A Taxonomic Review of Patient Complaints in Adult Hospital Medicine

Richard M Elias, MBBS, MPH[1] ⓘ, Karen M Fischer, MPH[2],
Mustaqeem A Siddiqui, MD, MBA[3,4] ⓘ, Trevor Coons, MHA, FACHE[1] ⓘ,
Cindy A Meyerhofer, MS, CPXP[4], Holly J Pretzman, MSN, RN, CPHIMS[5],
Hope E Greig, MSH, FACHE[4], Sheila K Stevens, MSW[4],
and M Caroline Burton, MD[1]

Abstract

Previous studies show that patient complaints can identify gaps in quality of care, but it is difficult to identify trends without categorization. We conducted a review of complaints relating to admissions on hospital internal medicine (HIM) services over a 26-month period. Data were collected on person characteristics and key features of the complaint. The complaints were also categorized into a previously published taxonomy. Seventy-six unsolicited complaints were identified, (3.5 per 1000 hospital admissions). Complaints were more likely on resident services. The mean duration between encounter and complaint was 18 days, and it took an average of 12 days to resolve the complaint. Most patients (59%) had a complaint in the Relationship domain. Thirty-nine percent of complaints mentioned a specific clinician. When a clinician was mentioned, complaints regarding communication and humaneness predominated (68%). The results indicate that the efforts to reduce patient complaints in HIM should focus on the Relationships domain.

Keywords

patient complaints, hospital medicine, patient satisfaction, physician communication

Introduction

Health care institutions receive large numbers of complaints, and patients and families expect a timely and personal response. A process that produces quick and individualized responses is good for patient satisfaction but not for quality improvement because every complaint may be treated as an isolated anecdote. A system for categorizing complaints and thereby enabling analysis is generally not a prominent component of the patient complaint response mechanism. This is problematic because there is evidence that patients and families are aware of errors and adverse events that are not apparent to treating clinicians, documented in the health record, or captured by institutional quality improvement mechanisms (1–3). Determining complaint patterns is important to provide clarity regarding systemic gaps in service and safety that are not uncovered by other means of quality and safety surveillance.

There are several high-risk features for patient dissatisfaction inherent to the practice of hospital medicine. Unlike outpatient practitioners, hospitalists generally do not have a previous relationship with their patients. Hospitalists meet patients for the first time when the patients are ill in a potentially stressful and unfamiliar environment of an emergency department or acute care hospital unit. This introduction is then compounded by the waiting, poor sleep, fasting, and myriad other inconveniences that characterize a hospital stay.

There is a critical need to understand patient complaints in hospital medicine. In 1991 a landmark paper brought awareness to adverse events in hospital (4). Research

[1] Division of Hospital Internal Medicine, Department of Medicine, Mayo Clinic, Rochester, MN, USA
[2] Health Sciences Research Biomedical Statistics and Informatics, Mayo Clinic, Rochester, MN, USA
[3] Division of Hematology, Department of Hematology and Oncology, Mayo Clinic, Rochester, MN, USA
[4] Office of Patient Experience, Mayo Clinic, Rochester, MN, USA
[5] Informatics and Quality Management Services, Mayo Clinic, Rochester, MN, USA

Corresponding Author:
Richard M. Elias, Division of Hospital Internal Medicine, Department of Medicine, Mayo Clinic, 200 First Street SW, Rochester, MN 55905, USA.
Email: elias.richard@mayo.edu

demonstrated that when directly asked, 4 of 10 patients under the care of a hospitalist reported a breakdown in care and a third of these patients perceived that patient harm resulted from that breakdown (5). It is estimated that for every complaint received by an institution, 90 patients were unhappy with their care but remained silent (6). The high frequency of patient-perceived problems underscores that the comparatively small number of unsolicited patient complaints (UPCs) represent the tip of a much larger iceberg of patient concerns. UPCs are a vital pool of primary data but utilizing it to improve quality and patient experience requires the ability to discern patterns and trends. The aim of this study was to describe key features of patients and families who have a complaint related to an admission to general hospital internal medicine (HIM) services, the nature of the complaints and to place them within the framework of a published taxonomy (7). This knowledge is a necessary component in addressing the safety, interpersonal, and system problems that underlie patient dissatisfaction in a rapidly growing specialty. A systematic approach to complaints allows institutions to identify weaknesses and service failures and provides the opportunity for effective remedies (8).

