



# **Analysis of Direct-To-Industry Roles Among 2022 PharmD Graduates**

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# Introduction

Despite an apparent oversupply of pharmacy schools, the number of US pharmacy students is shrinking by 6.7% annually<sup>1</sup> as job satisfaction in traditional pharmacy roles like community pharmacy has declined. Research conducted with community and hospital pharmacists reported that only 37% of respondents were either “very” or “extremely” satisfied with their job and 38% reported that they were considering a job change mainly due to job dissatisfaction and stress levels.<sup>2</sup> Based upon this employment environment there are a growing number of student pharmacists, recent pharmacy graduates, and experienced traditional pharmacists who are exploring opportunities to enter the Industry (definition below).

In sharp contrast, the role of the pharmacist in the pharmaceutical industry continues to expand. Recent research by the Industry Pharmacists Organization (“IPhO”) found that 80% of PharmDs working within the industry were either “extremely” or “mostly” satisfied with their positions for various reasons, including compensation, opportunities for advancement, and autonomy.<sup>3</sup> Every year, an increasing number of newly minted pharmacy graduates enter the industry as either Post-Doctoral Fellows or in Direct-to-Industry Roles.<sup>4,5</sup>

The goal of this research is to i) identify 2022 PharmD graduates who obtained a Direct-to-Industry Role, ii) characterize the roles they obtained and the employers they now work for, iii) compare results to similar research performed in previous years, and iv) share results to spread awareness of these rewarding alternative career paths

# Methods

For the purposes of this analysis, the following definitions apply:

**“Direct-To-Industry Role”** is a term used in this study to describe the first position of employment in Industry obtained by PharmDs immediately upon graduation without completing a Fellowship.

**“Employer Type”** is a term used in this study to describe the company that employed PharmDs in a Direct-to-Industry role. For the purposes of this study, the Employer Types were categorized at the discretion of the authors. This categorization was implemented to group employers into analyzable categories based on “best fit” despite the variability in company types across the Industry. The categories of Employer Types are listed below:

- **“Pharmaceutical/Biotech Company”** included employers that have a medicinal product on the market or are currently developing a medicinal product for the market.
- **“Agency”** included the following: Medical Training Agency, Medical Communications Agency, Medical Writing Agency, Advertising Agency or Medical Education Agency.
- **“Management Consulting Firm”** included consulting organizations that provide more than one major area of service to Pharmaceutical/Biotech/Healthcare companies.
- **“Clinical Research Organization”** included companies that focus their services primarily in Clinical Research.
- **“Market Access”** included agencies that focus their services primarily in Market Access.
- **“Other”** included the following: Diagnostics companies, Investment Firms, Imaging Companies, Contract Manufacturers or Medical Device Companies.

**“Fellowship”** is defined as a Post-Doctoral, pharmaceutical industry-focused training program for PharmDs, which may include residencies, fellowships, and other related nomenclature.

**“Functional Area”** is a term used in this study to describe the primary department(s) of focus for Direct-to-Industry roles. For the purposes of this study, the Functional Areas were categorized at the discretion of the authors, similar to the methodology used for the IPhO Annual Fellowship Analysis.<sup>2</sup> This categorization was implemented to group Functional Areas into analyzable categories based on “best fit” despite the variability in Functional Area nomenclature across companies.

**“Industry”** is defined as the group of companies whose primary purpose is to develop and commercialize pharmaceutical products, together with the group of companies whose primary purpose is to provide services to them, including but not limited to:

- Pharmaceutical and Biotechnology companies
- Pharmaceutical advertising agencies or clinical research organizations
- Companies whose primary purpose is to provide a service to pharmaceutical companies (e.g. management consulting, medical information, MSL contracting, HEOR consulting, medical communications agencies)
- Market access or global branding firms

Study Inclusion Criteria include US Class of 2022 PharmD graduates of an ACPE-accredited institution who were employed on or before December 31, 2022 by:

- Pharmaceutical companies (full time or contractor)
- Pharmaceutical advertising agencies or clinical research organizations
- Companies whose primary purpose is to provide a service to pharmaceutical companies (e.g. management consulting, medical information, MSL contracting, HEOR consulting, medical communications agencies)
- Market access or global branding firms

Study Exclusion Criteria include pharmacists who are:

- Not graduates of the Class of 2022
- Not graduates with a PharmD degree from an ACPE-accredited institution
- Employed in a direct patient care setting (e.g. retail pharmacists, hospital pharmacists, ambulatory care pharmacists, specialty pharmacies)
- Employed at Long-term Infusion pharmacies, compounding pharmacies, or medical marijuana dispensaries
- Employed by Managed Care Organizations (e.g. PBM, Insurance Company)
- Employed by the FDA or the US government
- Currently participating in a clinical residency or postdoctoral fellowship program

Data collection methods included:

- LinkedIn (Basic) was utilized to search for pharmacists from the class of 2021 who are registered on the IPhO website to identify those who met the inclusion criteria.
- LinkedIn (Recruiter) search was conducted to identify other pharmacists from the class of 2022 who met the inclusion criteria but were not registered on the IPhO website.
- Various data including employer, employer type, position title, and functional area were recorded from publicly available LinkedIn profiles.

# Results and Discussion

253 pharmacists from the class of 2022 met the inclusion criteria and were identified to have a Direct-to-Industry Role.

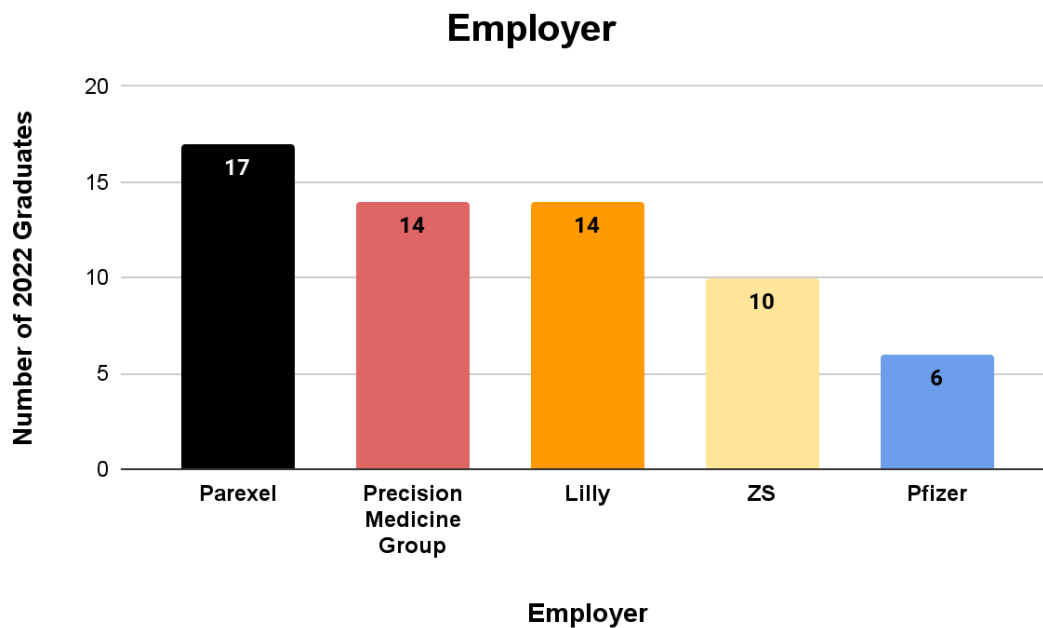
- Parexel, Inc (n=17) employed a greater number of 2022 PharmD graduates in Direct-to-Industry Roles than any other employer as depicted in Figure 1.
- Roughly 40% of the 253 PharmD graduates were employed at Pharmaceutical/Biotechnology companies, while about 60% were employed by “service industry” companies including Agencies and Clinical Research Organizations as shown in Figure 2.
- The 253 pharmacists that were included in this study cohort work in a variety of Functional Areas, the most common of which included Clinical Development (24.5%), Strategic Consulting (15.8%), Medical Affairs (13.0%), and Regulatory Affairs (12.3%), as illustrated in Figure 3. This distribution is different than for current Fellows, where Medical Affairs is the most common Functional Area (33%).<sup>4</sup>
- The most common alma maters included Rutgers (10.3%, n=26), Massachusetts College of Pharmacy and Health Sciences (MCPHS) (8.7%, n=22) as depicted in Figure 4.
- Data on “Position Title” was also evaluated but due to the high degree of variability of position titles and nomenclature across employers, this data was difficult to summarize in a meaningful way. Overall, these positions could be best described as “entry level” for a pharmacist in these employer organizations.

