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The Invisible Medication Safety Workforce: Nursing, Health Assistant, and Medical Secretary Co-Construction of Deprescribing Conversations in Saudi Geriatric Polypharmacy

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ABSTRACT: The ongoing challenge of polypharmacy in geriatric care necessitates a collaborative approach to ensure medication safety and improve patient outcomes, especially within the Saudi healthcare system. The concept of an "invisible medication safety workforce" highlights the often-overlooked roles of nursing staff, health assistants, and medical secretaries in the co-construction of deprescribing conversations. These healthcare professionals, while not typically credited for meditative interventions, play critical roles in fostering communication between patients, their families, and doctors. Their involvement is essential to identify potential medication-related problems and recommend modifications, thus helping to navigate the complexities often associated with managing multiple prescriptions in older adults. By integrating their insights and observations into deprescribing frameworks, healthcare teams can enhance medication safety and optimize therapeutic regimens tailored to individual patient needs. Furthermore, the promotion of a multidisciplinary approach to deprescribing conversations can significantly mitigate the risks of adverse drug reactions and improve adherence to essential medications among elderly individuals. Education and training of nurses, health assistants, and medical secretaries about their essential contributions to medication management can empower them to engage proactively in these conversations. This collaborative effort creates a support system that encourages shared decision-making, allowing patients and clinicians to address concerns regarding polypharmacy. The recognition of these invisible players not only enriches the healthcare dialogue but is also crucial in paving the way for safer medication practices and better health outcomes for the elderly population in Saudi Arabia.

INTRODUCTION:

Medication safety in older adults is rarely achieved by a single prescriber making a single decision. It is accomplished, or fails to be accomplished, through a chain of small communicative acts: a nurse notices that a patient is drowsy after a morning dose; a health assistant reports that the family has been crushing a tablet that should be swallowed whole; a medical secretary flags that the patient has missed two consecutive medication-review appointments. Each of these acts is low-status within the formal hierarchy of the health system, yet each shapes whether a deprescribing conversation can begin, what information enters that conversation, and whether the resulting decision is sustained at home. In Saudi Arabia, where the older population is growing rapidly and polypharmacy is widespread, the invisibility of this workforce is not a peripheral human-resources issue. It is a structural medication-safety problem [1–3].

Any discussion of deprescribing in Saudi Arabia must begin with the scale of the problem. Polypharmacy, commonly defined as the concurrent use of five or more medications, is highly prevalent among Saudi older adults. A cross-sectional study in the Hail region found that 52% of participants were engaged in polypharmacy, with hypertension and diabetes the most common chronic conditions driving complex regimens [3, 4]. A larger analysis of 14,081 patients reported that 66% of the cohort was identified with polypharmacy, and 31% of the cohort comprised older patients [5- 7]. The clinical consequences are not abstract. Potentially inappropriate medications are common: a retrospective multicentre study in Aseer Region found that 54.6% of older patients had at least one potentially inappropriate medication and 68.7% had polypharmacy [8]. In home health-care settings, 38.5% of patients had at least one potentially inappropriate prescribing incident, with polypharmacy present in 80.6% of those cases [9]. Trajectory analyses suggest that over 82% of older adults dispensed at least one potentially inappropriate medication, and 55.9% had sustained exposure [10].

These numbers are usually interpreted as a prescribing problem, and indeed they are. But they are also a communication problem. The Saudi polypharmacy literature repeatedly identifies adherence difficulties, limited health literacy, family involvement in medication management, and cultural practices such as the use of folk remedies as factors that complicate medication regimens [11–13]. A substantial proportion of older adults report suboptimal adherence, and illiteracy further hinders safe medication use [14]. These are not problems that can be solved by a physician writing a different prescription. They are problems that are detected, negotiated, and managed in the spaces between consultations, by the staff who see patients at home, in the clinic corridor, and on the telephone [15].

