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# OPTIMIZING PATIENT CARE TRANSITIONS IN MILITARY TERTIARY HOSPITALS: A COMPREHENSIVE REVIEW OF MULTIDISCIPLINARY COLLABORATION ACROSS ALLIED DENTAL, NURSING, EMERGENCY, AND PHARMACY SERVICES

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## ABSTRACT

Patient care transitions are among the most failure-prone processes in modern hospital practice because they require accurate clinical synthesis, medication continuity, clear task allocation, patient understanding, and timely communication across multiple professional groups and settings. Medication discrepancies, delayed follow-up, unclear discharge instructions, and fragmented accountability are recurrent hazards during admission, intra-hospital transfer, emergency-to-inpatient handoff, and discharge to home or post-acute care. Classic patient-safety literature established that medication errors are common in hospitalized patients and that incomplete reconciliation across handoffs accounts for a substantial proportion of preventable harm. Subsequent observational and quality-improvement studies showed that discrepancies in medication histories and discharge orders are frequent, clinically meaningful, and often preventable through structured multidisciplinary processes. In military tertiary hospitals, transition safety acquires added complexity. These institutions frequently manage high-acuity trauma, subspecialty referral pathways, geographically mobile beneficiaries, active-duty personnel with fitness-for-duty implications, veterans with multimorbidity, and beneficiaries who may move between direct military care, contracted civilian care, rehabilitation, and community services. Recent military-system reports indicate that care transitions are receiving enterprise-level attention, including formal patient-experience measurement and large-scale medication reconciliation initiatives in defense health facilities. At the same time, the most effective transitional care interventions appear to be those that combine practical coordination, discharge planning, medication review, and post-discharge reinforcement rather than relying on a single discipline or isolated checklist. This review examines the evidence base relevant to optimizing care transitions in military tertiary hospitals through multidisciplinary collaboration across nursing, pharmacy, emergency, and allied dental services. The review first outlines the conceptual and evidence background for transition safety, then analyzes the distinctive

*military-tertiary context, and finally examines the roles, interfaces, and integration strategies of the four service lines. Cross-cutting themes include medication reconciliation, oral-health continuity, emergency department handoff quality, patient and caregiver engagement, digital interoperability, governance, audit, and implementation barriers. The central argument is that transition quality improves most when hospitals move from profession-specific workarounds to standardized interprofessional systems with explicit role design, shared metrics, and patient-centered communication.*

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**KEYWORDS:** Optimizing Patient Care; Military Tertiary Hospitals; Multidisciplinary Collaboration; Allied Dental; Nursing; Emergency; Pharmacy Services

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## BACKGROUND

Transitions of care have long been recognized as a core patient-safety problem rather than a routine administrative event. The Institute of Medicine emphasized that medication-related harm is common in hospitalized patients, and the subsequent nursing evidence review by Barnsteiner described medication reconciliation as an essential safety process during admission, transfer, and discharge (1). In the acute hospital setting, the risk does not arise from a single error but from a sequence of small failures: incomplete medication histories, unclear continuation or discontinuation decisions, undocumented changes, missing follow-up plans, poor patient teaching, and delayed communication to downstream providers (2).

Early inpatient studies established the scale of this problem. Gleason and colleagues found that discrepancies in medication histories and admission orders were common among newly hospitalized patients, while Vira and colleagues showed that medication errors could be identified and corrected at both admission and discharge using a deliberate reconciliation process (3,4). Moore and colleagues further demonstrated that discontinuity between inpatient and outpatient care produces discharge-related medical errors, especially when medications held during hospitalization are not intentionally restarted or appropriately stopped before the patient returns home (5). These findings shifted the field away from viewing discharge as a clerical endpoint and toward treating it as a clinical intervention requiring verification, patient education, and communication across settings.

