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HOSPITAL SUPER-UTILIZERS AND THE IMPORTANCE OF TRANSITIONS OF CARE IN MISSOURI

Is your hospital doing something innovative to ensure discharge communication with health centers and primary care providers? Any lessons learned or best practices to share? Let us know: hidihealthstats@mhanet.com

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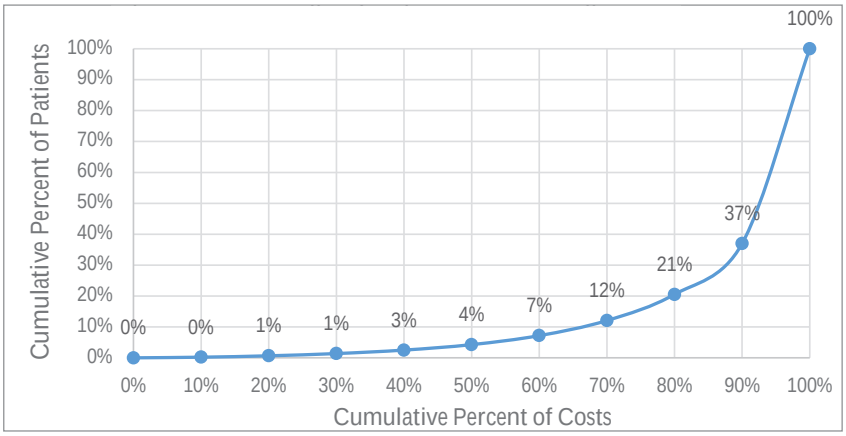
Background

The disproportionate concentration of health care consumption and expenditures among a small portion of the population is a well-documented facet of the health system in the U.S. The top 1 percent of the population consistently consumes more than one-fifth of health care resources, the top 5 percent account for half of all spending and half of the population accounts for 97 percent of health care utilization and expenditures.[i] This differential is even more pronounced among patients with low socioeconomic status — the top 1 percent of Medicaid beneficiaries in the U.S. accounts for one-quarter of all program spending and the top 5 percent accounts for 54 percent of total health care expenditures.[ii]

The asymmetrical distribution of hospital utilization in Missouri mirrors national trends. During 2013,[iii] half of all Missouri inpatient and emergency department patients accounted for 96 percent of total costs and the top 10 percent accounted for 63 percent of total costs (Figure 1). The top cost decile included 145,684 unique patients who accounted for more than $5.7 billion in hospital spending for an average of $39,258 per person. This was more than 15 times the average expenditure for other patients during 2013.[iv]

Because of new paradigms in accountable care and population health management, one particular segment of high-cost patients — hospital "super-utilizers"— has been the focus of emerging models of patient-centered care delivery

Figure 1: 2013 Distribution of Patients by Costs for Hospital Inpatient and Emergency Department Discharges in Missouri



Source: FY2013 HIDI Inpatient and Outpatient Discharge Databases. N=1,456,839

that concentrate on both medical and socioeconomic conditions. Much of the impetus for improving care and health outcomes for these highest-utilizing and most complex patients has been driven by Jeffrey Brenner, M.D., executive director of the Camden Coalition, 2013 MacArthur Genius Award winner and a speaker at the 2012 Missouri Hospital Association Annual Convention. Brenner has stated that his goal in life is to reduce cost and improve quality in America's poorest cities and health care systems.[v] A recent *New York Times* article reiterates the causal nature of poverty and health while describing some of the programs across the country that extend health care delivery beyond the walls of the medical clinic or hospital. Referencing the traditional health care delivery system, the article states, "We'd pay to amputate a diabetic's foot, but not for a warm pair of boots."[vi]

Throughout 2013 in Missouri, 18,544 individual patients, or 1.3 percent, visited an emergency room or were hospitalized on 10 or more occasions. The majority of these super-utilizing patients fell into the upper cost deciles of hospital utilization — 99 percent were in the seventh decile or higher, 86 percent were in the ninth and tenth deciles, and 63 percent were in the 10th cost decile alone. These patients were significantly more likely to be uninsured or covered by Medicaid, which suggests opportunities exist for improved health outcomes and reduced health spending through Medicaid reform and expansion, including tenets set forth by emerging and innovative models designed around coordinating care for super-utilizing patients. The foundational elements of these models include robust data analysis and patient-centered transitions of care from the hospital to patients' communities. This brief will focus on each.

