a firestorm of controversy, including condemnation from nurse practitioner and physician assistant advocacy groups, who accused the authors of peddling conspiracy theories and attacking colleagues. Within weeks of its publication, Mary Mundinger, the veritable godmother of nurse practitioner expansion rights, wrote a letter to the *Wall Street Journal* rejecting the book's premise that there is a lack of scientific research on independently practicing non-physicians. Mundinger pointed to research that she published in 2000 as proof, insisting that nurse practitioners in the study were practicing independently.[1]

To respond to these criticisms directly, co-authors Niran Al-Agba and Rebekah Bernard created a podcast series. Its seminal episode, 'There's Something About Mary,' detailed evidence repudiating Mundinger's *Wall Street Journal* argument, including new revelations obtained from the nurse researcher's memoir and YouTube video recordings that prove significant physician involvement and oversight throughout the study.[2]

With a rapid accumulation of new data on non-physician practitioner care, the *Patients at Risk* podcast aired 72 episodes over the next two years featuring physicians, research analysts, healthcare advocates, journalists, nurse practitioners, physician assistants, attorneys, and most importantly, patients. This book, a sequel to *Patients at Risk*, incorporates new information gleaned from these podcast recordings, and is shared in narrative format to

engage the reader. But do not be fooled by the anecdotal nature of these stories: they are factual, and they are backed by data.

The goal of this book is simple: to provide insight into the current workings of the healthcare system so that patients can empower themselves to ensure they receive the best healthcare. To be clear, optimal health care can indeed include care provided by non-physician practitioners. Nurse practitioners and physician assistants are critical members of the medical team and studies have shown over and over that when they work closely together with physicians, patients receive outstanding health care. However, when physicians are removed from the equation altogether, all bets are off—and that's exactly what this book will show.

THE SHOWDOWN

On December 17, 2020, television network WGN America featured the book *Patients at Risk: The Rise of the Nurse Practitioner and Physician Assistant in Healthcare* in a news segment entitled, "Families sound alarm on medical transparency after deaths of their children."[3] The book discussed the increasing replacement of physicians by non-physician practitioners—nurse practitioners (NP) and physician assistants (PA)—and centered around the tragic story of Alexus Ochoa, a 19-year-old honor student who died after Mercy Health Systems, a multi-billion-dollar corporation, staffed an Oklahoma emergency department with an online-trained nurse practitioner working all alone.

The American Association of Nurse Practitioners (AANP) was desperate to keep the public from seeing this news piece. The advocacy group worked frantically, issuing a call to action to its 121,000 members, urging them to inundate WGN with phone calls, emails, and social media messages demanding that the station pull the broadcast. An email written by AANP president Sophia Thomas read,

> Dear AANP member,
>
> I have an urgent request. We need your help to contact WGN America, News Nation using Facebook, Twitter, email, and phone to pull an irresponsible news story by reporter Rich McHugh that maligns NP [nurse practitioner] care.
>
> The story is scheduled to air tonight around 7 PM CST. This news piece suggests that NPs are unsafe providers who are unqualified to provide care. The storyline parrots the recent book [Patients at Risk] by Physicians for Patient Protection President Rebekah Bernard and a coauthor.

> This piece has the potential to reach millions of households nationwide. I was interviewed for this story, and the reporter's bias was clear. We have worked together to stop irresponsible journalism before. We need your action immediately today.[4]

The message was followed by contact information for WGN, including the network's phone number, email address, website, and even direct contact information for WGN executives. It included this sample phone message:

> Shame on you, WGN. Pull this irresponsible story from Rich McHugh. You are maligning NPs working on the frontlines of a pandemic. NPs' outstanding safety track record is backed by decades of research. News should be free of bias.

A sample Tweet suggestion read:

> @newsnationnow @RichMcHugh Your news promo on NP care is irresponsible and clearly biased. Pull this story. You should be ashamed of maligning frontline health care workers when patients need more care, not less.[4]

Despite the AANP's aggressive actions, WGN aired the segment, prefacing the report with a mention of the techniques used by the organization.

