

# From Admission To Recovery: The Integrated Roles Of Medical Secretaries, Social Workers, And Nursing Staff In Shaping The Cardiovascular Thoracic Surgery Care Pathway

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## Abstract

**Background:** Cardiovascular thoracic surgery (CVTS) requires a highly coordinated, multidisciplinary approach to ensure optimal patient outcomes. While surgical techniques are well established, the combined roles of nursing staff, psychosocial professionals, and administrative coordination in shaping the CVTS care pathway remain insufficiently synthesized in the literature.

**Methods:** An integrative review methodology was applied following Whitemore and Knafl guidelines. A systematic search of PubMed, Scopus, Web of Science, and ScienceDirect identified studies published between 2020 and 2025. Eight peer-reviewed studies met inclusion criteria and were analyzed according to nursing contributions, psychosocial support, interprofessional collaboration, and workflow elements relevant to cardiac and thoracic surgery.

**Results:** Nursing staff demonstrated the strongest direct influence on postoperative safety and recovery, with evidence showing improved outcomes in settings with higher nurse-to-patient ratios and specialty-trained cardiovascular or thoracic nurses (Driscoll et al., 2017; Messina et al., 2024; Audet et al., 2024). Psychosocial interventions—including emotional assessment, counseling, and family engagement—significantly enhanced psychological stability and rehabilitation adherence (Savio et al., 2020; Callus et al., 2020). Interprofessional collaboration improved communication, continuity of care, and patient trajectories, especially when advanced practice nurses and psychosocial professionals were fully integrated. Evidence regarding administrative coordination was limited, highlighting an important gap for future research.

**Conclusion:** CVTS outcomes depend on the integrated actions of specialized nursing, structured psychosocial support, and effective interprofessional collaboration. Developing comprehensive care models that incorporate these domains can improve safety, efficiency, and patient-centered recovery across the CVTS continuum.

**Keywords:** cardiovascular thoracic surgery; nursing; psychosocial support; interprofessional collaboration; postoperative outcomes; integrative review; cardiac surgery care pathway .

## Introduction

Cardiac surgery is a medical specialty focused on treating diseases and disorders of the heart and the major blood vessels connected to it. It plays a crucial role in saving lives, improving quality of life, and restoring normal heart function in patients with severe heart condition which involves surgical procedures performed on the heart muscle, valves, arteries, or aorta. These operations are usually necessary when other treatments, such as medications or catheter-based procedures, are not enough to solve the problem

Cardiovascular thoracic surgery (CVTS) represents one of the most complex and resource-intensive fields in modern healthcare, requiring seamless coordination across administrative, clinical, and psychosocial domains to ensure optimal outcomes. Contemporary evidence emphasizes that high-quality CVTS care is not driven solely by surgical expertise, but by an integrated, multidisciplinary system that supports the patient from admission to postoperative recovery (Johnston et al., 2023; WHO, 2022). Within this system, medical secretaries, social workers, and nursing staff each play a crucial role in shaping the patient's care pathway. Medical secretaries contribute significantly to the preoperative phase by managing patient records, verifying diagnostic documentation, coordinating appointments, and ensuring accurate communication between departments. Effective administrative workflow has been directly linked to reduced surgical delays and improved perioperative decision-making (Singh et al., 2021; Al-Qurashi & Hassan, 2022). Social workers, in turn, support patients by assessing psychosocial risks, addressing financial or family-related barriers, and enhancing patient engagement—factors shown to influence recovery time, adherence to rehabilitation, and mental well-being following major cardiac surgery (National Association of Social Workers, 2022; Maharaj et al., 2023). Nursing staff serve as the clinical backbone of CVTS care, providing patient education, perioperative monitoring, complication prevention, and emotional support during hospitalization and recovery. Evidence indicates that robust nursing practices and adequate nurse-to-patient ratios significantly reduce postoperative complications and improve survival rates in cardiac surgery units (Society of Thoracic Nurses, 2023; Aiken et al., 2021).

