What Do Patients Think About Year-End Resident Continuity Clinic Handoffs?: A Qualitative Study

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BACKGROUND: Although Internal Medicine year-end resident clinic handoffs affect numerous patients, little research has described patients' perspectives of the experience.

OBJECTIVE: To describe patients' perceptions of positive and negative experiences pertaining to the year-end clinic handoff; to rate patient satisfaction with aspects of the clinic handoff and identify whether or not patients could name their new physicians.

DESIGN: Qualitative study design using semi-structured interviews.

PARTICIPANTS: High-risk patients who underwent a year-end clinic handoff in July 2011.

MEASUREMENTS: Three months post-handoff, telephone interviews were conducted with patients to elicit their perceptions of positive and negative experiences. An initial coding classification was developed and applied to transcripts. Patients were also asked to name their primary care physician (PCP) and rate their satisfaction with the handoff.

RESULTS: In all, 103 telephone interviews were completed. Patient experiences regarding clinic handoffs were categorized into four themes: (1) doctor-patient relationships (i.e. difficulty building rapport); (2) clinic logistics (i.e. difficulty rescheduling appointments); (3) process of the care transition (i.e. patient unaware transition occurred); and (4) patient safety-related issues (i.e. missed tests). Only 59 % of patients could correctly name their new PCP. Patients who reported that they were informed of the clinic transition by letter or by telephone call from their new PCP were more likely to correctly name them (65 % vs. 32 % p=0.007), report that their new doctor assumed care for them immediately (81 % [68/84] vs. 53 % [10/19], p=0.009) and report satisfaction with communication between their old and new doctors (80 % [67/84] vs. 58 % [11/19], p=0.04). Patients reported positive experiences such as learning more about their new physician through personal sharing, which helped them build rapport. Patients who reported being aware of the medical education mission of the clinic tended to be more understanding of the handoff process.

CONCLUSIONS: Patients face unique challenges during year-end clinic handoffs and provide insights into areas of improvement for a patient-centered handoff.

KEY WORDS: outpatient handoffs; sign-out; resident continuity clinic; year-end transfer; transitions of care; patient-centered care; patient safety.
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BACKGROUND

Year-end resident clinic handoffs occur when patients transfer resident primary care providers (PCP) at the time of resident graduation. Annually, year-end resident clinic handoffs impact approximately one million patients.[1] Recently, it has been demonstrated that resident clinic handoffs put patients at risk and lead to discontinuity of care.[2–4] Despite Accreditation Council of Graduate Medical Education (ACGME) requirements for resident competency in handoffs, clinic handoffs remain an unaddressed patient safety issue in resident education, and there is little evidence for effective solutions.[1,5]

The risks of clinic handoffs for patients are numerous. After a clinic handoff, patients often do not have a follow-up appointment, are lost to follow-up, and test results are missed.[3,4] These handoffs also create many missed opportunities to provide preventative health and routine management for chronic conditions.[3] Even when patients receive appointments, they often miss visits and are ultimately lost to follow-up.[4] They may also experience more acute visits in the emergency room or hospital as a consequence of delayed care.[4] Although poor outcomes attributable to clinic handoffs have been demonstrated, there are few interventions demonstrating improvement in clinic handoff outcomes. One multifaceted handoff intervention in a psychiatry residency clinic demonstrated improved timeliness of follow-up and patient outcomes.[6,7] Two interventions in internal medicine clinics increased the number of handoffs completed and improved the number of clinical tasks that were followed up after the transition.[8,9]

To date, there has been little examination of the patient perspective of year-end clinic handoffs. One earlier study identified that less than half of patients were fully satisfied with their transfer in an Internal Medicine (IM) resident clinic.[10] The main predictor for increased patient satisfaction in that study was personal notification of the transition by the departing resident. Other predictors included whether or not the patient felt the departing resident had done everything possible to facilitate the transfer, whether there was opportunity to discuss the transfer with the departing resident, and the patient's overall perception of the medical center. A subsequent intervention consisting of educating departing residents on how to approach the transfer with patients and sending handoff notification letters to patients increased patient satisfaction.[11] These studies were based upon patient questionnaires and did not elicit patient experiences and perceptions of the handoff process.

