Health Care Leader Action Guide to Reduce Avoidable Readmissions

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Executive summary

Reducing avoidable hospital readmissions is an opportunity to improve quality and reduce costs in the health care system. This guide is designed to serve as a starting point for hospital leaders to assess, prioritize, implement, and monitor strategies to reduce avoidable readmissions.

Steps for hospital leaders to reduce avoidable readmissions

Recognizing that hospitals may be at different points in the process, this guide follows a four-step approach to aid hospital leaders in their efforts to reduce avoidable readmissions. The four steps are:

1. **Examine your hospital's current rate of readmissions.**
2. **Assess and prioritize your improvement opportunities.**
3. **Develop an action plan of strategies to implement.**
4. **Monitor your hospital's progress.**

Major strategies to reduce avoidable readmissions

This guide is meant to address readmissions that are avoidable and not all readmissions. Many readmissions, in fact, could represent good care; such as those that are part of a course of treatment planned in advance by the doctor and patient, or readmissions that are done in response to trauma or a sudden acute illness unrelated to the original admission. Neither public policy nor hospital actions should deter these readmissions from occurring. Instead, this guide is meant to better equip hospitals to address the readmissions that are unplanned and potentially the result of missteps in care either during the hospitalization or in the period immediately following the hospitalization. Hospitals should focus on these potentially avoidable readmissions to see if they can act – or they can encourage others to act - in such a way as to reduce their occurrence. This document suggests strategies that hospitals could pursue at different stages of the care continuum to reduce avoidable readmissions.

The strategies on the tables below are the foundational actions in the different interventions to reduce avoidable readmissions.

Table 1: During Hospitalization	Table 2: At Discharge	Table 3: Post-Discharge
• Risk screen patients and tailor care • Establish communication with primary care physician (PCP), family, and home care • Use "teach-back" to educate patient/caregiver about diagnosis and care • Use interdisciplinary/multi-disciplinary clinical team • Coordinate patient care across multidisciplinary care team • Discuss end-of-life treatment wishes	• Implement comprehensive discharge planning • Educate patient/caregiver using "teach-back" • Schedule and prepare for follow-up appointment • Help patient manage medications • Facilitate discharge to nursing homes with detailed discharge instructions and partnerships with nursing home practitioners	• Promote patient self management • Conduct patient home visit • Follow up with patients via telephone • Use personal health records to manage patient information • Establish community networks • Use telehealth in patient care

Why readmission rates matter

Hospitals' avoidable readmission rates have come under close scrutiny by payers and policymakers because of the potential of high savings associated with them. According to a recent study, unplanned readmissions cost Medicare $17.4 billion in 2004.[i] The study found that 20 percent of Medicare fee-for-service patients were readmitted within 30 days of discharge. In addition to having financial implications, avoidable readmissions are increasingly viewed as a quality issue by payers, health care organizations, and patients, with some research showing that readmission rates may be correlated with quality of care.[ii] Not all readmissions are entirely preventable, and thus, constitute a quality issue. However, a portion of unplanned readmissions that are related to the original reason for admission could be prevented by taking actions that address the processes that led to the readmission. Certain patient-level factors such as patient demographics (elderly, dually eligible Medicare enrollees), clinical conditions (cardiovascular conditions, stroke, and depression), race, and gender may be predictors of readmissions.[iii] The strategies proposed in this guide directly or indirectly address these factors.

Addressing the issue of potentially avoidable readmissions requires a community approach with input from various actors across the continuum of care. Better health care outcomes are not only dependent on receiving better care in the hospital, but increasingly, on receiving better care at home. The current fragmentation of the US health care system makes this a challenging concept. While most of the efforts to reduce avoidable readmissions focus on factors that are often outside of the hospital's control—empowering patients, consumers, families, and caregivers to navigate their way around community support services and organize their care at home—there are still actions that hospitals can take to make a difference. Hospital leaders will also benefit from positioning their organizations to succeed in the face of financial penalties and other payment reforms suggested in recent legislative proposals to address avoidable readmissions. The step-by-step actions in this guide provide a springboard for hospital leaders to proactively address avoidable readmissions.

> ***"Success in reducing readmissions lies in effectively partnering to not only achieve better outcomes but also to reduce the fragmentation and lack of support that so often comes with transitions between providers and care settings."***
>
> ***- Amy Berman, Program Officer, The John A. Hartford Foundation***

Steps for hospital leaders to reduce avoidable readmissions

Several interventions have been developed to reduce avoidable readmissions. Whereas some interventions are supported by a robust evidence-base, others require evidence to support their effectiveness in reducing avoidable readmissions. A detailed chart of these interventions is included in Table A in the Appendix. Recognizing that not every hospital has the resources or need to implement the entire suite of strategies recommended by the interventions, we identified the crosscutting strategies in these interventions that hospitals could implement. Even though there is no evidence supporting the ability of individual strategies to reduce avoidable readmissions, each of these strategies could help address the underlying reasons for readmissions such as improper transitions and lack of communication between care providers and patients. Health care leaders may need to implement several of these strategies or augment the actions that are already underway in their facilities to see a reduction in avoidable readmissions. The steps for hospital leaders included in this guide are:

