



White Paper: The Pharmacy Technician Workforce Crisis

In this paper Visante provides a holistic view of the pharmacy technician shortage to inform health system and pharmacy leaders and encourage a multifaceted approach to address this critical issue.

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Introduction

Since 2020, health systems have been plagued by persistent shortages of qualified pharmacy technicians, a trend that is likely to continue and possibly worsen in the years ahead given the ever-increasing demand for medicines. During the height of the pandemic, pharmacy technicians stepped up to perform admirably and will continue to do so—provided they are empowered and retained.

Achieving meaningful progress to retain pharmacy technicians is a direct challenge to the administrative will of health system decision-makers to deepen their investments in role creation, compensation, recruiting and placing qualified candidates, and establishing innovative career advancement programs. Financial investments are needed to facilitate effective health system-based pharmacy technician training programs and to provide pathways for role and career advancement.

However, health systems will likely be further strained for the foreseeable future given current market dynamics: a labor force largely preferring to work from home, high workloads with less available staff, less complex and challenging jobs receiving equal or higher compensation, and restraints of health system budgets, particularly given the struggling recovery of the global economy, continued inflation, and the looming specter of a potential recession.

The root causes of the technician workforce crisis are complex and shaped by the unfortunately lengthy history of technicians being undervalued, under-compensated, and underdeveloped. To avert crippling technician shortfalls, health systems and pharmacy departments will need to expand their strategies and investments on multiple fronts.

The crisis of the technician workforce over the past 2 decades has been much discussed — aided by frequent revision of state certification/registration/licensure requirements and national pharmacy association needs assessments, summits and policy recommendations. But more action is required. This includes a spectrum of innovative recruitment techniques, sourcing candidates more broadly, short- and long-term strategies to establish more competitive compensation packages, and employer-sponsored training and development programs, while simultaneously advancing roles as part of the interdisciplinary care team — all valid and important requests from pharmacy technicians themselves.

Health systems should look for opportunities to stratify technician roles to improve flexibility in technician assignments and create pathways for lateral, diagonal, and vertical mobility and advancement into more sophisticated roles. Organizations should allow flexibility for reassignment to promote best fit and long-term job satisfaction. Technicians are more likely to be retained if they are in a position in which they can better utilize their strengths, see the benefits of their individual efforts, and feel recognized for the impact of their work on patients and within the health system.



Technician compensation packages need to be competitive. Human resource, compensation and pharmacy departments should collaborate frequently to adjust salaries to reflect market conditions. O'Neil et al. in 2022 stated that closer collaboration between pharmacy and human resources departments may lead to "positive solutions of national problems and have a sustained impact on department operations."¹

Pharmacy leaders need to proactively search for opportunities to leverage existing workforce technologies to enable more efficient pharmacy operations and facilitate remote work. There are likely more ways to implement work-from-home pharmacy technician positions and to innovate.

Recruits will be attracted to positions that offer a living wage during training and competitive compensation, bonuses, some degree of flexibility (remote work and/or schedule flexibility), tuition reimbursement, purposeful onboarding, impactful entry-level and ongoing technician training, the formation of tiered pathways for growth into advanced specialization roles, individual empowerment, integration into the culture of the department, and progressive pharmacy leadership.

A holistic view of the technician shortage can inform the multifaceted approach of health system and pharmacy leaders with both short- and long-term strategies.

A State of Crisis

Severe Shortages of Low-wage Workers are the Achilles Heel of Health Care

"I think the pharmacy technician crisis is the greatest challenge pharmacy is currently facing. It's the Achilles heel of our profession right now," said Steve Rough, MS, FASHP, Managing Partner at Visante.

"We're in great need of technicians. They can be very capable. We need to expand their roles because they can be great force multipliers for the pharmacist workforce and help create more leveraged and cost-effective practice models."

Labor shortages have worsened among several different types of lower-wage workers, all on the front lines of health care: pharmacy technicians, medical assistants, nursing assistants, and home care aids. These professionals are all essential workers who have long been undervalued to the detriment of the health system. The severity of the shortage for lower-wage healthcare workers has intensified in the past 3 years in the United States (US), with the global spread of SARS-CoV-2 (COVID-19).

The pandemic brought hospitals, clinics, health systems and community pharmacies dramatic increases in patient volumes, a widespread need for personal protective equipment (and supply shortages), as well as the demand to provide new services like mass COVID vaccine clinics. The health system has been pushed into overdrive. Its aftershocks are having a reverberating impact across the globe. Economies, markets, and supply chains are still attempting to recover and stabilize, in the face of pent-up demand for healthcare services and medicines.



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Add to that extreme labor shortfalls and you get an over-tasked and over-burdened healthcare system increasingly strained and struggling to meet the demand. Now, the demand for health care services is stronger than ever, particularly the need for medicines and the pharmacy workers who facilitate them—especially pharmacy technicians. Hospitals and health systems are now scrambling to find competent pharmacy technicians.² In truth, they have been for some time. The shortage of pharmacy technicians should be a call to action.³

The Pharmacy Technician Shortage is a Recruiting and Retention Problem

Pharmacy technician turnover continues to be far too high. Pharmacy leaders surveyed in a recent ASHP pharmacy technician survey reported they lost 41% or more of their technician workforce. The range of their technician turnover rates were between 21% and 30%.⁴ Most pharmacy administrators (84%) report the perception of a “severe shortage” of experienced sterile compounding technicians and advanced technicians in general (76%).⁴

“Obviously, you want to retain your technicians and it makes good financial sense to do so,” Rough said. “To retain technicians, some organizations are proactively addressing this and willing to pay their entry-level pharmacy technicians upwards of \$25 per hour, and technicians performing more advanced roles over \$35 per hour. “The painful alternatives are to use contract labor or pay \$75 per hour or more for a pharmacist to perform roles that can be performed equally well or even better by pharmacy technicians, absolutely destroying your labor budget in the process. Most successful pharmacy departments are leveraging advanced pharmacy technician growth pathways so they can be retained,” he said.

The 2022 ASHP shortage survey found that more than half of pharmacy leaders (53%) had to take action to trim services to reduce some aspects of pharmacy operations. And nearly half of those same pharmacy leaders (48%) confirmed delays for their organization’s expansion plans.⁴ Limited on labor because of the shortage, 41% of pharmacy administrators find themselves forced to outsource medication preparation and products.⁴

The US Bureau of Labor reported there were 447,300 technicians in 2021 and this figure was projected to grow by at least 5% between 2021 and 2030. The median annual wage for pharmacy technicians was \$17.66 per hour or \$36,740 per year in 2021. As the need for technicians grows year after year, pharmacy departments must make up the ground by paying technicians more, incentivizing retention, or risk outsourcing at a premium or shutting down services.

In 2022, several health systems increased their minimum entry-level technician pay to \$21 per hour, with some offering up to \$3,000 in sign-on bonuses to be competitive, even in rural areas. Some pharmacy leaders are considering performance or retention bonuses for established employees. But if staff shortfalls continue with no improvement, these incentives will need to be boosted even more.



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Compensation and retention are certainly related, but it isn't the only aspect of the problem. There are some nuanced issues to retention. For instance, Deselle in 2022 published a report showing that pharmacy technicians' attitudes and work-related outcomes were significantly impacted by certain pharmacist supervisory behaviors, namely "transformative leadership behaviors" that create a sense of team, purpose, accomplishment, and positive valuation and appreciativeness of the employee.⁵

There are multiple dimensions to the technician mindset that result in staying or leaving. It may be that without a dedicated effort by supervisors to better interface with their employees, and provide them with some level of autonomy, flexibility and positive management behaviors, even veteran pharmacy technicians might slip away.

