Brief Report | RESIDENT'S FORUM

Missing Consent Forms in the Preoperative Area
A Single-Center Assessment of the Scope of the Problem and Its Downstream Effects

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Missing consent forms at surgery can lead to delays in patient care, provider frustration, and patient anxiety. We sought to assess the scope and magnitude of this problem at our institution. We surveyed key informants to determine the frequency and effect of missing consent forms. We found that 66% of patients were missing signed consent forms at surgery and that this caused a delay for 14% of operative cases. In many instances, the missing consent forms interfered with team rounds and resident educational activities. In addition, residents spent less time obtaining consent and were often uncomfortable obtaining consent for major procedures. Finally, 40% of faculty felt dissatisfied with resident consent forms, and more than two-thirds felt patients were uncomfortable with being asked for consent by residents. At our center, missing consent forms led to delayed cases, burdensome and inadequate consent by residents, and extra work for nursing staff.

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Informed consent represents more than a legal formality.[1] It is the most important conversation that patients have with their surgeons, allowing for autonomy and informed decision making.[2-4] Although the consent setting varies, it is part of the preoperative workflow and can suffer numerous structural and logistical faults. In a health care environment increasingly focused on efficiency and volume, missing consent forms at surgery can lead to delays in patient care, provider frustration, and patient anxiety.

As part of a resident quality-improvement project, which is currently mandated by the Residency Review Committee,[5] we sought to assess the scope and magnitude of this problem at our institution. We surveyed key informants to determine both the frequency and the effect of missing consent forms. We hypothesized that workflow logistics led to the missing consent forms and potentially avoidable case delays.

Methods

Qualitative Interviews With Key Stakeholders

Prior to the development of the survey instrument, qualitative, semi-structured, open-ended interviews were held with key stakeholders. Our survey instrument was developed based on the recurrent themes extracted from these interviews.

Administration of Survey

We administered a web-based survey to all preoperative nurses, residents, and faculty members actively working at our large academic institution. The survey was sent to 42 nurses, 49 surgical residents, and 72 faculty members, and 30 nurses (71%), 39 surgical residents (80%), and 53 faculty members (74%) responded. All study procedures were approved by our institutional review board.

Preoperative Area Assessment

For 1 week (November 29-December 3, 2010), preoperative nursing staff members tallied the absence of a surgical consent form in a patient's medical record and recorded subsequent actions and resultant case delays.

Results

The Problem

Based on our survey results and in-depth qualitative interviews with key informants, we developed the conceptual framework depicted in our **Figure**. This framework outlines the key stakeholders and the critical points in the surgical consent workflow. Key stakeholders included physicians, nurses (preoperative, clinic, and emergency department), staff members (ie, the Hopkins Information Technology and Computing Systems staff responsible for the electronic transfer of documents), patients, and the patients' families.

Missing Consent Forms

Of 137 patients (ie, cases) seen in the preoperative area, 90 (66%) were missing consent forms, which directly resulted in 13 cases (14%) of delayed operative start time (**Table 1**). Of 36 nurses, 26 (72%) paged the attending surgeon most often regarding missing consent forms. Missing consent forms had varied effects on case start times by service.

Faculty and Resident Responses

The demographics of our respondents are shown in **Table 2** and are representative of the department and residency. Faculty responses indicated that 37.7% of respondents obtained consent forms in the clinic and that 45.3% obtained consent forms in the preoperative area. Regardless of location, 59.6% of respondents spent 10 minutes or less and 31% spent 20 minutes or more obtaining consent (**Table 3**). Residents spent less time obtaining consent from patients, with 34.2% spending 5 minutes and no respondents spending 30 minutes or more. When called to the preoperative area to obtain consent, 78.9% of residents spent only 5 minutes obtaining consent, and no respondents reported spending more than 10 minutes (Table 3).

Faculty Satisfaction With the Consent Process

When queried about the resident consent process, only 60% of faculty members were satisfied with the performances of the residents, and nearly 70% felt that residents should not obtain consent for elective cases (Table 3). Furthermore, more than 70% of faculty member felt that patients preferred being asked for their consent by an attending surgeon.