1. **Examine your hospital's current rate of readmissions.**
2. **Assess and prioritize your improvement opportunities.**
3. **Develop an action plan of strategies to implement.**
4. **Monitor your hospital's progress.**

1 *Examine your hospital's current rate of readmissions.*

First, hospitals need to compile information on their readmission rates. Payers, legislators, and other health care stakeholders are focusing on readmissions data as evidenced by the reporting of 30-day readmission rates for heart attacks, heart failure, and pneumonia on *Hospital Compare* (www.hospitalcompare.hhs.gov). Knowing the readmission rates and trends in their facilities could aid hospital leaders to better target strategies for reducing them. One approach for gathering data is for hospitals to track and review data on patients being readmitted to their facility. In areas where the data is available, hospitals may also want to review other hospitals' readmissions data provided by state agencies and local payers. Hospitals could examine readmissions data for the following trends:

- **Readmission rates for different conditions:** To the extent feasible, examine readmission rates by diagnosis and significant co-morbidities, and look for correlation with the patient's severity.
- **Readmission rate by practitioners:** Examine the rates by physician to determine if the patterns of readmissions are appropriate or if any type of practitioner is associated with unexpected readmissions.
- **Readmission rates by readmission source:** Examine the rates by readmission source (for example, home, nursing home, etc.) to determine the places from which patients are most often being readmitted.
- **Readmission rates at different time frames:** Examine readmissions within a given time period such as 7, 30, 60, and 90 days. Examining a shorter timeframe may bring to light issues more directly related to hospital care or flaws in the process of transitioning the patient to the ambulatory setting. Examining the longer timeframe may reveal issues with follow-up care and patients' understanding of self care.

To supplement the internally and externally reported data on readmissions, health care leaders and practitioners should seek to more deeply understand readmissions in their facilities. An effective way of doing this is to review the charts of a few patients who have been admitted repeatedly from various sources. In reviewing the charts, hospitals should follow the trajectory of patient's care to understand why the patient was readmitted and what could have been done to prevent the readmission. Analyzing individual cases of readmitted patients will help health care leaders and front line clinical staff to understand the underlying failures that occurred in the care process and also witness firsthand the detrimental impact of the readmission.

> ***"Hospitals are constantly assessing and improving quality of care and implementing better patient safety systems that are transparent to the community. The growing interest in hospital readmissions will provide us opportunities to both improve the quality of care and reduce costs."***
> ***- Rich Umbdenstock, President & CEO, American Hospital Association***

In addition to the analyses recommended above, hospitals should examine the impact of avoidable readmissions on their finances, specifically, the current revenues and costs associated with readmissions. Recent legislative proposals seek to reduce payments to hospitals that have relatively high readmissions rates for certain conditions and establish a pilot program to test bundling payments for an episode of care, combining payment for initial and subsequent hospitalizations. Understanding the financial implications of readmissions will better position hospitals for future legislation tying reimbursement to readmissions and for potential reductions in revenues resulting from decreased readmission rates. Specifically, hospitals could examine whether reducing avoidable readmissions would affect their volume and potentially alter patient-mix.

2 *Assess and prioritize your improvement opportunities.*

Once hospital leaders determine the rates and trends of avoidable readmissions in their facilities, the second step is to prioritize their areas of focus. The prioritization process should capitalize on immediate opportunities for improvement for the hospital. Hospital leaders may follow one or more of the following approaches:

Focus on specific patient populations: If it is identified that readmissions rates are especially high for certain conditions or for specific patient populations, hospitals could focus on those conditions or patient populations. For example, for older adults who tend to be multiply co-morbid, hospitals could institute a more rigorous risk-assessment process to determine and address risk factors upon admission and at discharge.

Focus on stages of the care delivery process: Similarly, if it is identified that patients are readmitted for the same reasons, it could point to areas for improvement in the care delivery process. For example, discharge processes could be strengthened to include a component of patient/caregiver education to empower them to take charge of their care post-discharge.

Focus on hospital's organizational strengths: Hospitals could also address the issue of readmissions by harnessing the resources available to them. For example, hospitals serving ethnically diverse patients could harness the language skills of a multilingual staff in communicating care plans or discharge instructions to patients and caregivers. Similarly, a facility with a comprehensive electronic health record system could use the components of the system to coordinate patient care in their efforts to reduce readmissions.

Focus on hospital's priority areas and current quality improvement initiatives: Mandatory and voluntary quality improvement programs in which hospitals are currently involved could serve as a vehicle for prioritizing readmissions focus. As identified in Table B in the Appendix, several past and current quality improvement programs include a redesign of fundamental care processes that could be harnessed to concurrently reduce readmissions. By reviewing hospitals' current priorities, leaders could seamlessly incorporate readmissions goals into existing initiatives and assess progress.

