

Impact of Clinic-Embedded Clinical Pharmacist on Inflammatory Bowel Disease Health Maintenance

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BACKGROUND

- Inflammatory bowel disease (IBD) is a chronic autoimmune condition causing inflammation within the gastrointestinal tract.
- Health maintenance (HM), including vaccinations, cancer and osteoporosis screenings, is an essential component of IBD management.
- Barriers to health maintenance adherence include lack of knowledge, confusion among providers regarding preventative care responsibilities, and patient concerns about health maintenance necessity.
- Clinical pharmacists are positioned to address these barriers.
- This study aimed to assess the impact of an embedded clinical pharmacist on health maintenance recommendation uptake among IBD patients on advanced therapies.

METHODS

Objectives	Primary: Assess the uptake of health maintenance recommendations among patients with inflammatory bowel disease planning to initiate or initiated on advanced therapies seen by the clinical pharmacist. Secondary: Assess pharmacist interventions on select health maintenance recommendations (e.g., bone scan findings).
Study Design	<ul style="list-style-type: none"> • Retrospective, single-center, observational study at Cleveland Clinic from January 1, 2021 to July 31, 2025 • Inclusion criteria: ≥18 years of age; IBD diagnosis (as confirmed by ICD-10 code); planning to initiate or have initiated advanced therapy treatment; completed minimum of 2 visits with IBD pharmacist
Outcomes	Primary: Proportion of patients who completed hepatitis B or pneumococcal vaccinations at final pharmacist visit Secondary: Proportion of patients who completed HM recommendations by final pharmacist visit; outcomes of patients with DXA scan

RESULTS

Baseline Characteristics	• A total of 713 patients were included. Data below presented as N (%) unless otherwise indicated.			
	Age, years – mean ± SD	43.1 ± 16.2	Pharmacist visit type,	Initial
	Gender, Female	356 (49.9)	Virtual	479 (67.2)
	Race, White	592 (83.0)	Total # pharmacist visits –	Last
	IBD diagnosis, Crohn’s	432 (60.6)	median (IQR)	3.0 (2.0, 5.0)
	Treatment history, Naïve	400 (56.1)		

Outcomes	Primary Outcome: 18.4% increase in hepatitis B and pneumococcal vaccination by the final pharmacist visit			
		Pre-pharmacist visit, n (%)	Post-pharmacist visit, n (%)	p-value
	Not completed	397 (61.0)	254 (39.0)	<0.001
	Up to date	316 (40.8)	459 (59.2)	

Secondary Outcomes:

- Vaccine uptake increased by the final pharmacist visit for all possible recommended vaccines (COVID-19, influenza, hepatitis A, hepatitis B, pneumococcal, herpes zoster, Tdap, and HPV).
- Statistically significant: 68.8%, 65.0%, and 52.1% of patients completed hepatitis A, herpes zoster, and Tdap by the final pharmacist visit, respectively.

	Pre-pharmacist intervention	Post-pharmacist intervention	P-value
Bone scan (n=450)			<0.001
Up-to-date	101 (38.7)	160* (61.3)	
Skin check (n=922)			<0.001
Up-to-date	121 (39.2)	188 (60.8)	
PAP smear (n=499)			0.17
Up-to-date	157 (45.2)	190 (54.8)	

*38.8% of participants had normal bone density; 39.4% had osteopenia; 21.8% had osteoporosis

CONCLUSION

- Assessments and recommendations by the clinical pharmacist led to increased vaccination and other health maintenance completion by the final pharmacist visit.
- Hepatitis A, hepatitis B, pneumococcal, herpes zoster, and Tdap vaccination uptake significantly increased by the final visit.
- Bone scan and skin check uptake significantly increased by the final pharmacist visit.
- Majority of the patients who completed a bone scan had osteopenia or osteoporosis.
- Limitations included immunization record only pulling in-state vaccine administrations and varying study periods.

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