**Supplementary Table 1.** Performance Characteristics of PJI Identification Algorithms Comprised of Diagnosis and Procedure Codes From the Discharge Abstract Database Tested Individually and in Combinationa

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| --- | --- | --- | --- | --- |
| Diagnosis and/or Procedure Codes | Sensitivity | Specificity | Negative Predictive Value | Positive Predictive Value |
| PJI | 293/354  0.83 (0.78–0.87) | 4,046/4,192  0.97 (0.96–0.97) | 4,046/4,107  0.99 (0.98–0.99) | 293/439  0.67 (0.62–0.71) |
| Orthopedic procedure | 328/354  0.93 (0.89–0.95) | 3,115/4,192  0.74 (0.73–0.76) | 3,115/3,141  0.99 (0.99–0.99) | 328/1,405  0.23 (0.21–0.26) |
| PICC | 249/354  0.70 (0.65–0.75) | 3,896/4,192  0.93 (0.92–0.94) | 3,896/4,001  0.97 (0.97–0.98) | 249/545  0.46 (0.41–0.50) |
| PJI OR PICC + orthopedic procedure | 309/354  0.87 (0.83–0.91) | 4,031/4,192  0.96 (0.96–0.97) | 4,031/4,076  0.99 (0.99–0.99) | 309/470  0.66 (0.61–0.70) |
| PJI + orthopedic procedure | 283/354  0.80 (0.75–0.84) | 4,066/4,192  0.97 (0.96–0.97) | 4,066/4,137  0.98 (0.98–0.99) | 283/409  0.69 (0.64–0.74) |
| PJI + orthopedic procedure OR PJI + PICC | 289/354  0.82 (0.77–0.86) | 4,058/4,192  0.97 (0.96–0.97) | 4,058/4,123  0.98 (0.98–0.99) | 289/423  0.68 (0.64–0.73) |
| Orthopedic procedure + PICC | 236/354  0.67 (0.61–0.72) | 4,092/4,192  0.98 (0.97–0.98) | 4,092/4,210  0.97 (0.97–0.98) | 236/336  0.70 (0.65–0.75) |
| PJI OR wound disruption | 301/354  0.85 (0.81–0.89) | 4,001/4,192  0.95 (0.95–0.96) | 4,001/4,054  0.99 (0.98–0.99) | 301/492  0.61 (0.57–0.66) |
| PJI + PICC OR wound disruption + PICC | 223/354  0.63 (0.58–0.68) | 4,106/4,192  0.98 (0.97–0.98) | 4,106/4,237  0.97 (0.96–0.97) | 223/309  0.72 (0.67–0.77) |
| PJI OR excision + PICC | 306/354  0.86 (0.82–0.90) | 4,038/4,192  0.96 (0.96–0.97) | 4,038/4,086  0.99 (0.98–0.99) | 306/460  0.67 (0.62–0.71) |
| PJI OR spacer | 299/354  0.84 (0.80–0.88) | 4,044/4,192  0.96 (0.96–0.97) | 4,044/4,099  0.99 (0.98–0.99) | 299/447  0.67 (0.62–0.71) |
| PJI OR spacer OR arthroplasty + PICC | 266/354  0.75 (0.70–0.80) | 3,887/4,192  0.93 (0.92–0.93) | 3,887/3,975  0.98 (0.97–0.98) | 266/571  0.47 (0.42–0.51) |
| Recursive partitioning | 299/354  0.84 (0.80–0.88) | 4,044/4,192  0.96 (0.96–0.97) | 4,044/4,099  0.99 (0.98–0.99) | 299/447  0.67 (0.62–0.71) |

Note. PJI, prosthetic joint infection; PICC, peripherally inserted central catheter.

aThe denominator includes nonprimary arthroplasty readmissions and the first admission where a PJI was observed by chart review.