3 *Develop an action plan of strategies to implement.*

A detailed chart of some interventions that have been successfully implemented in various clinical settings is included in Table A in the Appendix.[iv] To facilitate hospital leaders' understanding of these interventions to reduce readmissions, the third step of this guide attempts to synthesize the foundational strategies in the interventions. The strategies are summarized in Tables 1, 2, and 3 on the following page. To effectively implement the strategies identified in the three tables, hospitals may need to involve key stakeholders in the care delivery process: patients, physicians, pharmacists, social services, nutritionists, physical therapists, and the community.

> ***"Rehospitalization is a system issue and the problem does not lie with one organization or one provider, but with the community and the local health care system. Addressing this issue will require organizations and providers to work together."***
>
> ***- Anne-Marie Audet, VP, The Commonwealth Fund***

Getting the health care team on board to address the issue

Since practitioners drive health care delivery, their active participation is needed in strategies to reduce avoidable readmissions. In some cases, hospitals may have to identify and overcome barriers to interdisciplinary/multidisciplinary care practices. Hospitals may also need to circumvent misalignment of hospital and physicians' incentives to obtain physician buy-in on the hospital's quality improvement goals. A proven approach for engaging practitioners is to pull together a core team of hospital staff (physicians, nurses, quality specialists, case managers, and pharmacists) to champion the hospital's work on readmissions, and then roll out the efforts to the medical staff.

Developing community connections to eliminate barriers to successful care transitions

Addressing the issue of avoidable readmissions requires hospitals to build partnerships with other health care providers as well as with public and private support groups in their communities. These partnerships will help facilitate the transition of patients back into the community by leveraging partners to ensure continuity of care for patients following hospitalization. Partners are able to ensure that the next care provider is aware of the patient's status and care information, and to direct at-risk patients such as low-income populations and elderly or frail patients to needed care following hospitalization. Community partners are also sometimes equipped to address non-medical factors that could lead to readmissions such as behavioral, health literacy, and cultural issues. In places where these partnerships already exist, hospitals could focus on strengthening and maximizing their benefit.

Engaging patients, families, and caregivers in addressing the issue

Even though patients and their families are active participants in the health care system, their feedback is often not sought in addressing health care delivery issues. Successfully reducing readmissions rates may depend on patients'

ability to understand three things: their diagnosis, the care they receive, and their discharge instructions. Hospitals could successfully engage patients in care delivery by establishing hospital-based patient advisory councils or by partnering with existing patient advocacy groups.[v] Patients' ability to engage in their care is influenced by several factors such as their clinical, physical, and emotional status, the support system available to them, their ability to organize care and medications, and language and cultural barriers. Patients' families and caregivers could be effectively engaged in patient care to help overcome some of these behavioral, cultural, and literacy factors. Another proven strategy to improving patients' health literacy is the use of the "teach-back" technique. Practitioners, families, and caregivers can be assured of patients' level of comprehension by asking them to repeat or demonstrate what they have been told.

Major strategies to reduce avoidable readmissions

The strategies in the three tables below are organized by the level of effort required to implement them. In general, implementation will require process changes in hospitals. However, strategies requiring "low effort" can be implemented using the hospital's existing resources. "Medium effort" strategies may require hospitals to acquire additional resources, especially human resources, while "high effort" strategies may necessitate the installation of complex and sometimes costly systems. In addition to considering the level of effort involved in implementing these strategies, health care leaders should also consider the value conferred by these strategies. The amount of effort required to implement a strategy may not correspond with its value in health outcomes and cost savings. For example, a multisite randomized controlled trial found that coordinating patient care across a multidisciplinary care team, a high effort activity, coupled with other activities, demonstrated annual average savings of $4,845 per patient after accounting for the cost of the intervention.[vi] High effort systems, such as, telehealth, electronic medical records, and remote monitoring could also be leveraged to achieve several patient safety and quality improvement goals, therefore warranting the higher initial investment. The strategies are grouped by the stages of care where they can be applied as presented in Tables 1, 2, and 3 below:

- Table 1: During hospitalization
- Table 2: At discharge
- Table 3: Post-discharge

Using the priority areas identified in the previous steps, hospital leaders can check off strategies in the tables below that their facilities can focus on to reduce their rates of avoidable readmissions.

Table 1: During Hospitalization	Table 2: At Discharge	Table 3: Post-Discharge
• Risk screen patients and tailor care • Establish communication with PCP, family, and home care • Use "teach-back" to educate patient about diagnosis and care • Use interdisciplinary/multidisciplinary clinical team • Coordinate patient care across multidisciplinary care team • Discuss end-of-life treatment wishes	• Implement comprehensive discharge planning • Educate patient/caregiver using "teach-back" • Schedule and prepare for follow-up appointment • Help patient manage medications • Facilitate discharge to nursing homes with detailed discharge instructions and partnerships with nursing home practitioners	• Promote patient self management • Conduct patient home visit • Follow up with patients via telephone • Use personal health records to manage patient information • Establish community networks • Use telehealth in patient care

Upon admission and during hospitalization, opportunities exist for hospitals to enhance the care that patients receive to facilitate discharge planning and post-discharge care. The strategies identified in Table 1 are primarily hospital-based and can be performed by nurses, physicians, caseworkers, or other hospital staff.

