**Supplementary information**

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Appendix Table 4. Univariate analysis of factors associated with receiving at least one claim for liver imaging within 12 months of CHB diagnosis among 396 patients with cirrhosis

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Appendix Table 6. Univariate analysis of factors (race and insurance type) associated with receiving at least one claim for liver imaging within 12 months of CHB diagnosis among women > 50 years without cirrhosis.

Appendix Table 7. Proportion of CHB patients with cirrhosis and without cirrhosis who received HBV antiviral therapy within 12 months of diagnosis by race.

Appendix Table 8. Analysis of factors associated with retention in treatment 13-24 months after the first diagnosis date among those who received treatment within 12 months and in continuous enrollment at least 24 months after the first diagnosis date.

**Appendix Table 1. ICD 9/10 Codes**

|  |  |  |
| --- | --- | --- |
|  | ICD 9/10 Codes | Code Description |
| CHB | B18.1 B18.0 B19.10Z22.51V02.61070.32070.33070.22070.2 | CHB without HDVCHB with HDVUnspecified viral hepatitis B without hepatic comaCarrier of viral hepatitis BCarrier of viral hepatitis B CHB without mention of hepatic coma or hepatitis deltaCHB without mention of hepatic coma with hepatitis deltaCHB with hepatic coma without hepatitis deltaCHB with hepatic coma with hepatitis delta |
| HCV | B18.2B19.20Z22.52070.44070.54 | Chronic viral hepatitis CUnspecific viral hepatitis C without hepatic comaCarrier of viral hepatitis CChronic hepatitis C with hepatic comaChronic hepatitis C without mention of hepatic coma |
| HIV | B20B97.35Z21042079.53795.71V08 | Human immunodeficiency virus [HIV] diseaseHuman immunodeficiency virus, type 2 [HIV 2] as the cause of diseases classified elsewhereAsymptomatic human immunodeficiency virus [HIV] infection statusHuman immunodeficiency virus [HIV] diseaseHuman immunodeficiency virus, type 2 [HIV-2]Nonspecific serologic evidence of human immunodeficiency virus [HIV]Asymptomatic human immunodeficiency virus [HIV] infection status |
| HCC | C22.0C22.7C22.8155.0 | Liver cell carcinomaOther specific carcinomas of liverMalignant neoplasm of liver, primaryMalignant neoplasm of liver, primary |
| Cirrhosis | K74K74.6K74.60K74.69K70.3K70.30K70.31K71.7571571.2571.5 | Fibrosis and cirrhosis of liverOther and unspecified cirrhosis of liverUnspecified cirrhosis of liverOther cirrhosis of liver Alcoholic cirrhosis of liverAlcoholic cirrhosis of liver without ascitesAlcoholic cirrhosis of liver with ascitesToxic liver disease with fibrosis and cirrhosis of liverChronic liver disease and cirrhosisAlcoholic cirrhosis of the liverCirrhosis of liver without mention of alcohol |
| Liver transplant | Z94.4/V42.7Z48.23T86.4/T86.40/T86.41/T86.42/T86.43/T86.49/996.82 | History of liver transplantEncounter for aftercare following liver transplantLiver transplant complications |

**Appendix Table 2. CPT codes**

|  |  |  |
| --- | --- | --- |
|  | CTP Codes | Code Description |
| ALT | 800768446080053 | Hepatic function panelALTComprehensive metabolic panel (CMP) |
| HBV DNA | 87515 87516 87517 | HBV detection by nucleic acid by direct probe HBV DNA, Qualitative, Real-Time PCRHBV DNA, Quantitative, Real-Time PCR |
| HBeAg | 87350 | Hepatitis B e Antigen |
| Ultrasound | 7670076705 | Complete abdominal ultrasoundLimited abdominal ultrasound |
| CT scan | 74150/74160/7417074176/74177/74188 | Abdomen without and/or with contrastAbdomen + pelvis without and/or with contrast |
| MRI scan | 74181/74183 | Liver depending on contrast |

**Appendix Table 3. HBV antiviral medications**

|  |  |  |
| --- | --- | --- |
| HBV antivirals | Brand and generic names | Tenofovir/tenofovir disoproxil fumarate/Viread/ Tenofovir alafenamide/VemlidyEntecavir/ BaracludeLamivudine/Epivir-HBV/Epivir Adefovir/Hepseratelbivudine/TyzekaEmtricitabine/ EmtrivaEmtricitabine and tenofovir disoproxil fumarate/Biktarvy/TruvadaEmtricitabine and tenofovir alafenamide/DescovyPegylated interferon alpha-2a/Pegasys/Pegasys-PInterferon alfa-2b/Intron APegylated interferon alpha-2b/Peg-Intron |

