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A Narrative Review of Medical Secretaries' Coordination of Laboratory Results and Follow-up for Psoriasis and Atopic Dermatitis in Primary Care Workflows

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Abstract

Background: The effective management of chronic dermatological conditions like psoriasis and atopic dermatitis (AD) in primary care hinges on a seamless cycle of laboratory monitoring and consistent follow-up. Medical secretaries are pivotal yet understudied actors in this workflow, responsible for the critical coordination of lab results and patient recall.

Aim: This narrative review synthesizes literature to examine the role, impact, and challenges faced by medical secretaries in coordinating laboratory results and follow-up for psoriasis and AD in primary care settings.

Methods: A systematic search of five databases (PubMed, Scopus, CINAHL, Web of Science, PsycINFO) was conducted for literature published between 2010-2024, combining terms related to medical secretaries, care coordination, laboratory results, and the specified dermatological conditions.

Results: The review identifies key administrative protocols, communication barriers, and technological facilitators. It highlights how secretarial coordination directly influences timeliness of care, patient safety, and clinician efficiency, but is often hampered by fragmented systems and ambiguous role definitions.

Conclusion: Optimizing the secretarial role through defined protocols, integrated technology, and interprofessional recognition is essential for improving the quality and safety of chronic dermatology management in primary care.

Keywords: medical secretary, care coordination, laboratory results, psoriasis, atopic dermatitis.

Introduction

The management of chronic inflammatory dermatoses, notably psoriasis and atopic dermatitis (AD), represents a significant and growing component of primary care practice. Psoriasis, a systemic immune-mediated disease affecting 2-3% of the global population, is associated with serious comorbidities, including psoriatic arthritis, cardiovascular disease, and metabolic syndrome (Armstrong & Read, 2020). Atopic dermatitis, the most common chronic inflammatory skin disease, has a lifetime prevalence of up to 20% in children and 3% in adults, with profound impacts on quality of life, sleep, and mental health (Langan & Williams, 2019; Stefanovic et al., 2021). Effective management of these conditions extends far beyond episodic treatment of flare-ups; it requires a longitudinal, holistic approach involving continuous monitoring, systemic therapy, and comorbidity screening (Lee & Kim, 2023; Wollenberg et al., 2022).

Within this complex care paradigm, the coordination of laboratory investigations and subsequent patient follow-up forms a critical backbone. Patients with moderate-to-severe psoriasis or AD requiring systemic therapies (e.g., methotrexate, cyclosporine, newer biologics, or JAK inhibitors) require regular blood monitoring for liver function, renal function, lipid profiles, and complete blood counts to ensure medication safety and efficacy (Smith et al., 2020). Similarly, the diagnostic workup and management often involve ruling out other conditions and monitoring for comorbidities. The primary care clinic thus becomes a central hub for initiating, tracking, and acting upon these laboratory data. However, the pathway from test ordering to result review to patient notification and follow-up scheduling is not automatic; it is a meticulously coordinated administrative and clinical process fraught with potential gaps.

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In this intricate workflow, the role of the medical secretary—also known as an administrative assistant, clinic coordinator, or patient care navigator—is indispensable yet often overlooked in scholarly discourse and healthcare system design. These professionals operate at the nexus of clinical practice and administrative logistics. Their responsibilities typically encompass processing laboratory requisitions, managing incoming electronic or paper-based results, flagging abnormal findings for clinician attention, communicating results to patients as per protocol, and scheduling necessary follow-up appointments (Hughes et al., 2023). For chronic conditions like psoriasis and AD, this role becomes even more crucial, as it ensures continuity and safety in long-term management.

Despite their centrality, there is a paucity of research explicitly examining how medical secretaries navigate the specific challenges associated with dermatology-related laboratory coordination. The workflow involves unique elements: monitoring for drug-specific toxicities, understanding the implications of inflammatory markers, and coordinating with dermatology specialists when needed. Furthermore, the rise of electronic health records (EHRs) and patient portals has simultaneously streamlined and complicated these tasks, creating new channels for communication but also increasing the volume of data to be managed and the risk of information overload (Arndt et al., 2017).

