

Analysis of 2017-18 PharmD Industry Fellowships

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Introduction:

A pharmaceutical industry fellowship is a postgraduate training program designed to give PharmD-trained individuals valuable experience in one or more functional areas within diverse corporate settings, including large and small sized pharmaceutical companies, biotechnology companies, and various agencies and industry service providers.

Currently, the pharmaceutical industry landscape emphasizes patient-centered care, involves complex therapeutics, incorporates outcomes-based reimbursement models, and stresses the importance of evidence-based medicine. Clinically trained pharmacists, including those with fellowship training, possess the skills necessary to help pharmaceutical companies meet these challenges from new drug development through commercialization. As a result, pharmaceutical companies continue to fill their talent pipelines with pharmacists as they recognize that PharmDs are among the best-equipped professionals to contribute to the development, commercialization, promotion, and optimal use of therapies.

Of the 10,000 pharmacists currently employed in the US pharmaceutical industry, about 20% have completed a PharmD Industry Fellowship¹. Currently, more than 50 companies train PharmDs through Post-Doctoral Fellowship Programs. The number of PharmDs participating in fellowships has grown significantly over the past decade and is fast approaching 450 fellows per year.

The objectives of this annual report from the Industry Pharmacists Organization (IPhO) are to describe i) characteristics of current 2017-18 fellowship programs, and ii) emerging trends in PharmD Industry Fellowships based on 4-year longitudinal data. This valuable report is designed to increase awareness among all fellowship program stakeholders, including students interested in industry, current fellows, fellowship program administrators, and fellowship preceptors and leaders at sponsor companies.

Methods:

The Industry Pharmacists Organization (IPhO) maintains a comprehensive, proprietary database of all PharmD fellows currently participating in PharmD Industry Fellowship Programs. Data is obtained from a variety of publicly available sources, and combined with information proprietary to IPhO.

The following data fields were utilized and evaluated:

1. Fellowship Department/Functional Area
2. Fellowship Sponsor Company
3. Fellowship Program Affiliation
4. Fellowship Program Duration
5. Fellows' Alma Mater

Data from the 2017-18 analysis were also compared with results from similar, past analyses for previous years (2014-15, 2015-16, and 2016-17) to produce 4-year trends.

Results and Discussion:

Results are described in the following sections:

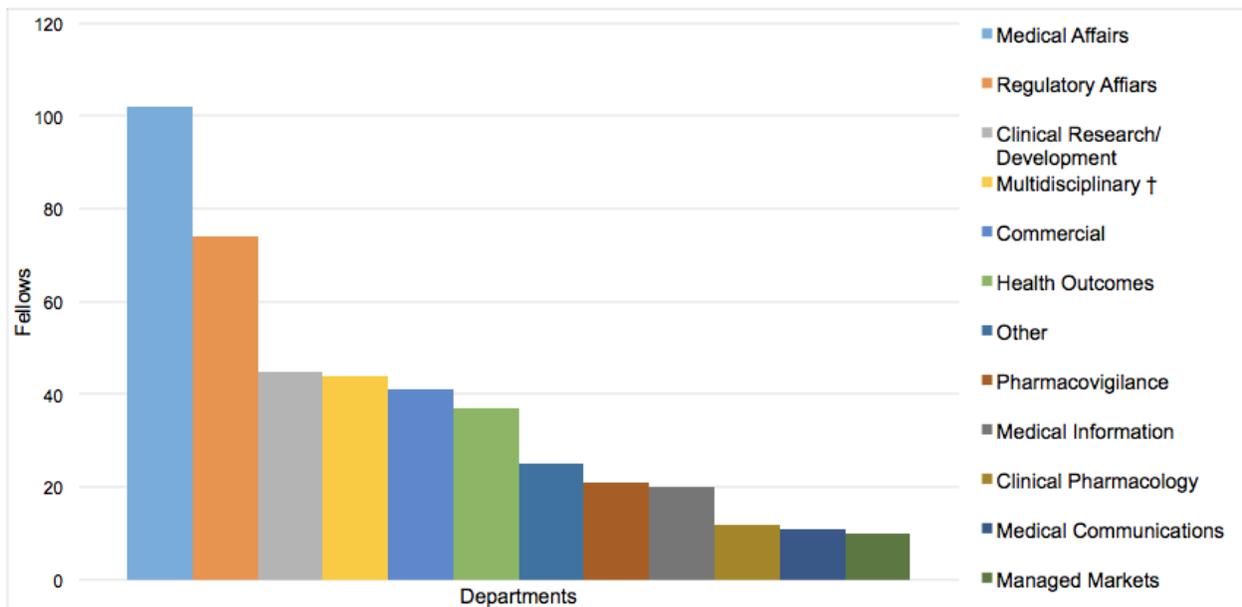
- A. Characterization of PharmD Fellows in 2017-18 Industry Fellowship Programs
 1. Fellows by Department/Functional Area
 2. Fellowship Sponsor Company
 3. Fellowship Program Affiliation
 4. Fellowship Program Duration
 5. Fellows' Alma Mater
- B. Four-Year Trends in Fellowship Positions
 1. Four-Year Trends in Number of Fellowship Positions
 2. Four-Year Trends in Fellowship Department/Functional Area
 3. Four-Year Trends in Fellowship Sponsor Company

