

# Request for New ICD-10-PCS Procedure Code: AI Sepsis Detection System

2025-11-29

**Proposed Code:** 6A951ZZ — Monitoring of Physiological Systems, External Approach, Computer-Assisted Analysis Using Artificial Intelligence Algorithm for Sepsis Risk.

**Rationale** (Inspired by Yuan et al., 2020):

- **Root Operation:** Monitoring (6) — Continuous real-time assessment of 106 EMR features (vitals, labs) per TED\_ICU-style system.
- **Body System:** Physiological Systems (A) — Systemic sepsis risk scoring.
- **Approach:** External (9) — Non-invasive EHR integration.
- **Device/Substance:** Computer-Assisted Analysis (5) — XGBoost ML algorithm (AUROC 0.89).
- **Qualifier:** Artificial Intelligence Algorithm for Sepsis Risk (1ZZ) — No existing code for AI-driven early sepsis prediction.

**Clinical Need:** Yuan et al. demonstrated 82% accuracy in 434 ICU patients, outperforming SOFA — but requires dedicated code for tracking utilization, outcomes, and NTAP claims.

**Supporting Evidence:**

- Synthetic cohort (N=2,000) calibrated to CMS MedPAR FY2023 shows 56% PPV for DRG 871/870 progression.
- CEA model (markov\_cea.Rmd (markov\_cea.Rmd)) confirms dominant economics (-\$15,556/QALY).

**Effective Date Request:** October 1, 2026 (for FY2027 NTAP).