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Reducing Clinical Communication Errors Through Nursing–Medical Secretariat Collaboration: Integrating Patient Handover, Medical Records, and Administrative Information Systems

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ABSTRACT: Clinical communication errors remain a leading and largely preventable contributor to patient harm in hospitals worldwide. Research has concentrated on physician–nurse interaction, yet information in hospitals also passes through administrative staff, including medical secretaries, who manage records, correspondence, scheduling, and data entry. This narrative review synthesizes literature published between 2017 and 2024 on patient handover, medical records, and administrative information systems, and examines how collaboration between nursing and medical secretariat staff may reduce communication errors. Evidence indicates that structured handover tools, standardized documentation, interoperable systems, and effective teamwork each reduce risk, while documentation burden, fragmented systems, and unclear role boundaries increase it. Studies addressing the secretariat role directly are scarce, so the review develops an integrated conceptual framework and an implementation roadmap. Recommendations for practice, policy, and research are presented, emphasizing shared standards, joint training,

interoperable systems, routine audit, and the inclusion of administrative staff in patient safety programs.

1. INTRODUCTION

Healthcare delivery depends on the continuous transfer of information among clinicians, between shifts, across units, and between clinical and administrative functions. Each transfer is an opportunity for information to be lost, distorted, delayed, or misdirected. Alert (2017) has long identified inadequate hand-off communication as a recurring contributing factor in sentinel events, and the World Health Organization (2021a) identifies safe communication and information transfer as essential to its global agenda for reducing avoidable harm. Systematic evidence suggests that the scale of the problem is substantial: a meta-analysis of studies across medical care settings estimated that about 6% of patients experience preventable harm (Panagioti et al., 2019). Beyond human cost, patient harm has major economic consequences, with analyses by the Organisation for Economic Co-operation and Development indicating that it consumes a significant share of hospital resources (Slawomirski et al., 2017).

Communication errors arise at many points in this chain. Some occur in conversations between professionals, such as an incomplete verbal handover. Others occur in documents, such as an inaccurate or outdated record entry. Still others occur in administrative processes, such as a mis-registered patient, a missed referral, or a result sent to the wrong recipient. Patient safety research has historically concentrated on the first of these, and in particular on interactions between physicians and nurses. Much less attention has been paid to the third, and to the staff who perform it. Medical secretaries also referred to in different health systems as ward clerks, unit secretaries, health unit coordinators, or medical administrative assistants, handle a large share of the information traffic in hospitals and clinics: they transcribe and prepare documents, manage appointments and referrals, update records, relay messages, and operate administrative information systems.

The nursing and medical secretariat functions are therefore adjacent and interdependent. Nurses generate clinical information at the bedside and depend on timely, accurate administrative support to act on it; secretaries process and route that information and depend on nurses and physicians for clarity about what is urgent, what is final, and what requires verification. When the two groups work in parallel without shared standards or mutual visibility, the interface between them can become a latent source of error. When they collaborate deliberately, the interface can become a safeguard in which each group catches errors that the other cannot see.

The purpose of this narrative review is to examine how collaboration between nursing and medical secretariat staff can reduce clinical communication errors by integrating three information domains: patient handover, medical records, and administrative information systems. Three questions guide the review. First, what does recent evidence reveal about the causes of communication errors in each domain? Second, what is known about the contribution of teamwork and interprofessional collaboration to reducing those errors? Third, what implementation strategies can integrate nursing and secretariat work across the three domains? After outlining the review approach, the article presents a conceptual framework, examines each domain in turn, considers the mechanisms of collaboration, proposes an implementation roadmap, and discusses limitations and research priorities.

2. SCOPE AND REVIEW APPROACH

This article is a narrative review. This design suits a topic that spans clinical, informatics, and organizational literatures and in which the objective is interpretive synthesis and framework building rather than pooled estimation of effects. The review focuses on peer-reviewed articles, systematic reviews, conceptual papers, and institutional reports published between 2017 and 2024. Priority was given to systematic reviews and umbrella reviews, studies from hospital settings, evidence on structured handover, documentation, health information systems, and teamwork, and sources that report on safety or error outcomes.

A notable feature of the evidence base is that research specifically on medical secretaries and comparable administrative roles is sparse in the international patient safety literature, and terminology for these roles varies considerably between countries. For this reason, the review draws on evidence about handover, documentation, information systems, and interprofessional teamwork more broadly, and applies it to the nursing–secretariat interface through reasoned extension. Where claims about the secretariat role are conceptual rather than empirically established, the text indicates this. Sources were selected purposively and

were not subject to formal risk-of-bias assessment, which limits the strength of conclusions, as discussed in the limitations section.

3. CONCEPTUAL FOUNDATIONS

3.1 Communication Errors and Patient Safety

Communication errors can be defined as failures in the transmission, receipt, interpretation, or recording of information that are relevant to patient care. They include omissions, inaccuracies, ambiguities, delays, and misdirection. They are rarely attributable to individual carelessness alone. Teamwork research has demonstrated that effective coordination, shared mental models, and clear communication underpin high-quality, safe care, and that breakdowns in these processes recur across settings and professions (Rosen et al., 2018). Bates and Singh (2018), reviewing progress two decades after the landmark report on medical error, emphasized that patient safety has advanced unevenly and that information and communication failures continue to feature prominently among emerging priorities.

