

# Integrating Chronic Care and Business Strategies in the Safety Net



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MacColl Institute for Healthcare Innovation  
Improving Chronic Illness Care  
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# INTRODUCTION



## Purpose of This Toolkit

Improving the care for the chronically ill is one of the most pressing health needs of our time. The Institute of Medicine's report, *Crossing the Quality Chasm*, made clear that there were no easy roads to improvement. Healthcare organizations must redesign their systems of care to better address the needs of their patients with depression, asthma, diabetes, and other chronic conditions. America's safety net providers have led the way. Today, 10 years after the development of the Chronic Care Model and the initial implementation of the Health Disparities Collaboratives, the lessons learned, tools developed, and strategies used by these vanguard teams provide the foundation for the next wave of improvement in chronic illness care.

To help more safety net organizations implement the Chronic Care Model (CCM) effectively and sustainably, the Agency for Healthcare Research and Quality (AHRQ) asked Group Health's MacColl Institute in Seattle, RAND Health, and the California Health Care Safety Net Institute (SNI) to develop and test a toolkit and a practice coaching approach. The toolkit provides a step-by-step practical approach to guide teams through quality improvement. A companion Practice Coaching Manual that outlines our approach and provides orientation to other national efforts is also available.

### THIS TOOLKIT:

- **SEQUENCES** and **DESCRIBES** the specific practice changes involved in Chronic Care Model implementation;
- **INTEGRATES BUSINESS STRATEGIES** to address the financial and operational barriers to quality improvement;
- Links **MORE THAN 60 TOOLS** commonly used for quality improvement with the relevant changes; and
- Includes **EXAMPLE STORIES** from practices that have made quality improvement pay.

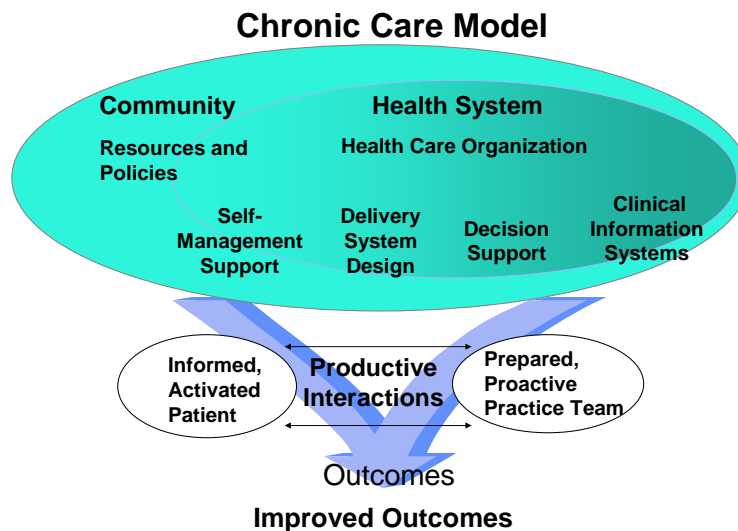
## Need To Improve Chronic Illness Care

Chronic diseases such as heart disease, stroke, cancer and diabetes are among the most prevalent, costly, and preventable health problems facing Americans. Seventy percent of American deaths (1.7 million) are due to chronic disease.<sup>1</sup> For the more than 100 million people in the United States living with at least one chronic disease, quality of life can be low and medical expenses, high. In fact, the treatment for individuals with chronic illness accounts for more than three quarters of national healthcare expenditures.<sup>2</sup> According to the Institute of Medicine's *Crossing the Quality Chasm* report, about 50 percent of these Americans are not receiving good chronic illness care.<sup>3</sup> For those living without health

insurance, the situation is even more drastic. Most people now agree that the poor quality of care in this country is a result of healthcare that is misaligned, unplanned, and fragmented.

## The Chronic Care Model as a Guide for Change

With funding from the Robert Wood Johnson Foundation, the MacColl Institute developed and tested a quality improvement approach based both on evidence and experience of how to effectively care for chronically ill people. This work led to the development of the Chronic Care Model, a visual guide to the comprehensive, integrated reorganization of care delivery needed to improve important patient outcomes.<sup>4,5</sup> The diagram below illustrates the Chronic Care Model:



*The Chronic Care Model was developed by the MacColl Institute, registered trademark of ACP-ASIM Journals and Books.*

Redesigning health systems to align with the Chronic Care Model emphasizes the central role of patients and their relationship with an organized practice team to achieve optimal health outcomes. It changes the healthcare system's focus from reacting to the acute care needs of individuals to taking a proactive approach to engaging a population of patients. The Chronic Care Model puts the patient's long-term health goals, needs, and competencies at the center of the healthcare system. It challenges the notion of specialized knowledge resting solely with the physician in favor of a broader approach where every member of the care team, including the patient, brings expertise to the table.

The Chronic Care Model includes six essential elements of a health care system that when integrated encourage high-quality chronic disease care:

- Community resources
- Health system
- Self-management support



- Delivery system design
- Decision support
- Clinical information systems.

To achieve real improvements in the quality of care as indicated by process and outcome measures, attention should be paid to each of these six elements. For more detailed information about the evidence base for the Chronic Care Model and a discussion of how the need for this toolkit and coaching methodology arose, please see [Appendix A](#).

## Making Changes in Practice

Implementing changes across all six elements of the Chronic Care Model can sound intimidating. In years of working with practices across the country, we have often been asked: Where do I start? This toolkit is designed, in part, to answer this question. Although all six elements of Chronic Care Model will be taught, experience suggests that practice changes can and should be made sequentially.

### THE TOOLKIT DESCRIBES FOUR MAIN PHASES:

*Phase 1 to Phase 4 include all of the Chronic Care Model Elements.*

**PHASE 1:** Getting Started

**PHASE 2:** Assess Data & Set Priorities for Improvement

**PHASE 3:** Redesign Care and Business Systems

**PHASE 4:** Continuously improve performance and work to make changes sustainable

The goal of the Chronic Care Model is to improve health outcomes by optimizing the individual practice team's interaction with patients, but it is clear that changes need to be made at all levels of the organization to support this work. The tools in this kit are generally focused on changes at the physician practice level. However, changes in both clinical and business practices, like those discussed below, require involvement and support from leaders and staff in financial and managerial departments. Depending on the structure of your organization, effective practice redesign efforts need to ensure that the decision-makers at all levels of the organization are involved.

## The Business Case for Quality Improvement

One of the first questions that financial and administrative leaders ask is: what is the business case for this new initiative? In addition to serving the business of healthcare by improving the very core of our work – improving patients’ health, implementing the Chronic Care Model has the potential to:

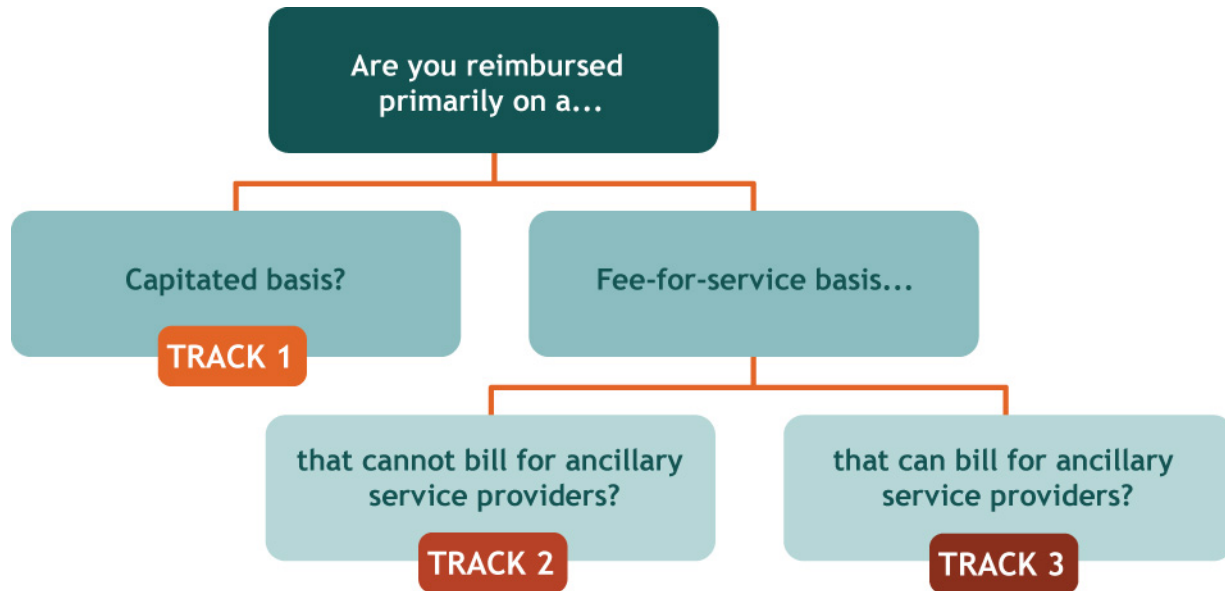
- **IMPROVE** staff satisfaction and retention;
- **ENHANCE** patient satisfaction and loyalty;
- **POSITION** clinics to capture pay-for-performance and quality improvement bonuses and grants;
- **STREAMLINE** workflow and maximize the use of staff; and
- **IMPROVE** efficiency.

The first step to making the business case for any new quality initiative in health care is to understand your organization’s unique financing structure. Examine your payer mix and learn what types of practice activities generate revenue. For example, if you are reimbursed primarily on a fee-for-service basis, you may generate more revenue by ensuring that all of your diabetic patients have the recommended number of Hemoglobin A1c tests. If you are paid primarily on a capitated basis, then ensuring that your patients are taught how best to manage their illness and avoid specialist or emergency room visits will likely provide a more robust financial return.

This toolkit provides strategies and tools to improve your financial performance while improving your clinical performance. Because the business of healthcare is to deliver the highest quality care to patients, improving clinical performance is the driving focus of our toolkit. However, understanding and responding to the reality of financial pressures through increased efficiency and enhanced revenue capture is what makes clinical changes possible and sustainable.

Because the financial landscape differs among organizations and even practices within organizations, we emphasize financial tools that are broadly applicable. We have also integrated text advice tailored to three financial tracks marked as Track 1, 2, or 3. Which track of tools you use will be based on where your organization falls in the flowchart below.

## FINANCIAL TRACK IDENTIFICATION TOOL



**TRACK 1** Track 1 is designed for practices that are reimbursed primarily on a capitated basis. In general, track 1 focuses on tools that increase efficiency, primarily by optimizing the care team and using process mapping to reduce waste. Certainly practices that are at risk for emergency department admissions, hospitalizations, or pharmaceutical utilization will want to focus on areas that help to contain these costs.

**TRACK 2** Track 2 is designed for practices that are reimbursed primarily on a fee-for-service basis and that are not generally reimbursed services provided by ancillary, nonphysician, providers. In these practices, a physician must be involved in the delivery of care to receive reimbursement. Services provided by other professionals such as Licensed Clinical Social Workers or Certified Diabetes Educators are not reimbursable. In addition to efficiency tools applicable to the capitated group, Track 2 practices will use tools focused on increasing revenue by examining billing practices. Each visit in the track 2 practices should be designed to include physician time.

