Physician Perspectives on Quality and Error in the Outpatient Setting

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ABSTRACT

Context: Little is known about the influence of the primary care workplace on patient care. Assessing physician opinion through focus groups can elucidate factors related to safety and error in this setting.

Method: During phase 1 of the Minimizing Error, Maximizing Outcome (MEMO) Study, 9 focus groups were conducted with 32 family physicians and general internists from 5 areas in the upper Midwest and New York City.

Results: The physicians described challenging settings with rapidly changing conditions. Patients are medically and psychosocially complex and often underinsured. Communication is complicated by multiple languages, time pressure, and inadequate information systems. Complex processes of care have missing elements including medication lists and test results. Physicians are pressed to be more productive, and key administrative decisions are made without their input. Targeted areas to improve safety and reduce error included teamwork, aligned leadership values, diversity, collegiality, and respect.

Conclusions: Primary care physicians clearly described positive and negative workplace factors related to safety and error. The themes suggest that systems of care and their dynamic nature warrant attention. Enhancing positive and ameliorating negative cultures and processes of care could bring real benefits to patients, physicians, and ambulatory office settings.

INTRODUCTION

In 1999, To Err is Human reported that 44,000 to 98,000 Americans die each year from medical errors. These statistics stimulated a flurry of error research, most of which targeted the inpatient setting. Studies on the outpatient setting are infrequent and generally focus on 1 of 3 areas. The first involves taxonomies of outpatient errors. For example, Jacobs et al identified 6 types of adverse events (administrative, communication, diagnostic, documentation, medication, and surgical or procedural). Dovey and colleagues identified 2 principal classes of error: processes and knowledge or skills.

A second group of studies attempt to quantify outpatient errors. For example, a systematic review by Sandars and Esmail revealed that errors occur 5-80 times per 100,000 consultations. Fischer et al reported a rate of 3.7 adverse events per 100,000 clinic visits.

The third group of studies targets contributors to outpatient error. In Holden's study of avoidable deaths, 40% were attributable to patient factors, 5% to physicians, 6% to hospitals, and 3% to environmental variables. Jacobs et al calculated 10 causal factors including complexity, discontinuity, failure to follow protocol, fatigue, gaps in knowledge, workload, insufficient information on pharmacologic properties of medication, medication side effects, relationship dynamics, and structural problems.

Few studies have focused on the ambulatory care workplace as a contributor to, or moderator of, errors. Kaissi et al found that practices that encouraged patient emphasis and collegiality were more prone to utilize benchmarking and practice guidelines that reduced errors. Williams et al reported that an organizational emphasis on quality affects physicians’ perceptions of past and future error. As part of the Minimizing Error, Maximizing Outcome (MEMO) Study, we convened focus groups of physicians to elicit ideas on how workplace factors, such as culture and policies or procedures, affect errors and care quality.
**Methods**

The MEMO Study is assessing the effect of primary care work environments on care quality and the role of physicians as mediators. Full design details are described elsewhere. At MEMO inception, general internists and family physicians from participating clinics were invited by members of the research team to participate in focus groups. During these sessions, participants were encouraged to discuss their experiences as health care professionals. The moderators (4 local primary care physicians and 1 PhD scientist) followed a set of questions gleaned from the literature and refined by the MEMO team of 10 primary care physicians and social scientists (Table 1). The questions were tested by 1 of the authors in a pilot focus group. This report focuses on the following 3 questions relating to safety and quality: (1) How does the way that work is organized in your office influence the quality of care that you are able to provide to your patients?; (2) Have you been involved in situations where medical errors, “oops,” and near misses, or adverse patient outcomes have occurred?; and (3) How could changes in the practice office environment prevent such situations from happening in the future?