Unfortunately, global and national labor disruptions have generally been fueled by employees having more leverage than ever before on working conditions and environment. Low-wage health care workers have more options than ever before to work outside of healthcare for similar (sometimes better) wages in fully work-from-home models. As more and more employers oblige inside and outside of health care, competition for workers increases. This has left hospitals and health systems with the short end of the labor straw as they have seen fewer and fewer qualified applicants.

Have Pharmacy Personnel Passed the Pandemic Test?

Confronting the Pharmacy Technician Shortage During and After the Worst of COVID-19

"We had a crisis in our profession before COVID-19," ASHP fellow Patricia Kienle wrote in her 2022 Harvey A. K. Whitney lecture paper, *Charting the next frontier in pharmacy*. "Although certainly not as devastating as what we've seen the last 2 years."⁷

When the pandemic hit, the entire healthcare system went into overdrive mode. A 2023 book described an overview of the issues COVID-19 presented to frontline health workers: "The threats to the financial, physical, and psychological well-being of healthcare professionals—many of whom entered the field due at least in part to a deep commitment to caring for and helping others—will have profound and long-lasting personal and professional impacts."⁸

Pharmacists and pharmacy technicians are frequently the first points of contact for the general public seeking critical health information or preventative care. The general public became more accepting of seeing community pharmacies as a primary care environment providing medical advice, vaccines, and testing.

Community and health-system outpatient pharmacies are broadly accessible. While convenient care clinics staffed by Nurse Practitioners or Physician Assistants have proliferated across the US in the past 15 years, pharmacies vastly outnumber them.

Even so, many retail clinics are established in the same stores as pharmacies with close collaboration.

The public's accessibility to pharmacy services placed pharmacy as the ideal health care platform to administer vaccines en masse. As of April 13, 2023, the CDC reports more than 301.9 million COVID-19 vaccine doses have been administered by the Federal Retail Pharmacy Program (FRPP) participants. FRPP participants have grown to include a total of 21 retail pharmacy partners with more than 41,000 locations across the US and include pharmacies serving long term care facilities. This represents an unprecedented rollout of health services in public health history.⁹

Pharmacy workers have certainly performed admirably during the pandemic, particularly given 1) the scarcity of help adding to their workloads and 2) a very limited pipeline of new recruits.

Unfortunately, a new set of problems has emerged. Like those in other health services, pharmacy personnel have experienced significant strain under the massive influx of patients and a wide array of new stressors. These include enduring the waves of provisional personal protective equipment, vaccine shortages impacting rollout, persistent drug shortages and supply chain meltdowns, disruptions to the nursing workforce, and mandatory furloughs.

All this was happening amid technician staffing shortages, which have now persisted into 2023 with little relief. Many pharmacy personnel must still stretch their responsibilities to compensate for unfilled positions and the busiest community pharmacies remain with reduced open hours.

The strain on community and health system pharmacies is real and continues today.

A 2022 study by Coelho et al. reported pharmacy professionals undergoing unprecedented burnout during COVID-19. They showed, on average, more time was spent at work and impacted the vast majority of workers. They also reported differences in female workers versus males, as well as significantly more burnout in pharmacy technicians versus pharmacists on the majority of burnout subscales.¹⁰

Navigating these challenges posed by the pandemic has spawned another epidemic, part of the so called "syndemics" caused by and co-occurring with the pandemic.¹¹ The greater overall burden of work faced by pharmacists and pharmacy technicians has unfortunately come at a cost—the epidemic of burnout, challenging pharmacy personnel's mental health, well being, and testing their personal and professional resiliency. Over the decades, this epidemic has always existed in pharmacy to various degrees. The COVID-19 pandemic only exacerbated and intensified it.

Combating burnout and bolstering resiliency requires system-level solutions and support. Some measures seem straight-forward to give pharmacy personnel breathing room, such as shutting down pharmacies for lunch, enforcing mandatory breaks, as well as an orchestrated effort to recruit and then schedule units to be fully staffed by utilizing "float" pools in hospitals and community pharmacy settings.



Other measures can empower personnel with training specialized staff (including advanced pharmacy technicians where appropriate), focused training to cultivate confidence in using technology, and pharmacy managers proactively monitoring the needs of workers before burnout becomes widespread and devastates retention, creating a vicious downward spiral as employees leave.

Pharmacy Technicians Are Pivotal for Hospital Operations

Pharmacists are, of course, pivotal in making a hospital operate effectively. But the same can be said of pharmacy technicians and pharmacy leaders. It's the work of all these professionals as a team that turn a building into a care delivery system working hard to keep patients safe while meeting the health care demand.

"And it's not just pharmacists," wrote Patricia Kienle. "A qualified technician workforce is essential for ensuring the health of the public. We can't proceed effectively without a coordinated effort," she writes. "We need to promote pharmacy technicians' roles. (Can we move to the word "technologists"?) Other professions have taken that approach to practice at the top of their licenses while having standardized, well-educated, and well-compensated technologists assume much of the operational activities."⁷

In every health system pharmacy service setting, whether inpatient or outpatient, specialty pharmacy or compounding, technicians are recognized as pivotal service workers in a fast-paced operational environment in which quality is paramount. Technicians deserve to be celebrated, compensated at a living wage, and provided a pathway for growth into advanced positions. Even before the pandemic in 2018, the profession was striving toward these goals and has long understood that technicians are critical to facilitate the implementation of pharmacist-provided services. These aims are aptly described by Westrick, Hohmann, and Hastings¹²:

"Technicians can be trained in specific areas so that they are equipped with the skills and knowledge needed to help pharmacists in patient care services. To make this change successful and sustainable, a systems approach to change and implementation science principles should be utilized to guide the planning and implementation process, which often goes beyond training technicians. For example, technicians' workload should be addressed to ensure that they are able to fulfill their advanced roles, and an incentive model should be implemented to recognize technicians' achievements. These steps can bring about greater job satisfaction and career advancement opportunities among technicians, as well as increasing the adoption rate of patient care services in community pharmacies."

Technicians significantly contribute to many aspects of productivity as they work in tandem with pharmacists and supervisors, or work more autonomously in various advanced roles. Having a leveraged ratio of technicians to pharmacists is essential to enable smooth, quality operations in virtually every kind of pharmacy setting with the right structure, training, mentoring, and empowerment.



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Patricia Kienle

“Technicians are vital members of pharmacy teams and stepped up even more during the COVID-19 pandemic,” writes Mike Hennessy Jr, President and CEO of Pharmacy Times. “It is time to compensate them in accordance with their value.”¹³

In 2021, the technician crisis appeared to be deepening even though a productive vaccine rollout was underway across the US. The National Community Pharmacists Association (NCPA) survey of community pharmacy economic health 2021 report found that 88% of pharmacies reported technicians were in “short supply,” and 68% were struggling to fill any staff position. Further, 68% of pharmacies said staff shortages have led to increased prescription dispensing times.¹⁴

In the United States (US) alone, Mercer predicts a shortfall of 3.2 million lower-wage healthcare workers by 2026.¹⁵ The sheer demands of these challenging roles have been accompanied by low job satisfaction, high rates of anxiety and burnout, and persistently suboptimal turnover, in addition to the relatively lower rates of pay. While some of these figures may have slightly improved as the world has attempted to bounce back from the pandemic, the majority of the shortfall of lower wage healthcare workers remains.

Even as the pandemic has subsided, the pharmacy technician shortage remains critical and may worsen. Visante’s Managing Partner Phil Brummond, PharmD, MS, FASHP sees trouble in 2023 because the macroeconomic situation in the US continues to weaken. Regarding the economy, its relationship to health care demands, and the current state of crisis for lower-wage health workers, Brummond suggests the economy could get rocky, with a short recession expected at the very least.