**TRACK 3** Track 3 practices are those that are reimbursed based primarily on a fee-for-service structure and for which providers can receive payment for ancillary services. These practices will be directed toward the efficiency tools in tracks 1 and 2, and the revenue enhancement tools in track 2. In addition, track 3 practices will focus on further optimizing

the care team by making use of non-physician specialists for patient education and self-management support functions with billable.

Admittedly, primary care practices are faced with many different payers and many different and sometimes conflicting financial incentives. The goal of this toolkit is not to be overly prescriptive. Rather, we encourage you to examine the financial structure of your practice and to take advantage of those financial elements that support and might be rewarded by your quality improvement efforts.

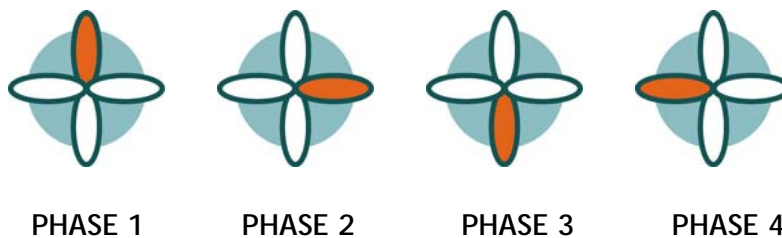
Finally, revenues are only one side of the equation. Reducing costs benefits all practices, regardless of payer source, and therefore applies to all user tracks. Additional cost-cutting tools are included under "[Advanced Topics](#)."

This toolkit provides you with specific clinical and business key changes that you can put to use in your practice. The clinical changes are paramount, and the business change processes are important to the extent that they facilitate clinical improvements. Therefore, we have purposely omitted many potentially worthwhile business tools that are not explicitly linked to improving clinical care. Many of those concepts, such as improving your collections policy, are valuable strategies that teams might want to undertake after implementing the Chronic Care Model. While we certainly encourage efficiency in the business as well as clinical realm, our focus here is guided by the clinical changes.

## How To Use This Toolkit

This toolkit is meant to be explicit enough to be used as a standalone document, but our experience suggests that real change is rarely achieved unless information and tools are linked to an organized quality improvement effort. You can read about quality improvement techniques on the Web at sites such as IHI.org if you want to be self-directed. Alternatively, you can use expertise, such as a practice coach or facilitator to aid in implementing the toolkit. A companion Practice Coaching Manual was developed and tested in conjunction with this toolkit. The Practice Coaching Manual also provides orientation to other national efforts using practice coaching and aids organizations in recruiting a coach to guide clinical quality improvement.

With or without the use of a facilitator, orientating yourself to the structure and layout of the toolkit before getting started will be helpful. As mentioned above, the toolkit is broadly organized into four phases. Each phase is denoted by an icon that will help to orient you in the toolkit.



The phases are meant to be covered chronologically with practices starting in phase 1 and then working through phases 2, 3, and 4.

Within each phase there are several “key changes” to put into practice. The key changes are not necessarily meant to be tackled chronologically. In fact, many practices may have already addressed the content and tools presented in a given key change. If so, teams should skip that key change and move to the next one. Practices should ensure that they have a handle on the content of each key change, even if they do not need to do any work in that section. Key changes are denoted by two numbers, such as: **Key Change 1.2**. The first number indicates the phase, the second, the key change. In this example, you are looking at the second key change within the first phase.

Each key change section is organized the same way, so you know what to expect as you move through the toolkit. The first page starts with a header that includes the phase locator icon and the number and title of the key change. Following the header, introductory content about the key change is presented.

Financial track icons are woven throughout the introductory content. These icons are a tool to help you navigate the toolkit, locating specific business advice for each track. Once you’ve identified which financial track you’re on, keep your eye out for that icon.

Following the introductory content and specific financial track information (if applicable), there is a table with specific action steps and associated tools.

Each tool has been reviewed or created by staff at the MacColl Institute and represents what we think is one of the best examples of a given type of tool available in the public domain. This is not meant to be an all inclusive list.

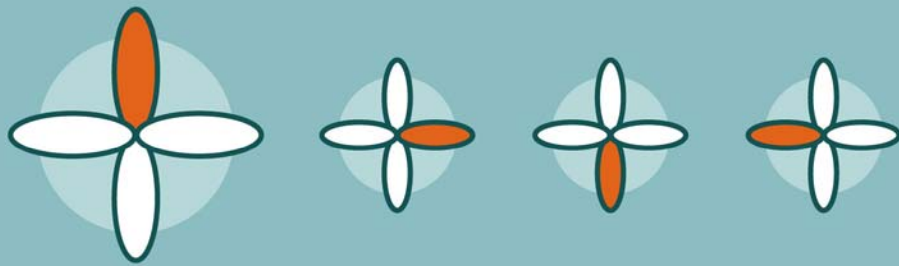
*Appendix B includes access to all tools. Clicking the name of a tool will take you to its corresponding cover sheet in Appendix B. Tool cover sheets list relevant Key Change(s), tool name, URL linking to online location, and suggested citation.*

After the action and tool table, additional resources are listed. Unlike the tools, physical copies of these resources are not included in the toolkit unless indicated by hyperlink text. In most cases, these resources are not available for free or require specific technology (such as a DVD player), but we thought they were worthwhile to include for those interested in learning more. Not all key change sections will have additional resources.

In developing the toolkit we recognize that each practice will be at a different point in their quality improvement work, and will approach this effort with different strengths and challenges. Feel free to pick the tools, and the improvement method that will be of the most help to you.

# PHASE 1

## Getting Started





## KEY CHANGE 1.1

### Organize your lead quality improvement team

#### TRACK 1 TRACK 2 TRACK 3

The Chronic Care Model calls for a paradigm shift in the way we think about medical care. Instead of focusing on the acute needs of individual patients, the Chronic Care Model calls practices to a thoughtful, organized, proactive approach to improving the healthcare of a population of patients. The goal of focusing on a population of patients, such as people with diabetes, is to ensure that EVERY patient receives optimal medical care. Initiating and sustaining this kind of shift in thinking requires strong and effective leadership and a clear strategy for improving care. Based on our research and experience working with teams, effective quality improvement is a team sport. The most effective teams include at least three categories of members. These can be summarized as:

1. **SENIOR LEADERS:** These organizational leaders allocate resources, remove roadblocks, and support spreading the changes to other practices.
2. **CLINICAL CHAMPIONS:** Practicing providers, usually physicians or nurses, these individuals are respected opinion leaders who understand the environment and processes of care, drive improvements and motivate colleagues.
3. **DAY-TO-DAY CHAMPIONS:** These team administrative leaders keep up momentum, convene and coordinate colleagues, and oversee implementation of change ideas.

It is important to ensure that this work is done, even if your improvement effort doesn't have three separate individuals in these roles.

Safety net clinics experienced in implementation of the Chronic Care Model say that one of the most important steps is to assemble and use your lead team well. This team will include representation from clinical, administrative and financial settings in your organizations. The team will be active in identifying the area to be improved, discussing resources needed, and coordinating the moving parts of whatever improvement you select.



## ACTIONS

Assemble a lead team to represent all disciplines and roles in your practice, ensure regular meetings, and work to actively engage all staff and patients.

Focus leadership attention on improvement.

## TOOLS

Forming the Team (guide) <sup>6</sup>

Seven Leadership Leverage Points (white paper) <sup>7</sup>

## ADDITIONAL RESOURCES

- The Health Disparities Collaboratives spent considerable time thinking about team functioning. Here is a presentation they used entitled, the **Zen of Teams**.<sup>8</sup>



## KEY CHANGE 1.2

### Familiarize your entire team with key improvement strategies

TRACK 1 TRACK 2 TRACK 3

Experience tells us that for change to be successful, a team needs to have a vision of both where they are trying to go and how they are going to get there. In this key change, your team will want to acquaint itself both with the vision of a high quality practice - through the Chronic Care Model - and with the strategy to get there - through the Model for Improvement. The resources listed below will provide a succinct primer on the essential elements of these two models. Many of you have undertaken Chronic Care Model-based improvement collaboratives on your own, and this information will be familiar to you. If not, consider that peers in your area, or even other parts of your own system, may already be experienced in these areas and can provide valuable information.

#### ACTIONS

Learn the Chronic Care Model as a system for redesigning your current care delivery.

Learn the Model for Improvement as a quality improvement strategy that teaches the team how to make rapid changes to their practice and measure their progress.

Acquaint the team with efficiency concepts including process mapping.

#### TOOLS

Chronic Care Model Primer (guide) <sup>9</sup>

A Model for Accelerating Improvement (online) <sup>10</sup>

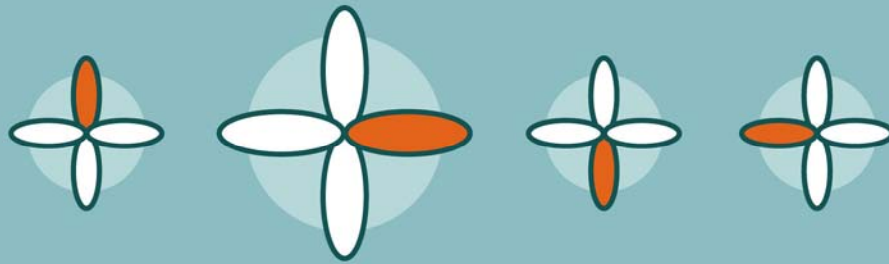
Going Lean in Health Care (white paper) <sup>11</sup>

#### ADDITIONAL RESOURCES

- *The Chronic Care Model Talk* (streaming media). Access it at [www.improvingchroniccare.org](http://www.improvingchroniccare.org)
- *Paths to Better Care* (streaming media). Access it at [www.improvingchroniccare.org](http://www.improvingchroniccare.org)
- Web-based training on the *Model for Improvement*. Access it at [www.ihl.org](http://www.ihl.org)
- [The Toyota Way](#) by Jeffrey Liker

## PHASE 2

Assess Data & Set Priorities  
for Improvement





## KEY CHANGE 2.1

### Use data to set priorities

TRACK 1 TRACK 2 TRACK 3

Most medical practices would like to improve aspects of their clinical and business processes and outcomes. Whether you want to decrease your patients' cardiovascular risk or increase staff satisfaction, you'll need data. Baseline data help you assess the current state of care and provide a picture of where you are succeeding and where improvement is needed. In other words, the baseline data help to inform the priorities for improvement. Ongoing data collection helps you see if the improvements you are implementing make a difference.

In reality, data may not be readily available for the issues that you care most about. If you believe a particular clinical goal is important to tackle - such as improving diabetes processes and outcomes - it might be worth asking your information support team to conduct a special data run or a chart audit to gather baseline data. A sample of about 25 charts should be enough to get you started. For more information on what clinical data might be interesting to collect and measure, the National Quality Forum Starter Kit can help (go to the tool in key change 2.2 below).

To support improvement in clinical measures, practices often need to understand their business infrastructure and capabilities. Below are tools that can help your team collect data about the five areas teams are most often interested in:

- **PATIENT** satisfaction & activation
- **STAFF** satisfaction
- **OFFICE** processes & efficiency
- **FINANCIAL** system function
- Available **RESOURCES** in the community

One advantage to incorporating both clinical and non-clinical goals in your improvement efforts is that it enables creative thinking when implementing strategies for change. Sites can often brainstorm ways to improve multiple measures at once. Keep in mind that collecting this information is not an end in and of itself; it is only useful in guiding decisions for improvement.

