There and Home Again, Safely

5 Responsibilities of Ambulatory Practices in High Quality Care Transitions

Making Strides in Safety® program

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Disclaimer

This report presents the consensus views of a set of experts on how ambulatory practices should be optimally engaged in ensuring safe care transitions for patients entering and leaving the inpatient setting. While these experts work in a variety of organizations and are affiliated with a number of different institutions, the views expressed should not be construed as formal policy statements of the American Medical Association nor of any other organizations or institutions that our collaborators represent.

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Dear Colleagues:

The AMA Center for Patient Safety is pleased to present this report, which aims to facilitate safer transitions for patients across the continuum, focusing on transitions from home into and out of inpatient facilities.

The last decade has seen a great deal of research and practice innovation to improve care transitions for patients leaving the hospital. Yet, for a variety of reasons, this work has often been driven by models that emphasize the roles and responsibilities of the inpatient team. When looked at from the perspective of the patient and his or her caregivers outside the hospital, however, these patients are also transitioning in and out of the outpatient/ambulatory setting.

There has been relatively little attention paid to exploring specific roles and responsibilities for outpatient clinics and other ambulatory practices during care transitions. But one thing we know is that patients leaving the hospital too often return to ambulatory care settings that are not well-connected to the hospital team and this can result in inefficient, confusing and sometimes unsafe conditions.

There are reasons to expect a significant increase in the focus of care transitions work on ambulatory practices in the next several years. New models of care delivery, improved methods of communication, and changes in payment systems will each propel an emphasis on understanding optimal roles for ambulatory practices in supporting safe care transitions for patients entering and leaving hospitals and other inpatient facilities.

The AMA is our nation's largest physician professional association, representing both inpatient and ambulatory practitioners from every state, region, and specialty. Since its inception, the AMA's Center for Patient Safety has aimed to build bridges between these groups to help protect patients from harm and ensure quality care. We therefore felt particularly well-situated to help provide some early focus and structure to the complex task of delineating appropriate roles and responsibilities for ambulatory practices in care transitions.

In doing so, we had the great pleasure of working with a distinguished group of health care leaders –researchers and practitioners, representing inpatient and ambulatory care, from across the nation. This report benefitted tremendously from their time and creative thinking, as well as their practical experience. If, as we hope, the report is useful to practitioners, payers, and policy makers, it will be due to their collective vision and energy.

We invite you to read this report and use it in your own work. Please let us know how the report has been helpful, and if there are ways we could make it better. In view of the rapidly-changing nature of this work, we will produce updates as needed.

Thank you for all that you do to help the medical profession live up to our ancient credo:
First, do no harm.
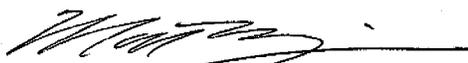
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Executive Summary

Patients are at particularly high risk of experiencing medical errors and harm during handovers in care, when responsibilities for patient care are being transferred from one individual or team to another. A handover of special concern is when patients are transferred from one care setting or facility to another, a period in time known as a *care transition*. Perhaps the most well-studied, and riskiest, care transition is the time when a patient leaves an inpatient hospital or other facility to go home.

This report aims to improve the safety of care transitions across the entire continuum of care by focusing particular attention on a relatively neglected aspect of care transitions: the appropriate roles and responsibilities of ambulatory practices (i.e., outpatient clinics and other similar settings) in ensuring the safety of patients transitioning in and out of inpatient settings. Patients moving to and from the hospital, often coming from and going back to their homes, are, in effect, experiencing a care transition out of, and then back into, an ambulatory setting.[1]

Most studies of patients leaving a hospital to go home[2] have been conducted from the perspective of inpatient care transition models, focusing on roles and responsibilities for members of the inpatient care team. Yet inpatient teams face important limitations in ensuring safe transitions to ambulatory settings. Given the great variability of inpatient and ambulatory care team resources and capabilities, there can be no "one-size fits all" model for safe care transitions; but certain tasks during care transitions are probably best carried out by members of the ambulatory rather than the inpatient care team, since the ambulatory practice will be responsible for providing ongoing care to the patient in the ambulatory setting.

To consider what these tasks and responsibilities might reasonably comprise, the AMA Center for Patient Safety convened a panel of experts in a series of in-person, telephone and electronic meetings over 2011-2012. During this time, the panel developed and debated a framework for understanding and exploring the optimal roles and responsibilities for ambulatory practices in supporting safe care transitions.

Uncertainty in the research base, variability in care delivery systems, and emerging changes in health care financing make it difficult, if not impossible, to produce a single framework for safe care transitions that will fit all practice settings. Still, the panel was able to come to consensus on 5 tasks that need to be accomplished for safe care transitions and agreed that, in most instances, the ambulatory practice is best situated to take lead responsibility for accomplishing these tasks.

In addition, the panel articulated 5 principles to help guide ambulatory practices in these tasks. These 5 responsibilities and 5 principles are summarized in the box on page 8.

From this 5 X 5 model of responsibilities and principles the panel was able to develop sets of more specific recommendations and checklists to help ambulatory practices organize their work in carrying out each task. Some key examples of these more specific recommendations are in the table on page 9, with more detailed recommendations provided in the sections of the report.

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1. For this report, any health care provided outside of an inpatient, institutional setting is considered "ambulatory care," whether or not any particular patient receiving this care can ambulate. Thus, we define ambulatory care to include traditional ambulatory, clinic-based care as well as care provided in the home in home-based primary care models.

2. This is often referred to as the patient being "discharged," though we have tried to avoid this term because it can suggest that the inpatient care team's responsibilities have been entirely completed at the time of the patient's departure, which is only rarely the case.

The panel's complete sets of recommendations related to each of the 5 responsibilities are arrayed as checklists at the end of each section of this report. We encourage ambulatory practices and others to use these checklists to help assess their local systems of care and communication around care transitions.

The recommendations were selected based on the tasks and principles, but also because members of the panel believe them to be both important and achievable—indeed, most are steps that panel members noted are already in place at practice sites around the nation. Some steps will be recognized as integral to promising models of care, such as the medical home and accountable care organizations. Yet, few sites are doing all that the panel recommends, and any practice can benefit from a structured review of workflow and communication processes around care transitions guided by the checklists in each section of this report. Such an exercise can identify areas of strength, which can be a source of pride and stepping stones to greater achievement, and also to illuminate gaps that might pose risk and deserve more attention and efforts toward quality improvement.

While the Panel's recommendations are aimed primarily at ambulatory practices, they reach to other organizations and systems of care as well. In particular, the Panel repeatedly noted two systemic issues. First is the need for better systems of communication across disparate parts of the health care system. Second is the urgent need for financial restructuring to support the increased demands associated with greater roles for ambulatory practices in ensuring safe care transitions. Panel members are acutely aware that some of the recommended tasks they would like to see ambulatory practices take on might require additional resources, and that reforms of the payment system have not reached a point where these tasks can be supported.

Finally, research on the role of ambulatory practices in ensuring safe care transitions is in its infancy. Ambulatory practices should seek out opportunities to collect data and write about what they are doing to help patients as they move from home, to the hospital, and back home again, safely.

5 Responsibilities

Assessment – care transitions will be safer if the ambulatory practice is responsible for conducting a baseline comprehensive health assessment, prior to the inpatient admission if possible, and then updating this assessment following discharge from the inpatient setting.

Goal-Setting – care transitions will be safer if the ambulatory practice is responsible for working with the patient to establish, document, and keep up-to-date an explicit set of the patient's goals and corresponding care decisions.

Supporting Self-Management – care transitions will be safer if the ambulatory practice is responsible for providing information and facilitating access to resources that can help the patient and caregivers safely manage the patient's condition(s) over time.

Medication Management – care transitions will be safer if the ambulatory practice is responsible for communicating with the patient, pharmacy, and other relevant members of the care team to promote effective and safe medication use.

Care Coordination – care transitions will be safer if the ambulatory practice is responsible for helping to synchronize the efforts of all members of the care team(s) to best promote achievement of the patient's care goals.

5 Principles should drive the work of ambulatory practices to achieve safe and effective care transitions.

5 Principles
Person-centered – effective care transitions are focused on the needs and goals of patients and their caregivers

Collaborative – effective care transitions take advantage of the complementary skills and talents of all team members, including those on the inpatient care team and other supportive resources when needed

Structured – effective care transitions use clear and carefully planned protocols, forms, and processes to help ensure comprehensive attention to core issues

Iterative – effective care transitions recognize the constantly evolving nature of ambulatory care, repeating tasks over time as appropriate and making adjustments as the patient's care needs and goals evolve

Flexible – effective care transitions acknowledge the unique needs and circumstances of each individual and are prepared to pursue creative solutions to novel problems

Table: Examples* of Recommended Tasks for Ambulatory Practices in Supporting Safe Care Transitions

| | Principles: | | | | |
Responsibilities	Person-Centered	Collaborative	Structured	Iterative	Flexible
Assessment	Elicit patient values and strengths as well as needs and challenges; assess care-giver needs	Involve all team members; share information as appropriate, especially with patient and caregivers	Keep organized information on: • medical issues • health goals • functional status • psychological status • behavioral issues • social issues	Update the assessment at key points in time, especially at admission and discharge from an inpatient facility	Tailor assessments for higher-risk patients
Goal-Setting	Patients must own their goals; use reciprocal repeat-backs to ensure mutual understanding	Involve patient and caregivers (where appropriate) in goal-setting conversations	Consider acute, intermediate and long-term goals; be explicit about culture, social, economic, and other factors	Revisit and reconfirm or revise goals following hospitalizations and other relevant life events	Goals often require patience and flexibility to achieve; backsliding or "stalled" goals should trigger an exploration of barriers
Self-Management	Use patient assessment and goals to develop self-management plans; attune plans to patient capacities; use teach-back to ensure understanding	Partner with local resources, health plans, government agencies and faith organizations; recognize caregivers as key members of the team to support self-management	Use reader-friendly tools (e.g., checklists, 'red flag' lists) to help patients and caregivers with self-management tasks; use motivational interviewing and teach-to-goal methods to support self-care	Self-management is inherently a lifelong activity; build on self-management successes and use setbacks as opportunities for teaching and to re-assess barriers	Stratify high-risk patients who might need greater self-management supports; patients needing home health care are a special high-risk group
Medication Management	Use open-ended questions to elicit medication adherence; help patients maintain an updated medication list; use teach-back and show-back to ensure understanding and ability to take medications; tailor regimen to patient capacity as well as medical needs	Share information about medication changes across care teams; communicate about medication problems or potential problems; use community-based patient support programs	Use pharmacy lists and patient lists as well as hospital discharge lists to ensure a fully reconciled and accurate medication list following discharge; reinforce changes made in the hospital as appropriate; use 'pill cards' to help patient track changes	Review medications at most visits, even if briefly	Focus more time on high-risk patients; tailor medications to patient abilities and overall goals; especially avoid treating each individual condition without regard to problems of poly-pharmacy
Care Coordination	Involve the patient in coordination conversations and use teach-back to ensure understanding; be especially clear when developing coordination roles for the patient or caregiver	Clearly describe care roles and accountabilities; use methods like read-back to ensure clear communication within teams about care responsibilities	Allocate discrete time to address care coordination tasks; use templates and checklists for specific tasks	Revisit care coordination at discharge and with changes in high-risk medications, mobility, new access problems, or changes in wound care or other care demands	Work with unique resources to develop local solutions; prioritize needs of high-risk patients; contribute to the research base on effective care coordination methods

*More detailed recommendations and checklists are contained in each section of the report.

Introduction, Overview, and Methods

What is "Ambulatory Care"?

For this report, any health care provided outside of an inpatient, institutional setting is considered "ambulatory care," whether or not any particular patient receiving this care can ambulate. Thus, we define ambulatory care to include traditional ambulatory, clinic-based care as well as care provided in the home in home-based primary care models.

Patients are at particularly high risk of experiencing medical errors and harm during handovers in care, when responsibilities are being transferred from one individual or team to another, such as at a shift-change, when one team passes along care responsibilities for a group of patients to another team, or when patients are moved to another site of care (e.g., for lab work, imaging or to access other resources needed for care). Discontinuities in the chain of responsibility during handovers, often exacerbated by inadequate communication across and between care teams, can lead to patient experiences of care that are unsettling, confusing and inefficient and thus, potentially costly and dangerous.

A handover of special concern is when patients are transferred from one care setting or facility to another, a period in time known as a care transition. Common examples of care transitions include when patients are admitted to a hospital from home, when patients transition between long-term care facilities, or when they are transferred between hospitals or from a long-term care facility into an acute care setting. Other types of care transitions are less obvious. For example, individuals may lose or drop their health insurance, thus transitioning in and out of the health care system. Young adults with complex care needs can transition from pediatric to adult care systems, or from Medicaid to Medicare coverage. And many individuals transition to new providers and settings of care when their insurance coverage changes. But, perhaps the most well-studied, and riskiest, care transition is the time when a patient leaves an inpatient hospital or emergency department to go home.

Most studies of patients leaving a hospital to go home[3] have been conducted from the perspective of inpatient care transition models. Several factors have driven this particular focus. Poor care transitions can lead to short-term, avoidable readmissions to the hospital, which are undesirable outcomes that are increasingly being measured and reported, and for which hospitals might be penalized. As a result, there have been increasing incentives for hospitals and their staffs to study hospital discharge processes. Researchers also tend to practice and to carry out their research in large academic medical centers, often primarily in the inpatient setting. By contrast, the research infrastructure for studying care transitions from the perspective of the ambulatory practice is much less well-developed. In addition, by the time a patient is discharged from a hospital, the care team in the hospital will often have developed a strong sense of ownership over the patient's care. Hence, for a variety of reasons the inpatient team has tended to take on primary responsibility for ensuring safe care transitions.

Yet inpatient teams face important limitations in ensuring safe transitions of patients from inpatient to ambulatory settings. These transitions in and out of the inpatient setting are best recognized as closed-loop, non-linear processes, which start and end with the patient in the ambulatory setting. That is, the transition process begins at admission, or even before, and ends sometime after the patient is no longer in the inpatient facility. For inpatient team members, information gaps about the patient and family, time limits, and other resources limits constrain their ability to fully address the complexity and variable scope of helping a patient through the transition from a "person in the home" to a "patient in the hospital" and back to being a "person in the home."

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3. This is often referred to as the patient being "discharged," though we have tried to avoid this term because it can suggest that the inpatient care team's responsibilities have been entirely completed at the time of the patient's departure, which is only rarely the case.

Compounding these challenges is the fact that the inpatient team might have no easy means of connecting with the patient's ambulatory care team, assuming there is one. And by the same token, the ambulatory team might not have easy access to information about the patient's care during the hospitalization, which makes it difficult for the ambulatory care team to accept responsibilities related to facilitating a safe care transition, at least until such time as the patient re-appears in the ambulatory practice.

Recognizing these complexities, it is very important to explore what inpatient teams can do to ensure safe care transitions. It is equally valuable to consider what ambulatory practices can and should do. Indeed, from the patient or family's perspective, it is not particularly important whether fragmentation in care, miscommunication or 'dropped balls' around the time of a care transition arise from failures of the inpatient team, the outpatient team, or both. What is important is that responsibilities for the patient's care be transferred seamlessly to and from the inpatient care team and the ambulatory care team – and both teams should be responsible and accountable for playing their parts to ensure a safe care transition.

> "What is important is that responsibilities for the patient's care be transferred seamlessly from the inpatient care team to the ambulatory care team – and both teams should be responsible and accountable for playing their parts to ensure a safe care transition.

The AMA's Expert Panel on Ambulatory Roles and Responsibilities in Safe Care Transitions
To address these issues, the AMA Center for Patient Safety brought together leading thinkers on care transitions and ambulatory safety to address appropriate roles and responsibilities for ambulatory practices in ensuring safe care transitions between inpatient and ambulatory settings. These individuals were asked to consider which specific tasks before, during, and after a patient's hospitalization would be handled best if the ambulatory care team were to play a leading role in accomplishing the tasks. The group examined a set of common frameworks for considering hospital discharge safety, including the Project RED, BOOST, and Coleman models for safer care transitions, focusing their attention on the potential ways that ambulatory practices might best fit into these models.

The group met in person in late summer 2011 and continued its work via electronic communications for another 18 months. During the in-person meeting, the group first articulated a set of 5 core responsibilities that ambulatory practices ought to take a leading role in accomplishing. The larger group then broke up into smaller groups of 5-6 individuals to establish sets of preliminary recommendations regarding each of these responsibilities.

Following the in-person meeting, the lists of recommendations developed during the in-person meeting were compiled and disseminated to the small groups for a series of iterative refinements over a period of several months. These refined recommendation lists from the small groups were eventually circulated to the larger group, which helped to facilitate consideration of whether these sets of recommendations reflected some basic principles that could help in developing more general guidance for ambulatory practices during care transitions.

The 5 X 5 Model for Safer Inpatient-Ambulatory Care Transitions
Using this iterative process, these leaders came to agreement on a set of 5 responsibilities, related to care transitions in and out of hospitals or emergency departments, where ambulatory practices should be expected to play important roles. They also articulated a set of 5 core principles that should generally govern the work of ambulatory practices when carrying out these and other responsibilities related to care transitions. Taken together, the expert panel believes these 5 responsibilities and 5 principles can provide tangible guidance to ambulatory practices to enhance the safety and effectiveness of care transitions.

5 Responsibilities
The panel recommends that ambulatory practices take on, and lead when possible, 5 responsibilities during care transitions: conducting or updating the comprehensive health assessment; establishing or updating care goals; supporting patient self-management; medication management; and care coordination. These 5 responsibilities do not represent a comprehensive list of every important task or issue that should be addressed to ensure safe transfers of care from

the ambulatory setting into an inpatient facility or emergency department and then back to the ambulatory setting. Rather, they are 5 specific tasks or activities that require explicit attention from ambulatory practices because, for practical purposes, they often cannot be managed effectively (or *as* effectively) by the inpatient care team alone. As a result, these 5 responsibilities almost always require the active engagement of the ambulatory team and, frequently, they will be accomplished most effectively if they can be led by the ambulatory team.

5 Responsibilities of Ambulatory Practices for Safe Care Transitions

The ambulatory practice team should bear significant or primary responsibility for:

Assessments–conducting a baseline comprehensive health assessment for the patient and updating this assessment following discharge from the inpatient setting;

Goal-Setting–working with the patient to establish, document, and keep up-to-date an explicit set of the patient's goals and corresponding decisions on care;

Supporting Self-Management–providing information and facilitating access to resources that can help the patient and caregivers safely manage the patient's condition(s);

Medication Management–communicating with the patient, pharmacy, and other relevant members of the care team to promote effective and safe medication use;

Care Coordination–helping to synchronize the efforts of all members of the care team(s) to best promote achievement of the patient's care goals.

