ICU DOWNGRADE GUIDELINES

Patients Recovering from Shock Requiring Vasopressors and/or Mechanical Ventilation

Guideline Type: Critical Care Operations
Applies To: All ICU Patients in Pipeline Health LA Market Hospitals
Hospitals: Coast Plaza Hospital, Community Hospital of Huntington Park, East Los Angeles Doctors Hospital, Memorial Hospital of Gardena
Guideline Basis: Society of Critical Care Medicine (SCCM), evidence-based ICU discharge and transfer literature
Review Cycle: Annual

---

1. PURPOSE

To establish a standardized, evidence-based process for determining when ICU patients recovering from shock requiring vasopressor support and/or invasive mechanical ventilation are appropriate for transfer from the ICU to a lower-acuity setting.

This guideline is intended to:

- Reduce preventable ICU readmissions
- Improve patient safety during transitions of care
- Standardize downgrade timing across all Pipeline Health ICUs
- Align Tele-ICU and bedside intensivist workflows
- Ensure appropriate monitoring after discontinuation of critical therapies

2. GUIDELINE

Patients previously requiring:

- Vasopressor therapy,
- Invasive mechanical ventilation,
- Continuous ICU-level monitoring,

may be considered for downgrade from the ICU only after demonstrating sustained clinical stability for the minimum observation periods defined in this guideline.

Transfer decisions remain at the discretion of the attending intensivist, in collaboration with bedside nursing, respiratory therapy.

These criteria are intended to standardize care while allowing clinician judgment for individual patient circumstances.

The SCCM ICU Admission, Discharge, and Triage Guidelines support institution-specific criteria for ICU discharge emphasizing physiologic stability, reduced monitoring needs, and decreased risk of clinical deterioration.

3. DEFINITIONS

Hemodynamic Stability

Defined as ALL the following:

- MAP ≥ 65 mmHg
- No vasopressor escalation
- No recurrent hypotension requiring intervention
- No evidence of ongoing shock
- Stable heart rhythm
- No clinically significant arrhythmias requiring ICU intervention
- Lactate stable or improving if previously elevated

4. ICU DOWNGRADE CRITERIA AFTER VASOPRESSOR DISCONTINUATION

Required Observation Period

Patients previously requiring vasopressor support must remain clinically stable for a minimum of:

≥ 6 HOURS AFTER COMPLETE DISCONTINUATION OF ALL VASOPRESSORS

prior to downgrade consideration.

Required Criteria During the 6-Hour Observation Period

The patient must demonstrate ALL of the following:

Hemodynamic Criteria

- MAP ≥ 65 mmHg without vasopressor support
- No recurrent hypotension requiring:
    - IV fluid bolus,
    - Vasopressor restart,
    - Escalation of monitoring
- No increasing tachycardia suggestive of recurrent shock
- Stable urine output appropriate for clinical condition

Respiratory Criteria

- No escalating oxygen requirements
- No respiratory distress
- No evidence of worsening acidosis

Clinical Stability

- No concern for active hemorrhage
- No new sepsis resuscitation requirements
- No ongoing unstable arrhythmia
- No need for ICU-only nursing interventions

High-Risk Shock Patients

The following patients should generally remain in ICU for:

≥ 12-24 HOURS AFTER VASOPRESSOR DISCONTINUATION

unless otherwise approved by the intensivist:

- Septic shock with recurrent hypotension
- Multiple vasopressor requirement
- Persistent lactic acidosis
- Cardiogenic shock
- Advanced heart failure
- Severe pulmonary hypertension
- Significant arrhythmia burden
- Massive transfusion
- Advanced cirrhosis
- Patients downgraded overnight

Evidence demonstrates that recurrent hypotension within 24 hours of vasopressor discontinuation is associated with adverse outcomes and ICU instability.

