

Supplement 2

An Example REDCap Survey for Retrospective Clinician Prediction Collection

Clinicians vs. Artificial Intelligence in Patient Outcome Prediction in the Intensive
Care Unit

Kuang et al.

Please examine the clinical data for the patient below and make your best guess regarding their patient outcomes. The data displayed below is collected from the patient's first 24 hours in the ICU. You can assume any measurement that is not shown below was not recorded for this patient in the database. Measurements that were recorded multiple times during the patient's first 24 hours in the ICU are plotted on graphs and measurements that were only recorded once are presented as single values. Note, for vital signs data only, the plots show the average value every hour.

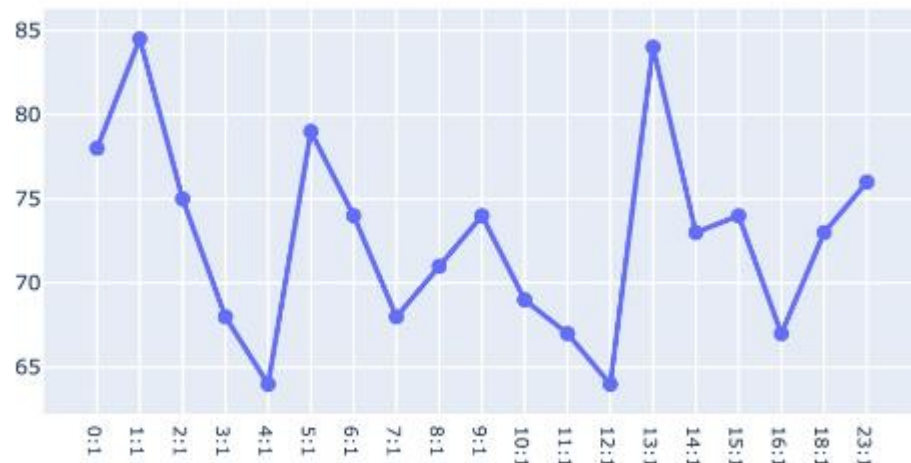
Patient 11

Gender	Male
Age	34
Admission Type	Non-Operative
Admission Class	Medical
Admission Diagnosis	Bleeding, upper GI

