After the Initial Diagnosis of HBsAg+
Overview of Next Steps

History
- Previous or current symptoms of liver disease
- Source of HBV exposure (mother, household member, sexual contact, needle use, etc.)
- Previous or current immunosuppression (HIV, chemotherapy, biologic agents, etc.)
- Alcohol and drug use
- Cigarette smoking history
- Sexual history
- Born or parents born in intermediate or high prevalence regions
- Family history
- Occupational history
- History of incarceration
- History of combat exposure
- Complete review of systems

Physical Exam
- Complete physical exam
- Physical signs of chronic liver disease

Laboratory
- HBsAg
- HBV DNA
- HBeAg and anti-HBeAg
- HDV Ab
- HCV Ab w/reflex HCV RNA
- HAV IgG (total Ab)
- HIV Ag/Ab
- CBC/platelet
- Liver: AST, ALT, alkaline phosphatase, total bilirubin, direct bilirubin, Albumin
- Sodium, potassium, creatinine, glucose (chem 7)
- PT/INR
- Ferritin
- Vitamin D

Look for Evidence of Cirrhosis
- Ultrasound abdomen
  - If evidence of a cirrhotic appearing liver and/or enlarged spleen
  - Platelet count (not applicable in asplenic patient)
    - If low, especially if <125K

If No Evidence of Cirrhosis, Determination of Fibrosis
- FIB-4 score and/or APRI score
  Cirrhosis can be excluded by:
  - FIB-4 < 0.70
  - APRI score < 0.45
- Biopsy (if needed)
- Fibroscan (preferred)
**HBV Treatment**
- Determine if recommended for treatment; refer to specialist
- All patients with (+) sAg and cirrhosis or co-infection should be treated

**Patient Education**
- Hepatitis B and potential outcomes (e.g., cirrhosis, HCC)
- Need for long term monitoring
- Role of Hepatitis B medications
- Sexual transmission
- Household transmission
- Mother-child transmission
- Testing for pregnant patients with hepatitis B
- Blood donation
- Ways to reduce risk of cirrhosis and HCC (e.g., lower alcohol, smoking, obesity, etc)
- Testing for co-infection – HIV, HCV
- Effect of injection drugs and use of clean needle exchange programs

**Immunizations**
- Hepatitis A
  - 2 shot series
- Influenza
  - Annually
- Tdap
  - Once and then Td booster every 10 years
- Varicella (if unvaccinated)
  - 2 doses
- Recombinant zoster vaccine (RZV)
  - 2 doses
- Pneumonia vaccinations:
  - PPSV23 and PCV13
    1. Initial: 1 dose PPSV23 at age 19-64 years
    2. And, 1 dose PCV13 at ≥ 65 years (at least 1 year after PPSV23)
    3. And, 1 final dose PPSV23 at ≥ 65 years (at least 1 year after PCV13 and at least 5 years after the most recent dose of PPSV23)

For further information:
http://www.cdc.gov/vaccines/schedules

**Screen for HCC in HBV Patients if:**
- Cirrhosis
- Asian female > 50
- Asian or Black man > 40
- First-degree family history HCC
- Additional diagnosis of NASH
- Co-infection (HCV, HDV, HIV)