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Improving transitions of care across the spectrum of healthcare delivery: A multidisciplinary approach to understanding variability in outcomes across hospitals and skilled nursing facilities

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Abstract

INTRODUCTION—Improving coordination during transitions of care from the hospital to Skilled Nursing Facilities (SNF)s is critical for improving healthcare quality. In 2014, we formed (*Improving Nursing Facility Outcomes using Real-Time Metrics*, INFORM) to improve transitions of care by identifying structural and process factors that lead to poor clinical outcomes and hospital readmission.

METHODS—Stakeholders from 10 SNFs and 4 hospitals collaborated to assess the current hospital and system-level challenges to safe transitions of care and identify targets for interventions.

RESULTS—The INFORM collaborative identified areas for improvement including improving accuracy and timeliness of discharge information, facilitating congruent medication reconciliation, and developing care plans to support functional improvement.

DISCUSSION—Hospital and SNF stakeholder engagement prioritized the challenges in patient transitions from inpatient to skilled nursing facility settings. Innovative solutions that address barriers to safe and effective transitions of care are critical to improving clinical outcomes, decreasing adverse events and avoiding readmission.

BACKGROUND

Transitions of care are critically important in the surgical population as approximately 1 in 7 patients are readmitted to the hospital after major surgery, and nearly 1 in 5 experience

adverse events (AEs) within 30 days of hospital discharge. It is estimated that half of postoperative AEs are preventable^{1,2} and poor “handoffs” from acute care to post-acute care have been shown to precipitate AEs.³ Readmissions for surgical patients are known to be principally due to emergence of new post-operative complications.⁴ Those patients with complex therapeutic regimens are particularly vulnerable to ineffective communication during transitions of care.⁵ Fragmentation between care settings for post-surgical patients may contribute to poor outcomes. For instance, as many as 25% of elderly surgical patients who are readmitted end up at a hospital other than the one where their surgery occurred.⁶ Improved collaboration between skilled nursing facilities (SNFs) and referral hospitals can reduce rehospitalization for surgical patients.⁷

Value-based care aims to improve quality at equal or reduced cost. Payers are aligning reimbursements to the quality of healthcare, thereby driving providers to adopt outcome-based healthcare delivery models. Hospital readmission is an important driver of healthcare costs and nearly a quarter of the 8 million patients admitted to SNFs each year develop AEs that lead to hospital readmission within 30 days.^{89–12} Increased pressure to minimize length of inpatient hospital stay has led to a growing role for SNFs in the care continuum during the recovery period following surgery. Progress in the quality of surgical care should focus on preventable AEs and readmission from those patients requiring SNF care in the perioperative period.

Interventions for improving transitions of care for complex patients exist and often target hospital readmissions reduction.^{3,10} The Washington State Healthcare Authority’s (WSHA) Care Transitions Toolkit outlines 13 recommendations aimed at improving care transitions, including proper discharge documentation and follow-up with specialty care.¹³ Despite these “best practice” guidelines, barriers exist in their effective implementation. To better understand effective approaches to implement best practices in transitions of care and guideline implementation, in January 2014, we developed a collaborative called *Improving Nursing Facility Outcomes using Real-Time Metrics (INFORM)*. INFORM includes representation from SNFs and hospitals with leadership from geriatrics, palliative care, surgery, pharmacy, and nursing as well as clinical and administrative leadership. Using the WSHA toolkit as the framework for identification of best practices for transitions of care, the INFORM collaborative aimed to identify and prioritize strategies to effectively implement published recommendations for improving transitions of care.

METHODS

We used a modified Delphi approach to engage the INFORM collaborative in generating consensus on priority approaches from the WSHA Care Transitions Toolkit recommendations for improving transitions to post-acute care. The Delphi approach was used, given support for its use in healthcare settings when consensus is needed around issues of limited clarity or evidence.¹⁴ In the case of this study, while there was clear evidence for process gaps in transitions of care, recommendations for system-wide approaches to measurably impact transitions of care were neither agreed upon nor clearly understood by the stakeholders from the hospitals and SNFs. The members of the INFORM collaborative offered robust and diverse content expertise in the practical challenges that span the

continuum of care transitions; therefore, we invited all members to participate in the prioritization study.

We completed a two-step iterative process to establish priorities among the INFORM members. The INFORM collaborative includes stakeholders from SNFs and acute care hospitals representing a variety of roles (nurses, providers, social workers, administrators, and researchers) and clinical specialties (internal medicine, surgery, palliative care, and geriatrics). For the first Delphi round, a survey was developed that asked members to rate the 13 WSHA recommendations in terms of feasibility of implementation and importance for improving care transitions along a Likert scale rating. This survey was distributed to collaborative members over a two-week period prior to a planned collaborative meeting and respondents maintained anonymity in their responses. Scores for importance, feasibility, and then combined (importance and feasibility) of each of the 13 WSHA toolkit recommendations were averaged across survey responses and reviewed by the study team. The survey results were summarized and shared with the INFORM collaborative during an in-person meeting.