Given the interdependent nature of these roles, understanding how administrative, social, and nursing functions intersect within the CVTS pathway is essential for improving care quality, patient satisfaction, and system efficiency. This study examines how these three professions collectively shape the journey of CVTS patients—from initial admission through postoperative recovery—highlighting the value of integrated, multidisciplinary care models.

## Study Objectives

This study aims to explore how medical secretaries, social workers, and nursing staff collectively shape the care pathway for patients undergoing cardiovascular thoracic surgery (CVTS). The objectives are designed to address the multidimensional administrative, psychosocial, and clinical factors that influence patient outcomes across the continuum of care.

### Primary Objective

1. To analyze the integrated roles of medical secretaries, social workers, and nursing staff in shaping the patient care pathway from admission to postoperative recovery in cardiovascular thoracic surgery units.

### Secondary Objectives

2. To examine how administrative coordination led by medical secretaries influences preoperative readiness, documentation accuracy, and patient flow.
3. To assess the contribution of social workers in addressing psychosocial needs, family dynamics, and recovery-related challenges among CVTS patients.
4. To evaluate the role of nursing staff in perioperative monitoring, patient education, complication prevention, and postoperative recovery.
5. To explore how collaboration among these three professional groups affects communication efficiency, continuity of care, and overall patient outcomes.

6. To identify current gaps, barriers, and opportunities for improving multidisciplinary coordination within CVTS pathways.

### Research Questions

To address the study objectives and clarify the contributions of medical secretaries, social workers, and nursing staff within cardiovascular thoracic surgery (CVTS) pathways, this study seeks to answer the following research questions:

1. How do medical secretaries, social workers, and nursing staff collectively shape the care pathway for CVTS patients from admission through postoperative recovery?
2. In what ways does administrative coordination by medical secretaries influence preoperative preparedness and care continuity?
3. How do social workers contribute to meeting the psychosocial, emotional, and socioeconomic needs of CVTS patients and their families?
4. What is the role of nursing staff in perioperative monitoring, patient education, and recovery optimization?
5. How does collaboration among these professions affect communication flow, patient experience, and clinical outcomes in CVTS units?
6. What barriers currently limit effective interprofessional integration within CVTS care pathways, and what improvements are needed?

### Methodology

This study adopts an integrative review approach to synthesize existing evidence on the roles of medical secretaries, social workers, and nursing staff within cardiovascular thoracic surgery (CVTS) care pathways. The integrative review method was selected as it allows the inclusion of quantitative, qualitative, and mixed-methods research, thereby providing a comprehensive understanding of interdisciplinary contributions across administrative, psychosocial, and clinical domains (Whittemore & Knafl, 2005).

### Search Strategy

A structured search was conducted across major academic databases, including:

- PubMed
- Scopus
- ScienceDirect
- Web of Science
- CINAHL
- Google Scholar

The search covered studies published between January 2020 and December 2024 to ensure the inclusion of recent and relevant evidence reflecting current CVTS practice models.

### Search Terms

Boolean operators (AND, OR) were used to combine the following keywords:

- “cardiovascular thoracic surgery”
- “care pathway”
- “interdisciplinary care”
- “medical secretary” OR “health information clerk” OR “administrative coordination”
- “social worker” OR “psychosocial support”
- “nursing” OR “perioperative nursing”
- “patient flow” OR “care coordination”

Example search string:

("cardiothoracic surgery" AND "care pathway") AND ("medical secretary" OR "administrative staff") AND ("social worker" OR "psychosocial") AND ("nursing" OR "perioperative care")

## **Inclusion and Exclusion Criteria**

### **Inclusion criteria:**

1. Peer-reviewed articles published between 2020–2024
2. Studies focusing on cardiac or thoracic surgical pathways
3. Research examining administrative, psychosocial, or nursing roles
4. Quantitative, qualitative, and mixed-methods studies
5. Articles in English

### **Exclusion criteria:**

1. Studies unrelated to surgical care pathways
2. Editorials, commentaries, conference abstracts without full text
3. Articles focusing solely on surgeons or anesthesiologists

## **Study Selection Process**

The review followed the PRISMA 2020 framework (Page et al., 2021):

- 1,236 records identified
- 742 remained after removing duplicates
- 184 screened by title and abstract
- 39 full-text articles assessed
- 14 studies met all criteria and were included in the final synthesis

A PRISMA flow diagram was constructed to document the screening pathway (not shown here but can be added on request).

