Creating Medical Home Communities

Systems of Care/Patient Centered Medical Home Initiative

Systems of Care/PCMH Initiative
Compact Facilitation Guide
September 2011

This Care Collaborative Agreement Facilitation Guide has been developed for general distribution with the support of the Colorado Systems of Care/Patient Centered Medical Home Initiative. Please reference the initiative in any reprints or revisions May 2011

Table of Contents

This Care Collaborative Agreement Facilitation Guide has been developed for general distribution with the support of the Colorado Systems of Care/Patient Centered Medical Home Initiative. Please reference the initiative in any reprints or revisions May 2011

Table of Contents Continued

Compact Facilitation Guide

Welcome to the Patient Centered Medical Neighborhood

The Patient-Centered Medical Home (PCMH) movement is gaining momentum. As of December 2010, NCQA has recognized 1246 PCMHs and is receiving 100 recognition applications monthly. There are now 14 major PCMH pilots demonstrating positive outcomes in quality parameters and cost reduction. Yet, the PCMH model faces significant unaddressed challenges. Several barriers exist to the successful implementation and sustainability of the PCMH and threaten the clinical and economic advantages of the model.

Effective coordination of care is an essential element in the successful PCMH and this element requires the willingness of specialists, other medical providers and health care facilities to participate in collaborative decision-making. The Medical Neighborhood is a systems model that extends the PCMH team-based care paradigm and:

- Fosters shared accountability among providers
- Improves quality
- Reduces waste
- Aligns incentives to encourage collaboration
- Includes measures to evaluate the patients' experience of care

Our health care system is not broken; it is obsolete (Jordan Cohen, M.D., Pharos magazine, winter 2011). We have a patchwork system of care that has exceeded the capacity to deliver safe, quality, coordinated and equitable care. We are trying to reach the moon fueled by gasoline and these efforts have exhausted the resources of our country. In the chaos of repair efforts, we must find a new community standard that can overcome health care's functional, social and logistical obsolescence. A system that provides innovative organizational and payment redesign that truly coordinates health care services.

The following guide provides the tools to take those first steps and make the difficult practice changes that will transform us from parallel, cooperative silos of care to collaborative care teams that can restore function to our dysfunctional system.

R. Scott Hammond, M.D., FAAFP
Medical Director, Colorado Systems of Care-PCMH Initiative

Introduction

In a recent publication of the American College of Physician, "The Patient Centered Medical Home Neighbor: The Interface of the Patient-Centered Medical Home with Specialty/Sub-Specialty Practices"[1] introduces the concept of the specialist "medical neighbor" is introduced and a framework and a set of guiding principles for the interaction between a primary care medical home and their specialist partners is outlined. These principles focus on shared patient care by defining the types of management and standardizing expectations for care coordination.

The Systems of Care Initiative Care Compact (or Collaborative Care Agreement) is based on the Joint Principles of the Patient Centered Medical Home and the American College of Physicians position paper on The Patient Centered Medical Home Neighbor: The Interface of the Patient Centered Medical Home with Specialty/Subspecialty Practices. As a result, there are certain assumptions made about the roles and interactions of physicians around continuity of care that need to be addressed:

- A patient centered medical home encompasses the following elements: personal physician, physician directed medical practice, whole person orientation, care is coordinated and/or integrated across all elements of health system, quality and safety are hallmarks of the home and promoted, enhanced access is available between patients and the medical practice.[2]
- The PCMH operates as the central hub of patient information, primary care provision[3] and is responsible for coordinating care across multiple settings, which includes:
    - Point of first contact for the patient
    - Primary care coordinator
- The patient centered medical home neighbor (PCMH-N), aka. Medical Neighborhood endorses:
    - Collaboration with specialists and sub-specialists are critical to achieve the goal of improved care integration and coordination within the patient centered medical home model.
    - Care delivery and care coordination is provided using a patient centered approach that encourages patient and family participation in referrals, diagnostics, treatment plan and self-management. The PCMH does not preclude the patient from self-referral to a specialist/subspecialist.
    - Please see Principles of the Patient-Centered Medical Neighborhood (hyperlink)
- Continuity of Care[4]: refers to the degree to which patients experience discrete components of healthcare as coherent, organized, connected and consistent with their needs.

---

[1] American College of Physicians position paper on The Patient Centered Medical Home Neighbor: The Interface of the Patient Centered Medical Home with Specialty/Subspecialty Practices. Philadelphia, American College of Physicians, 2010; Policy Paper

[2] Joint Principles of the Patient Centered Medical Home …..

[3] American College of Physicians position paper on The Patient Centered Medical Home Neighbor: The Interface of the Patient Centered Medical Home with Specialty/Subspecialty Practices. Philadelphia, American College of Physicians, 2010; Policy Paper

[4] Implementation Guide: Continuous and Team-Based Healing Relationships, Improving Patient Care through Teams. Safety Net Medical Home Initiative, December 2010.

- *Relational Continuity:* refers to ongoing caring relationships where a patient is known by his or her providers so that past care is linked with current care, usually with the expectation that the relationships will continue in the future.
- *Informational Continuity:* refers to the transfer of information from one episode of care to another, and the notion that relevant information is taken up and acted upon over time.
- *Managerial Continuity:* refers to the notion that care is coherently organized and planned and that today's care decisions take into account yesterday's care experience.

Objectives:

The purpose of the facilitation guide is to offer enhanced support to individuals or groups that are interested in convening groups of physicians to implement a care coordination guideline within their medical neighborhood by developing tools, key questions and other resources that aid in compact adoption.

The facilitation guide is organized according to the following elements:

- *Introduction: Concepts & Purpose*
- *Care Coordination Agreement: principles, definitions, areas for mutual agreement, exchange of information*
- *Implementation of agreement: tools and activities that support practices in the execution of a care compact*
- *Measurement: Monitoring and improvement*
- *Other Issues for Consideration*

Each section offers resources through:

- *Key questions:* The purpose of the key questions are to a) generate discussion about the value of care coordination agreements and b) surface and identify issues that that lead to a shared understanding if the compact between providers c) help providers think about how they might implement the compact within their own care settings.
- *First Steps: Suggested action plan*
- *Tools: Documents, tips, surveys and workflows*
- *Activities: Organized activities (facilitated and non-facilitated) that will support building and implementing compacts.*
- *Supporting Literature: evidence-based articles that support the patient centered medical home and the medical neighborhood approach.*

Introduction: Concepts & Purpose

Target Audience:

There are several circumstances where a physician compact, or care coordination agreement can be utilized. The following scenarios were taken into consideration when writing the facilitation guide.

- A primary care physician seeking to engage and build a network of medical neighborhood specialists to foster coordinated care with a comprehensive approach to referral and care management expectations (1:1 physician outreach).

- A specialist physician seeking to utilize the compact to improve bidirectional flow of relevant patient information when receiving a patient referral, and targeted at primary care or other specialists/community facilities. (1:1 physician outreach).
- A group of physicians (loosely defined) looking to identify and establish community standards for physician communication (i.e. "the Block Party").
- A physician group (IPA or PHO) looking to utilize the compact elements as standards and expectations for participation. (Likely done through contracting model)

A significant amount of work has been done in several national pilots on care coordination from inpatient settings to outpatient settings. The National Quality Forum has developed a matrix of care coordination measures to support this work. The following scenarios are also areas where a care collaborative agreement would be useful but have not been tested; therefore, specific supporting materials have not been developed at this time.

- Physician to Hospital/Hospital to Physician standardization of medical records and protocols pertinent in transitions of care.[5]
- Facilitation of bidirectional information between primary care/specialist physician and home health services or other community resources and facilities.

Purpose/Objectives of care coordination agreements

Patients who transition between primary care and specialty care often encounter lapses in communication, duplication of diagnostic testing, and ambiguity regarding physician duties and responsibilities[6]. A care coordination agreement, or compact, facilitates the goal of improved care integration and coordination for patients through articulation of bi-directional expectations around types of care, communication of pertinent clinical information and patient preferences, access and availability, and collaborative development of care plans for shared patient care. These agreements can serve as a practical guide to enhance referrals between primary care and specialty practices, as well as, standardizing transfer of clinical information across multiple care settings.

It is acknowledged that most physicians have established referral networks and clinical partnerships with specialists, hospitals and ancillary providers (medical neighborhoods). The care compact is meant to enhance, rather than replace those relationships by offering participants an opportunity to share their preferences, clinical expertise and update communication methods to ensure that they see the right patient at the right time in a more structured framework, as well as, to facilitate implementation within the clinical practice and other care settings.