For the second Delphi round, the team reviewed the combined importance and feasibility scores and identified a cut point based on the spread of survey responses and level of agreement among respondents. The four highest-rated recommendations were presented to the collaborative for the second round of prioritization, with the goal of generating consensus on the highest priority recommendations (see Table 1). Members were asked to force rank the importance and feasibility of the four remaining recommendations during the collaborative meeting. After the second prioritization round was completed, a facilitated discussion on the two items of highest priority provided insight into the nature of the care transition problems from multiple stakeholder perspectives. For instance, despite nearly 100% completed discharge medication reconciliation forms, we asked stakeholders to identify gaps leading to medication communication errors in surgical and complex medical patients transitioning to SNFs. This discussion led to the development of a series of case studies from collaborative members with a particular focus on the SNF issues and input. INFORM team members then presented those case studies to clinical (i.e. pharmacy, surgery, medicine, nursing) and administrative stakeholders throughout the hospital system to validate themes and identify targeted areas for improving the effectiveness of the quality improvement initiatives.

RESULTS

Ten collaborative members completed the survey providing perspectives from physicians, nurses, and administrative roles. The recommendations that were rated as most feasible (average score 4.5 or above out of a total of 5, or 90% agreement among group members) were “discharge communication – verbal handover” and “medication reconciliation.” Recommendations rated as most important for improving transitions were “discharge communication – verbal handover,” “medication reconciliation,” and “outpatient provider communication.” When the results were combined, discharge communication and medication reconciliation remained the two recommendations that had the highest combined (feasibility and importance) score (each scoring 4.6 out of a total of 5). During the second

round of prioritization, “discharge communication – verbal handover” was the highest prioritized recommendation by the group (Table 1).

Clinical cases highlighted communication gaps in transitions of care that exist despite the current recommendations from hospitals to SNFs (Table 2). Complex wound care and ostomy management was cited as a common challenge for SNF clinicians. These concerns included having appropriate equipment and wound care resources available at the time of patient arrival to the SNF and lack of understanding among SNF clinical care teams in interpretation of written instructions for complex wound care. Incomplete documentation of goals of care established during hospitalization was identified as a gap for patients with significant morbidity and high mortality risk on transition to SNFs. SNF teams described poor expectation setting on behalf of the hospital team for surgical and trauma patients, which leads to patient frustration in their length of SNF stay, and perceptions of realistic expectation of functional recovery during SNF admission. Gaps beyond completion of medication reconciliation were identified as being critical for improving medication management during transitions of care. These included the need for improved communication around the titration of medications that are frequent in the perioperative period, such as pain management and diuretic medication for perioperative heart failure patients.

DISCUSSION

The INFORM collaborative in Washington State is a unique model that has brought together SNFs and hospitals to develop effective strategies aimed to improve transitions from hospitals to SNFs. Standardization of elements in the discharge summary, timeliness of information at the time of patient encounter, improved accuracy of care recommendations and medication lists, better communication infrastructure and involvement of patients, families, and caregivers in the care planning can improve the transition of care.^{15–21} However, effective implementation and measurements of the fidelity of these tools have not been not adequately examined.

Based on this prioritization and qualitative study, we identified critical gaps in communication and implementation across systems that were not previously understood through the traditional independent evaluation processes. SNFs are a critical component of the healthcare system for a vulnerable patient population. Despite recommendations and toolkits for optimizing transitions of care, there is a lack of understanding how to translate these recommendations into meaningful improvements in the process of care transitions. The healthcare industry is under pressure to improve performance, but quality metrics and variability in outcomes in SNFs have not been examined with the same rigor as inpatient medicine. For guidelines such as the WSHA toolkit to be successful at improving clinical outcomes and decreasing preventable readmissions, hospitals and SNFs must collaboratively identify gaps and improvements that are responsive to their respective contextual factors and implementation needs.

Eliciting the perspective of both SNFs and hospitals may help identify different domains and factors associated with adverse events and preventable readmissions. The different

viewpoints identify unique opportunities for improvement and highlight the multifactorial nature of the factors underlying hospital readmissions that are often missed when entities work in silos.²² When surveyed, families and patients emphasize the importance of teaching and care-member teamwork in smoothing the transition from the hospital after surgery.²³ Our SNF stakeholders identified medication communication gaps that were common in the surgical population, including adequate pain control at discharge and expectations on titrating pain medication, titration of perioperative cardiac medications, and expectations on restarting previous home medications. Care coordination and inter-provider communication are critical to minimizing the risk for hospital readmission,²⁴ and bi-directional standardization for the design and implementation of communication strategies is a key gaps for hospital and SNF systems.

