

Pharmaceutical Industry: Medical Science Liaison

Background

Pharmacists in industry are employed in a variety of positions. Although practice titles, descriptions, and prerequisites differ by company, the educational requirements for these positions are often similar. Most pharmacists in industry work in the following areas: research and development (addressed in a separate profile), all phases of drug product development, sales and marketing, corporate administration, all phases of clinical trials research, drug information, manufacturing, regulatory affairs, health policy, scientific/professional affairs (e.g., professional relations, professional education, medical science liaison [MSL; addressed in this profile], medical information), and quality control.

Many pharmacists go on to obtain postgraduate degrees to meet the technical demands and scientific duties required in the pharmaceutical industry. Pharmacists with an interest in clinical work can combine this interest with their scientific background in pharmacy by serving as liaisons. MSLs call on a variety of health care professionals to educate them on the uses, merits, and scientific data related to the products their firms produce. Experienced and successful MSLs with administrative and management abilities often rise to supervisory or executive posts in the pharmaceutical industry.

Pharmaceutical industry corporate facilities are located throughout the United States, although there is heavier geographic concentration in the Northeast (including Delaware, New Jersey, New York, and Pennsylvania), the Midwest (including Illinois and Indiana), the Mid-Atlantic (North Carolina), and the West Coast (California), where many biotechnology start-up firms are headquartered. However, most MSL positions are not at the corporate office and in fact are tied more closely to the constituents with whom they work: physicians, pharmacists, and nurses. Many companies have a different perspective of the roles for the MSL and they are often located in different divisions when looking from company to company. Some are within research and development, some in sales and marketing, and some in the corporate division.

MSLs in the pharmaceutical industry spend 30% of their time consulting and advising health care professionals. This is followed by 12% of their time spent on department management activities, 10% on teaching, 10% on research, and 10% on project management. Notably, they also listed that 12% of their time is spent in other activities not listed in the survey.

Characteristics

Twenty-four pharmacists responded to the 2007 *APhA Career Pathway Evaluation Program* survey. Slightly over three fourths (79%) of the respondents held an entry-level pharmacy degree, with 67% having a PharmD degree. Thirty-eight percent indicated an advanced degree (MA, MS, MBA, or PhD). Sixty-three percent had completed a residency program, 21% a fellowship, 25% had received certificate training, and 25% reported completing some form of other training.

Respondents' average age was 42 years old. More than half (52%) of the respondents were female. Income data show that none of the respondents earn less than \$100,000. Of this group, 21% indicated that they earn more than \$170,000 per year. The average time worked per week was 42 hours. Respondents represented 19 states.

The majority of respondents indicated that they were satisfied with their work, with 67% indicating "extremely satisfied" and 21% indicating "somewhat satisfied." Respondents related that their work was challenging, with 42% indicating "extremely challenging" and 42% indicating "somewhat challenging."

Insider's Perspective

What aspects of the job are most appealing?

Forty-two percent of the respondents indicated that the most appealing aspect of their work was the flexible scheduling. One respondent from Kentucky liked the "flexible time management." Another from Tennessee enjoyed the "autonomy and flexibility in work schedule."

Thirty-three percent of the MSLs felt that the most important aspect was interaction with thought leaders. A North Carolina pharmacist indicated liking the "interactions with leaders in clinical medicine." Another respondent from Massachusetts enjoyed "interacting with physicians and discussing cutting-edge science." Similarly, an MSL from Michigan enjoyed the "opportunity to discuss cutting-edge science with expert physicians and scientists."

What aspects of the job are least appealing?

In contrast to the most appealing aspects, 38% of pharmacists indicated that the travel portion was the least appealing aspect of their work. An MSL from Illinois highlighted the "occasional heavy travel" as a least appealing aspect of the position.

Another 13% of respondents discussed how peers view their working for the pharmaceutical industry. An MSL from Kentucky expressed concern about some "peers' views of pharmaceutical industry." This was supported by comments from a pharmacist in Washington who stated that "some folks consider working for the industry 'selling out,' which is NOT true."

What advice should students and practitioners consider when selecting the option of working in the pharmaceutical industry as a medical science liaison?

The most important factor cited by respondents was to understand that most MSL positions rely on previous work experience. A respondent from Florida put it this way, "First get clinical education and experience with presentation skills, then look to the MSL position." This was supported by a colleague from Michigan who stated, "One needs clinical experience before entering into industry to be most effective with international experts."