Characterization of PharmD Fellows in 2017-18 Industry Fellowship Programs

1. Fellowship Department (Functional Area)

The top fellowship departments in 2017-18 are Medical Affairs (n=102) and Regulatory Affairs (n=74). In addition, many fellows are gaining experience in more than one functional area through multidisciplinary fellowships. These positions allow the fellow to rotate between different functional areas, which is beneficial because it provides an understanding of how different departmental functions collaborate with one another through multidisciplinary teams. This figure also demonstrates that PharmDs continue to be very well equipped to fulfill many different fellowship roles in the pharmaceutical industry.

Figure 1: Fellows by Department/Functional Area (n=442 Fellows)

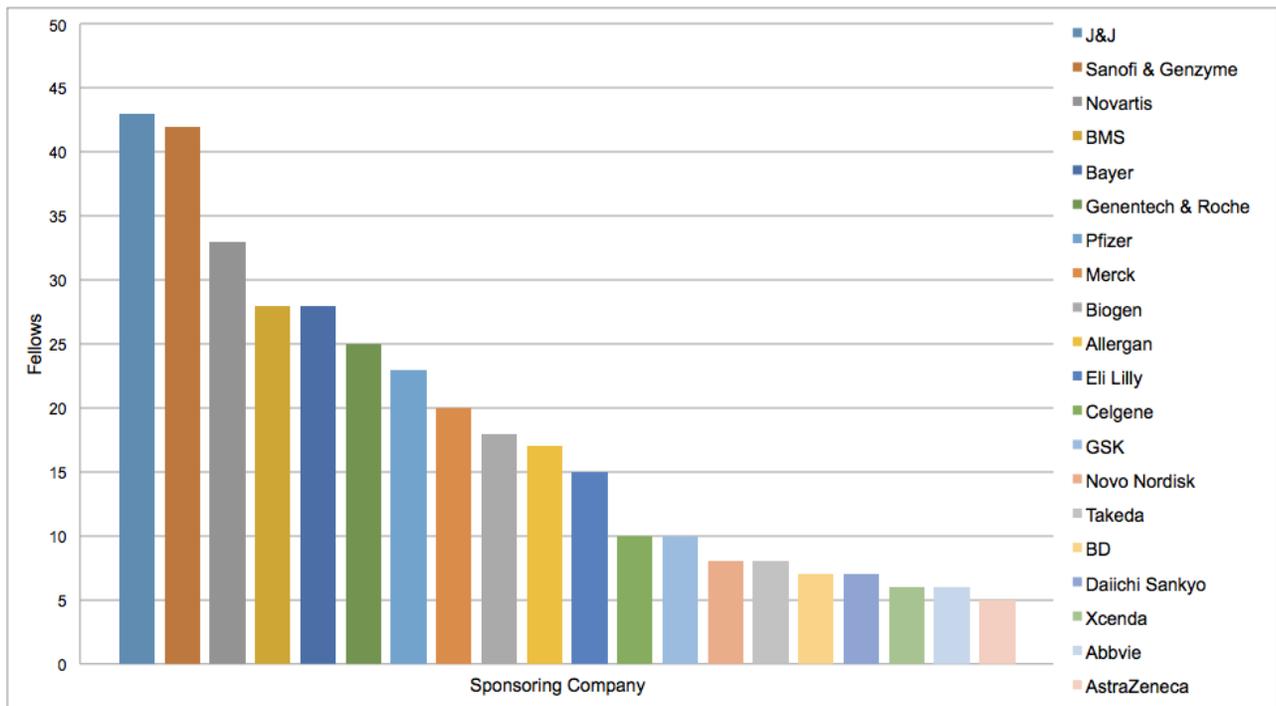


†“Multidisciplinary” includes fellows who gain experience in more than one department during their fellowship.

