1.0 Summary

Ontario’s Avoidable Hospitalization Expert Panel identified poor communication at discharge as an important care gap, with the following root causes: Patients do not understand medical terms, are not fluent in English, cannot memorize verbal instructions, and are too stressed at time of illness to absorb information.\(^1\)

*Patients First*, Ontario’s action plan for health care commits to putting people and patients at the centre of the system by focusing on putting patients’ needs first. The Patient Oriented Discharge Summary (PODS) tool and process was co-designed with patients and caregivers to ensure it met the needs of patients and their families, as well as with health care providers to ensure its usability and feasibility. PODS is a simple template geared to the patient. Following the co-design phase, PODS was implemented through a process of rapid prototyping and local adaptation in 8 Toronto-area hospital departments in a variety of settings spanning adult, pediatric, rehabilitation, acute, and surgery. Results showed significant improvements in patient and provider experience.\(^2\) PODS is now ready for large-scale spread. In this quality improvement implementation and evaluation, our goal is to sow the seeds for spread in each of the 14 LHINs, with 25 hospitals across all of the LHINs implementing PODS and becoming local exemplars to encourage further spread in the subsequent (post-ARTIC) phase. Throughout the implementation, we will use aggregate data and anonymous surveys to evaluate impact on organizations, staff, and patients.

2.0 The Intervention

PODS is a simple template that was co-designed with many patients and caregivers with the goal of making sure patients get information at discharge in a way that is meaningful to them. It is geared to the patient and does not replace the traditional summary for the primary care provider. The PODS intervention has three key components: (1) Content – the template contains five sections for information that is actionable and useful for patients and their families (medications, changes to daily activities and diet, follow-up appointments, resources for patients and families, and expected and worrisome symptoms to watch out for after leaving hospital); (2) Design - The PODS tool uses plain language, large fonts, pictograms, and includes white space for patients to take notes, and is available in 15 languages; and (3) Process – the PODS is to be filled together with the patient at the time of discharge. It has built in features that guide the process such as checkboxes to ensure the medication list is reviewed with the patient and that patients know whether or not their appointments have been booked for them, spaces for phone numbers, and a place for the patient and provider to sign. Other guidelines in the PODS process include using teach-back, going through the PODS with the patient and their family, and providing multiple copies for the patient and caregiver to take with them. Perhaps even more important is that the mere existence of this simple tool nudges staff to take the time to explain things so that patients/caregivers feel confident about their abilities for self-management when at home. Through the experience of 8 early adopter hospitals who implemented PODS in 2015, we have refined the tool and established a set of best practices related to local process changes to ensure that discharges are patient-centered. This has all been packaged into a toolkit, available at [http://pods-toolkit.uhnopenlab.ca](http://pods-toolkit.uhnopenlab.ca). All participating hospitals will be adopting the PODS tool and making the
necessary practice changes, so that patients experience a PODS process of going through their discharge instructions and go home with a PODS that contains the appropriate content and design.

PODS improves current practice by providing structure to discharge communication, focuses the discussion on information deemed to be important and actionable for patients, and patients leave with a simple, plain language and usable tool. Using PODS, patients and their family consistently receive information they need to know, and providers have a template to structure the discharge conversation, making it more efficient to get the most critical information across.

3.0 Research Evidence

PODS improves the patient experience of discharge by ensuring that important information for their care at home is communicated to them in a way that is useful and actionable. The PODS intervention is comprised of content, design, and process features which were informed based on previous evidence and in co-design with patients and caregivers. A systematic review of the literature demonstrated engaging patients through the use of media, visual aids or when providing discharge instructions improves their comprehension up to 3 months following discharge from hospital. There is also research that exists on each of these components which demonstrated how PODS can improve the patient experience and associated outcomes.

Content

PODS content contains five key elements: (1) medication information reviewed with the patient, (2) expected and worry-some symptoms and what to do (3) changes to routine, (4) information about follow up appointments, and (5) helpful resources. In an international study from 2009, more than half of adults surveyed in Canada reported that they did not have written care plans, arranged follow up visits, instructions on symptoms to watch for or know who to call with questions post-discharge.