The Critical Transition From Hospital to Community

The handoff from hospital providers to providers in the community is the foundation for optimal transitions of care for patients traversing the inpatient and outpatient settings. A 2003 study found that for the nearly 1 in 5 patients who experienced adverse outcomes after hospital discharge, more than half were preventable or could have been reduced in severity by a change in provider action or procedures.[vii]

A potential factor contributing to poor health outcomes is difficulty in communication between hospital-based and primary care physicians. The availability of a discharge summary at the time of the post-discharge visit has been linked to decreased risk of readmission[viii] and is a part of discharge improvement interventions such as the Agency for Healthcare Research and Quality-sponsored Project RED.[ix] A 2007 systematic review found that hospital discharge summaries were available at only 12 to 34 percent of patients' initial post-discharge primary care visits, and that the discharge summaries that were available often lacked information such as hospital course, discharge medications and follow-up plans.[x]

Despite an intensive focus on discharge process improvement nationwide, patient health outcomes at this care transition remain a concern. The continued importance of high-quality discharge communication for optimal results has been underscored by recent studies finding a high rate of post-discharge medication errors. One 2014 study found 51.4 percent of adults discharged with a diagnosis of acute coronary syndromes and/or acute decompensated heart failure were taking one or more discordant medications.[xi] Also adding to the complexity of effective transitions of care is research linking sociodemographic and other social factors with adverse post-discharge health outcomes metrics such as readmission rates.[xii, xiii] Gaps in communication with safety-net providers caring for low-income and minority patients are of particular importance for improving transitions of care and optimizing health outcomes.

Table 1: Engaging Community Health Center Provider Experience Survey Methods and Participants

Survey Participants by Method:

61 Online Surveys		
38 Primary Care Providers	23 Staff Members	
17 Interviewed		
4 Focus Groups	3 One-on-One Interviews	3 Written Interviews

Survey Results:

	Providers (N=38)		Staff (N=23)	
Communication Preference	#	%	#	%
Same-day auto-fax to the health center	29	76%	16	70%
Auto import of electronic Continuity of Care Document into your own Electronic Health Record with a review prompt	11	29%	12	52%
Call to PCP's support staff	7	18%	7	30%
Email to PCP's support staff	4	10%	6	26%
Email to PCP	3	8%	6	26%
Direct call/page to PCP (regardless of time/day)	3	8%	1	4%
Other	3	8%	0	0%
Text-message to PCP's cell phone	2	5%	2	9%

Note: Participants were from all six health centers participating in the Integrated Health Network.

Community Health Center Provider Perceptions of Transitions of Care Communication: The St. Louis Integrated Health Network Provider Experience Survey

In response to provider concerns, the St. Louis Integrated Health Network — a regional network of safety-net providers that promotes care coordination and integration through its multi-stakeholder Transitions of Care Task Force and its Community Referral Coordinator programs — initiated the Engaging Community Health Center Providers survey (Table 1) to evaluate community health center provider experiences and perspectives on current transitions of care between hospitals and CHCs.

Preliminary findings from this provider experience survey were presented in February as a poster[xiv] in the 2015 Patient Safety and Quality Symposium co-sponsored by Barnes-Jewish Hospital, St. Louis Children's Hospital, and Washington University. Across different community health centers, when asked about receiving notification when their patients were discharged from various area hospitals, the majority of provider responses were "Never" (49 percent) or "Sometimes" (37 percent). Similarly, when asked about receiving notifications on admission to the hospital, the majority of provider responses were "Never" (40 percent) or "Sometimes" (38 percent). Staff responses had a similar pattern. Provider comments further indicated that not receiving these notifications could impact patient care, for instance, difficulties with ensuring patients were on the correct medication dosages after discharge.