# Characterization of Direct-to-Industry Roles Obtained by Class of 2022 PharmD Graduates

## Most Common Employers

The 253 pharmacists represented in this study were able to obtain jobs at about 140 different employers. This figure depicts the companies that hired the most 2022 pharmacy school graduates in Direct-To-Industry Roles. Parexel, Inc employed a greater number of 2022 pharmacy school graduates (n=17) in a Direct-To-Industry role than any other employer.

*Figure 1. Top PharmD Class of 2022 Direct-To-Industry Employers (n=253)*



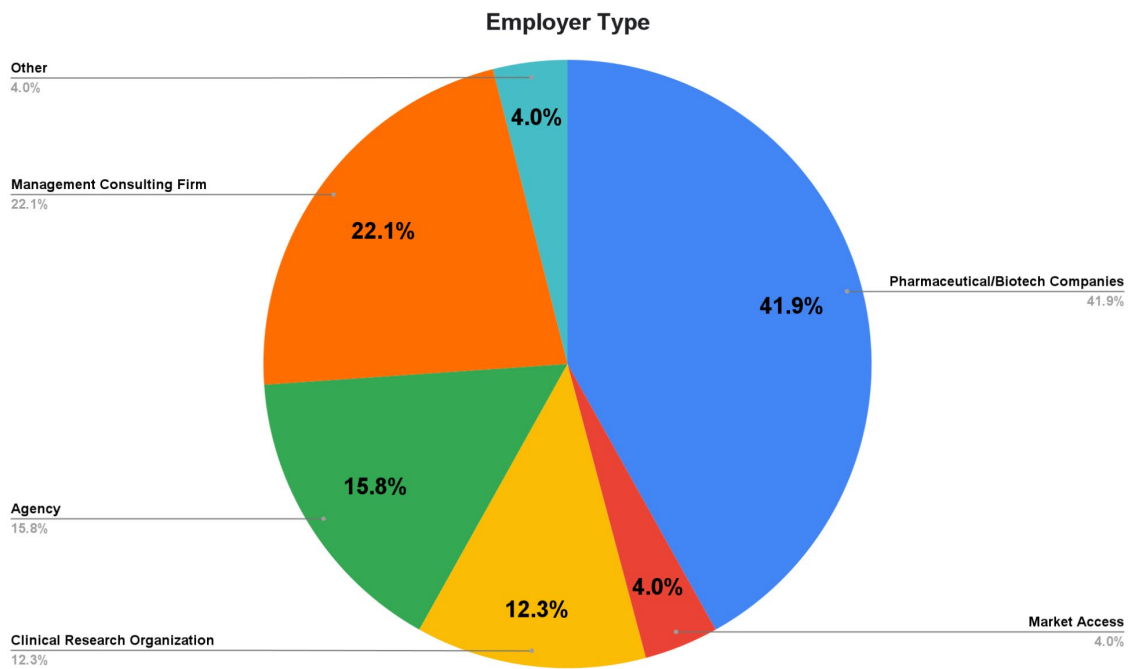
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Note: Other pharmacists (n=192) employed by miscellaneous Industry employers are not graphed in Figure 1

## Categorization of Employer Types

About 42% of the cohort of pharmacists represented in this study were employed by a Pharmaceutical/Biotechnology company. The remaining 58% were employed by a service company supporting pharmaceutical industry clients.

