

METHOD AND SYSTEM FOR PERSONALIZED PREDICTION OF INFECTION AND SEPSIS**ABSTRACT**

A computation system and method for early detection of sepsis and infection in patients uses personalized detection models. The system stores patient health data for many patients, including symptoms, vital signs and disease conditions obtained from medical records and wearable/personal sensors. Multiple sepsis prediction models are then trained based on identifying cohorts of similar patients using a similarity measure or score. Each model is trained using a different cohort or similarity measure. A patient is then monitored, and the model trained on the most similar set of patients is selected to monitor the patient and identify sepsis. Further as the patient's symptoms or vital signs change, the choice of the most similar patients, and associated model, is reassessed and the most appropriate model based on the patient's current state is selected. This ensures that as the patient's symptoms change the best model is used to assess likelihood of sepsis to ensure rapid and appropriate intervention.

Figure 1