Preventive Care and Monitoring of the IBD Patient

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Health Maintenance in the IBD Patient

- IBD patients do not receive preventive services at the same rate as general medical patients
- GI clinicians are often the only clinician that the IBD patient will see
- Clarify the limits of your responsibilities with the patient and delegate routine health care issues to the primary care clinician
- Offer guidance on the unique health maintenance needs in IBD patients on immunomodulators and biologic agents

Who Owns Vaccinations?

Survey of 109 Gastroenterologists

- Only 50% of GI providers ask about vaccinations always or most of the time with associated poor knowledge of appropriate vaccinations
- Majority thought PCP was responsible for determining which vaccinations to give (65%) and administering the vaccine (83%)

Survey of 61 PCPs

- Only 30% felt comfortable coordinating vaccinations for the immunosuppressed IBD patient


Will the Vaccine Work or Exacerbate the IBD?

- Diminished immune response in patients on anti TNFs alone or with immunomodulators but not with vedolizumab
- No evidence that vaccination exacerbates IBD

Take Home Points

- IBD patients have poor immunization rates
- IBD patients can mount a response to vaccines
- Immunogenicity is diminished in patients on combination therapy of immunomodulator and anti-TNF agents
- When possible, vaccinate prior to initiation of immunosuppressive agents
- IBD disease activity will not be affected by vaccination
- Take responsibility to vaccinate your IBD patients or make explicit recommendations to the patients PCP

Vaccinating the IBD Patient
A Practical Guide
Preventive Health Maintenance Statements

**Statement 1a:** All adult patients with inflammatory bowel disease should undergo annual vaccination against influenza. *Conditional recommendation, with very low level of evidence*

**Statement 1b:** Those on immunosuppressive therapies and their household contacts should receive the non-live trivalent inactivated influenza vaccine, but not the live inhaled influenza vaccine. *Conditional recommendation, with very low level of evidence*

**Statement 2:** Adult patients with inflammatory bowel disease receiving immunosuppressive therapy should receive pneumococcal vaccination with both the PCV-13 and PSV23, in accordance with national guidelines. *Conditional recommendation, with very low level of evidence*

**Statement 3:** Adults with IBD over the age of 50 should consider vaccination against herpes zoster, including certain subgroups of immunosuppressed patients. *Strong recommendation, with low level of evidence*

**Statement 4:** Adults with inflammatory bowel disease should be assessed for prior exposure to varicella and vaccinated if naive prior to initiation of immunosuppressive therapy when possible. *Conditional recommendation, with very low level of evidence*

**Statement 5:** Patients with inflammatory bowel disease who are immunosuppressed and traveling to endemic areas for yellow fever should consult with a travel medicine or infectious disease specialist prior to travel. *Conditional recommendation, with very low level of evidence*

**Statement 6:** Adolescents with inflammatory bowel disease should receive meningococcal vaccination in accordance with routine vaccination recommendations. *Conditional recommendation, with very low level of evidence*

Farraye FA, Melmed G, Lichtenstein GR, Kane S. *Am J Gastroenterol.* in press
Preventive Health Maintenance Statements

**Statement 7:** Household members of immunosuppressed patients can receive live vaccines with certain precautions. *Conditional recommendation, with very low level of evidence*

**Statement 8:** Adults with inflammatory bowel disease should receive age-appropriate vaccinations prior to initiation of immune suppression when possible. *Conditional recommendation, with very low level of evidence*

**Statement 9:** Vaccination against Tdap, HAV, HBV, and HPV should be administered as per ACIP guidelines. *Conditional recommendation, with very low level of evidence*

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Vaccines to Consider

- IBD is rare before age 5 so most patients have received all their childhood vaccines
- In adults, consider hepatitis A, hepatitis B, HPV, influenza, pneumococcal, herpes zoster and varicella vaccinations
### Vaccines in Immunosuppressed Adults

#### Recommended Adult Immunization Schedule—United States, 2016

**Note:** These recommendations must be read with the footnotes that follow containing number of doses, intervals between doses, and other important information.