> Even before the story aired Thursday night on NewsNation, there was significant pressure directed at us by the AANP—The American Association of Nurse Practitioners—not to run the story and alleging that our report unfairly maligns nurse practitioners in America. That is not the case and certainly not our intention, and it's one reason we interviewed the AANP in this story.[3]

After watching the complete segment, it was clear why the AANP wanted the story pulled. Journalist Rich McHugh pulled no punches, challenging Sophia Thomas with some of the toughest questions facing the nurse practitioner profession today. He began with a question that is far more complex than it seems at first light: "Do nurse practitioners practice medicine?"[3]

Nurse practitioners are registered nurses who complete an additional two years of training, which includes a minimum of 500 hours of clinical experience.[5] To be licensed to practice medicine, physicians must complete a minimum of 7 years of training, including 15,000 hours of clinical experience[6] (Table 1). Because of these differences, nurse practitioner advocates often state that rather than practicing medicine, NPs practice 'advanced nursing.'

Table 1. Minimum Years and Clinical Hours of Training by Profession

	College	Graduate Program/ Clinical Hours	Residency/ Clinical Hours	Total/Minimum Clinical Hours
Physician	4 years (BS/BA)	4 years (MD/DO) 6,000 hours	3 years 9,000–10,000 hours	11 years 15,000–16,000 hours
Nurse Practitioner	4 years (BSN or BA/BS direct entry)	2 (MSN) – 3 years (DNP) 500 (MSN) – 1500 (DNP) hours	Zero	6 years 500–1500 hours
Physician Assistant	4 years (BS/BA)	2 years (MS-PAS) 2,000 hours	Zero	6 years 2,000 hours

Thomas took a different tack, answering, "Nurse practitioners practice healthcare."

McHugh's brows furrow. "But I'm confused," he said. "If nurse practitioners are prescribing medicines and treating patients, aren't they practicing medicine?"

Thomas's reply: "I think the definition of medicine is changing."[3]

Indeed, the AANP has worked tirelessly for decades to expand the definition of medicine to incorporate care provided by nurse practitioners. Through strategic alliances and intensive lobbying efforts, nurse practitioners have successfully achieved 'full practice authority,' the right to treat patients without physician oversight, in about half the states of the Union, despite having just a fraction of the training of doctors.

McHugh asked Sophia Thomas if the AANP's goal is for nurse practitioners to have full practice authority—"basically the ability to run their own practices in every state in America."

Thomas answered in the affirmative, noting that this goal is supported by organizations like the Federal Trade Commission, the National Academy of Medicine, and the National Governors Association. "They all also recommend nurse practitioners have full practice authority because they know and understand that NP practice and clinical outcomes are equal to our physician colleagues and NPs improve access to care," she said.[3]

While this messaging of 'equal outcomes' is a core AANP talking point, it fails to include an important caveat: studies comparing nurse practitioner care to physician care have always evaluated low-risk patients with known diagnoses. Further, these studies have invariably involved some degree of physician supervision.

Just as the definition of medicine is being stretched, research findings are being extrapolated to the point of illogic, with advocates arguing that if nurse practitioners can treat simple medical problems with physician

assistance, they should have similar outcomes with complex patients and no physician oversight.

Advocates also fail to mention that the last large-scale analysis evaluating NP outcomes was published more than 20 years ago, and well before the rapid growth of nurse practitioner training programs pumping out poorly prepared graduates. Rich McHugh asked Sophia Thomas about the rise of such programs. "Would you agree that there is an issue with online diploma mills with regard to nursing schools right now?"

Thomas: "I think that there is an issue with—," she paused. "There are a few non-accredited programs out there, and AANP doesn't support programs that are not accredited."

McHugh: "If I understand you correctly, you're saying it's an issue but it's not that big of an issue."