Methodology

The study was reviewed and deemed exempt by the institutional review board of Mayo Clinic (ID # 20-000559). All complaints submitted to the Office of Patient Experience (OPX) related to an admission to an adult Hospital Internal Medicine service between June 1, 2017, and July 30, 2019, were reviewed. Complaints from patients or surrogates were included irrespective of mode of complaint (walk-in, phone, electronic mail, or letter). Patients who had contact with HIM clinicians in a consultative capacity but were admitted to another service were excluded.

This research took place at Mayo Clinic in Rochester, Minnesota USA. The hospital serves the local population and is also the major referral center for the Midwest region of the United States. Additionally, the hospital treats patients from other countries. During the period of the study, the HIM division had approximately 50 physicians and 50 advanced practice practitioners (APP) on 9 services. The practice model is a physician and APP dyad managing 12 to 16 patients. A variety of learners (medical students, APP students, internal medicine (IM) residents, psychiatry interns, and HIM fellows) rotate on the services. On 2 of these services, HIM MD/APP teams manage solid tumor and hematologic patients with medical and treatment complications. Additionally, hospitalist physicians served as faculty for 4 traditional IM resident-based teams consisting of a final-year resident and 3 interns. General IM physicians who are predominately in outpatient practice also staff these resident-based teams and were included in the analysis. Hospitalist physicians admit patient during evening and night shifts while APPs provide patient cross-coverage responsibilities. Patients with medical issues and aggressive behaviors

Table 1. The Patient Complaint Taxonomy Developed by Reader et al.[a]

Domain	Category	Subcategory
Clinical	Quality	Examinations
		Patient Journey
		Quality of Care
		Treatment
	Safety	Errors in Diagnosis
		Medication Errors
		Safety Incidents
		Skills and Conduct
Management	Institutional Issues	Bureaucracy
		Environment
		Finance and Billing
		Service Issues
		Staffing and Resources
	Timing and Access	Access and Admission
		Delays
		Discharge
		Referrals
Relationships	Communication	Communication Breakdown
		Incorrect Information
		Patient-Staff Dialogue
	Humaneness/Caring	Respect, Dignity, Caring
		Staff Attitudes
	Patient Rights	Abuse
		Confidentiality
		Consent
		Discrimination

[a] Adapted from *BMJ Qual Saf.* 2014; 23:678-689.

are managed by hospitalists on a service in a secured area, the complex intervention unit (CIU).

Data were obtained from patient complaint information stored in an institution-level database used to manage all complaints received by OPX (Midas+; Conduent). Data extracted from the Midas database was stored in REDCap (version: 9.1.15; Vanderbilt University), a web platform for collecting and organizing study data. The Reader et al taxonomy was then used by the authors to categorize complaints into 26 subcategories of complaint issues which exist in 7 thematic categories and more broadly in 3 conceptual domains (Clinical, Management, Relationships)[7] (Table 1). If more than one issue was reported in a complaint narrative, each issue was coded to a subcategory. Data identifying a clinician as the subject of the complaint were extracted from the complaint narrative and the internal communication system.

The rate of patient complaints was calculated per 1000 patient admissions irrespective of the number of clinician contacts during a hospitalization or the length of stay. To compare the rates of the different services to that of the Hospitalist/APP model services, Poisson exact tests were used. Descriptive statistics (frequencies, proportions, averages, and standard deviations) were used to quantify patient demographics and complaint features. Chi-square tests for categorical variables and Wilcoxon-Mann-Whitney

Table 2. Patient Characteristics.