These 5 responsibilities are listed not in order of importance, but in the natural order in which they typically take place during the care of an ambulatory patient; conducting a comprehensive health assessment leads naturally toward goal-setting, which leads to the need to establish plans for self-management, and so on.

5 Principles

In carrying out, contributing to or leading each of these 5 responsibilities, ambulatory practices should be guided by a set of 5 core principles for supporting safe care transitions into and out of the ambulatory setting. In all, the team's work should be person-centered, collaborative, structured, iterative, and flexible. Each of these principles is important and often they are mutually-reinforcing. However, like most sets of principles they can also come into productive tension with each other; when this occurs it should be seen as a marker of an important aspect of care that needs further reflection or work.

5 Principles to Guide Ambulatory Practice Team Efforts to Promote Safe Care Transitions

An ambulatory practice team's work on care transitions should be:

Person-centered–focusing on the needs and goals of patients and their caregivers

Collaborative–taking advantage of the complementary skills and talents of all team members, including those on the inpatient care team, and calling on other supportive resources when needed

Structured–using clear and carefully planned protocols, forms, and processes to help ensure comprehensive attention to core issues

Iterative–recognizing the constantly evolving nature of ambulatory care, repeating tasks over time as appropriate, and making adjustments as the patient's care needs and goals evolve

Flexible–acknowledging the unique needs and circumstances of each individual and being prepared to pursue creative solutions to novel problems

These principles, taken together, emphasize that the basic job of the ambulatory team is to help patients accomplish their goals by working together and following structured protocols, which help to avoid oversights and mistakes, while remaining flexible and attentive to changing individual patient needs. The principles also can be used to highlight specific opportunities for ambulatory teams to better define their roles, establish clear and transparent lines of accountability, and improve communication between health professionals from all sites of care and patients, their families, and caregivers.

Implications

These 5 principles and 5 responsibilities shed light on a number of important issues that can affect care transitions and that often are of particular or unique relevance for the ambulatory care team. For instance, all prior models for safe and effective care transitions have emphasized the importance of strong channels for communication, both within and across teams and especially with patients, their families, and other caregivers. Likewise, the panel's principles for safe care transitions also emphasize the importance of effective communication, including by focusing attention on person-centeredness, collaborative teamwork, and the importance of structured communication. The principles also recognize that in the ambulatory setting, in particular, communication channels must be iterative and flexible to accomplish each of the 5 proposed ambulatory team responsibilities. Ambulatory care is longitudinal and, compared to acute inpatient care, the ambulatory setting often affords more opportunities for repeat communication, breaking important messages into understandable chunks, and checking on patients' evolving understanding and goals over time.

Communication arises as a particular challenge to safe and effective care transitions because of the frequent absence of strong communication networks between inpatient care teams and the ambulatory team. Poor communication between these teams can lead to errors and harm on patient admission into the hospital (for example, if the hospital team is unaware of care plans and medication regimens in place or attempted prior to hospitalization and other historical data), and again when the patient is discharged (if the ambulatory team is unaware of new information or changes to the care plan arising during the hospital admission). Inadequate communication at these transitions in care can be attributed, in part, to technological and pragmatic factors such as the difficulty of contacting the other team at the time of hospitalization and discharge, but it also is a result of a culture of practice that sometimes accepts inadequate communication around care transitions as a mere annoyance rather than a significant risk to safe patient care. Ironically, the same inpatient team that might spend a great deal of energy, time and resources working to reduce uncertainty and the risk of a poor outcome, by carrying out additional testing or treatment while the patient is hospitalized, will sometimes discharge that same complex patient to home with a new and difficult care plan without first ensuring effective communication with the ambulatory team that will be largely responsible for helping the patient carry out the new care plan. Similarly, ambulatory care practitioners sometimes send patients to the hospital without proactively reaching out to the inpatient care team to ensure the team is fully apprised of the pre-admission situation and plans.

Another example of the unique opportunities and challenges facing ambulatory practices that are addressed by these principles and responsibilities is the increasingly important role of families and other caregivers during care transitions. In the inpatient setting, care is largely provided by trained professionals, though patients and their families often need to be taught skills to facilitate better care following discharge. But once they are in the ambulatory setting, the patient and family are rapidly thrust into roles as primary actors and decision makers often for complex and difficult care giving tasks, which can evolve as the patient's condition and/or goals change. Ambulatory practice teams are best-suited to take on the responsibility of supporting the patient and family in these tasks by eliciting needs, paying explicit attention to the needs of caregivers, providing ongoing education and assistance, identifying appropriate sources of expertise and guidance when new problems arise, and helping to connect the patient and caregivers to relevant community resources. Ambulatory practice teams are often better able to see individuals as "persons in the community" rather than "patients in the hospital." By holding this vantage point, ambulatory teams have a better

opportunity to help develop a comprehensive plan for what it will take for an individual to regain function within their families and communities.

Finally, there are some significant systemic challenges and barriers that are highlighted by considering these principles and responsibilities for ambulatory practices. For example, because many Americans receive employment-based insurance, changes in employment often mean changes in insurance coverage. As a result, patients can have continuous access to care, but not continuity of care with the same ambulatory care team, which exacerbates the challenges of ongoing care coordination. Also, few medical record systems today have explicit space to document patient goals and life changes, and where they are present, many record systems are not inter-operable across multiple ambulatory and inpatient care settings.

Perhaps the greatest challenge to ambulatory practices taking on these 5 responsibilities (assessment, setting goals, supporting self-management, medication management, and care coordination) is that ambulatory practices do not receive explicit reimbursement for a single one of them under most traditional insurance plans. Yet, there have been some positive recent efforts to provide support for ambulatory practices to carry out these responsibilities. Newer models of care delivery and payment, such as Accountable Care Organizations (ACOs) and episode of care payments, can provide indirect support to ambulatory practices for taking on these tasks. In addition, recent proposed payment changes from Medicare suggest the program will start providing direct reimbursement for certain care coordination activities that the Panel has suggested are best accomplished by the ambulatory practice. These changes suggest that it might be possible to develop a consistent and reliable business case for establishing the ambulatory practice as the primary locus of control for these 5 responsibilities.

The remainder of this report provides a more detailed discussion of each of the 5 responsibilities, including a set of explicit recommendations on how ambulatory practices can move towards carrying out each of these responsibilities, despite the obstacles noted above. In this regard, while the report establishes a set of responsibilities for ambulatory practices, the panel also acknowledged – and the recommendations address – the fact that other practitioners, organizations, policy-makers, and systems will need to play important roles in enabling ambulatory practices to accomplish these responsibilities and thereby ensure safe care transitions.

RESPONSIBILITY 1

Conducting a Comprehensive
Health Assessment

Conducting a Comprehensive Health Assessment

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"…the [high quality] doctor… carries his enquiries far back and … enters into discourse with the patient and with his family, and is at once getting useful information from the sick person and also instructing him as far as he is able…"

Plato, <u>Laws</u>, Book IV

Overview

Every clinical encounter begins, in one way or another, with an assessment of the patient's needs. Being clear about the roles of ambulatory care team members in conducting effective assessments, therefore, is the first step in understanding the roles of ambulatory clinicians in safe care transitions.

The AMA Care Transitions Panel (the Panel) recommends that the ambulatory clinical team should undertake a Comprehensive Health Assessment (CHA) for every patient. This assessment should take place as far in advance of any care transition or other significant change in condition (e.g., an admission to a hospital or new diagnosis) as possible, since many such changes and transitions are unanticipated.

The purpose of conducting a CHA in the ambulatory setting is to provide the care team (including the patient) with the information needed to estimate risk and make better care decisions. The information from the CHA should be used to develop a baseline profile of patient risks and strengths that can help guide care. While a traditional comprehensive history and physical examination by a clinician will include identification of the patient's clinical condition(s), needs and abilities, a CHA should be a team-based activity that aims to also identify and assess patient preferences, gaps in care, and important socio-economic, cultural, geographic and other factors that can affect health and health care.[1]

The Panel defined a CHA as:

> *…the systematic collection of the data needed for a patient's health status to be evaluated for both potential and existing problems, emphasizing risks and strengths that bear on functional capacity and quality of life. A comprehensive assessment need not determine a cure for all problems, but rather aims to elicit issues and suggest ways to maximize quality life years, highlighting concerns or topics most important to the patient, including issues related to the patient's values and preferences, risk factors, direness of consequences, and decisions or actions that might be time sensitive.*

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1. World Health Organization Health Impact Assessment; Determinants of Health; © WHO 2011. http://www.who.int/hia/en/
   Accessed September 20, 2012.

5 Principles to Guide Ambulatory Practice Team Efforts to Promote Safe Care Transitions

An ambulatory practice team's work on care transitions should be:

Person-centered–focusing on the needs and goals of patients and their caregivers[2]

Collaborative–taking advantage of the complementary skills and talents of all team members, including those on the inpatient care team, and calling on other supportive resources when needed

Structured–using clear and carefully planned protocols, forms, and processes to help ensure comprehensive attention to core issues

Iterative–recognizing the constantly evolving nature of ambulatory care, repeating tasks over time as appropriate, and making adjustments as the patient's care needs and goals evolve

Flexible–acknowledging the unique needs and circumstances of each individual and being prepared to pursue creative solutions to novel problems

The implementation of the CHA should be guided by the 5 principles for ambulatory care teams to promote safe care transitions. For this reason, the Panel stressed that the CHA should be conducted in a structured way and should become part of the patient's durable record, so that it can be accessed by all relevant team members to track the patient's health and wellness over time.

The data structure for the CHA should allow team members to quickly obtain and add information on the patient's life activities, behaviors or preferences that might influence the patient's health. It should also promote iterative assessments for comparative analyses following surgery, accidents, episodes of illness, or hospitalizations. In this regard, the Panel envisioned the assessment as residing in a "living" or dynamic document that would form a chronicle of the patient's entire health journey.

As part of a longitudinal record, the CHA should also facilitate collaborative care. It should be accessible to patients, who should have the capacity to share it with the rest of their care team(s) and others involved in their care. The Panel believes an accessible and mobile assessment record can enhance care coordination, especially when clinicians from different institutions are involved in a patient's care.

A recommended data collection framework
To achieve this vision, the Panel recommended that the health care community strive to implement a uniform, structured and CHA tool, designed to be easy-to-update over time. Recognizing the significant challenges to develop such a tool de novo, the Panel identified an existing tool, the Comprehensive Geriatric Assessment (CGA) instrument, as being consistent with all 5 principles and therefore as having the potential to meet its expressed goals.

The American Geriatric Society has noted that a CGA "goes beyond the standard adult comprehensive history and physical exam, including evaluations of special significance among older adults."[3] The CGA is described as "a multidimensional, interdisciplinary diagnostic process to determine the medical, psychological, and functional capabilities of a frail elderly person in order to develop a coordinated and integrated plan for treatment and long-term follow-up."[4]

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2. The term "caregivers" throughout this section refers to both formal caregivers, eg, certified or agency caregivers and family members who are often called informal caregivers. Caregiver roles, responsibilities, and health are discussed in Section 3, Self-Management.

3. American Geriatrics Society. The Role of a Geriatric Assessment in Care Coordination and in Improving Quality Care Coordination. http://www.americangeriatrics.org/advocacy_public_policy/care_coordination/ Accessed September 20, 2012.

4. Wieland & Hirth. Comprehensive Geriatric Assessment: Components of Comprehensive Geriatric Assessment. Cancer Control. November/December 2003, Vol.10, No.6. http://www.moffitt.org/CCJRoot/v10n6/pdf/454.pdf Accessed August 17, 2012; Stuck AE, Siu AL, Wieland GD, Adams J, Rubenstein LZ. Comprehensive geriatric assessment: a meta-analysis of controlled trials. Lancet. 1993; 342(8878):1032.

The Parts of a Comprehensive Geriatric Assessment (CGA)[5]

Component	Elements
Medical assessment	Problem list Comorbid conditions and disease severity Medication review Nutritional status
Assessment of functioning	Basic activities of daily living Instrumental activities of daily living Activity/exercise status Gait and balance
Psychological assessment	Mental status (cognitive) testing Mood/depression testing
Social assessment	Informal support needs and assets Care resource eligibility/financial assessment
Environmental assessment	Home and neighborhood safety Transportation and telehealth

The Panel believes that each of the components of a CGA – addressing medical, functional, psychological, social and environmental issues – should be standard elements of a CHA tool because they are useful for all primary care settings, not limited to geriatrics. However, the specific data elements within each component should be modified to meet the needs of individual patients. For example, elaborate cognitive and mental status testing is not routinely needed for an assessment of many adult patients, yet the patient's level of understanding of their medical condition and care plans should always be assessed.

In addition, the Panel believes there should be formal assessment of a sixth component that often affects the health of adults of all ages: behavioral factors. This includes eliciting information about dysfunctional health-related behaviors (e.g., passive dependence, projection, misplaced locus of control), personality disorders and substance abuse, but also potentially positive health behaviors such as exercise and dietary habits, and those aspects of the patient's cultural background that can affect these factors.

The CGA can serve as a useful model for a CHA to promote safer care transitions because the five components that comprise a CGA align with a set of determinants of health in the United States (and other developed countries) often associated with the likelihood of delayed or fragmented care, exposure to risk and adverse health outcomes.[6] In particular, there are important questions about social and environmental determinants of health risk to draw from the CGA that the Panel believes should be asked (and the answers recorded) as part of the comprehensive health assessment for all adults. These questions address key risks that strongly correlate with fragmented care and adverse health outcomes. They include:

- Mobility and Transportation – Does the patient have mobility challenges or need mobility assistance? Does the patient have inconsistent or absent transportation to appointments, employment, shops and support services when needed?
- Social isolation – Does the patient have inadequate social supports, including few or no supportive people to talk to and do things with?[7]
- Residence or Housing – Does the patient have unstable housing influenced by changes in housing costs, relocation or neighborhood changes?
- Income – Is the patient's income a limiting factor in obtaining needed goods and services?[8]

5. Wieland & Hirth. Comprehensive Geriatric Assessment: Components of Comprehensive Geriatric Assessment. Cancer Control. November/December 2003, Vol.10, No.6. http://www.moffitt.org/CCJRoot/v10n6/pdf/454.pdf Accessed August 17, 2012.

6. World Health Organization Health Impact Assessment; Determinants of Health; © WHO 2011. http://www.who.int/hia/en/ Accessed September 20, 2012.

7. Cacioppo JT, Patrick W. Loneliness: Human Nature and the Need for Social Connection. W. W. Norton & Company; 2008.

8. World Health Organization Health Impact Assessment; Determinants of Health; © WHO 2011. http://www.who.int/hia/en/ Accessed September 20, 2012.

Merely asking about these issues will not solve them. Each of these issues reflects entrenched social structures or inequities that cannot be cured by an ambulatory practice, and certainly not an ambulatory practice acting alone. In this regard, the Panel does not assert that ambulatory practices are responsible for ensuring their patients are able to overcome such social, geographic, income and other barriers to safe care transitions and good health outcomes. Still, ambulatory practice can and should be responsible for making sure these issues are explicitly recognized whenever they pose a problem for an individual patient, since failing to recognize and document these problems will almost guarantee they won't be addressed.

The Panel acknowledged a number of significant barriers to widespread adoption of a structured Comprehensive Health Assessment (CHA) for all adult patients, most notably the time required to elicit this information from patients and record it in a structured format. But, the Panel also noted that most components of the CHA can be self-reported for adult patients with normal mental status (many are addressed in the SF-36, for example[9]) and all of them could be incorporated into EMRs or other transportable and updatable records. Presently, few EMR systems have structured data fields for all the proposed components of a CHA. In addition, because patients are not alike, EMRs ought to offer assessment options to capture additional relevant data for each individual patient (reflecting a principle that guides both care transitions and EMR usability, the need for *flexibility*[10]). The Panel encourages EMR vendors to incorporate basic data fields for a CHA, derived from the CGA (see below), into all EMRs, but also agreed that there needs to be a "balance between standardization and customization".[11]

Additionally, the Panel identified time, workflow, and reimbursement methods in outpatient practices as barriers that would need consideration to encourage uniform adoption of the proposed CHA.

Iterative Use of the CHA
Because the CHA should be useful for tracking the patient's health journey over time, the Panel recommends completing or updating a version of the CHA at six key points around the care transitions from the ambulatory setting into a hospital and back to the ambulatory setting. They are:
- Pre-hospitalization (baseline) assessment, if possible
- ED visit (re-)assessment
- At time of admission (re-)assessment
- Readiness to go home, or pre-discharge, (re-)assessment
- Post-discharge (re-)assessment

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9. Ware JE. SF-36® Health Survey Update. http://www.sf-36.org/tools/SF36.shtml. Accessed October 29, 2012.

10. Webster C. EHR/EMR Usability: Natural, Consistent, Relevant, Supportive, Flexible Workflow. Published: June 28, 2009 at http://chuckwebster.com/2009/06/ehr-workflow/pediatric-emr-usability-natural-consistent-relevant-supportive-flexible-workflow Accessed August 17, 2012.

11. Institute of Medicine. Health IT and Patient Safety: Building Safer Systems for Better Care. Committee on Patient Safety and Health Information Technology. Chapter 7 Future Research for Care Transformation, page 135. National Academies Press; 2011.

• In-office (re-)assessment

Recommendations for Conducting and Using a Comprehensive Health Assessment

The panel offers the following recommendations to help ambulatory practices use the 5 principles to guide them in carrying out their responsibility for conducting and using a CHA. Numbered and lettered items comprise general recommendations, while items listed with a check-box can be used as specific guidance.