The focus groups were scheduled at times convenient for participants and accompanied by a light meal. Discussions were audiotaped and the transcripts were analyzed following Krueger’s grounded theory method. To maintain confidentiality and anonymity, the transcripts did not include physician or clinic identity. Three authors independently read each transcript for major themes and reached consensus during multiple telephone conferences. One author reassessed the transcripts and assigned each discrete statement to a theme. Institutional review boards at participating organizations approved the protocol and participants provided written consent.

**Results**

Nine focus groups were convened in 5 regions: New York City (2); Chicago (3); Milwaukee (1); Madison (2); and a rural area in Wisconsin (1). The 9 focus groups varied from 2 to 8 physicians. In total, 32 physicians participated—12 males and 20 females. The 18 family physicians and 14 general internists practiced in a variety of sites including inner city, academic, managed care, and small town clinics. The practices ranged in size from 5 to 27 physicians. Clinic characteristics, including practice type, academic affiliation, and source of financing, are illustrated in Table 2. A wide range of payers were represented including fee-for-service and managed care plans, Medicare, Medicaid, and large numbers of uninsured patients. Participant comments were sorted into 3 major areas: factors affecting quality, factors affecting errors, and cross-cutting factors that affected both quality and errors (Table 3).

**Factors Affecting Quality**

Many physicians mentioned misalignment between their most basic values and those of their leadership, which resulted in care compromises. “Well, my goal, ideally, is to provide excellence in medical care for my patients, to be able to provide patient education, to increase well-being and the longevity of my patients… I’m saying ‘ideally’ because that would be if the system works better. The fact that it doesn’t means that my goal is to just try to keep patients out of the hospital.” “Let’s give some care to as many people as we can versus let’s give good care to these people.”

Multiple physicians noted that resource availability (supplies, medications, referral resources) plays a large role in the ability to provide quality care. “We are always running out of stuff… We ran out of Pap smear kits. We never have enough shots, immunizations.” “Sometimes I just don’t bother to order certain things because it is too difficult…”

Inadequate resources often force physicians to compromise standards of care. “…it is difficult to even get an aspirin or hydrochlorothiazide for my patients and so I have had to continue to redefine what is my goal here.” “It’s frightening. Some of the things, the compromises, we are forced to make in patient care… Patients who come up with positive stool—trying to guess, can this patient wait 3 months to get this colonoscopy?”

Many comments touched upon practice management. A lack of job control and inability to participate in decision-making was frequently cited. “Our staff meetings are geared toward letting us know what happened instead of discussing the problems… When we make suggestions here, they are not taken seriously or followed up on. We don’t have a voice in what we are doing.” Feedback on performance or on effects of practice changes are not sought by managers. “It’s unsettling when changes are made when you are not asked, “How is it going?”

Policies and procedures, or the lack thereof, also affect quality. “I need to know how much expectation I should give my [Medical Assistant]. Should she be filling out the envelope for when I return all my labs? We don’t have any set procedure.” Sometimes existing policies need to be changed but mechanisms are unclear. “I’ve noticed some systematic things, for example the way that we report labs… It’s kind of been, well, too
difficult to change or can’t get a consensus on how to change things to make it better.”

Physicians reported nearly unanimous discontent with pressures to see more patients. These pressures affect both physician health and care quality.

- “If it’s a really crazy day and a patient needs a Pap smear, I won’t do it that day. I’ll say, ‘I’m sorry I have 5 patients still waiting. I can’t do the Pap smear. I will try to do it next time’... I have a hard time sleeping because then what happens in 3 months?”
- “We do our best. We work our hardest. We spend a lot of time with our patients to make sure that things get done for them so they keep healthy as much as possible and they look at that and say, ‘Hey, you know what, if he can do it for 8 patients a half day, he can do it for 10 patients a half day.’”

Factors Affecting Errors
Many clinics do not have formal error reporting systems, relying on informal meetings between a senior physician and the person responsible for the error. Thus, the focus is on individuals rather than systems. Many clinics also lack mechanisms for sharing error information so that others can learn. Physicians from clinics with formal reporting mechanisms tended to express common themes: non-punitive, systems-focused, supportive, error logs, problem-solving opportunity, promotes trust and honesty, and good learning process.

