Merck Collaboration Advances Diversity, Equity, and Inclusion Field-Based Advanced Pharmacy Practice Experience (APPE) Rotation

Saira Chaudhry, PharmD, MPH, BCIDP; Terreia Jones, PharmD; Julianna Roddy, PharmD BCOP; Ashley Glode, PharmD BCOP; Daniel Tjioe, PharmD; Joseph Cameron, PharmD, BCPS; Levita Hidayat, PharmD, BCIDP; Boris Nogid, PharmD, MBA; Kévin Byrne, PharmD; Patrick Clay, PharmD Merck & Co., Inc., Rahway, NJ, USA

Background

The profession of Pharmacy Practice is quickly transitioning from compounding and dispensing to more direct-patient care and providing treatments for specific populations. This shift is creating more career opportunities and increasing the demand for pharmacists in the Pharmaceutical Industry. Medical Affairs is one such department where pharmacists play a key role.1 This is a unique department within a life sciences company that focuses on communications between the company and medical professionals, health care providers, and patients.2 Professionals within Medical Affairs provide balanced, factual, and scientific information about therapeutic areas of interest to scientific leaders and key decision makers. They are the liaison of the company to conduct scientific exchange, discuss clinical trials and real world evidence, and provide scientific congress support.

As the need for Medical Affairs support continues to expand, it is necessary to expose pharmacy students to the various roles within Medical Affairs. In 2021, as part of a Diversity, Equity, and Inclusion (DE&I) initiative, a Merck US Medical Affairs (USMA) field-based Working Group (WG) was created to develop an APPE program for pharmacy students at Xavier University. The WG developed objectives and essential resources for the rotation. Based upon external and internal feedback, the program was expanded to include another Minority Serving Institution (MSI), Howard University. The program continues to gain interest from pharmacy students, Colleges of Pharmacy, and USMA colleagues. This study was conducted to describe the unique USMA field-based APPE rotation established at Merck and to assess the students' rotation experiences for potential future improvement.

Objectives

- Establish a unique USMA field-based APPE rotation program for MSIs
- Provide exposure to various roles available to pharmacists in the pharmaceutical industry
- Develop resources to assess the students' rotation experiences for program improvement
- Expand to additional MSIs of pharmacy to provide an introduction to USMA career opportunities

Methods

The USMA APPE Program established a WG that includes two Program Leads (a Team Lead and an Executive Director) and 43 field-based preceptors from various therapeutic areas and roles; Regional Medical Scientific Directors (RMSD), Health System Medical Affairs Directors (HS-MAD), and Health System Oncology Medical Affairs Directors (HSO-MAD).

WG Activities

- Met biweekly to develop rotation materials and capabilities that would extend across the USMA field-based teams
- The team included individuals with extensive experience in the clinical setting/academia and across various therapeutic areas
- Pre- and post-rotation evaluations were created to assess student experience and development at completion of rotation
- Continued active recruitment of new preceptors within individual teams
- Developed program playbook to support preceptors during their rotation

Student evaluations

- Student feedback on their rotation experience was captured by pre and post evaluations
- Evaluations were developed to assess baseline understanding of the Pharmaceutical Industry and long-term goals

Pre- and post-evaluation statements

I can list five activities of a Medical Affairs Organization.

I can name two resources to use to learn about the medical affairs roles.

I can effectively communicate the difference between scientific, health systems, and medical information roles.

I know the best resource to confirm on-label versus off-label use of a pharmaceutical product.

I can name two key elements of a scientifically balanced pharmaceutical drug presentation.

I can list three mechanisms of support that Merck provides medical affairs professionals to maintain therapeutic area knowledge excellence.

I can describe two key elements that increase the likelihood for a successful scientific discussion with thought leaders (ie, scientific exchange).

I can effectively communicate an example of a career path to becoming a Merck medical science liaison or health system director.

I am able to describe the relationship between the clinical trials organization and medical science directors/liaisons.

Student experience

• Students were exposed to three unique field-based experiences during their 5- or 6-week rotations, participated in multiple 1:1 discussions with various field-medical colleagues, shadowed appropriate external stakeholder engagements (after the required training), developed projects over the course of the rotation, and presented projects to a diverse USMA audience at the end of their rotation

Results

In 2023, USMA APPE Program Leads identified 43 USMA field-based colleagues interested in precepting students. Fifteen were selected to precept five students based on availability and academic experience (Table 1). Two Xavier University pharmacy students were assigned to 6-week rotation blocks and three Howard University students were assigned to 5-week rotation blocks.