1. **Person-centered:** To the extent possible, the patient and caregivers should be directly involved in every aspect of their Comprehensive Health Assessment (CHA)
   a. The patient and, as appropriate, the patient's family, caregivers and other individuals the patient identifies should be involved in completing the assessment
       ☑ When feasible, patients and caregivers should self-report and record information for the CHA before face-to-face visits, such as by using a pre-visit questionnaire
   b. Every assessment should result in the identification of issues most important to the particular patient, especially:
       ☑ Issues related to the patient's values and beliefs
       ☑ The patient's unique health-related strengths and risk factors
       ☑ Pending time sensitive results, including referrals, tests and evaluations
   c. The patient or patient caregivers are typically the best primary sources for the following information:
       ☑ The patient's symptoms
       ☑ The patient's functional status and assessment of self-support, including access to transportation, ability to shop, cook and manage their medications, use medical equipment or devices, and provide other aspects of self-care
       ☑ The patient's behavior that could influence adherence, safety, or outcomes
       ☑ The patient's living environment, including safety in the home and neighborhood
       ☑ The patient's goals and values, including any advance directives
       ☑ The caregiver's goals and values in relation to those of the patient
       ☑ The caregiver's health status, including emotional health, and social support that might impact ability to provide care
       ☑ Changes in any of the above categories
       ☑ Measure(s) of success by patient or caregiver in implementing recommended treatments since the last visit or since hospital discharge
       ☑ Barriers to implementing recommended treatments since the last visit or since hospital discharge

2. **Collaborative**: Around times of care transitions the patient's CHA should be carried out and updated over time collaboratively by a multi-disciplinary care team, incorporating information from both inpatient and outpatient teams as well as information directly from patients and their caregiver(s)
   a. Multiple team members can and should take part in eliciting information from the patient and caregivers to update the CHA at care transitions
       ☑ The CHA should be readily available to relevant clinicians, the patient and others, with the consent of the patient or the patient's surrogate
   c. The CHA should serve to inform and connect to a collaboratively designed plan of care and should help determine plan implementation. The plan of care should communicate ways to address current issues and avoid future problems that would be important to the patient, including those related to:
       ☑ Care coordination
       ☑ In-home support
       ☑ Medications and needed follow-up
       ☑ Referrals and appointments
       ☑ Communication within and between care teams, including with the patient

d. As key members of their own care teams, patients and/or their surrogates should regularly receive concise and understandable written summaries of their CHA and associated plans that should focus on:
- ☑ What to do and how to do it
- ☑ When to call (e.g., clinical signs of worsening, important side effects, new or worsening behavioral or other issues that could influence outcomes)
- ☑ Whom to contact for problems or questions, with their contact information
- ☑ When to follow-up, especially regarding pending test results or for diagnostic or therapeutic purposes (e.g., radiology or physical therapy appointments)

e. Communication of information from the CHA and care plans should take place across the continuum of care
- ☑ The ambulatory practice should facilitate transmission of information from the CHA to the ED and/or inpatient team prior to or at the time of patient admission
- ☑ A real-time, concise hospital summary should be available to the ambulatory practice prior to the first follow up appointment
- ☑ For high-risk patients, there should be collaborative discharge planning and the ambulatory practice should be provided with updated information for the CHA and care plan prior to patient discharge; often, an ambulatory practice-based care manager should visit and assess the patient during the hospital stay
- ☑ The ambulatory practice should be informed whenever a patient is seen in the inpatient setting, including ED visits and hospitalizations, even if it does not result in an immediate change to the CHA or care plan

f. Immediate information provided to the ambulatory practice prior to or following a hospitalization should be concise, focused on recommendations and changes to the care plan, with longer-form charts, test results and a full discharge summary provided later

3. **Structured:** A CHA should be deliberately planned and structured to ensure that it includes the right information, obtained from the right source, at the right time

a. The basic information in a CHA should include:
- ☑ Medical information, including a problem list, medications and allergies
- ☑ The patient's goals of care (see Section 2), including any advance directives
- ☑ Functional status, including capacity to carry out activities of daily living, exercise tolerance and any problems with gait or balance
- ☑ Psychological status, including cognitive deficits and problems understanding conditions and care plans
- ☑ Behavioral health habits, including those related to personality disorders that can negatively affect health, positive health-related behaviors, and those often affected by culture, such as diet and activity
- ☑ Environmental and social conditions and risks, including transportation, social support and other potential risks for adverse outcomes

b. Four key environmental and social risks for problems during care transitions should be addressed, including:
- ☑ Mobility and Transportation – Does the patient have mobility challenges or need mobility assistance? Does the patient have inconsistent or absent transportation to appointments, employment, shops and support services when needed?
- ☑ Social isolation – Does the patient have inadequate social support, including few or no supportive people to talk to and do things with?
- ☑ Residence or Housing – Does the patient have unstable housing, influenced by changes in housing costs, relocation or neighborhood changes?
- ☑ Income – Is the patient's income a limiting factor in obtaining needed goods and services?

    c. The basic information from the CHA that should be available at all times to all caregivers (with the patient's consent) includes:
- ☑ Medication allergies
- ☑ Medical diagnoses
- ☑ Baseline functional status
- ☑ Advance directives

4. **Iterative**: Recurrent assessments are necessary to ensure identification of changes to the patient's condition, health risks, values, goals and plans. Many updates can be very brief and focused, but should be structured to avoid missing important changes

    a. The CHA should be updated:
- ☑ At baseline in the office setting or pre-admission
- ☑ At admission, including evaluation in an emergency department
- ☑ Prior to discharge
- ☑ At the first post-discharge visit
- ☑ When there are changes in the patient's health
- ☑ Whenever the patient or physician identify other salient factors that might foreseeably affect the patient's condition, health risks, values, goals or plans

    b. The baseline CHA should follow the structured format noted above

    c. At admission, updates to the CHA should focus on:
- ☑ New conditions or symptoms leading to the admission
- ☑ The patient's goals for the admission
- ☑ Risk factors that might have contributed to the need for the admission

    d. Prior to discharge, the updates to the CHA should focus on:
- ☑ Indentifying the patient's ambulatory care team
- ☑ Ensuring communication of information to the ambulatory care team
- ☑ Identifying needs for in-home support and transportation
- ☑ Facilitating medication and test follow-up
- ☑ Scheduling appointments
- ☑ Ensuring care coordination following discharge

    e. At the first post-discharge visit, update to the CHA should focus on:
- ☑ Reviewing the hospital summary (which should be available at the practice at the time of the visit)
- ☑ Updating medical information, including new diagnoses, treatments, and medications
- ☑ Reviewing lab or diagnostic test results that were pending at the time of discharge
- ☑ Reviewing referrals, including consultations and appointments for services such as physical therapy or for diagnostic testing, that were planned at the time of discharge
- ☑ Reviewing plans for other services, e.g., home care
- ☑ Reviewing needs for durable medical equipment
- ☑ Reviewing the recommended plan of care and ensuring patient or surrogate understanding and agreement

    f. Following any important change in the patient's condition new information from the patient and/or caregiver should be also be elicited, including:
- ☑ New symptoms (e.g., since discharge)
- ☑ Changes in functional status from baseline
- ☑ Changes in goals/values of patient and /or caregiver following or as a result of events related to the hospitalization
- ☑ New information or needs vis-à-vis caregiver status or social support
- ☑ Changes in the living environment, including any updates to the 4 environmental questions noted above
- ☑ A review of successes or barriers encountered by patient or caregiver in implementing the recommended treatments since discharge

    g. Following any important change in the patient's condition the ambulatory practitioner should also provide an update to the patient's estimated risk for morbidity, mortality, functional decline and decreased quality of life

5. **Flexible**: The CHA should be tailored to the needs of individual patients
    a. All patients should have a CHA that includes the structured elements noted above
    b. Patients at high risk at baseline, or who become high risk during a hospitalization, should undergo a more detailed assessment and may require different assessment algorithms, as well as more intensive and collaborative care coordination (e.g., one or more in-person visits by an ambulatory practice care manager prior to discharge). Important markers of high-risk patients include:

- ☑ Age (especially frail older adults)
- ☑ Behaviorally complex, including mental illness and substance abuse
- ☑ Medically complex (multiple comorbid conditions)
- ☑ A single condition requiring complex or risky therapy (e.g., autoimmune illness, HIV infection)
- ☑ Newly insured patients following a period of uninsurance
- ☑ Higher numbers of medications (>4 scheduled medications, not including those taken as needed) or medications with a narrow therapeutic index
- ☑ Functional limitations to self-care and other activities of daily living
- ☑ Low self-rated health status
- ☑ High self-rated risk
- ☑ Patients on high-risk medications, including warfarin, insulin, digoxin, and aspirin when used in combination with clopidogrel
- ☑ Psychiatric diagnoses, such as depression
- ☑ High risk primary admission diagnoses, including cancer, stroke, diabetes or glycemic complication, COPD and heart failure
- ☑ Low health literacy, as assessed using the teach-back method to determine patient understanding of their condition and key aspects of the care plan
- ☑ Poor social supports, especially absence of a formal or informal caregiver following discharge
- ☑ Any prior hospitalizations in the last 6 months
- ☑ Patients hospitalized for palliative care

RESPONSIBILITY 2

Setting Goals

Setting Goals

Primary Section Reviewers (in alphabetical order):
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"Goals can reflect that aspect of care that has been variously called technical or scientific and usually are achieved by the physician's appropriate choice of tests and therapies. Other goals refer to the nontechnical or interpersonal aspect of care, the art of medicine; these goals usually are not achieved by tests or therapies but by attention to those patient values that generated them."

Grant E. Steffen, MD, MA

"It's not just that outcomes matter to patients; outcomes matter differently to each patient."

Hal Luft, PhD

Overview
Once a complete health assessment has been carried out, the next step is to establish an explicit set of goals of care that are attuned to the patients needs, values, unique strengths and risks, and available resources. Recent research establishes a direct relationship between explicit goal-setting and effective shared decision-making, i.e., the best shared decisions are based on both accurate clinical evidence and also an accurate understanding of the patient's well-considered goals and concerns. Studies and narratives consistently demonstrate that patients who participate in direct conversations about goals with their physicians and other care team members achieve better health outcomes and are more satisfied with their care experiences. Evidence also suggests that patient satisfaction and adherence increase when care plans and protocols focus on the patient's values and beliefs as well as the patient's disease or condition.

5 Principles to Guide Ambulatory Practice Team Efforts to Promote Safe Care Transitions

An ambulatory practice team's work on care transitions should be:

Person-centered–focusing on the needs and goals of patients and their caregivers[5]

Collaborative–taking advantage of the complementary skills and talents of all team members, including those on the inpatient care team, and calling on other supportive resources when needed

Structured–using clear and carefully planned protocols, forms, and processes to help ensure comprehensive attention to core issues

Iterative–recognizing the constantly evolving nature of ambulatory care, repeating tasks over time as appropriate, and making adjustments as the patient's care needs and goals evolve

Flexible–acknowledging the unique needs and circumstances of each individual and being prepared to pursue creative solutions to novel problems

The Panel believes that patients, or their surrogates when appropriate, should have the opportunity to make fully-informed goal decisions. Consistent with the principles of patient-centeredness and the legal obligations of informed consent, patients should be offered information about the medical risks and benefits related to their goal decisions. They should be able to receive, consider and discuss this information free of pressure and receive the opportunity (or opportunities) for full understanding of all relevant information to guide their decisions. This information-sharing and exploration of goals should take place in the context of a trusting relationship with a physician or other members of a care team. The Panel calls this discussion fully-informed shared goal-setting, which they define as follows:

> *Fully-informed, shared goal-setting is a process in which a patient and health professional work together to develop a set of reasonable goals of care. This is separate from developing action plans to accomplish these goals, but should take into account all factors, medical and social, that might bear on goal achievement. During this interactive process, the health professional becomes aware of the patient's preferences and values, while the patient learns about the risks, benefits and options associated with potential medical interventions that might help the patient achieve each goal. Goals should not be limited to medical needs, but should also include goals that reflect wellness, function, the cultural aspects of the patient's life, socio-economic factors affecting the patient, employment and career goals, and life enjoyment aims. The fluidity of the patient's choices must be anticipated, recognized and respected as the patient's goals may change due to health conditions, illness or lifestyle choices. Additionally, patient goals may be influenced by social, economic, medical or other changes. To ensure continuing concordance between the patient and others who need to know the patient's goals, any significant life events should trigger an opportunity to revisit de novo the goal setting discussion with the patient.*

The Panel stresses that fully-informed, shared goal-setting will incorporate a potentially complex set of important and diverse but interconnected considerations into decision making, including the patient's current state of health, illness, or wellness; cultural, social, economic issues; availability of family and community resources; the safety of the home environment; the patient's life goals at the time of the decision; and ways to optimize the patient's health. As such, fully-informed, shared goal-setting relies on the prior conduct of a complete health assessment (CHA), as described in section 1. A high-quality conversation on goals should include explicit, structured attention to the broad range of issues that often bear on health, wellness, and function, including issues from a set of domains that have not always been fully appreciated and incorporated into medical decision-making, such as cultural preferences, socio-economic influences, employment or other career aspirations, and life enjoyment goals. These factors can be important regardless of the patient's age, health, educational, demographic or social status.

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5. The term "caregivers" throughout this section refers to both formal caregivers, eg, certified or agency caregivers and family members who are often called informal caregivers. Caregiver roles, responsibilities, and health are discussed in Section 3, Self-Management.

A person-centered and structured goal-setting discussion should employ the principles of health literacy, including avoiding medical jargon, using plain, non-medical language, and the use of "teach-back" techniques. As a key facet of decision-making, often with high stakes in the short or long term, these conversations should always be carried out in the patient's preferred language.

Fully-informed, shared goal-setting goes beyond simply discussing the information collected during the CHA in several important ways. First, it entails exploring together the potential degree of difficulty, expense or additional support requirements associated with proposed self-management tasks. Second, setting goals requires a discussion about available options for testing, treatment, palliation or to address important barriers to care uncovered during the CHA. This discussion about options needs to include explicit consideration about potential risks, benefits and alternatives associated with suggestions, interventions and protocols, including by explaining the degree of difficulty, expense, or additional support associated with proposed self-management tasks, optional self-management approaches, and the likely associated risk and rewards. Finally, goal-setting cannot be assumed to be complete until one has confirmed through teach-back that the patient (and, where appropriate, family) understand the topics discussed and the goals that have been established.

In accordance with the principle that care transitions work should be iterative in nature, the Panel recognizes that the large number of factors that can come into play in establishing goals makes it very likely that goals will need to be revisited and changed over time, as these factors evolve. The Panel encourages physicians and other care team members to anticipate, elicit, recognize and respect changes in patient choices.

In this regard, the Panel acknowledges that a hospital stay can often prompt a revision in patients' goals. As such, the inpatient care team often is best-positioned to carry out some renewed goal-setting discussions. However, the ambulatory care team is particularly well-suited to ensuring ongoing, pro-active reassessment of goals at specific points in time, including before anticipated hospitalizations and in the aftermath of unplanned admissions or other problems. In particular, the ambulatory care team should always review goals set or revised during a hospitalization to ensure the patient continues to find them relevant. Certainly, the same triggers for updating the CHA should also prompt an opportunity to revisit the patient's goals. Any significant change in the patient's health, wellness, socio-economic status or other key factors should be recognized as a potential trigger for a new goal setting discussion with the patient. The Panel suggests that patients and the care team "revisit" goals at regular intervals, as well as before and after major events. Ideally, the goals incorporated into the plan of care should always reflect the patient's most current values and life goals, including what the patient considers to be important throughout life and essential at the end of life.

While goal-setting is often best conducted during a one-to-one conversation, communication about goal-setting is essential to effective collaborative care. In particular, changes in a patient's goals should trigger communication with those individuals whom the patient needs to know their goals in order to best achieve them, e.g. with family, caregivers, physicians or other members of the health care team. While sharing information about goals is critical, the ambulatory team should always bear in mind that regardless of the composition of the team or context of the discussion, the goals belong to the patient.

One reason for a structured goal-setting discussion is that the Panel realizes that it is easy for practitioners to become "prisoners of their own perspective." Clinicians tend to be most familiar with the medical facts about their patients and, as a result, focus on the medical aspects of goal setting. Many clinicians have not been trained on how to elicit information about social determinants of health outcomes or other risk factors that might affect the patient's ability to achieve their goals. Likewise, many clinicians have not been trained on how to elicit useful information about patients' preferences, values, concerns or what life goals are important to them and how health-related decisions might affect those goals. However, the Panel believes patients should be full partners in

deciding goals and in the end that goals must be "patient facing" rather than "provider facing", i.e., the goals and care plan should reflect the patient's authentic voice and values. This argues for a structured goal-setting discussion that is also flexible so that it can evolve to meet each patient's unique needs.

Finally, there is a need to have a series of highly personalized goal conversations with all patients. In particular, ambulatory care teams must recognize that goal setting is not exclusive to end-of-life situations. Rather, goal setting is about lifelong health and wellness and is important for all patients, at all stages of their lives and throughout their health journey. Unfortunately, current payment mechanisms rarely provide support for such conversations, even though they are likely to result in better medical care decisions by ensuring that these decisions are consistent with patient values. To facilitate regular goal-setting discussions, the Panel believes payors should develop financing mechanisms that support time spent on these tasks.

In the end, the Panel believes that fully-informed, shared goal-setting discussions should result in a plan of care that is reasonable and realistic given the patient's condition, resources and support; makes medical sense; and, foremost, makes sense to the patient.

Recommendations for Carrying Out Fully-Informed, Shared Goal-Setting

The panel offers the following recommendations to help ambulatory practices use the 5 principles to guide them in carrying out their responsibility for helping the patient set goals. Numbered and lettered items comprise general recommendations, while items listed with a check-box can be used as specific guidance.