Several agencies including the Institute of Medicine (IOM) and the Agency for Healthcare Research and Quality (AHRQ) advocate for redesigning processes of care to focus on delivering patient-centered care to improve quality.[12,13] Thus, understanding the patients' perspectives is necessary to improve clinic handoffs and design patient-centered care transitions. Eliciting the patient perspective is especially critical to improving clinic handoffs, since certain patient factors may be associated with poor outcomes, such as understanding why patients miss visits during the transition. Additionally, the risks of these handoffs may be underestimated, since prior studies show that patients are often able to report adverse events that would be missed by chart review.[14,15] Furthermore, patients may be aware of the quality of inter-physician communication during care transitions and may give additional insights into methods to improve communication during clinic handoffs.[16]

Therefore, to improve clinic handoffs, more insight into patient experiences and patient needs during this transition are crucial. Our aim was to examine patient perspectives and satisfaction with resident clinic handoffs using semi-structured interviews. In particular, we strove to identify patients' perceptions of positive and negative experiences during clinic handoffs. Ultimately, these findings can be used to design patient-centered handoff processes.

METHODS

Setting and Study Design

This study occurred at a single, academic IM resident continuity clinic. Approximately 30 IM residents per class have clinic at this site, spending half-days in clinic for the duration of their residency supervised by faculty preceptors consistent with ACGME regulations.[5] Patients were recruited for this study from October 2011 to January 2012 after being identified on a sign-out by graduating residents during a year-end clinic handoff in June 2011. This study was approved by the University of Chicago Institutional Review Board.

Clinic Handoff Process. In June 2011, as part of a multifaceted clinic handoff protocol, departing residents were asked to list patients they believed were "high-risk" during the handoff on a sign-out worksheet. Residents had previously received education on the risks of clinic handoffs and guidance on how to select high-risk patients. Suggestions for high-risk patients included complex patients with multiple comorbidities, nonadherent patients, patient who frequently miss visits, patients with frequent hospitalizations, patients with psychiatric diseases or challenging social situations, and patients undergoing active work-up.[4,17] During a scheduled conference, departing residents discussed patients on their sign-out with the post-graduate year (PGY) 2 resident assuming care for their patients after the handoff. Patients are handed off to PGY2 residents instead of interns, since interns would be unable to receive an in-person sign-out. Patients received letters notifying them of the transition in May, and many patients were also notified in person by the departing physician. When possible, patients received appointments with their new physician at the time of their last visit with their departing physician or were placed on a wait list. High-risk patients were scheduled to be seen with priority as soon as possible after the handoff.

Data Collection. Sign-outs were collected to record the names and medical record numbers of high-risk patients identified by residents. Departing residents and residents assuming care gave email or written consent for their patients to be contacted to participate in interviews.

A patient interview script was developed to elicit positive and negative experiences with the clinic handoff process (Appendix 1, available online). The script was designed for easy readability and reviewed with a patient champion to ensure adequate understanding. The interview questions were semi-structured. (For example, "Did anything bad or inconvenient happen following your transition to the new doctor?"). Probing questions were added to the script and improvised by the interviewer (KB) to prompt patient comments. Patient survey questions were also added to assess satisfaction with various aspects of the clinic handoff and quantify patients' perceptions of the quality of the clinic handoff.[18,19] Patients were asked to rate their level of agreement on a 5-point Likert-type scale from 1=strongly disagree to 5=strongly agree for specific statements about the clinic handoff. Patients were also asked to name their old and new PCP and whether they were notified about the transition.

High-risk patients were contacted by a trained research assistant (KB) by telephone and invited to participate in interviews during the post-handoff period (October 2011–

January 2012). Consent was obtained to record the conversation prior to beginning the interview. Interviews were recorded and transcribed using digital telephone audio recording.

