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BRIEF REPORT

A descriptive study of systemic factors that affect ambulatory care pharmacists

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ABSTRACT

Background: Ambulatory care pharmacists (ACPs) support patients and the health care team through clinical services such as patient education and comprehensive disease state management. Although multiple studies show the impact of ACPs on others, little research has been done on their own experiences.

Objectives: This study aimed to learn from ACPs about their workplace experiences and identify systemic factors that affect their role as members of interprofessional health care teams.

Methods: This exploratory, qualitative study consisted of digitally recorded, semistructured interviews with ACPs. Interviews were transcribed and analyzed inductively and iteratively by a multidisciplinary research team to determine salient themes.

Results: Twenty-one pharmacists (10 in private health systems, 11 in public health systems) participated, 15 of whom described the effects of leadership, metrics, and reimbursement on their roles. Although many pharmacists felt supported by leadership, others noted consistent pressure to meet arbitrary quality metrics and frustration with limited reimbursement options. Public health system pharmacists seemed to be more affected by these systemic factors than their private health system counterparts.

Conclusion: Leadership, metrics, and reimbursement are all systemic factors that affect ACPs' workplace experiences, as evinced by participant interviews. More research is necessary to determine how best to support ACPs across health systems to ensure that they can continue providing high-quality, accessible patient care.

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Background

Over the last 60 years, ambulatory care pharmacy practice has evolved from pharmacists filling and dispensing prescriptions to pharmacists providing clinical services. Ambulatory care pharmacists (ACPs) are now integrated into interprofessional health care teams and offer clinical services such as comprehensive disease state and medication management and patient education.[1,2] Board certification in ambulatory care pharmacy has been possible since 2009, when a petition by various national organizations requested the Board of Pharmacy Specialties designate a new board certification to recognize ACPs' role in providing "integrated, accessible health care services and addressing medication needs, developing sustained partnerships with patients, and

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Key Points

Background:

- Ambulatory care pharmacists (ACPs) make demonstrated contributions to multidisciplinary health care teams. However, little is known about their workplace experiences.
- Given ongoing concerns about burnout among health care professionals, it is necessary to understand the factors that contribute to positive or negative workplace experiences.
- This exploratory, qualitative study sheds light on ACPs' workplace experiences from their perspective.

Findings:

- Participants noted the influence of the health system-level factors of leadership, metrics, and reimbursement.
- Although participants often spoke highly of their immediate supervisors, environmental stressors such as system performance metrics and the inability to reimburse for clinical services contributed to a stressful workplace environment.
- Participants located in private health systems seemed to be more affected by these 3 factors than their public health system peers.

practicing in the context of family and community."[1] In addition, ACPs have reported holding more certifications and having a higher level of education than the overall population of pharmacists.[3] However, ACPs, like all pharmacists, are not currently recognized by the Centers for Medicare and Medicaid as health care "providers," which limits their ability to bill for clinical services and generate revenue.[4,5]

ACPs' contributions extend beyond formal recognition or reimbursement status, with substantial evidence supporting their positive impact on patient care and health system performance.[4,6,7] In a 2019 survey among primary care physicians and advanced practice providers (APPs), 95% of respondents identified ACPs as critical members of the health care team by increasing patient access, sharing the workload, and improving quality metrics.[4] Furthermore, studies have shown improved clinical outcomes and health system savings when ACPs are integrated into health care teams.[6,7] Physicians report reduced workload, and patients report greater satisfaction with their office visits.[6,7]

Given these benefits, maintaining ACPs' job satisfaction is essential. Recent research has shown a decrease in pharmacists working in ambulatory care settings along with premature attrition among ACPs.[8] Furthermore, when polled, fewer than half of pharmacists would choose this career path again, suggesting deep dissatisfaction with their profession.[8]

One potential reason for this dissatisfaction is burnout, described by Freudenberger[9] in 1974 as a set of negative "physical and behavioral symptoms" arising from "the effects of professional responsibilities and work environment."[10] Key drivers of burnout among pharmacists include high workload demands, extended working hours, the emotional toll of patient care, and administrative burden.[10] Hospital-based pharmacists often report lack of time to complete nonclinical tasks and a general sense of underappreciation,[11] whereas community-based pharmacists have reported inadequate recognition and high workloads.[12] Inadequate staffing, insufficient support from leadership, and declining reimbursements further exacerbate stress and reduce pharmacists' ability to engage meaningfully in patient care).[13,14]

One quantitative study demonstrated that ACPs were less likely to experience burnout than their community colleagues,[14] but little is known about the specific circumstances that contribute to or alleviate burnout among ACPs. As such, this exploratory, qualitative study begins to map the systemic factors that affect ACPs' workplace experiences.