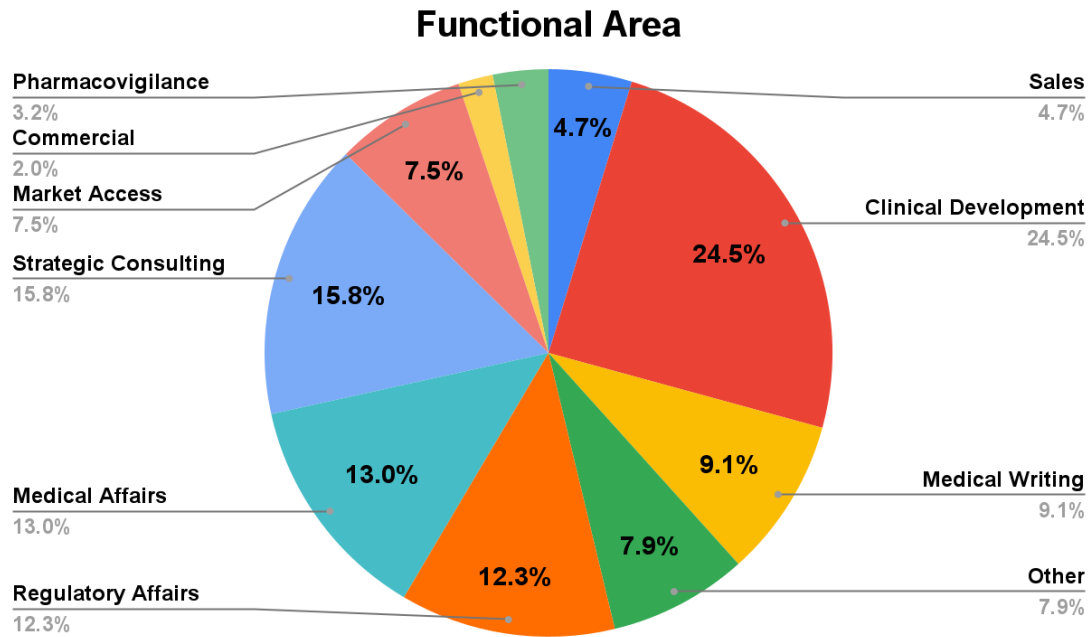
*Figure 2. Breakdown of Employer Type, Class of 2022 PharmD Graduates (n=253)*



## Categorization of Functional Areas

The cohort of pharmacists represented in this study were employed in a variety of Functional Areas, the most common of which was Clinical Development.

*Figure 3. Functional Areas of Direct-To-Industry Roles, PharmD Class of 2022 (n=253)*

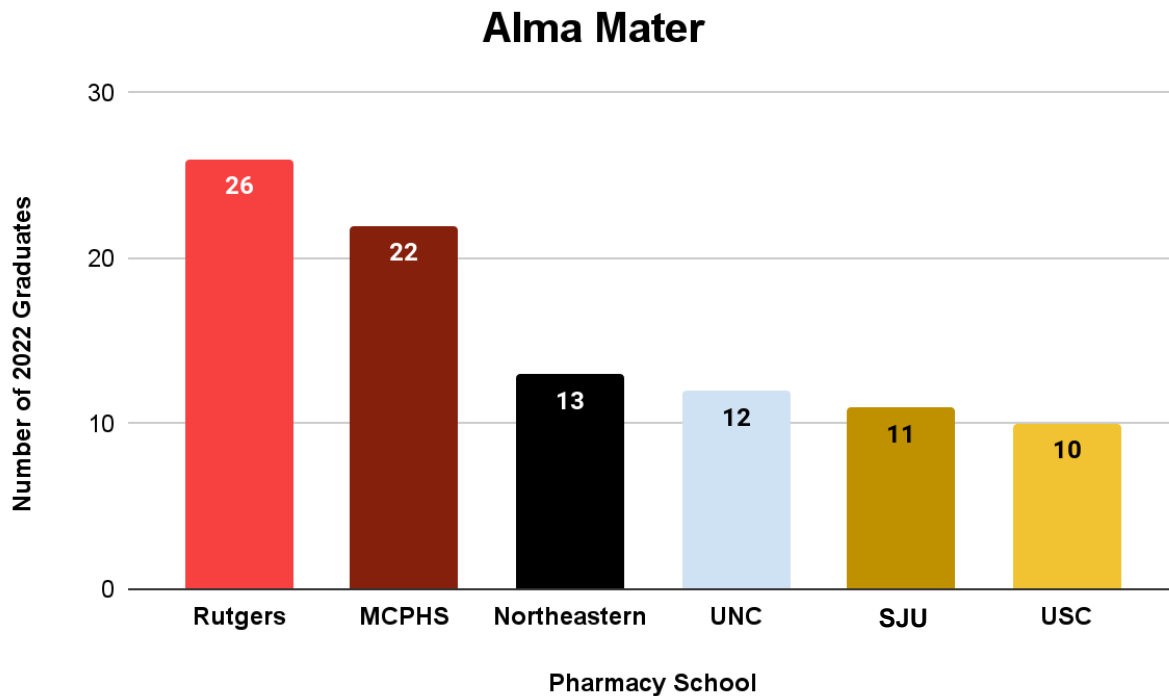




## Categorization by Alma Mater

The cohort of pharmacists represented in this study graduated from more than 70 different pharmacy schools, the most common of which was Rutgers University, followed closely by MCPHS.

