

## Letter to the Editor

# The infectious diseases pharmacist: An essential partner for health-system leadership in keeping pace with the coronavirus disease 2019 (COVID-19) pandemic

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*To the Editor*—The coronavirus disease 2019 (COVID-19) pandemic has caused healthcare systems to rapidly create and evolve treatment pathways to keep pace with the ever-changing variants in circulation, available therapeutics, emerging clinical data, and national guideline recommendations. In coordinating efforts to address this challenge, interdisciplinary collaboration has been fundamental and a new partner for disaster preparedness and response has emerged: the infectious diseases pharmacist.

Although interaction with senior medical leadership beyond intermittent reporting on antimicrobial stewardship program (ASP) outcomes is not routine, through experience and training infectious diseases pharmacists are well suited to serve as a proverbial “evidence-based wingman.”<sup>1–3</sup> The purpose of this letter is to discuss the evolving role of the infectious diseases pharmacist by describing how integration into a health-system’s COVID-19 response led to expedited adoption of evidence-based practices and expansion of the stewardship program. This research was determined not to be human research by the local institutional review board.

Baptist Health South Florida (BHSF) includes 12 hospitals (2,874 cumulative beds), 2 cancer centers, and >100 outpatient facilities (eg, urgent care, express care, primary care, ambulatory surgical centers, and infusion centers). In 2019, BHSF hired their first clinical enterprise pharmacist manager for antimicrobial stewardship; the timing was fortuitous as the COVID-19 pandemic approached. In working with an interdisciplinary group to create evidence-based guidelines and order sets for the management of COVID-19, leadership quickly enabled their ASP manager to routinely give status updates at stakeholder meetings, including a weekly Chief Medical Officer (CMO) Ad Hoc Council call.

The method for obtaining the information for CMO presentations included running internal reports, routinely monitoring key internet webpages, using WhatsApp chat groups with colleagues, and following prominent infectious diseases accounts

on Twitter. To characterize the volume of information collected and delivered to the CMOs, presentations delivered between October 5, 2020, and February 14, 2022, were analyzed. A summary of the findings is provided in Table 1. Overall, 71 presentations, >1,000 items were presented, including peer-reviewed articles, variant surveillance data, press releases, Food and Drug Administration releases, National Institute of Health updates, emergency use authorization (EUA) updates, internal drug utilization trends, system COVID-19 therapeutic optimizations (eg, creation or edits of electronic order sets and workflows). Information filtered up and down from CMO calls to the board of directors, C-suite officers, executive vice presidents, physician specialty councils, employee town halls, and community group presentations. This work kept stakeholders informed on emerging trends and contributed to rapid acceptance of system changes based on the most current scientific evidence.

One example of system change comes from treatment of mild-to-moderate COVID-19 with monoclonal antibodies (MABs), of which >18,800 courses have been administered by BHSF through August 2022. The use of bamlanivimab began in November 2020, with a switch to bamlanivimab-etesevimab in March 2021, then to casirivimab-imdevimab in April 2021, then to sotrovimab in January 2022, and most recently to bebtelovimab in April 2022. As the leadership was routinely appraised on MAB activity based on regional circulating variant prevalence, the system was able to rapidly adapt and change products to provide patients with the best option available well before an EUA was revoked for lack of effectiveness. Continuous communication of evidence additionally allowed for development and maintenance of MAB order sets leading to streamlined documentation and supported EUA compliance.