Collaborative Care Agreements & Care Coordination

How does the collaborative care agreement fit into the larger picture of care coordination? The Agency for Health Care Research recently developed a Care Coordination Atlas and distinguishes between the activities and broad strategies that support coordinated care. The collaborative care agreement is an activity that provides the framework for an effective care hand-off by establishing accountabilities, expectations for communication and facilitating transitions. Subsequent clinical activities, listed in the table below, should be communicated in the progress note or care record and shared across the care continuum with all relevant providers.

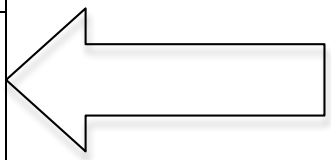
---

[5] National Quality Forum (NQF), *Preferred Practices and Performance Measures for Measuring and Reporting Care Coordination: A Consensus Report,* Washington, DC: NQF; 2010.

[6] Chen, AH, Improving the Primary Care-Specialty Care Interface. Arch Intern Med. 2009;169: pp.1024

Care Coordination Elements:[7]

Coordination Activities – unique activities that support coordinated care
Establish Accountability or Negotiate Responsibility
Communicate (interpersonal and information transfer)
Facilitate Transitions
Assess Needs and Goals
Create a Proactive Plan of Care
Monitor, Follow up and Respond to Change
Support Self-Management Goals
Link to Community Resources
Align Resources with Patient and Population Needs
Broad Approaches – means of achieving coordinated care
Teamwork focused on care coordination
Health Care Home
Care Management
Medication Management
Health IT – enabled coordination



"Care Coordination Atlas - Version 3" AHRQ Publication No. 11-0023-EF.

The effectiveness of care coordination activities and strategies should be viewed, and subsequently measured, from the perspective of multiple stakeholders, all of whom will have different definitions of successes and failures. The grid below summarizes those perspectives in terms of the purpose and goal of care coordination and what is a perceived failure by key stakeholders.

Care Coordination Perspectives[8]

	Patient	**Health Care Professional**	**System**
Purpose	Ensure that a patient's needs and preferences are met over time, regardless of people, function and sites.	Patient/Family centered, team based activity designed to assess and meet the needs of the patient while helping them navigate the system.	The system takes responsibility for care in a way that seamlessly integrates personnel, information and other resources that are required to meet patient needs.
Success	The delivery of high quality, high value care that are in accordance with the needs and preferences of the patient/family.	Support of the patient through complex system navigation, which includes knowing where to send the patient, what information to transfer, designating accountability and responsibility for care by providers, and identifying and addressing gaps in patient needs (medical and non-medical)	Facilitate the appropriate and efficient delivery health services within and across the system.
Failures	Failures may occur at transition points within the system. Patients perceive failure as anything that requires an "unreasonable" degree of effort by them or care givers in order to meet care needs.	Poor health outcomes as a result of poor hand-offs or poor information exchanges are recognized as failure points, as well as any "unreasonable" level of effort to accomplish the necessary coordination activities.	A failure is perceived in terms of cost and quality. If a patient experiences a poor outcome due to fragmentation of care, those failures have corresponding affects upon the financial performance of the system as a whole.

<u>The patient centered medical home and the medical neighborhood</u>

[7] *Care Coordination Measures Atlas*. AHRQ Publication No. 11-0023-EF, January 2011. Agency for Healthcare Research and Quality, Rockville, MD. http://www.ahrq.gov/qual/careatlas/

[8] Adapted from AHRQ Care Coordination Atlas, Perspectives on Care Coordination

The typical primary care doctor must coordinate care within an average network of 229 other physicians from 117 practices[9]. This presents several barriers to the successful implementation of the PCMH and threatens the clinical and economic advantages of the model. Effective coordination of care is an essential element in the successful PCMH model and requires the willingness of specialists and other medical providers of care to participate in collaborative decision-making[10]. A 2009 survey of physicians by the Colorado Medical Society revealed that while a majority of physicians (both primary care and specialty care) ranked care coordination a major area of focus within their practice, only 15% of PCPs and 21% of specialists were satisfied with their communications with other facilities. In addition, physicians noted they always or regularly received necessary information from referrals 41% (PCPs) or 36% (specialists) of the time[11].

Mutual Benefits:

A compact, or care coordination agreement, offers significant mutual benefits to all stakeholders on the care team. A primary care team has the confidence of knowing that they are sending patients to a trusted, high quality specialty network that shares the same values around patient care and has corresponding care processes to support patients in their treatment outside the primary care office. A relationship with a specialist network offers the opportunity for reciprocal continuing medical education on clinical conditions that are relevant to their patient population. Specialists ensure that they are seeing the right patient at the right time with the pertinent clinical information at hand. In addition, a compact offers the opportunity of a consistent and prepared patient volume from their primary care partners. Clinical information at the point of service can reduce unnecessary, duplicative testing and clear designation of management responsibilities help care teams know who's on point for critical follow up and communication. Physicians can reclaim the joy of medicine and professional camaraderie by building clinical relationships to meet their patient needs. Most importantly, successful implementation of a care compact supports the patient by having a seamless health experience across multiple care settings because providers understand and can respond to their clinical needs, communicates their preferences and encourage patient activation and engagement in a collaborative manner.

Key Questions:

Overview and Introduction:

1. What is the medical home and how does it relate to a care coordination agreement?
2. What is a compact / care coordination agreement?
3. If you are a PCP, what does it mean to be first point of contact and principle coordinator of care?
    I. What care processes need to be in place and functional prior to working on your medical neighborhood?
    II. What can "evolve" as you work out the referral process with your specialist partners?
    III. What are pros/cons of each approach?
    IV. How can I perform as a medical neighbor without being a PCMH?

---

9 Primary Care Physicians' Links to Other Physicians Through Medicare Patients: The Scope of Care Coordination. Pham, H et al. Ann Intern Med 2009;150:236-242.

10 "A Toolkit for Primary Care - Specialty Care Integration", R. Scott Hammond, MD and Caitlin Barba, MPH, Medical Home News, Volume 3, Number 2, February 2011.

11 "Physician Perceptions on Care Coordination", Karen Leamer, MD FAAP and Gene Sherman, MD, FACC; Colorado Medicine, January/February 2010, pp 36-37.

4. Why codify the care coordination and referral relationships between primary care and specialists and specialist to specialists?
5. What interests you about care coordination agreements?
    I. What doesn't work within your current referral relationship?
    II. Think about your various referring partnerships and identify what elements work well for your practice?
    III. Are there areas within your referral relationship that you feel strongly about and/or are non-negotiable as you develop care coordination agreements with your colleagues?
    IV. How does fragmentation of health care affect your patient's outcomes and safety?
6. How does this fit with your current practice priorities (business or clinical)? How does it not fit?
7. Does the economics of health care affect you or create concerns on how you practice in the future?

First Steps

- Develop your vision, agree to improve care coordination, and adapt/adopt Collaborative Guidelines (Compact)
- Identify a list of key specialists /PCPs that you want to invite into your medical neighborhood and send invitations to join. Initiate conversations, when needed.

Tools:

- PCMH and the Medical Neighborhood (HTW visual)
- Quick tips to setting up a community meeting
- Medical Neighborhood Invitation Letter Template
- Medical Neighborhood Community Meeting Presentation Template
- *Guide to document for PCMH application and/or MHI standards [to be developed]*

Activities:

- Hosting a medical neighborhood welcome visit or "block party" using tools listed above

Supporting Literature:

- Building a Medical Neighborhood for the Medical Home, Elliot S. Fisher, MD, PhD. New England Journal of Medicine, 359;12 www.nejm.org September 18, 2008

Care Coordination Agreement

Care coordination agreement, compact, service level agreement or standardized checklist for referrals all refer to an explicit understanding between providers that outline expectations around defining accountability for care management, the sharing of clinical information, access to care and areas of care coordination to facilitate a well orchestrated and seamless care experience for the patient. The American College of Physicians (ACP) outlines clear clinical interactions and guiding principles for the medical neighborhood in their recent position paper on the interface of the PCMH with specialty practices. Agreements can be implemented in phases or in its entirety. Full participation by providers of

care requires purposeful evaluation and redesign of care processes. A care coordination agreement is not a legal document rather it offers standardized language to describe the referral process and outlines what each provider can provide in key areas.

