

ARDS Micro-Credential Test Plan

I. Patient Problems (*Initial* - Causes and *Concurrent* - Sequelae) (32%)

- Etiology and predisposing factors
 - Direct injury (e.g., aspiration, pneumonia, smoke inhalation, pulmonary trauma, lung transplant)
 - Indirect injury (e.g., sepsis, toxicology, severe trauma, TACO/TRALI, pancreatitis)
- Severe diffuse lung injury
- Acid-base disorder
- Refractory hypoxemia
- Impaired gas exchange (i.e., V/Q mismatch)
- Non-cardiogenic pulmonary edema
- Multiple organ dysfunction syndrome (MODS)
 - Neurologic dysfunction (e.g., delirium, encephalopathy)
 - Cardiac dysfunction (e.g., dysrhythmias, decreased cardiac tone, myocardial depression, hypoperfusion, hypotension)
 - Kidney dysfunction (e.g., AKI, electrolyte derangements)
 - Gastrointestinal dysfunction (e.g., ileus, bacterial translocation, liver dysfunction)
 - Hematologic dysfunction (e.g., coagulopathies)

II. Therapeutic Interventions and Modalities (34%)

- Oxygen delivery devices (indications, management, and complications)
 - Nasal cannula/Face mask devices (e.g., high flow oxygen devices)
 - Positive pressure devices (CPAP/BiPAP)
 - Invasive ventilation
 - Extracorporeal membrane oxygenation (ECMO)
- Positioning/pronation therapy
- Pain management
- Agitation management
- Corticosteroids

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- Neuromuscular blockade agents
- Inhaled vasodilators (nitric oxide)
- Bronchoscopy
- Fluid management
- Electrolyte management
- Nutrition

III. Monitoring and Safety (34%)

- Airway management
 - Airway obstruction
 - Alarm detection and monitoring
- Cardiopulmonary monitoring (e.g., hemodynamic monitoring, ScvO₂)
- Diagnostic testing
 - ABG interpretation
 - Chest x-ray
- Assessment tools
 - Pain, sedation, and paralytic (e.g., CPOT, RASS, Riker SAS, vent dyssynchrony/TOF)
 - PaO₂/FiO₂ ratio; SpO₂/FiO₂ ratio
 - Sequential Organ Failure Assessment (SOFA/qSOFA)
- ICU Liberation Bundle (A-F)
- Prevention
 - Ventilator complications (e.g., barotrauma, pneumonia)
 - Pressure injury
 - Thromboembolism
 - GI stress ulcer
 - Nosocomial infection
 - Critical care neuromyopathies
 - Post-intensive care syndrome (PICS)

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Bibliography

Primary References

Fan, Eddy, et al. "An Official American Thoracic Society/European Society of Intensive Care Medicine/Society of Critical Care Medicine Clinical Practice Guideline: Mechanical Ventilation in Adult Patients with Acute Respiratory Distress Syndrome." *American Journal of Respiratory and Critical Care Medicine*, vol. 195, no. 9, 1 May 2017, pp. 1253-1263.
doi:10.1164/rccm.201703-0548ST.

Fan, Eddy, et al. "An Update on Management of Adult Patients with Acute Respiratory Distress Syndrome: An Official American Thoracic Society Clinical Practice Guideline." *American Journal of Respiratory and Critical Care Medicine*, Nov. 30 2023, doi:10.1164/rccm.202311-20111ST.

Grasselli, Giacomo, et al. "ESICM Guidelines on Acute Respiratory Distress Syndrome: Definition, Phenotyping and Respiratory Support Strategies." *Intensive Care Medicine*, vol. 49, no. 7, 2023, pp. 727-759. DOI: 10.1007/s00134-023-07050-7.

Additional References used for Item Validation

AACN Essentials of Critical Care Care Nursing, 5th ed., edited by Sarah Delgado, McGraw Hill, 2023.

AACN Essentials of Progressive Care Nursing, 5th ed., edited by Sarah Delgado, McGraw Hill, 2023.

AACN Procedure Manual for High Acuity, Progressive, and Critical Care, 8th ed., edited by Karen L. Johnson, Elsevier, 2024.

Core Curriculum for High Acuity, Progressive, and Critical Care Nursing, 8th ed., edited by Tonja M. Hartjes, Elsevier, 2022.

Manual of Critical Care Nursing: Interprofessional Collaborative Management, 8th ed., edited by Marianne Saunorus Baird, Elsevier, 2023.

Mosby's Diagnostic & Laboratory Test Reference, 17th ed., edited by Kathleen Deska Pagana, Timothy Pagana, and Theresa Pagana Bullen, Elsevier, 2024.

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Sole's Introduction to Critical Care Nursing, 9th ed., edited by Mary Beth Flynn Makic and Lauren T. Morata, Elsevier, 2025.

Textbook of Critical Care, 8th ed., edited by Jean-Louis Vincent, Elsevier, 2024.

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