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Searching for the pharma hiring cure



Unique hiring challenges in the pharmaceutical space require new practices for ambitious TA teams.

The cost of waiting

Pharma's talent crisis is accelerating

With a 35% talent deficit looming and layoffs reshaping the workforce, organizations that fail to act now risk delayed launches, missed revenue, and lost market share.

It's the height of irony: The one industry that impacts nearly every human being on the planet and generated \$1.6 trillion in profits in 2023 is having difficulties hiring new talent even as the population that rely on their products grows each day.

The pharmaceutical industry — which comprises research & development, manufacturing, regulatory compliance, and clinical trials — may be profitable thanks to their life-changing innovations but that has not spared it from the difficulties of hiring incredibly skilled workers in a highly competitive and volatile work economy.

The challenges have become so serious that the U.S. pharmaceutical and life sciences industry is projected to face a 35% talent deficit by 2030. At the same time, as it adjusts to a changing macro-economic environment, the pharma sector is experiencing layoffs: So far in the first half of 2025, 130 biopharma companies have laid off 13,500 employees, according to Biospace's Layoff Tracker. Indeed, these warning signs were highlighted in a recent AMS whitepaper titled "Solving the pharma and life sciences talent deficit" which argued that thinking differently could create a pipeline of possibility for this crucial sector.

With these factors in mind, talent acquisition leaders in the pharma and biosciences space are adopting new ways to make certain that the next generation of pharmaceutical employees find their roles in ambitious firms. This means that TA leaders need to think about hiring talented workers for this attractive market with a different mindset and a keen focus on skills.

What's driving the pharma talent gap? While nearly every industry faces challenges in attracting new talent, the pharmaceutical and biosciences sector contends with its own unique formulation of hurdles that have intensified in recent years.



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For starters, digital transformation has generated an increasing reliance on AI, data analytics, and digital tools in drug development, and manufacturing, requiring a workforce with advanced technical skills and aptitude. Second, the world's aging population is driving higher demand for pharmaceuticals, and this is intensifying the need for skilled professionals capable of responding quickly to need. Third, a hyper-competitive job market has seen pharma companies competing with IT firms and startups, thanks to their attractive compensation and flexible working conditions. And finally, the supply of new graduates entering the industry is insufficient to offset retirements and attrition, thereby exacerbating the talent shortage.

This projected talent deficit poses risks to the industry's ability to meet growing demand, maintain innovation, and comply with regulatory standards. The result? Companies are facing challenges in scaling operations, developing new therapies, and ensuring quality control without a sufficiently-skilled workforce.

If that were not enough, recent developments in U.S. immigration policy are having a significant impact on pharmaceutical and biotech companies seeking to hire skilled international talent through visa programs. The U.S. immigration system's complexity and current political environment are adding to the difficulty in recruitment. For example, although recent clarifications regarding the eligibility criteria for O-1A and EB-2 visas for STEM professionals have led to an increase in visa and green card approvals, visa caps on employment-based green cards, set at 140,000 in total with a cap of 14,700 per country, continue to restrict access for many skilled foreign professionals. The H-1B visa program offers only 85,000 new visas annually, with 20,000 reserved for applicants holding advanced degrees from U.S. institutions.

The demand far exceeds this cap, leading to a competitive lottery system. Even highly qualified candidates may be excluded due to the complexities of the selection process.



Pharma hiring solutions and best practices

The good news is that there are solutions and according to **Jacqui Horn**, Sector Director of Pharmaceuticals and Life Sciences for AMS, a strategic shift towards skills-based hiring combined with robust upskilling and reskilling initiatives is helping to meet the evolving demands of the pharma sector.

“People understand the importance of their roles, but for some candidates, that’s not enough—they’re looking for something with real purpose,” she says. “We’re seeing several of our pharma clients take a closer look at their employer brand to better reflect that sense of meaning.”

That said, skills still remain a top priority when hiring in this space, says Horn.

“Evaluating your current skill sets and anticipating future needs is a key part of staying ahead,” she explains. “When you have a clear understanding of your internal talent, you’re better positioned to shift resources quickly and invest in upskilling to keep pace with a rapidly changing environment.”