3.2 The Nursing–Medical Secretariat Interface

The interface between nursing and secretarial staff is typically informal and underspecified. Nurses may leave messages, request documents, or ask for appointment changes through a mixture of face-to-face requests, telephone calls, handwritten notes, and electronic messages. Secretaries may receive instructions from several clinicians at once, interpret them with limited clinical context, and enter them into systems that the nurses do not see. Responsibilities can be ambiguous: who verifies a patient's identity on a referral form, who confirms that a discharge letter matches the final medication list, and who follows up on an unacknowledged message? Where these questions lack explicit answers, errors can pass between the two groups unnoticed. Because the secretarial role is often narrowly characterized as clerical, its contribution to patient safety is also easily overlooked, and secretaries may not be included in safety training, incident reporting, or quality improvement.

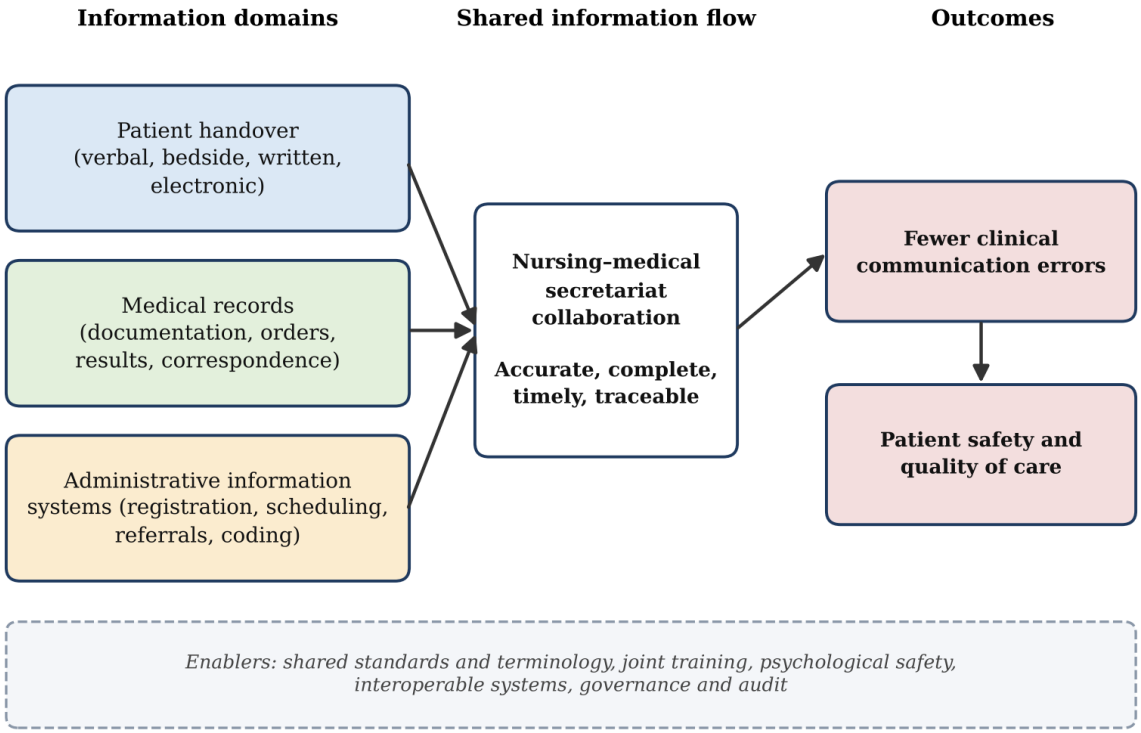
3.3 A Practical Taxonomy of Information Errors

For the purposes of this review, it is helpful to distinguish four broad categories of communication error. Content errors involve information that is wrong or missing, such as an omitted allergy or an incorrect dose in a transcribed letter. Timing errors involve information that is correct but late or premature, such as a result that is filed after the patient has left or a bed move recorded hours after it occurred. Routing errors involve information that reaches the wrong person or fails to reach the right one, such as a referral sent to an inappropriate clinic or a message left with a colleague who has gone off shift. Interpretation errors involve information that is delivered but misunderstood, because of ambiguous wording, unfamiliar abbreviations, or differing assumptions about urgency. Nursing and secretarial staff are each exposed to all four categories, but their vulnerabilities differ: nurses are more exposed to content and interpretation errors at the point of care, while secretaries are more exposed to routing and timing errors in the administrative chain. The two sets of vulnerabilities are complementary, which is the rationale for treating the interface between them as a unit of analysis.

3.4 An Integrated Framework

Figure 1 presents the framework that organizes this review. Three information domains, namely patient handover, medical records, and administrative information systems, are linked through nursing–medical secretariat collaboration, which is conceptualized as the mechanism that ensures information is accurate, complete, timely, and traceable as it moves through the care process. The product of effective collaboration is a reduction in clinical communication errors and, ultimately, improvements in patient safety and quality of care. A set of enabling conditions, including shared standards and terminology, joint training, psychological safety, interoperable systems, and governance and audit, supports the process. The framework is not an empirical model; it is a heuristic synthesis that is grounded in the evidence reviewed below and intended to guide implementation and testing.