5. ICU DOWNGRADE CRITERIA AFTER EXTUBATION

Required Observation Period

Patients extubated from invasive mechanical ventilation must remain clinically stable for a minimum of:

≥ 12 HOURS POST-EXTUBATION

prior to downgrade consideration.

For higher-risk patients, the preferred observation period is:

24 HOURS POST-EXTUBATION

Required Criteria During Observation Period

Respiratory Stability

- Stable oxygen saturation on:
  - Room air,
  - Nasal cannula,
  - Stable low-flow oxygen
- No escalating oxygen requirement
- No increased work of breathing
- Respiratory rate appropriate for condition
- No impending respiratory fatigue

Airway Protection

- Effective cough
- Adequate secretion clearance
- Airway protection intact
- No high aspiration concern

Neurologic Stability

- Awake and appropriately responsive
- No sedation infusion requirement
- No severe delirium requiring ICU-level management

Monitoring Stability

- No requirement for:
  - Continuous NIV/BiPAP,
  - Frequent suctioning,
  - Hourly respiratory assessments,
  - Difficult airway monitoring

High-Risk Extubation Patients

The following patients should generally remain in ICU for:

≥ 24 HOURS POST-EXTUBATION

- Difficult airway
- COPD with chronic hypercapnia
- Neuromuscular weakness
- Morbid obesity with hypoventilation
- HFNC dependence
- Frequent secretion burden
- Multiple failed spontaneous breathing trials
- Reintubation during same hospitalization
- Significant delirium/agitation
- Tracheostomy decannulation within prior 24 hours

Extubation failure most commonly occurs within the first 12-24 hours after extubation, supporting extended ICU observation in higher-risk populations.

6. EXCLUSION CRITERIA FOR ICU DOWNGRADE

Patients SHALL NOT be downgraded if ANY of the following are present:

Hemodynamic Instability

- Active vasopressor infusion
- Vasopressor discontinuation < 6 hours
- Recurrent hypotension
- Active shock state
- Escalating lactate

Respiratory Instability

- Continuous BiPAP/NIV
- HFNC above institutional floor threshold
- Respiratory distress
- Frequent suctioning requirement
- Anticipated difficult reintubation

Neurologic Instability

- Hourly neurologic checks
- Active seizures
- Continuous sedative infusion

ICU-Level Therapies

- Mechanical circulatory support
- Active DKA insulin infusion
- Continuous paralytics
- Massive transfusion protocol
- Frequent bedside interventions

7. OVERNIGHT DOWNGRADES

Whenever operationally feasible:

ICU downgrades should preferentially occur during daytime hours.

Nighttime ICU discharge has been associated with increased hospital mortality and ICU readmission risk in multiple observational studies.

8. PROCEDURE

Daily Downgrade Readiness Assessment

Downgrade readiness shall be reviewed during:

- Morning multidisciplinary ICU rounds
- Intensivist rounds and ad-hoc review

When the Intensivist identifies that a patient is suitable to be downgraded, the bedside RN contacts the primary provider, communicates the planned downgrade, and obtain their acceptance of the patient. The patient should not be considered formally downgraded until this confirmation has occurred.

In summary, ICU downgrades now require a two-provider handoff:

- Intensivist: Determines that the patient is clinically appropriate for downgrade.
- Hospitalist/Primary Provider: Accepts the patient and assumes responsibility for ongoing care.

11. REFERENCES

1. Society of Critical Care Medicine ICU Admission, Discharge, and Triage Guidelines. Crit Care Med. 2016;44(8):1553-1602.
2. Hosein FS, et al. ICU readmission and post-ICU mortality meta-analysis. Critical Care. 2014.
3. Santamaria JD, et al. Timing of ICU discharge and subsequent mortality. Am J Respir Crit Care Med. 2015.
4. Viglianti EM, et al. Late vasopressor administration in ICU patients: a retrospective cohort study. Chest. 2020.
5. Jeon K, et al. Hypotension after vasopressor discontinuation and outcomes following shock recovery. Scientific Reports. 2021.