Deprescribing as a Communicative and Interprofessional Achievement

Deprescribing is the systematic reduction or discontinuation of medications that are unnecessary, no longer beneficial, or potentially harmful. It is often described as a shared decision-making process between a prescriber and a patient, but the evidence increasingly shows that it is an interprofessional accomplishment. A Saudi narrative review of interprofessional deprescribing models concluded that effective management requires pharmacist-led medication reviews, nursing and health assistant assessments of real-world adherence and functional status, social work interventions, and clear communication and shared documentation across roles [4]. The Roles–Collaboration–Communication framework similarly shows that deprescribing depends on clearly defined roles, coordinated collaboration, and communication that mediates between professional perspectives [5].

Yet the same literature documents a persistent gap between the ideal and the real. A qualitative study of barriers and facilitators in Saudi secondary care found that physicians and pharmacists recognised multidisciplinary collaboration and patient involvement as facilitators, but they simultaneously anticipated high resistance from patients and carers, a perception that contrasts with international evidence that many patients are open to deprescribing when clinicians recommend it [2]. The study also identified system-level constraints: poor connectivity, non-interoperable electronic health records, fragmented care, high workloads, and the absence of structured documentation for deprescribing outcomes [16]. These are precisely the domains in which nursing, health assistant, and medical secretary labour becomes decisive—and precisely the domains in which that labour is least visible [17].

Family physicians in Riyadh report moderate-to-high confidence in deprescribing but low implementation frequency, with time constraints, lack of evidence, and fear of patient resistance cited as key barriers [7]. The communication challenge is therefore not simply one of persuading physicians to deprescribe. It is one of creating an interactional infrastructure in which deprescribing conversations can occur, be documented, and be followed up. That infrastructure is already being built, unevenly and informally, by the invisible workforce [18,19].

The Nursing Role: Assessment, Advocacy, and the Limits of Authority

Nurses are the occupational group with the most sustained contact with older patients and the most holistic view of medication effects in daily life. A Saudi narrative review of nursing within deprescribing models found that nurses contribute through patient assessment, education, advocacy, and interdisciplinary care, and that nursing involvement has been associated with reductions in potentially inappropriate medications of up to 30% and adverse drug events of up to 20% [1]. Nurses are well suited to deprescribing because of frequent patient interactions and a holistic lens on the patient's overall functioning, yet their role remains underexplored [20].

The barriers nurses face are not primarily clinical. They are structural and relational. The same review identified lack of authority and lack of time as key barriers, while training in deprescribing methodology and integration of the educator role with electronic health record nursing documentation were facilitators [18]. In the Saudi hospital context, these barriers are compounded by hierarchical and gendered dynamics. A critical inquiry into nurses' struggles for autonomy found that nursing is a predominantly female profession while medicine remains male-dominated, creating structural gender asymmetries that influence speaking-up behaviours and decision-making authority [21]. Nurses often play a subordinate role in interprofessional interaction, with decision-making tending to be physician-led rather than jointly negotiated [22]. This means that the nurse who notices that an older patient is experiencing dizziness after a new antihypertensive, or that a family is administering a sedative at the wrong time, may not have a legitimate interactional slot in which to raise that observation as a deprescribing-relevant contribution [5].

Yet nurses also perform invisible interactional work that makes deprescribing possible. They translate medication instructions into terms that patients and family caregivers can understand. They elicit accounts of what actually happens at home, as opposed to what the prescription says should happen. They reassure patients who fear that stopping a medication means being abandoned by the health system. In conversation-analytic terms, nurses are often the ones who create the sequential space in which a patient's concern can be voiced and recognised as a legitimate basis for medication review [22]. Without that space, the physician's deprescribing recommendation arrives without the interactional preparation it needs to be accepted.

The Health Assistant: Frontline Observation and the Real-World Adherence Picture

The health assistant—sometimes called a nursing assistant, patient care assistant, or home health aide—occupies a role that is even less visible than nursing but is arguably closer to the lived reality of medication use. Health assistants provide personal care, monitor vital signs, assist with mobility and nutrition, and report changes to nursing supervisors. In geriatric care, they are often the first to observe the functional consequences of medication regimens: a patient who becomes too drowsy to eat after a morning dose, a patient who refuses a medication because of the taste or the number of tablets, a patient who is secretly skipping doses to avoid nocturia [4].