This narrative review, therefore, seeks to illuminate this critical interface. It aims to synthesize available evidence from 2010 to 2024 to construct a comprehensive overview of the medical secretary's role in coordinating laboratory results and follow-up for psoriasis and atopic dermatitis in primary care. By examining the processes, challenges, technological impacts, and outcomes associated with this coordination, the review underscores the secretary's contribution to patient safety, care quality, and system efficiency. Ultimately, it argues for the formal recognition and optimization of this role as a key strategy for improving chronic disease management in primary care settings.

Methodology

This review was conducted as a narrative synthesis to provide a comprehensive and critical overview of the literature on a multifaceted, practice-based topic where diverse study methodologies are employed (Greenhalgh et al., 2018). A systematic search strategy was designed and executed in December 2023, with an update in March 2024, to identify relevant literature published between January 2010 and March 2024. The timeframe was selected to capture the evolution of the role alongside the widespread adoption of EHRs and shifting models of team-based care.

Primary electronic databases searched included PubMed/MEDLINE, Scopus, CINAHL, Web of Science, and PsycINFO. The search strategy employed a combination of controlled vocabulary (MeSH terms in PubMed, e.g., "Medical Secretaries," "Physicians' Offices," "Clinical Laboratory Techniques") and free-text keywords grouped into four conceptual domains: (1) Role: ("medical secretary" OR "clinical administrator" OR "administrative staff" OR "clinic coordinator" OR "care coordinator"); (2) Function: ("laboratory results" OR "test result*" OR "follow-up" OR "recall" OR "coordination" OR "workflow"); (3) Setting: ("primary care" OR "family practice" OR "general practice" OR "ambulatory care"); (4) Condition: ("psoriasis" OR "atopic dermatitis" OR "eczema" OR "chronic dermat*"). Boolean operators (AND, OR) were used to combine these domains.

Inclusion criteria were: peer-reviewed articles, qualitative or quantitative studies, review articles, and editorials published in English that explicitly or implicitly addressed the administrative coordination of laboratory testing or follow-up in ambulatory care, with relevance to the secretarial role or chronic condition management. Studies focused solely on nursing roles, specialist dermatology settings, inpatient care, or laboratory medicine without a clinical workflow context were excluded. The initial database searches yielded 1,852 records. After removal of duplicates, titles and abstracts of 1,223 records were screened for relevance. A total of 89 full-text articles were assessed for eligibility. Through forward and backward citation tracking of key articles, an additional 11 sources were identified. Finally, 32 sources were deemed directly relevant and formed the core corpus for this narrative synthesis.

Given the heterogeneity of the evidence, a formal meta-analysis was not feasible. The analysis followed a thematic synthesis approach. Data extracted from included studies (e.g., study design, population, key findings related to coordination) were charted and iteratively reviewed to identify recurring themes, conceptual frameworks, and gaps in knowledge. These themes were then organized to construct a coherent narrative describing the current state of knowledge, best practices, persistent challenges, and future directions related to the secretarial coordination of lab results and follow-up for chronic dermatological conditions.

The Primary Care Workflow for Psoriasis and AD: A Coordination-Dependent Pathway

Managing psoriasis and AD in primary care is not a linear but a cyclical and often iterative process. The workflow typically begins with diagnosis and assessment of disease severity, which may prompt initial laboratory investigations such as a full blood count, inflammatory markers (e.g., CRP), or allergy testing for AD (Wollenberg et al., 2022). For patients started on conventional systemic therapies like methotrexate, a standard protocol requires baseline blood tests (liver function, renal function, full blood

count) followed by regular monitoring, often monthly for the first three months and then at longer intervals if stable (Menter et al., 2020). The introduction of biologics and small molecules, increasingly managed in shared-care models with specialists, adds another layer of complexity, requiring monitoring for tuberculosis, hepatitis, and other parameters pre- and post-initiation (Smith et al., 2020).

