Implementing PODS (Patient Oriented Discharge Summary) in an acute medical urban health setting in Vancouver, Canada

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Implementing PODS (Patient Oriented Discharge Summary) in an acute medical urban health setting in Vancouver, Canada

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Abstract
The transition from hospital to home or community is a vulnerable time for patients and families, who face risks associated with misunderstanding instructions about medications, self-monitoring and when to seek emergency care. The quality of the discharge process can have a significant impact on patient confidence, overall patient experience, ability to manage health at home, and hospital readmission rates. Patient Oriented Discharge Summary (PODS) is a standardized form and set of process changes, utilized to overcome communication barriers faced at discharge. We implemented PODS in two Acute Medicine units of a tertiary care hospital in western Canada and used a mixed-methods approach to evaluate the four process changes (PODS form, use of teach-back, engagement of caregivers in discharge teaching, follow-up phone calls). Evaluation showed that 60% of patients received PODS and 87% found the form helpful. There was a large increase in the percentage of patients who felt adequately prepared at the time of discharge, and a 10% increase in the number of patients who rated their overall hospital experience positively. Healthcare providers reported that using PODS they were more confident that patients were adequately prepared to return home. The update of PODS on the implementation units has been sustained at 60% for 18 months. Implementation of the PODS form and process can be accomplished with an interdisciplinary team, leadership support and by working closely with Patient Family Partners. PODS can improve the discharge process even in the complex urban acute medical environment in ways that offer wide-reaching benefits.

Keywords
Patient experience, discharge planning, unplanned readmission, co-design, PODS

Introduction and Background
The transition from acute inpatient hospital care back to home or community is a vulnerable time for patients and families, who face risks associated with misunderstanding instructions about medications, self-monitoring and when to seek emergency care.1-5 The quality and timing of the patient discharge process and discharge teaching can have a significant impact on patient confidence, overall patient experience, ability to manage health at home, and hospital readmission rates.1,3-7 In Canada, the readmission rate for adult acute inpatient care is 9.4% (within 30 days of initial discharge), costing an estimated CA $2.1 billion annually and accounting for 11% of all acute hospital costs. While not all readmissions are avoidable, research suggests that between 9% and 59% could be prevented.8,9 Clear communication at the time of discharge is vitally important; however, there can be many barriers to communication, including limited time allotted to health care providers (HCPs) to provide discharge teaching, patients’ lack of understanding of medical terms, patients’ limited language fluency, and patients and family caregivers who may be feeling too stressed at the time of illness to absorb information.10

Although most hospitals have standard discharge forms in place, these forms are often inconsistently used.1,10,11 In addition, many discharge tools are primarily designed for provider-to-provider communication and contain medical jargon. This limits their usefulness as communication tools for patients and their caregivers and is aggravated when questions arise after discharge as patients and caregivers are struggling to manage care at home.1
PODS in acute care, Black et al.

Patient Oriented Discharge Summary (PODS) is a simple, standardized form and set of process changes that were co-designed by patients and HCPs, originally developed and tested by the University Health Network Experience Lab (UHNEL) in Toronto, Ontario, Canada. PODS has been shown to improve the patient and caregiver experience of transitions from hospital to home/community; improve the confidence of patients and caregivers to manage their health as they transition to home; improve the HCP experience of care; and reduce hospital readmissions. The four-part PODS process includes a discharge form, engagement of caregivers in discharge teaching, use of teach-back principles during discharge teaching, and follow-up contact with patients after discharge, incorporating strategies that have been shown to be effective in improving patients’ overall discharge process and reducing hospital readmissions.

Since its inception, the PODS form and processes have been piloted in a variety of healthcare settings, showing notable improvements in reported patient understanding of discharge instructions, medications, and the need for follow-up appointments. Additionally, PODS has resulted in improvements in patients’ experience and satisfaction scores related to the discharge process, including improved confidence in managing their own health. Importantly, evaluations of PODS have shown that over 80% of HCPs felt PODS did not add to their workload, noting instead that PODS adds structure to the discharge conversation and increases consistency and efficiency when communicating important information. Evaluations of PODS have also shown reduction in both hospital readmissions and unscheduled healthcare visits.

The development of PODS offers an example of a growing trend for researchers and HCPs to engage with patients, families, and designated caregivers in the co-design of healthcare tools, and for patients and families to participate as members of teams conducting healthcare research and improvement projects. The benefits of co-design with patients and families are numerous, including the promotion of a feeling of collective ownership among the patients/families, HCPs, and researchers.