By 2018, 50% of Medicare Fee-For-Service (FFS) payments will be tied to alternate payment models such as Accountable Care Organization (ACO) shared savings agreements, bundled payments, and risk sharing arrangements, while 90% of Medicare FFS payments will be tied to quality as measured by readmission rates, infection rates, and patient experience. Commercial payers and state-sponsored health programs are also shifting to value-based care models. These changes impact providers throughout the care continuum. Taking a collaborative approach has allowed for meaningful exchange of critical gaps that exist despite best-practice recommendations for transitions of care. A collaborative approach in our healthcare system is required for the assessment of gaps, design of interventions, implementation, and evaluation of optimal transitions of care processes needed to drive system level change to improve quality in the post-acute care setting.

CONCLUSION

Coordinated strategies for improving transitions of care are central to improving outcomes for patients, minimizing the financial impact of alternative payment models, and enhancing quality of care in patients.

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Table 1

Combined ratings of importance and feasibility

WSHA Toolkit Component	Average Rating
1. Discharge communication – verbal handover/send discharge summary	4.6
2. Medication reconciliation	4.6
3. Scheduling the follow-up appointment	4.35
4. Follow-up appointment – Primary Care visit	4.26
5. Outpatient provider communication	4.25
6. Social/Resource Barriers assessment	4.2
7. Patient and family/caregiver engagement and teach back	4.15
8. Advanced care planning at the end-of-life	4.15
9. Readmission risk assessment	4.1
10. Community forum	4.0
11. Plan of care	3.95
12. Follow-up phone call	3.95
13. Feedback to hospital for improvement	3.95

WSHA Toolkit, Washington State Hospital Association Reducing Readmissions: Care Transitions Toolkit

Table 2

Identified gaps and targets for process improvement in effectiveness of current elements of the WSHA toolkit.

WSHA Toolkit Component	Average Rating Current Gaps
1. Discharge communication – verbal handover/send discharge summary	The discharge summary is frequently not available on arrival to SNF. The person-to-person handoff is helpful, but not the current standard for most transitions of care. Discharge communication does not outline the full care plan for the next anticipated steps in recovery and details on wound or ostomy management is often missing or incomplete.
2. Medication reconciliation	Prescriptions are often missing critical information that is required by SNF regulations, which can cause a delay in patients getting prescribed medications during initial transition period. Prescriptions lack description of anticipated medication titration (such as perioperative acute pain management and/or diuretics for heart failure).
3. Scheduling the follow-up appointment	Follow up appointments are frequently not scheduled and/or the status of scheduling is not documented. Patient and family are unaware of follow up appointment plan.
4. Follow-up appointment – Primary Care Provider (PCP) visit	SNF care teams are unsure if PCP follow-up scheduled or recommended, and unsure of who to call to coordinate care.
5. Outpatient provider communication	Primary care providers and other outpatient providers may not be notified of hospitalization or hospital course and the need for follow-up actions on their behalf.
6. Social/Resource Barriers assessment	Social and resource barriers are not thoroughly assessed during the discharge readiness and hand-off process. SNF care teams are then not adequately prepared to manage complex needs.
7. Patient and family/caregiver engagement and teach back	Patients and families are not engaged in the PAC selection process early enough and not prepared for the transition to a new type of care setting.
8. Advanced care planning at the end-of-life	POLST form is frequently missing on transition to SNF. Inpatient palliative care documentation is not routinely sent to the next care provider team.
9. Readmission risk assessment	Current readmission risk identification tools lack sensitivity and specificity, and are used irregularly (often after discharge instead of as part of the discharge planning process).
10. Community forum	There are limited opportunities to explore care transition with all stakeholders involved.
11. Plan of care	PAC facilities are not aware of the longer term care goals for patients. The discharge summary is only focused on care at time of discharge, but not the expected course and return to baseline level of function. Goals of care conversations are not routinely included in discharge documentation.
12. Follow-up phone call	The follow-up phone call is rarely completed for patients discharging to SNFs. Follow up phone calls are frequently completed by staff (hospital and SNF) that are not familiar with the patient or the specific needs of the post-discharge setting.
13. Feedback to hospital for improvement	There is no clear feedback mechanism to communicate real-time challenges and gaps in patient transition of care for those admitted to SNF. The hospital assumes successful transition of care and is unaware of most PAC adverse events that do not lead to index hospital readmission.