## ACTIONS

## TOOLS

<p><b>PATIENT SATISFACTION &amp; ACTIVATION</b> Assess your patients' experiences with chronic care.</p>	<p>Patient Assessment of Chronic Illness Care (survey) <sup>12</sup> Patient Assessment of Chronic Illness Care Scoring Guide <sup>13</sup></p>
<p>Assess overall patient satisfaction.</p>	<p>CAHPS Adult Primary Care Survey <sup>14</sup></p>
<p><b>STAFF SATISFACTION</b> Assess staff satisfaction.</p>	<p>Primary Care Staff Satisfaction Survey <sup>15</sup></p>
<p><b>OFFICE PROCESS &amp; EFFICIENCY</b> Assess your system's chronic care capability.</p>	<p>Assessment of Chronic Illness Care (survey) <sup>16</sup> Assessment of Chronic Illness Care Scoring Guide <sup>17</sup></p>
<p>Assess your office processes.</p>	<p>Primary Care Practice Know Your Processes (survey) <sup>18</sup></p>
<p><b>FINANCIAL SYSTEM FUNCTION</b> Assess your financial systems.</p>	<p>Finance Collaborative Pre-Work (survey) <sup>19</sup></p>
<p><b>AVAILABLE RESOURCES IN THE COMMUNITY</b> Assess what community resources are available for patients.</p>	<p>Building Your Community (guide) <sup>20</sup></p>

## ADDITIONAL RESOURCES

- The *Patient Cycle Tool*, available at [www.clinicalmicrosystem.org](http://www.clinicalmicrosystem.org), will be helpful for those who have gone through a collaborative, or want to focus on access and efficiency as a way to improve chronic care. This is one of a variety of tools that help to quantify cycle time from the patient's perspective.
- First, Break All the Rules by Marcus Buckingham. This book includes a staff satisfaction survey recommended by many safety net providers.



## KEY CHANGE 2.2

### Select performance measures based on your needs assessment

TRACK 1 TRACK 2 TRACK 3

Now that you know something about your team and your business infrastructure, it is time for your team to select specific clinical system changes that will be the focus of your improvement effort. The key changes should be evidence based and supported by a useful clinical guideline.

You'll want to identify a reasonable number of performance measures tied to the evidence-based system changes you intend to make. Think broadly, and identify a few performance measures that represent the major clinical, business, satisfaction, and operations goals you identified in key change 2.1 above. Many practices find using a "dashboard" of measures a helpful and concise way to monitor multiple measures. Be careful to balance the comprehensive number and variety of your data measures with the time and resource burden of collecting and tracking those data. Improvement efforts will be greatly facilitated if each measure is simple and has a clear operational definition.

It is important to track your measures throughout the process of implementing improvements so that the team can monitor its progress. Seeing improvements in the numbers can be incredibly motivating for the team. Using the measurement process as a mechanism to inform the clinic or organization about the improvement effort is one of the best ways to generate interest in and commitment to the aim and improvement priorities.

The tools below provide a wide variety of guidelines, models, and measures. You're likely to find something that fits your needs.

## ACTIONS

## TOOLS

Procure and adapt specific guidelines.	National Disease Guidelines (online) <sup>21</sup>
Choose clinical performance measures.	National Voluntary Consensus Standards for Ambulatory Care (measures) <sup>22</sup>
Establish system-level performance aims. Be sure to include a measure of self-management support.	Redesign and Finance Measures <sup>23</sup>  % of patients with self-management goals noted in the registry

## ADDITIONAL RESOURCES

- Promote the transparency of data. This is one of the best ways to generate interest in and support for improvement. One great book that talks about creative and interesting ways to display data is [The Elements of Graphing Data](#) by W.S. Cleveland.
- Utilizing a dashboard of measures is one way that organizations can get a handle on multiple metrics including patient satisfaction, finances, clinical measures, and market share. One example of a dashboard is located on the [JENY Web site](#), an online community for quality improvement professionals.



## KEY CHANGE 2.3

### Build performance measurement capacity

#### TRACK 1 TRACK 2 TRACK 3

A data collection system is the backbone of performance improvement efforts. Without data about your patients, you can't proactively plan care or demonstrate improvements in process or outcomes. That said, data collection for performance measurement can be expensive, time consuming, and misleading if not done well. To maximize data measurement efforts:

- **LEVERAGE** information technology (IT) to harvest data that are already in the system.
- **AVOID** developing new IT capacity to start on data collection; you may be waiting a long time.
- For those data not readily available, **CREATE** the easiest process to secure them with an eye toward building future IT capacity. Double data entry or manual chart extraction requirements invariably stymie efforts to sustain and spread the improvement.
- **BEGIN** using your measurement system to create efficient clinical and business processes, and document the successes.
- **ENGAGE** the rest of your system in the need for improved performance measurement capability, demonstrating the return on investment associated with your efforts.

One way to maximize both clinical quality and efficiency is to use a patient-centered data registry rather than one focused on a specific disease. In fact, there is nothing inherently disease specific about a registry at all. It is just a spreadsheet used to collect patient data. You can always add columns. For example, Chronic Disease Electronic Management System (CDEMS) is a publicly available database tool that can be used even without electronic medical records and enables a practice to get a holistic sense of its patients needs.

It is likely that your ability to identify and track data will influence the performance measures you chose to focus on, so you can think of key changes 2.1, 2.2, and 2.3 as iterative.



**REMEMBER:**

- Use the guidelines and dashboard to inform the process for data collection and measurement;
- Start thinking at the beginning of ways to eliminate waste by considering the use of technology to monitor both clinical and business components; and
- To the extent to which strategy, resources, and priorities for improvement are aligned, transformation is more sustainable.

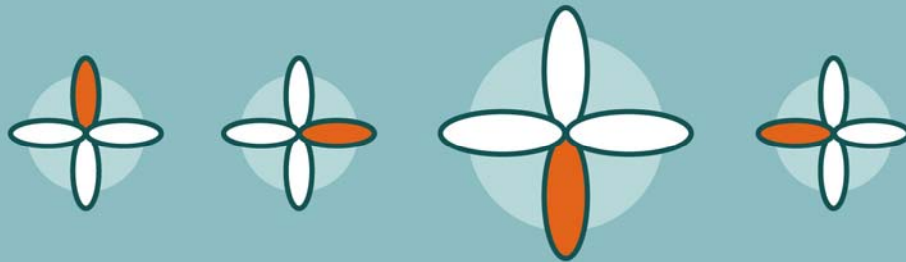
**ACTIONS**

**TOOLS**

Build database and implement reminder system.	Chronic Disease Registries: A Product Review (online) <sup>24</sup> CDEMS Registry (online) <sup>25</sup>
Focus leadership attention on improvement by building business and clinical improvement capability.	Executive Review of Improvement Projects (white paper) <sup>26</sup>
Use monthly reports to track progress toward goals.	Quantitative Diabetes Monthly Report Template (worksheet) <sup>27</sup> Narrative Monthly Report Template (worksheet) <sup>28</sup>

# PHASE 3

Redesign Care and Business Systems





## KEY CHANGE 3.1

### Organize your care team

Team care is at the heart of improvement and presents one of the biggest opportunities to improve practice efficiency. There are four key goals in rethinking primary care teams:

- **ENSURE** all of the needs are met in caring for the chronically ill;
- **USE** the least expensive & best trained staff to perform each task;
- **MAXIMIZE** patient and staff satisfaction and retention; and
- **STANDARDIZE** care, improving both quality and efficiency.

To achieve team-based care, an organization needs strong leaders willing to break down professional silos and clinicians willing to delegate tasks and assign roles and responsibilities for patient care to others on the team. Every staff person must be involved in the team and perceive their duties as improving the patient's experience of care.

Tom Bodenheimer, M.D., notes that physicians often try to perform all the clinical and self-management support functions necessary for effective patient care but are unable to do so as the burden of chronic illness increases. Bodenheimer emphasizes the need to delegate work to all staff, clinical and nonclinical. Nonphysician staff are more likely to adhere to protocols than physicians and therefore should be asked to engage in more of those care processes. Increasing staff involvement in patient care and creating a more cohesive care team increases both patient and team satisfaction, improving patient and employee retention.

One of the more efficient ways to begin developing a team is to:

- **MAP** out the existing care process for a specific clinical change (e.g. annual foot exams for patients with diabetes);
- **DETERMINE** which tasks aren't being completed or can be moved from "swamped" personnel to those more appropriate for the task; and
- **TEST** how the new process works with the next patient scheduled.

Team members should be trained as needed. In addition, regular meetings are critical to solidify the team. These can be early morning huddles or scheduled time during the week to review cases, evaluate outcomes of ideas being tested, and modify roles and responsibilities.

## FINANCE TRACKS

### TRACK 2

All finance tracks will want to organize the care team for efficiency, but track 2 will want to ensure that every visit has a physician involved.

### TRACK 3

Track 3 can further optimize efficiency by using ancillary staff to conduct prework.

*HINT: Standing orders can empower medical assistants and other ancillary staff to ensure that appropriate tests are conducted and available before a planned visit.*

## ACTIONS

## TOOLS

Acquaint yourself with the concept of optimizing the care team.	High functioning clinical teams are extremely efficient (presentation) <sup>29</sup>
Decide where to start.	Project Planning Form (worksheet) <sup>30</sup>
Based on the key areas for improvement identified above, use process mapping to understand how care is delivered.	Primary Care Practice High Level Flowchart (worksheet) <sup>31</sup>
Clearly assign roles and responsibilities to staff based on their capacities and licensure.	Converting Guidelines to Practice (guide) <sup>32</sup>
Use PDSA cycles to generate and implement ideas on improved flow.	Plan Do Study Act Worksheet <sup>33</sup> Plan Do Study Act Self-Management Support Example <sup>34</sup>
Conduct cross-training for staff where necessary/appropriate.	Cross Train Staff (guide) <sup>35</sup>
Evaluate team function.	Team Effectiveness Exercise (survey) <sup>36</sup>

## ADDITIONAL RESOURCES

- Improving Primary Care by Thomas Bodenheimer and Kevin Grumbach  
Chapter 9: Health Care Teams in Primary Care.
- Online training on improvement teams is available at [www.improvementskills.org](http://www.improvementskills.org).



## KEY CHANGE 3.2

### Clearly define patient panels

TRACK 1 TRACK 2 TRACK 3

Understanding your patient population is essential. If your practice does not have all patients paneled in some kind of electronic system, this will be your next major task. Creating patient panels helps to establish a linkage between a specific provider and his or her patients, a necessary prerequisite for quality measurement and improvement and many pay-for-performance programs. In addition, it enables the practice to assess the balance between patient demand and capacity.

Patient panels can help capture efficiency gains, especially if supply and demand are not properly matched. For example, once you can identify all your patients, you can begin to look at how the practice operates on a daily, weekly, and monthly basis. Knowing when you are likely to have heavy loads of chronically ill patients presenting or walk-ins allows you to schedule for these peak times.