Objectives

This study aimed to learn from ACPs about their workplace experiences and identify systemic factors that affect their role as members of interprofessional health care teams.

Methods

A team of ACPs sought to understand their colleagues' workplace experiences. They enlisted research support from a local undergraduate medical anthropology course taught by 1 of the authors. The students conducted this study as their semester-long project. They collaborated with the ACP team, a Doctor of Pharmacy student, and 2 external anthropology consultants to develop their approach to data collection and analysis.

Study sample and recruitment

The sampling frame consisted of 90 pharmacists working in ambulatory care settings who were members of local health care systems and professional organizations practicing in North Dakota and Minnesota, identified by study authors through professional networks. The ACP team sent e-mails inviting participation with the opportunity to win a gift card upon interview completion. Once each pharmacist agreed to participate, they were contacted by 1 of the students to schedule and conduct their interview.

Data collection

Pharmacists participated in student-conducted semi-structured interviews of 20-30 minutes via videoconference software using an interview guide that was developed collectively. Students initially proposed questions based on their background research into ambulatory care pharmacy, and these questions were refined in collaboration with the ACP team, which contributed content expertise, and the anthropology consultants, who contributed methodological expertise. Rather than addressing burnout specifically, which had the potential to bias participants, questions focused broadly on typical day and workload, favorite and least favorite aspects of the job, and potential avenues for improvement. The interviews were recorded, transcribed, and lightly edited for ease of reading before beginning analysis.

Data analysis

All students completed a preliminary analysis as part of their course assignment by identifying common themes among participants. A more in-depth analysis occurred after the course had ended with the authors taking an iterative-inductive approach through team-based coding.[15] Team-based coding[16] involves the team working together to develop a codebook through iterative rounds of interpretation and discussion before individual members use that codebook to code subsets of the data.[17]

Codebook development began with all team members independently reviewing 2 transcripts and then convening to discuss and agree upon the first set of codes.[17] This process continued over several weeks—with team members independently coding 2 transcripts and then meeting to discuss discrepancies and arrive at consensus[18]—and ended when the team agreed that there were no new emergent codes.[15] The final codebook included a list of codes with definitions, inclusion and exclusion criteria, and example quotes.[17] The team then divided into pairs to code the remaining 15 transcripts with the final codebook (first coding independently, then meeting to reconcile any discrepancies between the pair) before meeting for a final full team reconciliation discussion. Transcripts that had been used to develop the codebook were recoded using the final codebook at that time.[18] The team then grouped the original list of codes into higher-level categories (or themes) to reflect what we had learned from the data.[15]

The involvement of a multidisciplinary team that included members of the group under study (i.e., ACPs), plus the maintenance of a written log of the analysis process and changes made to the codebook along the way (i.e., an audit trail), helped ensure the trustworthiness of the process.[19] This study was approved by the North Dakota State University institutional review board.

Results

Fifteen of the 21 participating pharmacists discussed systemic factors related to leadership, metrics, and reimbursement. Participant demographics are outlined in Table 1. Compared with their peers practicing in public health systems (n = 11), ACPs in private health systems (n = 10) seemed to be disproportionately affected by these 3 areas. Private health system ACPs are indicated with an asterisk in the quotes below (Table 2). In what follows, we describe these 3 distinct yet interrelated factors and how they contribute to ACPs' workplace experiences.

Leadership

Eight private health system ACPs and 3 public health system ACPs spoke about the person to whom they directly reported, using the terms *leader*, *supervisor*, and *manager*. Multiple participants expressed feeling supported by their leaders and found frequent meetings beneficial in clarifying expectations and discussing barriers. Supervisors were described as critical in shaping workload and workplace culture. Many pharmacists reported their direct supervisors understanding the value of ACPs; however, this appreciation did not consistently extend to upper levels of administration.