Collaborative care agreements can take many forms but standardizing definitions for care responsibility and information are critical in order to create a shared language across provider communities. *For the purposes of this facilitation guide, we highly recommend that any collaborative care agreement developed maintain the ACP care management role definitions and include a section that outlines clinical records*. Several examples are listed in the appendix: a full scale collaborative care agreement, a one page document outlining expectations, and a standardized checklist for both primary and specialty care.

A PCMH-N is a subspecialty practice that engages in processes that:

- Ensure effective bidirectional communication, coordination, and integration with PCMH practices
- Ensure appropriate and timely consultations and referrals
- Ensure efficient, appropriate, and effective flow of necessary patient care information
- Effectively determine mutual responsibility in co-management situations
- Support patient-centered care, enhanced care access, and high levels of care quality and safety
- Support the PCMH practice as the provider of primary care to the patient and as having overall responsibility for ensuring the coordination and integration of all care.

Phase 1: Agreement on care management roles and clinical information sharing

The most important components of a care coordination agreement are identifying areas for mutual agreement on care transition, management definitions and accurate transfer of clinical information across the continuum of care. By knowing who's on point for clinical services and follow-up and having the clinical information at the point of service, each provider of care is prepared to care for the patient within their scope of expertise. In addition, care teams are equipped with specific knowledge about patient preferences and care plans.

Defining the care management roles. The ACP defines the following types of care management roles:

- Pre-Consultation Exchange: communication between primary care and specialist to answer a clinical question and/or determine the necessity of a formal consultation; facilitate timely access and determine the urgency of referral to specialty care; or facilitate the diagnostic evaluation of the patient prior to a specialty assessment. A pre-consultation exchange is intended to expedite/prioritize care or clarifies need for referral.[12]
- Formal Consultation: Referral of a patient to a specialist for a discrete diagnosis, diagnostic test, results, procedure, treatment or prognosis. Care is transferred back to the medical home for management and ongoing monitoring.
- Co-Management:

[12] American College of Physicians position paper on The Patient Centered Medical Home Neighbor: The Interface of the Patient Centered Medical Home with Specialty/Subspecialty Practices. Philadelphia, American College of Physicians, 2010; Policy Paper

- With Shared Care for the Disease: a referral to a specialist where they provide expert advice, guidance and follow up of the patient for one specific condition. The medical home will manage the illness with support from the specialist.
- With Principle care for the disease: both the medical home and the specialist are concurrently active in the patient's treatment plan. The specialist assumes responsibility for the long-term, comprehensive management of the patients referred medical/surgical condition. The medical home receives reports and follows the patient for all other aspects of care, as well as offering input on quality of life/treatment decisions.
- With Principle care for a consuming illness: The specialist assumes primary care for the patient for a limited time due to the nature and impact of the clinical condition(s). The medical home continues to receive on-going treatment information and retains input on secondary referrals.

- Transfer of a patient to specialty care: This refers to a situation where a specialist assumes the role of the medical home by mutual agreement with the primary care provider and patient/family. The specialist agrees to provide care according to the Joint Principles and would be expected to meet the recognition/certification requirements as a medical home. Examples of this type of care would include end stage renal disease patient on dialysis or an infectious disease practice caring for an HIV/AIDs patient with complex medical and treatment issues.

As more practices join the information super-highway, health information technology becomes an increasingly important tool in care coordination. The ease with which clinical information can be extracted and shared will continue to evolve as standards, protocols and rules for communities adopt meaningful use and health data exchange.

The *transitions of care record, or minimum data set,* outlines the recommended clinical information that should be exchanged in the course of a patient transition through the care continuum. Groups implementing a collaborative care agreement can develop their own required clinical data sets or use/modify the PCP and Specialist Patient Transition Record in the Systems of Care Agreement. These data elements should become embedded in any measurement system put in place.

Phase 2: Care Coordination Agreement Elements:

Systems of Care Agreement
The particular elements of any care coordination agreement should be mutually agreed upon expectations that correspond to a physician or practice setting, ability to provide that service or information. Care coordination will likely be included in upcoming versions of meaningful use and payment reform. Individual physicians, physician communities or organized groups will benefit from having candid discussions about referral and information standards.

i. Review and discuss Domains/Elements of Compact and PCP & Specialist patient transition record
ii. Review and discuss mutual agreement for care transition (if applicable)
    1. Identify what is personal to physician approach (i.e. area of interest is sports medicine & rehab, only refer patients when ready for surgical intervention, etc.)

Key Questions:

Compact details

I. If you could change one thing about the design of the care coordination agreement, what would it be and why?
II. Referrals
    a. Are there existing referral guidelines (formal or informal) within your specialty or within the community that offer guidance on seeing the right patient at the right time?
    b. Is there an interest to develop condition specific educational guidelines between PCPs/Specialists to support the referral process?
    c. How will secondary referrals to another specialist work? (i.e. exchange of clinical information, contact with primary care physician, patient preparation and development of shared care plan)
III. Types of Management
    a. Are there additional types of management that you think are not covered?
    b. How do you currently express clear designation of care responsibility and accountability in your current progress notes? Are there changes that you will need to make in order to sync up and speak the same "language" about care responsibility and accountability?
    c. Are there areas within the types of care management that you do not feel comfortable with and/or cannot agree to? If so, why?
IV. Collaborative Care Domains: Transitions of Care, Access, Collaborative Care Management
    a. Are the expectations something that you can provide in the course of a referral?
    b. How will you be able to distinguish a patient's level of urgency for an appointment and be able to respond to it within an appropriate and agreed upon time frame.
    c. What changes will you need to make in your office processes or care notes in order to deliver that information?
V. Patient Communication
    a. Does the patient have a specific agenda, set of needs or plan for the visit? What are the techniques that you employ to understand the patient's agenda?
    b. Do you have a system in place to identify if there are issues or barriers that prevent the patient from following through on care recommendations? (i.e. language or cognitive issues, family or community support not available, etc) How or is it appropriate to share with other providers of care?
    c. How will you prepare the patient for their next visit or service (whether that care is provided by you or another provider)?
    d. What is the role of the primary care physician or specialist in communicating patient wishes that are expressed within a visit while respecting patient confidentiality?
VI. Patient Transition Record
    a. Are you consistently sending patient information and medical records to your colleagues? What elements of the Patient Transition Record are missing? What information transfer system will work for your practice? How do you need to change your work flow?

b. Do your have the resources to capture the essential elements of the Report in an effective and consistent way?
c. How will you track and measure your performance? What tracking system is most appropriate for your system?

First Steps:

- Review each item of the Compact **and determine action plan**
- Choose a Quality Improvement model that will be most successful in your practice?

Tools:

- 6 Steps to Becoming a Medical Neighbor
- Types of Care Transitions Quiz
- PCMH –N Specialty List Template
- Practice Survey Questionnaire (practice self assessment) [need scoring tool from Perry]
- Diabetes Case Study (Carol Greenlee, MD)
- Sample ACP Checklist
- Sample 1 Page Compact

Activities:

- Compact Table Top Exercise: Ideal Referral State
- Action Planning: Building Your Medical Neighborhood

Supporting Literature:

- Chen, AH, Improving the Primary Care-Specialty Care Interface. Arch Intern Med. 2009;169:1024-1025
- Forrest, CB, A Typology of Specialists' Clinical Roles. Arch Intern Med. 2009;169:1062-1006
- American College of Physicians position paper on The Patient Centered Medical Home Neighbor: The Interface of the Patient Centered Medical Home with Specialty/Subspecialty Practices. Philadelphia, American College of Physicians, 2010; Policy Paper

Implementation of Collaborative Care Agreement

The 2011 NCQA Patient Centered Medical Home Standards places greater emphasis on care coordination, both in tracking results of testing done outside the medical home, referral tracking and follow-up and coordination with facilities and care transitions.

Operational execution is probably the most challenging component of the agreement, as it will require an evaluation and redesign of current care processes for both the medical home and the medical neighbor. The ability of a practice to consistently and reliably follow through on the associated tasks and activities below will need to be assessed and modified whether implementing the agreement as a medical home or as a medical neighbor.