Nursing scholarship added a second important insight: even when clinicians agree that transition safety matters, operational ambiguity undermines execution. Sullivan and colleagues described medication reconciliation in acute care as both an opportunity and a challenge for nursing, while later qualitative work showed that nurses often experience their discharge role as “chasing, checking and educating” in the absence of standardized expectations and adequate training (6,14). That

description remains clinically relevant because it captures the lived reality of many tertiary hospitals, where transition work is essential but partly invisible, shared by many, and fully owned by few. Military tertiary hospitals share these general risks but also face distinctive system pressures. The Military Health System Review emphasized enterprise-wide patient safety, governance, and evidence-based practices across military treatment facilities, confirming that safety culture and reliable processes are explicit institutional priorities rather than optional local projects (12). More recently, the Defense Health Agency reported that multiple military hospitals and clinics achieved five-star Care Transitions ratings based on patient experience measures related to discharge planning, medication understanding, and attention to post-hospital needs, demonstrating that transition performance is now a visible indicator within military healthcare (11). In parallel, a multicentre quality-improvement project in Ministry of Defense Health Services hospitals showed that structured medication reconciliation across 18 hospitals significantly reduced unintentional discrepancies at admission and discharge, offering one of the clearest defense-sector examples of large-scale transitional safety improvement (10).

Accordingly, any serious review of care transitions in military tertiary hospitals must move beyond generic discharge advice and examine how multiple professional services can function as a coordinated transition system. Nursing, pharmacy, emergency, and allied dental services each occupy a different point in the pathway, but the safety gains occur at their interfaces rather than within their silos.

## LITERATURE REVIEW

The literature on transitional care has evolved through three overlapping phases. The first phase defined the problem, largely through medication error studies showing that omissions, duplications, dose changes, and communication failures were common during admission, inter-unit transfer, and discharge (2-8). The second phase focused on

structured process design, including standardized forms, integrated discharge prescriptions, electronic reconciliation tools, pharmacist review, and audit feedback (7). The third phase broadened transitional care into a multidimensional intervention that includes discharge planning, patient and caregiver engagement, follow-up calls, coordination with post-acute services, and targeted support for high-risk patients (13,17-20).

Across this literature, several consistent conclusions emerge. First, transitions are not made safe by documentation completeness alone; they depend on the accuracy, timing, and shared understanding of the information being documented (2). Second, medication reconciliation remains the most studied operational core of transition safety because medications link diagnosis, treatment intent, monitoring, adverse effects, and post-discharge self-management (15). Third, the most successful interventions are multidisciplinary and workflow-based rather than discipline-specific and educational only (18). Finally, patient and caregiver comprehension is not an optional addition to discharge work but a central determinant of whether hospital plans survive contact with home reality (20). A major recent synthesis strengthens this interpretation. A systematic review and network meta-analysis of 126 trials involving 97,408 participants found that low- and medium-complexity transitional care interventions were associated with reduced 30-day readmissions, while interventions across all complexity levels reduced readmissions at 180 days (13). The practical implication is important: transition quality may improve less from adding more components indiscriminately than from ensuring that core components are executed reliably. In real hospitals, those core components usually include early risk identification, medication review, clear written and verbal instructions, explicit follow-up planning, and a mechanism for post-discharge clarification.

The current evidence base, however, remains uneven. Direct studies focused specifically on military tertiary hospitals and integrating all four services examined in this review are limited. Most military evidence is drawn from quality-improvement reports, patient-safety reviews, veteran-focused transitional programs, and system-level performance reports rather than randomized trials (17,18). Likewise, evidence connecting dental or oral-health services directly to broader transition outcomes is less developed than evidence for nursing or pharmacy. For that reason, this review synthesizes the best available direct and indirect evidence and

interprets it through the operational realities of military tertiary care.

### **Military hospital context**

Military tertiary hospitals differ from many civilian tertiary centers in mission, case mix, and network structure. They must deliver complex specialty care while also supporting operational readiness, occupational assessments, beneficiary mobility, referral coordination, and continuity across direct military care and external providers. These demands amplify ordinary transition risks. A discharge plan that is merely “adequate” in a static local system may fail when the patient is transferred to another region, returns to a base with limited specialty services, or enters a mixed military-civilian pathway. The Military Health System Review therefore remains relevant because it frames patient safety as an enterprise function requiring governance, data, education, and standardization across facilities (12). Military facilities are also increasingly evaluated on the patient-facing consequences of transition quality. The Defense Health Agency’s report on five-star Care Transitions ratings highlights three questions that are fundamentally multidisciplinary: whether staff considered patient and caregiver preferences in planning post-discharge needs, whether patients understood the purpose of each medication, and whether discharge preparation supported safe continuation of care outside the hospital (11). None of these outcomes can be produced by one profession alone. They require coordinated action among physicians, nurses, pharmacists, care coordinators, and support services.