Several pharmacists noted that upper-level administrators held supervisors accountable for achieving quality metrics, contributing to a focus on quantifiable outputs, such as patient visits per day. As Ph-08* said "They [the system] are very money-forward, and so, at the end of the day, if you just don't generate revenue in some fashion, they don't care where your level is." Ph-07 similarly noted a disconnect between patient-centered care and performance metrics:

> *In our model for my group, open access is more important to us than filling slots. For my pharmacy supervisor, filling slots is more important to them because it is all a numbers-based algorithm that we're graded on. So that doesn't always match up super well. My supervisor [says], "Yeah, I understand, but you're not going to get a raise because you don't meet these criteria."*

Metrics

Participants' perspectives on metrics varied drastically by health system type, with 7 ACPs in private health systems discussing stress related to metrics compared with only 1 ACP in a public health system describing metrics as a source of pressure.

Metrics were used across health systems to track productivity and demonstrate value. Specific expectations varied: some pharmacists were required to meet patient visit quotas, whereas others documented all daily tasks. Several pharmacists found these patient quota expectations especially frustrating, given that they were not always realistic and did not account for external factors influencing the number of patients a pharmacist could see per day. For example, visit length was variable and depended on factors such as patient complexity, visit type, and health system. Patient no-shows could affect metrics, making it difficult for pharmacists to meet their expected visit numbers.

As Ph-19* said, "We have production measures that are typically related to [the] number of patients, or how much of our day is spent in patient care. But what gets lost is a lot of the other things that we help support and navigate from a clinic standpoint, from a patient standpoint." These "other things" included nonpatient care responsibilities, such as managing in-baskets, scheduling, insurance coordination, and responding to provider or patient questions. Despite their importance to patient care, these tasks were not always reflected in performance metrics or reimbursement structures. Few participants reported having dedicated support staff.

Reimbursement

Seven private health system ACPs and 3 public health system ACPs expressed concerns regarding reimbursement. Participants emphasized that limited billing privileges made it difficult for them to generate revenue that accurately reflected their clinical contributions.

Several pharmacists mentioned the struggle of "living in a fee-for-service world," as Ph-02* said, where the emphasis is on treatment rather than prevention. Reimbursement also requires ample documentation, as Ph-03* explained, noting the additional pressure of "check[ing] all these boxes to meet the requirements of the insurer to get paid for the visit."

Table 1
Pharmacist demographics

Demographics	Participants (n = 21)	Percent (%)
Sex		
Male	7	33.3
Female	14	66.7
Years in ambulatory care		
0–5 y	9	42.9
6–10 y	4	19
11+ y	8	38.1
Health system		
Public or government funded	11	52.4
Private	10	47.6
Work location		
On-site	16	76.2
Remote	1	4.8
Hybrid	4	19

Although Ph-06 and Ph-15 spoke about the profession-wide goal of attaining provider status so that pharmacists' work could be reimbursed accordingly, Ph-19* noted that having provider status was not a panacea:

> *I think one of the beauties of nobody recognizing what you do is they can't make rules about it. So one of the huge pushes in pharmacy is to advocate for provider status, and so that we can independently operate on our own, and we can bill for our services, which I think has good things about it. But what that comes with is expectations, especially from people that you don't want making those expectations, often payers or insurance plans. And so when nobody really acknowledges what you do, you get to make your own rules.*

Discussion

This study provides a glimpse at how systemic factors including challenges with leadership, unrealistic productivity metrics, and insufficient reimbursement models have an impact on ACPs' workplace experiences. These factors contribute to stress, inefficiency, and burnout and may ultimately compromise patient care. Addressing these systemic challenges will require coordinated efforts to revise productivity expectations, improve reimbursement frameworks, and promote leadership practices that prioritize pharmacist well-being and patient outcomes.

The findings suggest that pharmacists in private health systems are disproportionately affected by revenue and productivity pressures compared with those in public health systems. The strong emphasis on meeting quantitative targets in private systems can create tensions between patient-centered care and performance expectations. In contrast, public systems may place less emphasis on productivity metrics but still face other challenges such as staffing shortages or budget constraints.

The disconnect between metrics and actual pharmacist workload suggests the need for more comprehensive evaluation tools that account for both direct and indirect patient care activities. Pharmacists felt visit-based metrics fail to capture the full range of their contributions, which include care coordination, provider communication, and patient education.

Reimbursement limitations were a persistent concern, particularly in fee-for-service models where many pharmacy services are not billable. Expanding billing privileges could not only improve financial sustainability but also justify increased investment in pharmacist-led care models and support staff. In locations with limited billing opportunities, health systems can foster pharmacist's involvement on multidisciplinary teams and monitor financial impact of their services.[20]

Of note, leadership support emerged as a critical factor influencing ACP satisfaction and perceived value. Although many participants described supportive direct supervisors, there was a noted gap in recognition from upper administration. Strengthening this alignment and advocating for pharmacist value at all levels of leadership could help shift organizational culture toward a more sustainable and patient-focused model.