Although promising, the PODS process has not been tested in acute medicine inpatient hospital settings serving complex patient populations with multiple intersecting determinants of health. We implemented PODS in two Acute Medicine units of an urban tertiary care hospital. These medical units serve a complex patient population, including a high percentage of patients who are low-income, marginally housed or homeless, have a substance use disorder, and/or experience challenges communicating in English. These medical units also serve a high percentage (12.8%) of patients who leave the hospital against medical advice (AMA). This rate of AMA is almost 10 times higher than the Canadian average of 1.3%, and has been correlated strongly with patients who live in lower-income neighbourhoods and experience substance use disorders, both of which can present challenges in providing care and preparing patients for discharge. Additionally, many newly graduated Registered Nurses (RNs) are employed on these Acute Medicine units. (Note: the term “AMA” is being replaced in some organizations with the term “patient-initiated discharge” to recognize the fact that some patients may choose to leave before their planned discharge in order to meet other priorities in their life or return to their home environment. In this paper, we use the term “AMA” because we are citing works that utilize this term).

The unique contribution of this paper to the study of PODS is threefold:

1. To report on the implementation of PODS in the complex environment of two inpatient Acute Medicine units in a large, urban, tertiary care hospital in Vancouver, British Columbia, Canada;
2. To report on the impact of PODS in the urban healthcare context on patient/caregiver experience, healthcare provider experience, and hospital readmission rates;
3. To highlight learnings from the involvement of two Patient Family Partners (PFPs) as members of the project team, both volunteers with lived experience in the health care system.

Methods

The PODS form and process were trialed on two Acute Medicine units at an urban tertiary care hospital in Vancouver, British Columbia, Canada, for a six-month period from May to October 2019. Using a mixed-methods approach the study was planned, implemented, and evaluated by an interdisciplinary team. Plan-Do-Study-Act, an iterative, four-stage problem-solving model used for improving a process or carrying out change, was used to guide testing of the UHNEL set of four process changes (the PODS form, the use of teach-back, engagement of caregivers in discharge teaching, and follow-up phone calls) in the urban Acute Medicine inpatient setting. The Standards for Quality Improvement Reporting Excellence (SQUIRE V.2.0) guided the writing of this manuscript.

The interdisciplinary project team consisted of two team leaders (who oversaw the entire project, including writing the funding proposal, developing the work plan, forming the interdisciplinary project team, writing and presenting the project findings), four unit-level nursing leaders, a quality improvement consultant, two allied health professionals (social work and occupational therapy), and two PFPs. The project also had strong support and...
PODS in acute care, Black et al.

sponsoring from senior leaders in the organization. A subcommittee of the team met to guide the adaptation of the UHNEL PODS form to meet organizational specifications. Three members of the team participated in “shadow shifts” on the Acute Medicine units to better understand the current discharge process and to gain additional insight from staff about workflow on the two units. Team leaders engaged with physician leadership and organizational senior leaders to build support for the project. The project team developed an implementation plan with timeline and expected milestones and was supported by the organization’s communications department to establish project branding and recognition, including feature stories in the organizational newsletter. Team leaders held information sessions on the implementation units to promote the PODS project. A unit RN “champion” was hired to provide elbow-to-elbow support to RNs and allied health professionals for two weeks as they became familiar with the PODS form and process. Both the PFPs on the project team shared their personal stories of hospital discharge with staff, including one PFP who visited the implementation units during staff meetings, to encourage uptake of the PODS form and process. Midway through the project, gift cards were presented to staff who through chart audits were found to have filled in the PODS form completely; the gift cards were provided as an incentive to staff on the units to continue use of PODS.

PODS form
Introduction and use of the PODS form itself comprised the first component of the PODS process. Unit Coordinators printed the PODS form for each patient at the time of admission to the unit, added basic information to the form, such as the patient’s admission diagnosis, primary care provider, etc., and placed all PODS forms in a labelled binder. Clinical Nurse Leaders encouraged allied health staff to add discharge instructions to the PODS forms during daily interdisciplinary Team Care rounds. RNs, who lead most discharges on the intervention units, were requested to copy and review the PODS form with every patient at the time of discharge and to provide a copy for the patient to take home. Patients and their family members were also encouraged to add their own notes to the PODS form, if they wished.

Teach-back methodology
The use of teach-back methodology, asking patients to repeat what they have understood, was the second component in the PODS process and was already in use on the implementation units. During the trial, Clinical Nurse Leaders reinforced to RNs the importance of using teach-back principles with patients and caregivers during discharges.