Horn adds that the concept of total talent is a priority as well. “Many firms have started exploring this, but workforce total talent will be critical as it provides you with a 360-degree ability and agility to react to market forces.” she says.

Best practices in pharma recruiting

Here’s a quick list of best practices for hiring the next generation of bioscience pioneers.



Predictive hiring analytics

Data analytics forecast future talent needs based on trends such as emerging therapies, regulatory changes, or digital tool adoption.



Personalized learning journeys

AI tailors upskilling/reskilling pathways for employees, which accelerates readiness for new pharma roles or technologies.



Automated candidate matching

AI can scan resumes and profiles to match candidates based on skills, cultural fit, and learning agility rather than keywords or credentials alone.



Reducing bias

AI tools can standardize candidate assessments to minimize unconscious bias and increase hiring fairness.

Horn suggests that pharma firms focus on the following practical steps in order to embrace total talent:

Leverage workforce intelligence “Using data-driven insights to map your current workforce skills and spot gaps early on sets the stage for smarter hiring and development,” says Horn. She adds that building in clear career pathing frameworks that support ongoing upskilling and reskilling is key to keeping pace with pharma’s fast-moving innovation—especially in areas like digital transformation, regulatory shifts, and biotech breakthroughs.

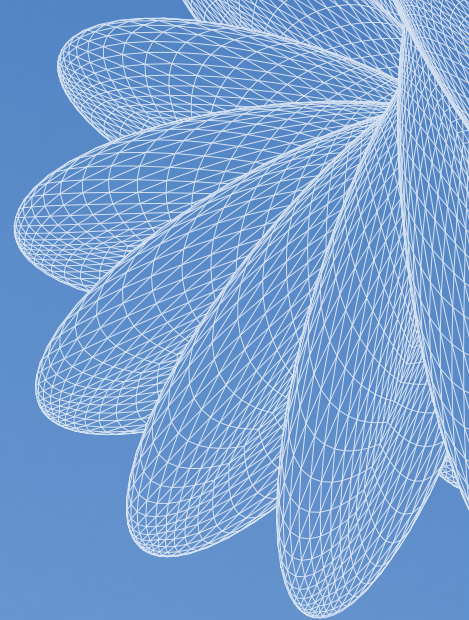
Integrate continuous learning. In order to add agility in talent strategy, firms must adapt hiring plans dynamically using real-time labor market data and predictive analytics to anticipate demand spikes (such as clinical trials, product launches etc). This will help with a firm’s diversity & inclusion efforts, too. “Pharma firms can amplify diverse hiring pipelines by focusing on skills equity, reducing bias inherent in traditional hiring processes,” she says.

Approach AI and data analytics with a clear head While these are critical enablers in modern pharma talent acquisition and workforce planning, it’s essential not to underestimate the importance of the human touch in the recruitment process. This is why partnering with an RPO provider that understands skills-based hiring and has trained their recruiters to be true advisors to both candidates and hiring managers is so important.

Skills Mapping and Gap Analysis. AI-driven platforms (like SkyHive, mentioned below) analyze current employee skills and market data to identify precise skill gaps, allowing targeted recruiting or internal reskilling.

There is always going to be a need to hire some resources externally and by us using these data analytic platforms we can ensure that we are bringing the right skills into the business that will be so important in the future.

Don’t ignore soft skills over hard sciences. “If we have individuals who possess high emotional EQ and have highly personable skills, these can be very important in high-value roles especially in pharma,” says Horn.



Recruiters need to be able to sell the career pathing opportunities to individuals entering the business, as well as understand and predict market changes. This is why AMS has invested significantly in ensuring that our insights team is trained to use all available tools and market data to help our clients stay ahead of future demand,” says Horn.

In response, AMS recently introduced “Skills Short Lists” as well as “Skills Adjacency Targets” to ensure that a certain percentage of a candidate slate not only aligns with the role’s requirements but also their future skills taxonomy. “This approach helps our clients accelerate the building of their future talent needs,” says Horn.