**Appendix Table 4. Univariable analysis of factors associated with receiving at least one claim for liver imaging within 12 months of CHB diagnosis among patients with cirrhosis (n=396)**

|  |  |  |  |
| --- | --- | --- | --- |
| Characteristics | Categories | Number (%) | Univariable analysis |
| Odds Ratio, (95% CI) | P |
| Age (years) | 18-44 | 28(77.8%) | (Ref) |  |
| 45-64 | 106(84.8%) | 1.59 (0.63-4.0) | 0.321 |
| > 65 | 192(81.7%) | 1.27 (0.54-3.0) | 0.58 |
| Sex | Male | 202(84.9%) |  |  |
| Female | 123(78.3%) | 0.64 (0.38-1.08) | 0.10 |
| Race | Asian | 198 (85.1%) | (Ref) |  |
| White | 140 (83.8%) | 0.91 (0.47-1.76) | 0.77 |
| Black | 41(77.4%) | 0.60 (0.26-1.37) | 0.22 |
| Hispanic | 42 (77.8%) | 0.61 (0.27-1.40) | 0.24 |
| Insurance types | Commercial | 113(83.1%) | (Ref) |  |
| Medicare | 191 (80.2%) | 0.83 (0.48-1.43) | 0.50 |
| Both | 22(100%) | NA |  |

**Appendix Table 5. Univariable analysis of factors (race and insurance types) associated with receiving at least one claim for liver imaging within 12 months of CHB diagnosis among men > 40 years without cirrhosis.**

|  |  |  |  |
| --- | --- | --- | --- |
| Characteristics | Categories | Number (%) | Univariable analysis |
| Odds Ratio, (95% CI) | P |
| Race | Asian | 621/1071 (58.0%) | (Ref) |  |
| White | 312/709 (44.0%) | 0.57 (0.47-1.76) | <0.01 |
| Black | 132/258(51.2%) | 0.76 (0.26-1.37) | 0.05 |
| Hispanic | 92/223 (41.3%) | 0.51 (0.27-1.40) | <0.01 |
| Insurance types | Commercial | 628(52.0%) | (Ref) |  |
| Medicare | 516 (50.7%) | 0.94 (0.80-1.12) | 0.53 |
| Both | 42(46.7%) | 0.81 (0.53-1.24) | 0.33 |

**Appendix Table 6. Univariable analysis of factors (race and insurance type) associated with receiving at least one liver imaging within 12 months of CHB diagnosis among women > 50 years without cirrhosis.**

|  |  |  |  |
| --- | --- | --- | --- |
| Characteristics | Categories | Number (%) | Univariable analysis |
| Odds Ratio, (95% CI) | P |
| Race | Asian | 427/727 (58.7%) | (Ref) |  |
| White | 298/677 (44.0%) | 0.55 (0.45-0.68) | <0.01 |
| Black | 97/214(45.3%) | 0.58 (0.43-0.79) | 0.01 |
| Hispanic | 86/190 (45.3%) | 0.58 (0.42-0.80) | 0.01 |
| Insurance types | Commercial | 295(49.7%) | (Ref) |  |
| Medicare | 574 (49.9%) | 1.01 (0.83-1.23) | 0.92 |
| Both | 59(51.8%) | 1.09 (0.73-1.62) | 0.68 |

**Appendix Table 7. Proportion of CHB patients with cirrhosis and without cirrhosis who received HBV antiviral therapy within 12 months of diagnosis by race.**

|  |  |  |  |
| --- | --- | --- | --- |
|  | CHB patients with cirrhosis | CHB patients without cirrhosis | CHB patients with and without cirrhosis |
| Asian  | 43(37.7%) | 327(12.8%) | 370(13.8%) |
| White  | 45(27.0%) | 160(9.3%) | 205(10.9%) |
| Black  | 18(33.9%) | 55(8.7%) | 73(10.7%) |
| Hispanic  | 6 (11.1%) | 30(5.9%) | 36(6.5%%) |
| All races | 114(28.8%) | 595(10.7%) | 709(11.9%) |

**Appendix Table 8. Analysis of factors associated with retention in treatment 13-24 months after the first diagnosis date among those who received treatment within 12 months and in continuous enrollment at least 24 months after the first diagnosis date.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Characteristics | Categories | Number (%) | Univariable analysis | Multivariable analysis |
| Odds Ratio, (95% CI) | P | Adjusted Odds Ratio, (95% CI) | p |
| Age (years) | 18-44 | 80(69.6%) | (Ref) |  | (Ref) |  |
| 45-64 | 150 (80.7%) | 1.82 (1.06-3.12) | 0.03 | 2.11 (1.19-3.74) | 0.01 |
| > 65 | 154(77.8%) | 1.53 (0.91-2.57) | 0.11 | 1.69 (0.98-2.91) | 0.06 |
| Sex | Male | 222(78.5%) | (Ref) |  |  |  |
| Female | 161(74.9%) | 0.82 (0.54-1.25) | 0.35 |  |  |
| Race | Asian | 215(81.6%) | (Ref) |  | (Ref) |  |
| White | 104(72.7%) | 0.59 (0.37-0.97) | 0.04 | 0.58 (0.35-0.94) | 0.03 |
| Black | 37(69.8%) | 0.52 (0.27-1.00) | 0.05 | 0.47 (0.24-0.93) | 0.03 |
| Hispanic | 18(78.3%) | 0.80 (0.28-2.27) | 0.68 | 0.68 (0.24-1.96) | 0.48 |
| Insurance types | Commercial | 220(76.4%) | (Ref) |  |  |  |
| Medicare | 149(76.8%) | 1.02 (0.67-1.57) | 0.92 |  |  |
| Both | 15(88.2%) | 2.31 (0.52-10.39) | 0.27 |  |  |
| Cirrhosis | No | 319(76.5%) | (Ref) |  |  |  |
| Yes | 65(79.3%) | 1.17 (0.66-2.10) | 0.54 |  |  |