



ProgressTrack Insight Faculty Report

Course: Adult Health Nursing I

Exam: Cardiovascular & Respiratory Disorders

Cohort Size: 18 students

1. Overall Exam Performance

- **Class Average: 74%**
- **Benchmark: 78%**
- **Pass Rate ($\geq 78\%$): 58%**
- **Below Benchmark: 42%**

Score distribution indicates a moderate left shift, with a concentration of scores in the 68–76% range. Fewer high-performing scores ($>85\%$) were observed compared to prior exam patterns (if applicable).

2. Item Difficulty (P-Value Analysis)

- **Easy Items ($P \geq 0.80$): 22%**
- **Moderate Items ($P = 0.30\text{--}0.79$): 54%**
- **Difficult Items ($P < 0.30$): 24%**

Several items fell below the acceptable difficulty threshold (<0.30), indicating either increased cognitive demand or potential misalignment with delivered content.

3. Item Discrimination (Point-Biserial Correlation)

- **Strong Discrimination (>0.30): 46% of items**
- **Moderate ($0.20\text{--}0.29$): 32%**
- **Weak (<0.20): 22%**

A subset of items demonstrated weak discrimination, suggesting limited differentiation between high- and low-performing students. These items warrant review.

4. Distractor Analysis

- **Effective distractors were observed in approximately 60% of items.**
 - **Ineffective distractors (selected by <5% of students) were present in 40% of items.**
 - **In several low-performing items, one distractor accounted for a disproportionate number of responses, indicating possible ambiguity or miskeying risk.**
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5. Content & Blueprint Alignment

- **Majority of items aligned with cardiovascular and respiratory content domains.**
 - **Overrepresentation noted in oxygenation-related items relative to pharmacology and acid-base balance.**
 - **Pharmacology content appeared underrepresented compared to course emphasis.**
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6. Cognitive Level (Bloom's Taxonomy)

- **Remember/Understand: 28%**
- **Apply: 50%**
- **Analyze or Higher: 22%**

Distribution reflects a predominance of application-level items, with fewer higher-order (analysis-level) questions than expected for this course level.

7. Reliability (Internal Consistency)

- **Estimated Cronbach's Alpha: 0.78**

This level indicates acceptable internal consistency for a course exam. However, removal or revision of low-discrimination items may improve reliability.

8. Individual Student Performance Patterns

- Cluster of students demonstrated consistent deficits in pharmacology and clinical judgment domains.
 - Students scoring below benchmark frequently missed multi-step prioritization items.
 - Strong performers showed consistent success across oxygenation and foundational physiology items.
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9. Question Review Guidance

Retain (No Revision Needed):

- Items with high discrimination (>0.30) and moderate difficulty

Revise:

- Items with low discrimination (<0.20)
- Items with ineffective distractors
- Items with disproportionate incorrect option selection

Discard or Replace:

- Items with both low difficulty (<0.30) and poor discrimination
 - Any item with potential ambiguity or misalignment to objectives
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10. Instructional Feedback Loop

- Content areas requiring reinforcement:
 - Cardiac pharmacology
 - Acid-base balance interpretation
 - Clinical prioritization frameworks
- Observed performance patterns suggest:
 - Strong foundational knowledge acquisition
 - Reduced performance in application and decision-making contexts
- Alignment between instruction and assessment appears strongest in oxygenation content and weakest in pharmacologic application.