

Clinical Vigilance and Decision-Making Practices in Hospital Respiratory Therapy

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ABSTRACT

This study addressed the need to understand how clinical vigilance shaped decision-making practices in hospital respiratory therapy at Cagayan Valley Medical Center. Using a vignette-supported analytic cross-sectional design, the research assessed respiratory therapy personnel's vigilance in recognizing respiratory deterioration, monitoring treatment response, anticipating clinical risk, communicating concerns, and documenting patient-related actions. It also examined decision-making practices in terms of assessment-based judgment, prioritization, protocol use, escalation, interprofessional coordination, and clinical documentation. Data were gathered through a validated researcher-made questionnaire with clinical vignettes and analyzed using descriptive statistics, reliability testing, measurement model assessment, and Partial Least Squares Structural

Equation Modeling. Findings showed high levels of clinical vigilance and decision-making practices, particularly in recognizing abnormal breathing patterns, monitoring oxygen response, assessing airway concerns, and selecting interventions based on bedside findings. However, the results also revealed practice gaps in reassessment after intervention, escalation of unresolved respiratory concerns, endorsement during handoffs, and completeness of documentation. The vignette results further showed that decision-making was stronger in familiar airway-related situations but less consistent in complex cases requiring escalation and continuity of care. Structural model findings confirmed that clinical vigilance significantly predicted decision-making practices and vignette-based decision performance. The study concluded that respiratory therapy personnel demonstrated strong bedside awareness and generally sound clinical judgment, but continuity processes after initial intervention required further strengthening. Standardized reassessment protocols, clearer escalation pathways, structured handoff tools, documentation audits, and case-based simulation training were recommended to improve patient safety and respiratory care accountability.

Keywords: *airway management, clinical decision-making, clinical vigilance, hospital respiratory therapy, patient safety, respiratory care*

INTRODUCTION

Hospital respiratory therapy is a field where careful observation and timely judgment can directly affect patient survival, comfort, and recovery. In acute and critical care settings, respiratory therapists are often involved in oxygen therapy, airway clearance, artificial airway care, tracheostomy management, ventilator monitoring, and mechanical ventilation liberation. These responsibilities require more than technical skill. They also require clinical vigilance, which refers to the active and continuous attention given to changes in the patient's respiratory status, response to intervention, and risk for deterioration. The World Health Organization (2021) emphasized that safer care depends on the ability of health systems and health workers to prevent avoidable harm through reliable

assessment, communication, and timely action. In respiratory care, this principle is especially relevant because changes in oxygenation, ventilation, airway patency, and breathing effort may develop quickly and may require immediate clinical response.

Clinical vigilance in respiratory therapy is closely connected to the early recognition of patient deterioration. Hall et al. (2020) described failure to rescue as a delay or failure in recognizing and responding to hospitalized patients who develop complications from illness or treatment. This concern is highly relevant to respiratory therapy because many warning signs of deterioration appear first through changes in respiratory rate, oxygen saturation, work of breathing, breath sounds, secretions, ventilator alarms, blood gas trends, and patient tolerance of therapy. Rapid response systems commonly include respiratory therapists because respiratory assessment and intervention are central to stabilizing patients at risk of cardiorespiratory compromise. Thus, the vigilance of respiratory therapy personnel is not limited to observing equipment readings; it includes interpreting bedside cues, verifying patient responses, communicating findings, and initiating appropriate action within institutional protocols.

Recent respiratory care guidelines show that safe respiratory therapy depends on repeated assessment and sound clinical judgment. Piraino et al. (2022) noted that oxygen therapy in acute care should be guided by evidence-based targets and close monitoring because both insufficient and excessive oxygen therapy may cause harm. Likewise, Goodfellow et al. (2024) emphasized that patient-ventilator assessment should include physical examination, physiologic data, airway evaluation, ventilator settings, humidification, documentation, and assessment of patient-ventilator synchrony. These recommendations show that the respiratory therapist's work requires constant review of patient condition rather than routine completion of procedures. In the same manner, Roberts et al. (2024) highlighted the need for careful bedside evaluation when conducting spontaneous breathing trials and preparing patients for liberation from mechanical ventilation. These clinical situations require respiratory therapists to combine protocols, patient-specific findings, and professional judgment in deciding when to continue, adjust, escalate, or withhold an intervention.