1. Person-centered: Patients have an inherent right to set their own goals and to do so with the best information and advice available. The patient's voice must be heard and reflected in establishing a set of goals that the health care team then helps the patient achieve
  a. The roles of the ambulatory team in goal-setting are to listen to the patient, provide reliable information, and offer trusted advice using plain language to inform the patient's goal-setting
    ☑ Patients or their surrogates must "own" their health goals; patients must make the ultimate decisions, if they are able
    ☑ The ambulatory care team must first listen to learn about patients' personal preferences and goals; while providing information and advice is helpful, often what the patient most wants is to have their point of view and wishes heard
    ☑ The care team should use methods like teach-back (asking the patient to summarize, in their own words, the key points they have heard) to ensure patient understanding of the information and options being presented
    ☑ Members of the ambulatory care team should use methods like repeat-back, reflecting back to the patient the key points the team member has heard from the patient, to confirm understanding of the patient's values and goals
    ☑ Health care professionals are responsible for clearly explaining potential risks, benefits and options to the patient and, when appropriate, the patient's family and caregivers
  b. The ambulatory team is responsible for helping patients determine the best ways to pursue achievement of their goals
    ☑ The ambulatory team should help patients pursue their goals, including through development of explicit and reasonable care plans that make sense to the patient
    ☑ An understanding of the patient's insurance and other payment coverage options is needed to set a context for furthering the goal setting and care planning conversations; however, payment issues should not control these conversations

      c. On occasion, patients might elect goals that are mismatched with medical capabilities
- ☑ The responsibility of the ambulatory care team is to attempt to fully understand the patient's aims and what underlies them while continuing efforts to convey realistic options and explain the extent to which those can or cannot achieve the patient's goals

      d. At times, patients may elect to pursue goals that are contrary to the religious or moral views of a practitioner or provider
- ☑ Health professionals should follow the guidance of their Codes of Ethics with regard to conflicts of conscience, which in some instances entails helping the patient find a clinician who is better able to work with the patient

2. **Collaborative:** While goal-setting conversations are often best carried out one-to-one, goal setting may require the input of multiple members of the team. In addition, optimal goal-setting is always collaborative in that it reflects a conversation between two members of the team: at least one health professional and the patient

      a. A number of team members may be involved with the patient in goal-setting, including
- ☑ The patient's family and other involved caregivers
- ☑ Physicians involved in the patient's care (e.g., PCP, specialist, hospitalist)
- ☑ The patient's care coordinator or case manager
- ☑ Other professionals providing services or supporting the patient

      b. Regardless of the composition of the team or context of the discussion, the goals belong to the patient

      c. The patient's current goals should be readily accessible to all team members responsible for helping the patient achieve the goals, with the consent of the patient as needed
- ☑ The patient's goals should be documented in the medical record under an explicit tag or tab labeled, for example, "Patient Goals," which should be visible and easily accessible
- ☑ All members of the care team are responsible for reading and being aware of the patient's goals
- ☑ As determined by the patient, it can be helpful to rank order goals from higher to lower priority

      d. When a patient's primary (high-ranking) goals are changed, the physician or another designated individual should ensure that other physicians and participants in the patient's care know the patient's new goals. Who is responsible for conveying this information may differ based on local communication networks, resources and practices

3. **Structured:** The health care community and its stakeholders should decide on what comprises the elements of goal setting and agree on some core components for shared goal setting language. The Panel offers the following initial guidance

      a. Goals of care conversations should consider acute, intermediate and long term goals

      b. The following domains, many of which can and should be taken from the CHA, should be addressed in a structured conversation to establish goals:
- ☑ Wellness and health
- ☑ Cultural preferences
- ☑ Social and economic factors and their influences
- ☑ Resources and support available to achieve goals
- ☑ Employment or career goals
- ☑ Aspirations and life enjoyment goals

      c. Goal setting is a valuable component of care and, therefore, as methods of eliciting and articulating goals are developed and validated, training in structured goal setting conversations should be available to physicians and the health care team

4. **Iterative:** Goals need to be revisited at key points in time, including around care transitions, and should also be revisited at regularly scheduled times when the patient and physician are better able to optimally engage in an in-depth goal-setting discussion. Ambulatory care practices are especially well-suited to take primary responsibility for initiating many of these goal-setting conversations

    a. Goal setting should be addressed/revisited at the following times:

        ☑ Prior to a scheduled admission

        ☑ Prior to discharge from an inpatient facility to home or another venue, such as a skilled nursing facility

        ☑ Following discharge from a hospital or other inpatient facility, at the patient's first follow up appointment in the ambulatory care setting

        ☑ When there are goal "breaches" ☑ At unanticipated readmissions to an inpatient facility or visits to an emergency department

        ☑ When any acute change in the patient's condition requires a medical response or results in a change in function

        ☑ Following a serious life event, including changes the patient chooses to make

        ☑ When changes in insurance coverage or other social or economic changes might affect access to resources needed to achieve a goal

5. **Flexible:** While goals should be iteratively examined and revised when necessary, the ambulatory care team should also recognize that many patients will establish goals that are difficult and that require both patience and flexibility to achieve. While instances of non-adherence, "stalled goals" or other setbacks should trigger a goal discussion to determine if the patient wants something different from what the health care professional believes ought to be done or the patient believed could be done, more often these occasions simply reflect the existence of significant barriers to achieving the patient's goal that are difficult to overcome

    a. Setbacks on the patient's path to achieving their goals often do not require a revision to the goals

        ☑ When patients stall or backslide on attaining a goal, the ambulatory care team should exhibit patience and flexibility by exploring the reasons for the setback and using it as a signal to revisit and either reaffirm or revise the care plan rather than changing or rejecting a goal

        ☑ Poor adherence and related setbacks rarely represent overt patient rejection of their goals, but can indicate a need to re-examine barriers and strategies for overcoming them

RESPONSIBILITY 3

Support Patient Self-Management

Support Patient Self-Management

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Health and care transcend position and location.
I discovered that most care delivery is actually self-care.
As much as I might think I affect health outcomes, most are influenced by factors other than "me,"
and are outside the four walls of medical delivery. Socioeconomics, biology, geography, education,
literacy, temperament, environment, and networks all play a role in outcomes.
John Krueger, MD

Overview
In 2003, the Institute of Medicine (IOM) released an important report, *Priority Areas for National Action: Transforming Health Care Quality*.[1] This report identified 20 areas that the IOM's Committee on Identifying Priority Areas for Quality Improvement agreed present the greatest opportunities to narrow the gap between known best medical practices and what the health care system is actually doing.[2] Two issues were listed as being "cross-cutting" areas of concern, because addressing them is necessary to achieve substantive improvements in all of the other issues. These cross-cutting areas were "care coordination" and patient "self-management/health literacy."[3,4] When examining the role of ambulatory practices in care transitions, the Panel agreed that each of these was a core concern and that the ambulatory practice is often in a position to address these cross-cutting issues effectively. Section 5 will discuss responsibilities related to care coordination.

5 Principles to Guide Ambulatory Practice Team Efforts to Promote Safe Care Transitions

An ambulatory practice team's work on care transitions should be:

Person-centered–focusing on the needs and goals of patients and their caregivers

Collaborative–taking advantage of the complementary skills and talents of all team members, including those on the inpatient care team, and calling on other supportive resources when needed

Structured–using clear and carefully planned protocols, forms, and processes to help ensure comprehensive attention to core issues

Iterative–recognizing the constantly evolving nature of ambulatory care, repeating tasks over time as appropriate, and making adjustments as the patient's care needs and goals evolve

Flexible–acknowledging the unique needs and circumstances of each individual and being prepared to pursue creative solutions to novel problems

1. Adams K, Corrigan JM, eds. Institute of Medicine: Priority Areas for National Action: Transforming Health Care Quality. Washington, DC: The National Academies Press; 2003. Institute of Medicine (IOM)

2. Ibid. Areas for improvement that represent the continuum of care across the life span are: Chronic Conditions; Behavioral Health; Preventive Care; End of Life; Children and Adolescents; Inpatient/Surgical Care. January 7, 2003.

3. Ibid.

4. Institute of Medicine. Crossing the Quality Chasm: A New Health System for the 21st Century. Washington, DC. National Academies Press; 2001.

With regard to self-management, the IOM report opened its discussion by recognizing the important roles both of individual clinicians and the organizations and systems within which they work, because both have responsibilities in helping patients achieve an environment to "make self-management tenable." Specifically, there is a key role for health professionals and organizations in providing what the IOM committee called "self-management support," and which the defined as:

> *the systematic provision of education and supportive interventions by health care staff to increase patients' skills and confidence in managing their health problems, including regular assessment of progress and problems, goal-setting and problem-solving support*[5]

The AMA Care Transitions Panel (the Panel) recognized the same set of considerations with regard to the more specific roles of ambulatory practices in ensuring the safety of care transitions. The Panel built from the work of the IOM, and of Lorig and Holman, to define self-management with regard to care transitions as follows:

> *Self-management is the universal, lifelong and dynamic process of self-monitoring, decision-making and re-evaluation, which is the primary means for individuals to affect their health. It includes not only decisions about seeking professional care and adhering to recommendations, but also daily decisions about work, recreational activities and food. Ambulatory practitioners and the organizations in which they work are responsible for supporting effective self-management and making it easier for patients. During transitions in care, effective self-management often involves helping the patient adjust to both real and perceptual shifts from wellness to illness and back again.*

Following discharge from a hospital, ambulatory care patients often assume (or are expected to assume) a much more active role managing their own care. At one time or another, patient responsibilities might include monitoring signs and symptoms, conducting self-triage and seeking care when needed; managing medications, wound care and healing, diet, rehabilitation, exercise and wellness activities; communicating complicated information across multiple clinicians and provider organizations; and, in general, navigating various aspects of an often disjointed health care system.[6]

Despite the complexity of such tasks and a number of other potential challenges, some degree of self-management is always necessary in the ambulatory setting, including for patients receiving extensive home-based care, and more effective self-management in the ambulatory setting could help achieve a number of important aims for patients and society (box). As a practical matter, the Panel believes that ambulatory practices should bear special responsibility for supporting effective self-management to help patients achieve three interlocking aims: 1) accurately monitor and measure their health status and progress; 2) recognize significant changes, especially those indicating potential deterioration; and 3) make appropriate decisions about self-care based on this information, including choices about when and what to communicate to caregivers and health professionals.

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During transitions in care, effective self–management often involves helping the patient adjust to both real and perceptual shifts from wellness to illness and back again.

5. Adams K, Corrigan JM, eds. Institute of Medicine: Priority Areas for National Action: Transforming Health Care Quality. Washington, DC: The National Academies Press; 2003. Institute of Medicine (IOM); page 52; referencing Glasgow et al. 2002.

6. Lorincz CY, et al. Research in Ambulatory Patient Safety 2000–2010: A 10-Year Review. American Medical Association. 2011; Section V. Patient roles in ambulatory safety research. www.ama-assn.org/go/patientsafety. Accessed October 30, 2012.

> **Potential Aims of Effective Self-Management Support in Ambulatory Settings**
> • Increase the patient's ability to make safe and healthy decisions
> • Increase patient's sense of ownership, comfort and satisfaction with their care decisions
> • Increase patient well-being and reduce patient harm
> • Reduce the burden of illness associated with the patient's condition or illness
> • Reduce the direct and indirect costs associated with patients' inability to manage their care

These three core aims are important throughout a patient's lifetime, but they can become especially challenging during times of care transitions. Patients discharged following an inpatient hospitalization often are tasked with monitoring and managing conditions and treatments that are new and frightening. Thus, effective self-management in the immediate aftermath of a hospitalization often requires intensive support from the ambulatory care team. The IOM noted that four features characterize successful programs to support self-management (Table 1). These can provide guidance to ambulatory practices in establishing ways to help patients during care transitions and they are also remarkably aligned with the Panel's 5 principles.

Table 1- Features of successful programs to support self-management[7]

Successful programs to support self-management have four features.
1. Providers communicate and reinforce patients' active and central role in managing their illness.
2. Practice teams make regular use of standardized patient assessments.
3. Evidence-based programs are used to provide ongoing support.
4. Collaborative care planning and person-centered problem solving result in an individualized care plan for each patient and support from the team when problems are encountered.

The Roles of Family Members and Other Caregivers in Self-Management
Family members and other caregivers often provide critical support to patients during care transitions (see box) and the number of patients who need caregiver support is increasing and becoming more diverse (e.g., with more and younger veterans requiring care). For an ambulatory practice team, part of fulfilling their responsibilities for supporting patient self-management is reaching out and directly engaging these key members of the care team to ensure their understanding of the care plan, especially as regards both patient and caregiver management tasks.

At the same time, the Panel recognized that the patient management demands placed on caregivers can be very high. This points to the need for flexibility and compassion in helping the caregiver address these demands. In particular, professional caregivers, such as home health aides, may help patients carry out a medical regimen, according to the patient's preferences and medical needs, within defined hours. But if the caregiver is a family member or friend, their care responsibilities (frequently unpaid) can extend well beyond medical issues, and usually beyond any set hours. Family caregivers often assume their care role in addition to other roles and responsibilities they have in their homes or at work. It is not uncommon for family caregivers to adjust their work schedules, take leaves of absence, or give up employment altogether. Family caregivers often spend their own money on caregiving expenses and can deplete their savings providing care to a loved one. As a result of such stresses, caregiving poses threats to the caregiver's psychological, behavioral and physiological health.[8] For example, a number of studies show that caregivers often have signs and symptoms of depression and many meet diagnostic criteria for major depression.[9]

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7. Adams K, Corrigan JM, eds. Institute of Medicine: Priority Areas for National Action: Transforming Health Care Quality. Washington, DC: The National Academies Press; 2003. Institute of Medicine (IOM); page 52; referencing Glasgow et al. 2002.

8. Bevans M, Sternberg EM. Caregiving burden, stress and health effects among family caregivers of adult cancer patients. JAMA. 2012: 307(4):398-403.

9. Cuijpers P. Depressive disorder in caregivers of patients with dementia: A systematic review. Aging Ment Health. 2005; 9(4):325-30.

Caregiver Facts[10,11,12]
- According to the National Alliance for Caregiving and AARP, more than 65 million people – 29% of the U.S. population – provide care for a chronically ill, disabled or aged family member or friend. They spend, on average, 20 hours per week on caregiving tasks.
    - The number of hours spent caregiving increases with the age of the caregiver and the average age of caregivers caring for someone 65 or older is 63 years; a third of these caregivers are in fair to poor health themselves.
    - The estimated value of the "free" services family caregivers provide for older adults is $450 billion a year.
    - In 2007, the average family caregiver for someone 50 years or older spent $5,531 on out-of-pocket expenses.
- About two-thirds of caregivers are female and one-third of them care for two or more people.
    - Female caregivers spend more time providing care than men (21.9 vs. 17.4 hours per week); but spousal caregivers of both sexes age 75 years and older provide equal amounts of care.
    - Female caregivers are more likely to handle bathing, toileting and dressing; male caregivers are more likely to help with finances and arranging care.
    - Female caregivers are more likely to suffer from high stress due to caregiving than male caregivers do (35% vs. 25%).
- On average, family caregivers provide care for 4.3 years.

The demands and stresses associated with caregiving not only can isolate and change the caregiver's life and negatively affect caregiver health, they can also reduce the caregiver's ability to provide effective care to the patient. Confusion, fatigue, fear, lack of confidence and limited resources can affect caregiver motivation, compromise care delivery and contribute to failed plans of care.

To support effective self-management in situations involving caregivers, ambulatory practices need to be aware of both patient needs and caregiver capabilities, including potential stresses on caregivers. The Panel therefore agreed with recent calls on ambulatory practices to specifically assess patient-caregiver relationships and caregiver needs as a means of ensuring both patient and caregiver well-being.[13]

10. National Alliance for Caregiving in collaboration with AARP; Caregiving Statistics: Statistics on Family Caregivers and Family Caregiving. Caregiving in the United States; November 2009.

11. National Alliance for Caregiving and Evercare; Caregiving Statistics: Statistics on Family Caregivers and Family Caregiving. Evercare Survey of the Economic Downturn and Its Impact on Family Caregiving; March 2009. http://www.nfcacares.org/who_are_family_caregivers/care_giving_statstics.cfm. Accessed October 30, 2012.

12. Family Caregiver Alliance. Selected Caregiver Statistics; Copyright © 2011 http://www.caregiver.org/caregiver/jsp/content_node.jsp?nodeid=439. Accessed October 30, 2012.

13. Cornwell T and Schwartzberg JG, eds. Medical Management of the Home Care Patient, Guidelines for Physicians. 4th ed. Chicago, IL: American Medical Association and American Academy of Home Care Physicians; 2012.

Caregiver Coaching

A promising strategy is for ambulatory practices to provide explicit coaching to caregivers. Qualis Health has reported the following anecdote:

> At the first coaching meeting, the beneficiary and her family caregiver were overwhelmed and unable to mobilize self-management skills. Over the course of a month, [the Qualis Health team] coached the beneficiary and her caregiver on the Care Transitions four pillars (medication reconciliation, physician follow-up, red flags, and personal health record). Our coach also referred them to existing community services, where the caregiver was able to receive further training. Over time, the pair became much more activated in her care. The beneficiary understood that she could have a voice in her own healthcare decisions, and was empowered to make her needs known. Consequently, our coach was able to complete the intervention knowing that [the Qualis Health team] had made a lasting improvement in this beneficiary's healthcare.[14]

Education for Self-Management

Presently, many patients receive much of their education for self-management for a coming care transition from hospital to home during their hospitalization. Unfortunately, the hospital setting is not an ideal educational environment for many reasons, often including the patient's acute illness, the patient and family's emotional state, effects of medications, poor sleep, limited time, interruptions and other distractions, and limited access to community resources the patient might need. Therefore, hospital-based education for self-management should generally be focused on ensuring the patient and caregivers know what to do in the first few days after leaving, so they don't end up back in the hospital. Teaching beyond that can run the risk of information overload, with diminished returns or increased confusion. Therefore, the Panel suggests that care coordination models consider re-focusing long-term self-management education tasks to the ambulatory setting after hospital discharge, when patients (and their caregivers) are often in a better state to receive education and other support to help them manage their condition and treatment. For medical or surgical admissions that are planned, self-management education in the ambulatory setting should take place both before and after admission to an inpatient facility.

As with other care transition responsibilities, a person-centered approach is necessary in supporting self-management. In particular, education efforts should focus on helping patients solve problems that matter to them. In this regard, effective support for self-management should build on the information obtained from the, Comprehensive Health Assessment (CHA), described in section 1. The CHA should have identified the patient's goals and needs, so that it can serve as a basis for targeted education and to highlight other support needs. From a patient's perspective, effective self-management is about being able to solve problems that might affect one's health – whether these problems are medical, behavioral, social, emotional, or some combination.

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14. Qualis Health. Care transitions coaching saves Medicare & Medicaid dollars. January 2010. http://www.qualishealthmedicare.org/about-us/results/local-success-stories/care-transitions-(coaching-saves-dollars) . Accessed October 30, 2012

Structured Models for Effectively Supporting Self-Management
Each individual patient will have a certain set of problem-solving skills and their own management style.[15] The Panel believes that building on these strengths is the most effective way to support improved self-management. To this end, the Panel recommends grounding self-management support in the evidence-based guidelines and techniques of behavioral counseling[16] and motivational interviewing.[17]

Research on the outcomes and effectiveness of self-management education spans a quarter of a century. Lorig and Holman's compilation of studies summarizes a body of research comprising patient outcomes studies, randomized trials and other clinical applications, which together have demonstrated the effectiveness of teaching five core self-management skills.[18] Baker, et al (2011) provides guiding principles for the Mastery Learning philosophy and Teach-to-Goal interventions, which can reduce variation in goal attainment, including among patients with low literacy.[19] Both of these methods are described more fully in the references and in appendix B.

A general message of these proven models is that effective education for self-management is not easily achieved in one office appointment, ED visit or during a hospitalization. In addition, these models recognize that a patient's capacity for self-management is fluid, waxing and waning over time, and is strongly influenced by the patient's state of health, goals, behavior, socio-economic status and the complexity of new tasks the patient must understand and manage. These observations are consistent with the principles that effective management of care transitions by the ambulatory care team should be both iterative and flexible.

Recognizing Barriers
Much of a patient's recovery depends on what happens to the patient after leaving the hospital. Yet physicians sometimes note that they are relatively powerless to address factors outside the hospital or clinic, such as that low-income people might not be able to afford the medications they are prescribed, healthful foods they are directed to eat, or equipment that might facilitate exercise. The ambulatory care team can control the information they elicit – ensuring these factors do not go unrecognized – and how information about self-management is exchanged. A structured complete health assessment should reveal these barriers and then, especially during goal-setting and care planning, they can be further explored for possible ways to overcome them.

Barriers to Self-Management
It is common for patients to face a number of important barriers to effective self-management. These barriers should be elicited in the course of the complete health assessment, especially when the assessment is updated at the time of discharge and at the first post-discharge visit. The ambulatory practice should, as far as possible, assist patients in overcoming or circumventing these barriers.