Figure 1. Integrated Framework for Reducing Clinical Communication Errors Through Nursing–Medical Secretariat Collaboration



4. PATIENT HANDOVER

Handover is the transfer of information, responsibility, and accountability for patient care from one clinician or team to another. It occurs at shift changes, transfers between wards, and transitions between hospital and community services. It is among the most error-prone moments in care, and its quality is a recurrent theme in patient safety research.

4.1 Why Handover Fails

A systematic review of challenges in patient handover identified a consistent set of problems: the absence of standardized processes, interruptions and noisy environments, time pressure, incomplete or inconsistent content, and insufficient training (Raeisi et al., 2019). An integrative review of nursing handover models found wide variation in approach, ranging from verbal reports at the nurses' station to bedside handover and written or electronic summaries, with each model displaying particular strengths and vulnerabilities (Bakon et al., 2017). These findings indicate that handover failures stem less from individual deficits than from the design of the process and its environment.

4.2 Structured Handover Tools

Structured communication tools such as SBAR (situation, background, assessment, recommendation) and its extended variant ISBAR (which adds identification of the patient and clinician) aim to standardize content and sequence. A systematic review of SBAR concluded that its use was associated with improvements in communication and patient safety outcomes in a number of studies, but also noted that the methodological quality of the evidence was modest, with many studies using uncontrolled before-and-after designs (Müller et al., 2018). A systematic review of structured handover interventions among nurses likewise found that standardization improved handover quality and several patient safety outcomes, while recognizing heterogeneity in the interventions and outcomes studied (Bukoh & Siah, 2020). Educational work suggests that tools such as ISBAR can be taught effectively when integrated into clinical training with opportunities for practice and feedback (Burgess et al., 2020).

4.3 Where Secretarial Staff Enter the Handover Process

Handover is often conceptualized as a conversation between clinicians, but it also has an administrative dimension. Ward lists, bed allocation, transfer paperwork, discharge summaries, appointment bookings, and requests for transport or follow-up are generated, updated, and circulated with the help of secretarial staff. If a patient is moved, the handover is not complete until the administrative record reflects the move; if a follow-up appointment is required, the handover is not complete until it has been booked and communicated. Failures at this administrative level can negate a technically excellent clinical handover. For example, a patient whose bed location has not been updated in the system may not receive a scheduled test, and a request for a review that is not routed to the correct clinic may be lost.

Collaboration between nursing and secretarial staff in handover can therefore take several forms. Secretaries can be included in the unit-level information exchange so that they understand which patients are being transferred, discharged, or at risk of deterioration, and can prioritize tasks accordingly. Nurses can use structured templates for handing administrative requests to secretaries, specifying urgency, patient identifiers, and required action. Secretaries can feed back confirmation when administrative actions are complete, closing the loop. Although direct trials of these specific practices are lacking, they are consistent with the broader evidence that standardization, closed-loop communication, and shared situational awareness improve handover reliability (Müller et al., 2018; Rosen et al., 2018).

4.4 Digital Handover Tools

Electronic handover tools and electronic health record (EHR)-integrated handover reports offer the promise of consistent structure and reduced transcription. However, they also introduce risks. Tsou et al. (2017), in their review of safe practices for copy-and-paste in the EHR, showed that copied text can propagate outdated or incorrect information and recommended governance and design measures to limit these risks. Electronic handover documents that are not updated in real time can create false confidence. For secretarial staff who maintain or format such documents, clear protocols on who is authorized to change what, and on how updates are communicated to nurses, are essential.

4.5 Transitions beyond the Ward

Handover does not end at the hospital door. Discharge to primary care, to community services, or to another institution involves summaries, referrals, appointment arrangements, and communication with families, much of which is administrative in character. Poor transitions are a well-recognized risk, and they frequently involve a combination of clinical omissions and administrative failures, such as a summary that is not sent or a follow-up that is not scheduled. A collaborative discharge process in which the nurse confirms the clinical content of the plan, the secretary verifies recipients and dispatches documents, and both confirm completion through a shared checklist is a practical way to close these gaps. The broader literature on handover standardization supports the principle that explicit, shared steps reduce reliance on memory and assumption (Bukoh & Siah, 2020; Raeisi et al., 2019).

5. MEDICAL RECORDS AND DOCUMENTATION

The medical record is the principal repository of clinical information and a primary means by which professionals communicate across time and across disciplines. Its quality shapes the information that reaches handover, referral letters, discharge summaries, and administrative systems. Nurses and secretaries both contribute to the record: nurses through clinical documentation and observations, and secretaries through transcription, scanning, indexing, correspondence, and data entry.