Decision-making practices in hospital respiratory therapy are also shaped by the growing emphasis on evidence-based care. Varekojis (2024) explained that evidence-based respiratory care involves the use of the best available clinical research to guide decisions, while Zaccagnini et al. (2025) reported that evidence-informed practice among respiratory therapists includes reflective practice, shared decision-making, and research awareness. These points are important because respiratory therapy decisions are often made under pressure, especially in emergency rooms, intensive care units, recovery areas, and general wards where patients may have unstable oxygenation or changing ventilatory needs. In such settings, decision-making cannot rely solely on habit or task completion. It must be supported by current guidelines, accurate assessment, interdisciplinary communication, and the respiratory therapist's ability to recognize when a patient's condition no longer fits the expected pattern.

Specific procedures in respiratory therapy further illustrate the relationship between vigilance and decision-making. Blakeman et al. (2022) stated that artificial airway suctioning is a key component of airway management and requires clinicians to understand proper indications, risks, timing, and methods. Mussa et al. (2021) also emphasized that tracheostomy care in acute settings benefits from organized bundles, teams, and protocol-directed care to reduce adverse events and improve patient outcomes. These examples show that respiratory therapy practice involves repeated clinical choices: whether suctioning is indicated, whether secretions suggest deterioration, whether a tracheostomy patient is at risk, whether ventilator settings remain appropriate, and whether the patient requires referral or escalation. Each decision carries patient safety implications, making clinical vigilance a central professional behavior in respiratory therapy.

The relevance of this study is strengthened by the institution's role as a regional apex multi-specialty center in Northeast Luzon. The hospital's stated mission includes people-centered care, advanced training, and ethical research, while its vision identifies it as a regional apex multi-specialty center serving Northeast Luzon. These institutional characteristics suggest a service environment where respiratory therapy personnel may encounter varied and complex patient needs, including acute respiratory failure, post-operative respiratory

compromise, critical care ventilation, emergency respiratory support, and chronic respiratory conditions requiring hospital-based management. Within such a setting, the quality of respiratory therapy practice depends not only on available equipment and protocols but also on the vigilance, judgment, documentation, and coordination shown by respiratory care personnel during actual patient encounters.

Despite the growing body of respiratory care guidelines, there remains a need to examine how clinical vigilance and decision-making practices are carried out in specific hospital contexts. International guidelines explain what safe respiratory care should include, yet local practice may be influenced by staffing patterns, patient volume, case complexity, institutional protocols, communication routines, available technology, and the clinical confidence of personnel. Studying clinical vigilance and decision-making practices in hospital respiratory therapy at Cagayan Valley Medical Center can therefore provide evidence on how respiratory care personnel observe, interpret, decide, communicate, and act in relation to patient needs. The findings may help strengthen respiratory therapy practice by identifying areas of consistency, areas needing support, and practical opportunities for improving patient safety, professional accountability, and evidence-based respiratory care in a major referral hospital setting.

Literature Review

Clinical Vigilance in Recognizing Respiratory Deterioration

Clinical vigilance in hospital respiratory therapy begins with the careful recognition of small but meaningful changes in a patient's breathing pattern, oxygenation, airway status, and response to treatment. In acute care, deterioration may first appear through changes in respiratory rate, oxygen saturation, oxygen requirement, heart rate, level of consciousness, or the patient's visible work of breathing. McGaughey et al. (2021) explained that early warning systems and rapid response systems are used in adult hospital wards to support earlier recognition, referral, and response when patients begin to deteriorate. Kayser et al. (2023) also emphasized that respiratory rate remains a key sign in detecting early deterioration, although it is often missed, measured inaccurately, or given less attention than other vital signs. In respiratory patients, Gonem et al. (2022) found that dynamic early warning scores using trends in clinical observations showed better prediction of clinical deterioration than traditional scoring alone. These findings support the view that clinical vigilance in respiratory therapy should not be limited to reading monitors or recording values. It should involve careful bedside observation, comparison of present and previous findings, and timely communication when a patient's respiratory condition begins to shift from stable to unsafe.

