Institute for Healthcare Improvement

Discharge to Assess: "Flipping" Discharge Assessment from Hospital to Home

Implementation Guide

IHI/Commonwealth Fund Innovations Network

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How to Cite This Document: Pelton L, Knihtila M. *Discharge to Assess: "Flipping" Discharge Assessment from Hospital to Home — Implementation Guide*. Boston, Massachusetts: Institute for Healthcare Improvement; 2018. (Available at ihi.org)

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Acknowledgments:

This work was made possible with the generous support and partnership of The Commonwealth Fund, and was undertaken as part of the IHI/Commonwealth Fund International Program for US Health Care Delivery System Innovation. We thank the IHI staff and faculty who facilitated the International Innovations Network Learning and Action Community: Kedar Mate, Don Goldmann, Leslie Pelton, Jane Taylor, Rima Sheehab, Melissa Knihtila, and Amrita Dasgupta. We are grateful to the teams in the Innovations Network that committed to testing this innovation and shared their experiences: Bellin Health, HealthPartners, and UPenn.

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How to Use This Implementation Guide

This guide provides details on implementing the Discharge to Assess (or "flipped" discharge) innovation based on the experience of US health care systems participating in the International Innovations Network Learning and Action Community, led by The Commonwealth Fund and the Institute for Healthcare Improvement (IHI).

The implementation guide outlines the sequence of activities vetted by three health system teams that strove to test, adapt, and adopt "flipped" discharge in their systems. The Discharge to Assess innovation developed by Sheffield Teaching Hospitals in the UK is described in more detail in the original case study published on this work.[1]

The intended audience for this guide is health system leaders and point-of-care staff, providers, and teams who seek to discharge patients to home as soon as possible upon being medically ready. Organizations seeking to improve their discharge processes may also want to consult the IHI White Paper, *Achieving Hospital-wide Patient Flow*.[2]

Background

US health care systems participating in the International Innovations Network Learning and Action Community learned about the Discharge to Assess (or "flipped" discharge) innovation from Sheffield Teaching Hospitals in the UK. The flipped discharge innovation in its original form focused on reducing hospital length of stay for patients medically ready for discharge by assessing a patient's needs after discharge in the patient's own home rather than in the hospital.

During the 18-month Learning and Action Community, three US health care systems resourced teams to adapt and adopt the flipped discharge innovation in their settings. The teams applied the IHI Idealized Design Process[3] and the Model for Improvement[4] to develop a prototype, test the flipped discharge innovation in one and then multiple settings, and develop a plan for scale-up and spread. This implementation guide shares their learning, which may be applied in other US health care systems.

The three US-based health systems that tested flipped discharge began by using the original innovation to build enthusiasm and support for expanded and improved care at home. They then developed and tested interventions that were significantly modified from the original innovation, as outlined below.

- **Hospital care at home:** Two health systems developed prototypes and tested (in at least one setting) flipped discharge for patients with significant medical needs, to transition their care to the home setting.[5] Neither health system scaled up the flipped discharge innovation to other settings or patient populations.
- **Expanded home care program:** One health system developed a prototype and small-scale test for expanding the criteria by which flipped discharge patients would be served by the home health program owned by the health system. The health system did not scale up the flipped discharge innovation to other settings or patient populations.
- **Shift the discharge time to earlier in the day:** One health system developed a prototype and small-scale test of moving discharge time to earlier in the day, from 4:15 PM to 10 AM, to

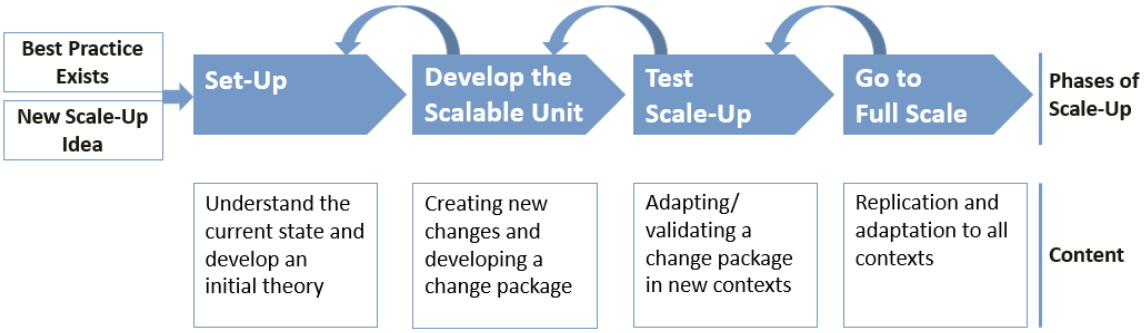
enable more effective coordination of home care services. The health system continues to actively test this approach in a broader range of conditions to develop a scalable model.

