Barriers to Administering Vaccines in Inflammatory Bowel Disease Centers

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INTRODUCTION

Providing appropriate vaccines for patients with inflammatory bowel disease (IBD) is an essential aspect of preventative care.[1] Vaccine-preventable diseases (VPD) may occur with immunosuppressive therapies used in IBD.[1] Optimizing patients' immunization status decreases this risk; however, vaccination rates remain suboptimal due to discordance of provider responsibilities and immunization misperceptions.[2-4] The capabilities of IBD centers to administer vaccines have not been explored but may also contribute to inadequate immunization rates. We sought to identify current vaccine availability and administration capabilities within IBD centers.

MATERIALS AND METHODS

A 19-question survey (Appendix) was emailed to 75 IBD centers across the United States in September and October 2020. The centers identified were members of the Crohn's and Colitis Foundation Research Alliance or offered an advanced fellowship in IBD. Practice demographics, center's ability to provide vaccines, type of vaccines stocked, barriers to vaccine administration, and comfort with Coronavirus Disease 2019 (COVID-19) vaccine were assessed. Participation was voluntary and responses were anonymous. The survey was designed and analyzed through Qualtrics (Provo, UT) and approved by the Mayo Clinic Institutional Review Board.

RESULTS

Responses were received from 42 of 75 (56%) IBD centers. Table 1 lists practice demographics. Approximately 15 (36%) of respondents cannot administer vaccines due to 1 or more of the following barriers: (1) inability to stock vaccines because of cost (25%); (2) inadequate storage (14%); (3) lack of staff to administer vaccines (25%); (4) reimbursement concerns (19%). Among centers with vaccines, the types stocked varied significantly (Table 1). General concerns about providing vaccines included inadequate reimbursement (23%), inadequate time to obtain a vaccine history (13%), and inadequate time, supply, and resources for administration (13%). Alternative methods utilized to promote vaccine uptake included referring patients to primary care (31%), providing prescriptions for administration at pharmacies (28%), or leveraging electronic health records to remind patients (32%) or providers (46%) about immunizations. Regarding the candidate COVID-19 vaccine, 85% of providers would recommend this to their patients, but once available, reported it would likely only be stocked in 27% of centers.

DISCUSSION

To our knowledge, this is the first study evaluating vaccination capabilities among IBD centers in the United States. One obstacle to administering immunizations is the inability of centers (36%) to stock vaccines due to logistical issues such as cost or storage availability. Moreover, in centers with capabilities, the type of vaccines available varied, with standard dose influenza and pneumococcal vaccines being most common. However, eligible patients should be immunized against most VPD.[5]

Optimizing vaccine capabilities in gastroenterology practices is essential to minimizing VPD. Each center should identify a vaccine advocate. In addition to providing education, this individual can identify barriers to vaccine capabilities and work with appropriate departments, such as pharmacy, nursing, and billing, to design an optimal workflow. Organizations such as Centers for Disease Control and Prevention and Immunization Action Coalition provide detailed guidance on establishing vaccination services.[6, 7] Centers that already stock vaccines can work with pharmacy departments to expand their inventory.

Although reimbursement and adequate staffing were commonly reported concerns, these should not be barriers to establishing or maintaining vaccination services. Certain processes can reduce immunization costs and maximize reimbursement, such as purchasing lowest-priced products (typically through manufacturers) and inputting correct billing

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TABLE 1. Respondents' Practice Demographics (n = 42)

	N (%)
Setting	
University	22 (52)
Health System	14 (34)
Private	6 (14)
Location	
South	14 (33)
Midwest	11 (26)
Northeast	10 (24)
West	7 (17)
Number of providers specialized in IBD	
1–5	30 (71)
6–10	11 (26)
11–15	1 (3)
Number of IBD patients seen per week	
11–15	5 (12)
16–20	12 (29)
≥21	25 (59)
Type of vaccines stocked in the IBD center[a]	
Standard dose influenza	25 (60)
Pneumococcal polysaccharide—PPSV23	24 (57)
Pneumococcal conjugate—PCV13	22 (52)
Hepatitis A/B combination	19 (45)
Hepatitis B—Engerix-B/Recombivax	16 (38)
High dose influenza	14 (33)
Hepatitis A	12 (29)
Tetanus, diphtheria, and pertussis	9 (21)
Herpes zoster	8 (19)
Human papillomavirus	2 (5)

[a]A total of 161 responses were received for this question; respondents could select all the vaccines available within their IBD center.

codes.[8, 9] Additionally, centers may start with 1 vaccine, such as influenza, while learning and implementing financially viable immunization services and expanding administration to other vaccines in the future. For centers with staffing concerns, most have designated individuals (eg, nurses, pharmacists) overseeing injectable teaching for biologics, vitamin B12, and methotrexate. These individuals can be trained and licensed to review immunization history and administer vaccines.

Another factor impacting vaccination rates is telehealth, a mode of care delivery here to stay post-COVID-19 pandemic. Thus, during in-person clinical encounters, efforts should be made to provide vaccines rather than place extra burden on patients to seek and obtain vaccines at other locations. For patients being managed via telehealth encounters, assessing immunization history and making alternative arrangements for vaccine administration if needed (eg, nursing visit or referral to local pharmacies) is essential. Regarding the COVID-19 vaccine, the anticipated demand is unknown, but most gastroenterologists plan to recommend this vaccine to their patients when available, and certain centers plan to stock this in practice.

CONCLUSION

Overall, our study shows that even among tertiary IBD centers, there is room for improvement with vaccine delivery. Implementing and optimizing vaccination services within IBD centers can be a model for other practices and is critical to improving immunization rates now and beyond the COVID-19 pandemic.

DISCLOSURES

Conflicts of Interest: FF is a consultant for BMS, Braintree Labs, Gilead, GSK, Innovation Pharmaceuticals, Janssen, Pfizer, and Sebela and sits on a DSMB for Lilly and Theravance. FC has been a consultant for GSK, Takeda, Celgene, and Arena Pharmaceuticals and received research support from Takeda Pharmaceuticals and Sanofi for work unrelated to the topic of this manuscript.

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