*Figure 4. Alma Mater, Direct-To-Industry PharmD Class of 2022 (n=253)*



\*Abbreviations: UNC: University of North Carolina- Chapel Hill; USC: University of California-San Francisco; MCPHS: Massachusetts College of Pharmacy and Health Sciences, SJU: Saint Joseph's University Philadelphia College of Pharmacy and Sciences

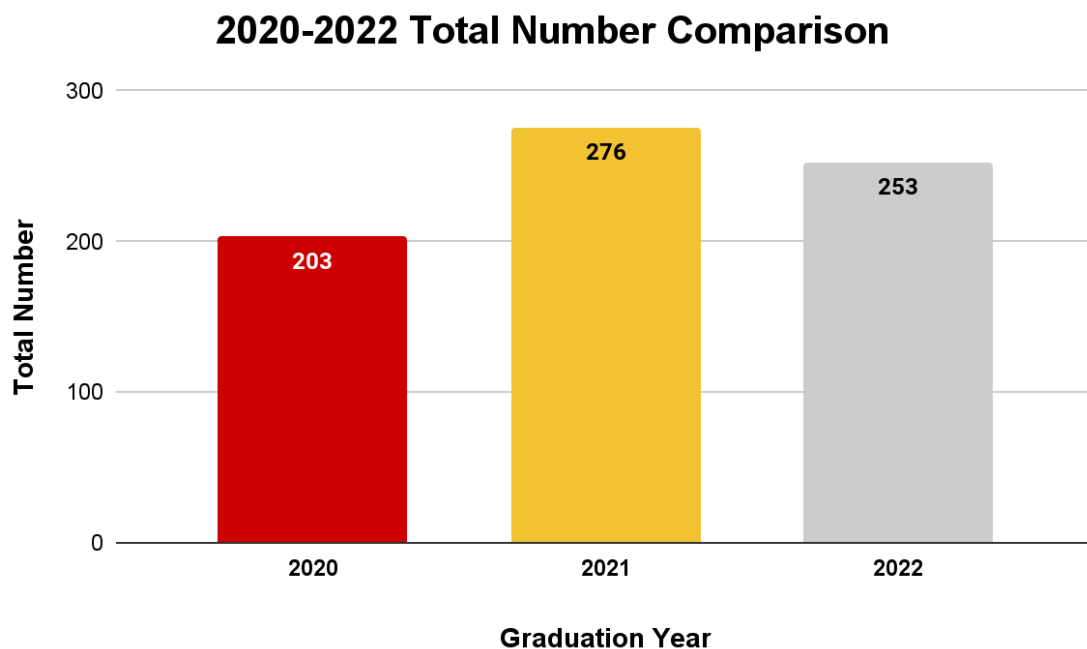
\*\*Other = 159 pharmacists from >65 miscellaneous schools are not graphed in Figure 4

# Comparative Analysis: 2020-21-22

- **Total Numbers**

- The number of PharmDs in the Class of 2022 identified as having secured Direct-To-Industry positions was higher than in 2020 but less than in 2021. Possible explanations for the decrease from 2021 include: i) substantially lower number of hires from Medpace who was a major employer in past analyses, ii) declining PharmD student enrollment, and iii) more PharmD graduates obtaining Fellowships.