Adapting and Adopting Flipped Discharge in Your Health Care System

The aim of the US-based health care systems participating in the Learning and Action Community was to test whether or not the original innovation could be implemented in their local contexts, and to learn what adaptations might be needed for successful implementation. Once they tested implementation on a small scale, the health systems sought to test spreading the innovation to other settings and/or patient populations. To that end, the teams used IHI's Framework for Going to Full Scale to guide their work.

IHI's Framework for Going to Full Scale (see Figure 1) defines four phases: 1) Set-Up, 2) Develop the Scalable Unit, 3) Test Scale-Up, and 4) Go to Full Scale.[6]

Figure 1. IHI Framework for Going to Full Scale



For health care systems seeking to test and implement the flipped discharge innovation, below we describe the essential elements to consider in each step of the framework's four phases based on the learning of the teams testing this innovation.

1. Set-Up

Ground the Work in Data

Flipped discharge is designed to reduce hospital length of stay for patients who are medically ready for discharge by moving the patient's assessment for, and provision of, services and support to home with a home-based assessment within four hours after discharge. The first step is to review quantitative data to understand your health system's current length of stay, time to discharge a patient, definition of "medically ready for discharge," delays in patient flow, and process and work steps related to discharge.

Relevant data collection may include focus groups with a diverse population of patients and caregivers to understand the discharge process from both the hospital and the home perspectives. Interviews and surveys with physicians, nurses, and other medical and administrative staff involved in discharge can help identify challenges and enablers to discharge.

You may want to include an environmental and literature scan to give context to your health system's qualitative and quantitative data compared to state or national averages or goals.

Identify a Leadership Sponsor and Local "Champions"

Based on the quantitative and qualitative data collected and the priorities of your organization, identify a leadership sponsor for the work to implement flipped discharge. The sponsor may be a physician or administrative leader with an interest in improving patient experience, staff satisfaction, and discharge to reduce length of stay.[7] The sponsor should also have familiarity and connections with social supports and home health. If your organization is an integrated system with a health plan, you may consider a leader in the health plan as your sponsor. In addition, identifying local "champions" (e.g., physician leaders, care providers, and staff who are eager to improve care processes by implementing flipped discharge) throughout the health system can be instrumental to your testing and implementation efforts.

Develop Your Aim and Theory of Change

Agreement among team members about your flipped discharge aim and what factors are key to achieving it will facilitate effective and efficient team learning. A driver diagram is a useful tool for visually conveying your team's theory of change: what drives (or contributes to) achievement of your aim.[8] The diagram shows the relationship between the overall aim of the project, the primary drivers that contribute directly to achieving the aim, the secondary drivers that are components of the primary drivers, and specific change ideas that can be tested for each secondary driver.

When developing a driver diagram for flipped discharge, do the following:

1) Review your data. What opportunities for improvement do the data suggest?
2) Listen to your patients, physicians, nurses, and other clinical and administrative staff. What are the enablers and challenges to flipped discharge? How much change would be an improvement?
3) Draft your aim (how much, by when, with whom) on the left side of the driver diagram.
4) Articulate the primary drivers that you heard from patients and staff in step #2: structures, systems, and operating norms that need to be in place to achieve your aim.
5) Include secondary drivers: supporting processes, structures, moments in time, or places where changes need to occur, related to the primary drivers.
6) Identify specific change ideas or interventions, directly related to each secondary driver, that the team will test.
7) Periodically review the driver diagram and update it (following steps 1 through 6 again) based on learnings as you test change ideas and refine your approach to flipped discharge.

2. Develop the Scalable Unit

A scalable unit is defined as the smallest representation of "full scale"; it includes the components of a self-contained functional unit (i.e., the people, processes, and structures) that produce an output that is representative of the whole system. The scalable unit serves as the initial test bed, on a small scale, to enable learning about what changes actually lead to the desired improvement before scaling up and spreading those changes.

Develop a Prototype

In order to develop the scalable unit, testing teams need to develop a prototype: a small-scale version of the flipped discharge intervention your team will test. For example, one health system team's driver diagram identified the need to provide same-day home care visits as a primary driver for flipped discharge. The team created a flowchart so they could see the steps and interdependencies involved in providing same-day visits. This flowchart enabled the team to recognize that same-day home care visits could only be achieved if patients were identified for discharge the day before so that the home visit could be set up. The flipped discharge prototype the team developed for testing thus included criteria and a process for identifying in advance those patients who are medically ready for discharge.