Why pharma stands apart from other business sectors

How does recruiting in the pharma space compare to other business sectors, such as IT, biotech, green tech and other complex fields? While pharma recruiting also shares the same challenges as other complex, knowledge-intensive sectors it also has several unique characteristics:

Highly regulated environment

Pharma roles require a deep understanding of compliance, regulatory standards, and quality control, making niche expertise crucial.

Longer hiring cycles

Due to the critical nature of roles and stringent vetting processes (clinical, safety, IP), pharma recruiting often takes longer than hiring in IT or green tech. Therefore, it's crucial to focus on your Employee Value Proposition (EVP) and brand, as well as having well-trained recruiters who can effectively communicate the career pathing or "gigging" opportunities that a true skills-based organization offers.

Blending science with digital

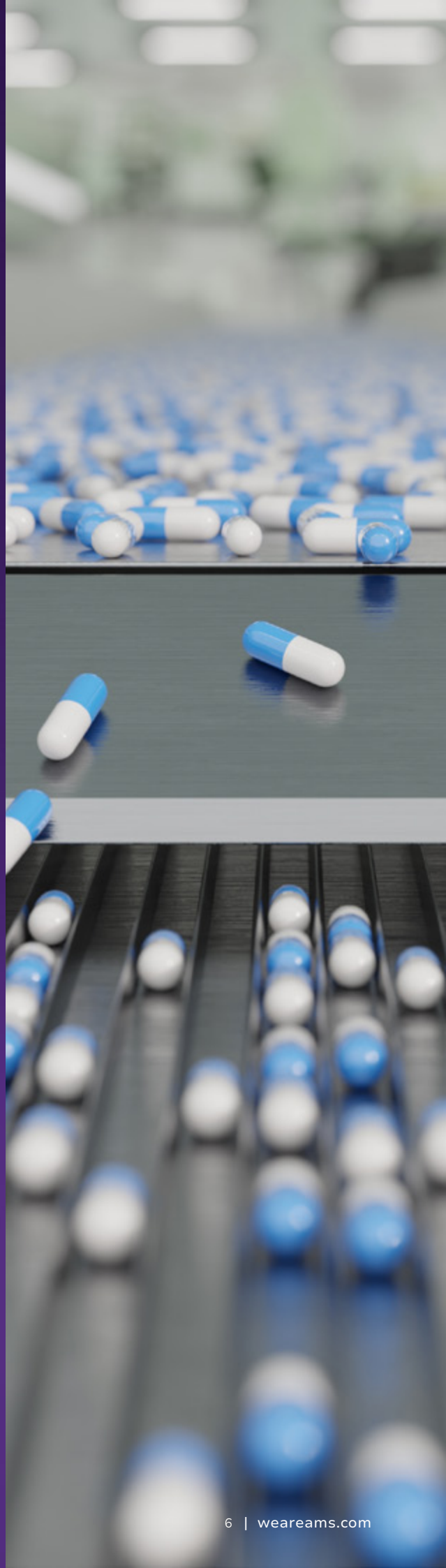
Increasingly, pharma needs hybrid skillsets that combine domain expertise with digital competencies (data science, AI, automation), similar to biotech but more regulated.

Career pathing complexity

Pharma careers often involve multiple interdisciplinary steps (research, development, regulatory, commercialization), requiring sophisticated career frameworks.

Talent scarcity

Like biotech and green tech, pharma faces shortages in specialized skills such as clinical research, regulatory affairs, bioinformatics. While a strong brand can attract candidates, recruiters can bring this to life by demonstrating what it means in practice. This is why AMS emphasizes training our teams on skills-based attraction.



Partner case study

How AMS and SkyHive are helping a global pharma client transform

An AI-fueled biopharma firm had a challenge: How can it hire forward-thinking employees in a volatile job market? The client needed to accelerate digital transformation and innovation while managing evolving talent needs in a highly regulated environment. Traditional hiring was too slow and rigid to keep pace with new skill demands and internal mobility.

AMS's client approached SkyHive, a skills-database and global workforce company which is an official AMS partner as well as a

subsidiary of Cornerstone. SkyHive provided a data-driven skills intelligence platform that mapped the clients existing workforce skills and compared them with market demands to identify skill gaps and reskilling opportunities.