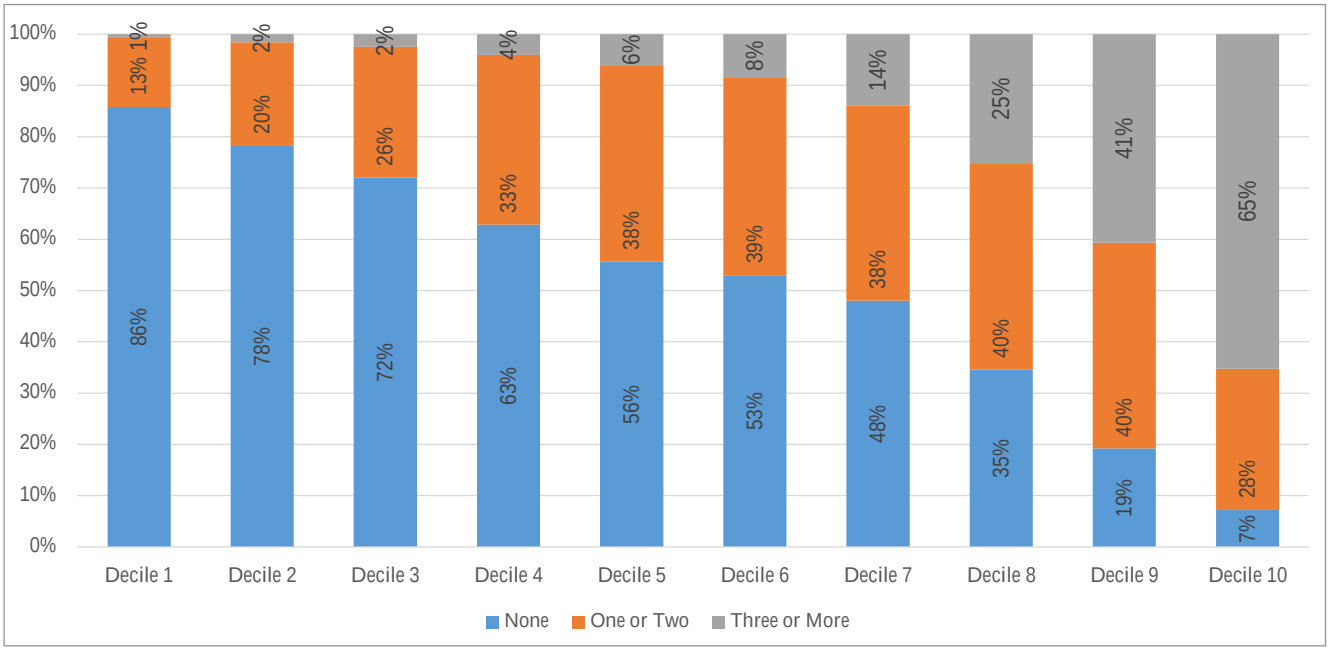
Providers noted the complexity of coordinating clinical communication across different settings, suggesting that barriers to communication transcended individual health centers or hospitals. The results presented at the symposium included provider and staff preferences around transitions of care communication, including the notification method. Although providers and staff chose a variety of methods, the majority of providers (76 percent) and staff (70 percent) selected same-day auto-fax; few providers (8 percent) preferred receiving a direct phone call for notification.

As a follow-up to these findings on provider perceptions and preferences of hospital-health center communication around transitions of care, the IHN is beginning a multistakeholder collaborative quality improvement project to create a discharge summary tracking system for CHC patients discharged from Barnes-Jewish Hospital. The project will include chart reviews to assess actual discharge summary receipt rates at CHCs before and after this quality improvement project.

Key Points:

- Transitions of care communication between hospitals and CHCs is perceived by health center providers and staff as being variable both in whether communication occurs

Figure 2: Number of Chronic Conditions by Cost Deciles of Missouri Inpatient and ED Patients in 2013



Source: FY2013 HIDI Inpatient and Outpatient Discharge Databases. N = 1,456,839

and in what clinical information is being received.
- Creating reliable systems across CHC and hospital settings that ensure the right information is communicated at the right time to community providers is important for the optimized handoff of patients across these settings.