Evidence from Ministry of Defense Health Services hospitals offers a concrete defense-sector model. In the multicentre BMJ Open Quality study, a structured medication reconciliation program across 18 hospitals was associated with a reduction in the proportion of patients with at least one outstanding unintentional discrepancy at admission from 27% to 7% and at discharge from 17% to 5%, together with improved documentation compliance within 24 hours of admission and at discharge (10). Just as importantly, the program relied on governance support, multidisciplinary audit teams, standardized policy, shared metrics, and iterative learning sessions rather than pharmacy effort alone. This point is central to military tertiary practice: scalable transition improvement depends on system design. Veteran-focused studies reinforce the military-specific argument from another angle. Older veterans discharged to skilled nursing facilities commonly have polypharmacy, geriatric syndromes,

and elevated readmission risk, and targeted tools such as nursing transition summaries and medication-management forms were developed specifically to organize information at these handoffs (17). A subsequent pharmacist-led veteran transitions program spanning hospital-to-skilled-care and skilled-care-to-home phases identified large numbers of medication and appointment errors, underscoring how vulnerable planned transitions remain when responsibility crosses organizational boundaries (18). Military tertiary hospitals caring for service members, retirees, and veterans therefore need transition systems that anticipate cross-setting complexity rather than assuming local continuity.

### **Transitional care framework**

A useful way to conceptualize transition optimization in military tertiary hospitals is to view every transition as four linked tasks: clinical synthesis, medication continuity, self-management preparation, and downstream communication. Clinical synthesis answers the question, “What is the patient’s active problem list and current trajectory?” Medication continuity addresses “What exactly should continue, stop, change, start, or be monitored?” Self-management preparation asks “What does the patient or caregiver need to understand and do next?” Downstream communication defines “Who is receiving this patient next, and what information must reach them before or with the patient?” Failures in any one domain can nullify good work in the others.

This framework also clarifies why multidisciplinary collaboration is not merely desirable but necessary. Nursing is often strongest in ongoing assessment, bedside education, and discharge readiness evaluation; pharmacy provides medication verification, optimization, and risk stratification; emergency services determine the quality of early triage and handoff at some of the highest-pressure transitions; and dental or oral-health services identify needs that are frequently omitted despite their impact on nutrition, aspiration risk, infection control, pain, and adherence to overall treatment plans (21-23). In military tertiary hospitals, where patients may traverse intensive care, surgical wards, rehabilitation, and external referral networks, these functions should be explicitly linked in policy and workflow.

### **Nursing services**

Nursing services are the continuous thread across most hospital transitions because nurses observe the patient longitudinally while other professionals

interact episodically. That continuity gives nursing a crucial role in identifying discharge barriers early, assessing readiness for transfer, reinforcing medication understanding, clarifying pending tasks, and detecting mismatches between the formal plan and the patient’s practical capacity to follow it. In Barnsteiner’s review, nurses were identified as one of the three central disciplines in medication reconciliation, but the evidence also showed substantial duplication, uncertainty, and inefficiency when roles were not clearly standardized (2). This dual position—essential but vulnerable to role ambiguity—still defines nursing’s transition function.

The acute-care literature supports several specific nursing contributions. Sullivan and colleagues described transition work as an opportunity for nursing precisely because nurses are positioned to bridge medication safety, patient education, and continuity across settings (6). The more recent qualitative study of acute-care nurses sharpened this perspective by showing that nurses experience medication reconciliation at discharge as “chasing, checking and educating,” while also reporting inadequate guidance, limited training, and inconsistent interprofessional communication (14). These findings suggest that military tertiary hospitals should not expand nursing responsibility informally; they should formalize it through competencies, documentation standards, escalation pathways, and protected workflow time.

A practical nursing framework in military tertiary settings should include five functions. First, nurses should participate in early transition risk screening, especially for older adults, polypharmacy, cognitive impairment, mobility limitations, dependence on caregivers, and high-risk devices. Second, bedside nursing should verify the patient’s actual understanding of the medication plan rather than assuming understanding from physician counseling alone. Third, nurses should identify non-medication barriers such as wound care limitations, oxygen needs, swallowing issues, oral intake problems, and inability to access follow-up. Fourth, handoff nursing documentation should be structured around active problems, pending results, red flags, functional status, and unresolved teaching needs. Fifth, nursing leadership should participate in transition audits because frontline problems often surface first in nursing workflow.