Critical Factor Ratings

Interaction With Patients

Respondents have very limited patient interaction. This depends somewhat on the role that the MSL has and whether it involves working with national patient groups as well as physicians and health care professionals.

$$= 3.3$$
$$\sigma = 2.5$$



Conducting Physical Assessments

A resounding 100% of the respondents indicated that they spend no time conducting physical assessments.

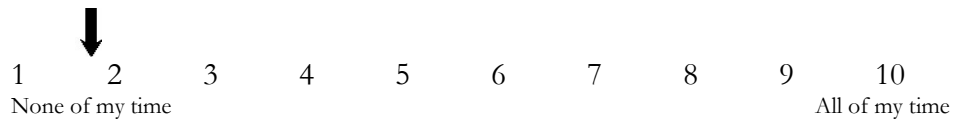
$$= 1.0$$
$$\sigma = 0.0$$



Interpreting Laboratory Values

MSL pharmacists spend little to no time interpreting laboratory values. Some pharmacists may engage in this activity as part of their responsibilities when working with practitioners to help them understand what laboratory measures should be taken when treating patients with particular products.

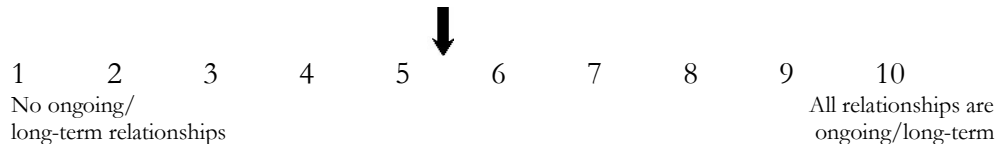
$$= 1.8$$
$$\sigma = 1.2$$



Continuity of Relationships

MSLs in the pharmaceutical industry will get to know other health care professionals on an ongoing basis. This holds especially true for the MSL who calls upon a set group of health professionals. Relationship building plays an important role in successfully carrying out these jobs, as well as in developing good public relations.

$$= 5.4$$
$$\sigma = 3.8$$



Helping People

Although respondents have little to no patient contact, they do impact patient care. Indeed, the results of the discussions with thought leaders may have an even greater impact on patient care than working one-on-one with individual patients. Therefore, MSLs are involved with activities that more indirectly help people, including patient/product outcomes studies, educating other health professionals on pharmacoeconomic data, and working with consumer advocacy groups to ensure access to pharmaceutical products.

= 2.0
 $\sigma = 1.8$



Collaboration With Other Professionals

Collaboration with other professionals ranks on the upper end of the scale among MSL pharmacists as noted by the high range 8.4 rating for this factor, which is the highest rating across all profiles.

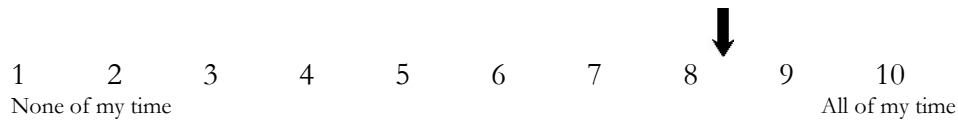
= 8.4
 $\sigma = 1.7$



Educating Other Professionals

As with the above factor, MSL respondents rated educating other professionals the highest across the entire survey and all profiles with an 8.3 rating. One of the main roles of the MSL is to present information from a science perspective that provides greater insight into the use of medications for a therapeutic area. Respondents spend time sharing new information and research with physicians, nurses, pharmacists, and others.

= 8.3
 $\sigma = 1.9$



Variety of Daily Activities

MSL pharmacists are involved in a variety of daily activities such as meetings, writing, professional reading, travel, presentations, and various other functions.

= 8.0
 $\sigma = 1.9$



Multiple Task Handling

MSL pharmacists are used to handling multiple tasks. The variety of work activities they are engaged in require them to multitask most of the time. These pharmacists must juggle many responsibilities.

= 8.0
 $\sigma = 2.1$



Problem Solving

Problem solving is an important element in the role of an MSL. Resolving problems can enhance long-term relationships with both internal and external clients. These positions provide pharmacists the opportunity to try untested solutions when the tried and true may not work.

= 6.7
 $\sigma = 1.6$



Focus of Expertise

Most pharmacists in industry say their pharmacy training and background is crucial to effective performance in their careers. MSL pharmacists tend to be specialized across therapeutic areas, however they also specialize in other areas of interest to the industry such as pharmacoeconomics.

= 8.0
 $\sigma = 2.4$



Innovative Thinking

Innovative thinking or new ideas are important components of working with thought leaders and other health care professionals. Creating new and better ways to communicate information to consumers, other health professionals, and media about product advances requires creativity. MSL pharmacists engage in this type of thinking most of the time reflected by the high range 7.9 rating.