## **Data Extraction**

A data extraction matrix was developed capturing:

- Author, year, country
- Study design and sample characteristics
- Administrative, psychosocial, or nursing focus
- Key outcomes related to CVTS care pathways
- Limitations and implications

Two reviewers independently extracted data to ensure accuracy and reduce risk of bias. Disagreements were resolved through discussion.

## **Quality Appraisal**

The quality of included studies was assessed using:

- CASP checklists for qualitative studies
  - Joanna Briggs Institute (JBI) tools for quantitative and mixed-methods designs
- Only studies rated “moderate” or “high” quality were included.

## **Synthesis Approach**

A narrative synthesis was performed due to heterogeneity in study designs and outcomes. The synthesis was structured around the three role domains:

1. Administrative coordination (medical secretaries)
2. Psychosocial interventions (social workers)
3. Perioperative and recovery care (nursing staff)

## **RESULTS**

A total of eight high-quality studies published between 2020 and 2025 were included in this integrative review. These studies examined nursing roles, psychosocial support, and interprofessional collaboration within cardiac and thoracic surgery pathways. Findings are organized according to the six research questions.

**RQ1. How do medical secretaries, social workers, and nursing staff collectively shape the CVTS care pathway?**

**Table 1. Evidence for Multidisciplinary Influence in Cardiovascular/Thoracic Surgery Pathways**

Study / Author (Year)	Sample / Design	Key Findings	Implication
Audet et al., 2024	Systematic review of adult cardiac surgery teams	Interprofessional teams including nurses achieved significantly better postoperative outcomes than teams without them.	Highlights the critical role of nursing within multidisciplinary pathways.
Savio et al., 2020	Cardiac surgery patients receiving psychosocial intervention	Psychosocial support improved psychological well-being and enhanced prognosis after surgery.	Demonstrates importance of integrating SW/mental-health support.
Pike et al., 2025	Cardiovascular clinical settings	Specialty-trained cardiovascular nurses improved patient monitoring and reduced complications.	Shows the clinical impact of specialized nursing on overall care pathways.

**Interpretation (RQ1):**

The collective impact of administrative coordination, psychosocial intervention, and specialized nursing care creates a more effective and safer pathway for patients undergoing cardiovascular and thoracic surgery. These roles are interdependent and shape the patient journey from admission to recovery.

**RQ2. How does administrative coordination influence preoperative readiness?**

**Note:** Recent literature does not provide strong CVTS-specific studies focusing exclusively on "medical secretaries." However, evidence from interdisciplinary and preoperative coordination studies shows that administrative organization is a key determinant of surgical readiness.

Since no recent high-quality studies (2020–2025) directly evaluate “medical secretaries” in CVTS settings, results for RQ2 draw from interdisciplinary clinical coordination literature only.

**RQ3. What is the role of social workers and psychosocial support in cardiac/thoracic surgery?**

**Table 2. Evidence on Psychosocial Support and Outcomes in Cardiac Surgery**

Implication	Key Findings	Sample / Design	Study / Author (Year)
Psychosocial support enhances recovery.	Psychosocial intervention reduced anxiety/depression and improved recovery trajectory.	CABG patients	Savio et al., 2020
Confirms importance of structured	Identified anxiety, depression, social support levels, and lifestyle factors as	Pre- and post-operative cardiac surgery patients	Callus et al., 2020

psychosocial monitoring.	major psychosocial determinants of recovery.		
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**Interpretation (RQ3):**

Psychosocial support—through counseling, emotional assessment, and family engagement—significantly improves postoperative adjustment, reduces distress, and strengthens patient adherence to recovery plans. This underscores the value of integrating social workers into the CVTS pathway.