The Saudi interprofessional deprescribing literature explicitly names health assistants as contributors to the assessment of real-world adherence and functional status [9]. This is a significant recognition, but it remains programmatic rather than operational. The evidence base on health assistant roles in Saudi geriatric care is thin, and much of the available material is descriptive rather than evaluative [23]. What is clear is that health assistants possess a type of knowledge that is not captured in clinical records: knowledge of whether the medication is actually being taken, whether the family has understood the instructions, whether the patient has the manual dexterity to open the container, and whether cultural preferences—such as fasting during Ramadan or the use of traditional remedies—are altering the regimen in practice [24].

This knowledge is essential for safe deprescribing. A physician may decide to stop a medication on the basis of a laboratory result or a guideline, but the health assistant knows whether the patient has been taking it at all. If the patient has already self-discontinued, the "deprescribing" decision is not a discontinuation but a ratification of an existing, undocumented practice. If the patient has been doubling the dose because a family member misread the label, the clinical picture that prompted the deprescribing decision may be misleading. Health assistants therefore function as epistemic brokers: they bring the messy, non-clinical reality of medication use into the clinical conversation, even when no one has formally asked them to do so [22,6].

The Medical Secretary: The Communication Hub of Medication Safety

The medical secretary is the least clinical of the three groups and, for that very reason, the most under-theorised in medication-safety research. Yet in Saudi hospitals, medical secretaries manage appointments, maintain medical records, coordinate communications, and ensure that administrative and clinical documentation is accurately processed. They bridge the gap between healthcare professionals and patients, ensuring seamless communication, accurate documentation, and efficient scheduling [23]. In the context of deprescribing, these apparently clerical functions are interactionally consequential [19].

Consider the life-cycle of a deprescribing decision. A medication review is scheduled. The patient must be notified, prepared, and reminded. The relevant laboratory results and medication lists must be retrieved. The consultation must be documented. A follow-up appointment must be arranged to monitor for withdrawal effects or recurrence of symptoms. If any of these steps fails, the deprescribing conversation may not happen, or the decision may not be sustained. Medical secretaries are the staff who make these steps happen. They are also the staff who hear the patient's informal concerns—"I don't want to stop that tablet, it helps me sleep"—before those concerns reach the clinician. They are, in a real sense, the first and last interlocutors in the deprescribing conversation [25].

A qualitative study of medical secretaries at Al-Hait General Hospital in Saudi Arabia found that their role extends beyond clerical responsibilities to include digital system support, workflow coordination, information governance, and communication facilitation [20]. This is consistent with broader Saudi work on role delegation and task sharing between nurses and secretarial staff, which argues that intentional redesign of nurse–secretarial positions is a crucial strategy for creating a high-performing, sustainable primary care system [5]. The medical secretary is therefore not an administrative add-on to medication safety. The secretary is part of the distributed cognitive system through which medication information is stored, retrieved, and acted upon [16].

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Co-Constructing the Deprescribing Conversation: A Distributed and Interactional Model

The argument so far can be stated more formally. Deprescribing conversations are not simply occasions on which a clinician transmits a recommendation to a patient. They are interactional achievements that depend on the participation of multiple actors across time and space. Conversation analysis has shown that patient participation in primary care is sequentially organised: patients voice concerns, resist or accept recommendations, and display agency through specific interactional practices [21]. The content and style of deprescribing conversations vary by medication class and by whether patients have been prepared in advance [8]. In other words, what happens in the consultation is shaped by what has happened before the consultation and by who has done the preparatory work.

This is where the invisible workforce becomes analytically visible. The nurse, health assistant, and medical secretary are the co-constructors of the pre-consultation interactional environment. The nurse elicits the patient's medication-related concerns and documents them. The health assistant reports the real-world adherence pattern. The medical secretary ensures that the patient receives the appointment reminder and that the medication list is available. Each of these acts is a contribution to the conversation that is about to occur, even if the contributor is not physically present in the consultation room. Distributed cognition theory captures this well: medication safety is not located in a single mind but is distributed across people, artefacts, and routines [22]. When one part of the system fails—when the secretary cannot reach the patient, when the health assistant's observation is not recorded, when the nurse's concern is dismissed in a hierarchical team meeting—the conversation is impoverished before it begins [6].