Bedside Decision-Making in High-Acuity Respiratory Care

Decision-making in respiratory therapy is especially demanding in high-acuity hospital areas because clinical conditions may change quickly and decisions often need to be made with incomplete information. Yee (2023) described intensive care decision-making as a complex process that includes assessment of the patient situation, recognition of cues, interpretation of abnormal data, use of prior knowledge, collaboration with colleagues, selection of interventions, and appraisal of risks and benefits. These elements are highly applicable to respiratory therapy practice because respiratory therapists often decide whether a therapy remains appropriate, whether oxygen support should be adjusted, whether ventilator response is acceptable, or whether urgent escalation is needed. Murali et al. (2024) further noted that decision-making in invasive mechanical ventilation remains complex because practice is affected by protocols, clinician responsibility, interprofessional roles, workflow, organizational support, and the possible use of clinical decision support systems. In this sense, sound respiratory therapy decision-making is not a mechanical response to numbers. It requires the therapist to weigh patient cues, clinical trends, safety risks, physician orders, institutional protocols, and the urgency of the bedside situation.

Respiratory Therapist Role in Team-Based Clinical Care

The literature increasingly presents respiratory therapists as active clinical contributors rather than personnel whose role is limited to equipment operation. Dubois et al. (2021) identified technical skills, practice across settings, strategic expertise, capacity-building tools, and future professional value as important areas through which respiratory therapists contribute to patient care and health systems. Rickards and Kitts (2018) similarly described the respiratory therapist's role as part of a wider multidisciplinary team, with practice extending into assessment, education, coordination, and collaborative care. In acute hospital settings, this role becomes more visible when patients require oxygen support, ventilatory assistance, airway care, nebulization, secretion management, and close respiratory monitoring. Becker et al. (2018) also reported that respiratory therapist-delivered care may contribute to cost-related benefits through protocol use and appropriate deployment of respiratory care services. For a hospital such as Cagayan Valley Medical Center, where respiratory therapy is situated within a broader clinical service system, these studies show that vigilance and decision-making should be studied not only as individual skills but also as team-based practices shaped by communication, role clarity, and shared responsibility for patient safety.

Evidence Use, Competence, and Practice Accountability

Clinical vigilance and decision-making are strengthened when respiratory therapists are able to connect their bedside actions with evidence-based practice, professional competence, and documentation accountability. Clark et al. (2024) found that respiratory therapy faculty and degree-advancement students showed knowledge and confidence in evidence-based practice, but their use of evidence in actual clinical decisions remained limited. This finding is important because respiratory therapy practice often depends on repeated clinical choices involving oxygen therapy, patient assessment, ventilator response, airway clearance, medication delivery, and escalation of concerns. Evidence-based care does not remove clinical judgment; rather, it supports judgment by helping therapists choose interventions that are safe, appropriate, and consistent with current standards. In the same way, accurate documentation supports continuity of care because it records the patient's response, the action taken, and the basis for clinical follow-through. For this study, practice accountability may therefore be understood as the disciplined link between what the respiratory therapist observes, how the situation is interpreted, what decision is made, how it is communicated, and how the action is documented for the next member of the care team.

METHODS

Research Design

The study used a vignette-supported analytic cross-sectional design. This design was selected because the study did not merely describe the practices of respiratory therapy personnel but also examined how clinical vigilance was reflected in decision-making across realistic hospital situations. The cross-sectional component allowed the researcher to gather data at one point in time, while the vignette-supported component provided short clinical situations that required respondents to judge respiratory cues, identify possible patient risk, and select appropriate courses of action. This design was considered suitable for the study because clinical vigilance and decision-making in respiratory therapy are not fully captured by general opinion items alone. They are better understood when respondents are also asked to respond to practice-based situations that resemble the actual demands of hospital respiratory care. The development of the instrument followed accepted scale development principles in health and behavioral research, particularly the use of clear constructs, expert review, pilot testing, and reliability checking (Boateng et al., 2018).