Begin Testing on a Small Scale

Develop and test the flipped discharge prototype on a small scale initially so that your team can learn what works and does not work before committing more resources to implementing the change. For example, test on one unit, with one patient; learn what does and does not work and refine the prototype for the next small-scale test with another patient. Use Plan-Do-Study-Act (PDSA) cycles to conduct approximately 10 iterative, small-scale tests in your first week.[9]

By testing on a small scale and refining their flipped discharge prototypes based on learning from those PDSA cycles, several Learning and Action Community teams were able to conduct home visits within the same day, and some within hours, of patients arriving at home following discharge.

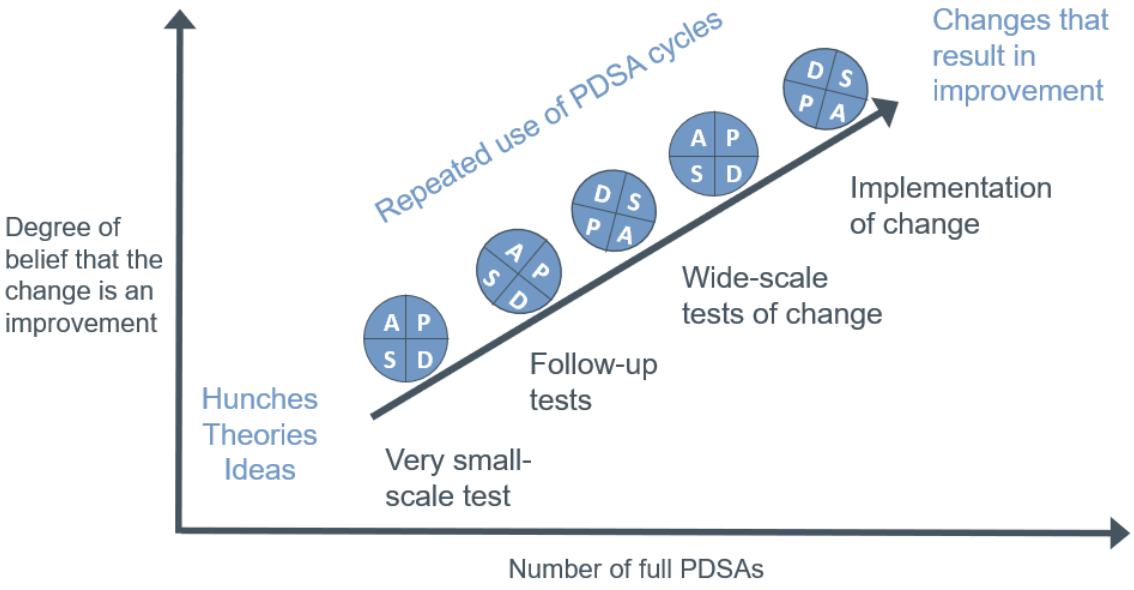
Continue Testing in an Increasingly Diverse Set of Conditions

Continue to expand testing of the refined prototype in an increasingly diverse set of conditions in order to develop a robust set of interventions in which there is a high degree of belief that they will achieve the desired aim. Each health system will decide how they will expand testing based on their theory of change. For example, one health system whose aim related to flipped discharge for patients with congestive heart failure expanded their prototype testing to include patients with other conditions.

While the goal of initial testing is to identify whether the flipped discharge prototype leads to improvement in a stable and well-supported environment (e.g., the middle of the week when all of the related functions are fully staffed and the system is moderately stressed), it is necessary to pressure test the prototype to ensure it will lead to improvement under a broader range of conditions (e.g., a Friday afternoon when fewer staff are available, or with discharges that occur later in the day). The purpose of broader testing is to increase the team's degree of belief that the changes being implemented do lead to improvement and the desired aim in various conditions.

Conduct approximately 10 small-scale tests each week, using iterative PDSA cycles (see Figure 2), in the various diverse conditions where flipped discharge will be implemented.

Figure 2. Learning with Iterative PDSA Cycles



Source: Langley GL, et al. *The Improvement Guide*. Jossey-Bass; 2009:146.

Make sure to review results after each test: Did the changes lead to improvement? Is there more to learn prior to implementation? Were there any surprises? Is the change ready for implementation? What supports are needed for implementation? For spread?

Articulating Your Scalable Unit

When you have tested the prototype in various conditions and achieved results consistent with your aim, update the driver diagram to reflect the specific change ideas that lead to improvement. Next, identify the resources needed to achieve flipped discharge (e.g., physician to sign discharge, assessor to meet patient at home within four hours after discharge, nurse to review medications at home if that is part of your model), including draft process flowcharts, training guides, and tools.