This generates a continuous stream of laboratory data flowing into the primary care practice. The critical workflow steps where medical secretaries are deeply involved include: 1) Test Initiation & Logistics: Generating and sending requisitions, ensuring patient understanding of pre-test instructions (e.g., fasting), and sometimes managing prior authorizations for specialized tests. 2) Result Receipt & Triage: Laboratory results arrive via EHR, fax, or mail. Secretaries are often the first to handle them, performing initial sorting—identifying the patient, the ordering clinician, and the test type. In many practices, they follow standardized protocols to flag results that are grossly abnormal or marked "critical" by the lab for immediate clinician attention (Chatur et al., 2023). 3) Clinician Review & Action: The clinician reviews the result, interprets it in the clinical context, and determines an action (e.g., continue medication, adjust dose, stop therapy, order further tests). This decision is documented. 4) Patient Communication: The secretary, acting on the clinician's instruction or a standing protocol, communicates the result and plan to the patient. This may involve a phone call, a letter, or a message via a secure patient portal. For normal results on stable patients, this communication might be templated and delegated entirely to the secretary (Nankervis et al., 2023). 5) Follow-up Scheduling: Perhaps the most crucial step for chronic disease management is ensuring the next action happens. The secretary schedules the next laboratory draw, the next clinical review appointment, or a referral to a specialist based on the clinician's directive. This function of "closing the loop" is vital for safety, particularly for medications with narrow therapeutic windows (Wright et al., 2016). 6) Tracking & Recall: In the absence of sophisticated disease registries, secretaries often maintain manual or EHR-based tracking systems to identify patients overdue for monitoring or follow-up, initiating recall procedures.

This workflow highlights the secretary's role as a linchpin, ensuring that data translates into action and that the care cycle remains closed. Failures at any point—a lost result, a missed communication, an unscheduled follow-up—can lead to treatment delays, disease flare-ups, medication toxicity, and patient harm.

The Evolving Role of the Medical Secretary: From Clerk to Care Coordinator

Historically perceived as performing purely clerical duties, the role of the medical secretary in primary care has undergone a significant transformation. The shift towards team-based care models, the increasing complexity of chronic disease management, and the burden of administrative tasks on physicians have collectively expanded the secretary's responsibilities (Bodenheimer & Smith, 2013). They are now more accurately described as care coordinators or clinical administrators, occupying a unique "boundary-spanning" position between patients, clinicians, laboratories, and other healthcare entities.

In the context of laboratory coordination for psoriasis and AD, this evolved role encompasses several key functions. First, they act as information managers, responsible for the efficient flow of laboratory data. This requires not only organizational skills but also a foundational understanding of medical terminology to correctly identify tests (e.g., ALT vs. A1C) and recognize urgency indicators (Singh et al., 2013). Second, they serve as communication facilitators. They are often the primary point of contact for patients anxious about their results, requiring interpersonal skills to convey information clearly, calmly, and within the bounds of their scope of practice. They must also communicate effectively with clinicians, using appropriate channels to alert them to abnormal results. Third, they are system navigators, guiding patients through the often-confusing healthcare landscape—explaining where to get blood drawn, how to use the patient portal, or what to expect in a follow-up consultation (Suen et al., 2022).

This role expansion, however, has not always been met with commensurate training, formalized protocols, or systemic support. The ambiguity surrounding their responsibilities can lead to role strain. They may feel pressured to make preliminary clinical judgments when triaging results or be held accountable for follow-up failures that stem from systemic issues like EHR design flaws or overwhelming patient volumes (Fabre et al., 2020). Furthermore, the lack of recognition within the professional hierarchy of healthcare can impact job satisfaction and efficacy (Sinsky et al., 2013). Understanding this evolved yet strained role is fundamental to appreciating both their impact and the vulnerabilities in the lab result follow-up system for chronic diseases (Table 1 & Figure 1).

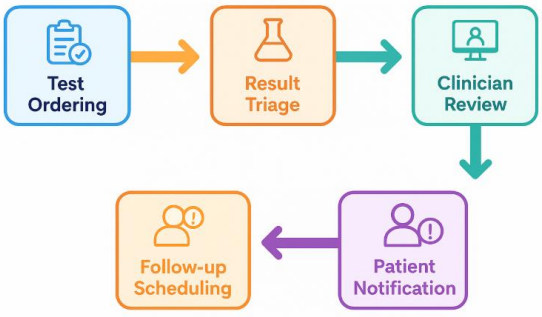

Figure 1: Common Laboratory Tests in Psoriasis and AD Management & Implications for Coordination