Characteristic	N = 76
Age	
Mean ± SD	62.7 ± 18.0
Min, Max	21, 95
Gender	
Female	41 (54.0%)
Male	35 (46.1%)
Race	
White	72 (94.7%)
Asian	1 (1.3%)
Black or African American	1 (1.3%)
Other (including more than one race)	2 (2.6%)
State	
MN	53 (69.7%)
Out of state	23 (30.3%)

tests for continuous variables were used to determine the relationship between complainant and complaint factors. *P* values of less than .05 were considered significant for all models. Statistical analysis was performed using SAS software package (SAS version 9.4; SAS Institute Inc).

Results

During the study period, 76 UPCs regarding care on HIM services were identified, which contained a total of 112 discrete complaint subcategory codes. The average number of codes was 1.5 per complaint episode (range 1-3 complaint codes). Fifty-eight percent of complaints reported a single issue with the remaining 42% reporting 2 or 3. No individual reported more than 3 complaint issues. The overall rate was 3.5 complaints per 1000 encounters (unique hospital admissions).

Patient Characteristics

The median age of patients was 67.5 years old (Q1 = 50, Q3 = 74). Fifty-four percent were women and 95% self-identified as white. Seventy percent were in-state residents (Table 2).

Rate of Complaints by Service Type

Hospitalist/APP model services had 49 complaints (3.2 complaints per 1000 encounters). The hospitalist service group that manages the medical/treatment complications of solid tumors and hematological malignances had the lowest complaint rate (5 complaints representing 1.7 complaints per 1000 encounters). The CIU had 13.2 complaints per 1000 encounters. The IM resident–based services had 6.5 complaints per 1000 encounters. Resident services and the CIU both had significantly higher rates of complaints than the Hospitalist/APP model services (3.2 per 1000 encounters; *P* values both = .02). There was no statistically significant difference within the Hospitalist/APP model between

general services and the solid tumors/hematological malignancies group (*P* = .20).

Complaint Characteristics

Complaints directly from patients comprised less than half of complaints (47%). Most complaints were initiated by patient family members, with the largest subgroup being the children and children-in-law of patients (26% of episodes). Most (78%) complaints were made by telephone. The mean elapsed time from patient encounter to complaint was 18 days with a range of 0 to 292 days. The mean time to resolve the complaint was 12 days (range 0-67 days). Most complaints (58%) did not specifically refer to a member of the care team (physician, APP, or RN) but rather to nonpersonnel matters. Twenty-three (30%) complaints referenced a specific physician and 30 (39%) mentioned a physician, nurse practitioner, or physician assistant. Less than 3% of complaints related to nursing staff (Table 3).

Complaint Taxonomy

Table 4 lists the complaint domain, category, and subcategory according to the taxonomy. The largest group of complaint issues was in the Relationships domain. Fifty-nine percent (n = 45) of complaints had a Relationship code of which most (76%) were in the Communication category. Thirty-eight percent of complaints had a Clinical code (n = 29). The Management domain represented 33% of complaints (n = 25) of which 84% were in the category of Timing and Access of care. Of the 30 complaints in which a clinical provider (physician, nurse practitioner, or physician assistant) was named, 26 (87%) had at least one code in the Relationships domain.

There were no statistically significant differences for the variables age, sex, days to close complaint, complainant relationship to patient and in-state residence across the 3 domains (*P* > .08).

Discussion

This is the first study to characterize UPCs in an adult patient population cared for by HIM physicians, APPs, and residents. The primary aim of this study was to describe key features of individuals who complain relating to IM hospitalizations and complaint types with the goal of facilitating future safety and satisfaction initiatives. We used an organized structure to categorize UPCs identified over a 26-month period. Although the overall complaint rate was low, we identified several notable trends.

There were more UPCs associated with care on IM resident–based services. These had more than double rate of complaints per 1000 encounters relative to hospitalist/APP model services at our institution. Patient satisfaction scores are known to be lower among patients on teaching hospital services (9). The reasons for this are speculative. Residents

Table 3. Complaint Characteristics.