= 7.9
 $\sigma = 1.7$



Management/Supervision of a Business

Supervising and managing a business was ranked lower than the above factor because MSLs tend not to spend a great deal of time managing the business.

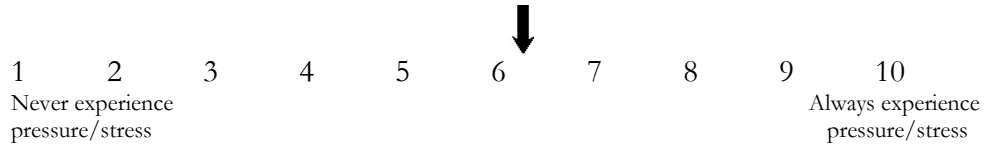
= 4.5
 $\sigma = 3.2$



Pressure/Stress

Often, pharmacists are pressured to handle many projects and responsibilities at one time and those in the industry are no exception. MSLs have to balance the needs of the health care professionals they work with and complete the variety of tasks related to their workload.

= 6.2
 $\sigma = 2.0$



Work Schedule

MSLs indicated that they tend to have more irregular and unpredictable hours. At times they have to change their plans in response to the needs of others who request their services.

= 4.4
 $\sigma = 2.5$



Part-Time Opportunities

Because of the long-term relationships they try to establish and the need to develop ongoing relationships in most MSL positions, part-time opportunities are very limited.

= 1.9
 $\sigma = 1.6$



Job-Sharing Opportunities

Similar to the above factor, job-sharing is very limited for MSLs.

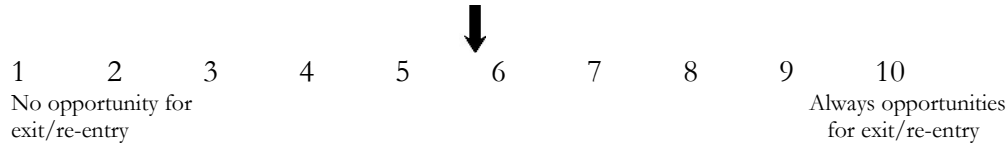
= 1.9
 $\sigma = 1.7$



Exit/Re-entry Opportunities

Exit/re-entry opportunities are mid-range in this practice environment. MSL pharmacists rated this factor at the 5.8 level. The sticking point is whether the same territory and position will still be available when seeking re-entry.

= 5.8
 $\sigma = 3.2$



Parental Leave Opportunities

MSL respondents rated this factor at 8.1. Considering many are employed by larger organizations, parental leave is a benefit that is typically offered.

= 8.1
 $\sigma = 2.7$



Leisure/Family Time

Respondents rated this factor at 7.5, indicating that they have opportunities for free time.

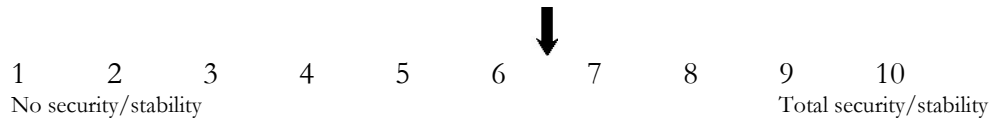
= 7.5
 $\sigma = 2.3$



Job Security

With so many mergers and consolidations in the industry, consideration must be given to the security of the MSL positions. The MSL pharmacists responding to the survey rated job security a mid-range 6.5.

= 6.5
 $\sigma = 1.6$



Opportunities for Advancement

Pharmacists agree that the industry offers a great opportunity to advance one's career. MSL pharmacists can move into regional or district positions or move in-house to the corporate office. Advancement opportunities vary from company to company, depending on their size and needs.

= 7.0
 $\sigma = 2.1$



Opportunities for Leadership Development

Leadership development opportunities are very available within the industry as reflected by the very high rating of 8.0. Developing highly refined communications and presentation skills are critical for many pharmaceutical industry positions, including the MSL.

= 8.0
 $\sigma = 1.6$



Community Prestige

The MSL pharmacist tends toward the lower end of the rating scale for community prestige of all profiles at 4.9. Perhaps some of this is because many work from their homes and cannot build upon the company's local community prestige.

= 4.9
 $\sigma = 2.6$



Professional Involvement

In contrast to the above factor, MSL pharmacists rated professional involvement as tied for the second-highest rating in the profile. Often pharmacists in industry are called upon to share their knowledge of product studies and outcomes research with other pharmacists. These pharmacists have the opportunity to get involved at many levels in the profession.