Vitals

Manual Respiratory Rate	14.0
Oxygen Saturation - Site 1	98.0

Non-Invasive Blood Pressure - Diastolic



Non-Invasive Blood Pressure - Systolic



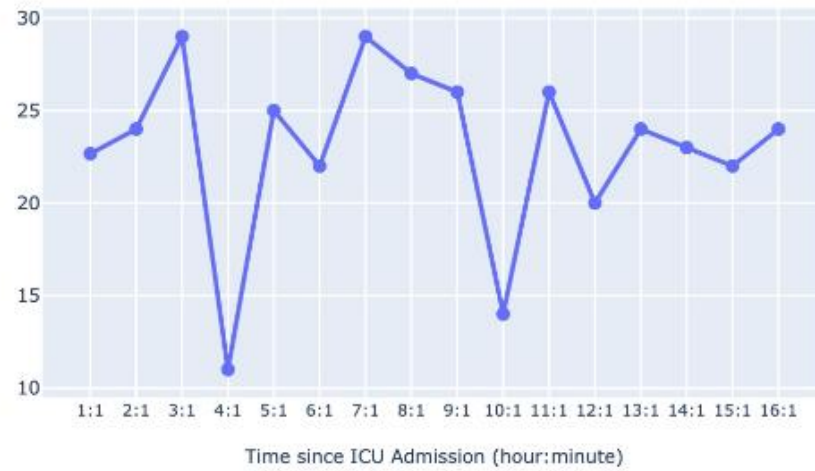
Non-Invasive Blood Pressure - Mean



Heart Rate



Resp Rate Bedside Monitor

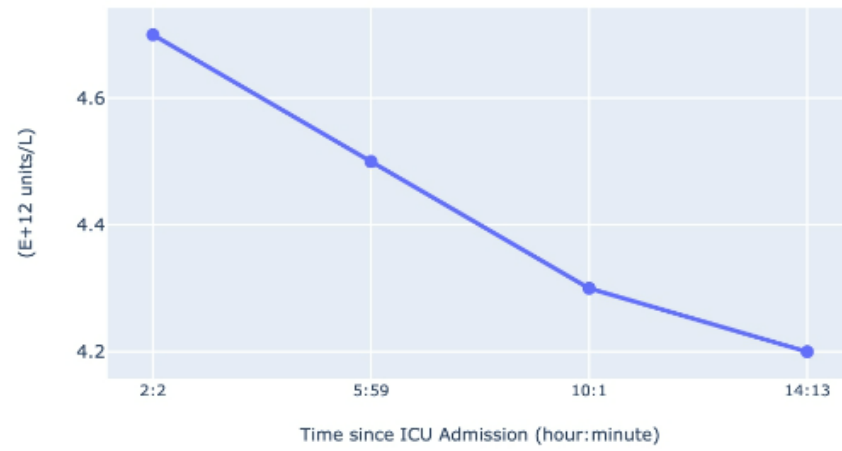