2. Fellowship Sponsor Company

Of the 50+ companies hosting fellowships, the top five companies were J&J (n=43), Sanofi/Sanofi Genzyme (n=42), Novartis (n=33), BMS (n=28), and Bayer (n=28). These companies have been hosting fellows for many years, and have increased the number of offerings during that time.

Figure 2: Fellows by Sponsor Companies*

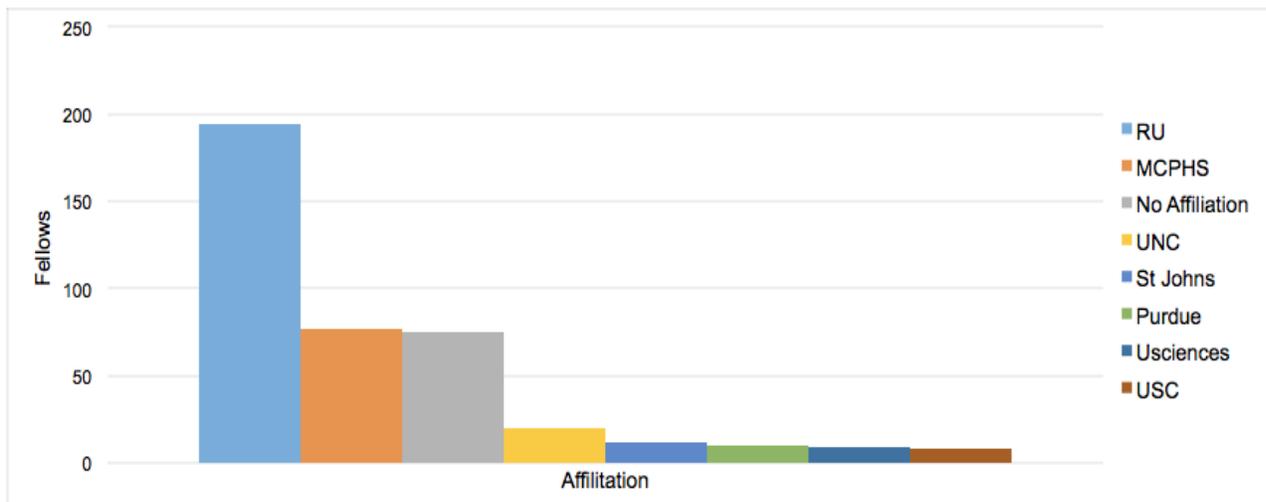


*The following sponsor companies were combined: Johnson & Johnson, McNeil and Janssen; Sanofi and Genzyme; Roche and Genentech; Abbreviations: J&J = Johnson & Johnson; BMS = Bristol-Myers Squibb; GSK = GlaxoSmithKline; BD = Becton Dickinson

3. Fellowship Program Affiliation

Overall, 83% of fellowship positions were offered through collaborations between two or more entities. The vast majority of positions offered through academic partners were Rutgers University (RU) (n=194) and MCPHS University (n=77). Together, the two employ over 60% of all current fellows. There was considerable growth in all program types in 2017-18 vs. 2016-17, including both affiliated and non-affiliated fellowships. Currently, 73 fellowship positions (17%) are offered through employers who do not have an affiliation with an academic institution. Possible reasons for this may include: monetary cost of affiliation, distance from affiliating university, significant time spent at academic institution away from the sponsor company, or a lack of sponsor interest in an academic affiliate. One of the largest non-affiliated fellowship programs is Eli Lilly & Company's Visiting Scientist Fellowship program (n=15).