Thomas tells McHugh that nurse practitioners need to graduate from an accredited program of nursing. "They are expected to meet certain core competencies and things like that," she said. "AANP has an issue with these programs that don't enforce these core competencies—meet the certain standards that are set forth by the educators." However, Thomas did not underline any planned actions by the AANP to close such programs.[3]

As part of the news story, Rich McHugh interviewed the family of Alexus Ochoa, who died after receiving improper treatment by a nurse practitioner working alone in an emergency department. Alexus's mother Amy told McHugh that the nurse practitioner who treated Alexus introduced herself as a doctor, saying, "I am the attending physician." It wasn't until after Alexus's death that the Ochoa family learned the truth.[3]

Regarding this lack of transparency, McHugh asked Thomas if she had any issue with nurse practitioners inappropriately referring to themselves as a doctor. Thomas responded adamantly: "Doctor is an academic term. Doctor doesn't mean physician and the physician world doesn't own the term doctor."[3]

When its efforts to cancel the WGN news segment failed, the American Association of Nurse Practitioners mounted a public relations campaign against the network, issuing a press release condemning the report. The AANP accused WGN of bias, stating that the news organization "chose to decline interviews with nationally recognized experts whose views diverged with the outlet's preferred and biased narrative"—even though the segment included extensive comments from the AANP's president.[7]

The press release also named the authors of *Patients at Risk*, stating, "WGN's coverage, at best, misrepresents the NP profession and parrots the conspiracy theories and misstatements of Rebekah Bernard, MD and Niran Al-Agba, MD, physicians who derive direct economic

benefit from limiting patient access to NP delivered health care."[7] The news release failed to clarify how the two primary care physicians with full solo practices could benefit from limiting nurse practitioner care—especially since both would be more likely to financially gain from hiring or remotely supervising nurse practitioners.

In the press release, the AANP insisted that 'decades of evidence-based research' have demonstrated nurse practitioner safety (true, when managing low-risk patients under physician supervision) and stated that "not one of the 22 states, District of Columbia or two U.S. territories that authorize Full Practice Authority for NPs has ever reversed course" (also true, despite a lack of any randomized, controlled studies evaluating the care by unsupervised nurse practitioners in these states).

The AANP's efforts to downplay WGN's report about patient safety were largely successful. Two years after this exposé, no meaningful action has been taken to limit independent practice by nurse practitioners nor to improve standards at training programs. On the contrary, nurse practitioners—and physician assistants—are replacing physicians more than ever, with no end in sight. The employment of non-physicians is projected to grow by 40% for nurse practitioners and by 28% for physician assistants in the next ten years.[8,9] At the same time, the employment of physicians and surgeons is projected to grow by only 3%.[10]

As predicted in *Patients at Risk*, the likelihood of being treated by a non-physician practitioner rather than a physician continues to increase, with dangerous repercussions. In fact, in just the few years since the book was published, enough new information has come to light on the subject to warrant this entirely new publication.

For example, the COVID-19 era has witnessed the rise—and fall—of nurse practitioner-staffed telehealth startups for various medical conditions, including mental illness. Rather than hiring psychiatrists to treat patients with serious psychiatric problems, these for-profit companies elected to employ less expensive and far less trained nurse practitioners, with dire consequences, including flooding the market with prescriptions for stimulant drugs like Adderall, causing addiction and death.

Despite the ongoing coronavirus pandemic and monkeypox outbreak, U.S. hospitals and clinics, increasingly owned by private equity for-profit companies, have slashed physician staffing, and replaced physicians with nurse practitioners and physician assistants as a form of cost-cutting. Citing narrowing profit margins due to the pandemic, these medical facilities increased the ratio of non-physician practitioners to unsafe levels, which has led to patient deaths.

Even premier academic organizations have embraced the trend of replacing physicians. In the last two years, Johns Hopkins University began to promote the use of nurse practitioners instead of gastroenterologists to

perform colonoscopies, and the University of Pennsylvania studied using radiology technicians rather than radiologists to interpret chest x-rays on critically ill patients in the intensive care unit.