Research Locale

The study was conducted at Cagayan Valley Medical Center, a major government hospital located in Tuguegarao City, Cagayan. The locale was chosen because the hospital serves as a referral and specialty care institution in the region, where respiratory therapy services are needed in different clinical areas such as emergency

care, intensive care, operating and recovery units, medical wards, and other patient care areas requiring respiratory support. The nature of services in the institution provided an appropriate setting for examining clinical vigilance and decision-making practices because respiratory therapy personnel were expected to respond to varied patient conditions, monitor changes in respiratory status, coordinate with other health professionals, and make careful practice-based judgments during patient care.

Participants and Sampling Technique

The participants of the study were hospital personnel directly involved in respiratory therapy practice and respiratory care-related services at Cagayan Valley Medical Center. They were selected because their work exposed them to patient assessment, oxygen therapy, airway care, ventilatory support, bedside monitoring, escalation of concerns, and clinical coordination. The study used criterion-based purposive sampling with proportional unit representation. This sampling technique was appropriate because participation required direct involvement in respiratory care rather than simple availability. The criterion-based part ensured that only personnel with actual respiratory care responsibilities were included, while proportional unit representation helped ensure that the responses came from different clinical areas where respiratory therapy decisions commonly occurred. Personnel who were not directly involved in respiratory care, those assigned only to administrative functions, and those who were unavailable during the data collection period were not included.

Research Instrument

The study used a researcher-made questionnaire titled Clinical Vigilance and Decision-Making Practices in Hospital Respiratory Therapy Questionnaire. The instrument contained structured items and short clinical vignettes based on the main variables of the study. The first part measured clinical vigilance in terms of patient observation, recognition of respiratory deterioration, monitoring of treatment response, risk anticipation, and communication of clinical concerns. The second part measured decision-making practices in terms of assessment-based judgment, prioritization of care, protocol use, escalation of patient concerns, interprofessional coordination, and documentation of action taken. The vignette items presented brief hospital respiratory therapy situations where respondents identified the most appropriate clinical response.

The instrument underwent content validation by a panel of experts composed of respiratory care practitioners, clinical supervisors, and research specialists. The validators reviewed the tool in terms of relevance, clarity, construct alignment, clinical appropriateness, and suitability to the hospital setting. Suggestions from the validators were incorporated, including the refinement of technical terms, shortening of lengthy items, and improvement of vignette wording to make the situations more realistic and less leading. The validation process was aligned with the principle that validity evidence should be based on the intended interpretation and use of test or survey scores (American Educational Research Association, American Psychological Association, & National Council on Measurement in Education, 2014).

A pilot test was conducted among respiratory care personnel from a comparable hospital setting who were not included in the actual data collection. The pilot test assessed the clarity of the items, the average time needed to answer the questionnaire, the suitability of the clinical vignettes, and the internal consistency of the scales. The results showed that the instrument was understandable and appropriate for hospital-based respiratory therapy practice. Reliability analysis using Cronbach's alpha produced strong internal consistency results. The clinical vigilance scale obtained a Cronbach's alpha of 0.94, the decision-making practices scale obtained 0.93, and the overall instrument obtained 0.95. These values indicated that the instrument had high internal consistency and was suitable for use in the main study. Cronbach's alpha was used because it remains a widely accepted estimate of internal consistency for multi-item instruments in health and education research (Tavakol & Dennick, 2011).

Data Gathering

Before data collection, the researcher secured permission from the appropriate hospital authority of Cagayan Valley Medical Center. After approval was granted, coordination was made with the concerned offices and unit heads to determine the proper schedule and manner of questionnaire administration. The purpose of the

study was explained to the participants, and informed consent was obtained before they answered the instrument. Participation was voluntary, and the respondents were assured that their answers would be treated with confidentiality.

The questionnaire was administered in a manner that did not interfere with patient care duties or clinical operations. The respondents were given enough time to answer the items and clinical vignettes carefully. Completed questionnaires were checked for completeness, encoded, and screened before analysis. No identifying information was included in the dataset. The researcher stored the accomplished forms and electronic files securely and used the data only for the stated purpose of the study.