Hospital Utilization and Chronic Health Conditions

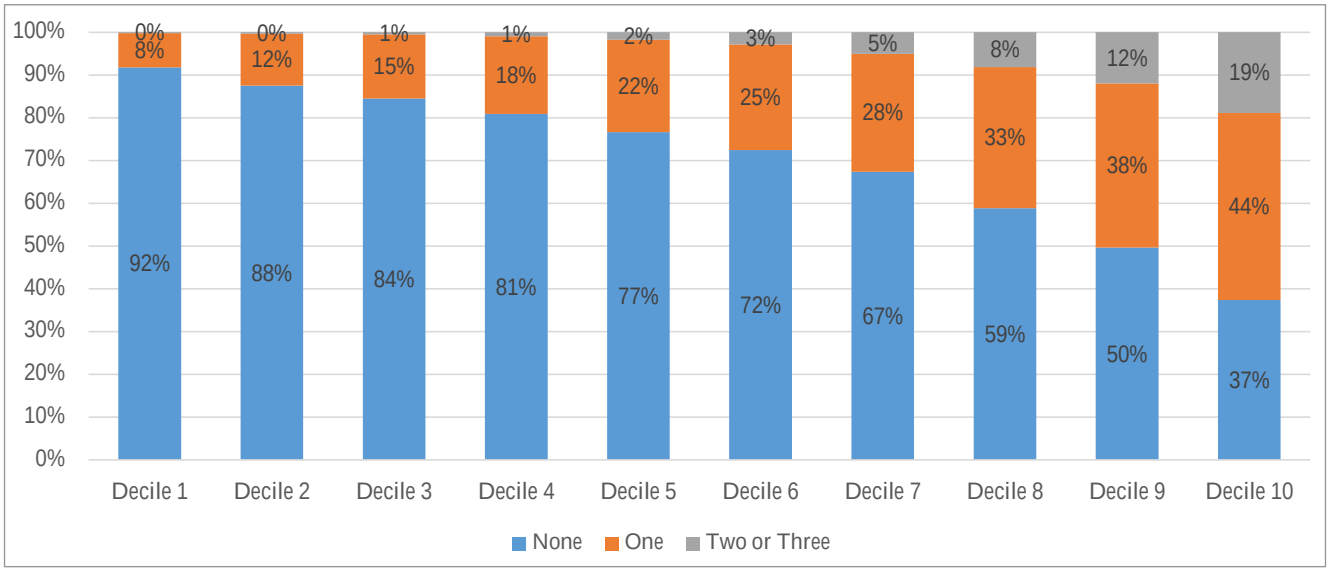
Health care costs associated with multiple diseases are additive.[xv] Patients who consume the most health care resources in terms of overall utilization and expenditures also tend to have multiple chronic health conditions. Patients with a complex set of multiple clinical comorbidities often need specialized care that addresses the interaction of all chronic conditions — approaching management of the diseases in isolation has shown to be less effective.[xv] For Medicaid patients nationally, 80 percent of high-cost beneficiaries have three or more chronic conditions.[xvi] In Missouri, across all hospital patients treated in an inpatient or ED setting in 2013, 93 percent of patients in the 10th cost decile had at least one chronic condition and nearly two-thirds had three or more different chronic conditions diagnosed during the year (Figure 2). By contrast, 86 percent of patients in the lowest cost group had no chronic conditions diagnosed during the year.

High-cost patients in Missouri also are more likely to exhibit behavioral risk factors that exacerbate chronic diseases and increase the probability of new diagnoses.[xvii] Sixty-three percent of the highest cost patients had at least one of the three risk factors detectable using hospital discharge data — smoking, alcohol use and obesity — and nearly 1 in 5 (19 percent) had two or more. Conversely, 92 percent of the lowest cost patients had none of the risk factors evaluated (Figure 3). Across all cost deciles in Missouri, the percent of patients with one or more chronic condition, or one or more risk factors, increases monotonically.

The most common chronic conditions for high-cost patients are hypertension and heart disease, with 72 percent and 65 percent of patients, respectively, in the 10th cost decile diagnosed during 2013 (Figure 4). [xviii] The top decile group had rates of heart disease 35 times higher than the bottom decile group and 3.8 times higher than the middle cost group. The largest relative inequalities in the prevalence of chronic conditions between high-, mid- and low-cost groups in 2013 were observed in stroke and liver disease. At 14 percent, high-cost patients were diagnosed with stroke at 416 times the rate for low-cost patients and 23 times the rate for patients in the fifth decile. Twelve percent of high-cost patients had liver disease (alcohol use also was significantly higher in upper cost deciles), which was 366 times the rate in the low-cost group and 25 times higher than the mid-cost group.