#### REMEMBER:

- Some practices already have this in hand, but if not, panel assignment is an essential first step.
- Practices overwhelmed by demand should consider strategies for aligning supply and demand, first by maximally using the existing team. If this is insufficient, ensuring that all providers have reasonable panels by adding additional clinical staff may be indicated.
- As you match patients and providers, ensure that you have up-to-date patient contact information. This will make it easier to contact patients for planned care visits described in section 3.4 below.

#### ACTIONS

Optimize the care team by assigning a panel of patients for each provider and manage panel size and scope of practice.

Assess supply and demand to further optimize your team and ensure appropriate panel sizes.

#### TOOLS

Panels and Panel Equity (guide) <sup>37</sup>

Practice Supply Worksheet <sup>38</sup>

Daily Demand (guide) <sup>39</sup>



## KEY CHANGE 3.3

### Create infrastructure to support patients at every visit

The ultimate goal of care that follows the Chronic Care Model is for every interaction between the patient and the medical team to be productive. Whether the visit is acute or planned, the care for every patient needs to change if we hope to improve health outcomes. Practices can start by treating the next patient that comes through their door as a partner for whom the clinic is organized to support. Some elements of Chronic Care Model-based care that should be present at every visit - planned or acute - should be:

- A deliberate focus on understanding and meeting patients' needs, including taking into account their treatment priorities. This can be accomplished through the creation and integration of a care plan.
- An explicit effort to enhance patient's health literacy. This can be accomplished using teach-back techniques to ensure that patients understand what you have told them.
- A perspective that any single interaction with a patient is part of an ongoing set of productive interactions where all of the patient's needs are being met. This can be accomplished by using each visit as an opportunity to engage the patient around the full array of medical needs including multimorbidities and depression, encouraging them to return for a planned visit when time is short.

#### FINANCE TRACKS

All three financial tracks benefit from productive patient - provider interactions. This interaction is, after all, the source of all value in the health care system. Practices that ensure that patients truly understand their medication regimen, for example, greatly reduce errors and the resulting rework and poor outcomes associated with them.

When providers manage the total breadth of their patient's needs, rather than creating more work, efficiencies can be gained.

**TRACK 3** Specifically, good integration of depression screening and management can directly increase revenues for track 3 practices, while dramatically freeing up time for primary care providers.

**TRACK 1****TRACK 2****TRACK 3**

Good mental health management can ensure that “15-minute visits don’t turn into disorganized 45-minute visits,” (Ann Lewis, CEO CareSouth Carolina, Curing the System May 2002). Such practices can dramatically improve efficiency for all three tracks. The CareSouth Carolina Story in the “Stories From The Field” section provides more details about their mental health work. In addition, the integration of case management activities into each visit increases the complexity of visits, increasing reimbursement opportunities.

**ACTIONS****TOOLS**

Create a patient care plan that captures the needs of the whole patient.	Shared Care Plan (patient material) <sup>40</sup>
Reduce the health literacy demands made on patients.	<p>Health Literacy and Patient Safety: Manual for Clinicians (guide) <sup>41</sup> see pages 18-40</p> <p>Helping Patients Manage Their Chronic Conditions (online) <sup>42</sup> see pages 8-15</p>
Utilize depression screening and care management to engage the whole patient.	<p>Depression Management Tool Kit <sup>43</sup> see Appendix I, p. 17 (online)</p> <p>Spanish PHQ-9 (survey) <sup>44</sup></p>

**ADDITIONAL RESOURCES**

- Visit [www.patientpowered.org](http://www.patientpowered.org) for more information about a shared care plan, including an electronic version that can be shared via the Web.
- The Center for Health Care Strategies has put together a set of fact sheets on health literacy that you may find interesting. They are available at [www.chcs.org](http://www.chcs.org).
- In addition to their Health Literacy manual, the American Medical Association has a number of other good health literacy tools, including a video available on their Web site [www.ama-assn.org](http://www.ama-assn.org).





## KEY CHANGE 3.4

### Plan care

Now that you have some of the fundamental building blocks of Chronic Care Model-based care in place, you are ready to try delivering planned care. A planned visit is an interaction with a patient designed and organized to ensure that the care is consistent with guidelines. Prenatal and well-child visits are examples already in use. Planned visits are proactive, not patient initiated.

Many health care providers believe themselves to already be doing “planned” visits. They note that their patients with chronic conditions come back at defined intervals. Upon closer inspection, however, these visits may look a lot like acute care. The provider might lack necessary information about the patient’s care needs; provider and patient might have different expectations for the visit; and staff may not be fully used to help with the organization of the visit and delivery of care. These “check-back” visits, while scheduled in advance, are often not efficient or productive for the provider and patient.

#### FINANCE TRACKS

Finance tracks need to look closely at how proactive clinical care can improve business practices. For example, while a team member is ensuring that labs and screenings are up to date, they or others can verify coverage or eligibility for supplemental programs.

#### TRACK 2

#### TRACK 3

For fee-for-service tracks 2 and 3 with onsite labs, ensuring that all patients receive the recommended number of tests can dramatically increase revenue. The Mercy Clinic and the Point of Care A1c Testing stories in the “Stories from the Field” section demonstrate how real clinics used this concept to increase revenue.

In addition, the more complex and comprehensive nature of planned care visits enables sites to qualify for more robust evaluation and management (E&M) codes when they integrate the educational and counseling elements of the Chronic Care Model into practice. The Greenfield Clinic story illuminates this point.

Finally, once you have worked out how your team can best deliver planned care to individual patients, consider including group visits as part of your practice. Group visits benefit patients clinically and can benefit your center financially.

**TRACK 2****TRACK 3**

Fee-for-service tracks 2 and 3 can benefit by including a medical exam component and billing for each patient in the group.

**TRACK 1**

Track 1 can use nurses to conduct group visits as an alternative to phone or individual office consultations.

**ADDITIONAL IDEAS TO HELP MAKE EFFICIENT PLANNED CARE A REALITY**

- Use registry and guidelines as the informational basis for your planned care visit.
- Integrate case management to improve efficiency and patient outcomes.
- Fully use the team you developed as part of key change 3.1.

**ACTIONS****TOOLS**

Use planned interactions to support evidence-based care for individuals.	Organizing the Planned Visit (guide) <sup>45</sup> System Changes and Interventions: Planned Care (presentation) <sup>46</sup>
Conduct visit preparation to ensure labs and screenings are up to date, & referral/specialty care information is available.	Diabetes Standing Orders (worksheet) <sup>47</sup>
Patient priorities are elicited & available.	Open Access - Open Office (patient material) <sup>48</sup> Shared Care Plan (patient material) <sup>49</sup> see page 3
Patient eligibility & insurance information is up-to-date.	Front Desk Collections Flow Chart (guide) <sup>50</sup>
Teams have all the information they need at the time of the visit.	Huddle Sheet (worksheet) <sup>51</sup>

<p>Ensure that this more complex visit is being appropriately reimbursed.</p>	<p>Getting Paid: Maximizing Collections (presentation)<sup>52</sup></p>
<p>Try group visits.</p>	<p>Group Visit Starter Kit (guide)<sup>53</sup></p> <p>Group Visit Financials (worksheet)<sup>54</sup></p>

### ADDITIONAL RESOURCES

- *Planned Care* (streaming media), available at [www.improvingchroniccare.org](http://www.improvingchroniccare.org). This video was produced by Improving Chronic Illness Care and demonstrates how planned care occurs within the context of a busy office.



## KEY CHANGE 3.5

### Assure support for self-management

To cope with their illness, patients living with chronic conditions must carry out complex treatment regimens, adjust everyday life tasks to accommodate their physical capacities, and deal with emotional responses to illness and loss. Because patients and families carry out much of the management of chronic illness, collaborative self-management support with patients is key to any effort to improve health outcomes. This effort can be seen both as a set of techniques useful in partnering with patients and as a cultural shift in the delivery of health care that places patients' goals, beliefs, preferences, and capacities at the center of care.

Creating informed, activated patients is particularly helpful when those patients have more than one chronic condition. When patients are informed and participate as partners in their care, they can provide valuable information to help their clinical team prioritize issues. Knowing patient preferences enables teams to have a realistic conversation about what self-care actions may best meet the patient's multiple needs. Other strategies the clinical teams can use to effectively partner with multimorbid patients include:

- Helping all patients to engage in general preventive care, such as exercising, eating well, and quitting smoking.
- Seeking out clinical "two-fers," where synergistically managing related chronic diseases results in positive outcomes for both, particularly in managing depression.

Providing necessary information, responding to patients' goals, and problem solving with patients to support continued improvement are central to self-management and can be part of every interaction between patients and the care team.

#### FINANCE TRACKS

##### TRACK 1

Self-management is important for patient improvement in all three financial tracks. For practices in track 1, good support for self-management support can keep patients healthy, reducing their demand for frequent, low-intensity visits. Self-management support in conjunction with planned care also reduces costly emergency department visits, a key financial lever in integrated delivery networks.

##### TRACK 2

##### TRACK 3

Track 2 and 3 practices benefit because when patients do come in for a planned visit, that visit is often more complex.

## TRACK 3

For those in track 3, self-management support by professionals such as Licensed Clinical Social Workers or Certified Diabetes Educators may be reimbursable.

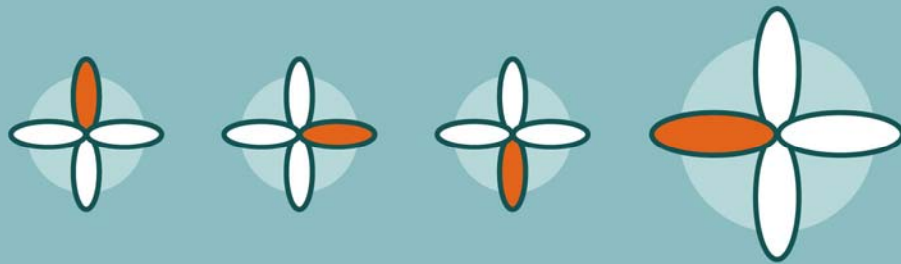
ACTIONS	TOOLS
Empower patients to be responsible for their health.	Helping Patients Manage their Chronic Conditions (online) <sup>55</sup>
Use the care team to work with patients collaboratively to: <ul style="list-style-type: none"><li>• Set realistic goals.</li></ul>	Understanding Goal Setting & Action Planning (guide) <sup>56</sup>
<ul style="list-style-type: none"><li>• Create action plans.</li></ul>	Action Plan (guide) <sup>57</sup>
<ul style="list-style-type: none"><li>• Follow up regularly to problem solve barriers and set new goals.</li></ul>	Agenda Setting Tool: Bubble Diagram (patient material) <sup>58</sup>
<ul style="list-style-type: none"><li>• Share easy-to-read, culturally and linguistically relevant information with patients.</li></ul>	World Education (online) <sup>59</sup>
Explore resources in the community to support patient self-management.	Diabetes Initiative (online) <sup>60</sup>

## ADDITIONAL RESOURCES

- The **"5 A's" Behavior Change Model**, a useful framework for organizing the infrastructure of self-management support. Check out the model by Glasgow et al and Whitlock et al. <sup>61</sup>
- New Health Partnerships, [www.newhealthpartnerships.org](http://www.newhealthpartnerships.org), for those interested in self-management support. They are also developing a business case for self-management support.
- *Techniques for Patient Self-Management*, available from the California Health Care Foundation at [www.chcf.org](http://www.chcf.org). This video provides an overview of how to engage patients.
- Improving Primary Care by Thomas Bodenheimer Chapter 5: Self-Management Support for People With Chronic Illness.