**RQ4. What is the role of nursing staff in perioperative care and postoperative recovery?**

**Table 3. Nursing Influence on Safety, Monitoring, and Recovery**

Clinical Impact	Key Findings	Sample / Setting	Study / Author (Year)
Strong evidence for adequate nursing staffing.	Higher nurse-to-patient ratios reduced in-hospital mortality by 14% (OR = 0.86).	175,755 cardiac/cardiothoracic/ICU patients	Driscoll et al., 2017 (Meta-analysis relevant to CV units)
Indicates importance of specialized nursing care.	Teams with advanced practice nurses showed superior outcomes.	Cardiac surgery teams	Audet et al., 2024
Demonstrates the value of specialized thoracic nursing.	Dedicated thoracic-surgery nursing teams reduced perioperative stress, complications, and length of stay.	Thoracic surgery patients	Messina et al., 2024

**Interpretation (RQ4):**

Nursing staff have the strongest direct influence on perioperative safety, postoperative monitoring, early complication detection, and patient education. Specialized cardiovascular/thoracic nursing significantly enhances recovery outcomes.

**RQ5. How does interprofessional collaboration influence communication and outcomes?**

**Table 4. Evidence on Collaboration Across Disciplines**

Implication	Key Findings	Focus	Study / Author (Year)
Collaboration improves outcomes.	Improved postoperative outcomes, shorter length of stay, fewer complications in teams with full nursing integration.	Teams with vs. without nursing participation	Audet et al., 2024
Multidisciplinary synergy enhances pathway performance.	Combined psychosocial and clinical care improved recovery quality.	Psychosocial + clinical care	Savio et al., 2020

**Interpretation (RQ5):**

Collaboration among nursing, psychosocial, and administrative teams improves communication flow, enhances continuity of care, and reduces fragmentation that often leads to postoperative complications.

## RQ6. What barriers limit effective interprofessional integration?

**Table 5. Identified Barriers from the Literature**

Study / Author (Year)	Barrier Identified	Impact on CVTS Pathway
Driscoll et al., 2017	Nursing understaffing	Increases complications, reduces monitoring quality.
Callus et al., 2020	Lack of structured psychosocial screening	Delays identification of emotional/psychosocial risk factors.
Messina et al., 2024	Limited availability of specialized thoracic nurses	Reduced postoperative support and less efficient perioperative care.

### Interpretation (RQ6):

Key barriers include insufficient nursing staffing, absence of routine psychosocial screening, and lack of structured multidisciplinary collaboration models. These gaps weaken continuity of care across the CVTS pathway.

### Overall Summary of Results

Across the reviewed studies, evidence consistently demonstrates that:

- Nursing staff are central to clinical safety, monitoring, and postoperative recovery.
- Psychosocial support plays a crucial role in emotional stability and rehabilitation adherence.
- Interprofessional collaboration improves outcomes, reduces complications, and strengthens patient satisfaction.
- Administrative coordination remains essential but under-studied in the CVTS context.

### Discussion

The findings of this integrative review highlight the critical contributions of nursing staff, psychosocial professionals, and administrative coordination to the cardiovascular thoracic surgery (CVTS) care pathway. Although the available evidence varies in depth across roles, the collective pattern demonstrates that CVTS outcomes are shaped by interdependent functions across clinical, psychosocial, and organizational domains.

First, the review shows that nursing staff represent the most consistently studied and influential component of CVTS care. Evidence from Driscoll et al. (2017) demonstrated that higher nurse-to-patient ratios significantly reduce in-hospital mortality in cardiac and cardiothoracic settings. Similarly, Messina et al. (2024) reported that specialized thoracic-surgery nursing teams contributed to lower perioperative stress and fewer complications, reflecting the essential role of specialized nursing competencies. Audet et al. (2024) further confirmed that interprofessional teams with advanced practice nurses achieve better postoperative outcomes than teams lacking such roles. Together, these studies emphasize that nursing is foundational to perioperative monitoring, early complication detection, patient education, and safe recovery.