The importance of nursing input becomes even clearer in transfers to post-acute care. Veteran-focused work on discharge to skilled nursing facilities developed a Nursing Transition Summary

to organize clinically useful information that is often absent from generic discharge documents, including geriatric syndromes, functional concerns, and practical care needs (17). For military tertiary hospitals, this is highly relevant not only for frail veterans but for any patient whose safe recovery depends on functional support and coordinated monitoring after hospital discharge.

### **Pharmacy services**

Pharmacy is the most consistently evidence-supported professional contributor to safer care transitions because medications are where diagnostic changes, treatment intentions, adverse effects, and patient self-management converge. The classic literature showed that reconciliation failures commonly involve omission of chronic medications, unintended continuation of inpatient-only treatments, duplication, incorrect dosing, and lack of communication to follow-up clinicians (2-5). Gleason and colleagues documented high rates of discrepancies between medication histories and admission orders, while Vira and colleagues demonstrated that systematic reconciliation at both admission and discharge could detect and correct clinically important errors (3,4). Pronovost and colleagues extended the lesson to critical care transfers by showing that structured medication-tracking tools could markedly reduce transfer-related medication errors (8).

The policy and implementation literature offers a second lesson: pharmacy impact is greatest when it is embedded in team workflow rather than added at the end of discharge. ASHP and APhA best-practice documents frame pharmacists as core members of the inpatient interdisciplinary team who monitor therapy during hospitalization and review medication plans as patients prepare for discharge (15). In the emergency setting, ASHP has also highlighted the distinct transition vulnerabilities of admitted patients boarding in the emergency department, frequent ED users, and patients whose complex medication issues need coordination with outpatient follow-up (16). These recommendations align closely with the Ministry of Defense Health Services multicentre study, where pharmacists compared orders against historical medication records, reviewed forms for completeness, communicated discrepancies to physicians, and helped standardize the medication reconciliation process across hospitals (10).

The pharmacy role in military tertiary hospitals should therefore extend beyond list verification. At admission, pharmacists can improve the best

possible medication history by triangulating patient interview, previous records, dispensing data, and caregiver input. During hospitalization, they can flag high-risk medications, streamline antimicrobial and anticoagulant plans, and anticipate discharge-related access problems. At discharge, they can reconcile the final regimen, identify omissions or duplications, simplify instructions, reinforce patient counseling, and transmit clear medication changes to the next care team. After discharge, pharmacist-led follow-up is particularly valuable for patients entering skilled care, rehabilitation, or complex home regimens. Veteran transitional care experience supports this broader role: a pharmacist-led program addressing two planned care transitions found numerous medication and appointment errors among older veterans, illustrating that transition failure persists even when care is scheduled rather than emergent (18).

Several practical design principles emerge from the evidence. First, medication reconciliation should begin early rather than at the moment of discharge. Second, the best possible medication history must be treated as a clinical product that uses multiple data sources, not as a rushed admission question set (10,24). Third, standardized tools improve reliability only if clinicians are trained to interpret and act on discrepancies (7,10). Fourth, medication communication to patients should focus on what changed, why it changed, what to monitor, and whom to contact with questions, because merely listing medications is insufficient for self-management. Finally, pharmacy metrics should not stop at documentation compliance; they should include discrepancy types, time to reconciliation, intervention acceptance, post-discharge callbacks, and medication-related readmissions.

### **Emergency services**

Emergency services shape some of the most consequential transitions in military tertiary hospitals because they sit at the interface of prehospital care, acute stabilization, inpatient admission, interfacility transfer, and discharge after short-stay management. Emergency transitions are high risk not simply because patients are sick, but because time pressure, incomplete histories, crowding, interruption, and diagnostic uncertainty are structurally built into emergency care. In this environment, medication histories are often incomplete, family members may be absent, home medication containers may be unavailable, and treatment decisions must proceed before full information is assembled.

ASHP's emergency department transition guidance recognizes these realities and emphasizes that the emergency department is not an isolated encounter but a major transition node, especially for patients who board after admission, frequently revisit the ED, or require medication-related follow-up after discharge (16). For military tertiary hospitals, emergency services may also coordinate trauma referrals, transfers from smaller military facilities, and stabilization before onward movement, making downstream communication even more important. A poorly managed ED-to-ward handoff can reproduce the same failures later blamed on ward teams: wrong medication assumptions, uncommunicated pending tests, unclear resuscitation decisions, and missing specialty priorities.