## PHASE 4

Continuously Improve Performance  
and Sustain Changes





## KEY CHANGE 4.1

### Reexamine your outcomes and make adjustments for continued improvement

TRACK 1 TRACK 2 TRACK 3

Real practice improvement means being committed to change, and that means planning for challenges even when you're succeeding. Generally, practices see great improvement in the first months of practice redesign, and they are tremendously motivated by those improvements. But inevitably those improvements start to plateau. The key is not allowing setbacks to halt your efforts. Continue to go back and evaluate your clinical, financial, and operational goals and strive for improvement. This constant reevaluation requires organizational commitment to ongoing improvement, but it is the only way sustainable change can be realized. Remember, improvement is a journey, not a destination.

There is a whole community of safety net practices who have gone through what you're going through. Look for ways to connect with those groups, and learn what they did to sustain their improvement efforts.

In addition, we've provided a number of tools below that can help to keep you motivated and focused on improvement. One such tool is the Change Flow Chart. This tool helps practices reflect on their results and then prompts them with specific questions to continue their improvement journey. The rest of the tools can be used within the context of the Change Flow Chart to keep focused on long-term financial sustainability and clinical improvements.

#### ACTIONS

#### TOOLS

Overcome barriers to improvement.	Change Flow Chart (guide) <sup>62</sup>
Apply process mapping methodology to new processes to ensure efficiency and sustainability.	Primary Care Practice High Level Flowchart (worksheet) <sup>63</sup>
Continue to optimize clinical interactions.	Plan Do Study Act Worksheet <sup>64</sup>
Work with community resources to ensure access to services that may not be available in house.	How Hot Are Your Improvement Action Plans PDSAs (worksheet) <sup>65</sup> Community (presentation) <sup>66</sup>



## KEY CHANGE 4.2

### Capture incentives based on quality of care

TRACK 1 TRACK 2 TRACK 3

Evidence remains mixed about the ability of pay-for-performance programs to change health outcomes by themselves. However, incentives can serve an important motivating and sustaining function when used as part of a robust quality improvement program.

Many health plans and other organizations are working on quality incentives, so maximize your revenue by taking advantage of those certifications, grants, and programs that tie into your Chronic Care Model work.

In addition to responding to pay-for-performance programs from payers, staff-model organizations also have an opportunity to structure their pay packages to create quality incentives for their staff. A few safety net provider groups have tried restructuring benefits to incentivize quality improvement. Learning from their experience could be helpful for sites interested in pursuing this strategy. Also, take a look at the Agency for Healthcare Research and Quality's Pay-for-Performance guide to learn what factors health plans take into account when designing their pay-for-performance programs.

#### ACTIONS

#### TOOLS

Pursue opportunities for enhanced reimbursement through grant funding as well as your payer's pay-for-performance and accreditation programs.	Pay For Performance: An Introduction (guide) <sup>67</sup>
Contact leaders in the field who have successfully leveraged these opportunities and learn from them.	See "Stories from the Field" section
Learn what purchasers consider when developing a pay for performance program.	Pay for Performance: A Decision Guide for Purchasers (guide) <sup>68</sup>

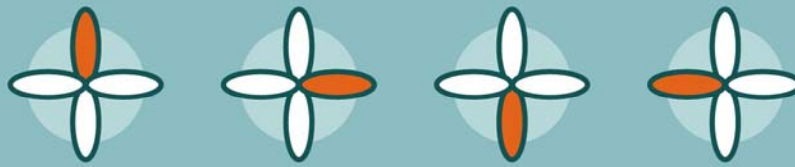
#### ADDITIONAL RESOURCES.

- The National Association of Community Health Centers, [www.nachc.org](http://www.nachc.org), conducts numerous trainings on grant writing and billing and coding, and they can connect you with a large network of other community health centers involved in quality improvement work.



# ADVANCED TOPICS

Tackle Operational Barriers to  
Improved Patient Care



## Advanced Topics

Some sites find that their quality improvement efforts are stymied by broken operational systems. For example, planned care visits are worthwhile only when patients can secure an appointment with their providers in a reasonable amount of time. Many sites have found that addressing core operational issues, such as access to care, can facilitate better patient care. But, redesigning office practices can be a major undertaking. For those sites interested in going beyond the clinical and business changes outlined in this tool kit, these advanced topics provide some basic resources to help get started.

ACTIONS	TOOLS
Reduce patient cycle time.	The CAHPS Improvement Guide <sup>69</sup> see page 68 & 69
Increase access to care (Advanced Access).	The CAHPS Improvement Guide <sup>70</sup> see page 61-67
Explore other mechanisms for improving health center finances.	Redesign and Finance Change Package (guide) <sup>71</sup>

# STORIES FROM THE FIELD



## GreenField Health, Chuck Kilo, MD

GreenField Health is an independent, six-physician primary care group in Portland, Oregon. GreenField Health also provides teaching and consulting services focused on all aspects of ambulatory care performance improvement. We started clinical services in 2001 by creating a fully paperless clinic that was established on the principles of the Chronic Care Model. We continue this focus today as we're moving to establish our second clinic and to drive continuous performance improvement in our clinical work. GreenField Health has a fully integrated electronic health record with a robust registry available to all clinicians. Our electronic health record and our registry provide (1) patient-specific reminders of needed care at the time of visits, (2) lists of patients due for services, and (3) aggregate population-based performance data. Our secure messaging system allow patients to connect to us electronically to provide updates on their care such as glucose levels in diabetic patients or weights in those with congestive heart failure. Secure messaging allows us to give patients rapid coaching and support for self-management, as well as timely lab results with instructions.

### **SPECIFIC BENEFITS OF THE CHRONIC CARE MODEL TO OUR CLINIC INCLUDE:**

- **POSITIONING OUR GROUP** to excel at pay-for-performance, which is on the horizon in our state, Oregon.
- **ALLOWING US TO BILL** evaluation and management (E&M) code 99214 for nearly all of our visits for those with chronic conditions.
- Supporting the **ABILITY TO PROVIDE** group visits at an E&M code 99213 or 99214.
- **FACILITATING PAYMENTS** of \$30 to 40 per e-visit, so vital in our efforts to engage patients in relationship-based care, which we also worked with our insurers to establish.
- **ENABLING GRANT FUNDING** of more than \$75,000 in 2007 as we help others in our State to implement the Chronic Care Model.

## Point-of-Care Hemoglobin A1c Testing at the Medical College of Wisconsin, Jaishree Hariharan, MD

At the Medical College of Wisconsin (MCW), the Primary Care Clinic partnered with the endocrinologists to test a reliable, easy, and effective point-of-care A1c test. Point-of-care A1c testing allows the physician or nurse practitioner to administer and receive results of the test at the time of the appointment - facilitating face-to-face information sharing, immediate decision making with patients, and better glycemic control.

MCW tested the DCA 2000, which requires a finger stick, analyses the sample, and provides the results in 6 minutes. After MCW tested and confirmed the reliability of the DCA 2000 in fall

2005, one medical assistant was trained on its use. It was piloted with one physician starting in November of 2005. By April 2006, all medical assistants were trained on its use and it spread to all the clinic physicians. The standardized lab testing was also available.

A total of 330 tests were performed over one year at the Internal Medicine Clinic in MCW. Approximately half the tests were ordered by the resident physician during their clinic sessions. The clinic has more than 800 diabetic patients. The impact of the point-of-care testing includes better diabetes control, improved patient care, and financial benefits. Specifically, the test:

- **ALLOWS FOR IMMEDIATE** decision making at the time of the visit.
- **ENABLES PHYSICIAN** to show patients a snapshot of their control over time, to help engage them in self-management.
- **BENEFITS RESIDENT PHYSICIANS** who are there only part time and decreases their paperwork.
- **ADDS VALUE** for patients who cannot obtain standardized laboratory tests due to financial or transportation issues. The test is much more convenient and provides immediate answers.
- **ENHANCES FINANCES.** The Centers for Medicare and Medicaid Services (CMS) increased payment for point-of-care A1c testing in 2007.

### CareSouth Carolina Integration of Behavioral Health Services, Liz Kershner, MSW, LISW

Fifteen years ago, CareSouth Carolina ended the fragmentation between medical and mental health services by hiring clinical social workers to assist medical providers with the care and treatment of primary care patients with mental health needs.

Through our initial participation in the Health Disparities Collaborative for depression and implementation of the Chronic Care Model in 2000, our care teams:

- **IMPLEMENTED** evidence-based guidelines for the treatment of depression in primary care.
- **USED** the Patient Electronic Care System (PECS), a clinical information system provided by the Bureau of Primary Health Care, to track the depression outcomes of all patients.
- **SCREENED** all new adult and adolescent patients for depression with the PHQ-9, an evidenced-based, self-administered depression screening tool designed for use in primary care. All patients are also assessed for depression at their annual visits.

- **MONITORED** patients diagnosed with depression using depression care management guidelines. The PHQ-9 is the tool used at CareSouth Carolina to track outcomes and response to treatment.

## QUALITY OF CARE

Currently, 47 percent of all CareSouth Carolina patients with major depression are achieving at least a 50 percent improvement in their depression outcomes within 4 months of treatment, as tracked by PHQ-9 score updates.

An additional benefit of onsite integration is the ability of the primary care provider to introduce the patient in need of mental health care to the behavioral health care provider by way of the “warm handoff.” This promotes trust between patients and providers and coordinated care plans between providers.

## FINANCIAL IMPACT

Primary care providers also appreciate the immediate availability of onsite behavioral health providers to assist with complex mental health cases, thus allowing them to maintain the quick pace of a primary care practice.

The clinical social workers at CareSouth Carolina have been credentialed with all major private insurance carriers as well as Medicaid and Medicare. Therefore, same-day reimbursement is possible for patients receiving both physical and mental health treatment at a CareSouth Carolina facility. The clinical social workers have also been added to local employee assistance programs. In addition, they provide mental health treatment in juvenile and long-term care facilities, which reimburse at least \$65 per mental health session.

## Economic Impact of Chronic Care Model Implementation at Mercy Clinics, David Swieskowski, MD

Mercy Clinics, a network of outpatient clinics in Des Moines, Iowa, began implementing a Chronic Care Model for diabetes care in two clinics in 2002. A disease registry was used to track all patients and a quarter-time care coach was identified in each clinic. In addition to improving the quality of care for diabetic and hypertensive patients, Mercy has also improved its financial position.

Because of prework done by the care coaches, use of standing orders, and use of a diabetes office visit form, providers were able to bill a higher level of service without requiring more provider time. An analysis of diabetes visit E&M coding for 2003 to 2005 showed that E&M

level 4 visits went from 35 percent to 74 percent of the billings. The impact was to increase the average net revenue from diabetes visits by \$12.29.