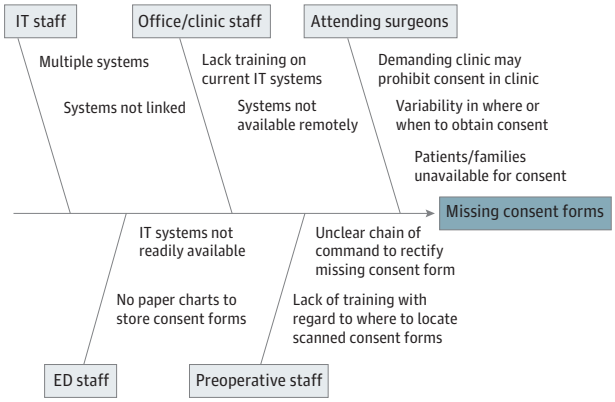
Resident Workflow and Comfort With the Consent Process

Residents were called to the preoperative area once a week 43.2% of the time, with 16.2% being called more than once a day (**Table 4**). This resulted in 65.8% of residents being removed from rounds or educational conferences at least once weekly and 13% reporting interruptions daily. The majority of residents (97.4%) were comfortable with obtaining consent for minor procedures, but only 47.4% were comfortable with obtaining consent for major procedures.

Discussion

This mixed-method (qualitative and quantitative) study examines the scope and effect of missing consent forms in the preoperative area. We found that 66% of patients were missing consent forms in their medical records on arrival to the preoperative area. Of those cases that were missing

Figure. Conceptual Framework of Key Determinants in Consent Forms Arriving in the Preoperative Area Prior to Surgery



Each box represents a different key stakeholder who can play a role in the consent form not making its way to the patient's medical chart. Listed under each box are the specific components within each system that may limit consent form availability. ED indicates emergency department; IT, Hopkins Information Technology and Computing Systems.

Table 1. Number of Consent Forms Missing by Service Type, Along With the Actions Taken and the Effect on Case Start Time

Service	Total No. of Cases	No. (%) of Cases			
		Consent Form Missing	Attending Surgeon Paged[a]	Resident Paged per Standing Instruction From Attending Surgeon[a]	Cases Delayed Owing to Missing Consent Forms[b]
First HPB service	9	3 (33)	0 (0)	0 (0)	0 (0)
Second HPB service	15	9 (60)	4 (44)	0 (0)	6 (67)
ACS	6	5 (83)	2 (40)	1 (20)	1 (20)
Third HPB service	6	5 (83)	2 (40)	0 (0)	1 (20)
Endocrine surgery	18	12 (67)	3 (25)	0 (0)	2 (17)
Colorectal surgery	20	7 (35)	4 (57)	0 (0)	0 (0)
First GIS service	10	8 (80)	1 (13)	3 (38)	1 (13)
Second GIS service	13	6 (46)	1 (17)	2 (33)	2 (33)
Thoracic surgery	11	9 (82)	2 (22)	0 (0)	0 (0)
Vascular surgery	12	8 (67)	1 (13)	1 (13)	0 (0)
Transplant	17	17 (100)	6 (35)	2 (12)	0 (0)
Total	**137**	**90 (66)**	**26 (29)**	**9 (10)**	**13 (14)**

Abbreviations: ACS, acute care surgery; GIS, gastrointestinal surgery; HPB, hepatobiliary.

[a] If the consent form is not in the patient's medical chart.

[b] No. of cases delayed/No. of cases missing consent forms.

informed consent forms, 14% had delayed operative start times. This amounted to 10% of the total number of procedures performed being delayed. In many instances, missing consent forms led to interference in rounds and educational activities. In addition, residents spent less time obtaining consent and were often uncomfortable obtaining consent for major procedures. Finally, 40% of faculty members felt dissatisfied with residents obtaining consent, and more than two-thirds felt that patients were uncomfortable being asked for consent by residents.

Studies have shown that patients prefer to discuss consent with the attending surgeon rather than the resident.[6] The strength of the surgeon-patient relationship is thought to mitigate the possibility of litigation in cases with unfavorable outcomes.[7-9] Krause et al[9] noted that litigation arose from a discrepancy between "expected and achieved results," not from the failure of treatment.[7] If miscommunication is the source of dissatisfaction, then surgeons should focus on ways to improve communication. The hurried environment of the preoperative area is likely not the optimal site for ideal communication. Our results illustrate that informed consent obtained in the preoperative area is plagued by timing and logistical issues.