“The technician workforce shortages are going to get worse—far worse,” he said. “If people think this is the tipping point, it’s not. It will worsen,” he said. “This is definitely a call to action for health system pharmacies. Even though many can only do what they can with what they’ve got, it’s important to preserve the long term vision for their departments to grow, and for technicians to get the advanced career options they deserve. Don’t let technicians fall by the wayside.” Brummond said. “Individuals are picking and choosing what’s important to them. They’re finding what’s important to them. They’re reprioritizing.”

Job candidates in the US want the flexibility to work from home. After all, the pandemic proved businesses can operate and survive with a remote workforce supported by a range of computing capabilities powering innovative communication technologies.

“But it’s a different type of problem for the non-degree workforce vs. those with degrees,” Brummond said. The vast majority of pharmacy technicians don’t have a bachelor’s degree. New pharmacy technicians typically start with an entry-level role with a high school diploma and grow with on the job training. In time they work up into more specialized roles, including roles considered advanced.”

Fortunately, many health systems either require national certification or incentivize it. Most health systems have at least a rudimentary career progression for technicians. Unfortunately, however, advanced pharmacy technician roles are often limited.



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“The degreed workforce is searching and thinking about what their next move is going to be. They have more options. How exactly can health systems motivate someone into accepting a technician role? Let’s say they offer 20 hours of work, say you get to help patients, appealing to your altruism, and you get good benefits for the most part, but no specific career path. It’s still not going to be attractive for those with degrees.”

Advanced Credentialing for the Evolving Workforce: Certified Pharmacy Technicians (CPhTs) and Certified Advanced Technicians (CPhT-Adv™)

Much has been written regarding the value of national pharmacy technician certification. It has been a push for decades and has slowly scaled into what was originally envisioned.¹⁶ As of December 31, 2022, the Pharmacy Technician Certification Board (PTCB) reported 283,229 active PTCB certified pharmacy technicians (CPhTs), which constitutes more than half of all working technicians. PTCB has released a distribution of CPhTs across the country (Figure 1). PTCB CPhTs work across the entire gamut of practice settings throughout the US, and PTCB Certification has been accepted in all 50 states, the District of Columbia, Guam, and Puerto Rico.

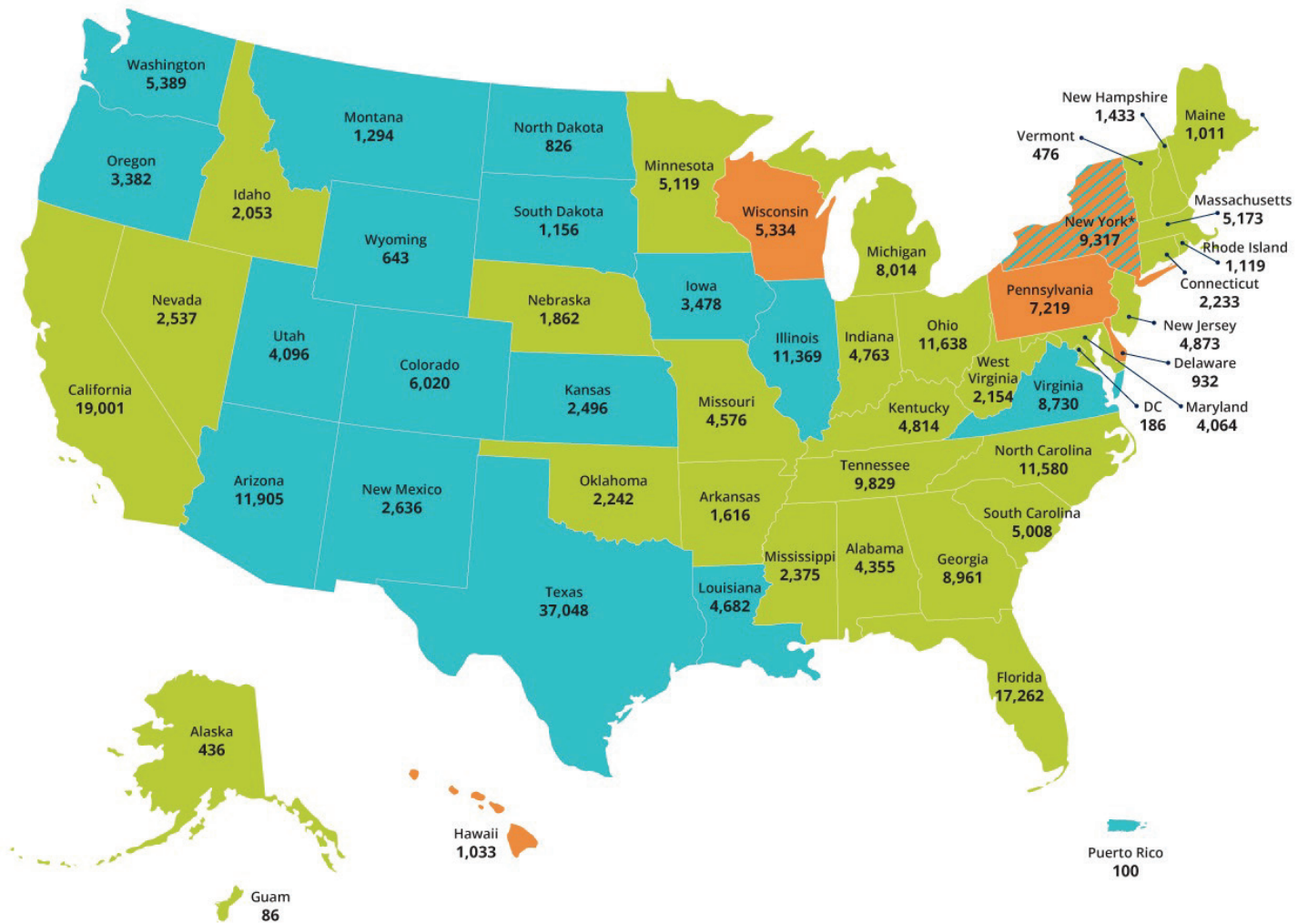
There is already evidence that advanced technicians are accompanied by financial benefits to the health system. A 2020 systematic review of pharmacy technicians in advanced roles found that, if appropriately trained, advanced practice technicians appear to reduce hospital costs and improve upon time efficiency over non-advanced technicians, incentivizing health systems hospitals to grow that workforce.¹⁷

“Successful pharmacy departments have had to adapt and move away from rigid career ladders to more of a lattice structure,” said Rough. “They can perform a number of technical distributive tasks just as well as pharmacists without overstepping their scope of practice. There is clearly a place for technicians to advance and, to an extent, credentialing has helped.”

What is the value of national credentialing? “Unfortunately, credentialing requirements have not kept up with the needs of health care,” Rough says. “Being a PTCB CPhT or CPhT-Adv doesn’t always translate into being a good competent pharmacy technician. Within professional health system pharmacy, we’re advocating there should be training requirements, licensure requirements, and this should be consistent in both the hospital and community pharmacy worlds. Comparatively, there really aren’t many advanced roles for pharmacy technicians in the community pharmacy workforce so within the profession we lack alignment on this issue.”

Regulations and requirements for certification, licensure, registration, and re-licensure vary by state and change on an undefined schedule. As an example, since publication of the graphic in Figure 1, Wisconsin is now the 47th state requiring technician registration as of March 31, 2023. Some states have no requirement for technicians to register with the State Board of Pharmacy, while other states have rigorous requirements related to formal education/training, practical experience, and national certification.

Figure 1. CPhT distribution and State Regulations Map. (<https://www.ptcb.org/resources/state-regulations-and-map>)



PHARMACY TECHNICIAN REQUIREMENTS

- Must be registered or licensed
- Must be nationally certified and registered or licensed
- No requirements

**New York requires registration and certification for health-system technicians only.*

Figures are current as of December 31, 2022.

