N11 — Infection Control: Hepatitis B and C, Vaccination, Isolation FRONT

Know every patient's hepatitis status, vaccinate the susceptible with a dialysis regimen, and isolate hepatitis B correctly.

When: admission or transfer, every serology result, and every vaccine decision.

Do this

1. **New patient or transfer:** hepatitis B triple panel — HBsAg, anti-HBs, total anti-HBc [4] — and an HCV screen [3], with results known before or at the first treatment per your unit protocol.
2. **Ongoing testing by status** [1,3]:
   - Hepatitis B susceptible (not immune): HBsAg monthly.
   - Immune (anti-HBs 10 mIU/mL or higher): anti-HBs yearly; booster if it falls below 10.
   - Hepatitis C: antibody or RNA test every 6 months; ALT monthly.
3. **Vaccinate every susceptible patient with a hemodialysis regimen** [2]:
   - **Recombivax HB dialysis formulation 40 mcg** — 3 doses (0, 1, 6 months), **or**
   - **Engerix-B 40 mcg** (two 20-mcg doses) — 4 doses (0, 1, 2, 6 months).
4. **Check anti-HBs 1–2 months after the last dose.** Below 10 mIU/mL: repeat the full series once [1].
5. **Other vaccines** per the current ACIP adult schedule: yearly influenza, pneumococcal (PCV20 or PCV21), COVID-19, RSV at 50 or older (dialysis counts as a risk condition), Tdap, recombinant zoster at 50 or older (screening white paper §8.4, verified against CDC 2026 schedules).
6. **HBsAg-positive patient:** separate room; dedicated machine, equipment, supplies, and medications; staff who are not caring for susceptible patients at the same time; no dialyzer reuse [1].
7. **Every station, every patient:** clean the chair, surfaces, and machine exterior; replace transducer protectors; clean blood spills right away with a disinfectant your unit protocol approves for blood [1].

Call the nephrologist when

- A test turns **newly positive** for HBsAg, anti-HBc, or HCV — same day. The unit reviews all patients' results and serologic history; retesting is for the new case, not routine retesting of everyone [1].
- A previously immune patient's anti-HBs falls below 10 mIU/mL.
- A patient has not responded to two full vaccine series.
- ALT rises without explanation.
- A patient dialyzed at another facility or while traveling.
- A needlestick or blood exposure occurs — follow your exposure protocol today.

Don't

- **Don't give Heplisav-B to a patient on hemodialysis.** CDC states its safety and effectiveness have not been established in adults on hemodialysis [2].
- Don't end hepatitis B isolation because the viral load is undetectable or the patient is on an antiviral. Isolation continues while HBsAg is positive [1].
- Don't return supplies or medications from the isolation station to general stock [1].

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BACK

Why

1. Dialysis patients respond to standard hepatitis B vaccine far less often than the general population, and their antibody wanes faster; CDC calls for high-dose dialysis regimens, yearly anti-HBs, and a booster below 10 mIU/mL [1].
2. Heplisav-B's two-dose schedule is not a dialysis regimen; CDC lists Recombivax HB (3 doses) and Engerix-B (4 doses) for adults on hemodialysis [2].
3. KDIGO 2022 recommends HCV screening every 6 months for in-center hemodialysis patients and monthly ALT [3].
4. CDC 2023 recommends the triple panel (HBsAg, anti-HBs, total anti-HBc) to separate active infection, past infection, and immunity [4].
5. CDC isolation for HBsAg-positive patients — separate room, dedicated machine and supplies, and staff not shared with susceptible patients — is the core of dialysis hepatitis B control [1].

Go deeper

- Mastery page: Infection Screening and Vaccination in Maintenance Hemodialysis
- Complete white paper: Screening and health maintenance in maintenance hemodialysis
- All dialysis nursing reference cards

References

1. Centers for Disease Control and Prevention. Recommendations for preventing transmission of infections among chronic hemodialysis patients. *MMWR Recomm Rep.* 2001;50(RR-5):1-43. https://pubmed.ncbi.nlm.nih.gov/11349873/
2. Centers for Disease Control and Prevention. Hepatitis B vaccine administration (health care providers). Accessed 2026-09-26. https://www.cdc.gov/hepatitis-b/hcp/vaccine-administration/index.html
3. KDIGO Hepatitis C Work Group. KDIGO 2022 guideline for the prevention, diagnosis, evaluation, and treatment of hepatitis C in CKD. *Kidney Int.* 2022;102(6S):S129-S205. https://pubmed.ncbi.nlm.nih.gov/36410841/
4. Conners EE, et al. Screening and testing for hepatitis B virus infection: CDC recommendations — United States, 2023. *MMWR Recomm Rep.* 2023;72(1):1-25. https://pubmed.ncbi.nlm.nih.gov/36893044/

Reviewed by Andrew Bland, MD, FACP, FAAP · v1.0 draft 2026-09-26 · Medical Associates Dept of Nephrology.