Table 1: During Hospitalization—Strategies to Prevent Readmissions			
Strategies[vii]	**Level of Effort**	**Actions**	**Selected Interventions that Use Strategies**[viii]
□ Risk screen patients and tailor care	Low	Proactively determining and responding to patient risks Tailoring patient care based on evidence-based practice, clinical guidelines, care paths, etc. Identifying and responding to patient needs for early ambulation, early nutritional interventions, physical therapy, social work, etc.	*Colorado Foundation for Medical Care and Partners(Care Transitions Intervention (CTI))* *Guided Care* *HealthCare Partners Medical Group* *Heart Failure Resource Center* *INTERACT* *John Muir Health (CTI)* *Kaiser Permanente Chronic Care Coordination* *Novant Physician Group Practice Demonstration Project* *Project BOOST* *Summa Health System* *Transitional Care Model* *Transitions Home for Patient with Heart Failure: St. Luke's Hospital* *Visiting Nurse Service of New York*
□ Establish communication with PCP, family, and home care	Low	PCP serving as a core team member of patient care delivery team Family or home care agency is informed of patient care process and progress	*Commonwealth Care Alliance: Brightwood Clinic* *Guided Care* *Project BOOST* *Transitional Care Model* *Visiting Nurse Service of New York*
□ Use "teach-back" to educate patient about diagnosis and care	Low	Clinician educating patient about diagnosis during hospitalization	*Novant Physician Group Practice Demonstration Project* *Project BOOST* *Re-Engineered Discharge/RED* *STAAR* *Transitional Care Model*
□ Discuss end-of-life treatment wishes	Medium	Discussing terminal and palliative care plans across the continuum	*Blue Shield of California* *Evercare™ Care Model* *St. Luke's Hospital* *Transitions Home for Patient with Heart Failure: St. Luke's Hospital* *Transitional Care Model*
□ Use interdisciplinary/ multidisciplinary clinical team	Medium	Team including complex care manager, hospitalists, SNF physician, case managers, PCPs, pharmacists, and specialists Team including bilingual staff and clinicians (where needed)	*Commonwealth Care Alliance: Brightwood Clinic* *Guided Care* *HealthCare Partners Medical Group Kaiser Permanente Chronic Care Coordination* *Transitional Care Model*
□ Coordinate patient care across multidisciplinary care team	High	Using electronic health records to support care coordination Using transitional care nurse (TCN) (or similar role) to coordinate care	*Commonwealth Care Alliance: Brightwood Clinic* *Guided Care* *Home at Home* *Sharp Reese-Stealy Medical Group* *Transitional Care Model* *Visiting Nurse Service of New York*

The actions identified to be performed at discharge could also be performed by other practitioners such as the primary care provider, home health agencies, long term care facilities, as well as caregivers, and community social networks for patients. Hospitals could however initiate these actions at discharge as described on Table 2 below.

Table 2: At Discharge—Strategies to Prevent Readmissions			
Strategies[ix]	**Level of Effort**	**Actions**	**Selected Interventions that Use Strategies**[x]
□ Implement comprehensive discharge planning	Medium	Creating personalized comprehensive care record for patient, including pending test results and medications Hospital staff communicating discharge summary to PCP or next care provider Reconciling discharge plan with national guidelines and clinical pathways Providing discharge plan to patient/caregiver Reconciling medications for discharge Standardized checklist of transitional services	*Project BOOST* *Re-Engineered Discharge/RED* *STAAR* *Transitional Care Model*
□ Educate patient /caregiver using "teach-back"	Medium	Reviewing what to do if a problem arises Focusing handoff information on patient and family	*St. Luke's Hospital* *Guided Care* *John Muir Health* *Re-Engineered Discharge/RED* *STAAR* *St. Luke's Hospital* *Transitional Care Model* *Transitions Home for Patient with Heart* *Visiting Nurse Service of New York*
□ Schedule and prepare for follow-up appointment	Medium	Transmitting discharge resume to outpatient provider Making appointment for clinician follow-up	*Care Transitions Program (CTI)* *Colorado Foundation for Medical Care and Partners(Care Transitions Intervention (CTI))* *John Muir Health (CTI)* *Re-Engineered Discharge/RED* *Sharp Rees-Stealy Medical Group* *St. Luke's Hospital* *Transitional Care Model* *Visiting Nurse Service of New York*
□ Help patient manage medication	Medium	Managing patient medication with help of a transition coach	*Care Transitions Program (CTI)* *Colorado Foundation for Medical Care and Partners(Care Transitions Intervention (CTI))* *St. Luke's Hospital* *John Muir Health(CTI)* *Project BOOST* *Re-Engineered Discharge/RED* *Transitions Home for Patient with Heart* *Transitional Care Model* *Visiting Nurse Service of New York*
□ Facilitate discharge to nursing homes with discharge instructions and partnerships with nursing homes	Low–High	Using standardized referral form/transfer form Using nurse practitioner in nursing home setting	*Evercare™ Care Model* *STAAR* *Summa Health System* *Transitional Care Model*