Strengths

This study's strengths lie in its qualitative depth, which provides a richer understanding of ACPs' experiences. By capturing detailed personal accounts, the study highlights real-world concerns that affect job satisfaction, efficiency, and patient care in

Table 2
Example quotes from qualitative interview participants

Codes	Example quotes
Leadership	"I have a really great manager. That helps. You know, I meet with her monthly, and then we have an annual review to kind of touch base, make sure that everything is being, you know, that I'm hitting all the points of where I need to be meeting goals and things like that. And then her manager is also really great. You know, she works at the top with all the big dogs and then communicates things really well down to our team. So I do have a great support system within the pharmacy team." (Ph-20*, private health system pharmacist) "I'd say like one of the main reasons besides my interest in [this pharmacy subspecialty] that led me to make that sort of switch from the other [ambulatory] care position I was in, was that I felt like the expectations [by leadership] of what I needed to get done every day were just too much." (Ph-14, public health system pharmacist)
Metrics	"We have had the opportunity to develop what they would call a 'workload unit' to identify, not just our productivity, but also what is a reasonable workload unit for number of visits per day or otherwise, that we can adhere to that feels right for what we're doing." (Ph-02, public health system pharmacist) "We are put into a product-based department, which is pharmacy. And we don't offer a product. I offer a service. And so it's really hard to create metrics around that in terms of productivity. And so a lot of times I find myself doing work because I have to, not because it's meaningful. … [I]t's like I could see five patients and make a huge difference, or I could see twenty [patients] and not make a difference in any of those. And in which situation is that a better use of me as a person and a provider?" (Ph-19, public health system pharmacist)
Reimbursement	"I don't bring in any revenue at my clinic because I'm not allowed to bill like a physician does. But I'm kind of providing a lot of the same extended services that they do. So we're trying to do that as a profession. … And I think once that happens, that'll open the door to more adequately staff these clinics. I think our clinic could staff three or four full-time ambulatory care pharmacists for that many patients." (Ph-15*, private health system pharmacist)

ways that quantitative data cannot fully convey. In addition, the interdisciplinary approach, combining the expertise of pharmacists with insights from medical anthropologists, enhances the analysis by offering a broader perspective on systemic barriers and workplace dynamics. This collaboration strengthens the study's findings and demonstrates the need for a multidisciplinary approach to addressing health system challenges.

Limitations

Despite its valuable insights, this study has several limitations. The smaller sample size of 21 pharmacists may not fully capture the experiences of all ACPs, limiting the generalizability of the findings. The nonresponse bias may be caused by timing of the study, uninterest in the study topic, or perceived lack of benefit. In addition, given that the study was conducted within a specific region, the results may not reflect the challenges faced by pharmacists in different geographic areas or in health systems with different policies and structures.

Future directions

Future research should include systemic exploration of workplace experiences among a broader population of ACPs, combining qualitative and quantitative data. Expanding the study to include a larger and more diverse sample of ACPs would help strengthen the findings and increase their generalizability. Future findings could be shared with professional organizations to help ACPs think more broadly about systemic changes and how to implement them. Given that ACPs work among health care teams, professional organization involvement is imperative to help ACPs advocate on behalf of the profession, not just the individual.

Open dialogue between leadership and ACPs can also create a better understanding of expectations of quality metrics and pharmacist capacity. Some pharmacists discussed the benefits of support staff, such as billing managers or schedulers, to reduce their administrative duties and increase patient-facing time. Advocacy for reimbursement policy changes is a critical next step, given that ACPs are not directly reimbursed for many of the same clinical services provided by physicians and APPs. This inequity forces pharmacists to operate in practice models where few visits generate revenue, creating pressure to meet productivity metrics. This can contribute to stress, limit service expansion, and threaten long-term sustainability. Collaborating with health system administrators to address these financial and operational challenges could lead to actionable solutions that better support pharmacists.

Conclusion

Leadership, metrics, and reimbursement are all systemic factors that affect ACPs' workplace experiences, as evinced by participant interviews. More research is necessary to determine how best to support ACPs across health systems to ensure that they can continue providing high-quality, accessible patient care.

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