PTCB offers a diverse array of technician credentials in the form of a certification or certificate after successful completion of tested programs. Combinations of these certification or certificate programs coupled with work experience can qualify individuals for the PTCB Advanced Certified Pharmacy Technician™ (CPhT-Adv™) credential.

The PTCB awards the advanced credential to active PTCB CPhTs with 3 years of experience to those who've completed at least 4 of the certificate programs. Alternatively, CPhTs would only have to do 3 certificate programs if they also earned Compounded Sterile Preparation Technician (CSPT) Certification.

Exams are administered in-person at more than 1,400 Pearson Professional Centers nationwide, including more than 100 military on-base sites, and via online proctored testing.

Credential	Credential Type
Certified Pharmacy Technician (CPhT)	Certification
Certified Compounded Sterile Preparation Technician (CSPT)	Certification
Advanced Certified Pharmacy Technician (CPhT-Adv)	Certification
Medication History Certificate	Certificate
Technician Product Verification Certificate	Certificate
Hazardous Drug Management Certificate	Certificate
Billing and Reimbursement Certificate	Certificate
Controlled Substances Diversion Prevention Certificate	Certificate
Immunization Administration Certificate	Certificate
Point-of-Care Testing Certificate	Certificate
Medication Therapy Management Certificate	Certificate
Regulatory Compliance Certificate	Certificate
Supply Chain and Inventory Management Certificate	Certificate
Nonsterile Compounding Certificate (future release TBD)	Certificate

Table 1. PTCB Credentialing (see <https://www.ptcb.org/credentials/>)

The most recent addition was last year's Supply Chain and Inventory Management Certificate, which "assesses pharmacy technicians' expertise in safely and efficiently managing complex drug supply chains and inventory." Next up, PTCB is developing the Nonsterile Compounding Certificate slated to be released in 2023 or 2024.

PTCB also offers employers the ability to verify a candidate or worker's certification directly at their website (<https://www.ptcb.org/verify-certification>), which includes the advanced credential (CPhT-Adv™).

Credentialing will continue to be an important tool to develop technicians into advanced roles. Other improvements within care models to harmonize team-based care may improve responsiveness within the pharmacy workforce.¹⁸

University of Missouri Healthcare Pharmacies

Visante spoke with Tom Greenlee, PharmD, retail pharmacy manager at University of Missouri Healthcare, and veteran pharmacy technician and 340B analyst, Kayla Hodges, BS, CPhT. The duo delivered a joint presentation on pharmacy technician career ladders at the 2022 ASHP Midyear Meeting in Las Vegas titled “Designing a Pharmacy Technician Career Ladder Focused on Advanced Roles,” in which they discussed their institution’s embracing of advanced technician roles over several years.

Both pharmacy technicians and pharmacists are pushing their scope of practice. Greenlee believes more progress can be made if it’s a team effort to advance the profession of both pharmacists and technicians, especially since their work is synergistic by nature. Developing a pharmacist technician program for career progression requires a more stratified, structured pharmacy technician slate of roles that can cater to technicians’ desire to advance in their career with flexibility.

But what’s the difference between a career ladder and a career lattice? Are they synonymous, interchangeable?

Greenlee said the ladder and lattice concepts are similar in that they invoke career progression. However, a career lattice builds upon the idea of a career ladder by giving the employee more role options for advanced roles in different settings. The lattice concept is a sort of seismic shift for technicians to advance in that it allows for vertical, horizontal, and diagonal movement, shifting the focus away from upward mobility and toward best fit.

A career ladder, on the other hand, is a less-stratified, more unidimensional means of career progression typically involving a single pathway allowing for upward advancement in an organization’s pay structure.

“I definitely encourage the lattice structure. Why? Because if you think about career ladders, they’re just so vertical in nature,” Greenlee said.

“From the health system perspective, you’ve got different teams and different silos within your pharmacy department, your acute care side, outpatient, specialty pharmacy, the infusion units, maybe even your business team.”

What if an individual starts on the business team and they find out it’s “really not their jam”? “If they want to do something else, then let’s find a path for them to join a more suitable team, say their infusion or specialty team. And let’s take advantage of and actually celebrate the fact that the health system is so diverse within pharmacy. It’s the idea that the lattice construct provides so much more flexibility for not just upward role mobility, but lateral or diagonal movement.”

Greenlee points out a caveat in training differences, however. For career ladders, some organizations find they can really dig in with the training and development side of things with a more vertical approach. They say, “If you’re going to be in the business unit for the next 15 years, let’s get you started doing this.” They can focus. A career ladder may suit that particular envisioned progression.



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But if it's true with some positions, why is the pharmacy technician role any different? "If I'm sitting in the role of a pharmacy technician, I can appreciate the fact that I may not find my best fit the first time around. If I leave my traditional dispensing role and join, let's say, the infusion unit, but I find that's not what I want to do, the fact that I belong to an organization that would support me to make a jump to specialty or retail, I think that's a unique advantage," Greenlee said.

The University of Missouri Healthcare pays its pharmacy technicians a wide salary range from minimum wage to nearly 75% of a pharmacist salary. But looking at compensation alone is thinking along only one dimension. There are many other management considerations that can forge a solid path for technician retention and job satisfaction.

Greenlee points out that their system understands they need to create some incentives to create that path to higher compensation. But in a lattice structure characterized by role flexibility geared to find best fit, compensation increases only occur with level jumps, not lateral role moves.

In their system, there are 6 tiers of compensation, but there are multiple technician positions on each tier. "This helps to distinguish the pharmacy technician role, including advanced roles, and that is something to be celebrated because there are so many options. They can truly find their best fit and still have a chance for upward mobility."

Furthermore, Greenlee says that it's true most every employee wants to be successful. Whether you're the health system, the pharmacy department, a pharmacist, lead tech, or their pharmacy manager, "You have to be invested in their success," he said. "You never have a second chance to make a first impression [with a new employee]. Their first impression of the organization should be that they understand on day one that we put a lot of thought and investment into their training."

Greenlee explains that new starts should recognize this investment is an extension of the pharmacy department's culture, that they truly want to help them succeed in finding the best fit for them and says, "It's the right thing to do."

In turn, most employees recognize and value that flexibility and investment. It can set the stage for the technician to not only feel connected to the organization, but to then reciprocate with their investment — their hard work and time that translates to serving patients in need.

It's this recipe of investment, role flexibility, and compensation that can move the needle toward increased retention.

Over the years, as pharmacy technician roles have evolved, University of Missouri pharmacy has learned to adapt with training. Though you have the core human resources training, training of the actual role "will look different for each position," he said. "We don't have as standardized an approach to training that's translatable to all these 17 job codes. We try to tailor it to the respective positions. And for every tech position, it's going to look different. But we want them to know we are very much investing in them and want them to succeed from day one."

Pharmacy technicians can become overloaded, especially given staff shortages and almost daily reliance on float pools comprised of cross-trained technicians, many of whom are at an advanced level. But to combat burnout, Greenlee says managers need to be proactive in learning what the issues are. There are typically a variety of tools pharmacy leaders have and should be taking advantage of to improve retention.

“We’re fortunate to be part of a health system that provides free counseling. It’s not just counseling alone either. We want to show as much grace as we can. We encourage struggling employees to apply for the Family and Medical Leave Act (FMLA) if they have mental health concerns.” Greenlee says COVID-19 “definitely changed how we deal with our workforce.”

Many institutions were forced to be more adaptable in creating more remote roles. Over time, many have become more astute and responsive to recruiting efforts to meet pharmacy technician shortages. Float pools for many organizations have expanded with the idea that it is more cost-effective to deploy emergency pharmacy technician assets than temporarily filling a technician job with a pharmacist.

Greenlee is a firm believer in a proactive approach to pharmacy workforce management.