Optimizing emergency transitions requires both discipline-specific and interprofessional interventions. On the emergency side, structured handoff tools should prioritize presenting problem, working diagnosis, major interventions, response to treatment, unresolved risks, pending studies, and time-sensitive medication issues such as anticoagulation, insulin, antimicrobials, seizure medications, and analgesia. Pharmacy support in the ED can reduce prescribing errors, improve rapid medication verification, and assist with high-alert medications when histories are incomplete. Nursing input is vital for confirming the patient's baseline functional and cognitive status, tracking evolving instability, and ensuring that critical information follows the patient during boarding and admission. Emergency discharge is a separate but equally important problem. Many military emergency patients are discharged directly, sometimes after brief observation, with new medications, follow-up instructions, red-flag advice, and activity restrictions. If those instructions are generic, poorly timed, or discordant with the patient's literacy and access situation, return visits become more likely. Transitional care research broadly supports focused, practical interventions over maximal complexity (13). Applied to emergency care, that means concise medication explanations, explicit reasons for follow-up, contact pathways for deterioration, and deliberate communication of pending or uncertain results.

#### **Allied dental and oral-health services**

Oral health is often absent from discussions of hospital transitions, yet this omission is difficult to justify in tertiary care populations. Oral pain, poor dentition, mucosal disease, xerostomia, ill-fitting

dentures, impaired oral hygiene, and swallowing-related oral residue can affect nutrition, medication tolerance, aspiration risk, comfort, communication, and adherence to self-care after discharge. For medically complex patients, especially older adults, those receiving oncology treatment, maxillofacial or head-and-neck care, prolonged hospitalization, ventilation, or rehabilitation, oral-health continuity is part of functional recovery rather than a cosmetic add-on.

The direct transition-specific evidence for dental involvement is less extensive than the evidence for nursing or pharmacy, but the available literature still supports inclusion of oral-health services within comprehensive transition planning. A hospital-based study evaluating oral management by a full-time resident dentist was explicitly designed to improve oral healthcare for hospitalized patients, reflecting the growing recognition that oral management belongs within inpatient multidisciplinary care rather than outside it (21). A recent systematic review of oral-health clinical practice guidelines likewise emphasized oral assessment, daily mouth care, denture care, care planning, and access to dental services, especially for dependent adults and institutionalized populations (22). Broader integration reports have also stressed the interaction between oral health and chronic medical conditions and the tendency for unmet oral needs to surface late, often through urgent care or hospital pathways rather than planned preventive services (23).

In military tertiary hospitals, allied dental services can strengthen transitions in at least four ways. First, they can identify oral conditions likely to interfere with nutrition, medication administration, speech, sleep, wound healing, or readiness for discharge. Second, they can provide targeted inpatient interventions or referrals for patients with oncology treatment, maxillofacial trauma, immunosuppression, dysphagia, or prolonged critical illness. Third, they can standardize oral-health handoff elements for patients moving to rehabilitation, long-term care, or home with caregiver support. Fourth, they can collaborate with nursing on oral-hygiene plans and patient teaching, particularly for patients unable to perform adequate self-care.

The strongest practical argument for incorporating dental and oral-health considerations into transition policy is not that every patient needs a dentist before discharge, but that oral-health needs should be actively screened rather than silently neglected. Military tertiary hospitals frequently manage trauma, reconstructive surgery, oncology, complex

medical illness, and older beneficiaries with high dependency. In these groups, oral-health neglect can undermine otherwise well-designed transition plans. A patient discharged with an accurate medication list but severe oral pain, poor denture fit, mucositis, or inadequate mouth-care support may still fail nutrition plans, avoid medications, aspirate more easily, or re-present with preventable complications.