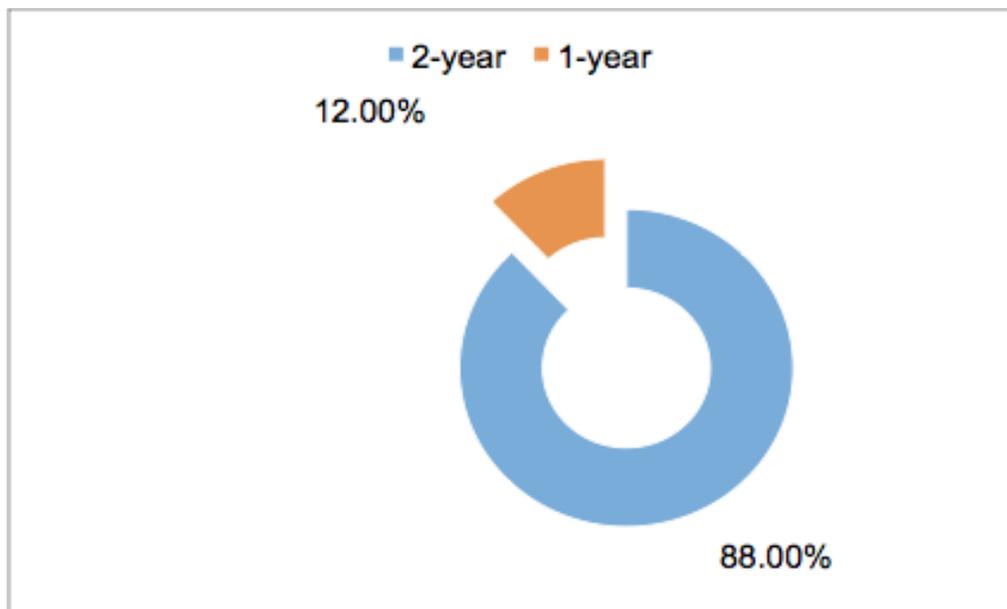
Figure 3: Fellowship Programs with an Academic or Non-Academic Affiliation (n=442 Fellows)



4. Fellowship Program Duration

Of the 442 fellows included in this study, 387 (88%) were in two-year programs versus 55 (12%) in one-year programs. Up to two years of experience is often necessary for a fellow to learn the pertinent skills required of a full-time employee. Two-year fellowships allow for greater opportunity to rotate through different functional areas. At the same time, one-year fellowships are advantageous because they allow the fellow to acquire experience concentrated in a single, preferred functional area.

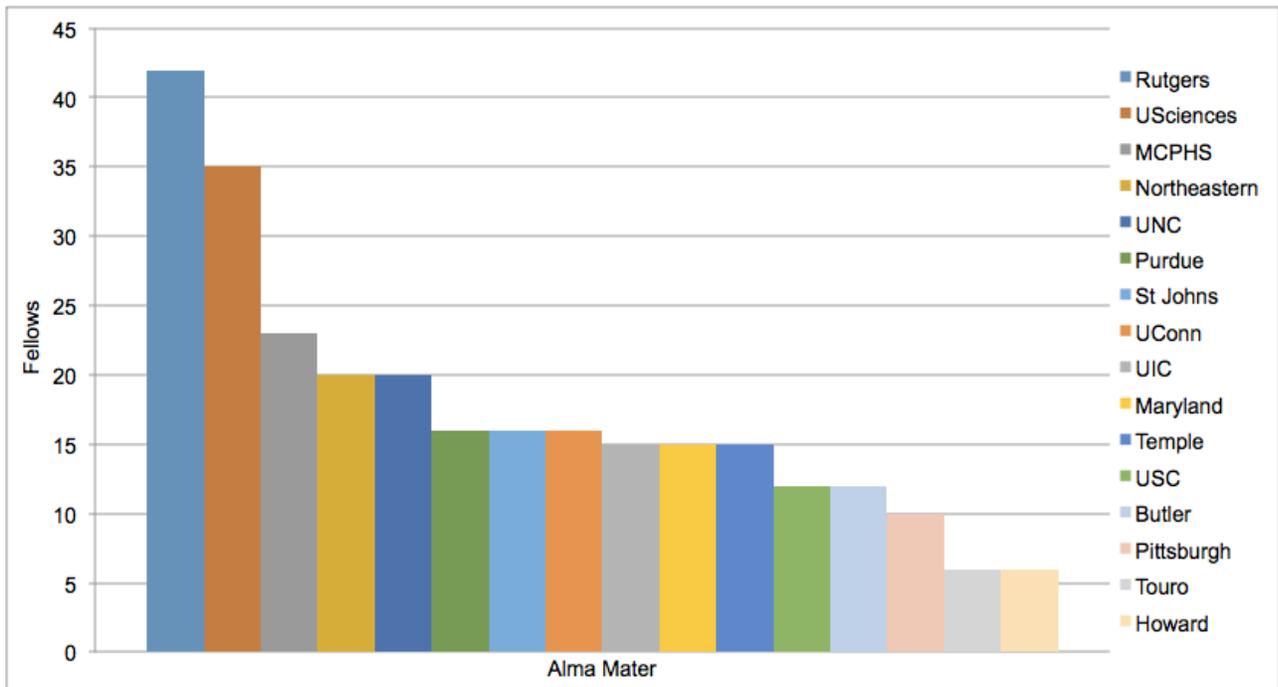
Figure 4: Fellowship Program Duration (n = 442 Fellows)