Maintaining community connections is especially important for strategies of interventions implemented post-discharge to reduce avoidable readmissions. Practitioners serving a predominant subset of patients such as the elderly or immigrants could benefit from community partnerships with outpatient physician offices, nursing homes, and home health agencies in their efforts to reduce avoidable readmissions through the strategies identified in Table 3 below.

Table 3: Post-Discharge—Strategies to Prevent Readmissions

Strategies[xi]	Level of Effort	Actions	Selected Interventions that Use Strategies[xii]
□ Promote patient self management	Low	Using tools to help patient manage care plan post-discharge	*Care Transitions Program (CTI)* *Guided Care* *Transitional Care Model* *Visiting Nurse Service of New York*
□ Conduct patient home visit	Medium	Conducting home and nursing home visits immediately after discharge and regularly after that	*Care Transitions Program (CTI)* *Colorado Foundation for Medical Care and Partners(Care Transitions Intervention (CTI))* *Commonwealth Care Alliance: Brightwood Clinic* *HealthCare Partners Medical Group* *Home Healthcare Telemedicine* *Hospital at Home* *St. Luke's Hospital* *Transition Home for Patients with Heart Failure: St. Luke's Hospital* *Transitional Care Model* *Visiting Nurse Service of New York*
□ Follow up with patients via telephone	Medium	Calling 2–3 days after discharge to reinforce discharge plan and offer problem solving Offering telephone support for a period post-discharge Calling to remind patients of preventive care	*Care Transitions Program (CTI)* *Colorado Foundation for Medical Care and Partners(Care Transitions Intervention (CTI))* *Commonwealth Care Alliance: Brightwood Clinic* *Evercare™ Care Model* *Kaiser Permanente Chronic Care Coordination* *Project BOOST* *Re-Engineered Discharge/RED* *Sharp Rees-Stealy Medical Group* *St. Luke's Hospital* *STAAR* *Transitional Care Model* *Transition Home for Patients with Heart Failure: St. Luke's Hospital* *Visiting Nurse Service of New York*
□ Use personal health records to manage patient information	High	Including information on patient diagnosis, test results, prescribed medication, follow-up appointments, etc. on PHR	*Care Transitions Program (CTI)* *Colorado Foundation for Medical Care and Partners* *John Muir Health (CTI)* *Re-Engineered Discharge/RED*
□ Establish community networks	High	Developing public/private partnerships to meet patients needs	*Community Care North Carolina* *Guided Care* *Summa Health System* *Transitions Home for Patient with Heart Failure: St. Luke's Hospital*
□ Use telehealth in patient care	High	Monitoring patient progress through telehealth, e.g., electronic cardiac monitoring, remote patient telemonitoring	*Heart Failure Resource Center* *Home Healthcare Telemedicine* *John Muir Health* *Sharp Rees-Stealy Medical Group*

4 *Monitor your hospital's progress.*

The key to sustaining efforts to reduce readmissions is for hospital leaders to monitor their facilities' progress. This fourth step is especially critical since this guide is structured to encourage hospitals to pick individual strategies to implement. Monitoring the hospital's progress will inform hospital leaders of the efficacy of these strategies and perhaps guide them in implementing additional strategies. Monitoring the hospital's progress should be done regularly, as determined by hospital leadership, and focus on the trends identified in step 1 of this guide:

- Readmission rates for different conditions
- Readmission rate by practitioners
- Readmission rates by readmission source
- Readmission rates over different time frames.

Finally, to sustain organizational efforts on reducing avoidable readmissions, data on readmissions could be included in the key quality indicators tracked and reported to hospital boards, other quality committees, and front line clinical staff. In addition to monitoring progress made in reducing avoidable readmissions, hospitals should also monitor possible unintended consequences from efforts aimed at reducing readmissions.