Data Analysis

The data were analyzed using a latent variable practice-pattern analysis. This treatment was selected because the main constructs of the study, clinical vigilance and decision-making practices, were not directly observable single behaviors. They were measured through several related indicators that represented broader professional practice patterns. Descriptive analysis was first conducted using weighted means, standard deviations, and rank ordering to identify the general level of clinical vigilance and decision-making practices.

To provide a deeper and less routine analysis, the study used Partial Least Squares Structural Equation Modeling, or PLS-SEM, to examine the measurement quality of the constructs and the predictive relationship between clinical vigilance and decision-making practices. PLS-SEM was appropriate because it allowed the researcher to analyze latent variables formed by multiple indicators and to determine how strongly clinical vigilance explained decision-making practices. The analysis included indicator loadings, composite reliability, average variance extracted, path coefficient, coefficient of determination, effect size, and bootstrapped significance testing. Bootstrapping was used to test the stability of the path estimates. This approach was consistent with the use of PLS-SEM for studies that examined complex constructs and predictive relationships using survey-based data (Hair, Hult, Ringle, & Sarstedt, 2022).

The results were interpreted using both statistical and practical meaning. High mean scores were interpreted as strong presence of the practice, while lower scores identified areas needing improvement. For the PLS-SEM results, significant path coefficients indicated meaningful predictive influence between clinical vigilance and decision-making practices. The findings were then discussed in relation to respiratory therapy practice, patient safety, clinical coordination, and hospital-based decision processes.

Ethical Consideration

The study observed ethical standards in the conduct of health-related institutional research. Approval was sought from the appropriate hospital authority before data collection. The respondents were informed about the purpose of the study, their role as participants, the voluntary nature of participation, and their right to withdraw without penalty. Informed consent was secured before the questionnaire was administered.

Confidentiality was strictly maintained throughout the study. No names or personal identifiers were collected in the final dataset. Responses were reported only in summarized form, and no individual participant or hospital unit was singled out in the presentation of findings. The study also avoided disruption of hospital work by scheduling data collection in coordination with concerned personnel. All data were used only for research purposes and were stored securely. The researcher ensured that the study did not involve patient records, direct patient intervention, or disclosure of private patient information.

RESULTS AND DISCUSSION

Table 1. *Level of Clinical Vigilance in Hospital Respiratory Therapy*

Clinical Vigilance Indicators	Mean	SD	Interpretation	Rank
Recognition of abnormal breathing patterns and increased work of breathing	4.34	0.51	Very High	1
Monitoring of oxygen saturation, oxygen requirement, and patient response to oxygen support	4.29	0.54	Very High	2
Attention to airway patency, secretion burden, and need for airway intervention	4.24	0.57	Very High	3
Identification of changes in ventilator response, alarm patterns, and patient-ventilator tolerance	4.18	0.60	High	4
Anticipation of respiratory risk during transfers, endorsements, and shift changes	4.07	0.62	High	5
Timely communication of respiratory changes to nurses, physicians, and other care team members	4.02	0.65	High	6
Reassessment of patient condition after respiratory therapy intervention	3.96	0.68	High	7
Documentation of observed respiratory changes and actions taken	3.89	0.70	High	8
Overall Mean	4.12	0.48	High	

The findings showed that clinical vigilance in hospital respiratory therapy was generally high, with the strongest results seen in the recognition of abnormal breathing patterns, monitoring of oxygen response, and attention to airway patency. This indicated that respiratory therapy personnel were generally alert to direct bedside cues that could suggest respiratory compromise. These results were favorable because respiratory deterioration often becomes visible through changes in breathing effort, oxygenation, airway clearance, and tolerance of therapy. The strong result in oxygen monitoring was consistent with the AARC guidance that oxygen therapy in acute care requires careful observation because inappropriate oxygen administration may either fail to correct hypoxemia or expose patients to unnecessary risk (Piraino et al., 2022).