Involvement of caregivers
The third component in the PODS process was involvement of family members or other informal caregivers (where present) in the conversation at the time of discharge teaching. The importance of caregiver involvement was emphasized to RNs leading discharge teaching.

Post-discharge follow-up
The fourth component of the PODS process was follow-up phone calls to patients after their discharge from hospital. These calls were made by the quality improvement consultant on the project team within a month of discharge, following a structured format, and were attempted for patients who received a PODS form over a two-month period of time (Sep-Oct 2019).

Completion rates of the PODS form, teach-back methodology, and engagement of caregivers were measured using chart audits, observation of regular discharges on the units, and review of checklists that RNs were requested to complete for each discharge. Project team members audited charts for all patients discharged for a period of two months, utilizing a data collection tool for consistency. Additional data was collected during the chart audits, including the number of patients who left the unit AMA (thereby eliminating the opportunity to use the PODS process). In addition, a survey being conducted by the British Columbia Office of Patient-Centred Measurement 24 during the same time period as the PODS trial, Sept 2019 to March 2020, was leveraged to invite every patient discharged from the two implementation units to provide feedback about their experience of care during their hospitalization. One question was added to this provincial survey to ask patients discharged from the two study units if they found the PODS form helpful. The provincial survey also included questions about ratings of overall hospital experience. Three questions were asked during the post-discharge follow-up telephone calls with patients to determine: 1) How the patient was doing; 2) If the patient had any questions about the information on their PODS form; 3) If the patient found the PODS form helpful. Readmission rates were calculated by the organizational Decision Support team.

The experience of HCPs on the implementation units was also evaluated through anonymous surveys conducted at three time points: at baseline, midpoint, and nine months after the implementation of PODS. The surveys, which included Likert-scale and open-ended questions, were developed and validated by the Canadian Foundation for Healthcare Improvement25 to ask about HCPs’ experiences with PODS. The baseline survey asked for opinions on the discharge process prior to the implementation of PODS. Additionally, team leaders conducted interviews with four unit leaders following implementation to solicit their ideas for sustaining PODS beyond the trial.
Quantitative and qualitative methods were used to analyze data. Chart audit results, provider survey results, and patient survey data were analyzed and reported as percentages, with patient survey data plotted on a run chart. Patients’ comments and suggestions provided as free text with their completed provincial survey responses, and comments reported by patients/caregivers during post-discharge follow-up telephone calls, were reviewed for common themes by team leaders and the quality improvement consultant. Provider survey comments added as free text with completed surveys were also reviewed for common themes. The results from the post-discharge telephone follow-up calls included the number of patients who were called, the number of patients reached, and the number of caregivers who provided information. Data collected during telephone interviews was reviewed and analyzed to determine common themes.

Results

Chart audits conducted by the team leaders on 126 charts showed that approximately 60% of patients discharged from the implementation units received a PODS form (after removing the average 12% of patients who left the units AMA). Data from the provincial patient experience survey were consistent with the chart audits, confirming that 60% of respondents discharged from the implementation units recalled receiving a PODS form on discharge. Provincial survey results confirmed that this rate of uptake has been maintained for 18 months. Of the 187 patients surveyed via the provincial survey, 114 were able to comment on the PODS form; 88% of those (100/114) reported that PODS forms were at least ‘partly’ helpful, while 67% (76/114) indicated PODS was ‘quite a bit’ or ‘completely’ helpful.

Table 1. Responses to select questions from the two healthcare provider surveys conducted during implementation of PODS

<table>
<thead>
<tr>
<th>Question</th>
<th>September 2019 (n=31)</th>
<th>Spring 2020 (n=45)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PODS has added to my workload.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Yes)</td>
<td>93</td>
<td>63</td>
</tr>
<tr>
<td>PODS helps me be more effective in my job.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Agree or Strongly agree)</td>
<td>29</td>
<td>47</td>
</tr>
<tr>
<td>Using PODS, I am more confident that patients and their caregivers are</td>
<td></td>
<td></td>
</tr>
<tr>
<td>adequately prepared to return home. (Agree or Strongly agree)</td>
<td>53</td>
<td>57</td>
</tr>
<tr>
<td>Overall, I am satisfied with the discharge process.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Agree or Strongly agree)</td>
<td>41</td>
<td>49</td>
</tr>
</tbody>
</table>