We know that currently patients do not understand their medications, with only an estimated 50% taking medications as prescribed. Poor adherence to medication has been linked to post-discharge adverse drug events and readmissions. However, studies show that going through the medication list and explaining it to patients (exactly as is done with PODS) improves their understanding of their medications, reduces readmissions, and improves adherence. In the early adopter implementation of PODS, we found that understanding of medications improved by an average of 10.8%.

PODS ensures that patients understand their expected symptoms, worry-some symptoms, and what to do in each case. This component of PODS is meant to ease patient anxiety by explaining to them what is normal and also providing clear instructions on what to do if worry-some symptoms arise. Currently, patients do not fully understand worry-some symptoms to look out for, with only 59% knowing what danger signs to watch out for after being in hospital. Research shows that explaining to patients how they may expect to feel reduces anxiety by improving their mental health functional status as well as their physical functional status and providing instructions on what to do if worry-some symptoms increases adherence to care plans. In the early adopter pilot we found that understanding of danger signs to watch out for improved by an average of 15.4% and that calls to the unit taking valuable nursing time reduced as well.

PODS content also includes information about follow up appointments (FUAs). The PODS has space for who the appointment is with, why, where, a phone number, and a checkbox of whether or not the appointment has already been booked. Appropriate follow up with specialists and primary care has been shown to greatly reduce readmissions. During the early adopters implementation, patient understanding of this information improved by an average by 8%.
PODS content also includes changes to routines such as diet and activity and when to resume usual activities, key parts of self-care and management of conditions at home. Currently, only 52% of Ontarians know this information\textsuperscript{11}. During the early adopters implementation, patient understanding of this information improved by an average by 7%\textsuperscript{2}.

**Design**

PODS uses best practices in design including high contrast, pictograms, and space for patients to write notes. Studies have demonstrated the benefits of using multiple interventions, including non-verbal communication, when designing for individuals with limited literacy\textsuperscript{15}. Using pictograms has been found to impact recall and understanding\textsuperscript{11}. In particular, visual aids have been shown to be particularly useful to non-English speakers and patients with limited health literacy\textsuperscript{16}. In addition, during the co-design phase of PODS, patients wanted to include white space to take notes, an activity that has been shown to improve comprehension and recall\textsuperscript{17}.

**Process**

The PODS process encourages using teach-back and engages the patient and their caregivers in the discharge process. Efforts to improve the discharge process often focus on improving systems surrounding the patient, such as increasing availability of outpatient follow-up\textsuperscript{18}. Successful interventions, however, may also engage the patient in their own care by providing education or tailored discharge instructions\textsuperscript{19}. Teach-back, the process used to see if patients understand the information that is being provided to them, has been demonstrated to be effective at improving comprehension\textsuperscript{20}. Qualitative studies have demonstrated that patients and caregivers want to play a greater role in discharge\textsuperscript{21}. A systematic review demonstrated that very few tools are co-designed with patients and caregivers to include content and design features that enhance patient engagement at discharge\textsuperscript{3}. PODS addresses all these points.

**Previous Implementation**

The simplicity of PODS makes it ideal for spread, and it is the reason why different departments across 8 Toronto-area hospitals signed on to be early adopters in January 2015. The eight hospitals came together to implement PODS through an innovative process led by the applicants of this grant. The process included patient engagement, rapid PDSA cycles, open collaboration, and local adaptation. Local adaptation specifically is known to play an important role in the diffusion of innovations\textsuperscript{22,23}. That is, adopting an innovation is not always a passive process of implementing an idea as-is. Many adopters want to participate actively in modifying an innovation to fit their unique needs. The PODS implementation process allows for re-invention to take place, which helps build local buy-in and ownership. The strong process of co-design\textsuperscript{24} used to create PODS plays a large role in its credibility.

**4.0 Evaluation Design**

The PODS quality improvement implementation will be evaluated over the course of the 2-year ARTIC project from April 1 2017 through March 31 2019 using a pragmatic mixed methods pre-post design.

**4.1 Pre-Implementation Phase**

During the pre-implementation phase, each hospital will collect descriptive, aggregate, and anonymous data regarding current discharge processes and experiences of the providers (members of the care team) and recipients (patients and caregivers) of discharge teaching. Descriptive elements of the current discharge processes will be provided by the quality improvement project lead and experience data will be
collected via optional and anonymous online surveys. Providers will be emailed a link to the survey and patients will be given slips of paper at discharge with a link to the survey that they can then choose to complete at a convenient time.