Characteristic	N = 76
Person who filed the complaint	
Patient	36 (47.4%)
Spouse	10 (13.2%)
Child	16 (21.1%)
Child-in-law	4 (5.3%)
Parent	8 (10.5%)
Other relative	2 (2.6%)
Patient self-reported	
Female	21 (58.3%)
Male	15 (41.7%)
Hospital Service Type	
Physician/APP model	48 (64.0%)
Resident model	18 (24.0%)
Hematology/Oncology	5 (6.7%)
CIU	4 (5.3%)
Missing	1
Days from encounter to complaint filed	
Mean ± SD	17.8 ± 48.8
Min, Max	0, 292
Days to close complaint	
Mean ± SD	12.1 ± 15.2
Min, Max	0, 67
Complaint target provider	
Physician	23 (30.3%)
NP	5 (6.6%)
PA	2 (2.6%)
Nurse	2 (2.6%)
Number of complaints per person	
1	44 (57.9%)
2	28 (36.8%)
3	4 (5.3%)
Average number of complaints per complainant	1.5 ± 0.6
Type of complaint code	
Clinical complaints	29 (38.2%)
Management complaints	24 (31.6%)
Relationships complaints	45 (59.2%)
Contact Method	
Call	58 (77.3%)
Email	2 (2.7%)
Letter	7 (9.3%)
In-Person	8 (10.7%)
Missing	1

Abbreviations: APP, advanced practice practitioner; CIU, complex intervention unit; NP, Nurse practitioner; PA, Physician assistant.

Table 4. Complaints by Domain, Category, and Subcategory.

Taxonomic descriptor	Frequency (% of patients who reported this category of complaint)
Clinical complaints	
Quality, examinations	0 (0%)
Quality, patient journey	4 (5.3%)
Quality, quality of care	7 (9.2%)
Quality, treatment	5 (6.6%)
Safety, errors in diagnosis	7 (9.2%)
Safety, medication errors	9 (11.8%)
Safety, safety incidents	1 (1.3%)
Safety, skills and conduct	1 (1.3%)
Management complaints	
Institutional, bureaucracy	0 (0%)
Institutional, environment	3 (4.0%)
Institutional, finance and billing	3 (4.0%)
Institutional, service issues	1 (1.3%)
Institutional, staffing and resources	0 (0%)
Timing and access, access and admission	2 (2.6%)
Timing and access, delays	4 (5.3%)
Timing and access, discharge	8 (10.5%)
Timing and access, referrals	7 (9.2%)
Relationships complaints	
Communication, communication breakdown	15 (19.7%)
Communication, incorrect information	7 (9.2%)
Communication, patient and staff dialogue	12 (15.8%)
Humaneness/caring, respect, dignity, caring	8 (10.5%)
Humaneness/caring, staff attitudes	7 (9.2%)
Patient rights, abuse	0 (0%)
Patient rights, confidentiality	1 (1.3%)
Patient rights, consent	0 (0%)
Patient rights, discrimination	0 (0%)

are in the process of developing the bedside skills to build rapport with patients. Less experienced clinicians may lead to a delay in diagnosis and effective treatment. It is possible that "teaching cases" preferentially admitted to the resident services are more medically and socially complex. The difference in complaint rate occurred even when having many of the same hospitalists staffing both the hospitalist/APP and IM resident–based services.

Comparing the rate of complaints across studies is difficult. Some studies do not report overall rates whereas others use different complaint criteria, such as a focus on only physician-related complaints or those "serious" enough to

be reported to a government surveillance system (8,10,11). The rate of provider-specific complaints in the present study is similar to that reported among pediatric hospitalists (1.4 vs 1.2 per 1000 encounters), and the overall rate of complaints is moderately higher than reported for surgical hospitalizations (3.5 vs 2.5 per 1000 encounters) (10,12). Caution is also warranted when comparing patient complaint studies given differences in variables such as patient populations and health care delivery models. When compared with a pediatric inpatient population, the overall complaint rate in this study was higher but the multiple-issue complaint rate was lower at 1.50 codes per complaint (10). This rate is also lower than reported in a study of medical imaging procedure complaints (13). Given the multi-issue nature of adult general medicine hospitalizations and the attendant social complexities around elderly patients with declining functional status, family dynamics, goal-of-care discussions, and complicated discharge planning, it is surprising that the number of discrete codes per complaint was lower than in pediatric and medical imaging episodes of care which might be