Furthermore, when residents obtain consent from patients, they are removed from important work and/or educational activities. In the era of reduced work hours, it is imperative to streamline workflow and reduce unnecessary or redundant work. In addition, the literature[10] suggests that residents do a poor job providing comprehensive consent forms, particularly for complex cases, and this opinion seems to be shared by the residents in our program. Last-minute, confusing interactions may undermine the overall relationship between the patient and the surgical team.[6]

Despite this, obtaining consent is an important skill for residents to learn and is required by the Accreditation Council for Graduate Medical Eduction. Informed consent is mentioned in 2 of the 6 broad core competency categories (interpersonal skills and communication and professionalism). However, in the current surgical and educational climate, we can no longer rely on residents learning this competency in an unstructured environment. With work-hour restrictions and limited instructional time, residents instead should be involved in the surgeon-patient conversation from the onset. Increased clinic experience and attending didactic and interactive sessions can help to improve residents' knowledge of the informed consent process and how to appropriately obtain consent for both major and minor procedures.

Table 2. Faculty Characteristics and Location of Informed Consent

Characteristic	Faculty Members, No. (%) (n = 53)
Time in practice, y	
<1	2 (3.8)
1-5	15 (28.3)
6-10	14 (26.4)
>10	22 (41.5)
Where do you obtain consent?	
In clinic	20 (37.7)
In the preoperative area	24 (45.3)
Other, please specify[a]	9 (17.0)

[a] Included responses such as on the surgical floor, in the emergency department, or all over the hospital.

Table 3. Time Spent on the Consent Process Stratified by Consenter and Faculty Satisfaction

Question	No. (%)		
	Faculty Members (n = 52)	Residents (n = 38)	Residents (Last Minute) (n=38)
How long do you usually spend on the informed consent process?			
5 min	5 (9.6)	13 (34.2)	30 (78.9)
10 min	31 (59.6)	21 (55.3)	8 (21.1)
20 min	13 (25.0)	4 (10.5)	0 (0.0)
≥30 min	3 (5.8)	0 (0.0)	0 (0.0)
	(n = 26)		
For faculty: Do you think that residents should obtain informed consent for elective cases?			
Yes	8 (30.8)		
No	18 (69.2)		
	(n = 50)		
For faculty: If the consent form is missing and the resident obtains it, are you usually satisfied with the consent obtained by the resident?			
Yes	30 (60.0)		
No	20 (40.0)		
	(n = 27)		
For faculty: Based on your experience, do you think that patients mind being asked for consent by a resident?			
Yes	19 (70.4)		
No	8 (29.6)		

Table 4. Effect of Missing Consent Forms on Resident Workflow and Comfort With the Consent Process

	No. (%) of Residents	
	How Often Are You Called to the Preoperative Area to Obtain Consent From Patients? (n = 37)	How Often Are You Pulled Away From Rounds or Conferences to Obtain Consent From Patients? (n = 38)
Workflow		
Once a week	16 (43.2)	25 (65.8)
Once every other day	12 (32.4)	8 (21.1)
Once a day	3 (8.1)	3 (7.9)
More than once a day	6 (16.2)	2 (5.3)
	Minor Procedures (n = 38)	Major Procedures (n = 38)
Comfort level obtaining consent		
Uncomfortable	0 (0.0)	7 (18.4)
Somewhat comfortable	1 (2.6)	13 (34.2)
Comfortable	13 (34.2)	13 (34.2)
Very comfortable	24 (63.2)	5 (13.2)

Based on the results of our survey, we are working to implement 3 things at our institution to help alleviate some of the burden associated with missing consent forms. First, we are working to create a centralized, single, streamlined, universally accepted electronic process to be used by all attending surgeons to ensure that all consent forms obtained in our clinics reliably make it to the patients' medical records. Second, we hope to work with all of the services to create standardized consent forms for the common procedures performed at our institution. Third, we have realized that there is a possible education-knowledge gap and have implemented specific educational initiatives for surgical trainees regarding informed consent. This will help to ensure that residents correctly counsel patients on the risks and benefits of common operations.

A potential limitation of this cross-sectional study is that it only represents a 1-week window. In addition, because participation was voluntary and not every nurse and physician participated, there is potential for selection bias. Our high response rate, however, may mitigate the effect of selection bias on inferences drawn from this study. Finally, this represents a single-center experience within only a subset of surgical services and may lack generalizability, although at least some of these issues likely occur at every hospital across the country with surgical resident trainees.

Ultimately, we hope this brief communication elucidates the negative ramifications of missing consent forms, including delayed cases, inadequate consent, negative effect on resident educational opportunities, extra work for nursing staff, and patient anxiety. We believe that small changes to the surgical workflow can address these issues and improve patient care, resident satisfaction, and hospital productivity.

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