Point-of-Care Interactive Decision Support Tool Demonstrates Discordance Between Healthcare Practitioner Approaches and AASLD Guideline Recommendations in the Management of HBV Infection

Tiffany Hensley-McBain, PhD[1]; Zachary Schwartz, MS[1]; Jennifer Blanchette, PhD[1]; Jenny Schulz, PhD[1]; Edward King, MA[1]; Paul Y. Kwo, MD[2]

[1]Clinical Care Options, LLC. [2]Stanford University School of Medicine.
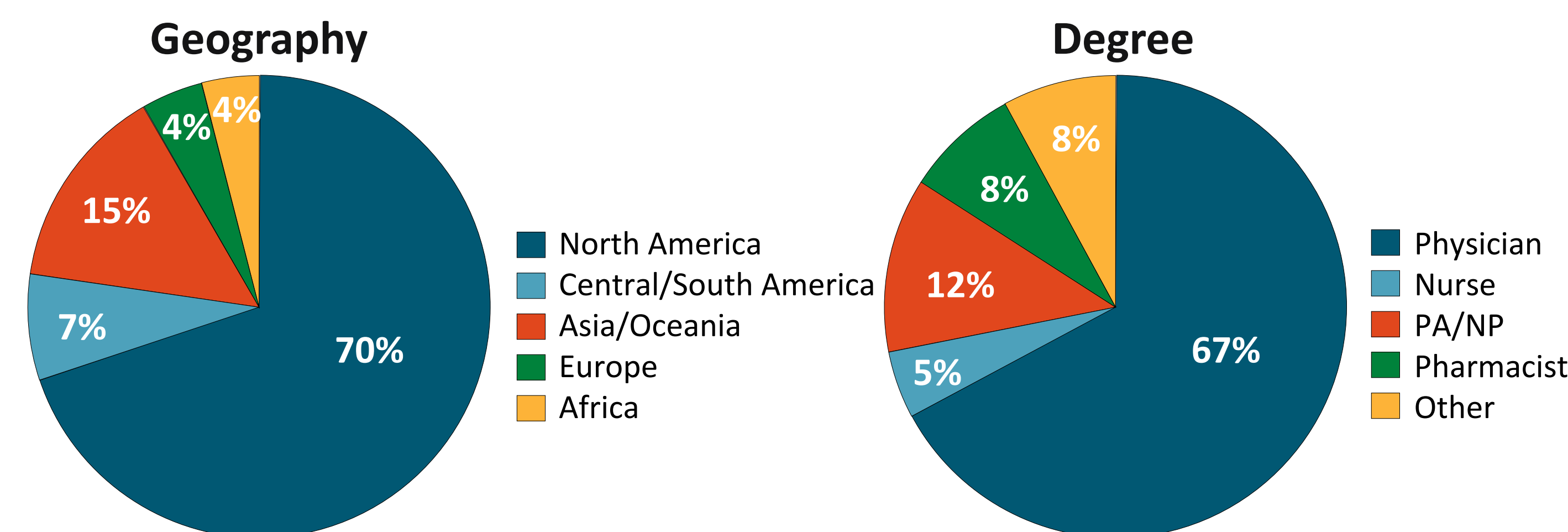
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1. Background

The AASLD HBV management guidelines were updated in 2018 to include new recommendations. Patient variables that inform HBV treatment candidacy and treatment selection are complex and interconnected. To aid healthcare practitioners (HCPs) in aligning management decisions with practice guidance, we developed a Web- and app-based decision support tool, "Hep B Consult."
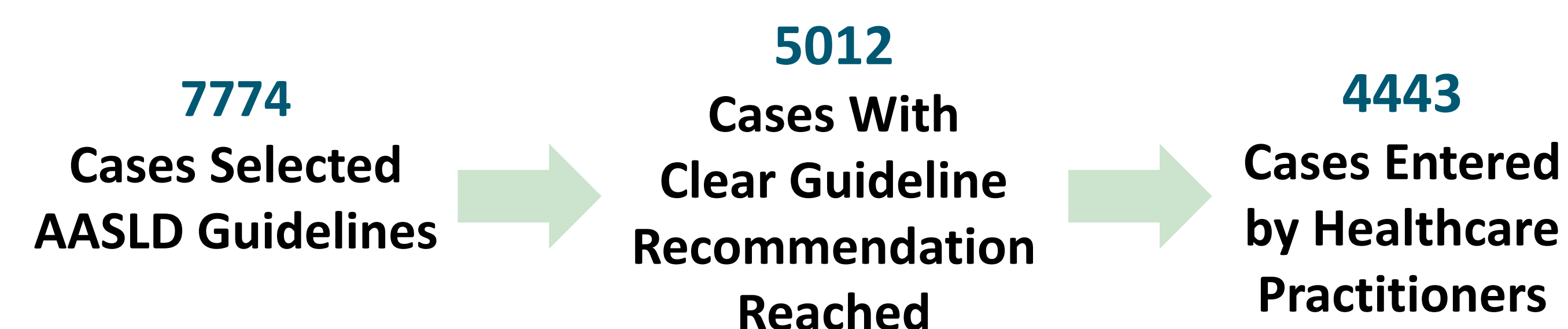
2. Tool Users