expected to be more single issue in nature. It is possible that hospital medicine complaints are more likely to be limited to a relationship concern whereas more technical or procedural specialties have complaints that begin as clinical in nature and then come to include the relationship domain based on dissatisfaction with the clinician response to the initial concern. It is also possible that in pediatric hospitalizations, because parents and guardians are closely involved, there are more opportunities to observe multiple unsatisfactory elements during the hospital course. Furthermore, the taxonomy does not grade for complaint severity, such as if the issue resulted in clinical harm, which limits ability to make comparisons across groups or specialties.

This study found that family members were more likely than patients to complain. Due to illness, patients may not be cognizant of potential concerns. The largest nonpatient group to complain was the children and children-in-law of the patient rather than the patient's spouse or significant other. There may be generational factors at play. Patients and spouses may feel vulnerable and fear worse care or no care if they complain. It may be that spouses have more longitudinal context of the patient's longer term health trajectory, whereas children might see the patient disproportionately during periods of acute illness.

Most complaint reports (59%) involved the Relationships domain and most were in the Communication category. Nearly all (98%) of these codes were related to communication and humaneness/caring subcategories rather than patient rights. This finding is consistent with data from orthopedic surgery (11). However, the recent study at a tertiary pediatric hospital in Canada found most complaints were in the Clinical domain (10). By contrast, in a study of interventional radiology procedures, complaints in the Clinical domain predominated, unsurprising given that the focus of that brief encounter is a technical procedure. Our results suggest that a renewed focus on empathic communication and shared decision-making could make an important contribution to reducing patient complaints in hospital medicine.

In the Management domain, complaints in the Timing and Access category predominated. Within this, the subcategories of Discharge and Referrals represented the majority of complaints. These complaints included post-discharge problems with accessing medical supplies, prescriptions, and outpatient consultations. This quantifies what many clinicians know from experience, which is that the period around discharge is a frequent source of mutual frustration with the pressure for a timely discharge coinciding with the need to coordinate an outpatient plan among providers, suppliers, pharmacy, laboratory, and payers. Interestingly, patients and families frequently complain after a considerable time has elapsed since hospital discharge. The mean time between hospital encounter and complaint was 12 days, and the longest interval between hospitalization and complaint was over 9 months. This suggests that a period of rumination occurs regarding an unsatisfactory hospital experience that may represent an opportunity for service recovery.

There were subcategories for which there were no complaints. Clinicians are frequently concerned about consent; however, this was not an identified issue. The only complaint in the Patient Rights category pertained to confidentiality, related to the institutional practice of including the patient name on the door card. Similarly, it is often thought that "bureaucracy" as a general concept is a source of frustration with the health care system; in this study, no complaints were coded as primarily related to Bureaucracy. Indeed, aside from one Service Issue complaint, all of the complaints in the Management category related to finance or the hospital environment.

Previous literature suggests that patient complaints have utility in identifying safety concerns that are not detected by other safety surveillance mechanisms (1,2). Complaints in our data set included 18 Safety codes of which 16 related to either diagnosis or medication. On review, only one was attributed to medical error with the potential to have caused direct patient harm. Patient and caregiver perceptions of errors in diagnosis and medications may not represent true safety incidents. These might represent communication issues in which diagnosis and the rationale for medication changes were inadequately communicated. Hospital Medicine is likely to be high risk for these types of complaints compared to outpatient practice because diagnoses and medications may change multiple times over the course of a hospitalization giving the appearance of errors if communication is insufficient.

Limitations

The Reader et al taxonomy was formulated using data from 59 studies, of which 16 were from the United States and a further 29 were from English-speaking British Commonwealth countries.[7] Regional validity of the taxonomy within the United States has not been studied.