3. Test Scale-Up

Determine which scale-up approach will best achieve your flipped discharge aim. For example, if your scale-up aim is to implement flipped discharge to reduce hospital length of stay for patients with COPD by 50 percent by December 31, 2019, your scale-up approach may be to spread flipped discharge to this patient population on multiple units within one hospital first, and then spread the changes to units in another hospital.

Implement the flipped discharge interventions initially in one new context (e.g., care setting, patient population, diagnosis). Test the change ideas in that new context and use the PDSA Worksheet to track results.[10] Review your results after each PDSA. Did the changes implemented lead to improvement in the new setting? Increase the scope of testing to additional contexts by multiples of five (e.g., expand testing from one unit to five units); test until you achieve improvements consistent with your aim and then increase testing again by multiples of five (e.g., expand testing from 5 to 25 units next).

Based on your scale-up approach and testing results, identify which specific changes or elements of the prototype must be spread in all contexts. Make a plan for coverage and completeness: Does each spread site need to implement all of the changes? Or are there a few key changes that are critical for success that must be spread to all sites?

Update draft process flowcharts and training guides. Harvest new ideas from the spread sites to inform adaptations of the prototype that lead to even more improvement. Gather and record (using low-technology methods) stories of the flipped discharge experience of diverse populations of patients, clinicians, and staff. Be sure to get approval to share these stories.

4. Go to Full Scale

Adopt the flipped discharge interventions in all relevant contexts in your health care system:

- Engage a sponsor and champion to kick off going to full scale;
- Link flipped discharge implementation to strategic initiatives to improve patient flow;
- Allow ample time for testing and implementation at full scale;
- Build the sequence of implementation rollout;
- Use process flowcharts and training guides to communicate the changes with staff; and
- Share stories of the flipped discharge experience of patients, clinicians, and staff to build will and gain support for implementing the interventions.

Lessons Learned and Implementation Tips

The flipped discharge innovation in its original design assessed for, and addressed, the medical and social needs of patients. The three Learning and Action Community health system teams tested a flipped discharge model that used a mix of their own services and those of other community-based organizations, with a primary focus on medical needs and access to meals. In addition, these health care systems used various team structures and communication strategies to create interfaces and handoffs between the hospital and home care settings. Their lessons learned and tips for implementing flipped discharge are described below.

- **Communication facilitated through technology:** Health systems whose post-discharge home health visits are not conducted by hospital providers rely on technology (e.g., apps, remote patient monitoring) to interface with patients and home care teams. The hospital teams' ability to stay connected with patients post-discharge was highly dependent on the technology. Technology that is fundamental to care delivery, especially with more critically ill patients who are at home, may benefit from care team input during the contract development process with home care agencies or technology providers that are utilized in the flipped discharge process.
- **Multidisciplinary team with interprofessional handoffs:** Teams conducted an interprofessional handoff call between hospital providers and home care teams during the care transition. Home care nurses called discharging providers to verify information on the discharge summary in advance of the in-home assessment. In health systems where this interdisciplinary way of working is already part of the culture, flipped discharge may be more readily tested.

- **Integrated care transition teams:** One health system used home health nurses for both flipped discharge patients as well as their usual home health patients. This team's leadership was responsible for oversight of extended care team members both inside and outside the hospital and leveraged relationships with other hospital departments to create smooth transition processes.

Health systems in the Learning and Action Community had additional insights about building will for flipped discharge redesigns and spreading this innovation to other settings:

- **Testing and adoption of flipped discharge requires an organization-level interest and commitment:** An investment of resources is needed to achieve reduced hospital length of stay for patients medically ready for discharge by moving patient assessment for, and provision of, services and support to the home. Otherwise, the costs related to the necessary home-based services and the savings achieved through reduced hospital length of stay are not aligned with a business case for the scale-up of flipped discharge. Frame the business case and need for flipped discharge as beneficial to a health system that is concerned about bed capacity, patient flow, and cost avoidance. By discharging patients in the morning, hospitals can free up beds for patient admissions later in the day. Strategically link flipped discharge to hospital flow initiatives.
- **Ensure that the flipped discharge patient population is well scoped:** Given the risks associated with employing a flipped discharge model, both financially and clinically, it is important for health systems to define the appropriate at-risk patient population and provide additional follow-up and tracking for discharged patients who may have more complex needs. Though flipped discharge is typically used in the inpatient setting, one health system considered expanding the innovation to the outpatient setting in order to prevent hospital admissions. Consider whether this upstream approach may work for a subset of your population.

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