Oxygen Saturation

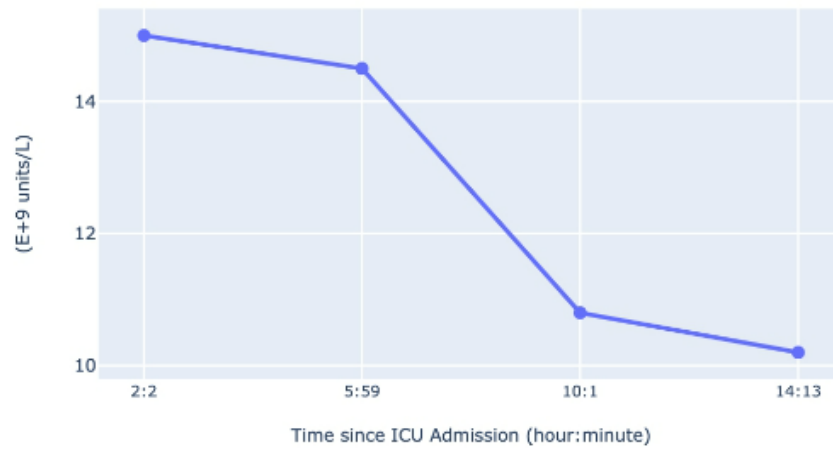


Labs

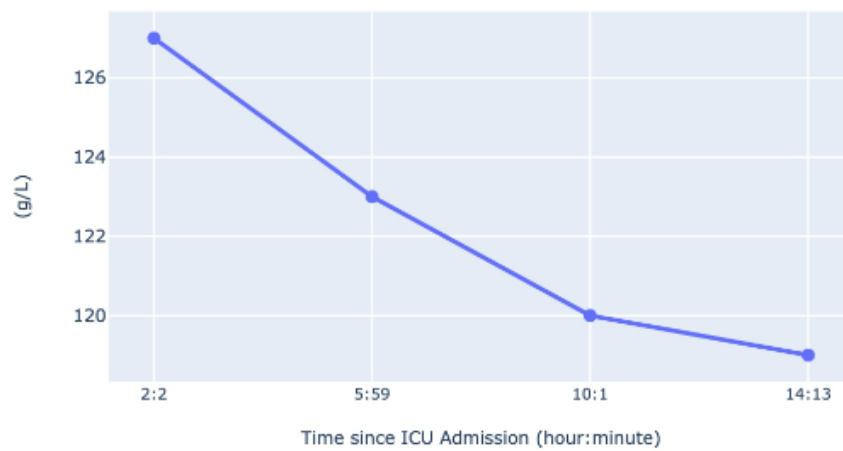
Red Blood Cells



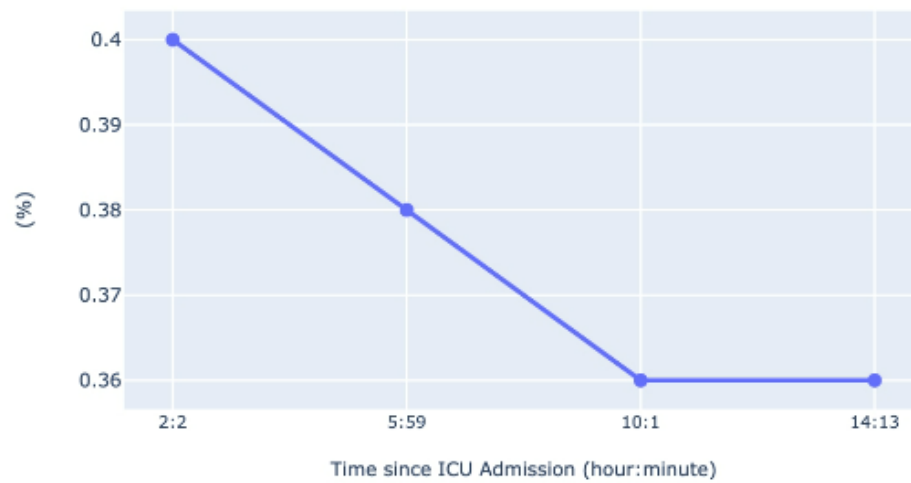
White Blood Cells



Hemoglobin



Hematocrit



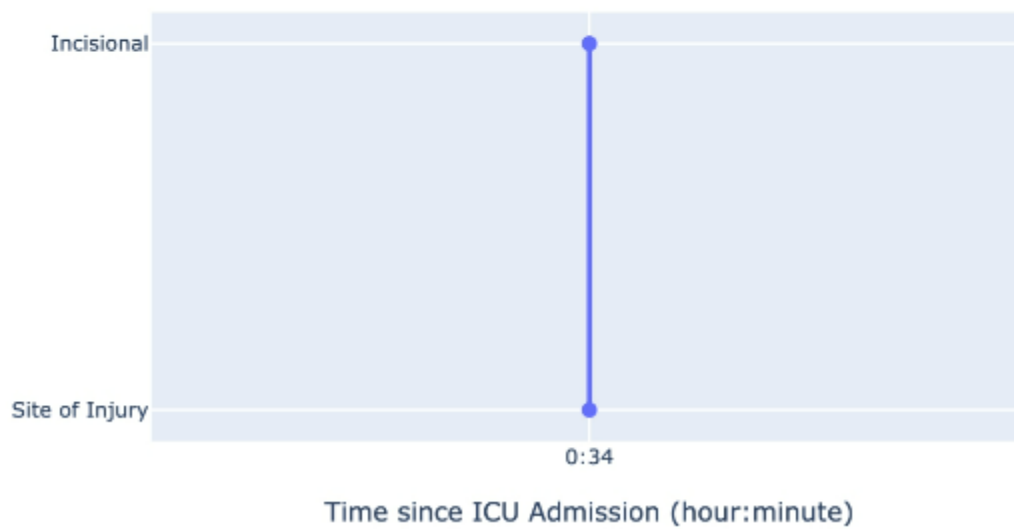
Prescriptions

Oral Fluids	400.0	(mL)
0.9% NaCl	500.0	(mL)