15. Lorig KR, Holman H., Self-Management Education: History, Definition, Outcome, and Mechanisms. Ann of Behav Med. 2003; 261(1):1-7.

16. Whitlock E, Orleans T, Pender N, Allen J. Evaluating primary care behavioral counseling interventions: An evidence-based approach. US Preventive Services Task Force web site. Available at: http://www.uspreventiveservicestaskforce.org/3rduspstf/behavior/behsum1.htm Accessed November 1, 2012.

17. Substance Abuse and Mental Health Services Administration (SAMSA). Motivational Interviewing website. Available at: http://www.motivationalinterview.org/ Accessed November 1, 2012.

18. Lorig KR, Holman H., Self-Management Education: History, Definition, Outcome, and Mechanisms. Ann of Behav Med. 2003; 261(1):1-7.

19. Baker DW, DeWalt DA, Schillinger D, Hawk V, et al. Teach to Goal: Theory and Design Principles of an Intervention to Improve Heart Failure Self- Management Skills of Patients with Low Health Literacy, Journal of Health Communication; 16:sup3, 73-88 (2011). http://dx.doi.org/10.1080/10810730.2011.604379 Accessed October 30, 2012.

Common barriers include, first, minimal or absent social supports. In light of the importance of family caregivers noted above, it is not surprising that absence of a caregiver and other social supports at home can be a major risk factor for poor outcomes, comparable to other commonly-recognized biomedical risk factors.[20] Lack of social supports can result in non-adherence, inability to follow up and other problems that lead to poor outcomes.

Financial barriers to effective self-management are also common, as noted in the box. Patients often face hurdles related to co-pays and other costs that can make self-management difficult or impossible. The ambulatory practice might or might not be able to fully address these issues for each individual patient, but it is possible to ensure that information about self-management is delivered effectively. And it is possible to elicit information from the patient specifically about these types of barriers, so that at least those barriers that can be mitigated will be recognized and addressed.

The Panel also noted that ambulatory practices, themselves, often face financial barriers to providing effective self-management supports. Over the last century, the success of the biomedical model in inpatient medicine has narrowed the meaning of "health care" largely to the delivery of discrete goods and services, which has allowed payers to allot payments based on quantifiable units (i.e., fee-for-service). Typically, payments to physicians have also been calculated on the basis of procedures performed, rather than whether thoughtful care was provided or whether any healing resulted. In the course of this evolution, those physicians who provide less easily quantifiable services like education and counseling for patient self-management – primarily generalists, internists, and pediatricians – have seen their relative reimbursement rates diminish. Newer payment models that emphasize population-based, coordinated care and that provide greater rewards when patients do not need to be hospitalized might reverse this trend, but this remains to be proven.Payers could also provide discrete reimbursement to ambulatory care practices for carrying out these important tasks.

A related barrier to effective self-management has been the relative emphasis given to the roles of health professionals and the services they provide, rather than patient actions, in improving health outcomes. This emphasis on the effectiveness of professional interventions might even reduce some of the positive effects of self-management. Patients' use of self-management not only can change behaviors, but there is emerging information from patient stories that improving one's sense of control over illness may contribute to improved outcomes. There is also some sense that patient education programs directed at reduction of feelings of helplessness and improved self-efficacy could result in greater cost containment and better outcomes in chronic diseases.

Finally, these observations highlight a broader issue: Medicine and health exist in a social context. While individual physicians often have the most influence in one-on-one encounters with individual patients, they also play social roles.[21] In this context, the Panel suggested that ambulatory practices should assume active social advocacy to support community programs and interventions to improve patient self-management. Similarly, ambulatory clinicians should work to understand and address the multi-factorial bases of issues like racial and ethnic health disparities, which exist at the community level and go well beyond explanations rooted in biomedicine.[22,23]

Recommendations for Supporting Self Management

The panel offers the following recommendations to help ambulatory practices use the 5 principles to guide them in carrying out their responsibility supporting patients and caregivers in self-management. Numbered and lettered items comprise general recommendations, while items listed with a check-box can be used as specific guidance.

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20. Krumholz HM, Butler J, Miller J, et al. Prognostic importance of emotional support for elderly patients hospitalized with heart failure. Circulation. 1998; 97:958-64.

21. Gruen RL, Pearson SD, Brennan TA. Physician citizens – public roles and professional obligations. JAMA. 2004; 291(1):94-8.

22. Chokshi DA. Teaching about health disparities using a social determinants framework. J Gen Intern Med. 2010; 25 (suppl 2):S182-5.

23. Washington DL, et al. Transforming clinical practice to eliminate racial-ethnic disparities in health care. J Gen Intern Med. 2008; 23(5):685-91.

1. **Person-centered:** Self-management supports should aim to help patients achieve their goals
   a. Members of the care team responsible for providing patient self-management support should be familiar with the patient's goals (see Section 2) and any potential barriers to self-management elicited through the complete health assessment (see Section 1)
   b. Self-management support should be attuned to the individual patient's health literacy, numeracy and language:
      - ☑ Use proven methods to ensure patient understanding, including plain language and methods like teach-back or teach-to-goal
      - ☑ Elicit patient questions and concerns about self-management tasks by using open-ended questions
      - ☑ Written educational materials should be reader-friendly for the particular patient, including using graphics, appropriate reading level, and in the patient's language
   c. Ambulatory care practices should play an especially important role in providing tailored patient self-management education
      - ☑ Work with the inpatient team to establish clear educational tasks for the inpatient and ambulatory settings
   d. Acute hospitalization is rarely the optimal time for comprehensive self-management education
      - ☑ To avoid information overload and confusion, teaching by the hospital care team prior to discharge should focus on preparing the patient and caregivers for the first few days after leaving the hospital
      - ☑ Long-term self-management education should be carried out by the ambulatory practice team
      - ☑ When possible, self-management education in the ambulatory setting should begin before hospitalization and continue following discharge, since the ambulatory environment can be more conducive to patient and caregiver learning
   e. The initial post-discharge visit often must focus on medication management and meeting other acute needs. Therefore, the first visit should include an explicit, though often brief, assessment of the patient and caregiver's immediate self-management skills (as part a comprehensive health re-assessment)
      - ☑ The post-discharge visit assessment should elicit the patient's self-management concerns, problems and needs for additional education or resources
      - ☑ Subsequent visits should address long-term chronic care self-management in more detail

2. **Collaborative:** In addition to working within the care team, including the patient and caregivers, ambulatory practices should also seek out partnerships with programs that support patient self-management
   a. The ambulatory practice should seek out formal collaborative or referral relations with organizations providing services that can help with self-management
   b. The practice should keep a readily-accessible list of self-management programs offered by:
      - ☑ Insurance/health plans
      - ☑ Community agencies
      - ☑ Faith-based organizations and
      - ☑ Federal, state or local government agencies
   c. Professional societies or local community organizations are logical sources to help practices maintain an updated list of reliable self-management support services
   d. In addition to working to help individual patients, ambulatory practices should also help advocate for support services that can improve patient self-management for their patient populations
   e. Because they are key parts of the patient's care team, ambulatory practices should give explicit attention to providing education and support to caregivers, such as the patient's family members or friends
      - ☑ Caregivers should be expressly recognized as members of the care team
      - ☑ The same attention to health literacy and focus on problem solving that are used in

providing patient education should be used when helping caregivers in their tasks

☑ Caregivers should be occasionally screened with regard to their own well-being as well as their capacity to provide ongoing care to the patient

3. **Structured:** Self-management tasks should be made as clear and structured as possible for the patient and caregiver

a. Patients and their caregivers, like the rest of the care team, can benefit from using tools to manage complex tasks

☑ These tools for patients and caregivers should be reader-friendly for the particular patient, including using graphics, appropriate reading level, and in the patient's language

b. Tools to consider providing to patients, as needed, include:

☑ Care checklists

☑ Written protocols for care management contingencies likely to arise

☑ "Red-flag" lists for when to call a member of the practice team

☑ Automated reminders using email, text messaging, phone calls, etc for appointments and other self-management activities

c. Track outcomes associated with these structured supports and elicit patient and caregiver feedback to determine their effectiveness

d. Education and training for self-management should build on patient and caregiver knowledge and skills by using proven tools and methods, including

☑ Motivational interviewing

☑ Teach-back and teach-to-goal

4. **Iterative:** Self-management is a lifelong activity that can be marked by progress and victories as well as challenges and setbacks

a. Patients' capacity and resource needs regarding self-management can affect their risk profile and health status and vice versa

☑ Self-management needs should be re-assessed at each updating of the CHA and whenever goals are changed

☑ Seek out self-management successes to reinforce and build upon them with the patient and caregivers

☑ Changes in self-management needs, especially nonadherence, should prompt both re-evaluation of self-management supports and consideration of revisions to the CHA and goals

5. **Flexible:** Different individuals and groups can benefit from different types of support

a. Certain groups of patients face high risks of adverse outcomes and should receive heightened self-management support

☑ The same high-risk patients noted in Section 1, Recommendation 5b (e.g., multiple conditions, >4 regularly scheduled medications, newly insured, behaviorally complex, and so on), are at heightened risk for failures of self-management and should receive additional self-management support and creative solutions

☑ Patients who are discharged needing home health or visiting nurse care are another group of patients at heightened risk for self-management failures and who require special attention

b. Group visits, or shared medical appointments, in the post-discharge timeframe should be considered for additional study. At this time, analysis of group visit outcomes show mixed results[24] and associated benefits and challenges to the practice environment – especially patient flow and billing issues – have not been resolved

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24. Dorsey, et al. Group patient visits for Parkinson disease, A randomized feasibility trial. Neurology. May 3, 2011 vol. 76 no. 18 1542-1547; Edelman, et al. Medical clinics versus usual care for patients with both diabetes and hypertension: a randomized trial. Ann Intern Med. 2010 Jun 1;152(11):689-96.

RESPONSIBILITY 4

Medication Management

Medication Management

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Extreme complication is contrary to art.
Claude Debussy

Overview
The patient's "medication journey" during a care transition typically involves the patient, multiple professionals and others, and it can be affected by a wide array of situational factors. Medication safety and achievement of optimal outcomes during an inpatient-ambulatory care transition often depend on an ideal convergence of decisions and actions by the patient, prescriber, pharmacist and payor.[1] The ambulatory practice should play several important roles in helping patients navigate this journey.

> **5 Principles to Guide Ambulatory Practice Team Efforts to Promote Safe Care Transitions**
>
> An ambulatory practice team's work on care transitions should be:
>
> *Person-centered*–focusing on the needs and goals of patients and their caregivers
>
> *Collaborative*–taking advantage of the complementary skills and talents of all team members, including those on the inpatient care team, and calling on other supportive resources when needed
>
> *Structured*–using clear and carefully planned protocols, forms, and processes to help ensure comprehensive attention to core issues
>
> *Iterative*–recognizing the constantly evolving nature of ambulatory care, repeating tasks over time as appropriate, and making adjustments as the patient's care needs and goals evolve
>
> *Flexible*–acknowledging the unique needs and circumstances of each individual and being prepared to pursue creative solutions to novel problems

As with all aspects of a safe care transition, the ambulatory practice can be guided by the 5 principles. Like the prior responsibilities, this one also builds on those that came before. That is, effective medication management should begin with the comprehensive health assessment and establishment of individual care goals, which should guide the patient and practitioner toward agreement on a care plan that may include a proposed medication regimen.

In developing or proposing changes to a potential medication regimen, the health professional (whether in the inpatient or ambulatory setting) who proposes a new medication or dose is responsible for ensuring effective communication and patient understanding regarding: Potential benefits to be gained by taking each proposed medication; potential risks or other negative effects of the medication and how they might manifest and influence daily activities; realistic options to each proposed medication (including non-pharmacologic options or the option to do nothing); basic instructions on how to take each medication, such as how many pills, how often and what to

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1. Friedman AL, Geoghegan SR, Sowers NM, Kulkarni S, Formica RN. Medication Errors in the Outpatient Setting, Classification and Root Cause Analysis, Arch Surg. 2007; 142:278-283.

do if a dose is missed; and any special instructions, especially including how to safely incorporate new medications into an existing regimen and scheduling issues. Finally, the patient should always know whom to contact if there are questions or problems, including if the regimen becomes confusing, cumbersome or too expensive to continue.

Even if this initial communication takes place perfectly, the patient's medication journey will continue through the maze of the delivery system. Safe and effective medication use always requires that the practitioner be committed to the proactive identification and mitigation of risks facing each individual patient.[2] During care transitions the need to seek out, identify and mitigate medication-related risk heightens because, as with other aspects of care during transitions, safe medication management requires a collaborative approach, structured supports, iterative work and flexibility in the face of changing circumstances.

In the ambulatory setting, evolving pharmacy coverage limitations, transportation challenges, social support problems and other issues frequently thwart long-term efforts at safe medication use. The ambulatory practice is often the venue where the physician or prescribing professional is most likely to be aware of the patient's coverage limits and possible substitutions for the needed medication that will be covered. Usually, the ambulatory practitioner, with the patient, is also best positioned for tracking medications that other prescribers might be providing and ensuring that all new prescriptions are correct, correctly understood by the patient, that potential adverse interactions have not been overlooked, and that there have not been delays or problems in receiving medications from the pharmacy.

> **Responsibilities of the ambulatory pharmacy in safe care transitions**
>
> Ambulatory practices should work closely with pharmacies and pharmacists to ensure that prescribed medications are safe for the patient and available in a timely fashion. Explicit recognition of a pharmacy and/or pharmacist as accountable members of the patient's ambulatory care team can prevent errors and enhance outcomes. For example, pharmacies can be responsible for notification of the ambulatory practice regarding a prescribed medication's availability or delays in delivery. Likewise, regular communication between the pharmacy and the ambulatory practice can illuminate adherence problems, important drug interactions or coverage issues. A number of systemic issues can make effective communication with pharmacists both critical and challenging, including nationwide retail and mail-order pharmacies that do not offer uniform access to a pharmacist who is familiar with the patient and frequent discrepancies and changes across health plan and hospital medication formularies.

Identifying Risks for Medication Events, Errors and Harm
Risks, mishaps and patient harm related to medications are well-documented in research studies but often go unrecognized, undiscovered or unresolved in practice.[3]

As noted in the section on self-management, patient confusion, misunderstanding, low English proficiency, low health literacy and low numeracy skills are well-known contributors to medication safety events including errors and harm. In addition, patient risk increases when patients do not have consistent medication management strategies.[4] Ambulatory practices are often in a good position to identify and mitigate these risks.

2. American Medical Association. The Physicians Role in Medication Reconciliation: Issues, strategies and safety principles. American Medical Association, Chicago IL; 2007. http://www.ama-assn.org/resources/doc/cqi/med-rec-monograph.pdf Accessed September 20, 2012.

3. Lorincz CY, Drazen E, Sokol PE, Neerukonda KV, Metzger J, Toepp MC, Maul L, Classen DC, Wynia MK. Research in Ambulatory Patient Safety 2000–2010: A 10-Year Review. American Medical Association. 2011; Section V. Patient roles in ambulatory safety research. www.ama-assn.org/go/patientsafety Accessed October 30, 2012.

4. Ibid.

For instance, research shows that patients are more likely to take their medications incorrectly when they:[5,6,7]

- have not established a structured medication system or administration routine
- store medications in multiple locations
- have received medication substitutions
- are confused by the generic and trade names of the same medication
- have a tendency to hoard medications or retain medication refills for discontinued medications
- are receiving medications from multiple prescribers
- have received therapeutic duplications
- do not receive follow-up appointments or support that corresponds to their needs
- are depressed

Cultural issues can also influence medication adherence, including through mistrust of treatment efficacy or low motivation to take a medication in the absence of symptoms.[8,9,10] Ambulatory practices, where patients are typically seen over a period of months or years and therefore have an opportunity to develop lasting relationships with clinicians and other staff, are often in a better position than the inpatient team to manage and mitigate such cultural and trust issues.

The Box summarizes a core set of communication, patient and payer-related barriers to safe and effective medication use. While an ambulatory practice might not be able to remove all of these barriers, it is the responsibility of the practice to elicit them and to work with the patient, caregivers and others to seek to ameliorate them where possible.

5. Lorincz CY, Drazen E, Sokol PE, Neerukonda KV, Metzger J, Toepp MC, Maul L, Classen DC, Wynia MK. Research in Ambulatory Patient Safety 2000–2010: A 10-Year Review. American Medical Association. 2011; Section V. Patient roles in ambulatory safety research. www.ama-assn.org/go/patientsafety Accessed October 30, 2012.

6. Friedman AL, Geoghegan SR, Sowers NM, Kulkarni S, Formica RN. Medication Errors in the Outpatient Setting, Classification and Root Cause Analysis, Arch Surg. 2007; 142:278-283

7. Gehi AK, Haas D, Pipkin S, Whooley MA. Depression and Medication Adherence in Outpatients With Coronary Heart Disease Findings From the Heart and Soul Study. Arch Intern Med. 2005. 165:2508-2513.

8. Dickson et al. Sociocultural influences on heart failure self care among an ethnically minority black population. J Cardiovasc Nurs. February 17, 2012.

9. Morgan S, et al. Ethnic differences in the use of prescription drugs: a cross-sectional analysis of linked survey and administrative data. Open Med. 2011; 5(2):e87-93.

10. Nakhutina, et al. Adherence to antiepilepsy drugs and beliefs about medication among predominantly ethnic minority populations with epilepsy. Epilepsy Behav. 2011; 22(3):584-6.

Eliciting and Addressing Barriers

During a care transition ambulatory practices should routinely elicit, and address when possible, the following common barriers to safe and effective medication use:

Communication Barriers
- Is there a formal communication plan with standard formats and processes to communicate medication-related information during the care transition, including between health professionals, among members of the patient's care team, and with the patient and patient's caregivers or support services, e.g., home health providers?
- Do the patient and relevant caregivers understand any medication changes?
- Has there been direct communication between the prescribing professional and the pharmacist or pharmacy about any changed medications?

Patient Factors
- Does the patient or caregiver have:
  - Low health literacy?
  - Misunderstanding or a need for educational interventions?
  - Economic challenges, especially inability to pay for needed medications?
  - Cultural beliefs that might affect medication adherence?
  - Depression or other behavioral changes?
  - Transportation or other challenges to accessing medication-related services?
  - Impaired hearing, vision or other health issues that could affect adherence?
- Is the patient asymptomatic for the condition the medication is intended to affect?
  - If so, does the patient believe there is value in taking the medication?
- Have there been changes in the patient's goals, values or preferences that would affect medication choices?
- Does the patient need additional services or resources to support medication adherence, e.g., community services, home health visits or educational programs, use of patient-centered medication cards (like the AMA's MyMedications card, the AHRQ pillcard, Iowa Healthcare Collaborative medcard or Association of Health System Pharmacists' medication card)?
- Are side effects or drug-drug interactions barriers to adherence?
- Is the patient prescribed drugs that do not have utility or a favorable risk-benefit profile given the patient's age or health conditions?
- Is the patient's medication regimen too complex?