The inpatient experience is not limited to a single service but rather relies on a complex, hospital-wide system of people, places, and processes. Consequently, dissatisfaction with HIM experiences are variably attributable to elements under the purview of the Division of HIM and at least partially a proxy for the broader system. The majority of patients were white and the small number of nonwhite patients did not allow meaningful evaluation of complaint characteristics of minority groups. The hospital is in the State of Minnesota which is 85% white; and the percentage among the older, hospitalized population may be higher (14). Additionally, information on primary language was not routinely collected and neither the OPX staff nor the authors have a robust mechanism to account for linguistic, cultural, physical, or psychological barriers to communication. Our study was limited to formal complaints made to the OPX. It is possible that complaints were communicated through informal channels to physicians, nurses, and other clinical area personnel. A further limitation is that the closure of a complaint is not a formalized process and is at the discretion

of the OPX representative. It is assumed that complaints are not closed until the individual who originated the complaint is satisfied or all avenues of remediation have been exhausted; however, there is no mechanism in the complaint database to record degree of satisfaction with complaint resolution. A more robust method of assuring patient satisfaction with complaint resolution could be a valuable quality improvement initiative. In addition, these data were collected at a single academic center, limiting generalizability. Finally, the total number of complaints was small which limited the scope to draw associations between complaints and person characteristics.

Conclusion

Our study expands what is known about patient complaints by describing patient complaints in adult hospital medicine. Our results suggest that communication is the highest yield area to improve satisfaction. Patient and family complaints are an important source of information regarding the quality of hospital care and gaps in the health care system. Addressing dissatisfaction is an important aspect of enhancing individual patient experience. Patient complaints occupy a vital place at the nexus between patient satisfaction and quality improvement, underscoring the importance of ongoing systematic study of medical complaints. Our results demonstrate that patient complaints in hospital medicine are uncommon and when they do occur they are often associated with provider communication and humaneness. Future research could prospectively explore the link between patient complaints and adverse patient outcomes.

Authors' Note

All procedures in this study were conducted in accordance with the Mayo Clinic Institutional Review Board's (ID # 20-000559) approved protocols. Informed consent for patient information to be published in this article was not obtained because the research was deemed exempt.

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ORCID iDs

Richard M Elias, MBBS, MPH 🔟 https://orcid.org/0000-0003-3389-5472
Mustaqeem A Siddiqui, MD, MBA 🔟 https://orcid.org/0000-0002-4640-7311
Trevor Coons, MHA, FACHE 🔟 https://orcid.org/0000-0002-3674-0698

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Author Biographies

Richard M Elias is a graduate of the Sydney University School of Medicine in Sydney Australia. He is a hospitalist physician and an

assistant professor of Medicine at Mayo Clinic. He conducts research in quality improvement and patient experience.

Karen M Fischer is a statistician with the department of Biomedical Statistics and Informatics at Mayo Clinic in Rochester. In the three years she had been at Mayo Clinic she has specialized in studies within general internal medicine and hospital internal medicine.

Mustaqeem A Siddiqui is a hematologist and Assistant Professor of Medicine at Mayo Clinic.

Trevor Coons is the operations manager for Mayo Clinic's Hospital Internal Medicine Division in Rochester. He has 10 years of healthcare leadership experience supporting patient care teams in inpatient and outpatient settings. Trevor is a Fellow in the American College of Healthcare Executives and currently serves on the Board of the Minnesota chapter.

Cindy A Meyerhofer is a privacy investigations Manager at Mayo Clinic. She has 25 years of healthcare leadership experience in Patient Experience, Human Resources, and Office Support Services. She is a Certified Patient Experience Professional (CPXP).

Holly J Pretzman is an informatics specialist in Quality Management Services at Mayo Clinic.

Hope E Greig is an operations administrator for the Office of Patient Experience at Mayo Clinic.

Sheila K Stevens is a quality administrator at Mayo Clinic and an Instructor in the Mayo Clinic Alix School of Medicine. With a background in social work and psychology, Sheila has more than 20 years of clinical experience in the fields of counseling, addictions, and health behavior change. She is a certified coach and member of the Motivational Interviewing Network of Trainers (MINT).

M Caroline Burton, MD is chair of the division of Hospital Internal Medicine at Mayo Clinic in Rochester, MN. She is a professor of Medicine and serves on the Mayo Clinic Institutional Review Board.