In addition to the increased E&M coding revenue, Mercy Clinics is seeing other financial benefits from Chronic Care Model implementation:

- **INCREASED LAB REVENUE.** Systemwide urine microalbumin testing went from essentially 0 to 10,868 tests per year. The Medicare profit was \$8 per test, yielding about \$87,000 profit per year.
- **PROFITABLE GROUP VISITS.** Revenues exceeded expenses by a large margin.
- **REDUCED TRANSCRIPTION AND FILING COSTS.** The diabetes office visit form requires little or no dictation, saving physician time and transcription cost.
- **INCREASED REIMBURSEMENT FOR PATIENT EDUCATION.** Mercy negotiated a payment of \$54 for patient education with their largest insurer.
- **PAY-FOR-PERFORMANCE BONUSES.** Mercy has completed the first year of a pay-for-performance project and has received the maximum payment for all 25 providers involved for a total of \$353,000.
- **NEW GRANTS.** Mercy has received more than \$170,000 in grant funding to further this initiative.

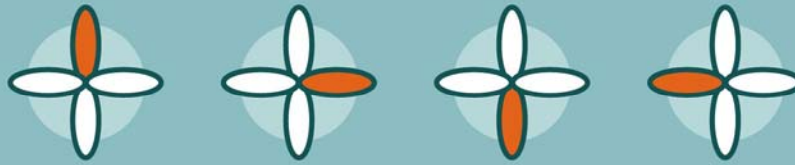
## Reduced Hospitalizations in the Univera System

Univera's initial foray into disease management using the Chronic Care Model began in 1999 with congestive heart failure, a condition responsible for a significant portion of overall health care costs in the United States. According to Peggy Calogero, R.N., Manager for Univera's Chronic Illness Program, costs for congestive heart failure are increasing for a variety of reasons including lack of coordination in the delivery of care and wide variation in the application of care.

By the time Univera completed the Chronic Disease Collaborative, about 100 patients were participating in the program. Univera saw a reduction in hospital admission rates for heart failure. "Even with the increase in pharmacy costs, savings in hospitalization alone still created overall savings," Calogero says.

# APPENDIX A

## The Evidence Base for the Chronic Care Model





## History of the Chronic Care Model

The initial evidence upon which the Chronic Care Model was based came from evaluations of interventions to improve care. For example, the MacColl Institute participated in a Cochrane Collaboration review of interventions to improve diabetes care in primary care,<sup>72</sup> These reviews demonstrated the need for the integrated set of changes called for by the Chronic Care Model. A more recent meta-analysis by Tsai and colleagues confirms these earlier findings and extends them to other conditions.<sup>73</sup>

Several healthcare organizations began adopting the Chronic Care Model around the turn of the 21st century either through participation in the Improving Chronic Illness Care (ICIC)-sponsored collaboratives or on their own. The second body of evidence about the effectiveness of the Chronic Care Model comes from observational evaluations of that experience. Several early chronic care collaboratives have been evaluated and generally document improvements. Investigators at the Center for Medicare and Medicaid Services (CMS) studied the quality of diabetes care in 134 managed Medicare organizations participating in a diabetes performance measurement program.<sup>74</sup> Fleming and colleagues used an organizational assessment tool based on the Chronic Care Model to compare high- (top quartile) and low- (bottom quartile) performing organizations. They found that high-performing organizations were much more likely to organize care delivery in accordance with the Chronic Care Model. They then identified specific systemic features that characterized high-performing organizations and differentiated performance. These included computerized reminders, practitioner involvement on quality improvement teams, guidelines supported by academic detailing, formal self-management programs, and a registry.

Feifer and colleagues studied the relationship between Chronic Care Model implementation and clinical outcomes in nine community-based practices.<sup>75</sup> They found a strong correlation between Chronic Care Model implementation and performance measures for diabetes and cardiovascular disease. Most recently, two randomized trials have tested interventions that explicitly used the Chronic Care Model to change primary care for asthma<sup>76</sup> and diabetes.<sup>77</sup> The Chronic Care Model-based intervention significantly improved asthma quality of life, and the diabetes intervention significantly improved glycemic and lipid control compared to usual care.

## Learning from Experience: The Case for a Toolkit

Our experience and a growing body of evidence suggests that implementation of the Chronic Care Model needs to be part of a explicit program of quality improvement, supported by leadership and designed to facilitate learning between practices. In the past, the structure of these improvement efforts frequently has taken the form of Breakthrough Series Collaboratives, which bring together dozens of teams to learn from each other at periodic

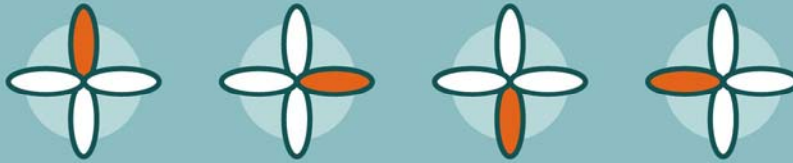
learning sessions. They then return to their systems to test incremental improvements using Plan-Do-Study-Act cycles. One of the most massive national collaborative efforts was the landmark Health Disparities Collaboratives (HDC) program sponsored by the Health Resources and Services Administration (HRSA) beginning in 1998. In concert with the Institute for Healthcare Improvement, MacColl/ICIC conducted chronic care Breakthrough Series Collaboratives in diabetes, congestive heart failure, asthma, and depression that were attended by pilot community health centers (CHCs) selected by HRSA.

These early collaboratives demonstrated that the Chronic Care Model was a feasible and useful guide to practice redesign and led to measurable improvements in the quality of care.<sup>78</sup> In addition, this experience led to two major observations. First, the collaborative structure, although effective as a learning tool, was expensive in terms of staff time and meeting costs. A search began for other, less lengthy and burdensome improvement methods that were still effective. The idea of a manual, or toolkit, first arose in the context of this work.

Second, many of the changes inspired by HDC participation did not sufficiently consider the efficiency and financial health of the participating CHCs. Many changes were made in ways that clearly were not going to be sustainable. To participate in the HDC, CHCs subsidized staff involvement in the collaborative and made new investments in information technology and staff. In addition, planned care often resulted in longer visits, more extensive counseling, or group visits for which reimbursement was often difficult to obtain. Huang and Chin evaluated an early diabetes HDC collaborative and found that implementation of the Chronic Care Model cost the CHC an additional \$6.41 to \$23.93 per patient.<sup>79</sup> This represents a significant portion of a CHC budget. These observations convinced the leaders of the HDC that “a primary care practice is at risk if they simply add the planned care work to their existing systems without stepping back and reengineering their organization.”

The pressing need for change, the early evidence of the promise and the limitations of collaboratives, and the requirement to consider both clinical and financial changes all led to the recognition of the need for a coherent set of tools that practices could use. This toolkit is an attempt to fill that need.

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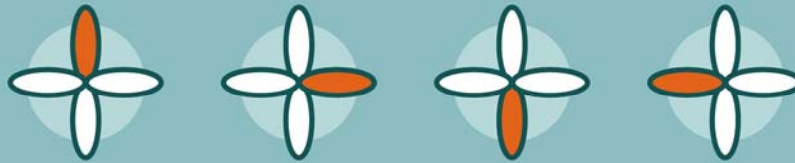


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# APPENDIX B

## Partner Tools



# 1.1

## Forming the Team (guide)



Institute for Healthcare Improvement: Forming the Team [Web Page]. Available at:  
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# 1.1

## Seven Leadership Leverage Points (white paper)



Institute for Healthcare Improvement: Seven Leadership Leverage Points for Organization-Level Improvement in Health Care [Web Page].

<http://www.ihl.org/IHI/Results/WhitePapers/SevenLeadershipLeveragePointsWhitePaper.htm>

Accessed January 2007.

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# 1.1

## Zen of Teams (presentation)



Zen of Teams. Buttress, S and Yee, R. Zen of Teams. [Web Page]  
Created for Redefin Phase 2 Learning Session 1 Event Date: March 10, 2005.  
Available at: <http://www.healthdisparities.net/hdc/html/home.aspx>.  
Accessed September 2008.

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# 1.2

## Chronic Care Model Primer (guide)



Improving Chronic Illness Care: Practice Change: Steps for Improvement [Web Page]. Available at:  
<http://www.improvingchroniccare.org/index.php?p=Models&s=98>.

Accessed August 2008.

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# 1.2

## A Model for Accelerating Improvement (online)



Institute for Healthcare Improvement Quality Improvement Resources:

A Model for Accelerating Improvement [Web Page]. Available at:

<http://www.ihl.org/IHI/Topics/HIVAIDS/HIVDiseaseGeneral/HowToImprove/>. Accessed August 2008.

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# 1.2

## Going Lean in Healthcare (white paper)



Institute for Healthcare Improvement: Going Lean in Health Care [Web Page].  
Available at: <http://www.ihl.org/IHI/Results/WhitePapers/GoingLeaninHealthCare.htm>.  
Accessed August 2008.

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## 2.1

# Patient Assessment of Chronic Illness Care (survey)



Patient Assessment of Chronic Illness Care: Improving Chronic Illness Care [Web Page] Available at: [http://www.improvingchroniccare.org/index.php?p=PACIC\\_Survey&s=36](http://www.improvingchroniccare.org/index.php?p=PACIC_Survey&s=36). Accessed August 2008.

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## 2.1

# Patient Assessment of Chronic Illness Care Scoring Guide



Patient Assessment of Chronic Illness Care Scoring Guide: Improving Chronic Illness Care  
[Web Page] Available at: <http://www.improvingchroniccare.org/index.php?p=Scoring&s=226>.

Accessed August 2008.

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## 2.1

# CAHPS Adult Primary Care Survey



CAHPS Clinician and Group Survey Adult Primary Care Questionnaire [Web Page]  
[https://www.cahps.ahrq.gov/CAHPSkit/files/351a\\_Adult\\_Prim\\_Eng.htm](https://www.cahps.ahrq.gov/CAHPSkit/files/351a_Adult_Prim_Eng.htm). Accessed August 2008.

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# 2.1

## Primary Care Staff Satisfaction Survey



Clinical Microsystems [Web Page].  
Available at: <http://www.clinicalmicrosystem.org>.  
Accessed March 2007.

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## 2.1

### Assessment of Chronic Illness Care (survey)



Assessment of Chronic Illness Care: Improving Chronic Illness Care [Web page].  
Available at: [http://www.improvingchroniccare.org/index.php?p=ACIC\\_Survey&s=35](http://www.improvingchroniccare.org/index.php?p=ACIC_Survey&s=35).  
Accessed August 2008.

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# 2.1

## Assessment of Chronic Illness Care Scoring Guide



Assessment of Chronic Illness Care Scoring Guide: Improving Chronic Illness Care [Web page].

Available at: [http://www.improvingchroniccare.org/index.php?p=ACIC\\_Survey&s=35](http://www.improvingchroniccare.org/index.php?p=ACIC_Survey&s=35).

Accessed August 2008.

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## 2.1

# Primary Care Practice Know Your Processes (survey)



Primary Care Practice Know Your Processes. Adapted from Assessing, diagnosing, and treating your outpatient primary care practice. [Web Page]. Available at: Clinical Microsystems (Dartmouth College). <http://dms.dartmouth.edu/cms/materials/workbooks/>. Accessed August 2008.