Payor and Practice Barriers
- Does the practice have sufficient time and resources available for medication reconciliation activities?
- Does the patient have coverage for medication management interventions such as home health visits or patient education programs?

While communication with patients about medication issues is critical, collaboration and communication within and between teams can be equally important. The risk of error and harm related to medications rises when the patient's medication history is unknown or unavailable between prescribing professionals. For safe care transitions, strong multi-directional communication channels about medications need to be in place. For example, on entry into the inpatient setting patients often are confused about their regular medication regimens. For the inpatient team, therefore, the ambulatory practice should be a source of reliable information not only about current medications, but also about which medications have been tried prior to hospitalization, in what doses, and so on. In a reciprocal manner, following discharge the ambulatory practice requires timely communication from the inpatient team about medication or dose changes made during the inpatient stay. Ideally, the inpatient and outpatient teams will collaborate during the hospitalization

and prior to discharge, discussing new medications or proposed changes to the patient's previous medication regimen.

As the medication regimen evolves over time, historical medication information can provide significant clues permitting prescribing professionals to "connect the dots" to possible self-management problems. Historical clues to self-management issues include prior inconsistencies or lapses in adherence; frequent phone calls from the patient suggesting confusion; "no shows" for scheduled visits or lab tests; and ED visits resulting from medication mistakes.

Finally, payment and financing issues can pose significant barriers to the ambulatory practice carrying out its responsibilities regarding safe and effective medication use. Even when medications are covered by insurance, it is relatively uncommon for ambulatory practices to receive explicit payment for performing medication reconciliation or other medication management activities. Yet the ambulatory practice is where these activities are often best performed and coordinated. With the evolution of new payment models, the idea of payment for each service performed might be on the wane, yet it will remain important that ambulatory practices receive adequate compensation to cover the costs of ensuring safe and effective medication use among patients at times of care transitions.

In sum, the responsibility to support medication management during care transitions flows directly from the previously noted responsibilities of ambulatory practices in care transitions: assessment, goal-setting and supporting self-management. The task of medication management should therefore be guided by the same 5 principles as these other roles (i.e., medication management efforts should be person-centered, collaborative, structured, iterative and flexible). These principles emphasize that ensuring safe and effective medication through care transitions is an ongoing, dynamic, episodic and team-based process that must span the inpatient and outpatient settings.[11] As a result of this complexity, specific roles and responsibilities are likely to vary according to local staffing and resources and a series of potential logistic and practical barriers to effective medication management can arise. The Panel recommends a set of specific steps that can help ambulatory practices establish and maintain safe medication management processes.

Recommendations for Medication Management

The panel offers the following recommendations to help ambulatory practices use the 5 principles to guide them in carrying out their responsibility regarding medication management. Numbered and lettered items comprise general recommendations, while items listed with a check-box can be used as specific guidance.

Like the prior responsibilities, these are grouped according to the 5 principles. However, the Panel also noted that there are four specific tasks with regard to medication management that the ambulatory practice is particularly well-suited to take on: maintaining an updated medication list; communication and coordination of medication information across and between settings, providers, and practitioners; communication about medications with the patient and caregivers; and supporting patient self-management of the medication regimen. These responsibilities are inter-related and interwoven into the 5 principles, and all are essential for safe, effective medication management.

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11. American Medical Association. The Physicians Role in Medication Reconciliation: Issues, strategies and safety principles. American Medical Association, Chicago IL; 2007. http://www.ama-assn.org/resources/doc/cqi/med-rec-monograph.pdf Accessed September 20, 2012.

1. **Person-centered:** focusing on the needs and goals of patients and their caregivers
   a. At the first post-discharge visit, review and reconcile the medication list to discover potential or current medication problems
      ☑ Directly involve patients, their families and caregivers in the reconciliation process
      ☑ Use open-ended questions ("how often are you taking this?") rather than yes/no questions ("are you taking this?") to verify medications on the list
   b. Help patients keep an updated medication list
      ☑ Always provide the patients with an updated medication list when any changes are made
      ☑ If possible, physically show patients as changes are being made to their medication list
      ☑ Help the patient create a patient-centered, reader-friendly medication card and tell the patient to bring it everywhere, especially all health care visits
   c. Evaluate and address the patient's understanding of and capacity to manage their medication regimen
      ☑ Use simple questions, as recommended by the Society of Behavioral Medicine,[12] such as "During the last 7 days, how many days have you missed a dose of one of your medicines?" followed by an assessment of the extent to which the patient has difficulty understanding, affording and taking medications
      ☑ Use plain language when explaining the medication regimen
      ☑ Use teach-back to emphasize and confirm understanding of medications, particularly changes to the medication regimen or for use of high-risk medications
      ☑ Use show-back to ensure patients can open packaging, sort medication, and dispense the correct dose, particularly when using a device such as an inhaler, drops or sprays
      ☑ Use teach-back to ensure families and caregivers also understand key medication information and changes
      ☑ Use trained interpreters for patients and their caregivers whose primary language is not English and have written patient materials available in languages that are common in your service area
   d. Facilitate patient understanding of medication management needs
      ☑ Explain the reasons for appointments and lab tests related to medication management
      ☑ Assess whether patients have transportation to these appointments
      ☑ Try to schedule appointments at times that work for the patient
   e. Address the appropriateness of proposed medication regimens in light of the patient's individual goals, values, capacity for self-management, age, and health status, recognizing that dosing schedules or medications might need to be altered to meet patient needs or abilities. Factors to consider include but are not limited to:
      ☑ The number of medications (polypharmacy)
      ☑ Cost
      ☑ Side effect profile, as applicable to the individual (e.g., medications considered inappropriate among the elderly)
      ☑ Compatibility with the patient's goals of care, health status, and prognosis (e.g., intensity of therapy)

2. **Collaborative:** The ambulatory practice should avail itself of the complementary skills and talents of all team members, and also those of the inpatient care team, to help maintain an updated medication list
   a. The ambulatory practice is typically in the best position to coordinate a shared medication list across the continuum of care. But the entire team – specialists, hospitalists, patient, family, and caregivers—bears responsibility for communicating with the ambulatory practice about medication changes
      ☑ Make available a standardized medication list to all authorized health professionals involved in the patient's care (subject to patient permission)

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12. Gehi AK, Haas D, Pipkin S, Whooley MA. Depression and Medication Adherence in Outpatients With Coronary Heart Disease Findings From the Heart and Soul Study. Arch Intern Med. 2005. 165:2508-2513.

b. Monitor for new or worsening symptoms that could represent disease exacerbation or medication side effects
- ☑ Carry out appropriate laboratory or other medication monitoring
- ☑ With patient permission, communicate concerns with all relevant team members, e.g., home health services, social workers, lay caregivers, physical or occupational therapists

c. Facilitate collaborative medication management by encouraging patients to bring their medication list to every medical encounter, including:
- ☑ Clinic, ambulatory, other outpatient appointments and Emergency Department visits
- ☑ When scheduled for invasive procedures
- ☑ When hospitalized

d. Patients are often asked to bring their medication bottles to visits or the hospital, but the Panel notes that this request may have unintended consequences, including lost medications, "mix-ups" and patient confusion
- ☑ When physically sorting through the patient's medications is the only way to execute a thorough medication reconciliation, consider including other members of the health care team, especially a pharmacist, and allocating time to provide patients with focused education and resources to help them safely organize and manage their medications

e. Partner with or refer patients to programs that provide medication management support or that assist with medication costs
- ☑ The patient's insurer, community agencies, disease or condition specific foundations, faith-based organizations and community health networks are potential sources for medication management supports and resources
- ☑ Strive to maintain a current list of resources in the community that can assist patients with their medications (see Self-Management section)

3. **Structured:** The ambulatory team should use all available sources of information to develop and maintain a well-organized current medication list
a. Suggested information sources include hospital discharge medication lists, pre-admission medication lists, the patient's medication bottles, and community pharmacy records
- ☑ When possible, use standard formats for medication lists within the practice or clinic
- ☑ At the first post-discharge visit, present a reconciled list to the patient that is well-organized and written in plain language

4. **Iterative:** Medication management must evolve as patient problems, goals and values change
a. In addition to a comprehensive medication reconciliation conversation at the first post-discharge visit, medications should be reassessed at all or most[13] visits thereafter:
- ☑ The medication list should be reviewed, even if briefly, to ensure ongoing relevance and accuracy

5. **Flexible:** Individuals with unique needs and circumstances should receive attention and benefit from problem-solving from members of the ambulatory care team
a. Teams should focus their time on high risk patients
- ☑ Identify factors that increase risk such as language barriers, confusion, limited resources and inconsistent or inadequate social support
- ☑ Teams should also focus more attention on high risk medications, such as those with a narrow therapeutic window (e.g., warfarin, insulin) or possible severe side effects
- ☑ Spend more time on those most needing medication management help
- ☑ Allocate enough time for thorough discussions of high risk medications with patients, their families and caregivers

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13. Electronic Health Record Incentive Program, 42 C.F.R. §412, § 413, §422, §495 (2010). The federal regulations governing the "meaningful use" of health information technology stipulate that practices maintain an active electronic medication list for each patient. See Eligible Professional Meaningful Use Table of Contents at https://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/downloads/EP-MU-TOC.pdf Accessed November 2, 2012

RESPONSIBILITY 5

Care Coordination

Care Coordination

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There was an important job to be done and Everybody was sure that Somebody would do it. Anybody could have done it, but Nobody did it…Everybody blamed Somebody…when Nobody did what Anybody could have done.
Jerald Winakur, MD
Quoting the AMDA Care Transition Practice Guidelines for Long Term Care Facilities

Overview
Care coordination is always important, but during care transitions failure to communicate and coordinate specific plans for care, making clear who is responsible for doing what, when, and where, poses particular risks. The major care coordination challenge during care transition from the inpatient to outpatient setting is to develop feasible ways to ensure a smooth transfer of specific patient care responsibilities from individuals or teams at a hospital or skilled nursing facility to individuals or teams in the ambulatory arena. Yet, during these transfers, studies and narratives reveal that it is common for individuals on either side of the transfer to be relatively unfamiliar with the care capacities of and resources available to those working in the other setting.[1] As a result, patients are often admitted to the inpatient setting with incomplete information, or on medication regimens that include drugs not on the hospital formulary or with which the hospital care team might not be familiar, and then discharged back into the care of the ambulatory practice with multiple disjointed follow-up appointments stemming from multiple subspecialists seen in the hospital, changes in their medication regimen that might not be covered by insurance, and pending test results that require follow-up.

5 Principles to Guide Ambulatory Practice Team Efforts to Promote Safe Care Transitions

An ambulatory practice team's work on care transitions should be:

Person-centered–focusing on the needs and goals of patients and their caregivers

Collaborative–taking advantage of the complementary skills and talents of all team members, including those on the inpatient care team, and calling on other supportive resources when needed

Structured–using clear and carefully planned protocols, forms, and processes to help ensure comprehensive attention to core issues

Iterative–recognizing the constantly evolving nature of ambulatory care, repeating tasks over time as appropriate, and making adjustments as the patient's care needs and goals evolve

Flexible–acknowledging the unique needs and circumstances of each individual and being prepared to pursue creative solutions to novel problems

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1. Coleman EA, Berenson RA. Lost in transition: Challenges and opportunities for improving the quality of transitional care. Ann Intern Med. 2004; 141(7):533-6.

While hospitals and inpatient team members can and should take responsibility for mitigating some of these potential problems, the Panel believes that effective care coordination prior to hospitalization and again in the time immediately following discharge from an inpatient facility is a responsibility for which ambulatory practices should accept primary accountability, though doing so requires appropriate information-sharing by the inpatient team. By its nature, care coordination requires multiple practitioners and providers to work together, but the ambulatory practice is generally in the best position to ensure effective synchronization of activities when the patient is in the ambulatory arena. This is true for reasons that have been articulated in earlier sections, including that the ambulatory practice should anchor the longitudinal health assessment records, be responsible for ensuring the patient's goals and capacity for self-management are carefully elicited and acted upon, and because the ambulatory practice is most likely to recognize when excessive or unrealistic demands are being placed on the patient and caregivers.

The Panel also recognizes that admission and discharge from an inpatient facility are just two care events that require diligent care coordination. Whenever patients receive care from more than one provider or are receiving services in multiple locations (e.g., emergency department visits, referrals, laboratory tests and imaging), care can be fluid and careful coordination is required to ensure nothing "slips through the cracks."[2,3] In this regard, care coordination is relevant to virtually all the patients in an ambulatory practice, not merely those undergoing a care transition, because all patients need well-coordinated medical or preventive care and social support.

The opposite of coordinated care is not merely uncoordinated care, it is unsafe care. This is especially the case at the time of care transitions. Over the past decade, research has shown that fragmented care at the time of care transitions can lead to omissions or duplications in the care plan; delays in care and sicker patients; poor utilization of resources and higher costs; and patient confusion and harm.[4,5,6]

Coordinated care requires knowing what others are doing but, too often, too many people involved in a patient's care do not have the means to or do not communicate with each other. Although the health system is advancing care coordination concepts and building health information exchange structures to improve communication, it has been said that, currently, U.S. health care has no care coordination system.[7] In fact, a number of characteristics of our health care system make care coordination more difficult, including insurance coverage variability, lack of interoperable electronic records, "silo-ization" of decision-making across care settings, and lack of reimbursement for care coordination activities (Box).[8,9]

> "
> The opposite of coordinated care is not merely uncoordinated care, it is unsafe care.

2. Young et al. Measuring cancer care coordination: development and validation of a questionnaire for patients. BMC Cancer. 2011, 11:298.

3. Liss, et al. Patient-Reported Care Coordination: Associations With Primary Care Continuity and Specialty Care Use; Ann Fam Med. July 1, 2011 vol. 9 no. 4 323-329.

4. Jencks SF, Williams MV, Coleman EA. Rehospitalizations among patients in the Medicare fee-for-service program. JAMA. 2009; 360(14):1418-28.

5. Kripalani S, LeFevre F, Phillips CP, et al. Deficits in communication and information transfer between hospital-based and primary care physicians: Implications for patient safety and continuity of care. JAMA. 2007, 297(8):831-41. Boockvar K, Fishman E, Kyriacou CK, et al. Adverse events due to discontinuations in drug use and dose changes in patients transferred between acute and long-term care facilities. Arch Intern Med. 2004: 164(5):545-50.

6. Lorincz CY, Drazen E, Sokol PE, Neerukonda KV, Metzger J, Toepp MC, Maul L, Classen DC, Wynia MK. Research in Ambulatory Patient Safety 2000–2010: A 10-Year Review. American Medical Association. 2011; Section V. Patient roles in ambulatory safety research. www.ama-assn.org/go/patientsafety Accessed October 30, 2012.

7. Lee, TH & Mongan JJ. Chaos and Organization in Health Care; MIT Press, Cambridge, Massachusetts, 2009.

8. Coleman EA, Berenson RA. Lost in transition: Challenges and opportunities for improving the quality of transitional care. Ann Intern Med. 2004; 141(7):533-6.

9. Bodenheimer T. Coordinating care – a perilous journey through the health care system. N Engl J Med. 2008: 358(10):1064-71.

Systems Barriers to Effective Care Coordination

A number of barriers and challenges contribute to breakdowns in care coordination, many of which are inter-related and complex. Coleman has divided these into systems, clinician, and patient-level barriers.[6,10] The Panel notes that systems barriers can be further classified into overlapping sets of policy, communication, and cultural barriers:

Policy barriers
- Existing policy and payment mechanisms often impede care coordination following discharge, though policies on bundled payments and team-based care are making inroads in shifting some care coordination responsibilities into the ambulatory realm
- Payment schemes rarely reward care coordination directly, e.g., there are no payment codes for many care coordination activities and existing financial support is often limited for multidisciplinary care and services [11]
- Facilities each use their own drug formularies; frequently patients must switch drugs when transitioning to a new site of care due to therapeutic substitutions to meet formulary requirements, leading to patient confusion, treatment delays, or financial hardship
- Insurance coverage changes can lead to discontinuities in care plans, including therapeutic substitutions, changing doctors and care sites; these changes often occur with little notice

Communication barriers
- There are few established communication networks between sites of care or across geographic areas; patients or their families are often the only source of information on the patient's health history and current needs
- Computerized information systems frequently are incompatible with one another, hindering information exchange
- Independent providers often cannot access information held by other providers
- Where electronic personal health records are available, patients have variable use patterns and many do not use them to communicate with providers

Cultural barriers
- Care sites often function as silos, without formal relations with other care sites
- The appropriate scope of care coordination activities across sites of care or for individuals on care teams is often unclear or there is lack of agreement
- Cultural and financial separation between providers of medical and social services, with medically-valuable social services often not reimbursed by health insurance
- Other aspects of care coordination are viewed as administrative functions, rather than as either medical or social services

10. American Geriatrics Society. The Role of a Geriatric Assessment in Care Coordination and in Improving Quality Care Coordination. http://www.americangeriatrics.org/advocacy_public_policy/care_coordination/
Accessed September 20, 2012. Coleman EA. Falling through the cracks: Challenges and opportunities for improving transitional care for persons with continuous complex care needs. J Am Geriatr Soc. 2003: 52(5):855-6.

11. There have been promising recent changes that begin to address this problem. These include payment reform experiments that support the medical home and Independence at Home models, and Medicare recently agreed to pay for certain transitional care services. See https://federalregister.gov/a/2012-16814 (accessed November 2, 2012); and Irving F. CMS accepts new CPT codes to cover physician services for transitional care management. PhysBizTech at http://www.physbiztech.com/news/cms-accepts-new-cpt-codes-cover-physician-services-transitional-care-management. Accessed January 23, 2013.

What is care coordination?

There are more than 40 different definitions of care coordination, perhaps because so many different stakeholders are involved in care coordination and related activities.[12]

The Agency for Healthcare Research and Quality (AHRQ) in its *Care Coordination Measures Atlas*[13] offers the following definition of care coordination.

> *Care coordination is the deliberate organization of patient care activities between two or more participants (including the patient) involved in a patient's care to facilitate the appropriate delivery of health care services. Organizing care involves the marshalling of personnel and other resources needed to carry out all required patient care activities, and is often managed by the exchange of information among participants responsible for different aspects of care. Care coordination addresses potential gaps in meeting patients' interrelated medical, social, developmental, behavioral, educational, informal support system, and financial needs in order to achieve optimal health, wellness, or end-of-life outcomes, according to patient preferences.*

The Panel adapted this definition of care coordination, emphasizing person-centeredness and the multi-faceted nature of care coordination, as well as the importance of role clarity and accountability.

