

1 Data preprocessing

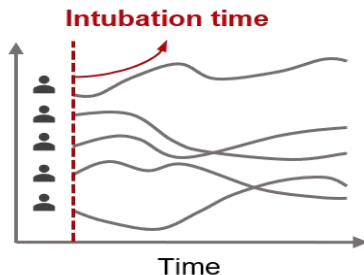


NYP-WCMC
Development



NYP-LMH
Validation

- SOFA trajectory derivation



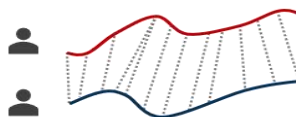
2 Two-stage subphenotyping

Stage 1: Baseline stratification

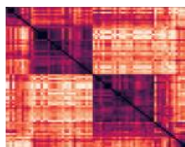


Stage 2: SOFA trajectory clustering

- Trajectory similarity calculation

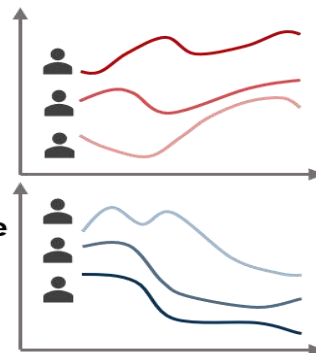


- Patient similarity matrix



Hierarchical
agglomerative
clustering

- Subphenotypes



3 Subphenotype marker identification



- Laboratory tests



- Vital signs



- Respiratory variables



- Ventilator parameters

Statistical testing

Prediction modeling

To identify and characterize distinct subphenotypes of COVID-19 critical illness