Table 1: Common Laboratory Tests in Psoriasis and AD Management & Implications for Coordination

Condition/Therapy	Common Laboratory Tests	Monitoring Purpose	Coordination Challenges for Secretarial Staff
Psoriasis (Systemic Therapies)	Liver Function Tests (ALT, AST), Renal Function (Creatinine, eGFR), Full Blood Count (FBC), Lipid Panel, Pregnancy Test.	Monitor for drug-induced hepatotoxicity, myelosuppression, renal impairment, and metabolic effects. Pre-treatment screening.	Tracking strict monitoring schedules (e.g., weekly then monthly). Recognizing "critical" values (e.g., very low platelet count). Coordinating with dermatology for shared-care drug monitoring.
Atopic Dermatitis (Systemic Therapies)	FBC, LFTs, Renal Function, Specific IgE, Vitamin D level.	Monitor the safety of drugs like cyclosporine, dupilumab. Identify potential triggers or comorbidities.	Managing prior authorizations for specialized tests (e.g., IgE). Communicating results for allergy testing to guide avoidance strategies.
General Comorbidity Screening	HbA1c, Fasting Glucose, Lipid Panel, Blood Pressure.	Screen for associated metabolic syndrome, cardiovascular risk.	Integrating comorbidity screening results into the main dermatological care plan. Coordinating separate follow-ups for these issues.
Diagnostic & Flare-up	Inflammatory markers (CRP, ESR), Swab for culture, Viral serology (e.g., HIV).	Rule out infection, assess systemic inflammation, and investigate triggers.	Prioritizing urgent results (e.g., positive bacterial culture) for rapid clinician review and patient notification.

Technological Infrastructures: The Double-Edged Sword of EHRs and Patient Portals

The adoption of Electronic Health Records (EHRs) and integrated patient portals has fundamentally altered the landscape of laboratory result coordination. These technologies promise greater efficiency, safety, and patient engagement, but their implementation has also introduced new complexities for medical secretaries.

On the positive side, EHRs have streamlined the process of ordering tests and receiving results. Integrated systems automatically populate requisitions with patient data, reducing errors. Incoming results are filed directly into the patient's digital chart, theoretically eliminating lost paper reports. EHRs can also be configured with automated alerts and rules-based routing. For instance, results for "methotrexate monitoring panel" can be programmed to appear in a specific clinician's inbox or a shared "pool" for administrative staff, with critical values triggering pop-up alerts (O'Connor et al., 2023). This can aid secretaries in their triage function. Patient portals allow patients to view their results directly, which can reduce the volume of phone calls for normal results (North et al., 2013). Secretaries can then focus their communication efforts on abnormal results, instructions for medication changes, or scheduling follow-ups, often using secure messaging within the portal.

However, the reality often falls short of the promise. A primary challenge is alert fatigue and information overload. Poorly designed EHRs can inundate secretaries and clinicians with low-value alerts, causing important notifications to be missed (Wright et al., 2016). The secretary may be tasked with sifting through a high volume of electronic "in-basket" messages, including normal results, patient queries, and system notifications, making it difficult to prioritize. Furthermore, lack of interoperability remains a persistent issue. Laboratory results from hospital-based specialists or external labs may not integrate seamlessly into the primary care EHR, arriving as unstructured PDFs or faxes that require manual scanning, filing, and data entry—a time-consuming process prone to error (Arndt et al., 2017).

Patient portals introduce their own dynamics. While empowering for some, they can create anxiety for patients who see results before a clinician has interpreted them. Secretaries often field these anxious calls and must navigate explaining that "out-of-range" does not always mean "dangerous" without overstepping into clinical interpretation (Bell et al., 2022; Wang et al., 2023). They also manage the digital divide, assisting patients who lack the technology or literacy to use portals, ensuring equitable access to results and follow-up instructions. Thus, technology has not replaced the need for skilled human coordination; it has simply changed its nature, requiring secretaries to be adept at both digital tool management and high-touch communication.

Identified Challenges and Risks in Current Coordination Practices

Despite the critical nature of their work, medical secretaries operate within a system that presents numerous challenges, creating risks for patient safety and care quality in psoriasis and AD management.