Appendix

Table A: Selected List of Interventions to Reduce Preventable Readmissions Organized by Level of Supporting Evidence[xiii,xiv,xv]

Organization & Intervention	Target Population	Actions Included	Key Players	Where
Interventions with Very Strong Evidence of Reduction in Avoidable Readmissions[xvi]				
Boston Medical Center *Re-Engineered Discharge/RED* http://www.bu.edu/fammed/projectred/	All adult BMC patients	Patient education; comprehensive discharge planning; AHCP; post-discharge phone call for medication reconciliation	Nurse discharge advocate, clinical pharmacist	Hospital and home (phone only)
Care Transitions Program http://www.caretransitions.org/	Community-dwelling patients 65 and older	Care Transitions Intervention (CTI); medication self-management; patient-centered record (PHR); follow-up with physician; and risk appraisal and response	Transitions coach	Home
Evercare™ Care Model http://evercarehealthplans.com/about_evercare.jsp%3bjsessionid=NNDDDJJFMEBB	Patients with long-term or advanced illness, older patients or those with disabilities	Primary care and care coordination; NP care in nursing home; personalized care plans	Nurse practitioner or care managers	Home and nursing home
Transitional Care Model (TCM) http://www.transitionalcare.info/	High-risk, elderly patients with chronic illness	Care coordination; risk assessment; development of evidence-based plan of care; home visits and phone support; patient and family education	Transitional care nurse (TCN)	Hospital and home
Interventions with Some Evidence of Reduction in Avoidable Readmissions[xvii]				
Commonwealth Care Alliance: Brightwood Clinic[xviii]	Low-income Latinos with disabilities and chronic illnesses	Primary care and behavioral health care coordination; reminder calls for preventive care; multidisciplinary clinical team; follow-up; health education and promotion; support groups; bilingual staff; non-clinician home visits	Nurses, nurse practitioners, mental health and addiction counselors, support service staff	Community
Community Care North Carolina http://www.communitycarenc.com/	Medicaid patients	Local network of primary care providers: DM for asthma, HF, diabetes; ED; pharmacy initiatives; case management for high-risk/ high-cost patients	Primary care providers	Community
Heart Failure Resource Center http://www.innovativecaremodels.com/care_models/15	Outpatient care for chronically ill patients with heart failure	Evidence-based clinical care protocols; remote patient telemonitoring	Advanced practice nurse and physician (for consultation)	Home and outpatient setting
Home Healthcare Telemedicine http://www.innovativecaremodels.com/care_models/18/key_elements	Recently discharged with congestive heart failure or COPD	Telehealth care; telemonitoring; in-home visits,	Telemedicine nurse and traditional home health nurse	Home
Kaiser Permanente Chronic Care Coordination	Patients with four or more chronic illnesses; recently	Multidisciplinary chronic care team; needs-based care plans; patient communications	Specially trained nurses, licensed clinical social	Hospital and long-term care

Organization & Intervention	Target Population	Actions Included	Key Players	Where
http://www.innovativecaremodels.com/care_models/13/overview	discharged; high ED utilization or recently discharged from a SNF	via phone	workers	settings
IHI Transition Home for Patients with Heart Failure: St. Luke's Hospital http://www.ihi.org/IHI/Programs/StrategicInitiatives/TransformingCareAtTheBedside.htm	Patients with congestive heart failure	Admission assessment for post-discharge needs; teaching and learning; early post-acute care follow-up; patient and family-centered handoff communication	Multidisciplinary team, including nurses, clinicians, and hospital executives	Hospital and home
Novant Physician Group Practice Demonstration Project http://www.cfmc.org/caretransitions/files/Care%20Transitions%20presentation%202%2008b.pdf	Medicare fee-for-service beneficiaries	Implement Comprehensive, Organized Medicine Provided Across a Seamless System (COMPASS); for providers: evidence-based practice standards, education and inpatient to outpatient systems; For patients: chronic and preventive care guidelines, education, and disease management	Physicians, staff	Community
Promising Interventions Requiring Additional Data[xix]				
Guided Care http://www.cfmc.org/caretransitions/files/Ouslander%20Care%20Transitions%20Call%20Presentation%20030308.pdf	Patients 65 or older deemed to be high risk for hospitalization or other cost-intensive care	Patient self-management; care coordination; patient/caregiver education; access to community services; evidence-based "care guide"	Specially trained nurses	Primary care offices
Hospital at Home http://www.innovativecaremodels.com/care_models/20	Patients over 65 years old requiring hospital admission for COPD, CHF, cellulitis, or community-acquired pneumonia	Daily physician visits; care coordination; multidisciplinary team	Registered nurse	Home
INTERACT http://www.cfmc.org/caretransitions/files/Ouslander%20Care%20Transitions%20Call%20Presentation%20030308.pdf	Nursing home patients	Care paths, communication tools, advance care planning tools , risk appraisal	Nurses, physicians, nurse practitioners, physician assistants	Hospital and nursing home
Project BOOST http://www.hospitalmedicine.org/ResourceRoomRedesign/RR_CareTransitions/CT_Home.cfm	Older adults	Medication reconciliation; general assessment of preparedness (GAP); teach-back; patient/caregiver education; communication; phone follow-up	Multidisciplinary care team	Hospital and home
Other Relevant Interventions[xx]				
Blue Shield of California *Patient-Centered Management (PCM)*[xxi]	Complex patients with advanced illness. Piloted with CalPERS enrollees in Northern California	Patient education; care coordination; end-of-life management in seven care domains	ParadigmHealth team, including case manager and team manager, both	Home