The provincial survey also showed that in response to the question “Before you left the hospital, did you feel adequately prepared for your discharge?” 79% of patients (110/140) discharged from the implementation units post-PODS project reported ‘quite a bit’ or ‘completely’. This compares to scores ranging from 38% to 62% in response to similar questions on previous 2016/17 provincial surveys for the same units.26

Responses to the provincial survey question “On a scale of 0 to 10, what was your overall experience with your hospital visit?” showed that of 132 patients discharged from the implementation units between September 2019-April 2020, 60% rated the experience as 9 or 10. This was improved over the 2016/17 provincial patient experience survey, in which only 50% of patients discharged from the same units reported hospital visit experiences as rating 9 or 10.26

Follow-up phone calls were attempted for 42 patients discharged with PODS in September and October 2019. Contact was made with twenty-four patients and five family members; calls ranged in length from 2 to 21 minutes. Eight requests for assistance were resolved, and patient and family member comments about the follow-up calls and the care provided in hospital were overwhelmingly positive. Examples included statements that the PODS form provided a good reminder of next steps and upcoming appointments: “The form was really good and had key questions about what to do at home, with reminders about what was done in hospital.”

HCPs, including RNs, physicians, unit coordinators and allied health professionals, working on the implementation units were surveyed at baseline and at two points during implementation of PODS: September 2019 (n=31) and March-May 2020 (n=45) (see Table 1). More than half of
the HCPs surveyed reported that since using PODS they were more confident that patients and their caregivers were adequately prepared to return home. During implementation, the percentage of HCPs reporting that PODS helped them to be more effective in their job increased from 29% to 47%, while the percentage of HCPs reporting that PODS adds to their workload decreased.

HCPs’ comments in response to open-ended questions on the surveys included a stated belief that PODS benefits patients’ “continuity of care in the community”; ensures “appropriate steps are taken for discharge”; and provides a helpful “plan” for patients. Furthermore, comments indicated that PODS benefits HCPs themselves in that it ensures items are not “missed” at discharge and that reviewing the PODS form with patients and caregivers offers opportunity for discussion to “clarify” details and “reinforce” important information. Interviews conducted with unit leaders following implementation emphasized a belief that while PODS adds to the workload of the entire team, its “impact on a successful and seamless discharge is significant.”

Metric analysis explored rates of “readmission within 30 days” for patients discharged from the implementation units during the time frame March 2018 to January 2020 after excluding patients who were deceased, left AMA, or ‘did not return from pass’. From the denominator population of 2,850 patients, readmission and admission back to any regional facility for any diagnosis was counted as readmission if it was within 30 days of discharge date. Monthly average by age group shows the 40-49 age grouping has a lower readmission average overall on these units, and the 50-59 age grouping shows an overall downward trend. Post-PODS implementation data showed a decrease in the readmission rate for the 50-59 age group on the study units with only two data points (out of 21) above the historical average of 25%.

**Discussion**

Evaluation of the implementation of the PODS form and process in Acute Medicine in the urban health context found that with leadership support, close involvement with point-of-care HCPs, and PFP engagement, transition to a new discharge process is possible, and brings practical benefits to patients and families. In our experience, PODS can be successful despite the complexities inherent in an urban medical unit, such as high percentage of newly graduated RNs, high rates of patients who leave the hospital AMA, and a patient population that faces multiple socio-economic challenges. The uptake of PODS on the implementation units has been sustained at 60% over a period of 18 months. As noted, although not all patients are available for discharge teaching, because some leave before a planned discharge, unit-level leadership can play a vital role in reminding HCPs to use the PODS form and process with every possible discharge until PODS becomes a habit with every provider.

Our PODS implementation project benefited from the support of a senior leader in the organization, whose engagement as Executive Sponsor gave the project credibility within the organization and emphasized the importance of tackling the topic of discharge teaching and planning. Members of the organization’s Senior Leadership Team were also committed to improving the discharge experience for patients, and their support for the PODS project was instrumental in keeping the project from stalling at various points. Senior organizational leaders provided strong support for sustaining and spreading PODS across the organization. The point-of-care leaders on the implementation units played pivotal roles in encouraging and reminding staff at daily interdisciplinary Team Care rounds and at morning check-in meetings to complete the forms for upcoming discharges. The Nurse Educators were also effective in reminding staff to complete PODS forms and orienting new staff to the PODS form and process. The Patient Care Manager’s presence on the project team lent additional support, as she was able to communicate regularly to staff about the project and remind them of the importance of using PODS.