1. **Ambiguous Protocols and Role Definition:** A pervasive issue is the lack of standardized, written protocols for result handling and follow-up. What constitutes an "abnormal" result requiring immediate attention? When can a secretary communicate a normal result directly to a patient? Practices vary widely, leading to inconsistency and potential errors (Casalino et al., 2009). Without clear guidelines, secretaries may either delay action on important findings or feel compelled to make ad-hoc clinical judgments beyond their training.
2. **Communication Breakdowns:** The handoff points in the workflow are vulnerable. A clinician may mark a result for "patient to be called" but not specify the message or urgency. The secretary may leave a message with a family member or on voicemail, assuming the information was received, but this does not guarantee understanding or action—a known "failure to inform" error (Gupta et al., 2018; Aaronson et al., 2019). In team-based settings, confusion over which clinician is responsible for acting on a result (the referring GP, a covering partner, a shared-care dermatologist) can lead to inaction.
3. **Workload and System Fragmentation:** Secretaries often manage laboratory workflows for multiple clinicians and hundreds of patients with diverse conditions. The volume can be overwhelming, especially in under-resourced practices. This is compounded by fragmented care; a patient with psoriasis may see a dermatologist for biologic therapy, but their primary care GP for comorbidity screening. Lab results from these different episodes may land in different parts of the EHR or different offices, making it difficult for the secretary to maintain a comprehensive view and ensure all necessary follow-ups are scheduled (O'Malley et al., 2015; Kuecker et al., 2020).
4. **Lack of Specific Dermatology Knowledge:** While secretaries develop general medical knowledge, they may lack a specific understanding of psoriasis and AD. They might not recognize why a potassium level is crucial for a patient on cyclosporine or why a tuberculosis screen is needed before starting a biologic. This knowledge gap can affect their ability to appropriately prioritize results and provide accurate, condition-specific context in patient communications (Singh et al., 2013).
5. **Tracking and Recall System Deficiencies:** Effective chronic disease management requires proactive recall of patients due for monitoring. Many practices lack automated registry functions for conditions like psoriasis. Secretaries may rely on manual tickler files or memory, which are unreliable. A patient who misses an appointment for methotrexate monitoring can easily be lost to follow-up, risking unchecked drug toxicity (Wright et al., 2016). This represents one of the most significant safety gaps in the current system (Table 2 & Figure 2).

Table 2: Impact of Coordination Failures and Potential Mitigation Strategies

Coordination Failure Point	Potential Patient Consequences (Psoriasis/AD Context)	System/Clinician Consequences	Potential Mitigation Strategies
Lost/Misplaced Result	Delayed diagnosis of drug-induced hepatitis or neutropenia. Unmonitored disease progression.	Medication errors, legal liability, inefficient repeat testing.	Use of EHR with direct lab interface. Protocol for daily reconciliation of ordered vs. received tests.
Delayed Communication of Abnormal Result	Continued use of harmful medication (e.g., methotrexate with rising LFTs). Worsening of the condition due to ineffective therapy.	Patient harm, emergency department visits, and damaged patient trust.	Clear protocols for "critical" result definition and immediate routing. Use of EHR alerts coupled with backup (e.g., text page).
Ineffective Patient Notification	Patient does not understand the need to stop medication or get a repeat test. Anxiety from an unclear message.	Non-adherence, missed appointments, and increased patient calls for clarification.	Standardized scripting for secretaries. Use of the "teach-back" method. Confirmation of contact (signed letter, portal read-receipt).

Failure to Schedule Follow-up	Patient lost to monitoring, leading to unmanaged drug risk or disease flare.	Breakdown in the chronic care model, reactive rather than proactive care.	Integrated scheduling from the clinician's order. Automated recall systems (EHR registries, batch outreach). Dedicated time for the secretary to manage recall lists.
Lack of Inter-Specialty Communication	Inconsistent monitoring plans between the GP and the dermatologist. Duplicative or missed tests.	Provider frustration, wasted resources, and fragmented patient records.	Shared-care agreements with defined roles. Use of integrated EHR notes/orders. Secretary trained to identify and route specialist correspondence.