A second area where evidence of impact can be observed is by the utilization frequency of the system’s evidence-based COVID-19 order sets. The urgent care center, emergency department, and admission COVID-19 order sets were activated >40,000 times through July 2022. Non-MAB treatment order sets (eg, remdesivir, tocilizumab, baricitinib, nirmatrelvir/ritonavir, molnupiravir) were activated >18,000 times through July 2022. Keeping pace with the leading edge of the science so that providers find the order sets useful is made possible by the engagement and awareness of medical leadership, who provided authority to the

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**Cite this article:** Gauthier TP, et al. (2023). The infectious diseases pharmacist: An essential partner for health-system leadership in keeping pace with the coronavirus disease 2019 (COVID-19) pandemic. *Infection Control & Hospital Epidemiology*, 44: 520–521, <https://doi.org/10.1017/ice.2022.248>



**Table 1.** Summary of Content Presented to System Leadership by an Antimicrobial Stewardship Pharmacist

Variable	Total
Timeline of analysis	10/5/2020–2/14/2022
Medical leadership presentations, no.	71
Approximate time spent presenting	11 hours, 50 minutes
Slides presented, no.	1,243
<b>Categorized items, no.</b>	
Peer-reviewed articles on SARS-CoV-2 (therapeutics)	199
Press releases	132
Internal drug utilization trends	107
Peer-reviewed articles on SARS-CoV-2 (vaccines)	115
Variant-related data	126
Peer-reviewed articles on SARS-CoV-2 (Other)	89
System COVID-19 therapeutic optimizations	85
FDA releases	51
NIH COVID-19 guideline updates	41
EUA updates	41
CDC COCA call content	20
Antimicrobial stewardship content	18
Total items presented	1,024

Note. CDC, Centers for Disease Control and Prevention; COCA, clinician outreach and communication activity; EUA, emergency use authorization; FDA, Food and Drug Administration; NIH, National Institutes of Health.

infectious diseases pharmacist to own the process of developing and implementing order-set updates. This work has been performed collaboratively with stakeholders from nursing, case management, and others.

Third, the health system has supported opening full-time equivalents for 5 additional infectious diseases pharmacists and 1 infectious diseases pharmacy resident during the pandemic. In a time when additional resources required significant justification, leadership identification and comfort with the value of these positions were critical for their creation. Although plans were made to expand the ASP prior to the pandemic, it is highly unlikely that this magnitude of expansion could have been achieved.

Although COVID-19 has caused a tremendous amount of pain and suffering, the elevation of the infectious diseases pharmacist to a more visible role may be a silver lining. The pandemic has afforded the opportunity to establish new relationships, build trust, demonstrate value, and work to expand programs that optimize

patient care across the healthcare landscape. Stevens et al<sup>4</sup> identified the importance of an “all hands-on deck” approach to COVID-19, emphasizing partnership between infection prevention and control and antimicrobial stewardship. Nori et al<sup>5</sup> endorsed the role of the ASP in taking a central role in navigating pandemic response, discussing the need for increased visibility and new mechanisms for communication and collaboration.<sup>5</sup> Mazdeyasna et al<sup>6</sup> as well as Pierce et al<sup>7</sup> have discussed how ASPs can be leaders in interpreting and communicating data while supporting a sustainable COVID-19 response. Our experiences reported here align with these opinions, moving from principle to practice by providing objective evidence that supporting infectious diseases pharmacists at the highest level can drive meaningful practice changes.

**Acknowledgment.** We acknowledge Erika Gonzalez, MSN, RN, CCRN, NE-BC, for her contributions to power plan deployment and maintenance. We acknowledge Milly Selgas RN, MSN, MBA, for her contributions to the COVID-19 monoclonal antibody workflow construction. We acknowledge Jonathan F. Choukroun, PharmD, CPHIMS, for his work building and maintaining COVID-19 content within the electronic medical record. We additionally acknowledge that the research discussed here was made possible by a large team of individuals for whom we are deeply grateful.

**Financial support.** This study was completed as a part of routine work without external funding.

**Conflicts of interest.** T.P.G. is the owner of Charlie Rose, LLC, [www.LearnAntibiotics.com](http://www.LearnAntibiotics.com), and @IDstewardship social media profiles. He has financial relationships with Antimicrobial Therapy Inc, DoseMe Pty Ltd, GoodRx, Pfizer, Pattern Biosciences, and Spectrum Mobile Health.

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