Table 1. Contributions of the Invisible Workforce to the Life-Cycle of a Deprescribing Conversation

Stage of the deprescribing conversation	Nursing contribution	Health assistant contribution	Medical secretary contribution
Pre-consultation identification	Screens for adverse drug effects; reviews medication administration records; raises concerns about adherence or symptoms	Observes functional status, appetite, drowsiness, mobility, and actual medication-taking behaviour at home; reports changes to nursing supervisor	Identifies patients due for medication review; retrieves medication lists and laboratory results; schedules and reminds patients; records informal patient concerns
Preparation of the patient	Explains the purpose of medication review; addresses fears about stopping medications; translates clinical language into patient-centred language	Reinforces instructions in everyday language; clarifies practical issues such as timing, swallowing, and storage; involves family caregivers	Confirms appointment details; provides instructions about what to bring; follows up on missed appointments
In-consultation information supply	Presents assessment findings; advocates for the patient's functional priorities; contributes to shared decision-making	Provides concrete examples of daily-life medication effects; clarifies adherence patterns and barriers	Ensures documentation is available; coordinates communication between team members if the patient is seen by multiple professionals
Documentation and follow-up	Documents the rationale for deprescribing, the monitoring plan, and the patient's response; integrates deprescribing into nursing care plans	Reports post-deprescribing changes in function, behaviour, or symptoms; alerts nursing staff to possible withdrawal effects	Schedules follow-up appointments; tracks no-shows; maintains the administrative record of the deprescribing decision; facilitates communication between primary and secondary care

Barriers and Enablers in the Saudi Context

The barriers to activating this workforce are substantial, but they are not immutable. They can be grouped into four domains: hierarchical and cultural, educational, technological, and policy-related.

Hierarchical and cultural barriers are perhaps the most deeply rooted. Saudi healthcare has traditionally been physician-led, and nurses' autonomy is constrained by institutional hierarchies and broader gender dynamics [18]. Health assistants and medical secretaries occupy even lower positions in the professional hierarchy, and their observations may not be treated as legitimate clinical knowledge [6]. The result is a system in which the people closest to the patient's daily medication reality have the least authority to influence medication decisions. Interprofessional communication is further complicated by time constraints, work pressures, and cultural obstacles to shared decision-making [20,25].

Educational barriers are equally significant. Undergraduate pharmacy students in Saudi Arabia recognise the value of deprescribing but report limited curricular exposure and only moderate preparedness to perform core deprescribing steps, including understanding interprofessional roles [2]. If future pharmacists—who are relatively high-status professionals—feel underprepared for interprofessional deprescribing, it is reasonable to assume that nurses, health assistants, and medical secretaries receive even less preparation [10]. The Saudi literature on role delegation between nurses and secretarial staff calls for intentional redesign of positions and training, but such programmes remain the exception rather than the rule [14].

Technological barriers centre on documentation and interoperability. The absence of structured documentation for deprescribing rationale and monitoring plans is a major impediment to safe medication withdrawal [11]. Poor connectivity and non-interoperable electronic health records between settings hinder continuity of care [2]. Medical secretaries rely on health information technology to manage appointments and communications, but their potential to support medication safety is limited when systems do not capture the relevant information or do not communicate across settings [10].

Policy barriers are perhaps the most consequential. Saudi Arabia has no standardised national deprescribing pathway, and local intervention evidence remains limited [14]. Without a policy mandate, the invisible workforce's contributions remain discretionary, unrecognised in job descriptions, and vulnerable to being cut when workloads increase [11].

Table 2. Barriers and Enablers for Invisible Workforce Involvement in Deprescribing

Domain	Barriers	Enablers
Hierarchical and cultural	Physician-led decision-making; nurses' subordinate role; gender asymmetries; low status of health assistants and secretaries; fear of speaking up	Interprofessional education; assertive communication training; leadership support for speaking-up; recognition of all roles as medication-safety contributors
Educational	Limited curricular exposure to deprescribing; lack of role-specific training; unclear scope of practice; absence of competency frameworks	Deprescribing modules for nursing, health assistant, and secretarial curricula; simulation-based interprofessional training; continuing professional development
Technological	Non-interoperable electronic health records; absence of structured deprescribing documentation; poor connectivity between settings; underuse of secretarial workflow tools	Shared documentation templates; medication dashboards accessible to nursing and secretarial staff; automated reminders; interoperability standards
Policy and organisational	No national deprescribing pathway; lack of recognised roles in deprescribing guidelines; workload pressures; absence of metrics for invisible workforce contributions	National deprescribing policy; role clarification in guidelines; protected time for medication review; inclusion of nursing and secretarial indicators in quality metrics