In recent years, there has been a significant increase in the number of nurse practitioners and physician assistants choosing to hang their own shingles, opening urgent care clinics, and eschewing primary care in favor of cash-based practices. Companies like *Collaborating Docs* and *The Elite NP* seem eager to help, potentially profiting from connecting non-physicians with doctors who may supervise in name only, and selling online courses about non-FDA approved and potentially risky anti-aging hormones, unnecessary intravenous infusions, and cosmetic treatments. In many cases, patients are not being informed about the credentials of these physician replacements, and few safeguards are in place to ensure patient safety.

But the pendulum may be starting to swing. The last two years have also seen the publication of multiple academic papers expressing concern about the state of nursing education. In 2021, academic nurse researchers exposed serious deficits in the educational experiences of family nurse practitioners, and in 2022, concluded unequivocally that nurse practitioners should not work in emergency departments without strict physician supervision. 2021 also saw a correction added to one of the most influential papers used to promote nurse practitioner independence, noting a previously undisclosed conflict of interest by lead author Mary Mundinger.

Legal interpretations of non-physician practice liability are also beginning to shift. Case law has traditionally held that nurse practitioners and physician assistants cannot be held to the standard of care of a physician in a malpractice trial. Plaintiff's attorneys are challenging the court to consider the standard of care, not for a particular clinician, but rather, the standard care that any patient should expect to receive in a comparable situation. In August 2022, the North Carolina Supreme Court overturned a ninety-year-old legal precedent that protected nurse practitioners from liability, citing an evolution in nursing responsibilities.

Importantly, data is beginning to accumulate showing concern about the effectiveness and cost of care provided by non-physician practitioners. A 2022 landmark review by Hattiesburg Clinic showed that independent nurse practitioners and physician assistants had poorer outcomes at a higher cost than physicians, increasing healthcare expenditures by an estimated $28.5 million per year. This finding led to a transformation of the clinic's practice model, and a return to physician-led care teams. There is also evidence that patients are becoming more aware of the differences in training and beginning to demand physician-led care.

But it's not all positive news. Despite evidence that physician-led care is best for patients, in 2021 the healthcare executives responsible for the

creation of the retail pharmacy urgent care chain *MinuteClinic* launched a new primary care chain—staffed entirely by nurse practitioners. Based in Minneapolis, The Good Clinic has six locations in the area, and plans to expand primarily in states that allow nurses independent practice.

Private equity for-profit organizations have also begun to creep into healthcare markets outside of the U.S. In 2021, an investigative report revealed that the United Kingdom's largest chain of primary care clinics had systematically replaced physician general practitioners with physician assistants to save money. This policy change occurred when Operose Health, a private equity company owned by U.S. healthcare conglomerate Centene, purchased clinics that provide care to 600,000 National Health System patients.

IMPOSTER DOCTORS

Advocates for non-physician practice insist that there is no need for concern because nurse practitioners and physician assistants are just as good—or better—than physicians. They are wrong. Not only does the claim make no logical sense—is there any field of study in which similar skills can be gained with just 5% of the training? There is no scientific evidence to support such an audacious assertion. When asked to defend their position, organizations like the AANP often use impressive-sounding statements like this one:

> Since the NP role was established in 1965, research has consistently demonstrated the excellent outcomes and high quality of care provided by NPs … Furthermore, NP care is comparable in quality to that of their physician colleagues, demonstrated by numerous studies that conclude no statistically significant difference across outcome measures.[11]

However, none of the studies cited by the AANP to support this bold claim include care provided by independent nurse practitioners managing typical patients; instead, they involve care teams of NPs and physicians working together and the management of straight-forward problems in low-risk patients. The truth is this: Despite over 50 years of scientific analysis of the care provided by non-physicians, there is no conclusive evidence that non-physician practitioners can provide safe and effective medical care without physician oversight. In fact, recent studies have shown the opposite: that the replacement of physicians puts patients at risk for worse outcomes at higher costs.