= 9.0
 $\sigma = 1.2$



Income

Tied for the second-highest rating in the profile, income was rated at 9.0 by the MSL respondents.

= 9.0
 $\sigma = 1.7$



Benefits (vacation, health, retirement)

Rated the highest across all profiles and highest in this profile, MSL pharmacists rated their benefits in the high range at 9.5. Benefits often go hand in hand with income and pharmacists in industry have very good benefit packages. A key difference in benefit packages within the industry may be the availability of stock options and other bonuses.

= 9.5
 $\sigma = 0.8$



Geographic Location

Another highest ranking across all profiles and tied for the second highest in this profile, MSL pharmacists rated their ability to work just about anywhere with a 9.0.

= 9.0
 $\sigma = 1.6$



Autonomy

Pharmacists who hold MSL positions tend to work independently, scheduling their appointments and carrying out most of their responsibilities with little to no direct supervision. Overall, pharmacists in industry feel they have great autonomy in their work.

= 8.0
 $\sigma = 1.3$



Advanced Degree

More often than not, an advance degree helps to be successful in the pharmaceutical industry. MSL pharmacists indicated that an advanced degree is required, although this may be company specific as some companies require advanced degrees while others do not.

= 8.4

$\sigma = 2.5$

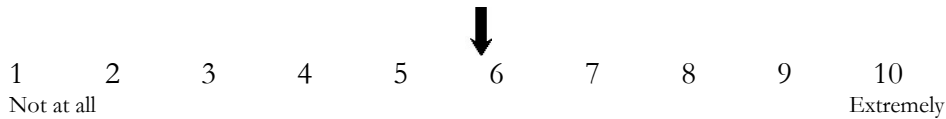


Entrepreneurial Opportunity

Ranked mid-range at 5.9, respondents feel they have some entrepreneurial opportunity. Opportunities vary by position and company as well as where the MSL group is located within the company.

= 5.9

$\sigma = 2.8$



Additional Training

Tied for the second-highest rated factor for this profile, MSL pharmacists scored additional training at 9.0. New scientific knowledge from many areas is important to keep up with these positions.

= 9.0

$\sigma = 2.3$

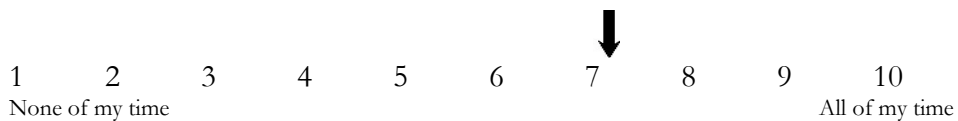


Interacting With Colleagues

Considering the type of work that is required by the MSL, it is not uncommon for these pharmacists to interact with many different colleagues in a given day.

= 7.1

$\sigma = 2.2$



Travel

Ranked the highest across all profiles in the survey at 7.4, MSL pharmacists indicate that they have the most travel requirements of any other group. While some listed this as a least appealing aspect, others enjoy the opportunity. What is important to realize is that the travel requirements depend on the territory and therapeutic area in which the MSL specializes.

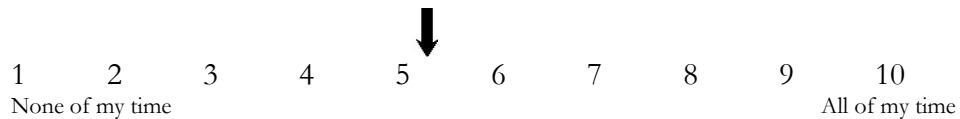
= 7.4
 $\sigma = 1.4$



Writing

Respondents indicate that they have a need for writing in their work. Progress reports are just one of many reports that are necessary when working with thought leaders and coordinating activities with others in a company. Additionally, departments tend to request activity reports to help look at financial considerations for the budgets that they distribute within the MSL group.

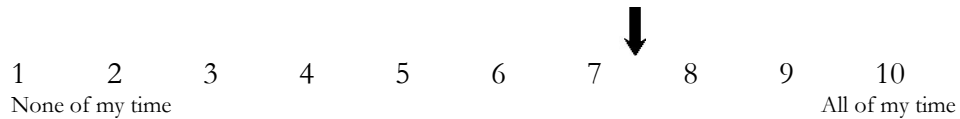
= 5.2
 $\sigma = 2.2$



Working With Teams

Respondents indicated that they work in teams most of the time. This is not surprising when one takes into account some of the factors mentioned earlier regarding interaction with colleagues.

