GEORGE MASON UNIVERSITY

PREDICTIVE ANEMIA RISK INDEX TECHNOLOGY

GMU-21-006

STAY AHEAD OF ANEMIA: PREDICT, PREVENT, PROTECT

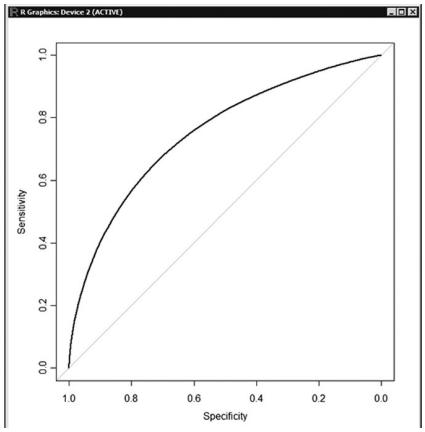
This technology leverages advanced data analytics to anticipate the likelihood of anemia onset based on a patient's medical history. Utilizing electronic health records and sophisticated modeling of risk factors, the tool helps healthcare professionals identify patients at high risk for anemia, allowing for early intervention and targeted care strategies. This innovative approach improves clinical outcomes by predicting anemia before its symptoms manifest, based on dynamic risk factors over time.

Key Features

- **Data-Driven Predictive Model:** Uses comprehensive data from over 9.7 million veterans to predict anemia risk
- **Dynamic Risk Assessment:** Evaluates time-dependent and repetitive medical diagnoses across 25 major diagnostic categories
- **High Accuracy:** Model accuracy validated with an area under the ROC curve of 0.751, ensuring reliable anemia predictions
- **Personalized Risk Scoring:** Individual patient risk is determined by analyzing multiple risk factors, including repeated hospitalizations and progression of underlying conditions
- **Proactive Health Management:** Enables healthcare providers to intervene early and tailor treatment plans to prevent the adverse outcomes associated with anemia

Benefits

- **Enhanced clinical decision-making**
- **Early detection and management of anemia risks**
- **Applicable to a wide range of healthcare settings**
- **Supports improved patient outcomes and reduced hospitalizations**



The area under the receiver operating characteristic curve for the prediction of the development of anemia.

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