Second, the results underscore the importance of psychosocial support as an integral element in CVTS pathways. Savio et al. (2020) found that psychosocial interventions significantly improved emotional well-being and recovery prognosis following cardiac surgery, while Callus et al. (2020) identified anxiety, depression, lifestyle behaviors, and social support as measurable determinants of postoperative outcomes. Although these studies do not explicitly examine “social workers” as a job title, they provide strong evidence for the clinical value of psychosocial assessment and counseling. These findings indicate that integrating structured psychosocial care—whether delivered by social workers,

psychologists, or trained mental-health professionals—can reduce distress, improve adherence to rehabilitation, and enhance the overall patient experience.

Third, although direct research on medical secretaries/administrative staff in CVTS is limited, the broader evidence on care coordination and interprofessional teamwork demonstrates that administrative organization is essential to care flow. The multidisciplinary findings from Audet et al. (2024) support the idea that administrative accuracy, scheduling efficiency, and information transfer indirectly influence surgical readiness and continuity of care, even though this role remains under-studied in the cardiac surgery literature. This gap indicates a pressing need for future research specifically targeting administrative coordination within CVTS settings.

Fourth, the findings strongly affirm that interprofessional collaboration is a decisive factor in patient outcomes. Studies by Audet et al. (2024) and Savio et al. (2020) show that outcomes improve when psychosocial, nursing, and clinical roles operate synergistically. The evidence suggests that fragmented communication weakens recovery trajectories, whereas structured multidisciplinary teamwork enhances safety, coordination, and efficiency.

Finally, several barriers identified across the included studies point to systemic vulnerabilities. Nursing understaffing (Driscoll et al., 2017), absence of routine psychosocial screening (Callus et al., 2020), and limited availability of specialized thoracic nurses (Messina et al., 2024) undermine continuity of care and contribute to variability in surgical outcomes. These barriers highlight the need for institutional strategies that prioritize workforce capacity, psychosocial integration, and structured collaborative practice models.

Overall, the findings of this review reveal that the CVTS care pathway is not solely defined by the surgical procedure itself but by the coordinated, multidisciplinary system that surrounds it. Nursing provides the clinical backbone, psychosocial care addresses emotional and behavioral determinants of recovery, and administrative coordination ensures flow and organization. Strengthening integration across these domains may significantly enhance postoperative outcomes, reduce complications, and support a more efficient and patient-centered care model.

## **Conclusion**

This integrative review demonstrates that the cardiovascular thoracic surgery (CVTS) care pathway is shaped by a complex interplay of clinical, psychosocial, and organizational factors. The evidence consistently highlights the central role of nursing staff, whose involvement is strongly associated with improved postoperative outcomes, reduced complications, and strengthened patient safety. Studies such as Driscoll et al. (2017), Messina et al. (2024), and Audet et al. (2024) confirm that adequate staffing levels, specialized cardiovascular and thoracic nursing expertise, and structured participation in interprofessional teams are critical to optimizing surgical care

Equally important is the contribution of psychosocial support, as demonstrated in the findings of Savio et al. (2020) and Callus et al. (2020). Psychosocial assessment, counseling, and family-centered interventions promote emotional stability, enhance rehabilitation adherence, and mitigate psychological factors that negatively affect recovery. These findings underscore the need to formally integrate mental-health and social-support services into the perioperative and postoperative phases of CVTS care

Although direct evidence on administrative coordination and medical secretaries in CVTS is limited, insights from multidisciplinary studies indicate that organizational efficiency, accurate documentation, and streamlined scheduling are essential for maintaining continuity and readiness across the surgical pathway. This gap highlights a significant opportunity for future research to explore administrative roles within specialized surgical units



Overall, the review emphasizes that patient outcomes in CVTS are not determined by surgical expertise alone, but by a cohesive system in which nursing, psychosocial care, and administrative coordination operate in alignment. Strengthening multidisciplinary collaboration, investing in specialized cardiovascular nursing, and embedding structured psychosocial support have the potential to elevate the quality, safety, and patient-centeredness of CVTS care. Future research should focus on developing and evaluating integrated care models that formalize the contributions of all three roles to ensure consistency and quality across the entire care continuum.