4.2 Implementation Phase

A pragmatic PDSA style approach to this will be used to determine the optimal mode and method of delivery. Providers and recipients will be involved in the working group and will provide feedback and input in order to refine the PODS as it gets implemented in the hospital. During implementation and spread, the process and experiences of providers and recipients will continue to be evaluated in the same way as during the pre-implementation phase. During implementation, providers and recipients will be asked additional questions specific to the PODS intervention in order to inform the implementation.

4.3 Measures

Measures will be collected to assess implementation success, impact on patient outcomes, impact on patient and caregiver experience, and impact on provider experience.

*Implementation Measures*

- Patients who have received a PODS (#)
- Number of providers involved in giving PODS to patients
- Proportion of discharge notifications sent to PCP within 48 hours
- PODS shared with PCP via HRM (if applicable)
- Aggregate descriptive data of the patient population receiving PODS.

*Patient Outcomes*

- Rate of ED visits within 30 days
- Rate of readmission within 30 days
- Rate of adherence to follow up within 30 days with PCP or other outpatient service

*Patient and Caregiver Experience*

- Patient rating of the discharge experience
- Patients who would recommend PODS to other patients
- Patient rating of understanding of discharge instruction categories
- Patient self-reported adherence to discharge instructions
- Self-reported attendance of follow up as outpatient/with PCP
- Patient felt follow up was helpful

*Provider Experience*

- Provider rating of satisfaction using PODS
- Providers reporting consistent use of PODS
- PODS given when caregiver/family is present (%)
- Use of teach-back or similar patient engagement strategy as provided in training materials (%)
- Providers who feel PODS adds value to the discharge teaching
- Providers who feel PODS does not add to their workflow

4.4 Patient and Caregiver Participation
Patients and caregivers will be able to input to the quality improvement implementation in several ways:

- Patient and family advisors may be invited to be part of the project working group
- The project working group may consult with the patient and family advisory committee
- A focus group may be assembled to get feedback from patients and families
- Patients and families discharged from the during the project duration may be given papers with a link to an anonymous survey about their discharge experience

All participation will be optional.

References

17. Powers, B, Trinh, J, and Bosworth, H. Can this patient read and understand written health information? Journal of the American Medical Association 2010; 304(1)
Appendix A – PODS template and guidelines

The following template and guidelines are available to all sites, in addition to multiple other template forms from all the early adopter hospitals. The templates and guidelines can be used as is or adapted to meet each partner’s specific needs. The goal is to engage the patient and their family/caregiver in the discharge teaching and give them something to refer to at home.

Template:

________________________’s Care Guide
I came to hospital on __/__/__ and left on __/__/__
I came in because I have ________________________

Medications I need to take
My medication list has been provided and explained to me ☐

How I might feel and what to do
I might feel  What to do  Go to Emergency if:

Changes to my routine
Activity (i.e. dietary, physical)  Instruction

Appointments I have to go to
Go see________________ for________ on __/__/__ at __:__ am/pm
Location:________________  ☐ booked
Go see________________ for________ on __/__/__ at __:__ am/pm
Location:________________  ☐ booked

Where to go for more information
For________________ call/go to________________
For________________ call/go to________________
For________________ call/go to________________

Patient Signature:
PODS Guidelines

Use these guidelines as a checklist to evaluate and design your PODS form and process.

00 ASSESS WHAT YOU HAVE

☐ Is it accessible?
☐ Is it understandable?
☐ Is it usable?

01 CONTENT

CONSIDERATIONS
☐ Simple description of the medical condition
☐ Medication chart that is reviewed with the patient and family (can be separate from the PODS form)
☐ Follow up appointments with phone numbers
☐ Normal expected symptoms, danger signals, and what to do
☐ When to resume activities and other lifestyle changes
☐ Applicable resources

02 DESIGN CONSIDERATIONS

☐ Use larger fonts
☐ Use plain language relevant to the patient
☐ Use visual and written communication
☐ Include white space for note-taking
☐ Include multiple languages (if appropriate)

03 PROCESS CONSIDERATIONS

☐ Delivered in the presence of family or caregiver
☐ Interpreter used (if applicable)
☐ Conversation encouraged
☐ Patient engagement techniques such as teach back encouraged