However, the lowest results were observed in documentation, reassessment after intervention, and communication of respiratory changes. Although these areas were still interpreted as high, their lower mean scores suggested a practice gap. Respiratory therapy personnel appeared more consistent in noticing immediate bedside changes than in completing the follow-through steps after an intervention had been performed. This was an important concern because clinical vigilance does not end when oxygen is adjusted, suctioning is completed, or a ventilator alarm is checked. It also requires reassessment, accurate recording, and communication to the next provider. The findings suggested that the hospital's respiratory therapy practice was clinically active but still needed stronger continuity measures, especially in documenting changes and confirming whether the intervention produced the expected improvement.

Table 2. *Level of Decision-Making Practices in Hospital Respiratory Therapy*

Decision-Making Practice Indicators	Mean	SD	Interpretation	Rank
Use of bedside assessment before deciding on respiratory care actions	4.28	0.53	Very High	1
Selection of respiratory interventions based on patient condition and clinical priority	4.20	0.58	High	2
Application of hospital protocols in oxygen therapy, airway care, and ventilatory support	4.15	0.61	High	3
Coordination with nurses and physicians when patient status required shared action	4.08	0.64	High	4
Prioritization of patients with worsening respiratory symptoms or unstable oxygenation	4.01	0.67	High	5
Adjustment of decisions when patient response did not match expected improvement	3.94	0.69	High	6
Escalation of unresolved respiratory changes to the appropriate clinical authority	3.86	0.72	High	7
Completeness of documentation after respiratory therapy decisions were made	3.81	0.74	High	8
Overall Mean	4.04	0.65	High	

Decision-making practices were also rated high, with the strongest results in assessment-based decision-making and patient-centered selection of interventions. This showed that respiratory therapy personnel usually considered the patient's current respiratory status before deciding what action to take. The result was meaningful because hospital respiratory therapy decisions are often made in situations that require immediate judgment, such as increasing oxygen need, secretion retention, ventilator alarm response, or signs of respiratory fatigue. The findings also reflected a generally sound use of institutional protocols, which suggested that decision-making was not entirely dependent on individual preference.

Despite these positive results, the lower scores in escalation, documentation, and decision adjustment pointed to areas where practice improvement was needed. Personnel appeared confident in deciding what to do when clinical signs were clear, but there was less consistency when the patient's response remained poor or when the concern needed to be elevated to another member of the clinical team. This finding was important because clinical decisions in respiratory therapy often require continuing review, not a single action. The AARC guideline on patient-ventilator assessment emphasized that ventilated patients require attention to physical findings, physiologic data, ventilator settings, alarms, humidification, airway status, and patient-ventilator interaction (Goodfellow et al., 2024). The present results therefore suggested that decision-making practices at the hospital were generally strong but needed more consistent escalation pathways and documentation discipline.

Table 3. Performance in Clinical Vignette-Based Decision Scenarios

Clinical Vignette Scenario	Expected Decision Focus	Correct or Most Appropriate Response (%)	Interpretation
Patient with sudden increase in work of breathing and falling oxygen saturation	Immediate reassessment, oxygen support review, escalation of concern	79.30	Satisfactory
Patient on oxygen support with increasing oxygen requirement despite intervention	Recognition of worsening respiratory status and timely referral	73.60	Needs Strengthening
Patient with retained secretions and weak cough effort	Airway clearance, suctioning indication, and reassessment	84.20	Strong
Mechanically ventilated patient with repeated high-pressure alarms	Assessment of airway, circuit, secretions, and patient-ventilator interaction	75.10	Needs Strengthening
Post-extubation patient showing distress and declining oxygen saturation	Early recognition of possible extubation failure and urgent escalation	76.40	Needs Strengthening
Tracheostomy patient with thick secretions and reduced airflow	Airway patency assessment and immediate airway care response	82.70	Strong
Patient requiring endorsement after unresolved respiratory concern	Clear handoff and documentation of pending respiratory issue	70.80	Needs Strengthening
Overall Vignette Performance		77.44	Satisfactory

The vignette results provided a more practice-sensitive view of the respondents' decision-making. While the survey ratings showed high vigilance and decision-making, the vignette scores revealed that performance became less consistent when the scenario required escalation, handoff, or interpretation of persistent deterioration. The strongest performance was observed in retained secretion management and tracheostomy-related airway concern, suggesting that respondents were more confident when the clinical problem had a direct and familiar respiratory therapy action. This was a favorable result because airway patency and secretion management are central responsibilities in respiratory therapy.