- Preparing the referral and the clinical record:

    - Ensuring that all elements of the transition of care record are available at the next scheduled point of service (primary care referral to a specialist office, specialist office hands back to primary care office, ancillary provider, hospital)
    - Clearly identifying type of care management and responsibility for specific elements of care and follow up.
    - Alters consult templates (written or electronic) to capture and communicate critical clinical and care management information.
- Preparing and meeting the needs of the patient:
    - Referral contact information readily available to share with patients
    - Establishes purpose, expectations and goals of the visit and/or shares diagnosis, prognosis and treatment plan.
    - Communicates appropriate time frame for specialist appointment and/or follow up appointment
    - Designs treatment interventions with a sensitivity to patients' needs and preferences (i.e. culturally sensitive, education materials in primary language, meets relevant insurance requirements, provides training and education for complex issues, assess patient confidence for self care)
- Being a good partner
    - Administrative:
        - Identification of single point of contact for referrals within office for questions
        - Be accessible to patient with reasonable office hours and timeframes for next available appointment based on urgency of clinical need.
        - Provide and accept respectful feedback from staff, physicians and patients in the spirit of improvement.
        - Obtains appropriate prior authorization
        - Understands and acts upon preferences for secondary/tertiary referrals
    - Clinical:
        - Availability of (number that will be answered for clinical issues) physician to answer physician or patient calls to facilitate care such as, discussion of treatment plan, assist in appropriate work-up or follow up, and for urgent matters
        - Offer ongoing clinical expertise to support shared care plan

The Systems of Care Initiative has developed, and continues to evolve, a comprehensive medical neighborhood toolkit to support the patient centered medical home implementation of the Primary Care-Specialist Physician Collaborative Guidelines. Many of these tools are referenced and utilized throughout the facilitation guide. The toolkit follows the 5 A's format (Ask, Advise, Assess, Assist, Arrange). This comprehensive approach walks practices through the process of identifying, establishing and monitoring the medical neighborhood on a monthly or quarterly basis. Practices typically spend about 5-8 hours for initial set up of their medical neighborhood and approximately 2 hours for each new medical neighbor. Routine monitoring and feedback is approximately 1-2 hours, depending on the frequency of your measurements. Please see appendix for the complete set of tools.

Key Questions:

Implementation Discussion Items

I. What are challenges that you see to implementation?
II. What are the benefits to implementing this kind of process?
III. How well do you think your practice performs on care coordination? How do you know? Please describe that process. Is it documented?
IV. Why go to the effort to formalize care processes and care coordination at your practice?
V. Who needs to be brought into this discussion at your practice in order to make this agreement work?
VI. Are there improvement projects that your practice has undertaken in the past few years that have been successful? What are the elements that made that project successful?
VII. How will you communicate this new effort to your staff? What are things that you can communicate to them that will help them understand why you are changing the current process? (i.e. How/why this is important in improving patient care? What will this effort require of them? What is their role? What is the time commitment?

First Steps:

- Audit your referral notes to be sure they satisfy the Transition Record core elements
- Develop a QI plan and timeline to implement changes
- Create 'breathing space' for transformation champions to work on the change process.

Tools:

- Primary Care Checklist by Roles
- Specialist Office Workflow for Compact Implementation [to be developed]
- Sample Consult Forms
- PCMH-N Fax Cover Sheet
- Specialist Transition Record Checklist
- Sample Consult Note

Activities:

- Test Tracking Rapid Improvement Activity (Health TeamWorks)
- Building a Medical Neighborhood: Implementation Guide (5 A's)

Supporting Literature:

- "A Toolkit for Primary Care - Specialty Care Integration", R. Scott Hammond, MD and Caitlin Barba, MPH, Medical Home News, Volume 3, Number 2, February 2011.
- Care Coordination: Reducing Care Fragmentation in Primary Care and Implementation Guide, Safety Net Medical Home Initiative, April 2011.

Measurement: Monitoring and improvement

An important component of undertaking any new initiative that can impact patient care is to understand if your intervention had the anticipated impact. Whether you are using a formal scorecard system or using a Plan-Do-Study-Act format, measuring performance is a critical feedback loop to ensuring accountability and offers insight into opportunities for improvement and communication going forward. Your group needs to define up front what it wants to measure in the implementation of the collaborative care agreement. In order to support patient safety and practice efficiency, we recommend that at minimum you measure a) clear identification of care management roles outlining responsibility for care (ie. do you know who is on point for what components of care based on the progress note) b) completeness of the clinical data set transferred between primary care and specialists.

The Systems of Care Initiative Medical Neighborhood toolkit developed a scorecard for both the primary care physician and the specialist to ensure that the compact is measureable and accountable for all parties. The scorecard mirrors the four domains of the SOC compact (Transitions of Care, Access, Collaborative Care Management, and Patient Communication) as well as the transition of care record (TCR) and has qualitative and quantitative measures. An excel spreadsheet has been developed with embedded formulas to track and report outcomes. It is recommended that scoring is conducted quarterly during the initial phases of implementation to identify and correct any issues that may arise.

Key Questions:

I. Measurement
   a. What is your overall aim in implementing a collaborative care agreement? How will you know if you have achieved that aim?
      i. Are you measuring acceptance and participation in the collaborative care agreement? What elements indicate adherence? [process measurements]
      ii. Are you measuring improved care coordination? What measureable elements exist that help you understand improvement? [outcomes measurements]
   b. What are your data sources to determine measurement?
   c. How will you determine whether the care coordination agreement is working?
   d. What are your specific expectations for:
      i. Receipt of clinical information prior to patient visit? Results of patient visit?
   e. Have you designated “Must Haves” ,“Important to Have” and “Nice to Have” elements of your the collaborative care agreement?
      i. What will you do if a practice does not meet the Must Have elements?

II. Monitoring & Improvement:
   a. How often will you audit your results? The results of other providers
   b. How will you share your findings with other providers?
   c. If you opt to put a practice on an Action Plan, what will that look like? How will you communicate that? How often will you re-visit that practice’s performance?

III. Agreement going forward: Are you keeping in pace with changes with new technology and policy in the health care system?
IV. What mechanisms can be put in place that provides regular review and evaluation of the agreement? Who's responsibility is it?
V. How often should this agreement be re-visit?
VI. What steps can you take if you feel that the care coordination agreement is not working for your patients or your practice?

First Steps:

- Score your practice and determine if you satisfy all 'Must haves'. As your first priority, create an action plan to ensure that your practice fulfills these criteria.

Tools:

- PCP Medical Neighborhood Score Card
- Specialist Medical Neighborhood Score Card
- Score Card Tracking (Excel Spreadsheet)
- Patient Satisfaction Survey Sample
- PDSA Template
- Online tutorial completing the score card excel spreadsheet (to be developed)

Activities:

- If you are developing your own measurement approach, the following link at the ARHQ Care Coordination Atlas provides a methodology to map your activity to validated care management assessment tools. http://www.ahrq.gov/qual/careatlas/careatlas4.htm

- *Care Coordination Measures Atlas*. AHRQ Publication No. 11-0023-EF, January 2011. Agency for Healthcare Research and Quality, Rockville, MD. http://www.ahrq.gov/qual/careatlas/

Supporting Literature:

- McDonald KM, Schultz E, Albin L, Pineda N, Lonhart J, Sundaram V, Smith-Spangler C, Brustrom J, and Malcolm E. "Care Coordination Atlas - Version 3" AHRQ Publication No. 11-0023-EF. Rockville, MD: Agency for Healthcare Research and Quality. November 2010.
- National Quality Forum (NQF), *Preferred Practices and Performance Measures for Measuring and Reporting Care Coordination: A Consensus Report,* Washington, DC: NQF; 2010.
- www.IHI.org

Other Issues for Consideration

Key Questions:

I. How do you ensure that the patient is at the center of care?
II. What is the role of HIE in a care coordination agreement?
III. How does something like a care coordination agreement align with efforts within your community?

IV. How do you identify, address, and communicate patient goals?

Tools:

- Patient Activation Assessment Form: http://www.ipro.org/index/cms-filesystem-action/care/cti/ptactivationassess1.pdf
- Partnering in Self-Management Support: *A Toolkit for Clinicians*: Institute for Healthcare Improvement; 2009: http://www.newhealthpartnerships.org/provider.aspx?id=1544
- The Care Transition Program, Eric Coleman, M.D.: http://www.caretransitions.org/
- Web Technology for Patient Referrals; http://www.chcf.org/%7E/media/Files/PDF/B/PDF%20BridgingTheCareGap.pdf

Activities:

- Contact your State REC provider (CO – Health TeamWorks, Physician Health Partners,….)