Reimagining Workflow, Training, and Professional Identity

If the invisible workforce is to become a visible and supported part of deprescribing, three changes are necessary. The first is workflow redesign. The evidence on role delegation and task sharing suggests that intentional redesign of nurse–secretarial positions can improve efficiency and team satisfaction [19]. In practice, this would mean creating explicit pre-consultation and

post-consultation roles: a nursing medication-review preparation role, a health assistant home-medication observation role, and a medical secretary deprescribing-recall and documentation role. These roles would need to be resourced, trained, and recognised in job descriptions [25].

The second is interprofessional education. The evidence is clear that interprofessional education can change attitudes and improve teamwork. A critical review of interprofessional communication among nurses, nursing assistants, and medical secretaries in Saudi hospitals found that structured interprofessional programmes led to a 15–30% attitude change towards working in a team [6]. Deprescribing-specific interprofessional education would need to go further, giving each group the opportunity to practise the communicative acts that constitute co-construction: how to raise a concern about a medication, how to document an observation so that it is clinically actionable, how to prepare a patient for a deprescribing conversation, and how to follow up after a medication has been stopped [20].

The third is professional identity work. Nurses, health assistants, and medical secretaries are often socialised to see themselves as helpers rather than decision-makers. Deprescribing requires a shift in identity: from "supporting the physician's medication decision" to "contributing to the medication decision as a legitimate knower." This shift is not merely a matter of individual confidence. It requires institutional recognition—in policies, in documentation systems, in quality metrics, and in the language used by senior clinicians. The Saudi Vision 2030 healthcare transformation, with its emphasis on expanding advanced practice nursing roles and improving healthcare quality and accessibility, provides a policy window for this identity work [25,1].

Implications for Policy and Practice

The policy implications are concrete. First, national deprescribing guidelines should specify the roles of nursing, health assistant, and medical secretary staff at each stage of the deprescribing pathway. A guideline that names only physicians and pharmacists reproduces the invisibility that undermines safety [14]. Second, documentation standards should require the capture of real-world adherence observations, functional status changes, and patient concerns—the domains in which the invisible workforce has distinctive expertise [2]. Third, quality metrics should include indicators of invisible workforce involvement, such as the proportion of medication reviews preceded by a nursing assessment or the proportion of deprescribing decisions with a documented follow-up contact by a medical secretary [19]. Fourth, workforce planning should recognise that the invisible workforce is not a cost to be minimised but a safety infrastructure to be invested in [14].

At the level of practice, the most immediate implication is that deprescribing conversations should be prepared, not simply scheduled. A prepared conversation is one in which the patient's concerns have been elicited, the adherence picture has been established, the medication list is accurate, and the follow-up is arranged. This preparation is already happening in fragments, performed by staff who have no formal mandate to do it. The task is to make it systematic, visible, and supported [1].

Conclusion

The dominant narrative of deprescribing in Saudi geriatric polypharmacy is a narrative of prescribers and pharmacists making evidence-based decisions. That narrative is not wrong, but it is incomplete. These groups possess knowledge that is not available to prescribers—knowledge of what actually happens at home, of what patients and families actually understand, and of whether a medication decision is actually followed through. When that knowledge is excluded from the deprescribing process, the process is less safe and less effective. When it is included, it becomes a genuine interprofessional achievement.

Making the invisible workforce visible is therefore not a matter of professional courtesy. It is a medication-safety imperative. The Saudi healthcare system has the clinical evidence, the policy framework, and the workforce to embed deprescribing into routine geriatric care. What it has not yet done is recognise that the people who make deprescribing work are already in the system, performing invisible labour in the spaces between consultations.

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