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# 2.1

## Finance Collaborative Pre-Work (survey)

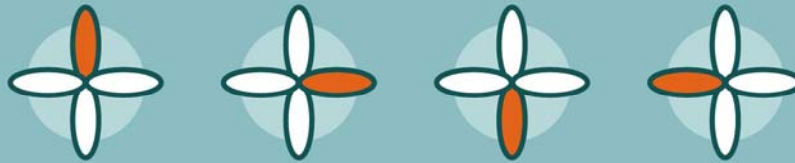


Finance Collaborative Prewrite Survey. Health Disparities Collaboratives.  
Finance Redesign [Web Page] <http://www.healthdisparities.net/hdc/html/home.aspx>.  
Accessed January 2008.

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## 2.1

# Building Your Community (guide)



Understand Your Community: Building Your Community: An Asset Based  
Community Development Toolkit [Web Page]. Available at: [communitybuilders.nsw.  
http://www.communitybuilders.nsw.gov.au/getting\\_started/needs/abcd.html](http://www.communitybuilders.nsw.gov.au/getting_started/needs/abcd.html). Accessed August 2008.

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## 2.2

# National Disease Guidelines (online)



National Voluntary Consensus Standards for Ambulatory Care -  
Reports - Publications - National Quality Forum [Web Page].  
Available at: [http://www.qualityforum.org/publications/reports/ambulatory\\_care.asp](http://www.qualityforum.org/publications/reports/ambulatory_care.asp). Accessed August 2008.

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## 2.2

# National Voluntary Consensus Standards for Ambulatory Care (measures)



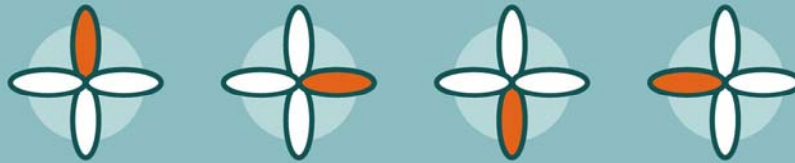
National Voluntary Consensus Standards for Ambulatory Care -  
Reports - Publications - National Quality Forum [Web Page]. Available at:  
[http://www.qualityforum.org/publications/reports/ambulatory\\_care.asp](http://www.qualityforum.org/publications/reports/ambulatory_care.asp).

Accessed August 2008.

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## 2.2

# Redesign and Finance Measures



St. Andre C. Redesign and finance change package. Rockville, MD: Health Disparities Collaborative; 2006 [Web Page]. Available at: Health Disparities Collaboratives Library and Search Portal. <http://www.healthdisparities.net/hdc/hdcsearch/index.html?themenu=mlibrary&sessuserid=guest>.

Accessed August 2008.

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## 2.3

### Chronic Disease Registries: A Product Review (online)



Simon J, Powers M. Chronic Disease Registries: A Product Review.

Oakland: California HealthCare Foundation; 2004 [Web Page]. Available at:

<http://www.chcf.org/topics/chronicdisease/index.cfm?itemID=102741>. Accessed August 2008.

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## 2.3

### CDEMS Registry (online)



CDEMS User Network (Website). Available at: The CDEMS User Network:  
<http://www.cdems.com/>. Accessed August 2008

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## 2.3

# Executive Review of Improvement Projects (white paper)



Reinertsen J, Pugh M, Nolan T. Executive Review of Improvement Projects: A Primer For CEOs and Other Senior Leaders. Rockville, MD: Health Disparities Collaborative; 2005 [Web Page]. Available at: Health Disparities Collaboratives Library and Search Portal. <http://www.healthdisparities.net/hdc/hdcsearch/index.html?themenu=mlibrary&sessuserid=guest>.

Accessed August 2008.

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## 2.3

# Quantitative Diabetes Monthly Report Template (worksheet)



Adapted from Learning Session One: BTS Collaborative Training & Materials: Improving Chronic Illness Care [Web Page]. Available at: [http://www.improvingchroniccare.org/index.php?p=Learning\\_Session\\_One&s=119](http://www.improvingchroniccare.org/index.php?p=Learning_Session_One&s=119).

Accessed August 2008.

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## 2.3

### Narrative Monthly Report Template (worksheet)



Adapted from Learning Session One: BTS Collaborative Training & Materials: Improving Chronic Illness Care [Web Page]. Available at [http://www.improvingchroniccare.org/index.php?p=Learning\\_Session\\_One&s=119](http://www.improvingchroniccare.org/index.php?p=Learning_Session_One&s=119).

Accessed August 2008.

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## 3.1

# High Functioning Clinical Teams are Extremely Efficient (presentation)



Moore, LG and Safford, B. High functioning clinical teams are extremely efficient: how to get one and achieve advanced access. Created for Institute for Healthcare Improvement 2004.

Available at [http://www.improvingchroniccare.org/index.php?p=Critical\\_Tools&s=162](http://www.improvingchroniccare.org/index.php?p=Critical_Tools&s=162).

Accessed September 2008.

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# 3.1

## Project Planning Form (worksheet)



Adapted from Learning Session One: BTS Collaborative Training & Materials: Improving Chronic Illness Care [Web Page]. Available at: [http://www.improvingchroniccare.org/index.php?p=Learning\\_Session\\_One&s=119](http://www.improvingchroniccare.org/index.php?p=Learning_Session_One&s=119).

Accessed August 2008.

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# 3.1 AND 4.1

## Primary Care Practice High Level Flowchart (worksheet)



Adapted from Assessing, Diagnosing and Treating Your Outpatient  
Primary Care Practice [Web Page]. Available at: Clinical Microsystems:  
[http://dms.dartmouth.edu/cms/materials/workbooks/outpatient\\_primary\\_care.doc](http://dms.dartmouth.edu/cms/materials/workbooks/outpatient_primary_care.doc).

Accessed August 2008.

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# 3.1

## Converting Guidelines to Practice (guide)



Improving Chronic Illness Care: Practice Change: Steps for Improvement [Web Page]. Available at: <http://www.improvingchroniccare.org/index.php?p=Models&s=98>. Accessed August 2008.

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# 3.1 AND 4.1

## Plan Do Study Act Worksheet



Plan-Do-Study-Act (PDSA) worksheet [Web Page]. Available at: Institute for Healthcare Improvement.  
[http://www.ihl.org/IHI/Topics/Improvement/ImprovementMethods/Tools/Plan-Do-Study-Act%20\(PDSA\)%20Worksheet](http://www.ihl.org/IHI/Topics/Improvement/ImprovementMethods/Tools/Plan-Do-Study-Act%20(PDSA)%20Worksheet). Accessed August 2008.

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# 3.1

## Plan Do Study Act Self Management Support Example



Learning Session One: BTS Collaborative Training & Materials:  
Improving Chronic Illness Care [Web Page] . Available at:  
[http://www.improvingchroniccare.org/index.php?p=Learning\\_Session\\_One&s=119](http://www.improvingchroniccare.org/index.php?p=Learning_Session_One&s=119).  
Accessed August 2008.

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# 3.1

## Cross Train Staff (guide)



Optimize the Care Team: Cross-Train Staff [Web Page].

Available at: Institute for Healthcare Improvement.

<http://www.ihl.org/IHI/Topics/OfficePractices/Access/Changes/IndividualChanges/CrossTrainStaff.htm>. Accessed August 2008.

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# 3.1

## Team Effectiveness Exercise (survey)



Mohr, Julie. Clinical Microsystem Assessment Tool. Adapted from Assessing, Diagnosing and Treating Your Outpatient Primary Care Practice [Web Page]. Available at: Clinical Microsystems. [http://dms.dartmouth.edu/cms/materials/workbooks/outpatient\\_primary\\_care.doc](http://dms.dartmouth.edu/cms/materials/workbooks/outpatient_primary_care.doc).

Accessed August 2008.

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## 3.2

### Panels and Panel Equity (guide)



Tantau & Associates. Understanding Panels in Primary Care [Web Page].

Available at: Institute for Healthcare Improvement.

<http://www.ihl.org/IHI/Topics/OfficePractices/Access/Tools/UnderstandingPanelsinPrimaryCare>.

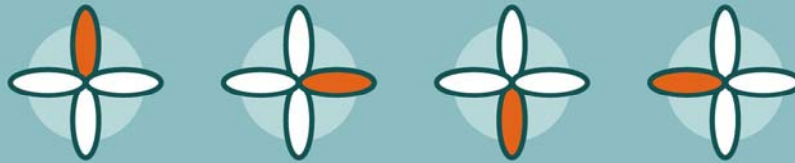
Accessed August 2008.

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## 3.2

# Practice Supply Worksheet

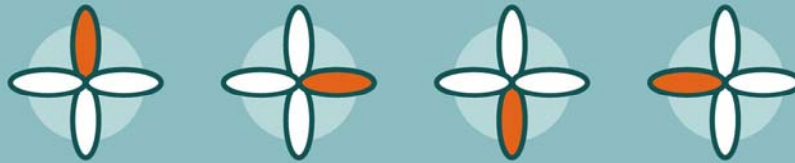


Batalden P, Godfrey M, and Nelson G. Institute for Healthcare Improvement: Practice Supply Worksheet [Web Page]. Available at: <http://www.ihl.org/IHI/Topics/OfficePractices/Access/Tools/PracticeSupplyWorksheet.htm>. Accessed March 2007.

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## 3.2

### Daily Demand (guide)



Daily demand [Web Page]. Available at: Institute for Healthcare Improvement.  
<http://www.ihl.org/IHI/Topics/OfficePractices/Access/Measures/DailyDemand.htm>.

Accessed August 2008.

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## 3.3 AND 3.4

### Shared Care Plan (patient material)



Shared care plan [Website]. Available at: Whatcom Health Information Network.  
<https://www.sharedcareplan.org/HomePage.aspx>. Accessed August 2008.

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## 3.3

# Health Literacy and Patient Safety: Manual for Clinicians (guide)



Weiss BD. Health Literacy and Patient Safety: Manual for Clinicians [Web Page].

Available at: American Medical Association Foundation and American Medical Association.

<http://www.ama-assn.org/ama1/pub/upload/mm/367/healthlitclinicians.pdf>. Accessed August 2008.

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## 3.3 AND 3.5

### Helping Patients Manage Their Chronic Conditions (online)



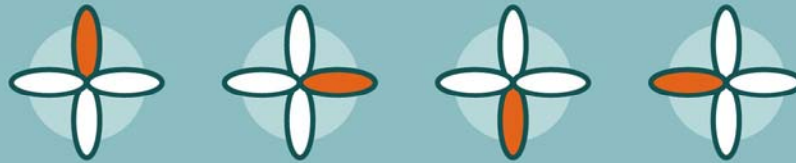
Bodenheimer T, MacGregor K, Sharifi C. Helping Patients Manage Their Chronic Conditions.  
Oakland: California Healthcare Foundation; 2005 [Web Page]. Available at:  
<http://www.chcf.org/topics/chronicdisease/index.cfm?itemID=111768>. Accessed August 2008.