“I think one of the most important things is to be opportunistic,” he said. “Some organizations feel a lot of pressure to map out their career lattice incorporating all these technician roles in one fell swoop.” That would be a mistake, he says. Organizational progress takes time. They’ve evolved their current technician lattice with numerous changes and adaptations.

“Invest the capital all in one moment? No. It’s really an incremental process. We’ve been adding and modifying [technician positions] for the last 5 years. And it’s not just me driving this change, it’s the history of my predecessors and all the progress they made.” They’re now benefiting from what was previously established. He said tech lattices within organizations must continuously evolve and adapt because the practice of health system pharmacy rapidly evolves. Labor markets also fluctuate, which is especially the case with the pharmacy technician job market.

But human resource restructuring takes time. Pharmacy technician needs can sometimes go unaddressed due to other priorities like drug shortages, or financial performance initiatives. That’s why Greenlee says it’s advantageous to formalize a review process at a defined interval as this can help prevent neglect of career development.

At the core of it, the institution has been driven to retain and celebrate technicians. Greenlee says they remain focused on new opportunities, to explore any new pathways for individual and institutional growth. “When new [pharmacy] service opportunities present themselves, we ask ourselves the question: is there an opportunity to employ a technician in an advanced role? Because there just might be a niche to be filled. The technician can take pride in filling that role and need to be celebrated.”

Key Steps in Building Pharmacy Technician Career Lattice

1. Department Self-assessment
2. Identify Opportunities
3. Create Job Descriptions
4. Develop Training and Competencies
5. Engage Key Stakeholders
6. Formal (and Informal) Review – formative review (vs. summative review)

Technician Career Vignette: Kayla Hodges, BS, CPhT

One of those technicians is Kayla Hodges, BS, CPhT, now a 340B analyst at University of Missouri Healthcare. Greenlee referred us to speak to Hodges to describe her career journey. “Kayla is simply a remarkably advanced technician.”

Greenlee described her journey as one in which she always stepped up to meet challenges, demonstrating her individual strengths and adaptability to the growing pains of the pharmacy department.

Her career path over the past 15 years at the University of Missouri Healthcare wasn't exactly a straightforward venture. “I started in pharmacy by chance,” she said. “I had a friend who worked at a local retail store. I needed a job at 16 and I decided to go that route.”

In her early career, she got her bachelor's in psychology.

“And then specialty pharmacy came along. Of course, I wanted to know what that was about. I just wanted to learn as much as I could,” she said. “We had very informal roles at that time.” In terms of job descriptions, “there were ‘technicians’ or ‘certified technicians’—that’s all there was.”

“I was like, ‘teach me all I need to do to make my time meaningful while I’m here at work every day.’ The university is known to be super-flexible and just very supportive for us continuing to learn and me taking on basically any role I wanted to.” She filled a lot of very informal roles. “But that’s got me where I am today,” she says with a smile.

Hodges said she enjoyed being part of starting the specialty pharmacy program. But eventually, she felt the position got to be stagnant for her. “I felt I had learned everything I could in that position. That’s when I started dabbling with the idea of 340B analyst with the pharmacy business team.”

When she started in this role she identified it as a new challenge, but quickly, Hodges found her footing. “I have a phenomenal manager. I can't say enough great things about him. He has been so supportive personally, and professionally, and he is always willing to help.”

For her manager to be so supportive, she also credits upper pharmacy leadership for encouraging patience and persistence in supporting pharmacists and technicians, advanced or not.

“I have to say I didn't know Tom Greenlee well, but now that I have gotten to know him, I can tell you he is so passionate about his job, he's passionate about the University, he's passionate about technicians, and growth and innovation. He's just somebody who's good to have in your corner, and I'm happy he's in mine.”

Hodges is one of 3 340B analysts at Mizzou on the business team. All work remotely.



"In these 340B positions, we all started the same time. I think as we've optimized and done audit after audit after audit, we've made a lot of progress. We're digging deeper. We've had to learn to master a lot of things to get where we are."

What are some important skills for advanced technicians? "I think being willing to learn and grow in every way possible is essential to becoming an advanced technician," said Hodges. "Going above and beyond normal duties is not only beneficial to the technician but also shows management that the technician is willing to invest in themselves and the role."

Determination to get things right and learn no matter the circumstances certainly appear to be positive factors to resist burnout. What else is needed?

"To be compassionate," she said. "Be compassionate to your coworkers. In order to succeed, others need to succeed, too. It's hard to work in pharmacy." After all, you're there and tackling challenges, she says. "Might as well put your heart and soul into it."

Hodges understands the pharmacy technician crisis is a big problem. "The University of Missouri is really trying to combat the shortages, but we're not immune," Hodges said. She's on a call with her retail pharmacy department in which they discuss role shortages on a weekly basis. "How many shifts are opened that are pharmacists taking technician shifts? [The technician crisis] is really unfortunate. I think if more people knew the benefits of the job, they would know how great it is."

Ultimately, technicians are rewarded with a full slate of lattice pathways that provide a lot of flexibility and opportunities to grow in advanced roles. It's the combination of that lattice and compensation that "keeps our highest performers inside the organization," Hodges said.

Dartmouth Health Pharmacies

Visante spoke with Staci Hermann, PharmD, MS, Chief Pharmacy Officer at Dartmouth Health — the most rural academic health system in the country — to discuss her organization's efforts to recruit and retain pharmacy technicians. One challenge to recruiting at Dartmouth Health is all hospitals are located in rural areas, resulting in a much smaller talent pool to recruit technicians from when compared to urban areas. "The things I think make rural healthcare most challenging are maintaining competitive wages (not only to other healthcare providers, but across all industries in the region) and the fact that most staff live 45 to 60 minutes away, so the cost of travel with minimal to no public transportation available must be factored in from a recruiting and compensation perspective," she said.

"The pandemic has made recruiting more challenging. Some health systems in big cities and their surrounding areas have more options to recruit and may have the luxury of a dedicated technician pipeline in the form of pharmacy students," said Hermann. "Unfortunately, Dartmouth College doesn't have a pharmacy school, and the closest pharmacy school is over an hour away. This technician workforce challenge can be daunting, especially when Amazon offers forklift drivers upwards of \$50 per hour. We've had to come up with other recruiting solutions to ensure we have a pipeline."



What makes rural healthcare most challenging is maintaining competitive wages.

The pharmacy department has 350 to 400 employees, more than half of whom are in various pharmacy technician roles. Hermann says their workforce continues to be impacted by fluctuating market forces, unexpected turnover, and broader workforce shortages. Recruitment efforts are ongoing and competitive rates for technician compensation are routinely reviewed. Recently, Dartmouth Health approved a bump in pharmacy technician pay well above the minimum wage with incentives for those with certification.

“We tried to move the salaries sooner but were challenged by many of the forces impacting healthcare organizations across the country and had to wait. What really helped was the organization moving the minimum wage for other entry level jobs, which we leveraged to move our technician rates,” she said. “In addition, COVID and the associated increase in all entry level jobs in our region also factored in to our push to increase the technician rates” she said. “About a month after our most recent pay raise for technicians, we found out another system raised their rates to match.”

Dartmouth Health also operates the [Workforce Readiness Institute](#) (WRI), a licensed career school that supports recruiting and training for key areas and roles in the health system. Since 2016, more than 150 certified pharmacy technicians have been trained through the WRI's Pharmacy Technician Apprenticeship Program. Through this earn-while-you learn strategy, participants have ability to gain the technical and professional skills needed to enter the profession, all while earning a training wage and working towards their Associate's in Health Science at Colby-Sawyer College. Base training pay for apprentice technicians was raised to a living wage well above minimum wage and the graduates from the program can be placed at multiple facilities throughout the system. The connection to college credit was very important as it position technicians for their next career step in healthcare including higher-paying jobs such as a pharmacist. Hermann says the program has a high rate of graduation success.