= 7.4
 $\sigma = 2.0$



“On Call”

Respondents indicated that they have little, if any, “on call” responsibilities.

= 1.5
 $\sigma = 1.0$



Work on Holidays

MSL pharmacists rarely, if ever, work on holidays.

= 1.2
 $\sigma = 0.4$



Work on Weekends

Respondents indicated that they occasionally work on weekends. For many, this is the time when they attend national meetings.

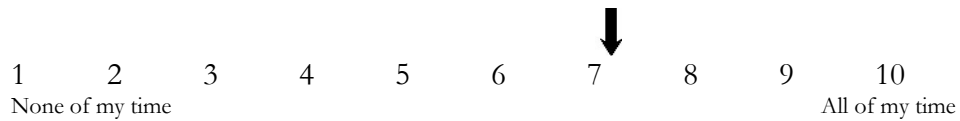
= 3.2
 $\sigma = 1.4$



Presentations

Respondents indicated that they spend time giving presentations. These can include internal presentations for their own department, presentations for physicians and thought leaders, and presentations at national meetings. Significantly, this is one of the most critical aspects of an MSL position.

= 7.1
 $\sigma = 1.9$



Mean Scores for Critical Factors

1. Interaction With Patients	3.3
2. Conducting Physical Assessments	1.0
3. Interpreting Laboratory Values	1.8
4. Continuity of Relationships	5.4
5. Helping People	2.0
6. Collaboration With Other Professionals	8.4
7. Educating Other Professionals	8.3
8. Variety of Daily Activities	8.0
9. Multiple Task Handling	8.0
10. Problem Solving	6.7
11. Focus of Expertise	8.0
12. Innovative Thinking	7.9
13. Applying Scientific Knowledge	8.9
14. Applying Medical Knowledge	8.9
15. Creating New Knowledge by Conducting Research	5.1
16. Management/Supervision of Others	3.7
17. Management/Supervision of a Business	4.5
18. Pressure/Stress	6.2
19. Work Schedule	4.4
20. Part-Time Opportunities	1.9
21. Job-Sharing Opportunities	1.9
22. Exit/Re-entry Opportunities	5.8
23. Parental Leave Opportunities	8.1
24. Leisure/Family Time	7.5
25. Job Security	6.5
26. Opportunities for Advancement	7.0
27. Opportunities for Leadership Development	8.0
28. Community Prestige	4.9
29. Professional Involvement	9.0
30. Income	9.0
31. Benefits (vacation, health, retirement)	9.5
32. Geographic Location	9.0
33. Autonomy	8.0
34. Self-Worth	8.4
35. Future Focus	7.8
36. Professional Prestige	6.0
37. Unique Practice Environment	7.5
38. Advanced Degree	8.4
39. Entrepreneurial Opportunity	5.9
40. Additional Training	9.0
41. Interacting With Colleagues	7.1
42. Travel	7.4
43. Writing	5.2
44. Working With Teams	7.4
45. "On Call"	1.5
46. Work on Holidays	1.2
47. Work on Weekends	3.2
48. Presentations	7.1

Reference

Schommer JC, Brown LM, Sogol EM. *Career Pathway Evaluation Program 2007 Pharmacist Profile Survey*. June 2007.

Professional Organizations

Accreditation Council for Pharmacy Education (ACPE)
20 North Clark Street, Suite 2500, Chicago, IL 60602
Tel: 312-664-3575 Fax: 312-664-4652
www.acpe-accredit.org

American Association of Pharmaceutical Scientists (AAPS)
2107 Wilson Blvd., Suite 700, Arlington, VA 22201
Tel: 703-243-2800 Fax: 703-243-9650
www.aaps.org

American Foundation for Pharmaceutical Education (AFPE)
One Church Street, Suite 202, Rockville, MD 20850
Tel: 301-738-2160 Fax: 301-738-2161
www.afpenet.org

American Pharmacists Association (APhA)
1100 15th Street NW, Suite 400, Washington, DC 20005
Tel: 800-237-APhA Fax: 202-783-2351
www.pharmacist.com

National Pharmaceutical Association (NPhA)
107 Kilmayne Drive, Suite C, Cary, NC 27511
Tel: 800-944-NPhA Fax: 919-469-5870
www.npha.net

Pharmaceutical Research and Manufacturers of America (PhRMA)
950 F Street NW, Washington, DC 20004
Tel: 202-835-3400 Fax: 202-835-3429
www.phrma.org

NOTE: For further pharmacy organization information, please visit the American Association of Colleges of Pharmacy Web site at www.aacp.org and click on the “Related Pharmacy Organizations” link.