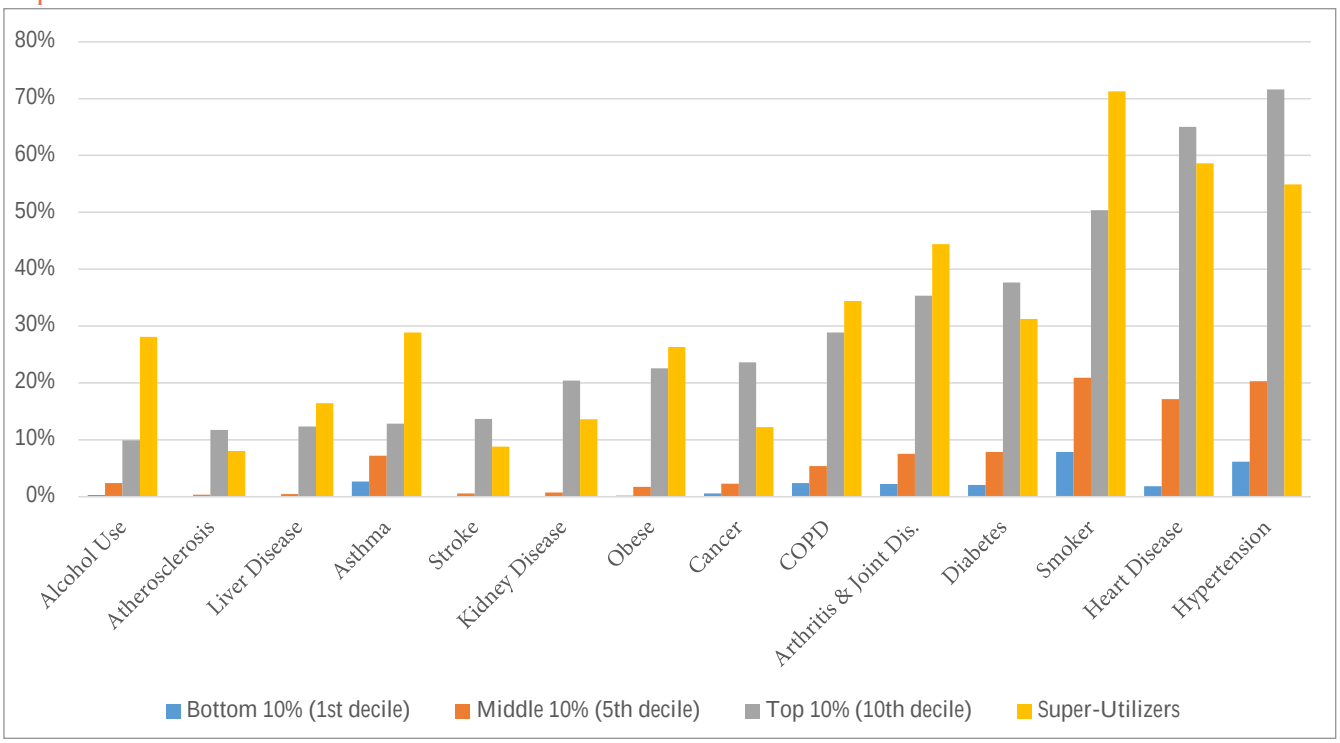
The majority of super-utilizers — individuals who visited an ED or were hospitalized 10 or more times in 2013 — are included in the high-cost group. Eight percent of the 145,684 individual patients in the 10th cost decile were classified as super-utilizers for this analysis

Figure 3: Number of Risk Factors (Smoking, Alcohol and Obesity) by Cost Deciles of Missouri Inpatient and Emergency Department Patients in 2013



Source: FY2013 HIDI Inpatient and Outpatient Discharge Databases. N = 1,456,839

Figure 4: Prevalence of Chronic Conditions and Behavioral Risk Factors by Missouri Inpatient and Emergency Department Patient Cohorts in 2013



Source: FY2013 HIDI Inpatient and Outpatient Discharge Databases. N = 1,456,839

(11,683 patients, 63 percent of the super-utilizer cohort). Compared to other patients in the 10th cost decile, super-utilizers had higher rates of liver disease, asthma, COPD and arthritis or joint disorders. They also were significantly more likely to smoke or use alcohol, and 26 percent were obese compared to 23 percent of other patients in the 10th cost decile.

Conclusion

Programs designed to intervene with hospital super-utilizers to reduce costs and improve outcomes are proliferating rapidly. [xvi] In addition to ensuring optimal transitions of care, understanding the drivers of excess hospital utilization is critical to improving health outcomes for super-utilizing patients. To learn more about opportunities to identify super-utilizers who visit your hospital and evaluate patients at risk of excess hospital utilization in the future, or to share your experiences in providing interventional care for these complex patients, please contact HIDI at hidihealthstats@mhanet.com.

Suggested Citation

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