Poor communication is prevalent in these primary care clinics. Most physicians would embrace regularly scheduled clinic meetings, but only if their input is solicited and valued. Multiple stories illustrated the impact of poor communication between primary care clinicians and sub-specialists or diagnostic facilities. “A lot of our referral services are not here. We send them to another facility. It is a black box. We don’t know what happens to our patients.” “Dangerously abnormal labs are not called.”

Physicians promoted patient advocates as a means to clarify instructions and prevent error. “I would have somebody even to teach people, because you can tell them then they need to take this in the morning or this is in the afternoon.” These advocates could be especially useful when patients speak multiple language. “You know sometimes people are kind of lost, they don’t know where they are coming or going so to have somebody to help the patient...explaining about how to get the medications and make sure that they are taking the medication.”

Physicians from clinics with on-site pharmacists, or those where pharmacists come once a week, noted that they helped prevent mistakes. “Writing prescriptions, people are either too hurried or too lazy. In some ways I think that if you do have a pharmacist that it is a safety net for them.”

Information systems can be very helpful if properly maintained and if clinic personnel are adequately trained. Medication lists are 1 aspect of electronic medical records that are particularly error-prone. “There are definitely mistakes in terms of medications that get renewed... You’re keeping a med list in a chart; then there is all of those meds in the computer. Meds in the computer will automatically continue, which is confusing.”

Cross-Cutting Factors Affecting Errors and Safety
Many physicians remarked on significant changes in patient complexity. “Their needs are more. They are less educated. They are less aware of their problems and what it takes to control or manage them... We’re not doing physicals that I used to do when I was in training on healthy people. These are sick people.”

Women physicians talked more about time pressure than their male counterparts. One factor involved communication style. “If there isn’t somebody right there to help me, which often there isn’t, my tendency is to do it myself. It gets done and I feel like I’m being efficient.
experiences that consume time for patient care. “They want to know, ‘Who’s taking care of the baby? How do you and your husband work it out? Do you both work full-time? What happens when he’s on call?’ They want my opinion on how to manage it all. Ten minutes later out of a 15-minute visit, you start to run out of time.”

Some minority physicians reported difficulty functioning in the health system. “I had great opportunities here for many years… But it is something that I did by myself and then I look back and I say, ‘It could have been so much different if somebody had helped you smooth the way or something.’”

The inability to balance work and family life affects morale and concentration. “The whole time that I was with my children, I would be distracted by what I wanted to get done. Then when I was doing my work, I’d be distracted by all the home stuff that I wasn’t doing that needed to get done. I felt completely uncentered all the time.”

Physicians from clinics with the poorest resource access and highest numbers of minority patients expressed the most frustration and fatigue. “Every day I get up and just feel like I am coming to a Third World system. Why is that happening in this country? What battle should I fight? Should I fight trying to get water for the clinic or gowns for the patients?”

What Improves Care?

Overall, physicians were upbeat and expressed faith in, and commitment to, the health system. They clearly identified components of workplace culture that increased their satisfaction and had the potential to enhance care:

• Teamwork—“I guess what works well for me is having a staff that is tuned into what keeps me going, and encourages me to keep going, and responds to my needs.”

• Respect—“One of the things that enhances our ability to provide quality care is these people that work here. Ranging from the faculty to the residents to the nurses and the [Medical Assistants]…”

• Diversity—“…there are very strong beliefs and cultural ways of doing, etc. that it should be represented.”

• Beyond the job description—“Our nurse has taken the time to connect with that patient, to visit her in the home, to obtain a relationship with her, and just yesterday, went with her to the cardiac catheterization and stayed with her all day long.”