> *Care coordination is the process of synchronizing health care relationships, services and supports to help patients meet their medical, social, behavioral and environmental needs and achieve their goals. It includes the explicit articulation of roles and responsibilities among the individuals and organizations involved in various aspects of the patient's care along with mechanisms of accountability. Many key tasks associated with care coordination arise from changes in the patient's needs, health status or location of care and the necessity to communicate information about changes and plans to all who should know.*

This definition reflects the fact that care coordination is an ongoing process, rather than a single task. As such, it also recognizes that with care coordination, one size does not fit all; for each care system, and each patient, the demands of care coordination can be different. This implies that a key challenge for care coordination is bringing sufficient structure to a set of tasks that must remain highly flexible and that are likely to be carried out very differently in different care settings, depending on local resources and opportunities as well as differing patient needs.

The aim of care coordination, as with all of health care, should be to assist patients to achieve the best care outcomes, as defined by the patient's goals. Thus, it is a patient-centric process that, though usually initiated by a physician or other health professional, is not provider-centric. The process typically involves multiple discussions, extending across the continuum from the hospital to the patient's home or next level of care, and to many other parts of the ambulatory setting, and it demands the cooperation of multiple individuals based on a clear and shared understanding about the patient's needs and goals. Effective care coordination is therefore inherently team-based (even though, today, the dispersed members of an ambulatory patient's care team might not all know each other, or even realize they should be working together) and it works best when it is formally organized, with transparent responsibilities and accountabilities within the team.

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12. McDonald KM, Schultz E, Albin L, Pineda N, Lonhart J, Sundaram V, Smith-Spangler C, Brustrom J, and Malcolm E. Care Coordination Atlas Version 3; (Prepared by Stanford University under subcontract to Battelle on Contract No. 290-04-0020). AHRQ Publication No. 11-0023-EF. Rockville, MD: Agency for Healthcare Research and Quality. November 2010. http://www.ahrq.gov/qual/careatlas/careatlas.pdf Accessed October 30, 2012.

13. Ibid.

Care coordination aims to enable patients to achieve their health-related goals, which at the time of care transitions often includes helping them make the psychological transition from "patient status" back to "person status", i.e., able to leave the medical environment equipped to meet their own needs, responsibilities, and aspirations. Because it has this broad aim, care coordination often needs to address a wide spectrum of individuals' medical-biological and functional abilities, mobility and capacity, emotional, behavioral, and socio-economic needs, all of which are likely to bear on individuals' ability to attain their health-related goals.

Note that there is a distinction between competence in providing any single service and effective care coordination. The American Medical Directors Association (AMDA) has noted that it is "essential that specific responsibilities with regard to transitions be identified for each individual and discipline, but it is coordination of those actions that determines success."[14] The AMDA draws an analogy between the coordination required for a safe care transition and that required in a ballet, noting that

> …each dancer must not only perform his or her own movements properly; but must do so within the framework and timing of all the other dancers. Any ill-timed action (e.g., leaping instead of catching another performer, pirouetting instead of remaining still) renders the ballet ugly and unsafe, regardless how well the individual action is performed.[15]

Care Coordination in the Context of Care Transitions

At the time of a care transition from an inpatient to the ambulatory setting, care coordination is the set of tasks necessary to unite all the elements of the patient's care plan to help the patient achieve their goals, move from "patient status" back to "person status," and enable optimal long-term self-management. As such, the responsibility for care coordination arises naturally from the prior ambulatory care team responsibilities described in this report: conducting a complete health assessment, setting goals, supporting self-management, and managing medications. In short, care coordination is the holistic process that ties all of these other ambulatory care team responsibilities together.

Some specific care coordination activities that are especially important during a transition include but are not limited to the following:

- Supervising medication reconciliation
- Calibrating discharge medication dosages to the patient's abilities
- Adjusting the care plan to meet family caregiver abilities and the home environment
- Assessing the patient's and family's capacity to adjust to changes, whether physical, behavioral, emotional or socio-economic
- Arranging for needed home health or community-based care, and scheduling follow-up appointments, e.g., medical, therapy, laboratory, imaging
- Arranging for durable medical equipment, social service supports, transportation and meals
- Communicating with all members of the patient's care team and support network including specialists, the interdisciplinary team, community providers, family members, and the patient him/herself.

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14. American Medical Directors Association. Transitions of Care in the Long-Term Care Continuum Clinical Practice Guideline. AMDA, Columbia, MD; 2010. http://www.amda.com/tools/clinical/TOCCPG/pageflip.html Accessed November 2, 2012.

15. Ibid.

Because care coordination at the time of transitions requires a team-based approach across multiple settings, ambulatory practices will require significant support to carry out their roles effectively. The Panel noted 5 descriptive characteristics of effective care coordination during care transitions, which illustrate the need to synchronize, manage and support a variety of care providers and activities.

1. Numerous participants are involved;
2. Participants rely on each other to carry out disparate activities in a patient's care;
3. Each participant has clear knowledge about their own and others' roles and available resources to meet the patient's needs;
4. Participants consistently and reliably use effective information exchange to coordinate their different care activities; and
5. There is full integration of care activities.

Effective communication is at the heart of care coordination. As such, information networks are important characteristics of care coordination models and good information exchange through a functional network is a hallmark of effective care coordination. At their best, care coordination information networks are highly reciprocal, with timely information flow between and among all areas of care activities, all professionals on the patient's care team, and others responsible for ensuring the medical system is working for the patient.[16,17]

Like other responsibilities related to care transitions, the responsibility to ensure effective care coordination is not just about providing medical care to an ill person using a medically-centric, acute illness-based model of care (i.e., it is not merely *clinical* care coordination[18]). In fact, the Panel emphasizes that seeing individuals only as patients rather than as persons in their communities can defeat the very aims of care coordination, by neglecting the need to unite and synchronize all aspects of care, including those aspects related to social, cultural or pragmatic patient concerns.

Effective care coordination must be person-centered and reflect the individual patient's reality. For example, care coordination should focus on conforming activities and interventions to the patient's culture and circumstances rather than assuming the patient will conform to the medical culture.

"Complex interventions such as care coordination initiatives are not likely to be embedded into practice unless the interactions between people and practices are known; the integration between existing knowledge and relationships is explored; the current division of labor is explicit and considered; and the contextual integration of the intervention with the organization is respected." May, et al[19]

16. Antonelli RC, McAllister JW, Popp J. Making Care Coordination a Critical Component of the Pediatric Health System: A Multidisciplinary Framework. The Commonwealth Fund. http://www.commonwealthfund.org/Publications/Fund-Reports/2009/May/Making-Care-Coordination-a-Critical-Component-of-the-Pediatric-Health-System.aspx Accessed October 30, 2012.

17. Grant, et al. Defining Patient Complexity From the Primary Care Physicians' Perspective. Ann Intern Med. 2011; 55:797-804, pg 798.

18. McDonald KM, Schultz E, Albin L, Pineda N, Lonhart J, Sundaram V, Smith-Spangler C, Brustrom J, and Malcolm E. Care Coordination Atlas Version 3; (Prepared by Stanford University under subcontract to Battelle on Contract No. 290-04-0020). AHRQ Publication No. 11-0023-EF. Rockville, MD: Agency for Healthcare Research and Quality. November 2010. http://www.ahrq.gov/qual/careatlas/careatlas.pdf Accessed October 30, 2012.

19. May C, et al. Understanding the implementation of complex interventions in health care: the normalization process model. BMC Health Services Research, 2007; 7:148 http://www.biomedcentral.com/content/pdf/1472-6963-7-148.pdf Accessed August 20, 2012.

To accomplish synchronization of services and relationships through care coordination, the Panel makes a number of recommendations, emphasizing the importance of approaching care coordination in a collaborative manner, using structured communication within and across teams, and ensuring clear lines of accountability. These recommendations arise from the understanding that care coordination must:

- Be a patient-centric process that is initiated by health professionals, but not provider-centered;
- Entail direct discussions across the continuum from the hospital to the patient's home or next level of care, informed by timely access to a shared knowledge base about the patient's needs, values and goals;
- Be team-based, collaborative, and structured, since it often requires integration of multidisciplinary services; and
- Establish clear lines of responsibility and accountability.

Recommendations for Care Coordination

The panel offers the following recommendations to help ambulatory practices use the 5 principles to guide them in carrying out their responsibility for care coordination. Numbered and lettered items comprise general recommendations, while items listed with a check-box can be used as specific guidance.

1. **Patient-Centered:**
   a. Care coordination should be explicitly addressed during care transitions for every patient
       ☑ Care coordination should be addressed for every patient, not just those in high-risk sub-populations
   b. Individual patient barriers to receiving well-coordinated care must be identified and addressed if possible, including
       ☑ social determinants of health
       ☑ language, literacy, cultural or other communication challenges
       ☑ mobility and access to needed resources
       ☑ geographic location of the patient's home or residence
       ☑ lack of social support
   c. Initiation of care coordination is the responsibility of health professionals, but care coordination should be person-centered and should correspond to the patient's plan of care to meet the patient's goals and needs
   d. Ambulatory teams should recognize the patient as the central member of the team, but realize that patients might not see themselves as responsible for, or even as participants in, care coordination activities that they assume to be the responsibility of health professionals
       ☑ Ambulatory team members should be as clear as possible when assigning care coordination roles to the patient or caregivers, including managing self-care, scheduling, arranging transportation and other responsibilities
       ☑ Patients should be encouraged to help define their care coordination responsibilities
       ☑ Ensure patient comprehension and concurrence on their care coordination responsibilities, through teach-back, coaching, or other means, because without patient buy-in many components of the care coordination plan can fail[20]
   e. The ambulatory team should help patients fulfill their roles by providing timely access to understandable information and needed support services
   f. There should be regular mechanisms in place (e.g., follow-up visits and communication) to ensure that the patient, as a full-fledged member of the team, has their self-assigned activities evaluated for effectiveness

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20. Coleman EA, et al. The Care Transitions Intervention Results of a Randomized Controlled Trial. Arch Intern Med. Vol 166, Sep 25, 2006.

2. **Collaborative:**
    a. Care coordination requires expanding the traditional team to include all those who are involved in the patient's care and also those who contribute their skills and resources to support or optimize care coordination tasks
    b. The care coordination model must be recognized as a three-legged stool, with key supports provided by the patient, health professionals and payors
        ☑ Payors must be represented in the care coordination process because they are a key source of resources; they also often know the patient's history and are motivated to promote the patient's health and wellness over the long term
    c. Accountabilities of the team and each member should be clearly delineated, agreed upon, and known to all those with an interest in the patient's care, which may include:
        ☑ The patient and the patient's family and caregivers
        ☑ Professionals who are active participants in the patient's care
        ☑ Service providers and others supporting care coordination tasks, e.g., transportation services
    d. There should be timely, formal receipt of notice of patient information when care coordination information is sent from one team member or site to another
        ☑ Instructions should be read-back, if delivered in person or by phone
        ☑ Written and electronic communications should be acknowledged as received

3. **Structured:**
    a. There should be a well-planned, supported and structured care coordination system
    b. Care coordination is more than assigning patients a primary care provider (PCP) or even a "medical home"
        ☑ Care coordination requires a set, or "block," of discrete work, which should take place in a well-defined space and time, with the explicit aim of planning how best to meet a set of distinct care needs
    c. A specific health professional should be named to lead a care coordination team and be accountable for ensuring initial aspects of care coordination, such as obtaining appointments and establishing other short-term follow-up plans
        ☑ The care coordinator should be a trained staff member that the health care culture recognizes as a permanent, qualified member of the health care team
        ☑ The care coordinator's role is known to the patient and family and all members of the health care team
    d. The care coordination team should also include:
        ☑ The patient and patient's family or caregivers
        ☑ A member of the hospital care team
        ☑ A member of the ambulatory team
        ☑ Other health professionals or service providers from the ambulatory and community settings as appropriate, and
        ☑ An individual who either represents or understands the policies of the relevant payor(s)
    e. Payment mechanisms should reflect the realities and importance of care coordination, including the time and structures it requires to be done proficiently
        ☑ Payment should specifically encompass or directly reimburse all care coordination activities
        ☑ Reimbursement for health professional involvement should be based on and correspond to patient needs
        ☑ Reimbursement should be stratified by the complexity of the patient's needs
    f. Care coordination models should focus on effective communication and, to support timely and patient-centered communication, should aim to establish the following features in the communication network
        ☑ A local focus, with an implementation strategy that has been agreed upon through negotiation by active participants in patient care and those with an interest in patient care

☑ Policy and technology that support multi-directional information and communication flow

☑ Patient ownership of their information, including the right to allow unfettered access to information to all who "need to know" when they need to know

4. **Iterative:**

a. Care Coordination efforts should start prior to hospitalization, when possible, and should be revisited at the time of discharge and again whenever triggered by a new care coordination need, including

☑ New high-risk medication

☑ Changes in mobility or other new access problems

☑ Changes in wound care or other care demands

☑ At any other transition, including to other levels of care, back to the hospital, to a new physician, with changes to home caregivers, or any other instances that prompt a transition or relocation of the patient

5. **Flexible:**

a. One size will not fit all in optimizing care coordination. Different teams and care settings will need to seek solutions to a variety of needs and challenges, each working with their own unique resources

b. For effective care coordination, settings of care will need the flexibility to encourage that

☑ Patients get appointments when they need them

☑ The receiving ambulatory setting has open access or other provisions to provide rapid-access appointments for transitioning patients

☑ It is appropriate to vary the rapidity of initial post-discharge appointments according to level of patient risk, with higher risk patients receiving earlier appointments

c. Because a cultural shift will be needed to optimize care coordination, flexibility will be required in moving towards a system that emphasizes health and wellness, addresses social determinants of well-being, and offers patient-centered and team-based care

☑ Ambulatory teams should contribute to the evolving evidence base on unique challenges and opportunities related to care coordination, especially on the optimal role(s) of the receiving practice or clinic from the hospital

☑ Ambulatory teams should help in development of innovative team-based models of care, including by exploring variations on defined roles and corresponding responsibility-accountability "maps" for care coordination

☑ Training in effective care coordination is evolving and various models and methods should be studied

☑ The defined roles of a care coordinator, including specific responsibilities and accountability, will vary across settings

APPENDIX A

SELECTED CARE TRANSITIONS
RESOURCES FOR AMBULATORY
PRACTICES

APPENDIX A: SELECTED CARE TRANSITIONS RESOURCES FOR AMBULATORY PRACTICES

There are a large number of resources for inpatient teams to improve care transitions. It is desirable that ambulatory practices adapt and use these resources whenever feasible, since there are numerous advantages when inpatient and ambulatory teams use shared language, frameworks and approaches. The following are several care transition resources that might be of particular value and can be easily adapted for use in ambulatory settings.

Society of Hospital Medicine
Project Boost Risk Assessment Tool: the 8Ps[1]

The 8 Ps Risk Assessment Tool
Numerous risk factors have been identified in the literature as being associated with increased risk of re-hospitalization, emergency department visits, or other adverse event. Researchers have developed a 20-item tool that predicts readmission to the hospital (Coleman, Min et al. 2004)[2]. To risk-stratify older patients transitioning out of the hospital, Project BOOST compiled and refined a set of important patient-specific risk factors and created a user-friendly tool called the 8P scale.

This risk assessment tool is designed to be completed at admission, highlighting the need for early identification of patients at increased risk of adverse events post-hospitalization, and using the duration of the hospitalization to mitigate these risks as much as possible. Of course, all risks identified and efforts put forth should be communicated with the patient's post-hospitalization providers (more detailed information is available at the Society of Hospital Medicine's Project Boost Web site).

The following information describing the 8P risk factors is adapted from the Project BOOST web pages. Unless otherwise noted, all references in this section that relate to The 8Ps, including research and articles that informed the development of The 8Ps, are available in Greenwald and Jack.[3]

The 8Ps[3]
1. **Problem medications:** Some medications increase the likelihood of adverse events after discharge. Although the list of these medications is quite long, the most risky appear to be: warfarin, insulin, digoxin, and aspirin when used in combination with clopidogrel. It is not clear yet from research whether this risk is only associated with new or changed prescriptions for these medications or if it is associated with any prescription. As such, we recommend including in the BOOST program all patients with prescriptions for these medications and perhaps focusing extra attention on patients newly started on them.

2. **Psychological:** Depression in older patients is common and frequently under-diagnosed.[4] The presence of depression, either in screening evaluations or by history, has been associated with increased risk of re-hospitalization. The status of depressive symptoms

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1. Society of Hospital Medicine http://www.hospitalmedicine.org/ResourceRoomRedesign/RR_CareTransitions/html_CC/06Boost/03_Assessment.cfm

2. Coleman EA, Min S, Chomiak A, Kramer AM. Post-Hospital Care Transitions: Patterns, Complications, and Risk Identification. Health Services Research. 2004;37(5):1423-1440.

3. Greenwald JL, Jack BW. Preventing the Preventable: Reducing Rehospitalizations Through Coordinated, Patient-Centered Discharge Processes. Prof Case Manag. 2009; 14(3): 135–142. Access at http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2720804/pdf/nihms123022.pdf . Accessed November 2, 2012.

4. Marcantonio ER, McKean S, et al. (1999) Factors associated with unplanned hospital readmission among patients 65 years of age and older in a Medicare managed care plan. American Journal of Medicine, 107(1), 13–17.

5. Kroenke K, Spitzer RL, Williams JB. The Patient Health Questionnaire-2: validity of a two-item depression screener. Med Care 2003; 41:1284-92.

has not been studied. Therefore, we recommend you include any patient with a history of depression (i.e., formally diagnosed) as well as patients who screen positive for depressive symptoms (using the PHQ-2, developed by The Commonwealth Fund[5] , which is highly suggestive of this diagnosis.

3. **Principal diagnosis:**[3,6,7] If patients have any of the following main reasons for hospitalization (i.e., their principal diagnosis), they are at increased risk of adverse events after discharge including rehospitalization: cancer, stroke, diabetes or glycemic complication, COPD, and heart failure.

4. **Polypharmacy:**[8] It appears that patients on 5 or more medications (scheduled, not as needed) are at increased risk of adverse event after discharge. It is also clear that with an increasing number of medications, adherence also decreases.

5. **Poor health literacy:**[3,9,10,11] Many validated tools evaluating general and health literacy have been published in the literature. However, most are cumbersome. Given that adherence and adverse events are increased among patients with poor health literacy, a simple screening tool is useful to clinicians to assess this risk factor for adverse events. We suggest clinicians use the teach-back method as their predominant method of patient preparation and education. It is patient centered, easy, and magnifies areas of poor understanding by patients, allowing you to correct misunderstandings while not taking excessive time.