Key Issues to Track & Trend with groups utilizing some form of a care compact:

2. What interests you about care compacts? Why did you opt for a formalized agreement?
3. How are care coordination agreements being implemented? (1:1 outreach, group meetings, IPA/PHOs, other) Why this format?
4. What activities have you undertaken to provide education about the compact? How effective were those activities?
5. What activities have you undertaken to support the implementation of the compact within physician practices?
6. What were the biggest barriers/obstacles to achieve implementation?
7. How are you measuring adherences to the compact?
8. What practice redesign was necessary to implement the agreement?
9. What resources would be needed to spread this program?
10. How many physicians are impacted by the care collaborative agreements?
11. Are there any strategic learnings that you feel are important to share with other groups that are considering implementing compacts?

Key Findings:

Westminster Medical Clinic experience:

2. Interest in and agreement to the compact was not a barrier; ability of specialty practices to effectively operationalize compact seems to be significant challenge.
    a. Specialists have interest in working on increasing efficiency and improving patient satisfaction
    b. Agreement with physician leaders doesn't always translate to prioritization with office manager so find resistance to investing staff time in working on practice improvement
    c. Specialists have the belief that they are doing higher-level quality tracking/improvements In office but this is not reflective of their practice operations.
    d. Operational challenges in identifying medical home patients and directing them to correct physician (in large practices) and receipt back of correct clinical information are poor.
3. See PCMH as another "gatekeeper model" or term not known/understood
    a. Specialty offices perceive PCMH patients as VIP
    b. Question necessity of communicating with other team players (i.e. PCP or allied health) unless directly referred or questioned
4. Specialist practices do not have experience with practice improvement value and techniques and oftentimes lack infrastructure (such as population based reporting tools) to facilitate quality improvement:
    a. Lack of access to published evidence-based guidelines that lend themselves to broad implementation
    b. Lack of access to nationally endorsed performance measures (needs additional research, PQRI is a good place to start)

Appendix

Principles of the Patient-Centered Medical Neighborhood

Table. **American College of Physicians' Position Paper on PCMH-Ns: Summary Points**[13]

Collaboration between specialty and subspecialty practices is important to achieve improved care integration and coordination within the PCMH care delivery model.

A PCMH-N is a subspecialty practice that engages in processes that

- Ensure effective bidirectional communication, coordination, and integration with PCMH practices
- Ensure appropriate and timely consultations and referrals
- Ensure efficient, appropriate, and effective flow of necessary patient care information
- Effectively guide determination of responsibility in co-management situations
- Support patient-centered care, enhanced care access, and high levels of care quality and safety
- Support the PCMH practice as the provider of primary care to the patient and as having overall responsibility for ensuring the coordination and integration of all care.

Interaction between PCMHs and PCMH-Ns can take the following forms:

- Pre-consultation exchange: intended to expedite or prioritize care, or clarify need for a referral
- Formal consultation: to deal with a discrete question or procedure
- Co-management with shared management for a disease, with principal care for a disease, or with principal care of the patient for a consuming illness for a limited period
- Transfer of patient to a specialty PCMH (that meets the same requirements as the primary care PCMH) for the entirety of care

Care coordination agreements between PCMH and PCMH-N practices should aspire to

- Define the types of referral, consultation, and co-management arrangements available
- Specify who is accountable for which processes and outcomes of care within (any of) the referral, consultation, or co-management arrangements
- Specify the content of a patient transition record or core data set, which travels with the patient in all referral, consultation, and co-management arrangements
- Define expectations regarding the information content requirements, as
- Specify how secondary referrals are to be handled
- Maintain a patient-centered address for situations of self-referral by the patient to a PCMH-N practice
- Clarify inpatient processes, including notification of admission, secondary referrals, data exchange, and transitions into and out of hospital
- Contain language emphasizing that in the event of emergencies or other circumstances in which contact with the PCMH is not practical, the specialty or subspecialty practice may act urgently to secure appropriate medical care for the patient
- Include mechanisms for regular review of the terms of the care coordination agreement and for evaluation of cooperation and quality of joint care.

[13] Laine, C. Welcome to the Patient-Centered Medical Neighborhood. Ann Intern Med. 2011;154:60.

Primary Care – Specialist Physician Collaborative Guidelines

Purpose

- To provide optimal health care for our patients.
- To provide a framework for better communication and safe transition of care between primary care and specialty care providers.

Principles

- Safe, effective and timely patient care is our central goal.
- Effective communication between primary care and specialty care is key to providing optimal patient care and to eliminate the waste and excess costs of health care.
- Mutual respect is essential to building and sustaining a professional relationship and working collaboration.
- A high functioning medical system of care provides patients with access to the 'right care at the right time in the right place'.

Definitions

- Primary Care Physician (PCP) – a generalist whose broad medical knowledge provides first contact, comprehensive and continuous medical care to patients.
- Specialist – a physician with advanced, focused knowledge and skills who provides care for patients with complex problems in a specific organ system, class of diseases or type of patient.
- Prepared Patient – an informed and activated patient who has an adequate understanding of their present health condition in order to participate in medical decision-making and self-management.
- Transition of Care – an event that occurs when the medical care of a patient is assumed by another medical provider or facility such as a consultation or hospitalization.
- Technical Procedure – transfer of care to obtain a clinical procedure for diagnostic, therapeutic, or palliative purposes.
- Patient-Centered Medical Home –a community-based and culturally sensitive model of primary care that ensures every patient has a personal physician who guides a team of health professionals to provide the patient with accessible, coordinated, comprehensive and continuous health care across all stages of life.
- Patient Goals – health goals determined by the patient after thorough discussion of the diagnosis, prognosis, treatment options, and expectations taking into consideration the patient's psychosocial and personal needs.

- Medical Neighborhood – a system of care that integrates the PCMH with the medical community through enhanced, bidirectional communication and collaboration on behalf of the patient.

Types of Transitions of Care

Pre-consultation exchange – communication between the generalist and specialist to:

Answer a clinical question and/or determine the necessity of a formal consultation.

Facilitate timely access and determine the urgency of referral to specialty care.

Facilitate the diagnostic evaluation of the patient prior to a specialty assessment.

Formal Consultation (Advice) – a request for an opinion and/or advice on a discrete question regarding a patient's diagnosis, diagnostic results, procedure, treatment or prognosis with the intention that the care of the patient will be transferred back to the PCP after one or a few visits. The specialty practice would provide a detailed report on the diagnosis and care recommendations and not manage the condition. This report may include an opinion on the appropriateness of co-management.

Complete transfer of care to specialist for entirety of care (Specialty Medical Home Network) – due to the complex nature of the disorder or consuming illness that affects multiple aspects of the patient's health and social function, the specialist assumes the total care of the patient and provides first contact, ready access, continuous care, comprehensive and coordinated medical services with links to community resources as outlined by the "Joint Principles" and meeting the requirements of NCQA PPC-PCMH recognition.

Co-management – where both primary care and specialty care providers actively contribute to the patient care for a medical condition and define their responsibilities including first contact for the patient, drug therapy, referral management, diagnostic testing, patient education, care teams, patient follow-up, monitoring, as well as, management of other medical disorders.

Co-management with Shared management for the disease -- the specialist shares long-term management with the primary care physician for a patient's referred condition and provides expert advice, guidance and periodic follow-up for one specific condition. Both the PCMH and specialty practice are responsible to define and agree on mutual responsibilities regarding the care of the patient. In general, the specialist will provide expert advice, but will not manage the condition day to day.

Co-management with Principal Care for the Disease (Referral) – the specialist assumes responsibility for the long-term, comprehensive management of a patient's referred medical/surgical condition. The PCMH continues to receive consultation reports and provides input on secondary referrals and quality of life/treatment decision issues. The generalist continues to care for all other aspects of patient care and new or other unrelated health problems and remains the first contact for the patient.

<u>Co-management with Principal Care for the Patient (Consuming illness)</u> – this is a subset of referral when for a limited time due to the nature and impact of the disease, the specialist practice becomes first contact for care until the crisis or treatment has stabilized or completed. The PCMH remains active in bi-directional information, providing input on secondary referrals and other defined areas of care.

<u>Emergency care</u> – medical or surgical care obtained on an urgent or emergent basis.