• Collegiality—“We’re kind of a family atmosphere here with everyone, not just the providers and the residents, but the [Medical Assistants] and the nurses,”

but I’m actually wasting a lot of time. I think that’s a major gender difference. I don’t see male providers do that, ever. I get frustrated.” Panels comprised of more female patients exacerbated time pressure: “I see a lot of women. They tend to want more integrated care sometimes…a lot more psychosocial issues that go on, preventive issues… We recently got an e-mail from 1 of our colleagues saying that we should be able to see someone every 10-15 minutes. I’m thinking, maybe in his practice!”

Women patients tend to establish more familiar relationships with women physicians, sharing personal experiences.

### Table 2. Characteristics of Physicians’ Clinics (n=9)

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<th>Clinic Characteristic</th>
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<td>Clinics with academic affiliation</td>
<td>5</td>
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<tr>
<td><strong>Clinic Type</strong></td>
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<tr>
<td>Community, primary care-only clinic</td>
<td>5</td>
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<tr>
<td>Community, multi-specialty clinic</td>
<td>2</td>
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<tr>
<td>Hospital-based, primary care clinic</td>
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<td><strong>Clinic Financing</strong></td>
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<td>HMO</td>
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<td>County</td>
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<td>Hospital</td>
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<td>University</td>
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### Table 3. Major Themes Addressing Quality and Safety

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<th>Specific Factors Affecting Quality</th>
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<td>Discordant values between physicians and their leaders</td>
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<td>Resource availability</td>
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<td>Lack of control over work environment</td>
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<tr>
<td>Inflexible and unclear policies and procedures</td>
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<td>Productivity and time pressures</td>
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<tr>
<th>Specific Factors Affecting Errors</th>
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<tr>
<td>Need for non-judgmental error reporting and feedback systems</td>
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<tr>
<td>Lack of effective communication between providers, and between providers and patients</td>
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<tr>
<td>Lack of patient advocates to explain medicines and troubleshoot transport to next appointments</td>
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<tr>
<td>Need for pharmacist medication review (reconciliation) and improved electronic health records</td>
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<tr>
<th>Cross-Cutting Factors Affecting both Quality and Errors</th>
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<tr>
<td>Need for systems to care for aging, complex patients</td>
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<td>Lack of attention to special issues for women and minority physicians and patients</td>
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<td>Support of work-life balance</td>
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<td>Resiliency promotion</td>
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<tr>
<td>Work environment factors: teamwork, respect, collegiality, diversity, leadership</td>
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<tr>
<td>Complexity of health systems</td>
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<td>Dynamic nature of health systems</td>
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and I think that’s the strength of the clinic and how that kind of reaches out to the community and connects to the community.”

- Aligned values—“But the thing that I relied on a great deal is that certain standard of care that the [Medical Assistants] have as well as the physicians that work here, and the nurse that works in our clinic.”
- Leadership—“I think there are actually a couple of people in leadership of the Department who actually think about your life and balancing.”

**DISCUSSION**

MEMO physicians offered keen insights into workplace factors that they believe affect quality and error. These factors reflected potentially remediable areas such as communication, administration, clinical support, high workload, case complexity, and structural problems. MEMO physician comments also demonstrated resilience and dedication, as they discussed reasons for remaining in their practices and what they hoped to provide for their patients. These physicians were goal-oriented, practical, and thoughtful about solutions to the identified problems.

In the realms of communication and administration, these front line physicians advocated aligned values between physicians and leaders, and shared control of increasingly complex work environments. Policies and procedures must be clear and sensible, grounded in the increasing complexity and dynamic nature of health care. These findings could inform current initiatives designed to enhance ambulatory care such as the patient-centered medical home and assessment of clinical Microsystems. Heeding factors perceived by physicians to enhance safety and reduce errors, making a “business case” for these improvements, and redesigning health systems collaboratively with physicians to address these factors may improve care quality for patients and increase the sustainability of ambulatory care practices. Additional research is warranted to delve more deeply into assessing the impact of work environment modifications on physician recruitment and retention as well as on patient care.

**REFERENCES**


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