The assertion of being 'just as good or better' than physicians is aggressively promoted in marketing materials, media appearances, and in

legislative committee hearings. Due to the fact that patient lives depend on these discussions, it is important to be clear and to label these claims for what they are: a deliberate effort to deceive the public. Organizations that advocate these mistruths knowingly sacrifice patient health and lives in the service of advancing corporate profit and political power.

Following the ethical principle of non-maleficence, or, 'do no harm,' some physicians are speaking out about these dangers to patients. This is not to say that physicians don't make mistakes themselves—in fact, the understanding of personal fallibility is one of the reasons that physicians are so concerned about the future. If errors can occur despite years of physician training, then how much more danger do medical professionals with less training pose?

An additional concern of these doctors is this: will there be a physician to care for them—or for their loved ones—in a time of medical need? While some physicians do not speak out due to the legitimate fear of job loss and cyberbullying, many others are either unaware of the extent of the problem, have been misled by non-physician claims, or are complicit with efforts to undermine the medical profession. Physicians must wake up and act before it is too late, because the truth is, we are all patients—or one day, we will be.

While *Patients at Risk* lay the groundwork for patients to better understand the dangers of physician replacements, *Imposter Doctors* provides more ammunition for patients to advocate for their own medical care. The only cure for today's healthcare crisis is for patients to become informed about who is providing their care. They must know the difference in training and education, and demand answers from those who would deprive them of physician-led care.

CHAPTER 1

THE PHYSICIAN SHORTAGE: A MANUFACTURED CRISIS

Seven-year-old Betty was the light of her family's life. "Betty was life, and she was happiness. We used to call her 'Wonder Betty' because even though she was autistic, she was making amazing progress," said her father Jeremy Wattenbarger during a *Patients at Risk* podcast recording.[12] "We were starting to see things in her that we were told were never to be expected. She was becoming verbal. She started riding her bicycle and running and interacting with other children."

When Betty suddenly developed a fever, Jeremy called her pediatrician who was unavailable but suggested that Betty be evaluated at a local pediatric urgent care. That seemed reasonable to Jeremy, who assumed that an urgent care would be like an emergency department. "In fact, this one advertised that they had the same capabilities as an emergency room and everything they needed to diagnose and take care of her," he said.

Photos taken of Betty in the urgent care waiting room showed a child that appeared quite unwell. Her expression is listless, her eyes sunken, and her lips dry, cracked, and tinged blue.[12] Indeed, measurements of Betty's vital signs showed concern that she wasn't getting enough oxygen, with a pulse oximetry reading between 88–94% (normal over 95%).

Jeremy said that he and his wife assumed that the clinician in the white coat who came to evaluate Betty was a physician. They were wrong. In fact, there was no physician on-site at the urgent care that day. Instead, Betty was treated by pediatric nurse practitioner Madeline Broemson, who diagnosed the child with influenza, a viral infection, and discharged her home. Jeremy remembered, "She told us that Betty just had the flu; that her lungs were clear, and everything was fine."

But Betty was not fine. She slept throughout the day, and the next morning, Betty would not wake up. As Jeremy attempted to rouse his daughter, he noticed black fluid—blood, he realized—coming from her mouth. Despite rushing Betty to the emergency department, it was too late. The light of Jeremy's life had been extinguished.

Autopsies showed that Betty did indeed have influenza, but she also had streptococcal pneumonia and evidence that the bacterial infection had spread into her bloodstream, causing sepsis. Jeremy and his wife questioned how their child could have declined so quickly, and whether earlier treatment could have saved her life. As they sought answers, it was only then that they discovered that Betty had been treated not by a physician, but by a nurse practitioner.

The Wattenbargers were shocked. "She did not identify herself as an APN [advanced practice nurse]," said Jeremy. "She did not wear a name tag or a badge or any other type of identification." Additionally, there was no signage to indicate that a physician was not on the premises, said Jeremy, who later discovered that Broemson's supervising physician Michael Cowan, DO was out of the country at the time that Betty was evaluated. Although Cowan had assigned a proxy to oversee Broemson while he was away, there was no evidence that the nurse practitioner sought any physician advice about Betty's care.