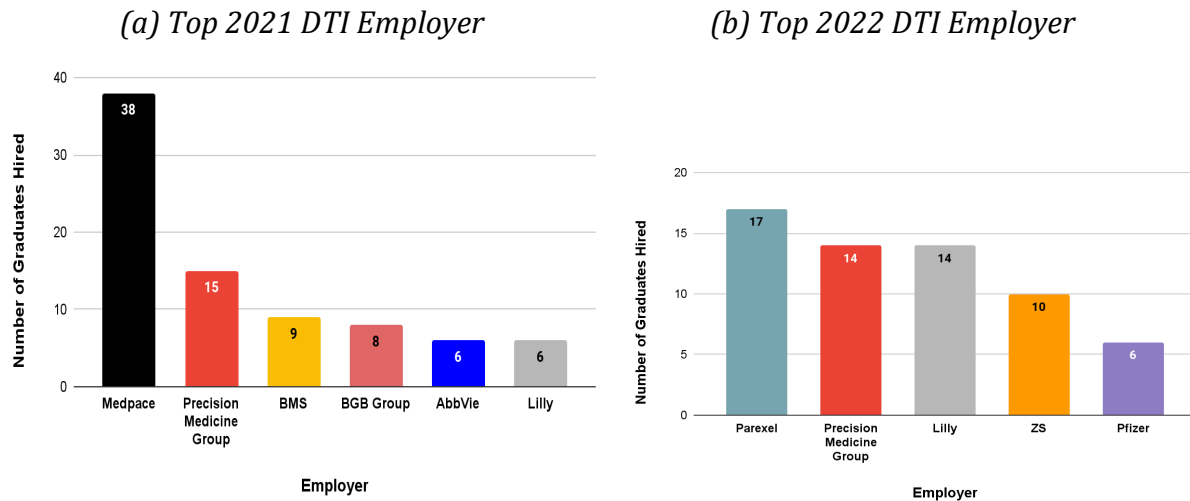
*Figure 5. Direct-to-Industry Total Number Comparison  
PharmD Graduating Classes of 2020-2022*



- **Employers**

- As shown in Figure 6a and 6b, in 2021 Medpace was a prominent DTI employer but in 2022, graduates were hired more evenly across different companies. Medpace hired just 4 PharmD graduates in 2022, compared with 38 in 2021, a substantial 89.5% decrease.

*Figure 6: Direct-To-Industry Employer Type Comparison*



# Limitations

Functional Areas were categorized at the discretion of the authors. Due to variability in titles across companies, positions were manually stratified into distinct functional area categories to allow for comparative analysis, but this categorization may have led to differences in distribution based on the stratification methodology. Another limitation was the difficulty in accurately categorizing service provider companies according to whether they make their business by providing i) multiple categories of services (a “Management Consulting Firm”) or ii) by providing only one primary service category.

It has come to our attention that the 2021 analysis reported graduates hired by Precision Medicine Group in its different subsidiaries rather than the single parent company.<sup>5</sup> The error has been corrected in the current analysis.

The accuracy of self-reported data collected from a LinkedIn profile cannot be fully verified. Also, some individuals simply described themselves as “contractors” or “pharmacists” without further description of their responsibilities. Individuals might have changed their LinkedIn profile at any time after the data was collected. Despite these limitations, IPhO will endeavor to maintain the most complete and accurate database of Direct-To-Industry Roles in the future.

# Conclusion

More than 250 PharmD graduates from the class of 2022 secured a Direct-To-Industry Role, 24.6% more than the Class of 2020 but 9.1% less than the Class of 2021.

Although a greater number of 2022 graduates secured a Fellowship (n=495)<sup>4,6</sup> than a Direct-to-Industry role, the findings of this study highlight a substantial number of Industry employment options for graduating pharmacists. Until IPhO began conducting research of this type, these Direct-To-Industry opportunities were not widely known or understood, and student pharmacists who want to enter the Industry have focused on Fellowships as the only available path to industry employment. Many unsuccessful Fellowship applicants ask the question “what now?” and do not realize that they could be pursuing these types of employment opportunities.

About 40% of these Direct-to-Industry Roles were in Pharmaceutical/Biotechnology companies, while about 60% of the positions were in Service Provider organizations, agencies, or other related companies. This distribution of Employer Type for PharmDs who are employed in Direct-to-Industry Roles differs substantially from the distribution of Employer Type for Fellowship Alumni, which is roughly 87% Pharma/Biotech and 13% all other types.<sup>4,6</sup> These data suggest that if a PharmD is seeking a role with a management consulting firm or other service company, it may be best for PharmDs to pursue these roles at graduation rather than after completing a Fellowship.

Although the number of PharmD graduates employed into Direct-to-Industry Roles in 2022 decreased from 2021, it is still substantially more than in 2020.<sup>5</sup> Numerous Industry employers are recognizing that there is a strong talent pool of graduating pharmacists who are Industry-ready and do not need a Fellowship to obtain an entry level role in their organization. The results of this study will be shared with employers to help increase awareness of Direct-To-Industry Roles for graduating pharmacists who are Industry-ready. This study will be repeated annually to track changes and trends related to industry employment for graduating pharmacists.

# References

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