Pain

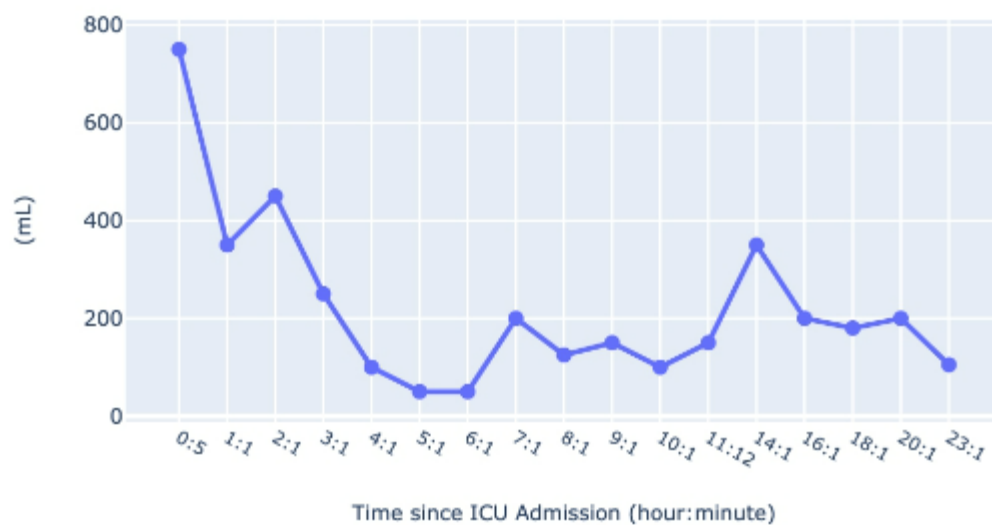
Pain Scale at Rest 4.0

Location of Pain



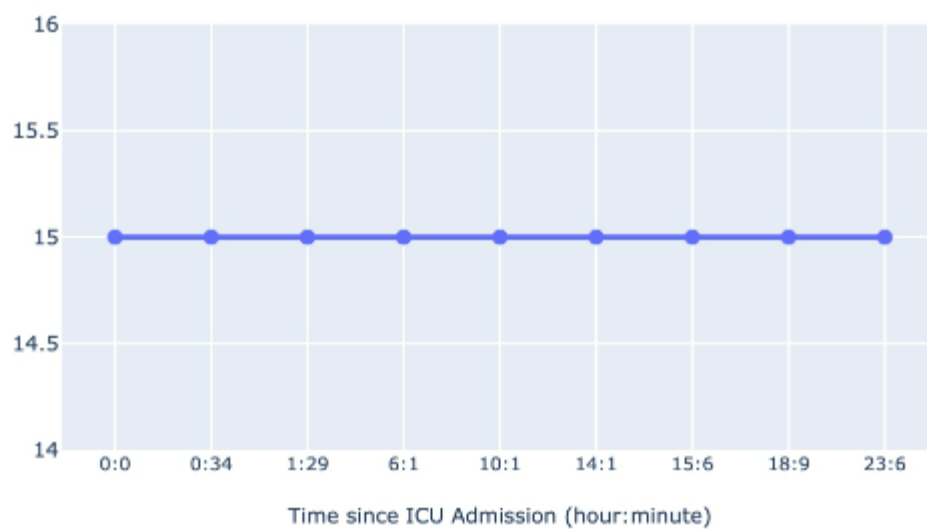
Urine Volumes

Urine Indwelling Catheter

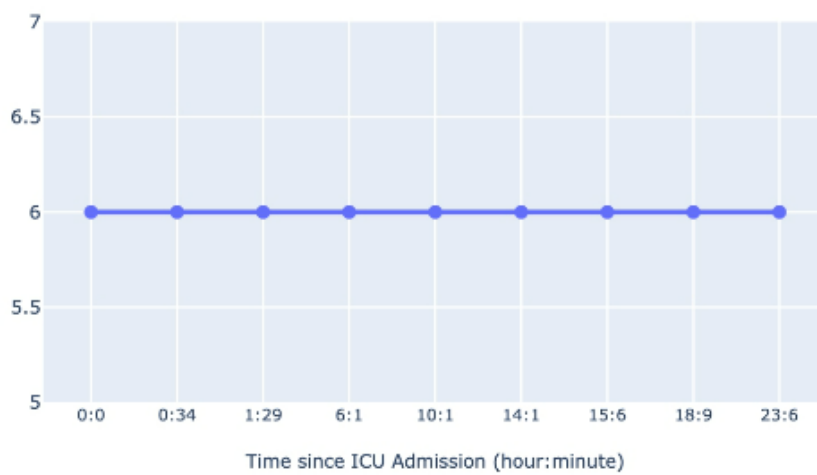


GCS

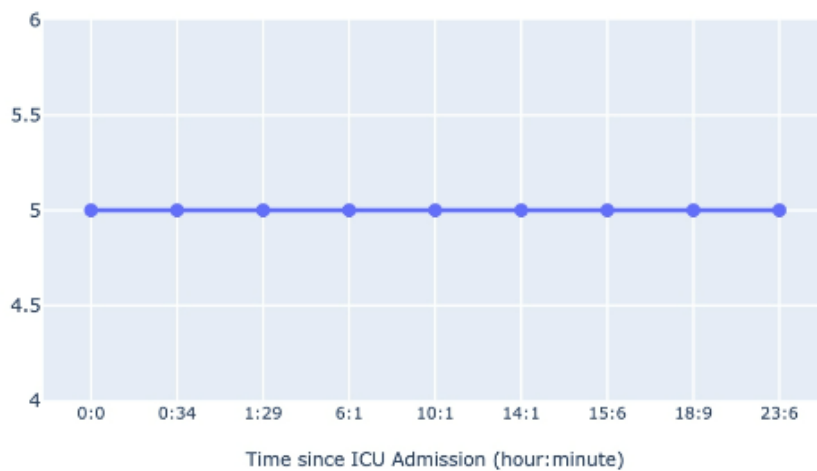
Glasgow Coma Scale



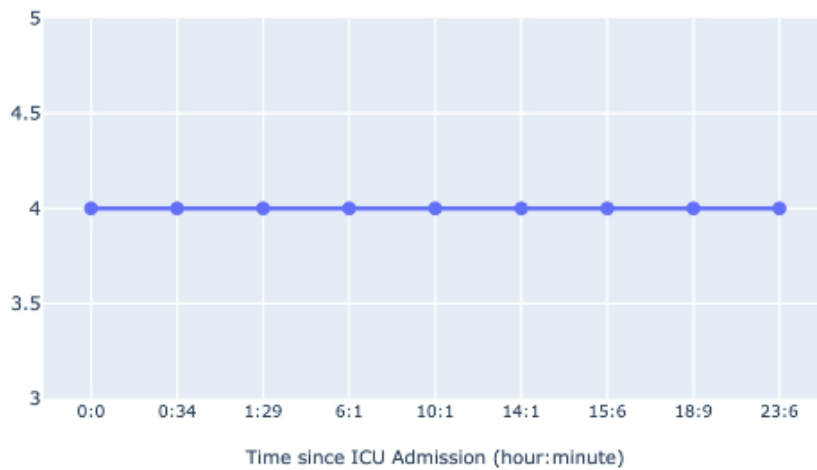
Motor Response



Verbal Response

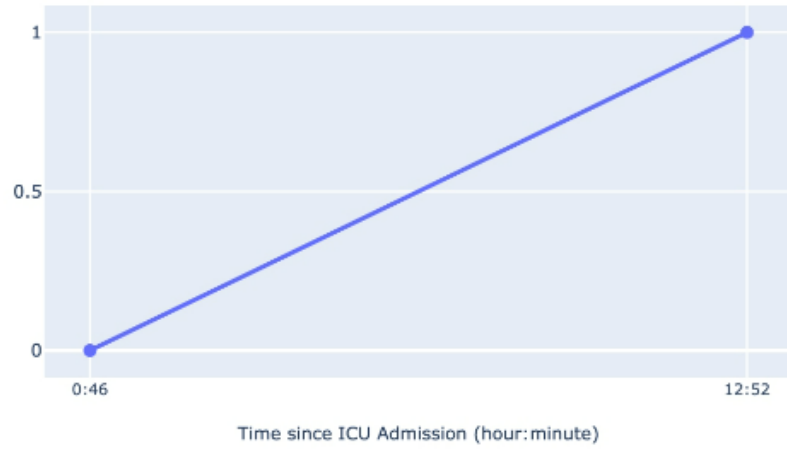


Eye Opening



ICDSC

Intensive Care Delirium Screening Checklist



Psychomotor Agitation or Retardation



Sleep Wake Cycle Disturbance



Inattention



Hallucination, Delusion or Psychosis



Inappropriate Mood or Speech



Fluctuations



Disorientation

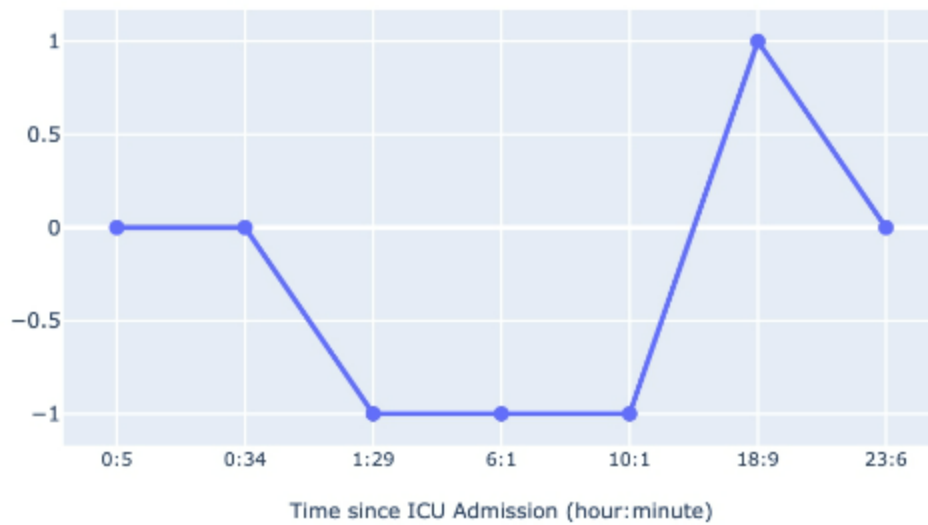


Altered Level of Consciousness



RASS

Richmond Agitation Sedation Scale



SOFA

Liver (admission)	0.0
Respiratory (admission)	0.0
Sequential Organ Failure Assessment (admission)	0.0
Cardiovascular (admission)	0.0
Coagulatory (admission)	0.0