Jeremy Wattenbarger is now on a crusade to ensure that no one else loses a child. "Had we known Betty was going to see an advanced practice nurse and not a physician, we would have realized that she may not have had the skills to see Betty based on the way she looked that day, and we would have taken her to the emergency room," he said, noting that one of the points of confusion was the use of the word 'provider,' which he assumed was the same as a physician.[12]

NAME CHANGE: THE 'PROVIDER' IS IN

Originally used to refer to healthcare delivery agencies like hospitals, group practices, and insurance networks, the title 'provider' has been embraced by administrators and insurance payers as a way of grouping any clinician with a prescription pad. Non-physician advocates have been particularly enthusiastic about the title, with position papers by the AANP encouraging use of the term. Citing a recommendation from the Institute of Medicine calling for nurse practitioners to be "full partners with physicians and other healthcare professionals," the group encouraged policymakers to use the terms 'healthcare provider' and 'advanced practice provider,' while strongly rejecting the terms 'midlevel' or 'physician extender.'[13]

Writing in the *American Journal of Medicine*, Laura Kendall, MD argues that the word 'provider' is intended to create a false equivalence between physicians and non-physician practitioners—"a targeted method of obscuring the hierarchy of training and expertise, confusing the public, and quietly removing physicians as the captains of the healthcare team as a cost-cutting measure."[14]

Jeremy Wattenbarger agrees. "When most people hear the word provider, they hear 'doctor,' but it's not. Until this started, I didn't even know what a provider was." Jeremy says he has learned to ask, 'what kind of provider?' and chooses to wait to see a physician, noting that this has become increasingly difficult in his area. Describing a new primary care practice that he visited, Jeremy said he was told, "You can see the provider today, but the doctor only comes in once a week."[12]

CREATING A PHYSICIAN SHORTAGE

Indeed, patients are increasingly finding that the doctor is no longer 'in,' but has been replaced by a non-physician practitioner. Although healthcare experts have been warning about a physician shortage for the last twenty years,[15] the profession is increasing at a rate of just 3%, nowhere near enough to fill the projected deficit. Instead, nurse practitioners and physician assistants are being used to fill the gap, with employment rapidly rising and far surpassing the growth rate of physicians. Based on the current number of clinicians and projected growth rates, it is reasonable to expect that the number of non-physician practitioners will eventually surpass the number of practicing physicians (Table 2).

This disproportionate growth of clinicians reflects 30 years of U.S. healthcare policy, as influenced by non-physician lobbyists and corporate strategists. While healthcare companies and government agencies argue that they have no choice but to hire nurse practitioners and physician assistants due to a supposed 'physician shortage,' the truth is far more sinister. They are systematically replacing physicians with lesser-trained clinicians for one simple reason: money.

Nearly every discussion by advocates for non-physician independent practice begins with the phrase, '*because of the looming physician shortage …,*' followed by the proposal that non-physicians be permitted to practice medicine, despite having an estimated 5% of the training of physicians. Where did this shortage come from, and how was it allowed to happen?

Table 2. Total Number of Physicians, Nurse Practitioners, and Physician Assistants in 2022 and Projected 10-Year Growth Rate[15–18]

Type of Clinician	Total Number (2022)	Projected 10-Year Growth Rate
Physician	1,074,000	3%
Nurse Practitioner	355,000	40%
Physician Assistant	158,000	28%

In large part, the physician shortage was created by government policies instituted in the 1990s, when the government actually paid hospitals *not* to train physicians.[19] While medical school graduates receive 6,000 hours of clinical exposure, they cannot practice medicine without completing additional years of postgraduate training, called residency. In 1997, Congress froze residency funding, creating a bottleneck for the production of physicians. Every year, thousands of medical students graduate with an MD (Medical Doctor) or DO (Doctor of Osteopathic Medicine) degree, but because there are not enough residency positions, they are not permitted to practice medicine. Nurse practitioners and physician assistants, by contrast, may practice without additional required training.