**Figure 2. Vaccines that might be indicated for adults based on medical and other indications**

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Doses</th>
<th>Interval</th>
<th>Indications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influenza</td>
<td>1 dose</td>
<td>Annual</td>
<td>Episodes</td>
</tr>
<tr>
<td>Haemophilus influenzae type b (HiB</td>
<td>2 doses</td>
<td>0-2 months</td>
<td></td>
</tr>
<tr>
<td>Pneumococcal polysaccharide (PPV23</td>
<td>1 dose</td>
<td>1 dose</td>
<td></td>
</tr>
<tr>
<td>Hepatitis A</td>
<td>2 doses</td>
<td>0-2 months</td>
<td></td>
</tr>
<tr>
<td>Varicella</td>
<td>2 doses</td>
<td>0-12 months</td>
<td></td>
</tr>
<tr>
<td>Measles, mumps, rubella (MMR</td>
<td>2 doses</td>
<td>1 dose</td>
<td></td>
</tr>
<tr>
<td>Tetanus, diphtheria, pertussis (Tdap</td>
<td>2 doses</td>
<td>0-12 months</td>
<td></td>
</tr>
<tr>
<td>Rubella</td>
<td>1 dose</td>
<td>2 doses</td>
<td></td>
</tr>
<tr>
<td>Varicella</td>
<td>2 doses</td>
<td>0-12 months</td>
<td></td>
</tr>
</tbody>
</table>

# General Vaccination Considerations

**Titers to check at first office visit:**
- MMR – if vaccination history unknown
- Varicella – if vaccination history or history of chicken pox/zoster unknown
- Hepatitis A – except those with evidence of protective titer within 5 years of vaccine administration
- Hepatitis B – except those with evidence of protective titer within 5 years of vaccine administration

**Vaccinations to administer in specific patient groups regardless of immunosuppressive drug use**
- Tdap
- HPV
- Influenza (yearly)
- Pneumococcal (PCV 13 and PPSC 23)
- Hepatitis A (if not immune)
- Hepatitis B (if not immune)
- Meningococcal

**Vaccinations to consider if NO plans to start immunosuppressive therapy in 4-12 weeks:**
- MMR (if not immune)
- Varicella (if not immune)
- Zoster (if age 60 or older)

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# Inactivated Vaccine Recommendations (Regardless of Immunosuppression)

- **Td/Tdap q 10 years**
- **HPV**: 3 doses (0, 2, 6 months) for males and females 12-26 years
- **Influenza annually**
- **PCV 13** given 8 weeks prior to PPSV23 or one year later
- **Pneumococcal** (PPSV 23) 1-2 doses (one time revaccination after 5 years if immunosuppressed)
- **Hepatitis A**: 2 doses
- **Hepatitis B**: 3 doses
  - Check post-vaccine titers 1 month after last dose
  - If no response, then vaccinate with double dose (or with combination hepatitis A/B)
- **Meningococcal vaccine** if risk of exposure


PCV 13 and PPSV 23 Vaccination

Live Vaccine Recommendations

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Pre vaccination Titer?</th>
<th>Before Immunosuppression</th>
<th>Already immunosuppressed</th>
<th>Family Vaccination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Herpes Zoster</td>
<td>No</td>
<td>Contraindicated 1–3 months before start of biologics *</td>
<td>Anti-TNFs: contraindicated *</td>
<td>Yes</td>
</tr>
<tr>
<td>Varicella</td>
<td>Yes</td>
<td>Contraindicated 1–3 months before starting immunosuppression</td>
<td>Ant-TNFs Contraindicated</td>
<td>Yes</td>
</tr>
</tbody>
</table>

* See next slide

** <0.4 mg/kg/wk MTX, <3.0 mg/kg/d AZA, <1.5 mg/kg/d 6-MP, <14 d prednisone

### The IBD Patient Leaving the Country

#### Live Vaccines
- Yellow fever
- Measles mumps rubella
- Oral typhoid
- Oral polio
- Influenza

#### Inactivated Vaccines
- Japanese encephalitis
- Rabies vaccine
- Oral typhoid
- Oral polio
- Influenza

### Live Vaccines

- Yellow fever
- Measles mumps rubella
- Oral typhoid
- Oral polio
- Influenza

### Inactivated Vaccines

- Japanese encephalitis
- Rabies vaccine
- Oral typhoid
- Oral polio
- Influenza

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### Initial Office Visit

#### Obtain vaccination history

(when did you receive the tetanus, diphtheria, pertussis, human papilloma virus [HPV], influenza, pneumococcal, hepatitis A and B, meningococcal, MMR, varicella, herpes zoster vaccines?)