5.1 Documentation Burden

Documentation burden has emerged as a significant issue in the literature on electronic records. A scoping review of measures of clinical documentation burden among physicians and nurses found a large and growing body of work, with considerable variation in how burden is defined and measured (Moy et al., 2021). Event log research found that primary care physicians spent roughly half of their working day interacting with the EHR, including time outside scheduled hours (Arndt et al., 2017). In nursing, documentation burden has been linked to clinician burnout (Gesner et al., 2022). A systematic review of the impact of EHRs on documentation time found mixed effects, with increases in documentation time for physicians in many studies and more variable findings for nurses (Baumann et al., 2018). A review of factors shaping the EHR user experience emphasized that usability, workflow fit, and organizational factors jointly determine clinician satisfaction and efficiency (Tutty et al., 2019).

These findings matter for communication errors because overburdened clinicians are more likely to shorten, copy forward, or defer documentation, which degrades the record. They also create a rationale for redistributing documentation tasks appropriately. Where permitted by regulation and competence, secretarial staff can take responsibility for administrative documentation, for clerical elements of correspondence, and for preparing forms, thereby freeing nurses for clinical documentation and direct care. However, this redistribution must be designed carefully; transferring tasks without ensuring clarity about accountability and verification can merely relocate the risk.

5.2 Quality, Standardization, and Integrity of Records

A multicenter retrospective study reported that structured and standardized documentation was associated with improved documentation quality, supporting the use of templates and defined data fields (Ebbers et al., 2022). Standardization benefits both nurses and secretaries by clarifying what must be recorded and where, reducing ambiguity and the need for interpretation. Rule et al. (2023) reviewed the use of event logs to observe interactions with electronic records and noted the growing availability of vendor-derived measures, which suggests that organizations are increasingly able to monitor how records are used and to identify problem areas.

Record integrity also depends on controls over who may add, alter, or finalize entries. Secretarial staffs that transcribe dictated notes or prepare letters play a critical role in ensuring that the final document matches the clinician's intent. Common vulnerabilities include misheard medication names or doses, wrong-patient filing, and incomplete correspondence. Mechanisms for verification, such as read-back and sign-off by the responsible clinician, are well-established safeguards, but they require clear agreement between nurses, clinicians, and secretaries about who verifies what, and at which point.

5.3 Collaboration in Record-Keeping

Collaborative practices that reduce error in record-keeping include joint review of discrepancies, shared checklists for discharge documentation, and clear routes for querying unclear entries. For example, if a secretary notices that a discharge summary lists a different medication from the nursing medication chart, an agreed route to query the nurse or physician, without fear of reprimand, can prevent a discrepancy from reaching the patient or primary care provider. This depends on psychological safety, which a systematic review identified as being enabled by supportive leadership, inclusive team climate, and open communication in healthcare teams (O'Donovan & McAuliffe, 2020). A systematic narrative review of interventions to promote staff speaking up found that organizational and cultural conditions strongly influence whether staff voice concerns, and that interventions need to address hierarchy and fear of negative consequences (Jones et al., 2021). Because administrative staff frequently occupy lower positions in organizational hierarchies, these findings are particularly relevant to their ability to raise concerns about clinical information.

5.4 Scope of Practice and Accountability

Any redistribution of documentation tasks raises questions of scope of practice and accountability. Regulations differ by jurisdiction regarding which entries may be made by non-clinical staff, which must authenticate documents, and how responsibility is allocated when an error occurs. Organizations should therefore specify, in policy, which tasks are delegated to secretarial staff, what training and competence are required, and which clinician retains final accountability. Clear delegation protects patients, because it ensures that each entry has an accountable author, and protects staff, because it prevents secretaries from being implicitly held responsible for clinical judgments. The experience of documentation burden among clinicians (Gesner et al., 2022; Moy et al., 2021) suggests that appropriate delegation, accompanied by verification, may relieve pressure on nurses, but empirical evaluation of such arrangements is limited and should be a research priority.

6. ADMINISTRATIVE INFORMATION SYSTEMS AND INTEROPERABILITY

Administrative information systems include patient registration and master patient index functions, appointment and bed management, referral and order communication, billing and coding, and document management. Although often viewed as separate from clinical systems, they determine which patient information is visible to whom, when, and in what form.

6.1 Fragmentation and Interoperability

Interoperability remains a persistent challenge. Reisman (2017) described the difficulty of making electronic data usable and interoperable, noting that exchanging data is only the first step; meaningful use requires shared structure and semantics. A

systematic review of the use of electronic records to support population health documented clear benefits for data availability alongside persistent barriers related to cost, usability, and system integration (Kruse et al., 2018). A systematic review of interoperability among heterogeneous health information systems identified technical, semantic, organizational, and legal obstacles and highlighted the importance of standards and governance (Torab-Miandoab et al., 2023). Experience with large-scale implementations, such as that of integrated records in Nordic hospitals, shows that integration can improve consistency but also generates substantial work for staff and requires continuous adaptation (Hertzum et al., 2022). A rapid umbrella review of national EHR implementations identified leadership, stakeholder engagement, and training among the key facilitators of success (Fennelly et al., 2020).

6.2 Where Systems Create Communication Errors

When administrative and clinical systems do not communicate, staff must re-enter data manually, and each re-entry is an opportunity for error. Patient demographic mismatches, duplicate records, incorrect referral routing, and orders that are visible in one system but not in another are examples of failures that originate in system fragmentation but manifest as communication errors. Secretarial staff are often the people who work around these gaps, for example by re-keying information, reconciling lists, or telephoning other departments. Their experiential knowledge of where systems fail is a valuable and underused source of safety intelligence. Involving them in system design, testing, and incident review can help to identify risks before they cause harm.