5. Fellows' Alma Mater

In 2017-18, over 80 different pharmacy school alma maters were represented among the 442 fellows. The most common alma mater was Rutgers University (n=42), followed by University of the Sciences in Philadelphia (n=35), MCPHS University (n=23), followed by Northeastern, UNC – Chapel Hill, and others.

Figure 5: Fellows' Alma Mater (n = 442 Fellows)



Four-Year Trends in Fellowship Positions

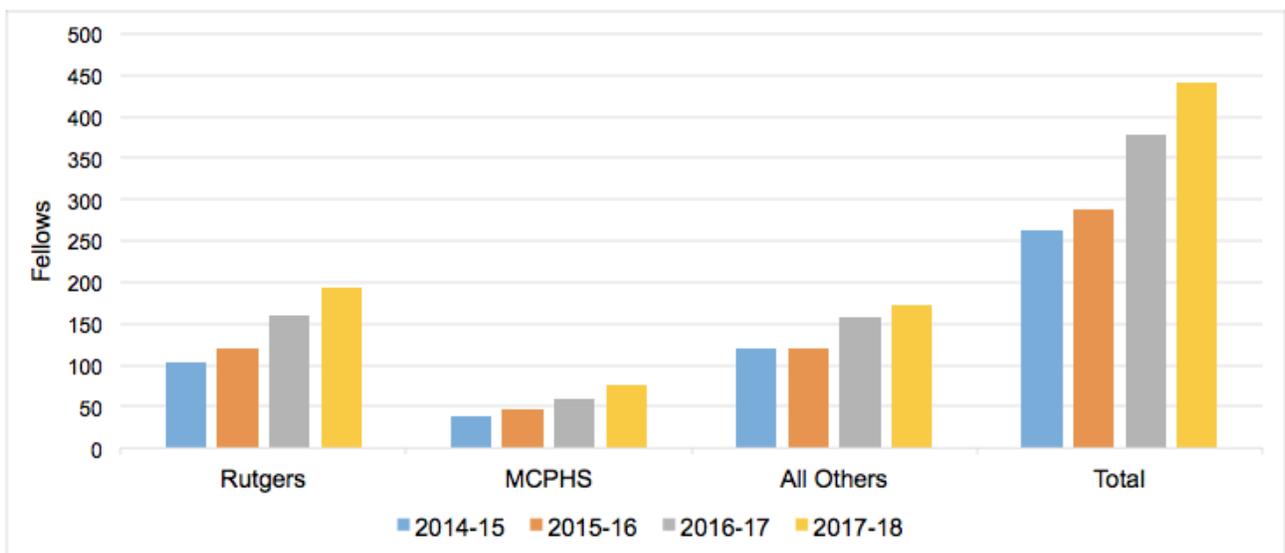
For four years, IPhO has collected data about industry fellowships and fellows and reported this data on an annual basis. Trends in key program metrics can be reported by comparing 2017-18 data with results of substantially similar analyses from with 2014-15, 2015-16, and 2016-17^{2,3,4}, producing four-year trended data depicted and described in this section.