Dartmouth Health has an established tele-pharmacy group that was asked, in 2021, to take on the medication reconciliation program after pilot programs showed it was feasible. Staci explained, “That was an interesting process, to leverage technology, because everyone suddenly went remote. But when you're in rural parts of America, it's all about the technology to make things work.”

Tufts Medical Center Pharmacies

Melissa Ortega, PharmD, MS, is Vice President of Ambulatory Pharmacy Services at Tufts Medicine. We spoke to her about the technician crisis, retention strategies, and the impact of the pandemic on her institution.

“Everyone's retention story is a little bit different,” she said. “In the technician workforce, what we're trying to do is create a successful work-from-home model. I think that the pandemic is causing us as employers to rethink what's possible.”

Ortega emphasized their daily long-term strategy is to strive to achieve team identity, a culture of accountability, and empowerment of individual workers to provide quality patient-centered care. And this is their overall practice philosophy whether they are new technician recruits in training or experienced veterans. Much of this is motivated by cooperation with pharmacists themselves.

"Of course, that starts with training," she said. "Those elements need to be established early on, but they also need to be reinforced. Our pharmacists work with technicians every day at a 1:1 ratio. So pharmacists have an opportunity, especially pharmacy unit managers and all lead technicians, to step up and train, mentor, educate, and reinforce. And they do.

"They can really have an impact on the trajectory of individual technicians. Effective leadership means connecting at the human level to create a sense of team, productivity, and accomplishment. That's where you see the return on investment in the long run," she said.

That focus on team includes frequent positive feedback for individual efforts. One of their pharmacy technicians was recently recognized system-wide by the CEO for catching a medication error that could've had serious consequences. "It was really nice seeing the CEO praise our technician, who absolutely deserved that recognition."

Tufts Medicine pharmacy has roughly a team of 200, with 100 technicians.

"My particular team is comprised of 85 full-time equivalents (FTEs) and half of those are technicians. Recently we did a market analysis, an important initiative we aim to do more frequently.

"Unfortunately, with the technician shortage, it gets really tough when you don't get technicians to fill positions, you have tasks around distribution that need to get done. The work remaining undone is my greatest concern with the technician shortage. It's a scary ripple effect."

"Our community college apprenticeship program is unfortunately not active anymore. But it's a good past learning point we haven't forgotten—that we should partner when we're able," she said. Historically, they've gained "pockets of success" by bringing in community apprentice technicians who would rotate through pharmacy units and fill work shifts. "In fact, we're currently discussing this type of partnership to once again complement our source for technicians. Our MelroseWakefield Hospital was an important point of partnership."

Staying competitive in the marketplace has required a shift in mindset in attracting pharmacy technicians since they're in such short supply. Tufts Medicine pharmacy leadership has worked with their health system's human resources to incentivize an internal referral program, and has also approved a sign on bonus of \$3,000, which appears directly on their job listings.

"Boston has multiple hospitals. We're competing with them for technicians. We've made sure our rates are competitive. We receive referral sources and perform traditional marketing."

Ortega is particularly proud of the evolution of their technician advancement ladder, which provides upward mobility for technicians to advance to greater responsibility and can help retain those who believe they're being invested in by the health system. Levels 1 through 5 technicians are briefly described below, with level 5 being the most advanced functioning technicians.

- **Level 1.** In Massachusetts, they distinguish technicians by **certified vs. non-certified**. Both perform core medication distribution and fulfillment. Registered with the state;
- **Level 2.** All are certified technicians, and while they may also perform foundational medication distribution, they can take on additional responsibilities, such as outpatient pharmacy services, helping with compounding, delivery, automated dispensing, and fulfillment.
- **Level 3.** This level requires additional experience and expertise, and performs patient reconciliation, prior authorization, medication access, affordability, patient assistance programs, and compounding for hazardous medications.
- **Level 4.** Unique expertise is required for special roles. “They’re overseeing a program or operational process,” said Ortega. “They’re lead technicians, supervisors, or serve as an expert or trainer.”
- **Level 5.** This level typically consists of even more unique roles, like medication access coordinator, who may directly help patients arrange for their pharmacy needs, manage Medicare Part B, provide support for the entire pharmacy revenue cycle, and may support the 340B program. For instance, this may include the role of business analyst, who helps with financial auditing, analytics, trending, and accreditation efforts.

Beyond career ladders, Tufts Medicine is looking at what work can be offloaded from technicians. “Technology solutions—that’s the big challenge. How do you lean on technology more?” Ortega said. “On the acute care side, we’ve deployed technology. On the ambulatory side, we’ve deployed robotics. Right now, we’re exploring an adherence management program, which is a very, very manual process. When we looked at this 4 years ago, the volume was very different. Prior authorization technicians have now partnered with a third-party company with expertise in helping health systems manage patient assistance programs and reimbursement with a central portal.”

“We’re also looking at the types of functions that our advanced techs complete in specialties that align with tasks such as benefit investigations, completing their outreach and coordination calls [typically level 4 technicians], completing assessments and coordinating home deliveries,” she said. “There’s a lot our pharmacy technicians can do, and they do make a big difference.”

Ortega leans toward a practical vision for their workforce considering the state of the economy, which has temporarily tempered growth prospects.

“No health system right now is looking at their financial statements and smiling,” she said. “Very few health system organizations are doing well. Whenever you are pausing growing services—and I know other leaders have said this—you can’t grow services by cutting people. The challenge is to ensure your current workforce can operate well and actually leverage technology.”

Ortega views this technician crisis as an ongoing uphill battle with seemingly unending demand. But armed with greater tools to recruit and retain, she also sees the slope improving as long as larger health system investment is there.

"We have to use a system-level approach to improve our workforce," she said. "We've seen that reaching this level of success is certainly a challenge to self-identify as a single cohesive team. But we can certainly drive solutions across our 3 hospitals. This is a priority. We know we're going to invest more resources in supporting technicians."

A Closer Look at Technician Compensation, Recruitment, and Training

Health systems are not strangers to labor squeezes. In the past 20 years, shortages of physicians, nurses, and pharmacists have each taken a turn making headlines and reaching a fever pitch of scarcity. In each shortage, hospitals were left with no choice but to incentivize with hefty sign-on bonuses and to raise salaries to encourage retention.

In an effort to directly compete with many health systems' recruitment and retention strategies, Walmart and Sam's Club raised its average technician hourly rate to \$20 per hour, the second time it has increased pharmacy technician wages in 2022. As part of their new technician compensation policy, a technician will get a raise every 6 months in their first 2 years with the company, and additional raises over the course of 4 years that can add up to \$4 over their starting base pay.²⁰

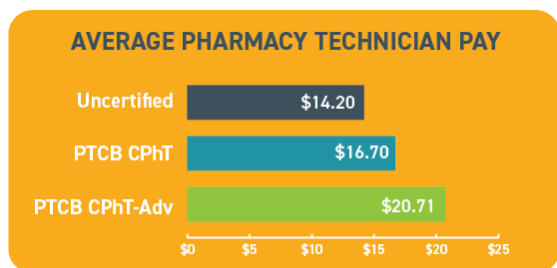


Figure 2. Pharmacy technician hourly Rates by certification status. PTCB survey (2022).¹⁹

Released in March 2022, ASHP conducted a pharmacy technician survey (n=74,448 technicians) regarding the shortage. A majority of technicians (75%) confirmed that higher compensation rates would be at least one contributing factor to retention. About 25% reported they wanted a clear path for advancement. Around one-third indicated a periodic "retention bonus" would be another significant step toward retaining technicians. The ASHP pharmacy administrator survey (n=1,952 hospital and health-system pharmacy executives) reported 75% increased base pay in the prior 11 months with the intention of attracting new technicians and retaining those currently employed.⁴

A majority also offered off-cycle pay raises and other retention and hiring incentives. Prior to 2021, more employers were offering to pay for educational expenses and formal technician training and certification/recertification or registration or licensing fees for technicians, and 38% of employers actually implemented internal technician training programs.