Alerts and automated reminders are a related concern. A study of a clinical decision support system found that workload, work complexity, and repeated alerts contributed to alert fatigue, with clinicians becoming less responsive to alerts over time (Ancker et al., 2017). A broader overview of clinical decision support highlighted both its benefits and its risks, and stressed that strategies for success include user involvement, careful design, and continuous evaluation (Sutton et al., 2020). Administrative systems that generate task reminders or flags for secretarial staff are subject to the same dynamics. Where nurses and secretaries receive overlapping or conflicting notifications, important messages may be lost in the noise.

6.3 Privacy, Security, and Governance

Administrative staff handles sensitive information and frequently have broad access to patient records. Keshta and Odeh (2021) reviewed concerns and challenges related to the security and privacy of electronic health records, including unauthorized access, data breaches, and inadequate user training. Communication errors in this domain include disclosures to the wrong recipient, misdirected correspondence, and inappropriate access to records. Collaboration between nursing and secretarial staff should therefore include shared understanding of confidentiality rules, role-based access, and procedures for verifying recipients before releasing information. The World Health Organization (2021b) global strategy on digital health stresses the importance of governance, standards, and workforce capacity in ensuring safe and equitable digital health systems.

6.4 Implementation and Change Management

Introducing or modifying information systems is a complex organizational change. Braithwaite et al. (2018) argued, from the perspective of complexity science, that health systems are adaptive and that interventions interact with local conditions in ways that are difficult to predict, which implies that implementation should be iterative and sensitive to context. Nilsen (2020) provided an overview of theories, models, and frameworks in implementation science and emphasized that explicit attention to determinants, processes, and evaluation improves the likelihood of sustainable change. For the nursing–secretariat interface, this means that system changes should be accompanied by joint training, consultation with both groups, and monitoring of unintended consequences.

6.5 Emerging Technologies and the Changing Division of Labor

Technologies such as speech recognition, automated transcription, and algorithmic tools that draft or summarize documentation are beginning to change the work of clinicians and administrative staff. These tools may reduce routine transcription but also introduce new categories of error, such as plausible but inaccurate text, and new demands for review. In such circumstances the secretarial role may shift from typing toward verification, coordination, and data stewardship, which makes shared standards and clear accountability more rather than less important. The general lessons from clinical decision support, namely that user involvement, careful design, and continuous evaluation are central to safe adoption (Sutton et al., 2020), and from privacy research, namely that access control and training are indispensable (Keshta & Odeh, 2021), apply

equally to these new tools. Organizations should involve nursing and secretarial staff in evaluating such technologies before deployment and should monitor their effects on accuracy, workload, and role boundaries.

7. MECHANISMS OF COLLABORATION

7.1 Interprofessional Collaboration and Teamwork

The case for collaboration rests on evidence that well-functioning teams deliver safer care. A Cochrane review of interventions to improve interprofessional collaboration found that such interventions can improve professional practice and some patient outcomes, although the evidence was of low to moderate quality and the effects varied (Reeves, 2018). A systematic review of teamwork processes across health care disciplines identified communication, coordination, and shared understanding as important components of effective teamwork (Dinh et al., 2020). A systematic review of teamwork interventions in surgery found that improving teamwork was associated with better patient outcomes (Sun et al., 2018). A review of interprofessional collaboration and patient-reported outcomes in inpatient care found associations between collaboration and some outcomes, though with limited certainty (Kaiser et al., 2022). Qualitative work has emphasized that a culture of caring, mutual respect, and shared responsibility underpins successful interprofessional collaboration (Wei et al., 2020).

Most of this research concerns clinical professions, particularly physicians and nurses, and does not explicitly include administrative staff. Nonetheless, the mechanisms identified, such as clarity of roles, shared goals, mutual respect, and effective communication, apply equally to the nursing–secretariat interface. Including secretaries in unit meetings, safety huddles, and training sessions is a practical way to extend teamwork to the administrative dimension of care.

7.2 Training and Team-Based Programs

Structured team training programs such as TeamSTEPPS have been evaluated in a range of settings. A systematic review of implementation in surgical settings reported improvements in teamwork and communication and, in some studies, in safety outcomes, while noting variability in design and rigor (Chen et al., 2019). The relevance to the secretariat context is that team training typically addresses communication techniques, such as closed-loop communication, check-backs, and structured briefings, which are directly transferable to administrative information exchange. Joint training of nurses and secretaries, using realistic scenarios that include administrative failures such as misrouted referrals or incorrect patient identifiers, may foster shared mental models and clarify expectations. Burgess et al. (2020) demonstrated that structured communication frameworks can be taught effectively within clinical education, and similar methods could be adapted for administrative staff.