IPhO has been collecting and reporting comprehensive data about industry fellowships and fellows annually for the past four years, making it possible to report trended data on key program metrics. Trends in key program metrics can be reported by comparing 2017-18 data with results of substantially similar analyses from with 2014-15, 2015-16, and 2016-17^{2,3,4}, producing four-year trended data described in this section.

1. Four-Year Trends in Number of Fellowship Positions

The combined total number of both academic and non-academic affiliated programs offered has grown an average of 24% annually since 2014-15. During this timeframe, both the Rutgers and MCPHS programs have been growing at about 30% per year. As in previous years, 2017-18 showed a substantial increase in fellowship programs and fellows across the industry, supporting the trend among employers finding value in sponsoring a PharmD fellow in various functional areas and enhancing their talent pipeline.

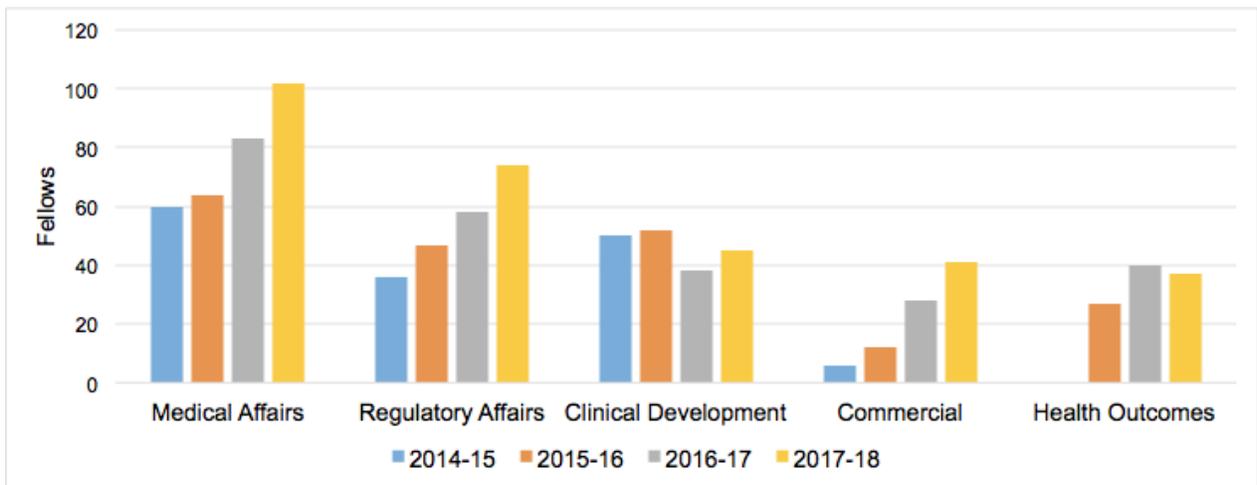
Figure 6: 4-Year Trend in Fellowship Positions Offered by Various Programs (n = 442 Fellows)



2. Four-Year Trends in Fellowship Department/Functional Area

There has been continued growth in the number of Medical Affairs (+70%) and Regulatory Affairs fellowship positions (>100%) since 2014-15. Commercially-focused fellowships have grown more than 4-fold during this timeframe, due to the growth of Market Access and other commercial functions. The total number of clinical development fellowships has remained relatively consistent since 2014-15. There was a slight decline in the number of Health Outcomes fellows in 2017-18, although there is still a notable presence of PharmDs entering this functional area through a fellowship program.