Data Analysis

Two physician investigators (AP& WL) and one research assistant (RA) (KB) each independently coded 21 (20 %) of the interview transcripts to establish a coding scheme, and subsequently met to discuss discrepancies and to refine the coding scheme. Discrepancies were resolved by consensus. After the coding scheme was finalized, an additional ten (10 %) transcripts were coded independently each by two physician investigators (AP& WL) and one trained RA (KB) to further test and refine the categories. Another author (AP) reviewed all coded quotations to ensure correct assignment. Qualitative analysis was completed using Atlas.ti 5.2 (Berlin) software program.[20]

Patient responses to Likert-type items were examined and data were dichotomized for analysis ("agree" was defined as the combined sum of agree- and strongly agree). Whether patients could correctly name their new PCP, whether or not they had recalled receiving notification of the handoff, and their satisfaction ratings were analyzed using STATA.[21] Chi square, Fisher's Exact, and t-tests were utilized, as appropriate, to test associations between these variables.

RESULTS

There were 26 departing residents who listed 323 high-risk patients on their sign-outs. After contacting all (323) patients, 95 % (307/323) were deemed eligible. Patients who could not consent, were deceased, changed insurance providers or were no longer patients of the clinic were excluded (Fig. 1). After attempting to contact all eligible patients twice, 103 patient interviews were completed. The mean age of participants was 67 (range 31–91), 71 % were women and 88 % were African American. On average, non-respondents were younger; their mean age was 63 (range 24–90, $p=0.01$), but had similar proportions of women (66 %, $p=0.41$) and African American patients (85 %, $p=0.46$). Inter-rater reliability for coding was assessed using a three-way kappa statistic, which was 0.6.

Patients' Negative and Positive Experiences

Patients identified 28 negative experiences with clinic handoffs that were categorized into four overarching themes: (1) doctor-patient relationships (i.e. difficulty building rapport); (2) clinic logistics (i.e. difficulty rescheduling appointments); (3) process of the care transi-

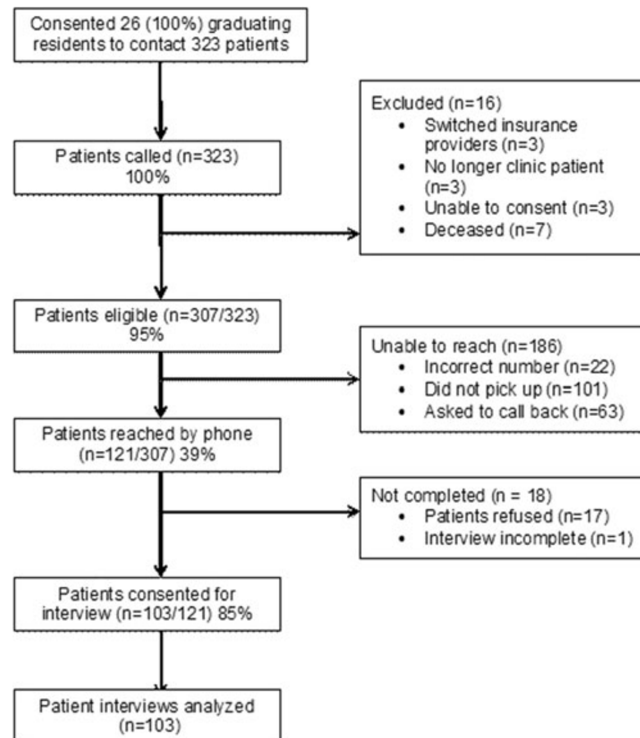

Figure 1. Patient enrollment for the Engineering Patient Oriented Clinic Handoffs (EPOCH) project.