This enabled AMS's client to pivot towards skills-based hiring, optimize internal talent mobility, and design targeted upskilling programs, improving time-to-fill and future-proofing their workforce.

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The partnership helped our client enhance workforce planning agility, reduce dependency on external hires, and increase employee engagement through clearer career pathing thus accelerating their skills-based approach, **according to Horn.**

“We’re not just filling roles — we’re enabling transformation into a skills-first organization. This involves upskilling our recruiters, coaching their hiring managers, and embedding skills intelligence into every hiring decision,” adds Horn.

“A great example of this is our roll-out of key initiatives such as skills-first intake sessions

with hiring managers, where we use data to unpack the problem the role addresses. This ensures we review skills clusters and co-define what is must-have, adjacent, and what trainable skills look like,” she adds.

Speaking more broadly, regardless of industry sector, AMS is also adopting new KPIs to support its clients in their skills-based journey, such as the percentage of roles filled with adjacent skills. This KPI demonstrates openness to mobility and growth candidates, not just perfect matches, ultimately enabling the business to upskill faster and address the talent deficit.

“In a skills-first model, our success can’t just be measured by time-to-fill,” says Horn. “We co-own adoption and impact. That means KPIs that measure internal visibility, hiring manager behavior change, and the quality of skills match — not just process outputs.”



How pharma firms adapt to its biggest challenge: Change

For AMS, the biggest and most consistent theme in modern hiring is how to adapt to change. “This is a constant in hiring”, says Horn. “Companies can create their hiring plans for one or two years at the most and still miss major innovations and developments in technology, the economy and global events. Profound change can occur in six months and in some cases, three.”

“It’s difficult to plan”, explains Horn. “If a global head of talent acquisition cannot hire the right candidates into their business, targets and goals will not be reached in time. Companies won’t be able to generate the revenue they need to, and this will cause negative brand implications of things not being done or not being done well.” “This is the most urgent concern I hear from TA heads — how do we become more adaptable and scalable?” says Horn.

AMS’ partner SkyHive, for instance, uses vast pieces of market labor data to help their clients to hire and to adapt to changes in new skill requirements. Businesses need to know

what skills will disappear from the workforce once Baby Boomers and Generation X employees leave the labor force as well as the new skills that will be required in the years to come. And of course, AMS’ own data can help.

“It’s the power of bringing those two data sets together to make sure that clients are ahead of those skill shortages. AMS can help clients understand what is coming down the path, and how they can react in a quick and prudent way to achieve the best results,” says Horn.

“How do you open up that skills pool? Everybody’s looking for a data scientist so how can AMS help you identify those softer skills to bring them in the business to then accelerate their career path?” says Horn.

Horn says it comes back to pharma branding and making the company irresistible to join as a new hire. “People are forever loyal to those companies that help them grow and develop,” she says. “Tying those two things, which are truly important, is the secret to success.”

High-demand skills pharma recruiters look for

Recruiters are prioritizing both technical and soft skills in the search for the right candidate:



Technical Skills

- Biotechnology and Biologics
- Genomics and Precision Medicine
- Regulatory Affairs and Compliance
- AI, Data Science, and Bioinformatics
- Advanced Laboratory Techniques



Soft Skills

- Communication & Collaboration
- Problem-Solving
- Adaptability in Fast-Changing Environments

The future of pharma hiring can't wait



The pharmaceutical and life sciences industry stands at a turning point. The talent deficit is no longer a distant concern — it is a present and growing barrier to innovation, product launches, and long-term growth.

TA leaders who continue to rely on outdated hiring models risk stalled pipelines, missed revenue targets, and shrinking competitive advantage. But those who embrace a skills-first approach, backed by data, workforce intelligence, and adaptable hiring strategies, will unlock new pathways to talent resilience and transformation.

At AMS, we partner with leading pharma and life sciences organizations to reimagine hiring for this new era — enabling them to secure critical skills faster, adapt to market shifts, and future-proof their workforce.

The question isn't whether pharma will face a talent shortfall. It's whether your organization will be prepared to overcome it.

Discover how AMS can help you close the pharma talent gap – and build a workforce ready for what's next.

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People powered partnership