Ironically, at the same time that government policies restrict thousands of new physicians from practicing medicine, state legislatures are pressured to allow non-physicians to step in to alleviate this artificially created shortage. The replacement of physicians by non-physicians is therefore a problem created by government policy—and could be solved by commonsense political action.

THE PHYSICIAN SURPLUS MYTH

While the physician shortage is currently accepted as fact, just forty years ago, experts were predicting the exact opposite problem: a physician surplus. A 1980 report produced by the Graduate Medical Education National Advisory Committee warned that the U.S. was training too many physicians, estimating a major surplus by the year 2000. To solve the problem, the committee recommended drastically decreasing class sizes and halting the creation of new programs. Medical schools hastened to comply by freezing or reducing admission rates, and between 1980 and 2005, just 16,000 new MDs graduated per year.[20]

Policy concerns over a physician surplus persisted throughout the 1990s, with the Pew Charitable Trust recommending that existing medical schools be closed to slash physician graduates by another 25%.[21] In 1996, the Institute of Medicine (now the National Academy of Medicine) recommended a moratorium on medical schools and freezing of class sizes, stating that "the United States has an oversupply of physicians." The organization also advised a reduction in first-year residency positions to restrict the entry of foreign medical graduates.[19]

The next year, a consortium of medical organizations agreed that further steps should be taken to limit the number of physicians, recommending a decrease in funding for residency training (the mandatory 1–3 minimum years that graduates must complete to be licensed to practice medicine).[22] That same year, the 1997 Balanced Budget Act capped residency training funds, which would remain frozen for the next twenty-five years.[23]

There was such urgency in the 1990s to slow the production of physicians that the government began paying hospitals not to train doctors. In 1997, the Clinton administration instituted a pilot program in New York State that paid teaching hospitals $400 million over six years to reduce the number of resident physician slots. A news article about the program quoted Bruce C. Vladeck, Medicare's administrator at the time, as saying that it was time for the government to stop "giving hospitals an incentive to hire more residents," and that Medicare would save money by no longer paying for unnecessary physicians. The article noted that hospitals across the country were 'bombarding' the government with requests for the same financial deal.[17]

Too many physicians, but not enough non-physician practitioners?

The initial 1980 report predicting a physician surplus noted that the use of nurse practitioners and physician assistants was likely to exacerbate the problem, and recommended curbing the growth of these professions. With the expectation that non-physician practitioner numbers would double by 1990, the committee wrote that the growth rate "aggravates the impending physician surplus and poses a public policy dilemma," and recommended holding levels of nurse practitioners, nurse midwives, and physician assistants stable at current numbers.[24] Despite these recommendations, in the next twenty years, the number of nurse practitioners quadrupled, and the number of physician assistants doubled (Table 3).[25,26]

As policies were instituted to decrease the number of physician graduates, government agencies took active steps to increase nurse practitioners and physician assistants. For example, at the same time as his administration was paying hospitals to stop training physicians, President Bill Clinton designated the first funding program for graduate nurse education, allocating $200 million in 1994 to train nurse practitioners.[27] Fifteen years later,

Table 3. Trends in the Nurse Practitioner and Physician Assistant Workforce

Year	Number of Nurse Practitioners	Number of Physician Assistants
1980	24,000	29,000
1990	30,000	23,000
2000	80,000	57,000
2010	140,000	87,000
2020	290,000	125,000

President Barack Obama signed the Affordable Care Act (2010), legislation that expanded funding to nurse practitioner and physician assistant training programs, without increasing residency training for physicians.[28]

Ironically, organizations sounding alarm bells on the dangers of too many physicians simultaneously advocated for the growth of non-physician practitioners. For example, the Pew Charitable Trust, which recommended cutting medical school admissions in 1995, later advocated that nurse practitioners "step in where doctors are scarce" and encouraged an expansion of independent nurse practice.[29] Perhaps the loudest mixed messaging has come from the Institute of Medicine, a nonprofit public policy advisory group founded in 1970, which has loudly insisted for the last twenty years that the U.S. should cut physician production and focus instead on expanding the role of nurse practitioners.