7.3 Workload, Staffing, and Well-Being

Collaboration cannot be sustained in conditions of chronic overload. A systematic review found that lower nurse staffing was associated with more omissions in nursing care, which include missed communication and documentation tasks (Griffiths et al., 2018). A theoretical review of burnout in nursing highlighted workload, lack of control, and organizational factors as contributors (Dall'Ora et al., 2020). Research on physicians has linked burnout to reported medical errors and to poorer unit safety ratings (Tawfik et al., 2018). Although these studies address clinical staff, they suggest that workload and well-being are relevant to secretarial staff as well, who may face high interruption rates, simultaneous demands, and limited recognition. Any collaboration initiative should therefore examine workload distribution and resourcing so that the added requirements of verification and communication do not exceed capacity.

7.4 Patient and Family Perspectives

Patients and families are also participants in the information chain. A qualitative study of aspects of healthcare quality considered important by professionals and patients found that communication and information exchange were prominent in both groups (Hannawa et al., 2022). A literature-based study of patient-centered care and communication in nurse–patient interactions identified barriers such as time pressure and communication skills deficits, and facilitators such as training and organizational support (Kwame & Petrucka, 2021). Patients frequently interact with secretarial staff when making appointments, requesting documents, and seeking information about results, and the quality of these interactions affects whether patients receive and understand the information they need. Including administrative staff in communication training and patient-experience initiatives is thus consistent with a person-centered approach.

Table 1 summarizes the principal points at which communication errors arise across the three domains, the typical mechanisms, and examples of collaborative countermeasures involving nursing and secretarial staff.

Table 1. Communication Error Points, Mechanisms, and Collaborative Countermeasures

Domain	Typical error and mechanism	Collaborative countermeasure	Supporting literature
Patient handover	Incomplete or inconsistent content; interruptions; no standard format	Structured format (SBAR/ISBAR) for clinical and administrative requests; protected time	Raeisi et al. (2019); Müller et al. (2018); Bukoh & Siah (2020)
Patient handover	Administrative status not updated after transfer or discharge	Secretary included in unit information exchange; confirmation of completed actions	Bakon et al. (2017); Rosen et al. (2018)
Medical records	Documentation burden leading to delayed, shortened, or copied entries	Task redistribution within scope; standardized templates	Moy et al. (2021); Gesner et al. (2022); Ebbers et al. (2022)
Medical records	Copy-and-paste propagation; transcription errors; wrong-patient filing	Verification and sign-off rules; read-back; governance of copying	Tsou et al. (2017); Tutty et al. (2019)
Administrative systems	Fragmentation; manual re-entry; referral misrouting	Joint process mapping; secretarial input into design and testing; interoperability standards	Reisman (2017); Torab-Miandoab et al. (2023); Hertzum et al. (2022)
Administrative systems	Alert fatigue; misdirected disclosure; unclear access rights	Role-based access; recipient verification; alert review with users	Ancker et al. (2017); Keshta & Odeh (2021)
Team and culture	Reluctance to query clinicians; hierarchy; overload	Psychological safety; speaking-up routes; workload monitoring	O'Donovan & McAuliffe (2020); Jones et al. (2021); Griffiths et al. (2018)

7.5 Leadership and Organizational Culture

Collaboration across professional and occupational boundaries depends on leadership. Leaders set expectations about who belongs in safety conversations, allocate time and resources for joint training, and respond to reported errors in ways that either encourage or suppress further reporting. The evidence on psychological safety and speaking up points to the importance of leaders who invite input, acknowledge fallibility, and respond constructively to concerns (Jones et al., 2021; O'Donovan & McAuliffe, 2020). Evidence from national implementation of electronic records similarly identifies visible leadership and stakeholder engagement as facilitators (Fennelly et al., 2020). For nursing–secretariat collaboration, this implies that ward managers, nursing leaders, and administrative managers should share responsibility for the interface, rather than treating it as belonging to one line of management. Joint governance, such as a unit-level group that includes both nursing and secretarial representatives, can provide a forum for resolving recurring problems.