#### Completed vaccination series or up to date on vaccine?

**Yes**
- Evidence of protective antibodies to hepatitis A and B in past 5 years?
  - No? Check titers
  - Not immune

**No**

**Not sure**

- If no plans to start immunosuppressive therapy within 4–12 weeks or not currently on immunosuppressive therapy
  - Recommend*: MMR, varicella, or herpes zoster

- If no prior history of infection, check titers for MMR, varicella, hepatitis A and B
  - Not immune to MMR/varicella

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**Recommend:**

- Tdap (tetanus, diphtheria, pertussis), HPV, Influenza, Pneumococcal, Hepatitis A, Hepatitis B, Meningococcal

*Only certain populations are recommended to receive HPV, herpes zoster, and meningococcal vaccines.

**Wasan SK et al.** *Clin Gastroenterol Hepatol.* 2010;8:1013
http://cornerstoneshealth.org/checklist/

Preventive Health Maintenance Statements

**Statement 10:** Women with inflammatory bowel disease on immunosuppressive therapy should undergo annual cervical cancer screening. *Conditional recommendation, very low level of evidence*

**Statement 11:** Screening for depression and anxiety is recommended in patients with inflammatory bowel disease. *Conditional recommendation, low level evidence*

Farraye FA, Melmed G, Lichtenstein GR, Kane S. Am J Gastroenterol, in press

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Preventive Health Maintenance Statements

**Statement 12a:** Patients with inflammatory bowel disease (both ulcerative colitis and Crohn’s disease) should undergo screening for melanoma independent of the use of biologic therapy. *Strong recommendation with low level of evidence*

**Statement 12b:** Inflammatory bowel disease patients on immunomodulators (6-mercaptopurine or azathioprine) should undergo screening for non-melanoma squamous cell cancer (NMSC) while using these agents, particularly over the age of 50. *Strong recommendation with low level of evidence*

Farraye FA, Melmed G, Lichtenstein GR, Kane S. Am J Gastroenterol, in press
**Preventive Health Maintenance Statements**

**Statement 13:** Patients with conventional risk factors for abnormal bone mineral density with ulcerative colitis and Crohn’s disease should undergo screening for osteoporosis with bone mineral density testing at the time of diagnosis and periodically after diagnosis. *Conditional recommendation with very low level evidence.*

**Statement 14:** Patients with Crohn’s disease who smoke should be counseled to quit. *Strong recommendation with low level evidence*

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**Selected Monitoring Parameters**

<table>
<thead>
<tr>
<th></th>
<th>5-ASAs</th>
<th>Corticosteroids</th>
<th>Immuno-modulators (MTX, 6MP/AZA)</th>
<th>Biologics</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBC</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Liver enzymes</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Creatinine/UrinaIsysis/BUN</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eye examination[^1]</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Opportunistic infections (TB, Hep B, varicella, etc)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Immunizations</td>
<td>x</td>
<td></td>
<td>x[^*]</td>
<td>x</td>
</tr>
<tr>
<td>TPMT</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Bone mineral density for &gt;3 mo use</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>
Patient meets criteria for IS therapy

Update vaccination status

- Steroids
  - Calcium/vitamin D
  - DEXA
  - “Exit strategy”
  - Monitor for infection

- Immunomodulators
  - TPMT for thiopurines
  - CBC, liver enzyme
  - Monitor for infection

- Biologics
  - HBV testing
  - TB testing
  - Monitor for infection


Thank You
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