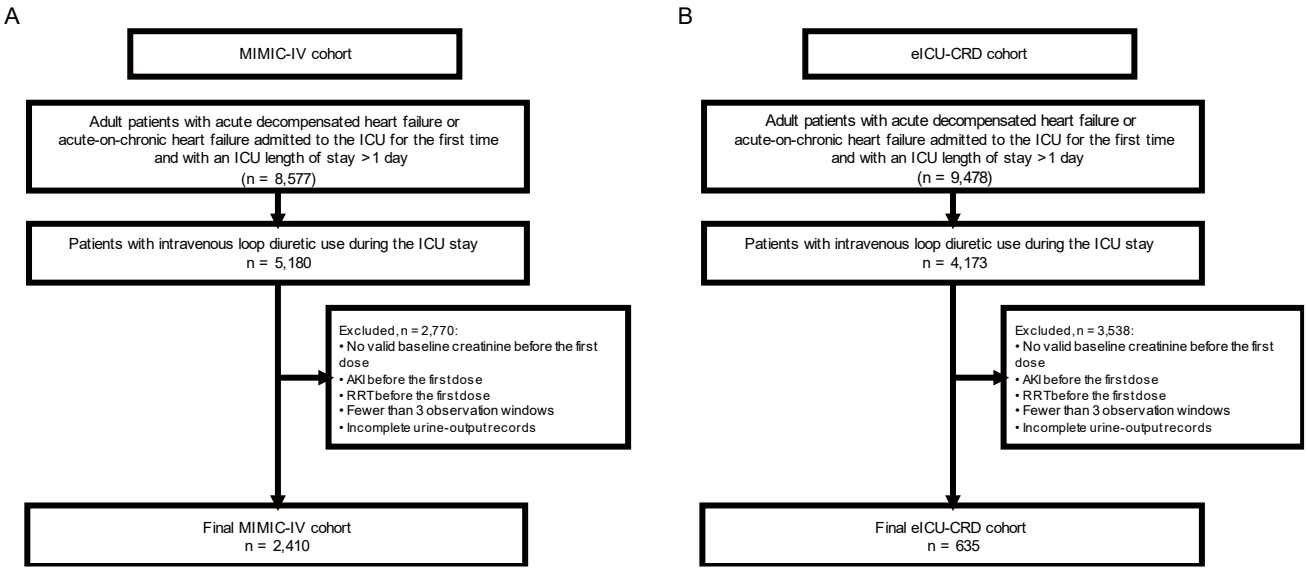
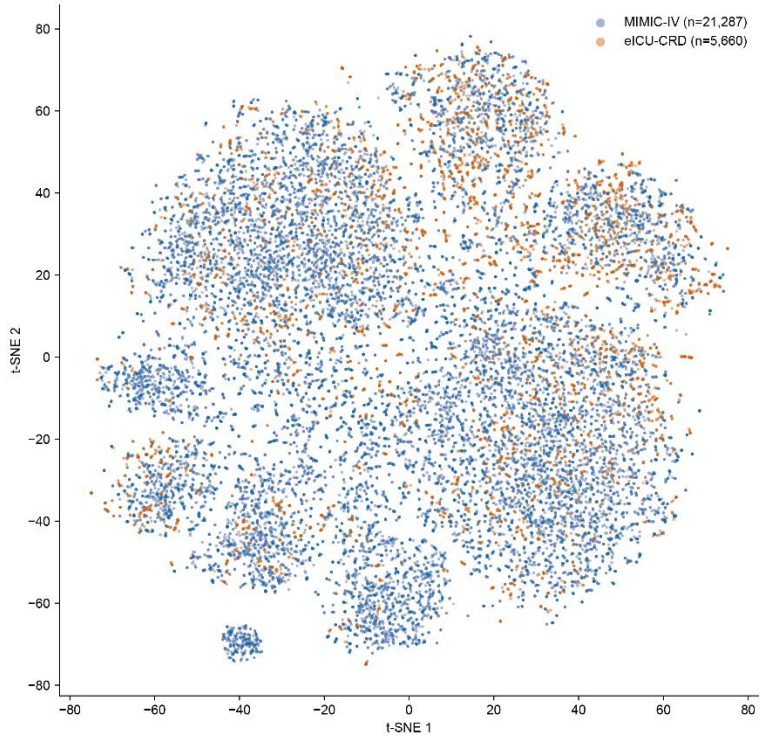
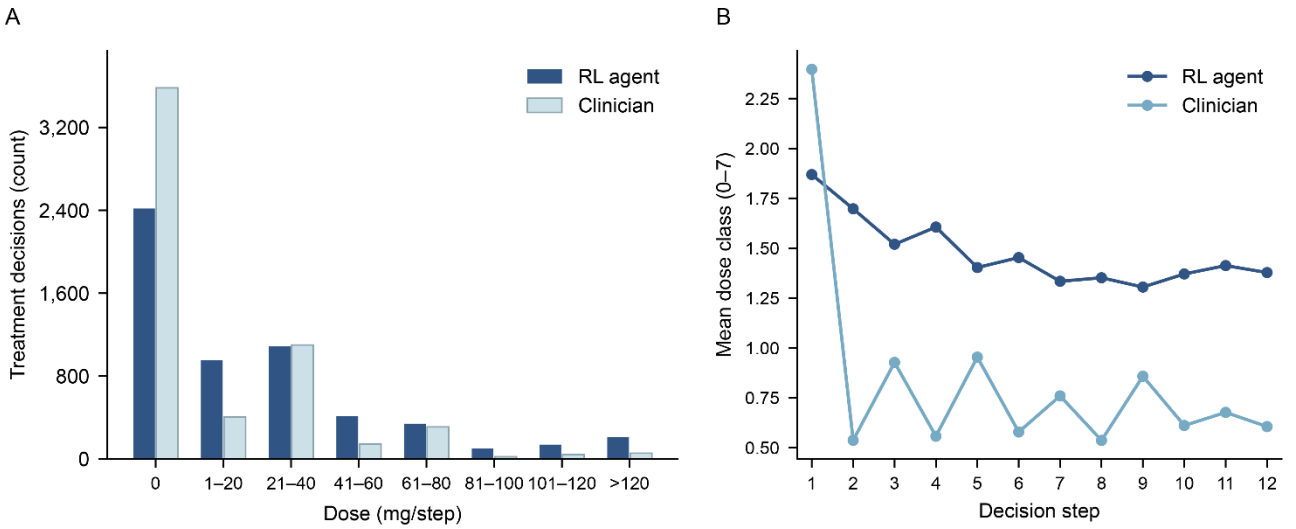


Supplementary Figure S1. Flowchart of study cohort selection.



Supplementary Figure S2. Visualization of clinical state distributions using t-SNE**.** Each point represents a clinical state at a 6-h decision window. Colors distinguish MIMIC-IV (21,287 states) from eICU-CRD (5,660 states).



Supplementary Figure S3. Comparison of dosing decisions between the RL agent and clinicians in the eICU-CRD cohort. (A) Distribution of treatment decisions across dose categories. (**B**) Mean dose class selected by the RL agent and clinicians at each decision step.