- From March 2019 through August 2020, **N = 18,176** cases were entered into the tool, of which **n = 7774 specified AASLD guidelines**
  - n = 6289 cases via the app (anonymous)
  - n = 1485 cases via the CCO site (authenticated)

Authenticated Participants (n = 1485)

Geography
- North America 70%
- Central/South America 7%
- Asia/Oceania 15%
- Europe 4%
- Africa 4%

Degree
- Physician 67%
- Nurse 5%
- PA/NP 12%
- Pharmacist 8%
- Other 8%

3. Cases Entered

7774 Cases Selected AASLD Guidelines → **5012** Cases With Clear Guideline Recommendation Reached → **4443** Cases Entered by Healthcare Practitioners
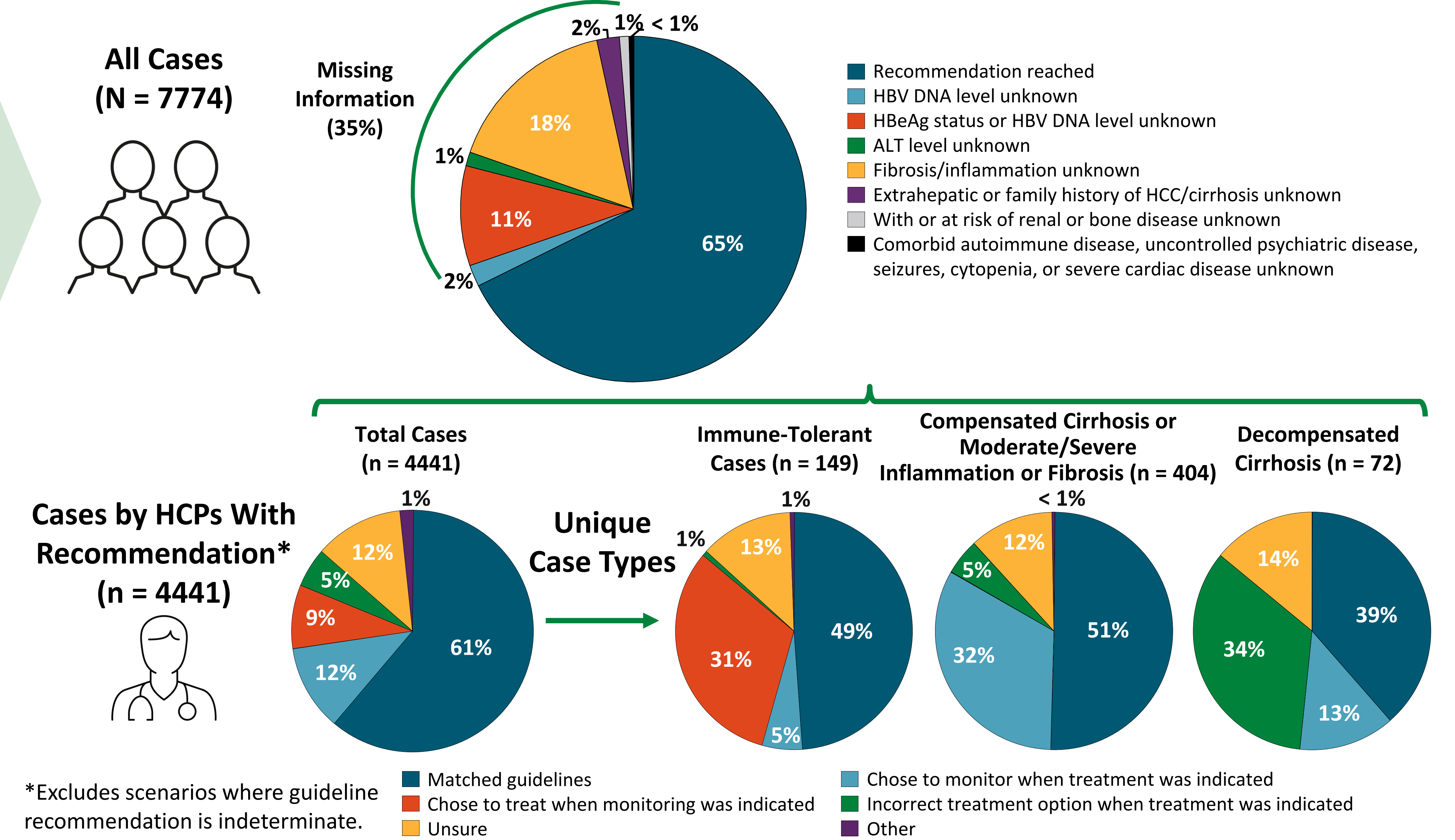
Of 1743 cases where participants specified:
- **58% were real patients**
- 42% were hypothetical cases