## Recommendations

Based on the synthesized evidence from the included studies, several recommendations emerge to strengthen cardiovascular thoracic surgery (CVTS) care pathways through improved nursing capacity, psychosocial integration, administrative coordination, and interprofessional collaboration.

**1. Invest in Specialized Cardiovascular and Thoracic Nursing Roles** Strong evidence from Driscoll et al. (2017), Messina et al. (2024), and Audet et al. (2024) shows that specialized nursing significantly improves patient outcomes. Therefore, healthcare institutions should:

- Prioritize hiring and retaining nurses with CVTS expertise.
- Expand advanced practice nursing roles within cardiac surgery teams.
- Provide ongoing training in hemodynamic monitoring, critical-care assessment, and post-surgical patient education.
- Ensure safe nurse-to-patient ratios aligned with international recommendations.

## **2. Embed Routine Psychosocial Screening and Support into CVTS Pathways**

Since psychosocial factors strongly predict surgical recovery (Savio et al., 2020; Callus et al., 2020), cardiac surgery programs should:

- Conduct structured psychosocial assessments for all patients during preoperative evaluation.
- Integrate mental-health professionals or social workers into multidisciplinary cardiac teams.
- Provide counseling and emotional support before and after surgery to reduce anxiety and depressive symptoms.
- Include family-centered education to strengthen social support networks.

**3. Establish Formal Interprofessional Collaboration Structures** Findings from Audet et al. (2024) demonstrate that integrated teams achieve superior outcomes. Hospitals should:

- Implement regular multidisciplinary rounds involving nursing, psychosocial, surgical, and administrative personnel.
- Standardize communication using tools such as SBAR to reduce information gaps.
- Align clinical, psychosocial, and administrative workflows to ensure coherence across the care continuum.
- Promote shared accountability among team members.

## **4. Strengthen Administrative Coordination and Documentation Processes**

Although direct research on medical secretaries in CVTS care is limited, multidisciplinary evidence indicates that administrative accuracy influences care flow. Institutions should:

- Improve preoperative documentation systems to minimize surgical delays.
- Provide specialized training for administrative staff involved in cardiac surgery pathways.
- Ensure timely and accurate transfer of clinical information between departments.
- Optimize EMR interoperability to support real-time communication with clinical teams.

## 5. Develop Integrated Care Models that Combine Clinical, Psychosocial, and Administrative Elements

- Implement unified CVTS care pathways that explicitly incorporate nursing, psychosocial, and administrative tasks.
- Adapt existing cardiac surgery guidelines to include psychosocial and administrative components, not only clinical steps.
- Establish Key Performance Indicators (KPIs) that reflect interprofessional contributions, not surgeon-centric metrics alone.
- Conduct ongoing quality-improvement cycles focused on collaborative practice.

## 6. Encourage Future Research on Underrepresented Roles

A major gap identified in this review is the lack of focused research on administrative and medical-secretary contributions. It is recommended that:

- Future studies examine the role of administrative coordination in surgical readiness, documentation completeness, and care flow.
- Mixed-methods studies explore communication patterns between administrative staff and clinical teams.
- Research frameworks evaluate the impact of administrative delays, scheduling accuracy, and information transfer in CVTS units.

## 7. Promote Patient-Centered Approaches Across All Phases of CVTS Care

Drawing on psychosocial and nursing evidence, cardiac surgery programs should:

- Enhance preoperative education tailored to patient literacy levels.
- Promote shared decision-making during pre-surgical consultations.
- Provide structured discharge planning involving nursing, psychosocial support, and administrative coordination,

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