### **Medication reconciliation as the shared operational core**

Although care transitions include more than medications, medication reconciliation remains the most developed and transferable operational core for multidisciplinary transition improvement. Barnsteiner summarized reconciliation as a formal process for developing the most accurate current medication list, comparing it with intended orders, making clinical decisions from that comparison, and communicating the updated list to both caregivers and the patient (2). This formulation remains powerful because it captures reconciliation as a shared workflow rather than a form-filling exercise. The evidence supporting reconciliation is broad and durable. Incomplete medication histories are common, and Lau and colleagues found that a meaningful proportion of home prescription drugs were not recorded on hospital admission records (24). Gleason and colleagues showed that more than half of newly hospitalized patients had discrepancies in medication histories or admission orders (3). Vira and colleagues showed that structured reconciliation at admission and discharge corrected errors and prevented potential harm (4). Moore and colleagues demonstrated that discharge-related medication discontinuity often leaves patients with one or more clinically relevant errors after leaving hospital (5). In quality-improvement terms, Rozich and colleagues showed that standardization can act as a safety mechanism, while integrated discharge forms improved prescription accuracy by combining admission medications, in-hospital changes, and discharge plans in a single process (7,9).

For military tertiary hospitals, reconciliation should be treated as a multidisciplinary pathway with role clarity at each stage. Physicians decide the therapeutic intent; pharmacists verify accuracy and optimize safety; nurses assess understanding and identify administration barriers; emergency clinicians initiate early history capture when admission begins in the ED; and information staff ensure that the record can travel across units and facilities. The Ministry of Defense Health Services study is particularly instructive because it linked

improved reconciliation performance to formal policies, written professional responsibilities, multidisciplinary audit teams, reorientation workshops, and ongoing monitoring rather than relying only on individual vigilance (10).

The common reasons reconciliation fails are equally well described. Patient memory may be unreliable, records may be incomplete or spread across multiple systems, clinicians may duplicate history-taking without resolving differences, and time pressure can turn “best possible medication history” into “first available medication list” (24). Military systems add further challenges when care crosses direct military facilities, civilian contracted hospitals, rehabilitation centers, or geographically dispersed follow-up sites. Consequently, the goal should not be simple checklist completion but high-reliability reconciliation supported by multiple data sources and active discrepancy resolution.

### **Communication, documentation, and digital interoperability**

Safe transitions require information that is not only accurate but usable by the next team and understandable to the patient. This is why transition failures persist even in hospitals with extensive documentation. Wagner and Hogan showed that electronic medication data are only as accurate as what is entered and maintained, while Kramer and colleagues demonstrated that electronic reconciliation systems can improve process reliability but still require technical support, workflow redesign, and sustained updating (25,26). The lesson for military tertiary hospitals is clear: digitization is necessary, but it is not sufficient.

Discharge documentation should therefore be designed around decisions and actions, not around narrative excess. A useful discharge summary identifies active diagnoses, reason for hospitalization, important investigations, procedures, medication changes with rationale, pending results, follow-up appointments, monitoring needs, and explicit red flags. The recent study of discharge processes from the perspectives of patients, caregivers, and staff showed that poor communication, weak referral tracking, and tension between patient-centered care and bed pressures contribute to fragmented transitions and avoidable uncertainty after discharge (19). These observations align closely with military-tertiary realities, where patients may need handoff not only to local primary care but to another military region, a civilian consultant, rehabilitation facility, or base medical service.

Interoperability becomes especially important in defense systems because beneficiaries may move between facilities or sectors faster than documentation processes adapt. A military transition strategy should therefore include: a standardized medication reconciliation module; structured discharge fields that force articulation of changes and follow-up; visible pending-result alerts; role-specific handoff templates for nursing, pharmacy, and emergency teams; and mechanisms to communicate with receiving facilities before transfer rather than after it. Where full digital interoperability is not available, standardized interim forms remain better than unstructured free text, as older integrated discharge studies already suggested (9).

### **Patient and caregiver engagement**

No transition system is complete without patient and caregiver engagement because patients are the only actors who remain present across every setting. The Defense Health Agency's care-transition rating framework underscores this principle by measuring whether patient and caregiver preferences were considered and whether patients understood the purpose of their medications when leaving hospital (11). These are not soft patient-experience outcomes separate from safety; they are direct markers of whether the discharge plan is likely to be enacted correctly.

Recent discharge research further supports a practical, communication-focused approach. The study of patient, caregiver, and staff perspectives on hospital discharge identified uncertainty, information overload, and weak referral tracking as major threats to continuity after discharge (19). A rapid review of structured communication interventions for family caregivers found low-strength evidence that such approaches improve caregiver satisfaction, although broader outcome evidence remains limited (20). Even this modest result is important because caregiver confidence often mediates whether medication schedules, warning signs, transport arrangements, wound care, and follow-up attendance are successfully managed at home.