Table 1. Categories of Patient Reported Experiences (Events) in Clinic Handoff Experience with Illustrative Quotations

Category (n)	Sub-category (n)	Illustrative Quotation*
Doctor–patient relationships (172)	Handoff resignation (52)	"Well, I didn't like it because I didn't know that she (old resident) was going at that time. But since she left, I can't do anything about it". 691
	Difficulty building a relationship or rapport (50)	"I hate the fact that when I get to know a doctor and we get a good rapport, that I automatically 2 or 3 years down the line have to switch over and get used to another doctor. I've had some good doctors, but my biggest fear is that I will get a doctor who won't understand and who won't be able to communicate well with me." 683
	Doctor–patient communication (24) (aspects of communication interfering with care transition, i.e. poor listening skills)	"If you can't talk to your doctor and let the doctor know what's going on with you, then what can that doctor do for you? They wouldn't know what to do. You can look at a piece of paper that can tell you something, but you would be best off, I think, if you just sit there with the doctor and go through it." 588
	Frequent resident turnover (21)	"Well, my original doctor was my primary for 7 years and he was going on to do other things. And then that's when the next doctor [old resident] came in and she was great. We got along. She was a good thorough doctor. Just as I got accustomed to her they yanked her away from me and put in the new doctor [new resident]. I was really upset about it because I didn't want to keep changing doctors. I need someone to stay with me who knows all about me. Now I've only been to him [new resident] a couple times, but he is a good doctor. I'm just cautious about whether or not I'm going to have him for a long time." 715
	Anxious/uncomfortable with new physician (14)	"It would be nice to hear from the new doctor and for them to make nervous patients feel a little bit more comfortable. I have had bad experiences with doctors and it's already hard for me to warm up to a doctor. It would be nice for them to make me feel a little bit more comfortable and say, 'everything is going to be cool. We'll see how things go when I meet you.' Something like that would be nice." 504
	Big care changes during first meeting (6) (i.e. patients not being happy with too many changes at a first visit with a new doctor)	"There's so much going on in my case. I'm sure it's kind of hard for a new doctor to consider everything that's going on, because so much is going on. I think she [new doctor] could find out some more maybe, especially now that she took me off of a medication that I've been taking for years." 846
	Stigma of being a chronically sick patient (5)	"I am in so much pain so I think they think I'm lying or just pretending to be [in so much pain]. It's just that when I am in the emergency room, I don't feel comfortable going there anymore. I just feel like they think I'm lying or just trying to come in there. I don't just go to the hospital just to go to the hospital. I am hurting. 24 hours, 7 days a week I am hurting, every day." 768
Clinic visit logistics (138)	Unavailability of residents for appointments (28)	"She's been away for the last, I don't know, 2 months and they told me today she won't be back until mid-January. I don't know where she is or what she's doing." 751
	Missed visits (25)	"Because of where I live, sometimes I can't make my appointments when I need to. I explained that to him. Because of where I live, sometimes when it's really cold or it's raining or something like that, I can't do it. It's because most of the time I'm on the bus and it usually takes me anywhere from an hour and a half to 2 h to get there." 683
	Scheduling process (24)	"I asked for an appointment and he [my doctor] didn't give me one. Then they told me later that I would have to call sometime and make an appointment. Then I had to ask for him when I was at the clinic." 919
	Wait times (13)	"I just don't like waiting two and a half hours to see a doctor and then [after waiting] they still haven't seen you. I had to leave because my ride was there." 723
	Health literacy/ability to navigate system (13)	"What they send is a list of doctors in the order in which you are supposed to see them. It's like a chart and they come so frequently, it's almost like you have to throw it in the garbage right away because it's too much information. I can't keep track of what I'm supposed to do. Sometimes, it seems to me, [I receive] a lot of communication that I can't keep track of." 904
	Social barriers to care (i.e. transportation) (12)	"I couldn't get in to the clinic. I didn't have a way to get there and it was very difficult. […]I had a lot of other things happening in my life so I couldn't get in to the clinic. The clinic wants you to come in a couple of times a week sometimes and that's just impossible." 904
	Insurance difficulties/changes (10)	"I was not able to keep the last visit that was scheduled because [my] insurance changed. They called and said because of the change in coverage, they would not accept the insurance so I could not have the visit." 827
	Seeing a physician who did not receive the handoff (seeing resident not assigned to them) (9)	"At first, I was supposed to have this lady doctor. I had to go in for an emergency to see my current doctor. When I went to see him, during the process of going to see him, somebody switched me over to him. I don't know whether he asked for me or what happened, but they switched me over to him and I was very satisfied with that." 525
	Short visit length (3)	"We didn't talk too much when I first saw him because he was new and he had so many patients. I think he said about a few words and that was it." 983