Organization & Intervention	Target Population	Actions Included	Key Players	Where
			nurses, and MD consultant	
Colorado foundation for Medical Care (CFMC) *Care Transitions Intervention (CTI)*, pilot project http://www.cfmc.org/	Elderly clinic patients, medical beneficiaries who have been hospitalized	Hospital visit, home visit, and follow-up calls by coach, focusing on the four CTI pillars	Transitions coaches (nurses)	Hospital and home
HealthCare Partners Medical Group http://www.healthcarepartners.com/	Uses risk assessment to stratify patients and match to four levels of programs; special programs for frail patients	Self-management and health education; complex case management; high-risk clinics; home care management; disease management	Multiple interdisciplinary staff members	Hospital, home, SNFs
John Muir Physician Network *Transforming Chronic Care (TCC) Program* *http://www.johnmuirhealth.com/index.php/chronic_care_referral_program.html*	Eligible frail patients—most have heart failure, COPD, or diabetes	CTI; complex case management; disease management	Transition coaches, case managers, both with multiple backgrounds	Hospital and home
Sharp Rees-Stealy Medical Group http://www.sharp.com/rees-stealy/	High-risk patients, including all discharged from hospital or ED	Continuity of Care Unit (CCU); Telescale for HF patients; Transitions program for those near end-of-life	CCU: nurse case manager; Transitions: nurse	Hospital and home
St. Luke's Hospital, Cedar Rapids, IA *Transitions Home for Patients with Heart Failure* *http://www.innovations.ahrq.gov/content.aspx?id=2206*	Heart failure patients in pilot	Patient education using "teach-back"; home visit; post-discharge phone call; outpatient classes	Advanced practice nurse, staff nurses	Hospital and home
State Action on Avoidable Rehospitalizations (STAAR) http://www.ihi.org/IHI/Programs/StrategicInitiatives/STateActiononAvoidableRehospitalizationsSTAAR.htm	All patients	Enhanced assessment of post-discharge needs; enhanced teaching and learning; enhanced communication at discharge; and timely post-acute follow-up	Hospital-based care team, representatives from skilled nursing facilities, home health agencies, patients, family caregivers, etc.	Hospital, home, and other post-acute/long-term care setting
Summa Health System, Akron, OH http://www.summahealth.org/	Low-income frail elders with chronic illnesses in community-based long-term care	Risk appraisal; integrated medical and psychosocial care based on Naylor and Coleman models	Interdisciplinary teams, including RN care manager, APN, AAA staff, etc.	Hospital, home, PCP office visits
Visiting Nurse Service of New York (VNSNY) http://www.vnsny.org/	Nursing Home patients post-hospitalization	Risk assessment with stratified interventions; self-management support, etc.	NPs; home nurses; home health aides	Hospital (for some patients) and home

Linking readmissions strategies to other national efforts

Hospitals may currently be or previously have been involved in care delivery and patient safety initiatives that could serve as vehicles for implementing strategies to reduce preventable readmissions. By coordinating efforts in various priorities, hospitals are able to reap the most benefit for their investment, avoid duplicative work, and minimize burden on practitioners as they strive to improve the care that they deliver. The following table outlines strategies in some of the initiatives that could facilitate implementation of strategies to reduce avoidable readmissions:

Table B: Linking Readmissions Strategies to Current National Strategies

Initiative	Description	Overlap with Readmissions Strategies
AHA Hospitals in Pursuit of Excellence (HPOE)[xxii]	Topic Areas: • ***Care coordination***—focus on the discharge process and care transitions to reduce readmissions • ***Reduce hospital-acquired conditions*** such as: ○ surgical infections and complications; central line-associated blood stream infections; methicillin-resistant Staphylococcus aureus; clostridium difficile infections; ventilator-associated pneumonia; catheter-associated urinary tract infections; adverse drug events from high-hazard medications, and pressure ulcers • ***Implement health information technology (HIT)***—focus on leadership and clinical strategies to effectively implement HIT • ***Medication management***—use of HIT and performing medication reconciliation • ***Promote patient safety*** • ***Patient throughput***—improving patient flow in ED, OR, and ICU	• Risk screening of patients & tailored care • Establishing communication with PCP • Use of interdisciplinary/ multidisciplinary team • Care coordination • Patient education • Comprehensive discharge planning • Patient /caregiver education using "teach-back" • Scheduling and preparing for follow-up appointment • Discussions about end-of-life treatment wishes • Facilitate discharge to nursing homes • Home visit • Follow-up call • Medication management • Personal health records • Establishing community networks • Patient self management
IHI Campaigns (*100K and 5 Million Lives* campaigns)	Components for the *100K Lives* campaign: • **Deploy Rapid Response Teams** • **Deliver Reliable, Evidence-Based Care for Acute Myocardial Infarction** • **Prevent Adverse Drug Events (ADEs)** by implementing medication reconciliation • **Prevent Central Line Infections** • **Prevent Surgical Site Infections** • **Prevent Ventilator-Associated Pneumonia**	• Risk screening of patients & tailored care • Care coordination • Patient education • Comprehensive discharge planning • Patient /caregiver education using "teach-back" • Medication management