The time team members spent in shadow shifts on the implementation units enhanced the team’s understanding of the context of discharges on those units, and enabled team leaders to adjust the implementation process as needed, including, for example, changing the location of the PODS forms to improve form completion rates by allied health staff. Time spent on the units also helped the implementation team understand the challenges faced by many of the patients on those units, including precarious housing, poverty, and substance use, all of which have been correlated to leaving the hospital AMA.8-21,22 These challenges have an impact on staff as well, and some RNs reported feeling discouraged that many patients don’t stay to participate in discharge teaching.

Although the high rate of patients leaving AMA from these units is a problem that has not been solved by the PODS project, the project raised awareness amongst all HCPs about the barriers faced by the patients on units serving an urban population in a tertiary setting, such as substance use disorders. When patients are available to participate in the PODS process, benefits of clarifying and making more explicit their follow-up appointments with community health services, their medications, and other discharge instructions were noted, thus smoothing the transitions for these patients and their families from hospital to home.
Over the course of the project there was a notable increase in the number of HCPs who felt that PODS helped them to be more effective in their job, as well as an increase in the number of HCPs who felt that PODS improves patient and family preparedness at the time of discharge. This HCP confidence in the usefulness of PODS was vitally important in sustaining the adoption of PODS on the implementation units. There was also an encouraging decrease over time in the number of HCPs who felt that PODS added to their workload, indicating that as HCPs became accustomed to using the PODS forms and process, there was less time needed to complete the forms and conduct the teaching. Although not specific to the complexity of the patient population served on these units, HCP comments on surveys indicate there remains a high level of frustration that PODS forms are incompletely filled out by colleagues who are planning the discharge, and perceived duplication of discharge plans. Unit leadership is continuing to address these challenges as they work to sustain the use of PODS. A positive finding was that the high percentage of newly graduated RNs on the Acute Medicine units did not seem to be a disadvantage in implementing PODS, and may have offered benefits, as new staff did not have entrenched discharge planning habits to change.

A small reduction in the rate of hospital readmissions was demonstrated following implementation of PODS. While this reduction may not be directly related to the use of PODS or to PODS alone, it is encouraging that the reduction in readmissions occurred over the same time period as the PODS implementation project.

Most importantly, a large majority of patients found PODS helpful, and the notable increase in the number of patients from the implementation units who felt adequately prepared at the time of discharge was encouraging. Finally, patients’ overall ratings of their hospital experience increased during the PODS project time period. The PODS form, along with the use of teach-back during discharge teaching, the involvement of family caregivers in the discharge teaching, and the follow-up phone calls to patients, combined to enhance patients' overall hospital experience on the two units using PODS. These encouraging improvements have led to an organizational commitment to sustain the use of the PODS form and process, as well as a commitment to the spread of PODS to other programs in our organization.

Additionally, the PFPs contributed to the re-design of the PODS form to fit our organizational requirements, and their presence at project team meetings was an ongoing reminder to the whole team that improving the patient experience was the fundamental goal of the project. The PFPs encouraged the team to continue making post-discharge follow-up phone calls to patients, following the two-month trial period, emphasizing the importance of this contact for patients and families. To continue to bring the patient/family voice to the staff, signs were posted on the implementation units with quotes from patients, gleaned during follow-up phone calls, stating how much they appreciated the care they received and the PODS forms. The signs featured a variety of patient quotes, under the heading “PODS is making a difference.” See Figure 1. Unit leaders told us that these signs were helpful.
in encouraging staff to continue using PODS and reported comments from staff such as “It’s nice to know, as we don’t often hear what happens after patients leave.”

Conclusion

The quality of the discharge experience from hospital to home or community is a major driver of patient experience, patient safety and hospital readmission rates. Communication at the time of discharge is a vital component of a safe discharge process, and better tools and processes are needed to enhance communication and support patient/family confidence at the time of discharge following acute care inpatient hospitalization. As healthcare teams strive to improve the discharge process so that patients and families feel confident and supported during this important transition, PODS provides a model that is well-received by patients, families and HCPs. Our experience shows that implementation of the PODS form and process can be accomplished by an interdisciplinary team with leadership support and by working closely with Patient Family Partners. The PODS form and process are easy to understand and to implement, and adaptable to a variety of healthcare settings. Further, our experience showed that even in the complex urban acute medical environment, PODS can improve the discharge process in ways that offer wide-reaching benefits.

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