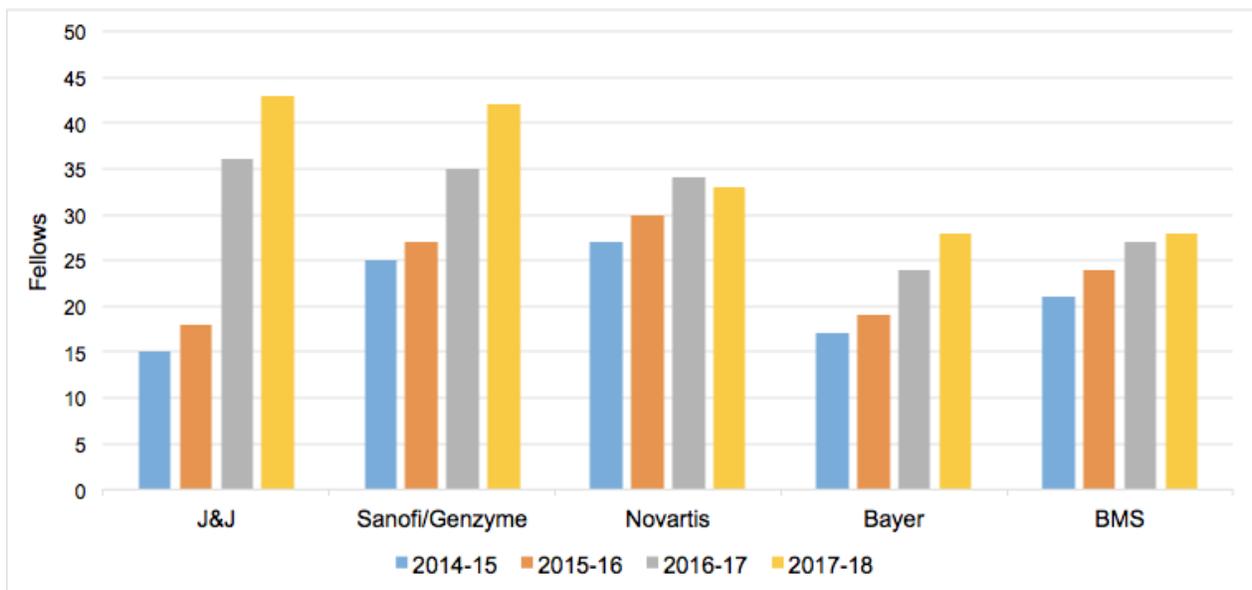
Figure 7: 4-Year Trend in Fellowship Positions by Department/Functional Area (n = 442 Fellows)



3. Four-Year Trends in Fellowship Sponsor Company

Since 2014-15, the companies depicted below have continued to sponsor the highest number of fellows. During this timeframe Johnson & Johnson (J&J) has shown an almost threefold increase in their offerings through a variety of fellowship affiliates. Sanofi/Sanofi Genzyme, Bayer, and BMS have steadily increased the number of fellowship positions offered. The company supporting the most fellowship positions has varied since 2014-15, but the top five companies have remained relatively constant. Overall, this data suggests that these companies have sufficient infrastructure to host large numbers of fellows, and they see the value in investing in the training of PharmD graduates for key roles within the pharmaceutical industry.

Figure 8: 4-Year Trend in Fellowship Positions Offered Through Various Sponsor Companies (n = 442 Fellows)



Limitations:

- Fellowship functional areas/departments were categorized at the discretion of the authors due to the variability in nomenclature across companies.
- A small number of inquiries were unanswered by fellows, resulting in a few incomplete data fields.
- Data collection was closed on October 1, 2017. Therefore, a small number of current fellows identified after this date are not included in this analysis.

Conclusions:

PharmD Industry Fellowships continue to grow across a wide variety of pharmaceutical companies and functional areas/departments. This growth is coming from both well-established and new fellowship programs.

Pharmaceutical employers continue to see the value that PharmD Industry Fellowships bring to the company, enhancing their talent acquisition and development strategies.

This fourth annual report provides all fellowship program stakeholders, including student pharmacists with an interest in applying to fellowship programs, with a better understanding of the current and trending landscape of PharmD Industry Fellowships.

This report will be conducted annually to provide current information about fellowship programs to future fellowship applicants as they consider the programs which best suit their career goals.

Resources:

1. Data on file, Industry Pharmacists Organization (IPhO)
2. Alexander JG, Strasburger S, Dipsia D. An Analysis of 2016-17 PharmD Industry Fellowships; 2016-2017.
www.industrypharmacist.org/resources_pub.php?type=scholarlypublications
3. Aslam U., Lee P., Alexander JG. An Analysis of 2015-16 PharmD Industry Fellowships; 2015-2016.
www.industrypharmacist.org/resources_pub.php?type=scholarlypublications
4. Jacob B., Allison Hart A., Formella D., McGann S., Alexander JG. An Analysis of 2014-15. Industry Fellowships and Related Experiences of PharmD Fellows; 2014-2015.
www.industrypharmacist.org/resources_pub.php?type=scholarlypublications