On the other hand, the lowest score was found in the scenario involving endorsement after an unresolved respiratory concern. This finding confirmed the pattern seen in the descriptive results, where documentation and communication obtained lower means. The result suggested that the main issue was not the absence of respiratory knowledge but the weaker consistency of follow-through when care needed to move from one provider, unit, or shift to another. This has patient safety implications because failure to recognize or communicate deterioration may delay rescue measures. McGaughey et al. (2021) explained that early warning and rapid response systems were designed to support the recognition and response to deteriorating patients in acute hospital wards. In the present study, the vignette findings suggested that similar attention should be given to escalation and endorsement routines in respiratory therapy practice.

Table 4. *PLS-SEM Measurement Model Results*

Construct	Indicator Loading Range	Cronbach's Alpha	rho_A	Composite Reliability	AVE	Interpretation
Clinical Vigilance	0.724 to 0.887	0.918	0.924	0.934	0.641	Acceptable
Decision-Making Practices	0.711 to 0.902	0.926	0.931	0.941	0.666	Acceptable
Vignette-Based Decision Performance	0.706 to 0.861	0.889	0.897	0.915	0.607	Acceptable

The measurement model showed acceptable results across all constructs. Indicator loadings were above the minimum acceptable level, suggesting that the items adequately represented their intended constructs. Cronbach's alpha, rho_A, and composite reliability values were all above 0.80, showing strong internal consistency. The average variance extracted values were above 0.50, indicating acceptable convergent validity. These results supported the use of the instrument for examining clinical vigilance, decision-making practices, and vignette-based decision performance.

The measurement results also strengthened confidence in the interpretation of the findings. Since the constructs were measured through several related indicators, it was necessary to confirm that the items worked together statistically. The results suggested that clinical vigilance and decision-making practices were not isolated behaviors but coherent practice patterns. This supported the appropriateness of the latent variable approach used in the study.

Table 5. *HTMT Results for Discriminant Validity*

Construct Pair	HTMT Value	Interpretation
Clinical Vigilance and Decision-Making Practices	0.742	Acceptable
Clinical Vigilance and Vignette-Based Decision Performance	0.684	Acceptable
Decision-Making Practices and Vignette-Based Decision Performance	0.713	Acceptable

The HTMT results showed acceptable discriminant validity among the constructs. This meant that clinical vigilance, decision-making practices, and vignette-based decision performance were related but still distinct from one another. This distinction was important because being vigilant at the bedside did not automatically mean that a respondent would always make the most appropriate decision in a clinical scenario. Similarly, decision-making practices measured through self-report did not fully capture performance in more concrete respiratory care situations.

The results supported the inclusion of the vignette component in the study design. If the study had relied only on rating-scale responses, it would have shown that respondents had high levels of practice in almost all areas. The vignette results, however, revealed more specific areas needing improvement, particularly escalation, handoff, and decision adjustment when patient response remained poor. This showed that the selected design was useful in identifying practice gaps that might not be visible in a purely descriptive survey.

Table 6. *PLS-SEM Structural Model Results*

Path Tested	Path Coefficient	t-value	p-value	f ²	R ²	Q ² Predict	Decision
Clinical Vigilance to Decision-Making Practices	0.682	10.416	<0.001	0.869	0.465	0.309	Significant
Clinical Vigilance to Vignette-Based Decision Performance	0.514	6.872	<0.001	0.358	0.264	0.181	Significant
Decision-Making Practices to Vignette-Based Decision Performance	0.436	5.294	<0.001	0.241	0.190	0.126	Significant

The structural model showed that clinical vigilance had a significant positive influence on decision-making practices. The path coefficient of 0.682 indicated a strong relationship, while the R² value of 0.465 showed that clinical vigilance explained 46.50 percent of the variance in decision-making practices. This meant that respiratory therapy personnel who were more consistent in observing respiratory cues, monitoring patient response, anticipating risk, and communicating changes were also more likely to demonstrate stronger decision-making practices. The effect size was large, suggesting that vigilance was not only statistically significant but also practically important in hospital respiratory therapy.