Although the Institute of Medicine advised cutting medical school numbers to decrease the supply of physicians, just a year later, the group recommended increasing the number of nurse practitioners by redirecting physician training funds toward clinical training for nurse practitioners.[30] As recently as 2014, the Institute continued to argue against a consensus of other voices that there was "no credible data" to support the idea of a physician shortage, and discouraged additional funding for physician residency programs, stating that increasing federal funding would be "irresponsible without evidence." The group instead advised "innovative approaches to health care delivery"[31]—including the replacement of physicians by nurse practitioners, as outlined in the Institute's magnum opus, the *Future of Nursing* (2010) report.

The *Future of Nursing* report was published through a $4.2 million grant from the Robert Wood Johnson Foundation, an organization that has aggressively advocated for an expanded role for nurse practitioners. The report was commissioned to provide "national recommendations for action on the future of nursing,"[32] which included scope expansion for nurse practitioners, and a call for nurses to be full partners with physicians.

To achieve this goal, the Institute asked Congress to expand Medicare to cover nurse practitioner services "just as physician services are now covered," recommended requiring insurance companies to pay nurse practitioners directly, and asked that hospitals be mandated to give nurse practitioners medical staff privileges. To prepare nurses for these expanded roles, the Institute advocated for funding to implement and support nurse practitioner residency programs.[33] In response to the Future of Nursing report, in 2019 the U.S. Government Accountability Office recommended diverting physician residency funds toward funding nurse practitioner and physician assistant 'residency' programs, stating, "while increasing physician supply is one way to reduce physician shortages, some experts have also suggested increasing the number of non-physician providers."[34]

THE PHYSICIAN SHORTAGE

While the Institute of Medicine was a notable exception, by 2006, most experts were no longer predicting a physician surplus, but a shortage. Analysts attributed the surplus prediction error to calculation models that failed to consider increased economic expansion and increased population growth.[35]

In retrospect, the physician shortage could have been predicted by comparing the U.S. physician supply to that of similar nations. While the United States had one of the highest numbers of physicians per population in the 1960s, that ratio rapidly declined in the following two decades, and by 1980, the U.S. had fewer physicians per capita than western European nations.[36] With policies enacted to curb a predicted physician surplus, the U.S. physician supply continued to drop below comparable countries, and by 2018, the U.S. had 2.6 physicians per 10,000 compared to an average of 3.6 in similar nations.[37] Canada ranked just ahead of the U.S., having followed a similar physician-reduction tactic as the United States in the 1990s.[38] The U.S. also lagged behind other nations in the production of physicians, with an increase of just 14% between 2000 and 2018, compared to an average of 34% in Western Europe.[37]

Policy analysts continue to decry a physician shortfall today, with anticipated shortages across all medical specialties, but especially in primary care.[39] While medical schools have responded by gradually increasing enrollment by 30%, residency slots increased by just 1% due to a lack of program funding.[40] This created an entirely new problem: unmatched medical school graduates, saddled with hundreds of thousands of dollars of debt, but unable to practice medicine.

The match

Although medical students will have received 6,000 hours of clinical experience by the time they graduate, they are required to complete additional postgraduate training to receive a license to practice medicine. Every state in the country requires at least one year of residency training for U.S. citizens, with some states requiring two or three years, and most states requiring three years for graduates of foreign medical schools. A lack of postgraduate residency training positions creates a bottleneck for medical students who wish to pursue any type of medicine, including primary care.

The *match* is a computer algorithm that determines where medical students will continue into residency training, based on ranking lists submitted by applicants and training programs. According to the National Resident Matching Program, there are more than enough residency slots to accommodate all