Initiative	Description	Overlap with Readmissions Strategies
	Principles for the *5 Million Lives* campaign (plus principles from *100K Lives* campaign: • **Prevent Harm from High-Alert Medications (**focus on anticoagulants, sedatives, narcotics, and insulin) • **Reduce Surgical Complications** • **Prevent Pressure Ulcers** • **Reduce Methicillin-Resistant *Staphylococcus aureus* (MRSA) infection** • **Deliver Reliable, Evidence-Based Care for Congestive** • **Heart Failure…**to avoid readmissions • Ge**t Boards on Board** so that they can become far more effective in accelerating organizational progress toward safe care	
Joint Commission Speak Up™ initiatives	***Current initiatives:*** • Help Prevent Errors in Your Care • Help Avoid Mistakes in Your Surgery • Information for Living Organ Donors • Five Things You Can Do to Prevent Infection • Help Avoid Mistakes With Your Medicines • What You Should Know About Research Studies • Planning Your Follow-up Care • Help Prevent Medical Test Mistakes • Know Your Rights • Understanding Your Doctors and Other Caregivers • What You Should Know About Pain Management • Prevent Errors in Your Child's Care	• Patient education • Patient /caregiver education using "teach-back"
Patient-Centered Medical Home (PCMH) [xxiii]	Characteristics of the Patient-Centered Medical Home(PCMH): • ***Personal physician*—**for each patient • ***Physician directed medical practice***—has collective responsibility for the ongoing care of patients • ***Whole person orientation***—includes care for all stages of life; acute care; chronic care; preventive services; and end-of-life care led by personal physician. • ***Care is coordination*—**across all elements of the health care system (subspecialty care, hospitals, home health agencies, nursing homes) and the patient's community (family, public and private community-based services).	• Establishing communication with PCP • Use of interdisciplinary/ multidisciplinary team • Care coordination • Patient education • Comprehensive discharge planning • Scheduling and preparing for follow-up appointment • Discussions about end-of-life treatment wishes • Facilitate discharge to nursing homes • Follow-up call • Medication management • Personal health records

Initiative	Description	Overlap with Readmissions Strategies

	• ***Quality and safety***—includes the following:
	  ○ care planning process
	  ○ Evidence-based medicine and clinical decision-support tools
	  ○ Active patients and families participation
	  ○ Information technology
	  ○ Patients and families participate in quality improvement activities at the practice level.
	Enhanced access***—used through open scheduling, expanded hours and new options for communication between patients, their personal physician, and practice staff***
		• Establishing community networks
		• Patient self management

Contact Information for Some Interventions

1. **Care Transitions Program**
   http://www.caretransitions.org/

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2. **Project RED (Re-Engineered Discharge)**
   http://www.bu.edu/fammed/projectred/index.html

   Brian Jack, MD
   Principal Investigator
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3. **Project BOOST (Better Outcomes for Older adults through Safe Transitions)**
   http://www.hospitalmedicine.org/ResourceRoomRedesign/RR_CareTransitions/CT_Home.cfm

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4. **Transitional Care Model**
   http://www.transitionalcare.info/

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[vii] Not all of the actions listed for this particular strategy may correspond to the resource intensity identified.

[viii] The interventions listed here, though not comprehensive, represent some of the commonly used and referenced. interventions for reducing avoidable readmissions. Details on the intervention are listed on Table 1 in the Appendix.

[ix] Not all the actions listed for this particular strategy may correspond to the resource intensity identified

[x] The interventions listed here, though not comprehensive, represent some of the commonly used and referenced interventions for reducing avoidable readmissions.

[xi] Not all the actions listed for this particular strategy may correspond to the resource intensity identified

[xii] The interventions listed here, though not comprehensive, represent some of the commonly used and referenced interventions for reducing avoidable readmissions.

[xiii] Kanaan, S.B. *Homeward Bound: Nine Patient-Centered Programs Cut Readmissions*. California Healthcare Foundation; 2009.

[xiv] Information on this table is culled from the California HealthCare Foundation publication, *Homeward Bound: Nine Patient-Centered Programs Cut Readmissions*, and supplemented with other resources.

[xv] The interventions listed here, though not comprehensive, represent some of the commonly used and referenced interventions for reducing avoidable readmissions.

[xvi] Boutwell, A. Griffin, F. Hwu, S. Shannon, D. *Effective Interventions to Reduce Rehospitalizations: A Compendium of 15 Promising Interventions.* Cambridge, MA: Institute for Healthcare Improvement; 2009.

[xvii] Boutwell, A. Griffin, F. Hwu, S. Shannon, D. *Effective Interventions to Reduce Rehospitalizations: A Compendium of 15 Promising Interventions.* Cambridge, MA: Institute for Healthcare Improvement; 2009.

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