Of 3004 cases where HBeAg status and HBV DNA level were known:

HBeAg Positive	HBeAg Negative
19% HBV DNA ≥ 2000 but ≤ 20,000	**30%** HBV DNA < 2000
18% HBV DNA > 20,000	**33%** HBV DNA ≥ 2000

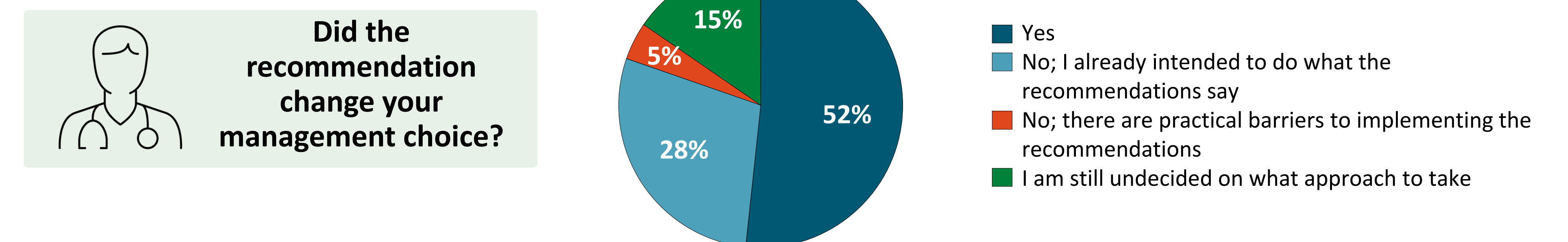## 4. Online Decision Support Tool Provides Patient-Specific Recommendations

Treat HBV now or monitor? Consult our tool

SCAN TO OPEN TOOL or visit clinicaloptions.com

1. Participant enters patient and disease characteristics

Hep B Consult

2. Participant indicates management plan

3. Participant receives guideline recommendations for that specific case, **including link to CME-certified module**

Recommendations
✓ **Treat**
This person meets indications for treatment.
- Consider **entecavir** or **tenofovir alafenamide**
- Avoid tenofovir alafenamide in patients on dialysis or with creatinine clearance < 15 mL/min

For more information on this recommendation, see the module, "Insights on the Management of Patients With Chronic Hepatitis B."

Review Additional Considerations

Clinical Implications
Did the recommendations change your management choice?
- Yes
- No; I already intended to do what the recommendations say

Start New Case

4. Participant is asked if guideline recommendations changed their management plan

5. Case Outcome and Intended Management Approach

All Cases (N = 7774)

Missing Information (35%)

- Recommendation reached 65%
- HBV DNA level unknown 2%
- HBeAg status or HBV DNA level unknown 11%
- ALT level unknown 1%
- Fibrosis/inflammation unknown 18%
- Extrahepatic or family history of HCC/cirrhosis unknown 2%
- With or at risk of renal or bone disease unknown 1%
- Comorbid autoimmune disease, uncontrolled psychiatric disease, seizures, cytopenia, or severe cardiac disease unknown < 1%

Cases by HCPs With Recommendation* (n = 4441)

*Excludes scenarios where guideline recommendation is indeterminate.

Unique Case Types

Total Cases (n = 4441)
- Matched guidelines 61%
- Chose to treat when monitoring was indicated 12%
- Unsure 9%
- (green) 5%
- (yellow) 12%
- (other) 1%

Immune-Tolerant Cases (n = 149)
- 49%
- 31%
- 5%
- 13%
- 1%
- 1%

Compensated Cirrhosis or Moderate/Severe Inflammation or Fibrosis (n = 404)
- 51%
- 32%
- 5%
- 12%
- < 1%

Decompensated Cirrhosis (n = 72)
- 39%
- 34%
- 13%
- 14%
- 1%

- Matched guidelines
- Chose to treat when monitoring was indicated
- Unsure
- Chose to monitor when treatment was indicated
- Incorrect treatment option when treatment was indicated
- Other

6. Posteducation Impact

Subset of Clinician Cases Where Baseline Plan Differed From Guidelines and Clinician Identified Future Plan (n = 676)

Did the recommendation change your management choice?

- Yes 52%
- No; I already intended to do what the recommendations say 28%
- No; there are practical barriers to implementing the recommendations 5%
- I am still undecided on what approach to take 15%

7. Conclusions

- This online decision support tool showed **users selected "unknown" for a variable necessary to reach a guideline recommendation for 35.5% of cases** → the information most often missing was the level of fibrosis/inflammation
- Clinicians' initial HBV management plans of whether to treat and what to treat with **differed from guidelines for 39% of case scenarios** → certain types of cases demonstrated higher discordance
- Of cases in which the HCPs' intentions were inconsistent with guidelines, **52.1% indicated that they planned to change their approach** after being provided the recommendation by the tool