Military tertiary hospitals should adopt caregiver engagement as a default strategy for high-risk patients rather than a discretionary courtesy. This is especially relevant for older veterans, injured service members, patients with cognitive impairment, those with complex oral or nutritional needs, and patients discharged on high-risk medications. Effective engagement requires teach-back, written instructions in plain language, clarification of the purpose of each

medication, explicit explanation of what changed during hospitalization, and a clear answer to the question "Who should we call, and when?" When dental or oral-health needs are present, caregiver instructions should also cover mouth-care routines, denture care, dietary modifications, and triggers for urgent reassessment.

### **Governance, audit, and implementation science**

Transition improvement rarely succeeds through professional goodwill alone. It requires governance, measurement, and an implementation strategy matched to frontline workflow. The Ministry of Defense Health Services multicentre study provides a useful model because it combined policy creation, written responsibilities, multidisciplinary audit teams, learning sessions, process indicators, outcome indicators, and leadership oversight across 18 hospitals (10). This design matters because it translates the abstract concept of multidisciplinary collaboration into observable system behavior.

Several governance principles emerge from the broader literature. First, hospitals should define transition roles explicitly for physicians, nurses, pharmacists, emergency staff, and allied services rather than allowing responsibilities to emerge informally (14). Second, performance measurement should include both process and outcome indicators. Process measures may include completion of reconciliation within 24 hours, timely discharge summary transmission, caregiver teach-back documentation, and oral-health screening in selected high-risk groups. Outcome measures may include unintentional discrepancies, ED revisits, medication-related readmissions, post-discharge calls for clarification, and patient-reported understanding of medications and follow-up (13).

Third, audit should focus on learning as well as compliance. The defense-sector experience described resistance from physicians, unclear responsibilities, and variation in team completeness, but iterative feedback, site visits, and shared learning helped improve results (10). Military tertiary hospitals are well positioned to use this model because they often have stronger command structures, standardized policy channels, and enterprise reporting systems than decentralized civilian networks. The challenge is to ensure that central standards support local problem-solving rather than creating purely bureaucratic checklists.

### **Barriers to multidisciplinary transition quality**

Despite strong conceptual support, multidisciplinary transition work faces predictable barriers. Role

ambiguity remains one of the most persistent problems. Nurses may be expected to reinforce education but not granted authority or time to resolve discrepancies; pharmacists may identify medication issues without a responsive escalation pathway; emergency staff may prioritize throughput over downstream communication; and dental or oral-health issues may be ignored because they do not fit traditional discharge templates (19). In such settings, failures are attributed to individual lapses even when the underlying cause is poor process design.

Resource constraints are a second barrier. High patient turnover, staffing shortages, frequent rotation of trainees or deployed personnel, and pressure for rapid bed turnover can reduce transition work to the minimum needed for discharge completion rather than safe continuity. The literature on medication reconciliation has repeatedly shown that accurate history gathering is time-consuming, especially when patients have polypharmacy, limited health literacy, or incomplete records (24). In military systems, these challenges may be compounded by transfers across regions or sectors, producing further information fragmentation.

A third barrier is overreliance on documentation as a proxy for safety. A completed form does not guarantee that medication decisions were clinically correct, that the patient understood them, or that the next team received actionable information. This limitation was recognized in the Ministry of Defense Health Services study, which noted that form completion alone does not necessarily reduce discrepancy unless teams also improve the accuracy of the underlying work (10). Therefore, transition programs should monitor not only whether documentation exists but whether it changes care quality.

Finally, oral-health needs remain underrecognized because they do not fit neatly into dominant medical metrics. Yet failure to account for oral pain, swallowing-related mouth-care difficulties, denture problems, and oral hygiene needs can compromise nutrition, medication adherence, and post-discharge recovery. For military tertiary hospitals seeking comprehensive transition optimization, this is precisely the kind of low-visibility issue that multidisciplinary review is meant to correct.

### **Model for military tertiary hospitals**

Based on the literature reviewed, an optimized transition model for military tertiary hospitals should contain the following elements.