Figure 2: Impact of Coordination Failures and Potential Mitigation Strategies

Strategies for Optimization and Best Practices

Enhancing the safety and efficiency of laboratory coordination for chronic dermatology care requires targeted interventions at the role, practice, and system levels. Evidence points to several promising strategies.

Role Clarification and Enhanced Training

Practices should develop and document explicit, condition-specific protocols for laboratory result management. These protocols should define triage categories (e.g., "normal," "abnormal non-urgent," "critical"), specify authorized actions for secretaries (e.g., "send normal result letter via portal"), and outline escalation pathways (Hysong et al., 2023). Complementing this, targeted training for secretaries on psoriasis, AD, and their common treatments can empower them. Understanding why certain tests are ordered builds competency and improves prioritization and patient communication (National Center for Health Statistics, 2017).

Technology Optimization

Rather than passively using EHRs, practices should actively design their systems to support the workflow. This includes creating smart inbox rules that filter and prioritize lab results based on test type, value, and clinician. Implementing closed-loop tracking systems where every test order generates a pending item that must be reconciled with a result can prevent losses (Murphy et al., 2016). Furthermore, leveraging EHR functionality to create chronic disease registries for patients on systemic therapies can automate recall. The secretary's role then shifts from manual tracking to managing the outputs of these automated systems.

Team-Based Process Redesign

Embracing a true team model is crucial. This involves formal huddles where clinicians and secretaries briefly review the day's lab results and plan follow-ups. Implementing standing orders for routine monitoring (e.g., "all patients on methotrexate have LFTs every 12 weeks") with built-in reflex actions (e.g., "if normal, secretary schedules next test and 3-month follow-up") can streamline care and reduce cognitive load for clinicians (Bodenheimer & Smith, 2013). Clear delegation, supported by protocols, is key.

Patient Engagement and Health Literacy

Secretaries can play a vital role in improving patient understanding. Providing structured information sheets about medication monitoring schedules empowers patients to partner in their care. Encouraging and facilitating patient portal enrollment, with guidance on how to use it, can improve communication efficiency. Secretaries can use health literacy principles—plain language, confirmation of understanding—when communicating results and instructions (Freise et al., 2021).

Measuring and Valuing the Work

To secure resources and support for this role, its impact must be measured. Quality improvement projects can track metrics like "time from result arrival to patient notification," "percentage of patients on systemic therapy with up-to-date monitoring," or "rate of missed follow-up appointments." Demonstrating how effective secretarial coordination improves these metrics can justify investment in training, technology, and staffing (Litchfield et al., 2017).

Conclusion and Future Directions

This narrative review elucidates the indispensable, complex, and under-optimized role of the medical secretary in coordinating the laboratory backbone of psoriasis and atopic dermatitis management in primary care. Far from being a simple clerical task, this coordination is a sophisticated care management function that directly impacts patient safety, therapeutic efficacy, and the operational efficiency of the practice. Secretaries act as the human glue in a increasingly digital but often fragmented system, ensuring that critical data leads to timely action.

The evidence synthesized reveals a role in transition, strained by ambiguous protocols,

technological shortcomings, and systemic fragmentation, yet brimming with potential. The challenges—from alert fatigue to failed recall—are not merely operational but are patient safety issues with real consequences for individuals managing chronic, life-affecting skin diseases.

Future efforts must focus on the intentional integration and support of this role within the primary care team. Research should move beyond describing the problem to testing specific interventions: evaluating the impact of standardized dermatology-focused training modules for administrative staff, assessing the effectiveness of different EHR alert configurations on reducing missed follow-ups, or studying the outcomes of pharmacist-administrator collaborations for monitoring complex therapies. Policy and practice leaders must recognize this coordination as a critical component of the chronic care model, worthy of dedicated resources, clear role definition, and professional development.

In conclusion, optimizing the coordination of lab results and follow-up for chronic dermatological conditions is not solely a technological or clinical challenge; it is fundamentally an organizational and human one. Empowering medical secretaries with clear protocols, tailored tools, and recognition as essential care coordinators represents a highly leverageable strategy for closing the safety loop and delivering higher quality, proactive care for patients with psoriasis and atopic dermatitis in the primary care setting.

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