Mutual Agreement for Care Management

- Review tables and determine which services you can provide.
- The *Mutual Agreement* section of the tables reflect the core elements of the PCMH and Medical Neighborhood and outline expectations from both primary care and specialty care providers.
- The *Expectations* section of the tables provides flexibility to choose what services can be provided depending on the nature of your practice and working arrangement with PCP or specialist.
- The *Additional Agreements/Edits* section provides an area to add, delete or modify expectations.
- After appropriate discussion, the representative provider checks each box that applies to the commitment of their practice.
- When patients self-refer to specialty care, processes should be in place to determine the patient's overall needs and reintegrate further care with the PCMH, as appropriate.
- The agreement is waived during emergency care or other circumstances that preclude following these elements in order to provide timely and necessary medical care to the patient.
- Each provider should agree to an open dialogue to discuss and correct real or perceived breaches of this agreement, as well as, on the format and venue of this discussion.
- Optimally, this agreement should be reviewed every 2 years.

Transition of Care

Mutual Agreement

- *Maintain accurate and up-to-date clinical record.*
- When available and clinically practical, agree to standardized demographic and clinical information format such as the Continuity of Care Record [CCR] or Continuity of Care Document [CCD]
- Ensure safe and timely transfer of care of a prepared patient.

Expectations

Primary Care	*Specialty Care*
☐ *PCP maintains complete and up-to-date clinical record including demographics.* ☐ Transfers information as outlined in Patient Transition Record. ☐ Orders appropriate studies that would facilitate the specialty visit. ☐ Provides patient with specialist contact information and expected timeframe for appointment. ☐ Informs patient of need, purpose (specific question), expectations and goals of the specialty visit ☐ Patient/family in agreement with referral, type of referral and selection of specialist	☐ *Determines and/or confirms insurance eligibility* ☐ Identifies a specific referral contact person to communicate with the PCMH ☐ When PCP is uncertain of appropriate laboratory or imaging diagnostics, assist PCP prior to the appointment regarding appropriate pre-referral work-up. ☐ Informs patient of need, purpose, expectations and goals of hospitalization or other transfers. ☐ Notifies referring provider of inappropriate referrals and explains reasons.

Additional agreements/edits: _____

_____

_____

_____

Access

Mutual Agreement

- *Be readily available for urgent help to both the physician and patient.*
- Provide adequate visit availability.
- Be prepared to respond to urgencies.
- Offer reasonably convenient office facilities and hours of operation.
- Provide alternate back-up when unavailable for urgent matters.
- When available and clinically practical, provide a secure email option for communication with established patients and/or providers.

Expectations

Primary Care	*Specialty Care*
☐ Communicate with patients who "no-show" to specialists. ☐ Determines reasonable time frame for specialist appointment.	☐ Notifies PCP of first visit 'no-shows' or other actions that place patient in jeopardy. ☐ Schedule patient's first appointment with requested physician. ☐ Provides PCP with list of practice physicians who agree to compact principles.

Additional agreements/edits: _____

_____

_____

Collaborative Care Management

Mutual Agreement

- *Define responsibilities between PCP, specialist and patient.*
- Clarify who is responsible for specific elements of care (drug therapy, referral management, diagnostic testing, care teams, patient calls, patient education, monitoring, follow-up).
- Maintain competency and skills within scope of work and standard of care.
- Give and accept respectful feedback when expectations, guidelines or standard of care are not met
- Agree on type of care that best fits the patient's needs.

Expectations

Primary Care	*Specialty Care*
☐ *Follows the principles of the Patient Centered Medical Home or Medical Home Index.* ☐ *Manages the medical problem to the extent of the PCP's scope of practice, abilities and skills.* ☐ *Follows standard practice guidelines or performs therapeutic trial of therapy prior to referral, when appropriate, following evidence-based guidelines.* ☐ Resumes care of patient as outlined by specialist, assumes responsibility and incorporates care plan recommendations into the overall care of the patient. ☐ Shares data with specialist in timely manner including pertinent consultations or care plans from other care providers.	1. *Reviews information sent by PCP and addresses provider and patient concerns.* 2. *Confers with PCP or establishes other protocol before orders additional services outside practice guidelines. Obtains proper prior authorization.* 3. Confers with PCP before refers to secondary/tertiary specialists for problems within the PCP scope of care and , when appropriate, uses a preferred list to refer when problems are outside PCP scope of care. Obtains proper prior authorization when needed. 4. Sends timely reports to PCP and shares data with care team as outlined in the Transition of Care Record. 5. Notifies the PCP office or designated personnel of major interventions, emergency care or hospitalizations. ☐ *Prescribes pharmaceutical therapy in line with insurance formulary with preference to generics when available and if appropriate to patient needs.* 6. Provides useful and necessary education/guidelines/protocols to PCP, as needed

Additional agreements/edits: _____

_____

Patient Communication

Mutual Agreement

- Consider patient/family choices in care management, diagnostic testing and treatment plan.
- Provide to and obtain informed consent from patient according to community standards.
- Explores patient issues on quality of life in regards to their specific medical condition and shares this information with the care team.

Expectations

Primary Care	*Specialty Care*
☐ Explains, clarifies, and secures mutual agreement with patient on recommended care plan. ☐ Assists patient in identifying their treatment goals. ☐ Engages patient in the Medical Home concept. Identifies whom the patient wishes to be included in their care team.	☐ *Informs patient of diagnosis, prognosis and follow-up recommendations.* ☐ Provides educational material and resources to patient when appropriate. ☐ Recommends appropriate follow-up with PCP. ☐ Be available to the patient discuss questions or concerns regarding the consultation or their care management. ☐ Participates with patient care team.

Additional agreements/edits: _____

_____

_____

_____

_____

Appendix

PCP Patient Transition Record

Practice details – PCP, PCMH level, contact numbers (regular, emergency)
Patient demographics -- Patient name, identifying and contact information, insurance information, PCP designation and contact information.
Diagnosis -- ICD-9 code
Query/Request – a clear clinical reason for patient transfer and anticipated goals of care and interventions.

Clinical Data --

- problem list
- medical and surgical history
- current medication
- immunizations
- allergy/contraindication list
- care plan
- relevant notes
- pertinent labs and diagnostics tests
- patient cognitive status
- caregiver status
- advanced directives
- list of other providers

Type of transition of care.

- Consultation
- Co-management
- Principal care
- Consuming illness
- Shared care
- Specialty Medical Home Network (complete transition of care to specialist practice)
- Technical procedure

Visit status -- routine, urgent, emergent (specify time frame).

Communication and follow-up preference – phone, letter, fax or e-mail

Specialist Patient Transition Record --Initial

- Practice details – Specialist name, contact numbers (regular, emergency)
- Patient demographics -- Patient name, identifying and contact information, insurance information, PCP designation.
- Communication preference – phone, letter, fax or e-mail
- Diagnoses (ICD-9 codes)
- Clinical Data – problem list, medical/surgical history, current medication, labs and diagnostic tests, list of other providers.
- Recommendations – communicate opinion and recommendations for further diagnostic testing/imaging, additional referrals and/or treatment. Develop an evidence-based care plan with responsibilities and expectations of the specialist and primary care physician that clearly outline:
    - new or changed diagnoses
    - medication or medical equipment changes, refill and monitoring responsibility.
    - recommended timeline of future tests, procedures or secondary referrals and who is responsible to institute, coordinate, follow-up and manage the information.
    - secondary diagnoses.
    - patient goals, input and education provided on disease state and management .
    - care teams and community resources.
- Technical Procedure – summarize the need for procedure, risks/benefits, the informed consent and procedure details with timely communication of findings and recommendations.
- Follow-up status – Specify time frame for next appointment to PCP and specialist. Define collaborative relationship and individual responsibilities.
- Consultation
- Co-management
- Principal care
- Shared care
- Consuming illness
- Specialty Medical Home Network (complete transition of care to specialist practice)
- Technical procedure

Specialist Patient Transition Record -- Follow-up

- Practice details – Specialist name, contact numbers
- Patient demographics -- Patient name, DOB, PCP designation.
- Clinical Data –interval history and pertinent exam, current medication and allergies list, new labs and diagnostic tests.
- Diagnoses (ICD-9 codes)
- Note new or changed diagnoses
- New or current secondary diagnoses.