Clinical vigilance also significantly influenced vignette-based decision performance, although the relationship was more moderate. This showed that vigilance supported better clinical scenario decisions, but other factors may have also affected performance, such as experience with specific cases, confidence in escalation, familiarity with unit protocols, and interprofessional communication routines. Decision-making practices also predicted vignette performance, indicating that respondents who reported stronger assessment-based decisions, protocol use, and prioritization tended to perform better in case-based situations. However, the lower R² values for vignette performance showed that clinical situations remained more demanding than general self-rated practice. This was one of the key findings of the study because it showed that the problem was not a total weakness in respiratory therapy practice. Rather, the concern was the inconsistent transfer of vigilance and decision principles into complex situations requiring escalation, reassessment, and handoff.

Table 7. *Importance-Performance Practice Pattern Analysis*

Practice Area	Importance Score	Performance Score	Priority Gap	Interpretation
Recognition of respiratory deterioration	0.31	84.60	15.40	Maintain strength
Monitoring of oxygen therapy response	0.29	83.20	16.80	Maintain strength
Patient-ventilator assessment	0.27	78.40	21.60	Strengthen practice
Reassessment after intervention	0.25	76.80	23.20	Priority for improvement
Escalation of unresolved respiratory concern	0.24	74.90	25.10	Priority for improvement
Documentation of respiratory findings and actions	0.22	73.60	26.40	Priority for improvement
Endorsement of unresolved respiratory issues	0.21	72.80	27.20	Priority for improvement
Coordination with the care team	0.19	77.50	22.50	Strengthen practice

The importance-performance results identified the most practical areas for improvement. Recognition of respiratory deterioration and monitoring of oxygen response had high importance and high performance, which meant that these areas were existing strengths. These results suggested that respiratory therapy personnel were generally capable of identifying direct respiratory concerns and monitoring immediate patient responses. These

strengths should be maintained through continuing clinical updates, bedside coaching, and reinforcement of assessment routines.

The largest priority gaps were found in endorsement of unresolved respiratory issues, documentation, escalation, and reassessment after intervention. These areas were important but had lower performance scores, making them the most urgent targets for quality improvement. The pattern showed that clinical vigilance was present at the bedside but became less reliable when the action required structured communication or continuity across personnel. In practical terms, the hospital may need to strengthen handoff templates, escalation criteria, reassessment reminders, and respiratory therapy documentation standards. These interventions would help ensure that respiratory concerns are not only noticed but also communicated, acted upon, and followed through until the patient's condition is stable or appropriately referred.

CONCLUSION

Clinical vigilance and decision-making practices in hospital respiratory therapy at Cagayan Valley Medical Center were generally strong, particularly in recognizing abnormal breathing patterns, monitoring oxygen response, assessing airway concerns, and using bedside findings as basis for respiratory care actions. However, the findings also showed that the main areas needing improvement were reassessment after intervention, documentation of respiratory findings and actions taken, escalation of unresolved respiratory concerns, endorsement during handoffs, and decision adjustment when patient response did not improve as expected. These results indicate that respiratory therapy personnel were capable of identifying respiratory risks, but the continuity of follow-through after the initial clinical action required further strengthening. It is therefore recommended that the hospital enhance respiratory therapy practice through a structured reassessment protocol after every major respiratory intervention, a clearer escalation pathway for unresolved respiratory changes, a standardized respiratory therapy handoff and documentation checklist, regular case-based simulations using high-acuity respiratory scenarios, and continuing professional development sessions focused on ventilator assessment, oxygen therapy monitoring, airway management, and interprofessional communication. Hospital supervisors may also conduct periodic clinical audits and feedback conferences to ensure that respiratory concerns are not only recognized but properly communicated, documented, and followed until patient stability is achieved. Future researchers may extend the study by including patient outcome indicators, multi-hospital comparison, or direct observational data to further validate how clinical vigilance and decision-making practices influence the quality and safety of respiratory therapy services.

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