Table 1. (continued)

Category (n)	Sub-category (n)	Illustrative Quotation*
Process of the care transition (121)	Trouble with doctor's name (36)	"I had so many doctors. My old doctor? Somebody, let me see what was his last name? I don't know, I can't remember that. Yeah I had so many, you know. I know they graduate." 590
	Patient lack of awareness of handoff ahead of time (35)	"Me and my old doctor, we talked about it before the change, and I liked that she did that. The last three doctors I've had were very good about talking to me before they changed, and that was great. I think it's good that they prepare you instead of just, boom, you have a new doctor automatically, and you didn't even know it was coming. in the past when that happened I did not like it. Starting with my old doctor, she told me that I was going to have a new one. She would talk to the new one and tell them everything about me, so that's sort of a good policy for me." 806
	No ability for direct communication with Physician (24)	"About three weeks ago, I was having some problems that I couldn't get resolved and I would try to call [my doctor] and got the answering service. And they said well no, he's not in today but you can leave a voice mail message. So I finally got to his nurse and I left a message with her and never really heard back from anybody. So I called again and they said we will page him to get him. So I have no idea, for all I know my doctor was on vacation or on duty somewhere else. I have no idea." 735
	Poor Resident preparation concerning handoff (19)	"I see this new doctor and she's asking me what's going on with me. I felt that because she was my new doctor, she should have read up on me. I don't think she really did and so when I first met her it was bad and I have not even seen her again." 932
	Patient lack of awareness of provider communication (7)	"I don't know if he [old doctor] told her a lot. Like I said, it could've been in the system, and I don't know whether or not she read it all. When I saw her, she [new doctor] wanted me to tell her the problem and I don't know why she didn't read everything. I don't understand why I had to explain myself when it's in the system." 898
Patient safety-related issues (88)	Delay of care (29)	"I have to hold everything in until I get to see my primary care doctor. So that's been a situation that I don't know what to do about. There are things that I need to talk to someone about. So when I go in and see my specialist, I try to tell him and he says you have to tell your primary doctor. By that time I will have forgotten." 665
	Seeking acute care after the handoff (ED visits, urgent care & hospitalizations) (23)	"My new doctor's been away for the last 2 months. She won't be back until the end of January, so I did have trouble and I went to Urgent Care." 751
	Medication issues (14)	"I wanted to talk to my new doctor because I needed some Tylenol. I have a bad knee and the prescription that I had at Walgreens was up. I was calling her to ask her to write a new prescription or call them for me, but I never did get a hold of her. I would leave a message there and then one time I went up to the clinic when I was at the hospital. I called her and she wasn't in the clinic so I talked to the nurse. She said when she saw the doctor she would tell her. I still haven't heard anything back from that either. So I called Walgreens and asked them had anyone called in the prescription and nobody had. So I said I was just going to wait until I go in." 881
	Test results (14)	"Certain physicians get test results to you on time, right away, over the phone if necessary, especially if it's important and it has some impact on your health. I don't know if they're late or sometimes in the form of a written piece of paper, but most of the time, you find out when you get to clinic." 904
	Disruption in coordination of care (8)	"I think they should let him know, because he was my primary care doctor that I was diagnosed with gestational diabetes, just in case my glucose doesn't go back to normal after having the baby. I have to go back in October. He isn't supposed to see me until after that. I feel very good but I'm going to say 'I've been diagnosed with gestational diabetes.' He didn't take my glucose after I had the baby and they should have let him know." 626

**Patient comments were edited for readability*

tion (i.e. patient unaware that transition had occurred); and (4) patient safety-related issues (i.e. missed tests) (Table 1). The most common experiences by patients were resignation with the handoffs (52), difficulty building relationship or rapport with the new physician (50), inability to recall their new physician's name (36), and not being made aware of the handoff prior to its occurrence (35) (Appendix 2, available online).