Care Plan Recommendations –

1. Communicate opinion and recommendations for diagnosis, further diagnostic testing/imaging, additional referrals and/or treatment.
    a. Technical Procedure – summarize the need for procedure, risks/benefits, with timely communication of findings and recommendations.
2. Develop an evidence-based care plan that clearly specifies responsibilities and expectations of the specialist and primary care physician:
    a. Medication or medical equipment changes, refills and monitoring responsibility.
    b. Recommended timeline of future tests, procedures or secondary referrals and who is responsible to institute, coordinate, follow-up and manage the information.
    c. Community or medical resources obtained or needed such as Home Health, Social Services, Physical Therapy, etc.
    d. Patient goals –
    e. Outline education and consultation provided to patient on med/surgical condition, prognosis and management and summarize their desired outcome/needs/goals/expectations and understanding.

Specify Follow-up status –

1. Specify Transition of care status – Consultation, Co-management (shared care, principle care, consuming illness), Technical procedure
2. Specify preference for bi-directional communication (phone, letter, fax or e-mail) – how does specialist prefer to send information to PCP and how does specialist want to be contacted by PCP.
3. Specify time frame for next appointment to PCP
4. Specify time frame for next appointment to specialist.

References

- Chen, AH, Improving the Primary Care-Specialty Care Interface. Arch Intern Med. 2009;169:1024-1025
- Forrest, CB, A Typology of Specialists' Clinical Roles. Arch Intern Med. 2009;169:1062-1006
- Primary Care – Specialty Care Master Service Agreement CPMG - Kaiser Permanente. June 2008
- Care Coordination and Care Collaboration between PCP and Specialty Care template from TransforMed Delta Exchange
- Coordination Model: PCP to Specialist process map– from Johns Hopkins Bloomberg School of Medicine. The development and testing of EHR-based care coordination performance measures in ambulatory care (current study).
- Direct Referrals Model - Quality Health Network communication
- Principles of Service Agreements for PCMH and PCMH-N, American College of Physicians internal document 10-09.
- Dropping the Baton: Exploring what can go wrong during patient handoffs and reducing the risk. COPIC Insurance Company. Sept 2009 (151)

Physician Health Partners Primary Care-Specialty Care Collaborative Guidelines

Transition of Care	
Mutual Agreement	
Maintain accurate and up-to-date clinical record.	
Expectations	
Primary Care	Specialty Care
☐ Clarify type of transition: co-management, advice, complete transfer and be clear about the question begin asked ☐ Transfer detailed baseline information, including methods tried to date and tests performed (including copies of labs and other studies) ☐ Provides patient with specialist contact information ☐ Review information sent from the specialist	☐ Provide single source contact person to coordinate services with specialist or primary care practice and easy access to PCP for coordination of care ☐ When PCP uncertain of appropriate laboratory or imaging diagnostics, assist PCP prior to the appointment regarding appropriate pre-referral work-up ☐ Review information sent from the PCP
Access	
Mutual Agreement	
Be readily available for urgent help to both the physician and patient via phone. Be prepared to respond to urgencies. Provide alternate back-up when unavailable for urgent matters.	
Expectations	
Primary Care	Specialty Care
☐ Determines reasonable time frame for specialist appointment ☐ Be open to preferences about location of admit ☐ Provide specialist easy access to discuss case by phone if need be.	☐ Have timely consultation appointments available to meet patient and referral source requests ☐ Be open to preferences about location of admit ☐ Discuss special arrangements, as needed
Collaborative Care Management	
Mutual Agreement	
Define responsibilities between PCP, specialist and patient. Clarify who is responsible for specific elements of care (drug therapy, referral management, diagnostic testing, care teams, patient calls, patient education, monitoring, follow-up). Give and accept respectful feedback when expectations, guidelines or standard of care are not met	
Expectations	
Primary Care	Specialty Care
☐ Review information sent by Specialist and follows-up on questions ☐ Resumes care of patient when patient returns from specialist care and acts on care plan developed by specialist. ☐ If surgery needs to be done, performs pre-operative evaluation ☐ Order labs, radiological studies, etc., as applicable	☐ Reviews information sent by PCP and follows-up on questions ☐ Sends timely reports to PCP to include a care plan, follow-up, test results and studies and provides clear recommended next steps ☐ If surgery needs to be done, performs pre-operative evaluation ☐ Order labs, radiological studies, etc., as applicable ☐ Returns care to PCP once patient is stable
Patient Communication	
Mutual Agreement	
Consider patient/family choices in care management, diagnostic testing and treatment plan. Provide to and obtain informed consent from patient according to community standards.	
Expectations	
Primary Care	Specialty Care
☐ Explains specialist results and treatment plan to patient, as necessary ☐ Identifies whom the patient wishes to be included in their care team	☐ Informs patient of diagnosis, prognosis and follow-up recommendations ☐ Recommends appropriate follow-up with specialist and PCP

This Care Collaborative Agreement Facilitation Guide has been developed for general distribution with the support of the Colorado Systems of Care/Patient Centered Medical Home Initiative. Please reference the initiative in any reprints or revisions May 2011

Specialty Referral Request Checklist:

(This information can be communicated through any of several means including a paper-based referral form, detailed clinical note from last appointment or abstraction from an Electronic Medical Record)

- ❑ Patient name and demographics.
- ❑ Contact person (if not the patient) and appropriate numbers.
- ❑ Any special considerations required such as loss of vision, hearing loss, language preference, cognitive deficits, or cultural factors.
- ❑ Insurance company name/type of coverage.
- ❑ Referring provider name and contact information including number for direct contact for urgent issues (could be a specified staff person, physician cell phone or back office line).
- ❑ Indicate if urgent or routine (if urgent please call or directly contact the physician or referral coordinator for the specialty practice).
- ❑ Indicate type of referral requested:

  _____Pre-visit Preparation/Assistance

  _____Consultation (Evaluate and Advise)

  _____Procedure

  _____Please assume Co-Management with Shared Care*

  _____Please assume Co-Management with Principal Care**

  _____Please assume full responsibility for complete transfer of all patient care

- ❑ Provide detailed reason for referral, including the clinical question you want answered and a brief summary of case details pertinent to the referral including significant co-morbidities.
- ❑ Attach core data set/ clinical summary / continuity care record (reconciled problem list with chronic conditions, medication list; medical allergies; pertinent surgical history, family history, habits/social history; list of providers (care team); advance directive; current care plan).
- ❑ Attach pertinent data including office notes or care summaries, lab and imaging results, or anything else felt to be helpful to the evaluation and /or management of the patient (i.e., data showing a pattern over time provided in an organized manner).
- ❑ Ensure patient is aware of and in agreement with the referral. Ask patient to call for appointment or let specialty practice know if special scheduling arrangements are required.

*Shared care indicates that the care of the referred patient for a specified condition or set of conditions is shared between the PCMH and the Neighbor with the PCMH assuming responsibility for most or all of the elements of care for the specified condition, unless other arrangements agreed upon.

**Principal care indicates that the care of the referred patient for a specified condition or set of conditions is managed by the Neighbor with assumption of the elements of care for that condition, unless other arrangements or agreed upon.

Referral Response Critical Elements Checklist*:

(This information can be communicated through any of several means including a paper-based referral form, detailed clinical note from last appointment or abstraction from an Electronic Medical Record)

Patient Name:_____ Date Of Birth:_____/_____/_____

Referring Provider: Specialist's Name/Practice:_____

_____

Reason for Referral/Clinical Question: _____

- ❑ Acknowledge acceptance of referral and indicate any recommended changes in referral type and why (i.e., requested consultation but actually need "Shared Care" for this problem).
- ❑ Diagnoses (include confirmed, new, changed or suspected diagnoses as well as any ruled-out diagnoses pertinent to the reason for referral/clinical question).
- ❑ Secondary Diagnoses (include any new identified or suspected disorders not directly related to referred disorder but which may need further evaluation and/or management. Clarify who should take primary responsibility for that follow up).
- ❑ Medication changes (include new medications, samples provided, changes in dosage or form (i.e., solid to liquid), and any medications discontinued. Indicate whether any changes have already been instituted or need to be instituted by PCMH.
- ❑ Equipment changes (include new, changed or discontinued items and indicate whether any changes have already been instituted or need to be instituted by PCMH.
- ❑ Diagnostic testing (include results of testing already completed, tests that have results pending and tests that have been scheduled and clarify whether Neighbor or PCMH needs to follow up).
- ❑ Patient Education (include education completed, scheduled or recommended as well as patient information provided)
- ❑ Procedures (include procedures completed with results/outcomes; list other procedures scheduled/recommended)
- ❑ Referrals: (include other referrals completed, scheduled or recommended and reason for those referrals)
- ❑ Follow up (list any further follow up that is recommended with specialist or PCMH, specify time frame and indicate whether that has already been scheduled or not.
- ❑ Indicate any special requests or other recommendations:

*The above should be presented as a stand-alone document or as the first page of a complete response note that includes a history and physical (H&P), full evaluation and other relevant information. This should reach the referring and other pertinent providers that are part of the patient's care team, in a timely fashion, such as within one week of the referral visit if not sooner.