While increased compensation is one tactic that can help with the current pharmacy technician crisis, it can't be relied upon as the only answer for a workforce notoriously difficult to retain.

"Retention is not going to be based on salary alone, even if it is a key piece," said

Visante Senior Director David Hager, PharmD, FASHP. "Pharmacy technician jobs aren't easy—support from front-line leaders, autonomy to impact their work environment, and a sense of belonging are essential. You have to consider the impact of USP 797/800 in separating pharmacists from technicians with true physical barriers – how are we as leaders breaking down those walls?"

"A few years ago, technicians were making \$35,000 or \$40,000 a year, which isn't a living wage. Salaries have gone up some, so now they may make closer to \$50,000. There has been some progress, but the pay still isn't where it needs to be to retain technicians," he said. And "human resource consultants can sometimes contribute to the problem, often incorporating community pharmacy technician salaries into the marketplace average reported to health systems performing compensation surveys, thus lulling human resource leaders into a false sense of security that their existing pharmacy technician pay grades are adequate."

"Personnel development is preventive work that can feel lower priority than the crisis of the day, but it is necessary to build the best technician workforce," said Hager. "In the long run, it will put you ahead – getting off the wheel of low retention, hiring, onboarding then starting again. It's putting in place not only daily huddles to improve workflows, but connection to purpose to help them see the bigger picture of medicine delivery, the patient centered approach, even if they never see the patient," he said.

"When I mentor people, it is all about their strengths and how I know them well enough to put them in positions to use those strengths more. That is how you create a relationship where they know you are invested in them as a human being who is part of the team, an employee who belongs there, and shares in our common purpose. Many organizations used to have the approach of 'You're lucky to work for us.' With that approach, people leave."

"Pharmacy could be the trailblazer in health care on this issue. Historically, you have entry level roles that haven't been truly supported from a career development and retention standpoint. This happens with clinicians to a degree, but leaders can get blinders on to those who make the day-to-day run that do not have multiple college degrees."

Whatever path they choose, all technicians should be afforded the opportunity to train, learn, and be shaped to be resilient healthcare team members.

"Many health systems are still very top-down. But the millennial generation teaches those at the top, telling them that they can build an engaged workforce if they have people at the level of whatever problem they're solving actually owning it—creating a culture of owning vs. renting—and taking the responsibility to fix it. This is the part of the culture of accountability that you want because it is proactive, empowering, and team centered."



A Multifaceted, Holistic Approach

Insufficient compensation is only one piece of the labor shortage puzzle. There is no single “root” of the problem because the issue itself is multidimensional. There are multiple demands on health systems and limits to supply, not only in the labor market, but in limitations to the availability of viable partnerships with local or regional staffing agencies, universities, or trade colleges to bolster recruiting, which may be a problem in rural areas.

Multiple health service units compete for resources in an intricately interrelated hospital healthcare ecosystem. It is advantageous for pharmacy services to make their voice heard as part of the C-suite of the health system. Refueling the capacity of services via staffing and other improved capabilities (e.g., automated dispensing, robotics, etc.) depends upon accurate reporting of needs. It's essential pharmacy leadership view the big picture and clearly articulate needs.

Technician Crisis Results in Pharmacist Burnout: Impact on Frontline Pharmacy Services

Hospitals and health system pharmacies are in crisis mode with unrelenting staffing shortages. Short-staffed pharmacies can sometimes be disabling, with the burden of many technician responsibilities falling upon pharmacists themselves. The tasks otherwise performed by technicians may constitute a significant shortfall that can impact all other personnel in that department. If there are not enough technicians, those tasks still need to get done and will always fall on others to fulfill. This can translate to pharmacists, who may inherit the brunt of tasks ordinarily performed by a technician. In other words, a shorthanded technician staff is a fast road to unhappy pharmacists, who can quickly experience burnout—particularly if positions aren't filled for months.

This was confirmed by the 2022 ASHP survey in which 89% of pharmacy administrators reported that pharmacists inherited and performed the technician's tasks.⁵ As a short term stop-gap measure, many pharmacy administrators decided to utilize overtime.

This persistent staffing strain and lack of resources fuel a range of issues with pharmacists and technicians alike, including burnout.

Burnout has an insidiously negative impact on worker mental health and well-being, lower job satisfaction, and higher risk of turnover. But critically, these workplace stresses are known predictors of suboptimal worker productivity that may lead to compromised patient care in the form of medication errors.

A 2022 systematic review by Dee et al. reported the overall prevalence of pharmacist burnout globally was 51% from 17 studies suitable for analysis. The prevalence estimates ranged from 5% to 75% among the 19 included studies but increased and plateaued to roughly 60% for the past 3 years during the pandemic. Unsurprisingly, pharmacists identified with burnout were more likely to have made a medication-related error.²¹

89%
of pharmacy leaders
reported that
pharmacists inherited
technician tasks
during a shortage

Burnout is critically important to identify and overcome.



What is burnout?

Burnout is a term that generally describes an individual's psychological response to work stress in perception, behavior, or both. Though it can be defined and identified in different ways by multiple burnout assessment questionnaires for research, it is generally characterized by one or more of the following:

- Emotional exhaustion/physical fatigue.
- Reduced feelings of personal efficacy or accomplishment.
- Feelings of isolation, depersonalization, or lack of team identity/shared purpose.
- Feelings of not thriving in the position, group, or company.
- Increased work-related anxiety, frustration, and/or cynicism toward job duties and compensation.
- Gradual feelings of dissonance or dissociation with various aspects of the job, potentially culminating in leaving the position.
- Can impact a worker's overall health status with decreased feelings of well-being, lack of motivation, and potentially depression.
- Lack of resilience to continued work pressures, which may include longer shifts and greater workload given staffing shortages, as well as lack of quality recovery time to return to work refreshed and motivated to perform.

The World Health Organization suggests burnout occurs when chronic work stress is ineffectively managed. In 2019, it defined burnout as an "occupational phenomenon" and added it to the International Classification of Diseases 11th revision (ICD-11). However, it does not consider burnout a medical illness, though obviously some illnesses may be comorbid and act as significant personal contributors.²²

How common is it?

Burnout is very common in the health professions. More than half of pharmacists (51%) experience burnout. Burnout in pharmacy technicians is likely comparable as they typically operate in tandem in the same workspaces as pharmacists.

The 2022 ASHP Pharmacy Technician Shortage Survey reported technicians "are frustrated with heavy workloads, inadequate staffing, and inadequate compensation." In 2021, the majority of pharmacy administrators reported technician turnover between 21% and 30% in 2021, and roughly 10% of administrators had lost 41% or more of their technicians.

But more research is needed to determine the full extent of pharmacy technician burnout. For instance, how can we better identify causes and more quickly deploy burnout resources for technicians? Is there an association between how burnout develops with pharmacy technicians individually, how it develops in pharmacists individually, and how might they influence each other? Is burnout contagious?

Early Recognition of Burnout is Vital for Retention

It is important for all pharmacy leaders—administrators and managers—to identify burnout early to provide effective support to retain the worker.

Burnout may be difficult to identify for a number of reasons. It is a complex, heterogeneous psychological phenomenon experienced internally, and therefore manifests differently between individuals, even among or between teams. This is why it is equally important to be aware of barriers to detection that may otherwise short-circuit a burned-out worker getting the help he or she needs.