Patients most frequently reported interruption of the doctor–patient relationship as their experience of clinic handoffs (172). Patients reported difficulty with frequent physician turnover, doctor–patient communication and often felt anxious and uncomfortable with the new physician PCP (Table 1). Patients most frequently expressed tolerance and resignation with the system of clinic handoffs and experienced frustration with frequent turnover (Table 1).

Clinic logistics and the process of the care transition were the next most frequently occurring themes. Overall patient safety-related issues occurred as a theme in 88 interviews. Specifically, patients reported seeking acute care visits (ER or urgent care) due to delayed care, missed test results or running out of medications during the transition period (Table 1).

Patients identified several positive experiences during the clinic handoff process. There were 15 distinct positive categories identified by patients, which fit into the same four themes as the negative experiences (Table 2). The most common identified positive experiences were being made aware of the handoff before its occurrence (53), being able to build a relationship or rapport with the new doctor (45), being called by their new doctor before the first visit (44), and good doctor–patient communication (42). Patients valued being prepared by their doctors for the transition (37) and some found it helpful to prepare themselves for their first visit with their new doctor. They also reported that 'personal sharing' from the new PCP helped build rapport. Personal sharing occurred when patients learned personal information about their doctor, such as being made aware of an important personal event in their doctor's life, i.e. marriage or a birth of a child (Appendix 2, available online). Also, patients who were aware of their role in the educational mission as educators of residents were more understanding of the process (Table 2).

Patient Satisfaction and Patient Reported Outcomes

During interviews, although 73 % (75/103) of patients could correctly name their old PCP, only 59 % (61/103) of patients could correctly name their new PCP (Table 3), even though the majority of patients (83 %, 86/103) reported they had seen their new PCP at the time of the interview. A few patients (15 %, 15/103) reported difficulty getting a visit after the handoff and 19 % (20/103) reported having

Table 2. Categories of Patient Reported Positive Clinic Handoff Experiences and Solutions, with Representative Quotations

Category (n)	Sub-category (n)	Representative quotation*
Process of the care transition (159)	Patient awareness of handoff ahead of time (53)	"My old doctor told me when she would be leaving and she told me a little bit about the new doctor...." 588
	Telephone Visits (44)	"I love being called by my doctors because that makes me feel that they're really concerned about what's going on with me." 760
	Resident preparation concerning handoff (37)	"The first time I met him [new doctor] when he walked into the room, he had already perused my file, I could tell. He sat down and spent time just to get to know me. He said, 'I've read a little bit about your file, so tell me what you think about this, what you think about that.' I really appreciated that because he didn't come in cold." 523
	Patient awareness of provider communication (25)	"When I was transferred over, he [new doctor] had all the medical history from the old doctor. They went over it together. He went over it with me to see if everything was correct." 631
Doctor–patient relationships (108)	Good Ability to Build a relationship/ rapport (45)	"The first day I met her [new doctor] she was very nice and friendly and she did spend time with me. She answered my questions […] I just fell in love with her. She seemed to care about me." 860
	Good Doctor–patient communication (42)	"So what I like about her [new doctor] is that she listens and when she looks up and sees me, it seems like she's glad to see me. It's a friendly reception." 588
	Patients giving feedback/involvement in process (11)	"I think that this phone survey was actually very nice." 958
	Reaching out to the patient/going the extra mile (7)	"In the 21st century, he's calling my house to see how I'm doing. I couldn't believe it. I would expect a text message before I expect a phone call. He actually called me on a holiday, on the weekend. I couldn't believe it. I said since you're going to all of this trouble, I guess I'll take my medicine like I should, and I did. My point being it's the little things [that count]. That really touched me." 523
	Personal Sharing (3)	"The doctors that I have had, they've given it their all. We even talked about some personal things. My doctor was getting ready for her marriage when I talked to her on the phone. I told her you're not supposed to be worried about your patients, go get married. We'll talk when you get back." 662
Clinic visit logistics (45)	Awareness of Training Mission (25)	"I'm very satisfied. I understand that they are only residents, and every year or every 2 years we get a new resident." 979
	Scheduling process (16)	"Usually when they make the appointments, they try to arrange them with me to fit my schedule. I go to dialysis and they fix my schedule according to that." 674
	Patient visit preparation (4)	"I'm going through my notes because I have a special book for my medical care. I have my doctors' names and my blood work in it." 953
Patient safety-related issues (25)	Test results (14)	"I told the doctor they sent me a letter with the results. She said she was just calling me as well to inform me that everything was okay." 728
	Establish care with new physician early and assume care immediately (8)	"He [new doctor] assumed care for me. He really did. He just stepped right in there." 760
	Coordination of care (3)	"The new doctor talked to my heart specialist and my heart specialist talked back to him. He knows everything that is going on." 695