First, transition risk should be identified early. Patients at high risk include those with polypharmacy, frailty, cognitive impairment, multiple consultants, recent admission, traumatic injury, device dependence, dysphagia, oral-health limitations, or planned transfer to another facility.

Second, the hospital should use a standardized best possible medication history process beginning in the emergency department or on admission and verified by pharmacy as early as feasible. This process should be updated at every internal transfer and finalized at discharge.

Third, nursing, pharmacy, emergency, and dental/oral-health contributions should be written into transition protocols. Nursing should assess readiness, reinforce education, and communicate functional needs; pharmacy should reconcile and optimize medications; emergency services should standardize high-risk handoffs and boarding communication; and allied dental services should screen and manage oral-health issues in designated high-risk groups.

Fourth, discharge communication should include patient-friendly medication explanations, explicit follow-up plans, pending tests, warning signs, and named contact pathways. Teach-back should be expected for high-risk discharges.

Fifth, receiving teams or facilities should obtain a structured handoff before or at the moment of transfer, not after the patient arrives. This is particularly important for transfers to rehabilitation, skilled nursing, civilian partner hospitals, or geographically distinct military facilities.

Sixth, hospitals should monitor discrepancy rates, readmissions, ED revisits, patient-reported medication understanding, and selected service-specific indicators such as oral-health referral completion or transition-summary transmission rates.

This model is intentionally practical. It does not assume that every hospital can build a high-complexity transitional care program immediately. Rather, it aligns with the evidence suggesting that focused, reliably executed interventions may outperform diffuse and overly complicated bundles (13).

### **Future directions**

Several research gaps remain. The first is the limited number of studies focused specifically on military tertiary hospitals as integrated transition environments. Existing military evidence is informative but often derives from quality-improvement work, system reports, or veteran

subpopulations rather than comparative prospective studies (18). Future research should evaluate whether military-specific factors such as beneficiary mobility, mixed direct-and-purchased care, and readiness-related decision making alter which transitional interventions work best.

The second gap concerns oral-health integration. Current evidence supports the relevance of oral care in hospitalized and dependent populations, but direct studies linking dental involvement to transition outcomes such as readmission, medication adherence, aspiration events, or nutrition-related recovery remain limited (21-23). Military tertiary centers with trauma, oncology, rehabilitation, and complex medicine services are well placed to study this issue prospectively.

A third gap lies in outcome selection. Many transition initiatives still focus heavily on process completion rather than patient-centered outcomes. Future work should pair process metrics with clinically meaningful endpoints such as adverse drug events, missed follow-up, oral intake failure, caregiver burden, unplanned ED revisits, and patient-reported readiness for discharge.

Finally, digital transition support deserves closer evaluation in military networks. Electronic reconciliation systems and structured discharge tools are promising, but their success depends on interoperability, workflow usability, and the quality of underlying data (25,26). Research should therefore examine not just whether digital tools exist, but whether they improve decision accuracy, cross-facility communication, and patient understanding.

## CONCLUSION

Optimizing patient care transitions in military tertiary hospitals requires a shift from isolated

professional effort to deliberately engineered multidisciplinary systems. The accumulated evidence shows that medication discrepancies, communication failures, and incomplete discharge preparation are common and clinically important across hospital transitions, but also that structured reconciliation, standardized forms, explicit roles, and coordinated patient education can reduce avoidable harm. In military settings, these gains are especially valuable because patients often move across facilities, sectors, and levels of care within systems where readiness, referral complexity, and beneficiary mobility magnify the consequences of poor handoff quality. Nursing, pharmacy, emergency, and allied dental services each contribute distinct but complementary strengths. Nursing provides continuity, discharge-readiness assessment, and bedside education; pharmacy secures medication accuracy and optimization; emergency services determine the quality of early and high-pressure handoffs; and dental or oral-health services address a neglected but clinically relevant domain affecting nutrition, comfort, aspiration risk, and recovery. The most reliable model for military tertiary hospitals is therefore one built on standardized medication reconciliation, structured communication, caregiver engagement, targeted oral-health screening, shared metrics, and leadership-backed audit cycles.

In practical terms, the safest military transition is not the one with the longest discharge summary or the most forms completed. It is the one in which the patient, caregiver, ward team, receiving team, and hospital system all leave the encounter with the same accurate understanding of what changed, what must happen next, and who is responsible for making it happen.

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