Table 1. Rotation blocks and preceptor diversity

Student 1 (Howard Univ)	Student 2 (Howard Univ)	Student 3 (Howard Univ)	Student 4 (Xavier Univ)	Student 5 (Xavier Univ)
Thoracic oncology RMSD	Virology RMSD	Virology RMSD	ID/PV RMSD	Heme RMSD
Heme RMSD	GU oncology RMSD	HSO-MAD	HS-MAD	HSO-MAD
Virology RMSD	Thoracic oncology RMSD	Heme RMSD	ID/PV RMSD	CV RMSD

Evaluation feedback

The evaluation results show that students had an improvement in understanding the difference between scientific, health systems, and medical information roles in addition to an improved knowledge of the clinical trials organization, key medical affairs resources, and delivering scientifically balanced presentations.

Student presentations given at the end of rotation

- 1. COVID-19 therapy monograph
- 2. CMV neutropenia
- 3. CAR-T therapy: Barriers and access to care
- 4. Barriers of DE&I in clinical trials and how to overcome these issues
- 5. mRNA-Based Individualized Neoantigen Therapies for Cancer

Evaluation questions	Pre-rotation	Post-rotation
I can list five activities of a Medical Affairs organization.	25% 25% 50%	25% 75%
I can effectively communicate the difference between scientific, health systems, and medical information roles.	25% 25% 50%	25% 75%
I can name two key elements of a scientifically balanced pharmaceutical drug presentation.	25% 25% 50%	25% 50% 25%
I can list three mechanisms of support that Merck provides medical affairs professionals to maintain therapeutic area knowledge excellence.	25% 25% 50%	25% 50%
I am able to describe the relationship between the clinical trials organization and medical science directors/liaisons.	25% 50% 25%	25% 25% 50%

Strongly agree Agree Disagree Strongly disagree Neutral

Table 2. Select student feedback

Evaluation Questions

your perception on the role of pharmacists within the pharmaceutical industry?

How has this rotation changed "I cannot say that the rotation changed my perception of pharmacist role in industry but the rotation is a really great insight on the roles and responsibilities of RMSDs and HS-MADs which I truly enjoyed. I like that the role is heavy in building relationships with scientific leaders as well as a collaborative conversation versus grand presentations on a daily basis. I like that it's virtual for the benefit of having flexibility, but I like that there are times that there are in-person meetings. I also like that pharmacists have the opportunity to attend scientific conferences."

Please share any additional feedback about the rotation experience and/or structure that you believe was very helpful or useful.

"I also enjoyed shadowing my preceptor's meetings because it gave me the opportunity to see first-hand how their meetings are conducted internally with their Merck teams and externally with scientific leaders. I enjoyed seeing my preceptors partner with other Merck scientists to conduct talks with scientific leaders. I had the opportunity to talk with current fellows, which I believe was a great introduction to the importance of networking as well as getting more information on a fellow's experience with their fellowship."

Conclusions

This novel industry rotation opportunity was successful on multiple levels. Students were exposed to a variety of unique areas where pharmacists play a crucial role in the Pharmaceutical Industry. They gained knowledge and experience in an industry setting which few students from MSIs are afforded. The pre- and post-rotation evaluations demonstrated that students gained an expanded understanding of the various roles within the Pharmaceutical Industry. This rotation provides a unique opportunity for bridging the gap from academic to professional practice in the Pharmaceutical Industry. For next steps, the USMA APPE Program is expanding to additional MSI Schools of Pharmacy starting in the fall of 2024.

References:

1. Bastow S, Greszler C. Am J Pharm Educ. 2024;88(4):100687.

2. ACMA. What is Medical Affairs? Medical Affairs Essentials. Blog. https://www.medicalaffairsspecialist.org/blog/whatis-medical-affairs. Accessed June 5, 2024.

Contact Information

Saira Chaudhry, Saira.Chaudhry@merck.com; Boris Nogid, Boris.Nogid@merck.com

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