Barriers to recognizing burnout may include any one of the following:

- Burnout may go unnoticed because the worker may be in denial that their performance and well-being is affected.
- The worker may feel indifference or cynicism, perhaps feeling prior concerns have not been heard, or present concerns may be dismissed, hence adoption of a “What’s the point?” stance that hinders recognition and support.
- If burnout is self-recognized, one may fear voicing their specific concerns about working conditions because of embarrassment or feel inadequate in their ability to be as resilient in their role as they hoped to be (particularly in newer workers); one may be especially avoidant in acknowledging any effect on their job performance.
- A worker may fear complaining about working conditions, may anticipate their concern is dismissed, or fear reprisal from complaining.
- If recognized by a manager, they may be hesitant to discuss it to avoid singling out or embarrassing the worker. The manager may also lack training in how to approach burnout and/or have no institutional resources available to offer workers.
- Some managers might perceive burnout as an excuse for suboptimal performance, even if systemic working conditions are clearly contributing.
- Managers are not exempt from burnout.

Proactive communication by pharmacy leaders can help to better identify burnout in individual workers or groups of workers facing the same conditions.

RISK FACTORS	PROACTIVE FACTORS FAVORING RESILIENCE
<ul style="list-style-type: none"> • Working full time/longer hours worked per week. • Younger age/less professional experience. • High prescription/patient volumes. • Increased workload. • Poor work/life balance. • Too many non-clinical/administrative duties. • Inadequate administrative/teaching time. • Additional professional/leadership role. • Lack of burnout management resources or unaware of resources available. • Lack of appreciation by colleagues for professional contributions. • Mentoring/tutoring too many pharmacy students. 	<ul style="list-style-type: none"> • Involvement in patient and peer education and training. • Time away from work. • Social interactions and hobbies. • Having burnout management resources. • Mentoring/tutoring a small cadre of pharmacy students. • Access to wellness programs or burnout resources provided by their employer.

The Paradox of Remote Work

In the 2022 ASHP Pharmacy Forecast Strategic Planning Guidance (DiPiro et al.), Woller and Van Devender explored how the expansion of telework offers opportunities in the form of increased work. Improved efficiency consisted of fewer interruptions, bolstered capacity across groups, and the general convenience factor removing transport from the work equation.²³

However, it also poses some potentially confounding challenges with increased workloads via electronic communication (email, text, etc.) due to lack of in person collaboration and the tonal challenges associated with purely textual communication. The lack of team bonding and team building in remote work can result in isolation and potentially role-threatening dissociation. Each of these challenges can lead to burnout.

Burnout mitigation is specifically stated by the authors as a strategic practice recommendation (number 6):

“Establish strategies and resources for employee resilience and well-being specifically targeted on mitigation of burnout and feelings of isolation for pharmacists and pharmacy technicians who are transitioning from traditional in-person work to more permanent remote work.”²³

It is important for pharmacy leaders to be vigilant in anticipating and managing both the opportunities and challenges of remote work since many technicians, including some advanced technicians, have already transitioned to remote telework roles. But remote work is only available in select specialties and is not a universal solution for every pharmacy technician.

“These roles are typically supply chain buyers or specialty pharmacy technicians doing the leg work for prior authorizations—roles that don’t require direct in person supervision,” said Brummond. “You can’t have technicians working on IVs at home.” He suggested the remote work trend will likely continue in these roles and possibly others in the future given ongoing staffing shortages and candidate expectations. “It’s a retention strategy that’s necessary and needed. From my perspective it’s multi layered and laddered. It opens opportunities for growth while providing flexibility.”

Consequences: Medication Errors and Patient Harm

Patient safety may be compromised by burned out health professionals, including pharmacists and pharmacy technicians. The 2022 systematic review by Dee et al.²¹ suggested there is enough evidence to conclude that burned out pharmacists are more likely to make medication-related errors. The same is likely true with burned out pharmacy technicians—all pharmacy personnel are probably more likely to make medication-related errors compared to personnel who are not burned out.

Because burnout is so highly prevalent among pharmacists and pharmacy technicians, it is imperative to identify and address the multiple factors that lead to burnout to potentially reduce medication errors.^{10, 21, 24}

No part of pharmacy is immune to burnout, even in senior leadership. In fact, a 2023 study by Mathew et al. reported burnout appeared to be prevalent in almost two-thirds of pharmacy business leaders in the Veterans Health Administration healthcare system.²⁵

Well-being and resilience in the pharmacy workplace has been a continuing issue. In 2022, Schommer et al. concluded their analysis of pharmacy workers showed their lived experiences appeared to go beyond the individual level of control, and changes were needed at the system level.²⁴ Clearly, interventions are needed for individuals, teams, departments, and the system.

It is imperative health care organizations identify, manage, and overcome burnout to prevent medication errors, the majority of which are entirely preventable.

This is why the US Department of Health and Human Services (HHS), via the Health Resources and Services Administration (HRSA), awarded ASHP more than \$2.3 million in 2022 to combat pharmacy personnel burnout. The ASHP is currently developing a robust formative educational curriculum slated to be deployed as a key professional resource with wide availability over the next 3 years.^{26, 27}

Strategic Forecast and Conclusion

The impact of technician shortages can be disabling to productivity and employee engagement, leading up to and including compromising pharmacy services to do the basics of distributing drugs safely to patients. Furthermore, vacancies in technician roles can increase burnout in other pharmacy roles. It is clear that the pharmacy technician workforce crisis is a risk to healthcare operations broadly.

To recruit and retain pharmacy technicians in the coming years, healthcare leaders will need to address technician shortages in a continuous, multifaceted fashion including the following:

1. **Leverage technology**, automation, process improvement, centralization, and system integration as aggressively as possible to reduce pharmacy technician labor demand.
2. **Advocate for regular reassessment** of pharmacy technician compensation structures (versus accurate peer groupings) and develop career lattices to remain competitive.
3. **Grow the pipeline of new pharmacy technicians** through the creation of apprentice or health system-based technician training programs where the health system pays the trainee a living wage.
4. **Align as a profession on the entry level requirements** for health system technicians, including requirements for registration, licensure, and certification to demand higher entry-level wages.
5. **Deploy innovative engagement strategies** and advance pharmacy technician roles and responsibilities to improve patient care, operational efficiency, job satisfaction, and workforce flexibility.

Staffing shortfalls must address not only short term organization needs, but also long term needs of both the worker and the health system. This includes allocating technicians not only increased pay but incentivizing with other monetary bonuses (including sign on and retention bonuses) and providing a clear path for career progression as a technician and, for some, providing an on ramp roadmap to higher paying health care careers (e.g., pharmacist, physician, physician assistant, nurse practitioner, nurse, etc.). Health systems affiliated with colleges and universities may have the advantage of leveraging pharmacy students to gain experience as technicians.

Technicians are typically trained on the job. Certification requirements have varied in years past, but the field has benefitted from a national PTCB technician credential—the certified pharmacy technician (CPhT), and most states require licensure. Regardless of certification requirements, it is incumbent upon organizations to create robust technician training programs and provide tangible incentives for certification and skill development to advance and become resilient to burnout. Burnout is a major threat to technician retention, and the health care workforce overall, but can be successfully recognized and overcome, especially if detected early.

Technicians have requested more autonomy and flexibility. Developing a career lattice for increased technician responsibility and progression, including specialized advanced technician roles, is likely a good step in the right direction. Since the labor shortage consists of low-wage workers, there could be some advantages for health systems to recognize commonalities between job types (e.g., pharmacy technicians and medical assistants) as recruiting pools may be similar and/or training following onboarding may overlap.

Finally, health system budgets must be proactive in considering the increased compensation associated with qualified pharmacy technicians. Proactive action by pharmacy leaders to drive the compensation decision is essential as the title of a recent paper admonishes, “Be in the room where it happens.”²⁸

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