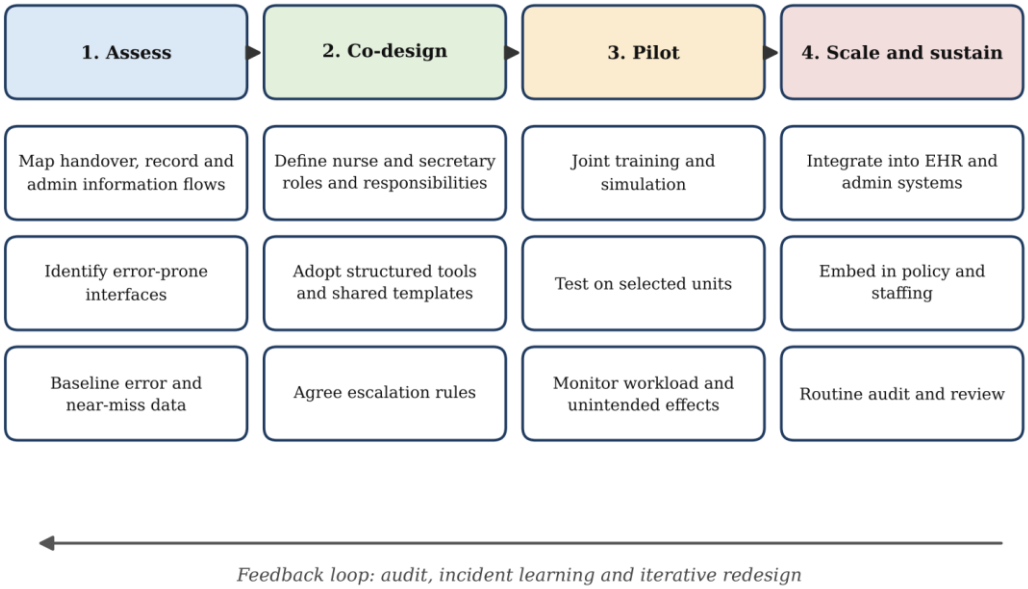
8. AN IMPLEMENTATION ROADMAP FOR NURSING–SECRETARIAT COLLABORATION

Drawing together the evidence, this section proposes a roadmap for integrating nursing and secretariat work across the three domains. It is intended as a practical synthesis rather than a validated model, and it should be adapted to local regulations, professional scopes, and resources.

8.1 Four Phases of Implementation

Figure 2 outlines four phases. In the assessment phase, organizations map the flows of information across handover, records, and administrative systems, identify points at which nursing and secretarial work intersect, and gather baseline data on incidents, near misses, and staff perceptions. Process mapping with frontline staff from both groups is likely to reveal workarounds and unrecognized dependencies. In the co-design phase, nurses, secretaries, physicians, and informatics staff jointly define roles and responsibilities, adopt structured tools such as ISBAR for administrative requests, develop shared templates, and agree on escalation rules. In the pilot phase, joint training and simulation are conducted, interventions are tested on selected units, and workload and unintended effects are monitored. In the scale-and-sustain phase, successful practices are integrated into EHR and administrative systems, embedded in policy and staffing models, and subjected to routine audit and review. A feedback loop connecting all phases ensures that incident learning informs iterative redesign, consistent with the complexity perspective discussed above (Braithwaite et al., 2018).

Figure 2. Implementation Roadmap for Nursing–Medical Secretariat Collaboration



8.2 Core Components

Table 2 sets out core components of a collaborative program, indicating actions, the roles of nurses and secretaries, and suggested indicators for evaluation. Four principles underlie these components. The first is role clarity: each information task should have a named owner and a defined verification step. The second is closed-loop communication: requests should be acknowledged and completed requests confirmed, so that nothing depends on assumption. The third is shared visibility: nurses and secretaries should be able to see the same information at the same time, or at least know what the other can see. The fourth is learning: errors and near misses involving the nursing–secretariat interface should be reported, analyzed, and used to improve the system, with secretaries participating as full members of the safety community.

Table 2. Core Components of a Nursing–Medical Secretariat Collaboration Program

Component	Action	Roles of nurses and secretaries	Suggested indicators
Role clarity	Define ownership and verification step for each information task	Nurses: clinical content and urgency; secretaries: administrative processing and confirmation	Proportion of tasks with named owner; audit of role compliance

Structured communication	Use ISBAR-style templates for requests and handovers	Both: use common format; secretaries confirm receipt	Template use rate; request acknowledgement time
Record integrity	Standard templates; verification and sign-off rules	Nurses: accurate clinical entry; secretaries: transcription and filing with query route	Discharge documentation completeness; discrepancy rate
Systems and data	Joint mapping; interoperability; role-based access	Both: report system workarounds; secretaries: test administrative functions	Duplicate or mismatched records; misdirected correspondence
Training and culture	Joint simulation; inclusion in huddles and incident review	Both: participate as equal team members	Psychological safety scores; incident reports by role
Evaluation	Process, outcome, experience and balancing measures	Both: contribute to audit and feedback	Near-miss trends; workload and documentation time

8.3 Measurement and Evaluation

Evaluation should combine process, outcome, and experience measures. Process measures may include the proportion of handovers using a structured format, the rate of administrative requests acknowledged within an agreed interval, and the completeness of discharge documentation. Outcome measures may include incident and near-miss reports related to information transfer, wrong-patient errors, misdirected correspondence, and delays in follow-up. Experience measures may include staff perceptions of role clarity and psychological safety, as well as patient-reported experience of information provision. Event log data can supplement these measures by indicating how records are accessed and edited (Rule et al., 2023). Importantly, evaluation should include balancing measures such as workload and time spent on documentation, since improvements in communication that increase burden unsustainably may be counterproductive (Moy et al., 2021).

8.4 Policy and Organizational Implications

At the organizational level, leaders should recognize secretarial staff as part of the patient safety workforce and include them in safety policies, training budgets, and governance structures. At the policy level, regulators and professional bodies should clarify the scope of administrative roles in documentation and information handling, and ensure that standards for confidentiality and data security are explicit and enforced. The global patient safety action plan emphasizes the engagement of all health workers and the building of safety culture, which provides a normative basis for extending safety initiatives to administrative staff (World Health Organization, 2021a). Investment in interoperable systems and in workforce training should be seen as complementary rather than alternative strategies, since technology alone cannot compensate for unclear responsibilities or poor teamwork.