**Patient comments were edited for readability*

Table 3. Patient-reported Clinic Handoff Outcomes

Outcome Theme	Clinic Handoff Outcome	N, 103	%
Identification	Patients correctly named old PCP	75/103	73
	Patients correctly named new PCP	61/103	59
Notification	Patients recalled receiving a transition letter	74/103	72
	Patients recalled telephone contact before their first visit	36/103	35
Visits	Patients who have seen their new PCP after the handoff for a visit	86/103	83
	Patient who a missed visit with the new provider	20/103	19
	Patients who had difficulty getting a visit	15/103	15
Contact	Patients who tried to reach their new PCP	41/103	40
	Patients who were unsuccessful in reaching their new PCP	12/41[a]	29

[a]The total N for this clinic handoff outcome is 41, because 41 patients out of 103 tried to reach their new primary care provider (PCP)

missed a visit with their new PCP. About half of patients had tried to reach their PCP after the handoff (40 % 41/103), and of these, 29 % (12/41) reported having difficulty communicating with them. While satisfaction with most aspects of the clinic handoff was high (Table 4), only 63 % (62/99) of patients were satisfied with the process of changing doctors overall. Patients who had seen their new PCP at the time of their interview were more satisfied with the clinic handoff than those who had not yet seen their PCP (57/86 [66 %] vs. 6/17 [35 %], p=0.027).

Overall, 72 % (74/103) of patients recalled receiving a letter from the clinic notifying them of the handoff, and 35 % (36/103) reported having a telephone conversation with the new PCP prior to their first clinic visit. In total, 82 % (84/103) of patients were notified of the transition by either a letter or telephone call. Patients who recalled receiving a letter or being contacted by telephone were more likely to report they were aware that their doctor was changing when compared to those who did not (95 % [80/84] vs. 79 % [15/19], p=0.02). Notification of the clinic transition by letter or telephone call with the new PCP was associated with a higher rate of patients correctly naming their new PCP (65 % [55/84] vs. 32 % [6/19], p=0.007). This notification was also associated with more patients reporting their new doctor assumed care for them immediately (81 % [68/84] vs. 53 %[10/19], p=0.009) and reporting satisfaction with communication between their old and new doctors (80 % [67/84] vs. 58 % [11/19], p=0.04). There was no association between receiving a letter or a telephone visit (61 % [51/84] vs. 58 % [11/19], p=0.82) and correctly naming their new PCP (64 % [39/61] vs. 55 % [23/42], p=0.35) and overall satisfaction with the clinic handoff.