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## 3.3

# Depression Management Tool Kit (online)



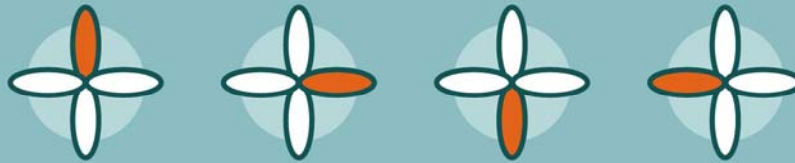
Depression management toolkit (PHQ-9, Appendix I, p. 17). MacArthur Initiative on Depression & Primary Care [Web Page]. Available at: <http://www.depression-primarycare.org/clinicians/toolkits/>.

Accessed August 2008.

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## 3.3

### Spanish PHQ-9 (survey)

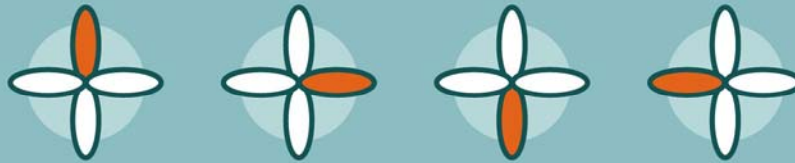


Patient Health Questionnaire PHQ-9 for Depression (Spanish). MacArthur Initiative on Depression & Primary Care [Web Page]. Available at: <http://www.depression-primarycare.org/clinicians/toolkits/materials/forms/phq9/>. Accessed August 2008.

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## 3.4

### Organizing the Planned Visit (guide)



Improving Chronic Illness Care: Practice Change: Steps for Improvement [Web Page]. Available at: [http://www.improvingchroniccare.org/index.php?p=Planned\\_Visits&s=48](http://www.improvingchroniccare.org/index.php?p=Planned_Visits&s=48). (Accessed August 2008).

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## 3.4

# System Changes and Interventions: Planned Care (presentation)



Improving Chronic Illness Care: System Changes and Interventions: Planned Care [Web Page]. Available at: <http://www.improvingchroniccare.org/index.php?p=Presentations&s=230> .

Accessed August 2008.

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## 3.4

# Diabetes Standing Orders (worksheet)



Standing orders: diabetes mellitus type II. Olympia, WA: Providence St. Peter Family Medicine Residency Program at Providence St. Peter Family Medicine [Web Page]. Available at: <http://www.diabetesinitiative.org/resources/topics/TopicGenAdmin.summary19-PROV.html>.

Accessed August 2008.

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## 3.4

### Open Access - Open Office (patient material)



Open Access - Open Office. Sample Open Access Mailer. St. Peter Family Medicine. Olympia, WA. Available at: [http://www.improvingchroniccare.org/index.php?p=Critical\\_Tools&s=162](http://www.improvingchroniccare.org/index.php?p=Critical_Tools&s=162). Accessed September 2008.

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# 3.4

## Front Desk Collections Flow Chart (guide)



Front Desk Collections Flow Chart.

Available at: Health Disparities Collaboratives Library and Search Portal (Web Page).  
<http://www.healthdisparities.net/hdc/hdcsearch/index.html?themenu=mlibrary&sessuserid=guest>.

Accessed August 2008.

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# 3.4

## Huddle Sheet (worksheet)



Batalden P, Godfrey M, and Nelson G. Institute for Healthcare Improvement: Huddle Sheet [Web Page]. Available at: <http://www.ihl.org/IHI/Topics/Improvement/ImprovementMethods/Tools/Huddles.htm>. Accessed September 2008.

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## 3.4

# Getting Paid: Maximizing Collections (presentation)



Getting Paid: Maximizing Collections. RedeFin II; 2005 April 13.

Available at: Health Disparities Collaboratives (Web Page).

<http://www.healthdisparities.net/hdc/hdcsearch/index.html?themenu=mlibrary&sessuserid=guest>.

Accessed August 2008.

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## 3.4

# Group Visit Starter Kit (guide)



Group Visit Starter Kit. Seattle: Group Health Cooperative; 2001 [Web Page].

Available at: Improving Chronic Illness Care.

[http://www.improvingchroniccare.org/index.php?p=Toolkits\\_&\\_Manuals&s=162](http://www.improvingchroniccare.org/index.php?p=Toolkits_&_Manuals&s=162).

Accessed August 2008.

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# 3.4

## Group Visit Financials (worksheet)



Group Visit Financials. Created by Providence Health System.  
Washington. Available at: [http://www.improvingchroniccare.org/  
index.php?p=Critical\\_Tools&s=162](http://www.improvingchroniccare.org/index.php?p=Critical_Tools&s=162). Accessed September 2008.

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## 3.5

# Understanding Goal Setting & Action Planning (guide)



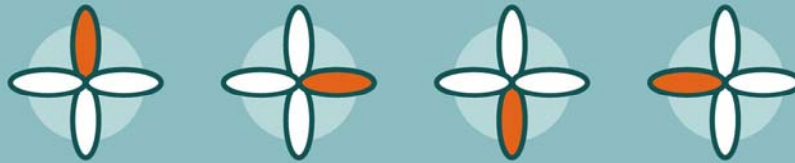
Adapted from Lorig K, Sobel D, Gonzalez V, et al. Living a Healthy Life With Chronic Conditions: Self-Management of Heart Disease, Arthritis, Diabetes, Asthma, Bronchitis, Emphysema, and Others. Third Edition. Boulder, CO: Bull Publishing Company, 2006.

Available at: [http://www.improvingchroniccare.org/index.php?p=Critical\\_Tools&s=162](http://www.improvingchroniccare.org/index.php?p=Critical_Tools&s=162).

Accessed September 2008.

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## 3.5 Action Plan (guide)



Action plan [Web Page]. Available at: New Health Partnerships.  
<http://www.collaborativeselfmanagement.org/ChangeTool.aspx>. Accessed August 2008.

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## 3.5

### Agenda Setting Tool: Bubble Diagram (patient material)

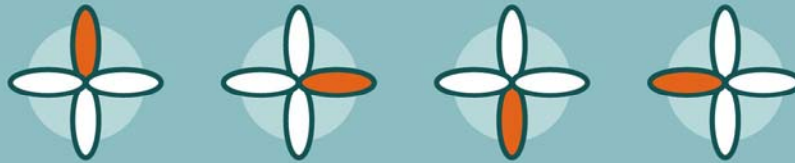


Agenda Setting Tool: Bubble Diagram. Author unknown.  
Available at: [http://www.improvingchroniccare.org/  
index.php?p=Critical\\_Tools&s=162](http://www.improvingchroniccare.org/index.php?p=Critical_Tools&s=162).  
Accessed September 2008.

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# 3.5

## World Education (online)

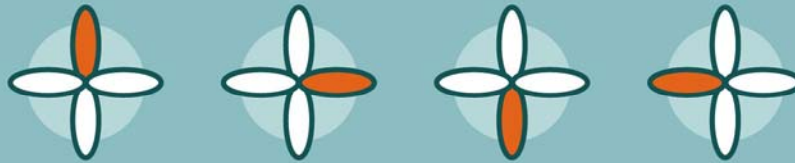


Health & Literacy Special Collection.  
Available at: <http://healthliteracy.worlded.org/>.  
Accessed August 2008.

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# 3.5

## Diabetes Initiative (online)



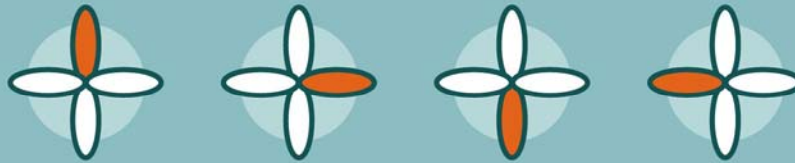
Diabetes Initiative [Web site].  
Available at: <http://www.diabetesinitiative.org/>.  
Accessed August 2008.

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## 3.5

# “5 A’s” Behavior Change Model



5 A’s Behavior Change Model Adapted for Self-Management Support Improvement [Web Page].

Available at Institute for Healthcare Improvement:

<http://www.ihl.org/IHI/Topics/PatientCenteredCare/SelfManagementSupport/EmergingContent/5AsBehaviorChangeModel.htm>. Accessed August 2008.

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# 4.1

## Change Flow Chart (guide)



Wagner, EH. Change Flow Chart. Improving Chronic Illness Care 2007.  
Available at: [http://www.improvingchroniccare.org/index.php?p=Critical\\_Tools&s=162](http://www.improvingchroniccare.org/index.php?p=Critical_Tools&s=162).  
Accessed September 2008.

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## 4.1

# How Hot Are Your Improvement Action Plans PDSAs (worksheet)



How Hot Are Your Improvement Action Plans: Critical Tools [Web Page].

Available at Improving Chronic Illness Care:

[http://www.improvingchroniccare.org/index.php?p=Critical\\_Tools&s=162](http://www.improvingchroniccare.org/index.php?p=Critical_Tools&s=162).

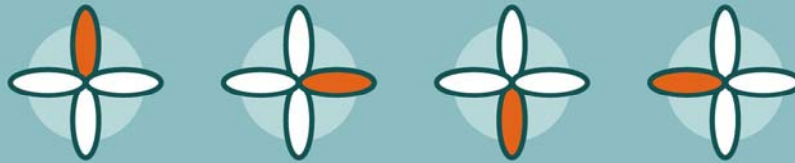
Accessed August 2008.

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# 4.1

## Community (presentation)



Kelly-Flis P. Community [Web Page].

Available at: Health Disparities Collaboratives Library and Search Portal:

<http://www.healthdisparities.net/hdc/hdcsearch/index.html?themenu=mlibrary&sessuserid=guest>.

Accessed August 2008.

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## 4.2

# Pay For Performance: An Introduction (guide)



Pay For Performance: An Introduction [Web Page].

Available at: Health Disparities Collaboratives Library and Search Portal:

<http://www.healthdisparities.net/hdc/hdcsearch/index.html?themenu=mlibrary&sessuserid=guest>.

Accessed August 2008.

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## 4.2

# Pay for Performance: A Decision Guide for Purchasers (guide)



Dudley RA, Rosenthal MB. Pay for Performance: A Decision Guide for Purchasers. Rockville, MD: Agency for Healthcare Research and Quality; 2006. AHRQ Pub. No. 06-0047 [Web Page]. Available at: <http://www.ahrq.gov/qual/p4pguide.htm>. Accessed August 2008.

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# ADVANCED TOPICS

## The CAHPS Improvement Guide



The CAHPS® Improvement Guide: Practical Strategies for Improving the Patient Care Experience [Web Page]. Available at: Agency for Healthcare Research and Quality. [http://www.cahps.ahrq.gov/content/resources/QI/RES\\_QI\\_CAHPSImprovementGuide.asp](http://www.cahps.ahrq.gov/content/resources/QI/RES_QI_CAHPSImprovementGuide.asp).

Accessed August 2008.

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# ADVANCED TOPICS

## Redesign and Finance Change Package (guide)



St. Andre C. Redesign and Finance Change Package. Rockville, MD: Health Disparities Collaborative; 2005 [Web Page]. Available at: Health Disparities Collaboratives Library and Search Portal. <http://www.healthdisparities.net/hdc/hdcsearch/index.html?themenu=mlibrary&sessuserid=guest>.

Accessed August 2008.

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