6. **Patient support:**[3,12,13] Social support is critical to many older patients transitioning from the hospital. The absence of a formal or informal care giver has been associated with higher rehospitalization rates.

7. **Prior hospitalizations in the last 6 months:**[3,14] Prior hospitalizations have been shown in multiple studies to be the single most predictive risk factor for future hospitalizations. A patient should thus be viewed automatically as high risk if an unplanned hospitalization has been identified in the six months (some authors studied up to twelve months) prior to the current admission.

8. **Palliative care:**[15,16] Only the minority of patients qualifying for palliative care services receive them. Engaging these services actively has been shown to improve symptom management, patient satisfaction and limit resources, including re-hospitalizations for patients nearing end of life.

6. Bravata DM, Ho S, et al. Readmission and Death After Hospitalization for Acute Ischemic Stroke, 5-Year Follow-Up in the Medicare Population. Stroke. 2007; 38: 1899-1904. Access at http://stroke.ahajournals.org/content/38/6/1899.long. Accessed November 5, 2012.

7. Westert GP, Lagoe RJ, Keskimäki I, Leyland A, Murphy M. An international study of hospital readmissions and related utilization in Europe and the USA. Health Policy. 2002 Sep; 61(3):269-78.

8. Coleman, E. A., Smith, J. D., Raha, D., & Min, S. J. Posthospital medication discrepancies: Prevalence and contributing factors. Arch Intern Med. 2005; 165(16), 1842-1847.

9. Williams MV, Parker RM, Baker DW, et al. Inadequate functional health literacy among patients at two public hospitals. JAMA. 1995; 274:1677–1682.

10. Gazmararian JA, Baker DW, et al. Health literacy among Medicare enrollees in a managed care organization. JAMA. 1999; 281(6):545-51.

11. Gazmararian JA, Williams MW, Baker DW, Peel J. Health literacy and patient knowledge of chronic disease. Patient Educ Counseling. 2003; 51:267–75.

12. Boult, C., Dowd, B., et al. Screening elders for risk of hospital admission. J Am Geriatr Soc. 1993; 41, 811-817.

13. Mistry R, Rosansky J, McGuire J, McDermott C, Jarvik L; UPBEAT Collaborative Group. Social isolation predicts re-hospitalization in a group of older American veterans enrolled in the UPBEAT Program. Int J Geriatr Psychiatry. 2001; 6(10):950-9.

14. Smith DM, Katz BP, et al. Risk factors for nonelective hospital readmissions. J Gen Intern Med. 1996;11:762–4.

15. Davis MP, Walsh D, Nelson K, Konrad D, LeGrand SB. The business of palliative medicine: management metrics for an acute-care inpatient unit. Am J Hospice & Palliative Care 2001;18(1);26-29.

16. Axelsson B, Christensen SB. Evaluation of a hospital-based palliative support service with particular regard to financial outcome measures. Palliat Med 1998;12:41-49.

The admission 8P score should be generated at the time of admission and may be completed by a multidisciplinary team; however, the role of one specifically identified team member should be to ensure that the assessment is completed. Once risk factors are identified, Risk Specific Interventions should be reviewed and addressed and information about the risk factors and interventions should be conveyed to those healthcare professionals who will be assuming responsibility for the patient's care after discharge. Additional risk specific resources are provided in the Clinical Tools section of the Project BOOST web site and should be coordinated with those your organization may already have in place or may need to consider developing.

Project RED (Re-Engineered Discharge)
After Hospital Care Plan (AHCP)[17]

The following information is from the Project RED web site.
Project Re-Engineered Discharge is a research group at Boston University Medical Center that develops and tests strategies to improve the hospital discharge process in a way that promotes patient safety and reduces re-hospitalization rates. The RED (re-engineered discharge) intervention is founded on 11 discrete, mutually reinforcing components and has been proven to reduce rehospitalizations and yields high rates of patient satisfaction. Virtual patient advocates are currently being tested in conjunction with other Project RED interventions. In addition, Project RED has started to implement the re-engineered discharge at other hospitals serving diverse patient populations.

One of the principles of Project RED and of the National Quality Forum Safe Practice is that all patients should leave the hospital with a discharge plan. We call our discharge plan the "After Hospital Care Plan" because in the course of our work we realized that some patients are confused by the word "discharge." The AHCP is a spiral-bound, color booklet that is designed to clearly present the information needed by patients to prepare them for the days between discharge and the first visit with their ambulatory care physician. We worked with consultants from the Rhode Island School of Design to help us with the graphic design. The personalized AHCP lists medications and upcoming appointments and tests; provides a color-coded calendar of upcoming appointments; and is designed to help the patient prepare for his/her upcoming appointment (patient activation). View a template for the AHCP.

Training Manual
The Project RED team has prepared a 25-page training manual and workbook for health professionals that describes in detail how to deliver a safe and effective hospital discharge. For each of the components of the RED, the manual contains a detailed script describing how to collect the necessary information. For example, the manual describes how to determine the best time for the first follow-up appointment, provides a photograph of the primary care physician, and prompts practitioners to ascertain that the patient has transportation, to give the patient a map describing the location of the appointment, and to tell the patient what to do if the appointment needs to be changed. Detailed dialogue is provided for each step. View the training manual for Project RED.

CareOregon's CareSupport Program

The following information is from CareOregon's CareSupport program information document.

CareOregon's Health Risk Assessment (HRA) is used for new members enrolling with the health plan. These HRAs are conducted by telephone or are mailed to new members if telephone contact is not successful. The HRA results in a score that indicates health status and predicts complexity, or risk. Members with elevated HRA scores are automatically referred to the CareSupport program for further assessment.

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17. Project RED: (Re-Engineered Discharge); Boston University Medical Center; Boston Medical, Boston University http://www. bu.edu/fammed/projectred/index.html

CareOregon's CareSupport Program
The CareSupport Program provides multidisciplinary, person-centered case management services to at-risk members. CareSupport staff work in teams comprising Registered Nurses, master's prepared Behavioral Health Specialists, Clinical Pharmacists and Medical Assistants (health navigators). Each team is aligned with specific clinics to provide better linkage in support of the primary provider's care plan.

The CareSupport Model
The CareSupport Program supports members who: (1) are at risk for or experiencing a functional health decline because of lack of appropriate supports or self management, (2) are using the health care system ineffectively or inappropriately, or (3) are experiencing a significant health-related transition in their life, such as hospital discharge to home with advanced disease. Overlaying these criteria is the expectation that we enroll members who have "modifiable" risk factors. Using the Wagner Chronic Care Model as a framework, CareSupport staff attempt to optimize the productive interaction between the patient and provider, working closely with both the patient in becoming informed and activated and the medical team in being prepared and proactive in the medical home. In many cases this involves working with members to improve their self management or with medical providers to find or coordinate medical services, social services or both as needed.

Proactive identification of At-Risk Members
Providers are an important referral source to the program (see below). Providers often recognize patients who are moving toward poor outcomes that can be avoided with early intervention, who may be lacking critical supports, or who have self management/behavioral barriers to managing their health. State and county case workers, as well as mental health and social services agencies provide additional referrals. CareOregon also uses other strategies to proactively identify at-risk members.

1. A claims based predictive model, called the Adjusted Clinical Groups Predictive Model (ACG-PM) identifies the presence of constellations of health conditions (as reported on claims by ICD-9 codes) that indicate high medical risk. Setting the ACG software system to identify members who receive a risk score indicating a 50 percent or greater chance of being in a high-cost group in the next year identifies 2 to 3 percent of the membership quarterly.
2. A Health Risk Assessment (HRA) on new members enrolling with the plan. These HRAs are conducted by telephone or are mailed to members if telephone contact is not successful. The HRA results in a score that indicates health status and predicts complexity, or risk. Members with elevated HRA scores are automatically referred to the CareSupport program for further assessment.
3. Internal CareOregon Utilization Management, Pharmacy and Quality Processes: Another Source of Referral:
   a. Nurses within Utilization Management Units doing in-hospital concurrent review rounds recognize the risks that members may face upon discharge from the hospital and can refer to CareSupport when a member faces barriers to a safe and effective discharge. The prior authorization process allows a nurse to alert a CareSupport case manager when a member is planning a high-risk procedure so that proactive discharge planning can occur.
   b. Pharmacy Department, members who meet the eligibility criteria for Medication Therapy Management Program (MTMP) are also assessed for risk factors that should be addressed by CareSupport staff and are referred to CareSupport when indicated.
   c. Quality Improvement staff will identify indicators for CareSupport involvement when monitoring and resolving member complaints and while following up on adverse events.
   d. Use several reports to more proactively identify members who may require assistance and support. One report identifies members who were in the Emergency Department within the past 48 hours and provides the admitting diagnosis or diagnoses. Another

report identifies members who were discharged from a hospital or Skilled Nursing Facility within the past 48 hours and provides the admitting diagnosis or diagnoses. A third report identifies members who are currently hospital inpatients.

CareSupport Interventions

Each CareSupport intervention is patient-specific. The CareSupport program is not disease-specific as most enrolled members have multiple chronic conditions as well as multiple psychosocial challenges. CareSupport assesses members globally and provides interventions that are most likely to improve their health status. A benefit of the highly integrated program is the opportunity for CareSupport staff to refer members enrolled in the CareSupport Program for additional support available from the Health Education program or the Pharmacy Unit. Many health education/health promotion opportunities are available to members on a case-by-case basis, for example, tobacco cessation counseling. Our Clinical Pharmacists provide ongoing pharmacotherapy counseling to our members, particularly those who have been newly diagnosed with a chronic condition and prescribed unfamiliar medications, or those who require a very complicated regimen of medications. Each member is enrolled when modifiable risk factors are identified and is provided client-centered interventions for time period that is determined by the member's progress toward health status goals. The member's goals, as well as the goals and capacities of the case manager and those of the provider are each considered when designing interventions and assessing progress.

Evaluation of the CareSupport program has shown significant improvements both in health outcomes and cost, based on claims data, as well as functional status, as measured by a pre and post surveys of enrollees using a validated functional status tool (Health Utilities Index – HUI).[18]

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18. Pilot project brings better health care to chronically ill, shut-ins; Latest News, Articles and Presentations at: http://www.careoregon.org/transforminghealthcare/11-09-14/Pilot_project_brings_better_health_care_to_chronically_ill_shut-ins-2211765441.aspx.

APPENDIX B

TECHNIQUES TO ENHANCE HEALTH LITERACY AND SELECTED RESOURCES TO FACILITATE SELF-MANAGEMENT

APPENDIX B: TECHNIQUES TO ENHANCE HEALTH LITERACY AND SELECTED RESOURCES TO FACILITATE SELF-MANAGEMENT

Health Literacy

The Affordable Care Act of 2010 (ACA) defines Health literacy as the capacity to obtain, communicate, process, and understand basic health information and services to make appropriate health decisions.[1] By definition, health literacy is a precondition for effective self management, since self-management is also defined by the patient's capacity to make appropriate health-related decisions.

An individual patient's health literacy level can be a fluid and dynamic factor, strongly influenced by the content, complexity and context of health-related information, how that information is packaged and delivered, as well as the patient's education, preferences, culture and English language proficiency.[2,3,4]

Perhaps of greatest importance regarding ambulatory practice responsibilities for supporting self-management is that the clinician's communication skills can affect the patient's capacity to make appropriate health decisions. Educators and health literacy experts highly recommend conveying all health information in clear, plain language, delivered in a simple and structured manner, followed by checking whether patients and their caregivers can understand and are able to use the information to manage their care.[4,5]

Structured Methods to Improve Patient Understanding
Ensuring patient and caregiver understanding of and concurrence with the care plan is the primary consideration when ambulatory practices are helping patients with self-management. But asking patients, "Do you understand?" almost invariably leads to an affirmative answer, even when the patient did not understand or understood incorrectly. Similarly, experts report that asking "Do you have any questions?" is not the best wat to elicit questions.

Ensuring Understanding
To determine whether the patient or caregiver has heard and understood new information, the ambulatory practice team member needs to ask them to repeat it back in their own words. The "Teach back" is an evidence-based technique that is known to be effective when properly executed.[5] Teach-back is not a test; it is an inquiry. Health literacy experts and patient educators strongly recommend that teach-back be used whenever important new information is delivered. The teach-back technique is:
- A polite request that the patient and/or caregiver state in their own words key points of the information exchange
    - o If relevant, it might also include a demonstration of a skill (also referred to as a show-back or demostrate back)
- Organized into manageable amounts of information.
    - o Using a "Chunk and Check" approach, organizing information into just 1 to 3 concepts at a time, followed by a brief teach-back before moving on to the next concept.

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1. Patient Protection and Affordable Care Act of 2010 (H.R. 3590)

2. Baker DW. The meaning and the measure of health literacy. J Gen Intern Med. 2006; 21(8):878-83

3. Wynia MK, Osborn CY. Health literacy and communication quality in health care organizations. J Health Comm. 2010; 15-102-15;

4. Health Literacy and Patient Safety, Help Patients Understand, Reducing the Risk by designing a safer, shame-free health care environment. American Medical Association Foundation and American Medical Association© 2007; Page 15 Accessed November 5, 2012.

5. Agency for Healthcare Research and Quality. Health Literacy Universal Precautions Toolkit. http://www.ahrq.gov/qual/literacy/ Accessed October 30, 2012

Eliciting Questions

To facilitate understanding, experts recommend that clinicians avoid closed-ended (yes/no) questions and instead use open-ended inquiries that can promote further conversation and feedback, such as:

- "What questions do you have?"
- "What are the most important things you are taking away from our visit today?"

Ask Me 3™ is an educational program developed by the Partnership for Clear Health Communication and owned by the National Patient Safety Foundation[6] to help improve patient-clinician communication by encouraging patients to get answers to a standard set of focused and useful questions at each visit:

- What is my main problem?
- What do I need to do?
- Why is it important for me to do this?

If the patient does not ask these questions, clinicians should consider incorporating explicit answers to these questions into the conversation, e.g., "Your main problem is…"; "You need to do the following…"; "It is important for you to do these things because…" and then closing the loop by framing them as teach-back questions.

Self-Management Education Models

Lorig and Holman propose that five core self-management skills should drive patient education.[7]

1. Problem-solving - enhancing the ability to arrive at a feasible solution
2. Decision making - having enough appropriate information to identify and respond to changes in health, wellness, or illness; information includes the formation of key messages to foster good decision-making
3. Resource availability and utilization
4. Relationship formation - helping patients to form partnerships with their health care providers, thus enhancing patient ability to accurately report on their health and ensure providers listen to enhance an exchange of information that leads to informed choices by patients and their providers
5. Skill mastery and/or solution implementation - using skills and knowledge and applying to oneself appropriately

Baker, et al have described concepts of Mastery Learning and teach-to-goal and suggest that repetition is essential for patients to gain understanding of health materials and achieve the necessary skills and knowledge needed for effective self-management.[8]

Essential components of Mastery Learning and teach-to-goal
1. Formal specification of cognitive (learning) objectives
2. Division of course content and objectives into instructional units
3. Formative/diagnostic evaluations to determine whether learners have mastered material
4. Corrective, tailored, or remedial instruction until mastery has been attained

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6. National Patient Safety Foundation. Ask Me Three. Available at: http://www.npsf.org/for-healthcare-professionals/programs/ask-me-3/ Accessed October 30, 2012.

7. Lorig KR, Holman H., Self-Management Education: History, Definition, Outcome, and Mechanisms. Ann of Behav Med. 2003; 261(1):1-7.

8. Baker DW, DeWalt DA, Schillinger D, Hawk V, et al. Teach to Goal: Theory and Design Principles of an Intervention to Improve Heart Failure Self- Management Skills of Patients with Low Health Literacy, Journal of Health Communication. 2011; 16:sup3, 73-88.

Mastery Learning and teach-to-goal steps for developing educational curricula, materials and an overall approach to achieving learning goals

1. Define a limited set of the most important learning goals and eliminate all information that does not directly support the learning goals
2. Present information in discrete, identified units ("chunks")
3. Determine the optimal order for teaching the topics
4. Develop simple, plain language text to explain essential concepts for each learning goal and use graphics to help increase comprehension and recall whenever possible
5. Confirm understanding after each unit, perform corrective or remedial instruction until mastery is attained, and review previously learned concepts until stable mastery is achieved
6. Link all knowledge to a specific attitude, skill, or behavioral goal

"Mastery Learning" instruction works backward from desired behaviors to behavior-promoting messages. As stated in Principle 1, the information presented in essential learning goals is the important information patients need to achieve knowledge and understanding. According to Baker, et al information is included when it directly supports a goal or can help motivate behavior change. The authors found that in this model, patients work within well-developed, concrete strategies to meet anticipated obstacles to achieving their goals and behavioral changes. The design of patient instructional materials should incorporate health literacy principles. Patients receive health information in plain language and pictorial aids are used to assist understanding of abstract concepts and complex instructions.

The aim of "teach-to-goal" is to ensure interventions go beyond patient mastery of knowledge to patient mastery of self-management performance. To achieve self-management and increase self-efficacy, the teach-to-goal approach gradually builds on patient knowledge and skills. Educators should confirm understanding after each learning unit and "perform corrective, tailored instruction" until patients master each task.

Selected studies of patient self-management programs

The Stanford Patient Education Research Center contains a set of materials for patients with a variety of chronic conditions.[9] Studies of patients using these materials have shown:
1. Significantly improved behaviors: increase in minutes per week of exercise and cognitive symptom management techniques
2. Improved communication with their physicians
3. Changes in health status; reduction of painful conditions, pain, and disability; less fatigue, distress, or worry and improved role function
4. Significant reductions in health care utilization

Gibson et al, (2001) demonstrated improvement with self-management interventions including goal-setting or action plans.[10]

Clark et al, (1997) studied group self-management interventions and demonstrated reduction in symptoms and distress for up to 1 year.[11]

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9. Stanford Patient Education Research Center: Stanford Arthritis Self-Management Program; Spanish Arthritis Self-Management Program; Positive Self-Management Program (for people with HIV/AIDS); Back Pain Self-Management Program; Chronic Disease Self-Management Program (evaluated in RCTs lasting 4-12 months; evaluated for long-term follow-up in longitudinal studies of 1 to 4 years; Arthritis Self-Management Program and Chronic Disease Self-Management Program replicated with diverse populations out-side of United States http://patienteducation.stanford.edu/programs/

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Brody et al, (1999) studied self-management for elderly patients with macular degeneration and demonstrated improved psychological health and increased use of vision aids.[12]

Hammond, et al (1999) studied goal setting and modeling techniques of self-management support and showed improved use of joint protection.[13]

LeFort, et al (1998) demonstrated effectiveness of a self-management program for management of chronic pain.[14]

Mazzuca et al (1986), demonstrated that self-management strategies resulted in significant differences in participants' hemoglobin A1c one year after treatment.[15]

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