Table 4. The Proportion of Patients Who Answered Agree or Strongly Agree, or Satisfied or Very Satisfied, to Likert-Type Interview Statements

Statement	N, 103	%
The clinic made sure I was aware that my doctor was changing	94/103	91
During the switch to the new doctor, I was informed of any results of tests and studies that were performed	71/85	84
When I changed doctors, my new doctor assumed care for me immediately	78/98	80
How satisfied are you with the communication between your old doctor and your new doctor	79/99	80
When I changed doctors, I did not have to wait too long to visit my new doctor	76/102	75
How satisfied are you with the process of changing doctors overall	62/99	63

Denominators are less than 103 when there were missing responses due to item non-response

DISCUSSION

In this study, high-risk patients identified positive and negative experiences of clinic handoffs after switching to a new resident PCP. Lack of patient notification and preparation for the handoff are common problems, as is inability to recall the new PCP's name. Patients expected good communication to occur between the old and new doctor, as well as for the new physician to be aware of their medical history at the time of the first visit. They also expressed a lack of trust with the new PCP and being unhappy with major changes at the first visit. Patients were also aware of patient safety-related issues during their handoff and scheduling constraints. Additionally, many patients could not name their new resident physician when asked. Furthermore, many patients felt resignation with frequent turnover, and yet were tolerant of the process. Patients also expressed problems with systems issues outside of resident education, such as trouble communicating with their physician, difficulty with transportation to clinic and difficulty scheduling appointments.

Despite the numerous negative experiences of clinic handoffs identified, for the majority of patients, satisfaction was high. Interestingly, patient satisfaction with individual components of the handoff process was higher than overall satisfaction with the clinic handoff. One possible reason is that even with a good handoff process, patients do not like switching PCPs. It is also possible that we did not ask about components of the handoff process with which patients are most dissatisfied that would have correlated with their overall satisfaction. Our patient satisfaction with the clinic handoff was higher than satisfaction ratings reported in previous studies. Other investigators reported findings similar to ours that satisfaction correlated with notification of the handoff by letter or telephone.[10,11]

The finding of patients' resignation is also interesting. Although many patients identified problems and aspects of the clinic handoff that they disliked, they were tolerant of it. It is possible that this resignation is because patients like having a resident PCP because they receive more attention, have longer visits, and like being seen by young doctors. It is also possible that patients did not think they had a choice because they wanted to receive care at our tertiary clinic rather than at other clinics.

This study has implications for a patient-centered clinic handoff process. It is important to ensure that patients receive clear notification of the handoff well in advance either in person, by telephone or by letter. It is equally important to help patients identify and pronounce the name of their new physician. Patients should be made aware of how physicians prepare for the handoff including communication, since patients value knowing that physicians review their chart prior to the visit and communicate about their care. Training residents in patient-centered communication during the handoff and working on improving their doctor–patient communication overall will also be helpful. Acknowledging patients for their role in educating resident physicians may be helpful. In addition, telephone visits with their new physician prior to the first visit may help improve the transition. Lastly, ensuring patients are notified about test results during handoffs and have methods of getting medications refilled seamlessly throughout the transition time period will improve patient safety. Scheduling high-risk patients to be seen in clinic early after the handoff is crucial.

There were several limitations of our study. First, it was a single institution study possibly limiting the generalizability our findings. Second, non-response bias may have influenced results, as it was difficult to reach patients by telephone and we were thus unable to interview all patients in our sample. In addition, we solicited the views of "high-risk" patients who likely had more chronic conditions, nonadherence, missed visits and hospitalizations. This also highlights the difficulty of contacting this high-risk population by telephone. Lastly, we had already implemented a clinic handoff protocol and an educational intervention for resident physicians prior to this study, so we are likely underestimating the negative experiences of patients and overestimating patient satisfaction compared to clinics without handoff protocols in place.

In summary, patients face negative experiences during clinic handoffs. Patients frequently are not aware of the transition, cannot name their new physician, and are at risk of experiencing patient safety-related issues during the handoff time frame. Patients are anxious about seeing a new physician and have difficulty establishing rapport after experiencing frequent physician turnover. Good physician handoff communication, doctor–patient communication and resident preparation prior to the first visit may mitigate these effects. Redesign of clinic handoff processes to be more patient-centered is needed and should incorporate these findings.

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