



SESSION 1

VACCINATION GUILDELINES Vaccination Guidelines Update

Jennifer Jones, MD MSc FRCPC

Patients with IBD may be at increased risk of some vaccine preventable diseases (VPDs) and, unfortunately, there is a care gap in relation to the uptake of evidence-based clinical care guidelines for VPDs in clinical practice. Management of VPDs in clinical practice can be complex given that vaccine safety, efficacy, and appropriateness may be altered by IBD and its therapies. This makes education, knowledge synthesis and dissemination on this topic critically important.

In 2020, the Canadian Association of Gastroenterology performed a rigorous systematic review and generated evidence-based recommendations for the administration of both live and inactivated vaccines in adult and pediatric patients with IBD. During the same year, Crohn's and Colitis Canada (CCC) formed a National COVID-19 Task Force in order rapidly review, interpret and disseminate data related to COVID-19 vaccines to support the IBD community throughout the pandemic.

Good clinical practice statements in relation to VPDs include the recommendation that a complete review of the history of immunization and VPD be performed at diagnosis and be updated at regular intervals by IBD providers, that all appropriate vaccines be given as soon as possible, ideally before initiation of immunosuppressive (IS) therapy, and that IS not be delayed in order to provide vaccinations if IBD patients require urgent therapy. Overall, the pediatric VPD recommendations adhere to childhood vaccination schedules. The panel recommended against giving the measles, mumps and rubella (MMR) and varicella vaccine to pediatric patients on IS therapy. Likewise, MMR vaccines were not recommended for adults on IS therapy, but was recommended for adults not on IS therapy. No recommendation could be made for or against giving live vaccines to infants born to mothers using biologic therapies in the first 6 months of life. Most recommendations for inactivated vaccines were congruent with current Centers for Disease Control and Prevention (CDC) and National Advisory Committee on Immunization (NACI) recommendations, with a few exceptions. Statements could not be made due to lack of evidence for double dose hepatitis B vaccine, timing of influenza immunization in patients on biologics, pneumococcal and meningococcal vaccines in adults without risk factors, and human papillomavirus (HPV) vaccines in patients aged 27-45 years. With respect to COVID-19 vaccinations, patients on systemic IS may have an attenuated response to vaccines. Additionally, the protective benefit may decline more rapidly over time in patients on IS therapy. The CCC COVID-19 Task Force recommends that all patients with IBD receive two doses of an mRNA vaccine, as well as a third booster shot, in order to maximize effectiveness.

Maintaining appropriate vaccination status in patients with IBD is critical to optimize patient outcomes. Further studies are needed to study the safety and efficacy of live vaccines in patients on IS therapy and to better understand the durability of protection provided by COVID-19 vaccines.





References

Agarwal N, Ollington K, Kaneshiro M, et al. Are immunosuppressive medications associated with decreased responses to routine immunizations? *Vaccine*. 2012;30:1413–24.

Benchimol EI, Tse F, Carroll MW, et al. Canadian Association of Gastroenterology Clinical Practice Guideline for immunizations in patients with inflammatory bowel disease (IBD)-Part 1: Live vaccines. *Gastroenterology*. 2021;161(2):669–80.

Jones JL, Tse F, Carrol MW, et al. Canadian Association of Gastroenterology Clinical Practice Guideline for immunizations in patients with inflammatory bowel disease (IBD)-Part 2: Inactivated vaccines. *Gastroenterology*. 2021;161(2)681–700.

Kennedy NA, Lin S, Goodhand JR, Contributors to the CLARITY IBD Study, et al. Infliximab is associated with attenuated immunogenicity to BNT162b2 and ChAdOx1 nCoV-19 SARS-CoV-2 vaccines in patients with IBD. *Gut*. 2021;70(10):1884–93.

Levin EG, Lustig Y, Cohen C, et al. Waning immune humoral response to BNT162b2 COVID-19 vaccine over 6 months. N Engl J Med. 2021;Oct 6. Epub ahead of print.

Marin AC, Gisbert JP, Chaparro M. Immunogenicity and mechanisms impairing the response to vaccines in inflammatory bowel disease. World J Gastroenterol. 2015;21:11273–81.

Melmed GY, Ippoliti AF, Papadakis KA, et al. Patients with inflammatory bowel disease are at risk for vaccine-preventable illnesses. *Am J Gastroenterol*. 2006;101:1834–40.

Selby L, Hoellein A, Wilson JF. Are primary care providers uncomfortable providing routine preventive care for inflammatory bowel disease patients? *Dig Dis Sci.* 2011;56:819–24.

Siegel CA, Melmed GY, McGovern DPB, et al. SARS-CoV-2 vaccination for patients with inflammatory bowel diseases; recommendations from an international consensus meeting. *Gut*. 2021;70(4):635–40.

Wasan SK, Calderwood AH, Long MD, et al. Immunization rates and vaccine beliefs among patients with inflammatory bowel disease: an opportunity for improvement. *Inflamm Bowel Dis.* 2014;20:246–50.