8.5 Anticipated Barriers and Mitigation

Several barriers can be anticipated. Hierarchy and status differences may inhibit secretaries from questioning clinical staff, which can be addressed through explicit speaking-up routes and leadership modeling. Workload pressure may lead staff to regard new verification steps as extra burdens; this can be mitigated by simplifying processes, removing redundant tasks, and monitoring balancing measures. Fragmented systems may prevent shared visibility, which may require interim solutions such as shared communication boards or standardized messaging while longer-term integration proceeds. Role boundary disputes may arise as tasks are redistributed, and are best managed through consultation, documented delegation, and review. Finally, evaluation fatigue and limited analytic capacity may impede measurement, which suggests using a small set of meaningful indicators and drawing on data already generated by existing systems (Rule et al., 2023). Anticipating and planning for these barriers increases the likelihood that collaboration initiatives will be sustained.

9. LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

This review has important limitations. It is narrative and purposive rather than systematic, so selection bias is possible, and no formal quality appraisal was undertaken. The most significant limitation is the scarcity of direct empirical research on medical secretaries and comparable roles in patient safety; the application of evidence from handover, documentation, informatics, and teamwork to the secretariat context is therefore an inference rather than an established finding. Much of the evidence concerns

high-income settings, and terminology and role boundaries for administrative staff differ substantially among countries and health systems, which limits generalizability. Many of the intervention studies cited rely on uncontrolled designs, short follow-up periods, and intermediate outcomes. The framework and roadmap proposed here have not been empirically tested.

Future research should address several priorities. First, descriptive studies are needed to document what medical secretaries do, how they interact with nursing staff, and where errors arise at this interface, using mixed methods such as observation, process mapping, and incident analysis. Second, intervention studies should evaluate joint nursing–secretariat training, structured request templates, and closed-loop administrative communication, using controlled or stepped-wedge designs and measuring both safety and workload outcomes. Third, research on health information system design should investigate how administrative functions can be made more transparent to clinicians and how secretarial staff can contribute to usability testing and incident review. Fourth, studies should examine the implications of emerging technologies, such as automated transcription and artificial intelligence-assisted documentation, for the division of labor and for new categories of error. Fifth, research in low- and middle-income settings is needed, where paper-based and hybrid systems remain common and where resource constraints shape feasible solutions.

10. CONCLUSION

Clinical communication errors arise from the interplay of people, processes, and systems, and they occur not only in conversations between clinicians but also in records and in the administrative processes that support care. The evidence reviewed here indicates that structured handover, standardized documentation, interoperable and well-designed information systems, and effective teamwork each contribute to reducing these errors, while documentation burden, system fragmentation, and unclear role boundaries elevate risk. Medical secretarial staff occupy a pivotal position in these information flows, yet their contribution to patient safety is under-recognized and under-studied.

Collaboration between nursing and medical secretariat staff offers a promising way to integrate the three domains of handover, records, and administrative systems. By clarifying roles, adopting shared standards, practicing closed-loop communication, training together, and learning from errors, organizations can transform the nursing–secretariat interface from a latent vulnerability into a safeguard. The framework and roadmap presented here offer a starting point for implementation and evaluation. Rigorous empirical research is now needed to test their effectiveness and to establish the place of administrative staff within the broader patient safety agenda.

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تقليل أخطاء التواصل السريري من خلال التعاون بين التمريض والأمانة الطبية: دمج تسليم المرضى، والسجلات الطبية، ونظم المعلومات الإدارية

الملخص

لا تزال أخطاء التواصل السريري مساهماً رئيسياً وقابلاً إلى حد كبير للوقاية في إلحاق الضرر بالمرضى في المستشفيات حول العالم. وقد تركز البحث على التفاعل بين الأطباء والتمريض، غير أن المعلومات في المستشفيات تمر أيضاً عبر الموظفين الإداريين، بما في ذلك الأمناء الطبيون، الذين يديرون السجلات، والمراسلات، والجدولة، وإدخال البيانات. تستعرض هذه المراجعة السردية الأدبيات المنشورة بين عامي 2017 و2024 حول تسليم المرضى، والسجلات الطبية، ونظم المعلومات الإدارية، وتبحث كيف يمكن للتعاون بين التمريض وموظفي الأمانة الطبية أن يقلل أخطاء التواصل. وتشير الأدلة إلى أن أدوات التسليم المنظمة، والتوثيق الموحد، والنظم القابلة للتشغيل المتبادل، والعمل الجماعي الفعال، يقلل كل منها من المخاطر، بينما يزيدها عبء التوثيق، وتشتت النظم، وعدم وضوح حدود الأدوار. وتندر الدراسات التي تتناول دور الأمانة مباشرة، ولذلك تطور المراجعة إطاراً مفاهيمياً تكاملياً وخارطة طريق للتنفيذ. وتُقدَّم توصيات للممارسة والسياسة والبحث، مع التأكيد على المعايير المشتركة، والتدريب المشترك، والنظم القابلة للتشغيل المتبادل، والتدقيق الروتيني، وإشراك الموظفين الإداريين في برامج سلامة المرضى.

الكلمات المفتاحية: أخطاء التواصل السريري؛ تسليم المرضى؛ السجلات الطبية؛ نظم المعلومات الصحية؛ التعاون بين المهن