Neurologic (admission)	0.0
Renal (admission)	0.0

Apache II

Age Point	0.0
Apache II Score	4.0
Apache II Compliance	8.0
Acute Physiological Score	4.0
Chronic Health Point	0.0

Apache III (IV)

Age Point	0.0
Apache III (IV) Score	20.0
Apache III (IV) Compliance	10.0
Acute Physiological Score	20.0
Chronic Health Point	0.0

Predict the following outcomes/events for this patient:

In-hospital mortality:

- ☐ Most likely to die
- ☐ Likely to die
- ☐ Equally likely to die or survive
- ☐ Unlikely to die
- ☐ Most unlikely to die

reset

30-day post-discharge mortality:

- ☐ Most likely to die
- ☐ Likely to die
- ☐ Equally likely to die or survive
- ☐ Unlikely to die
- ☐ Most unlikely to die

reset

Sepsis during this ICU stay:

- ☐ Most likely to develop sepsis
- ☐ Likely to develop sepsis
- ☐ Equally likely to develop sepsis or not develop sepsis
- ☐ Unlikely to develop sepsis
- ☐ Most unlikely to develop sepsis

reset

Delirium during this ICU stay:

- ☐ Most likely to develop delirium
- ☐ Likely to develop delirium
- ☐ Equally likely to develop delirium or not develop delirium
- ☐ Unlikely to develop delirium
- ☐ Most unlikely to develop delirium

reset

AKI during this ICU stay:

- ☐ Most likely to develop AKI
- ☐ Likely to develop AKI
- ☐ Equally likely to develop AKI or not develop AKI
- ☐ Unlikely to develop AKI
- ☐ Most unlikely to develop AKI

reset

ARDS during this ICU stay:

- ☐ Most likely to develop ARDS
- ☐ Likely to develop ARDS
- ☐ Equally likely to develop ARDS or not develop ARDS
- ☐ Unlikely to develop ARDS
- ☐ Most unlikely to develop ARDS

reset

From this point forward, how long do you think this patient will stay in the ICU? Give your prediction in days without a decimal point (e.g., 2).

From this point forward, how long do you think this patient will stay in the hospital? Give your prediction in days without a decimal point (e.g., 2).