This Care Collaborative Agreement Facilitation Guide has been developed for general distribution with the support of the Colorado Systems of Care/Patient Centered Medical Home Initiative. Please reference the initiative in any reprints or revisions May 2011

Synopsis of Medical Home/Medical Neighbor Responsibilities based on Type of Care Management

Adopted from American College of Physicians Sub-Specialty Committee on PCMH-N

Patient Centered Medical Home Responsibilities	Medical Neighbor Responsibilities
All Patients: Referrals, Consults, Co-Management:	

• Prepare the patient:
  ○ Use of referral guidelines where available
  ○ Patient/family aware of reason for referral and type of referral
  ○ Patient/family in agreement with referral, type of referral and selection of specialist
  ○ Expectations for events and outcomes of referral
• Provide appropriate and adequate information:
  ○ Demographic and insurance information
  ○ Reason for referral, details
  ○ Core medical data on patient
  ○ Clinical data pertinent to reason for referral
• Indication of urgency
  ○ Direct contact with specialist for urgent cases
• Contact number for additional information or urgent matters
  ○ Needs to be answered by responsible contact
	• Review referral requests and triage according to urgency
	  ○ Maintain schedule to allow for urgent care
	  ○ Notify referring provider of inappropriate referral
	  ○ Work with referring provider to expedite care in urgent cases
	  ○ Verify insurance status
	  ○ Anticipate special needs of patient/family
	• Notify referring provider of no-shows and cancellations
	• Notify referring provider of changes in care plan: recommended interactions, diagnosis, medication, equipment, testing, procedures, education, referrals, follow-up recommendations or needed actions.

Co-Management with Shared Care	
• Assume responsibility for elements of care unless special arrangements are agreed upon with specialist and patient/family • Share data with specialist in timely manner • Communicate directly with specialist in any matter that requires change to care plan • Ensure appropriate follow up with specialist	• Develop care plan with input from patient • Share care plan with referring provider • Review data on patient as received from PCMH and incorporate into patient chart • Communicate with PCMH on any matters of concern regarding data received on patient • Coordinate any secondary referral or treatment of secondary disorders with the PCMH or pre-specify terms • Communicate with PCMH regarding any interim issues that arise • Communicate follow up findings and any changes to care plan/critical elements to PCMH

Co-Management with Principle Care of Disorder	
• Review care plan and incorporate it into overall patient care plan • Share data with principle care provider, including pertinent consultations or care plans from other care providers.	• Assume responsibility for the elements of care unless special arrangements are agreed upon by the PCMH and patient/family • Share data with the PCMH and other pertinent care team providers • Respond to data from other providers as needed for the care of the patient and incorporate into patient record • Maintain a chronic disease registry if appropriate for the condition and appropriate follow up of condition(s) • Respond to patient and family questions • Communicate with other providers to integrate care as needed • Manage secondary diagnoses that pertain to disorder of principle care and refer others back to PCMH • Make secondary referrals if appropriate to management of disorder of principle care and coordinate others with PCMH • Communicate follow up findings and changes in care/critical elements with PCMH and other pertinent care providers

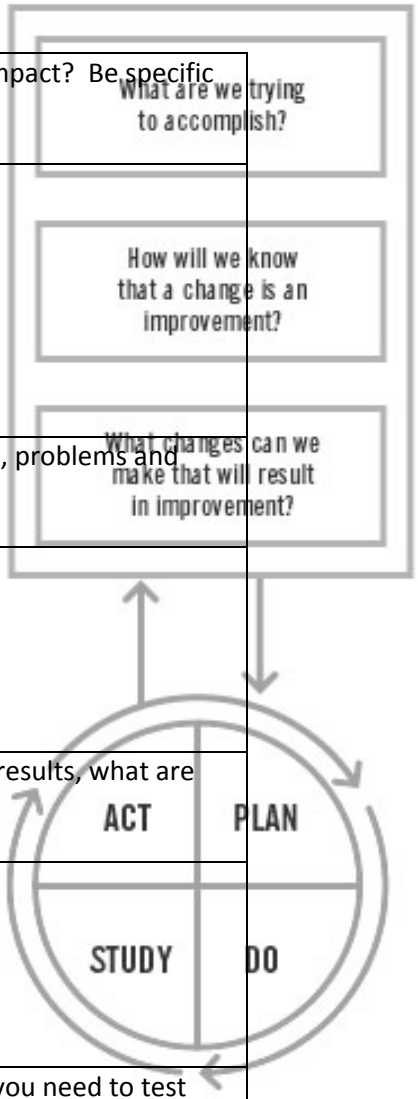
PDSA Template (Plan-Do-Study-Act)

Project Name:

Responsible: _____ Date:_____

Aim Statement: (**Aim statement should be specific, measurable and concise)**

Plan: What test of change are your proposing, what do you think is the potential impact? Be specific about who, what, where and when
Do: Carry out the small test of change and document what you found (experiences, problems and surprises)
Study: Analyze the results of the test, how did this compare with your anticipated results, what are your learnings?
Act: Are there refinements or adjustments that need to be made to the plan? Do you need to test again prior to implementation?



Ideal State Referral Process
Compact Table Top Exercise

Purpose:

Facilitate a group discussion around continuity of care through a "future" state exercise on the referral process and identify focus areas to improve coordination of care.

Objectives:

- Highlight the value and utility of implementing a care compact through gap analysis. (ie. back into the need for a care compact)
- Group defines what the compact elements (types of management, transition of care, access, collaborative care management, patient communication, and transition record) mean with their own language and examples.
- Group develops an action plan to improve referral process and is introduced to tools that will support that improvement (ie. Rapid Improvement Activity, Implementation of Care Compact, Compact Score Card).

Introduction (15 minutes):

1. Patient story on care coordination – hosting physician relates patient story about why care coordination needs to be a priority between PCPs and specialists. – make is personal!
2. Continuity of Care: refers to the degree to which patients experience discrete components of healthcare as coherent, organized, and connected and consistent with their needs.
    a. *Relational Continuity:* refers to ongoing caring relationships where a patient is known by his or her providers so that past care is linked with current care, usually with the expectation that the relationships will continue in the future.
    b. *Informational Continuity:* refers to the transfer of information from one episode of care to another, and the notion that relevant information is taken up and acted upon over time.
    c. *Managerial Continuity:* refers to the notion that care is coherently organized and planned and that today's care decisions take into account yesterday's care experience.[14]
3. *How effective do you think the continuity of care is for your patients?* How do you know? *How effectively do you think your "community" is at realizing continuity? If the goal is to see the right patient at the right time, what can you do differently to ensure that happens? What is happening within your community that might impact the referral process?*
4. Introduce exercise: see if we can find better ways to work together, let's not assume that our current process works,

Group Exercise (30 – 45 minutes):

Gap Analysis:

1. In a perfect world, how does a good referral look? Take the next 5 minutes to describe the elements of a good referral handover/return between a PCP and a Specialist. Think about: information, timing, patient interaction, communication and coordination with other providers
2. Facilitator writes down and categorize feedback into the following areas:
    a. Transition of Care
        i. Information/Timing/Accuracy
        ii. Clinical work-ups prior to referral (opportunity for specialists to offer continuing education on targeted clinical issues)
        iii. Contact information
    b. Access

[14] Implementation Guide: Continuous and Team-Based Healing Relationships, Improving Patient Care through Teams. Safety Net Medical Home Initiative, December 2010.

i. Appointment Availability
ii. Respond to urgent issues

c. Collaborative Care Management
i. Plan of Care
ii. Feedback loops for future plans, interim issues and urgent issues

d. Patient Communication
i. Patient Preparation
ii. Patient Self Mgmt Goals
iii. Privacy

e. Transition Record
i. Minimum data set
ii. Specific clinical information by condition

f. Types of Care Management
i. Clarity of referral request
ii. Role of PCP in managing condition vs role of specialist

3. How do referrals currently flow? What works? What doesn't work? How does that compare to the ideal state?
   a. Facilitator documents current state and documents feedback using process mapping and categorizes feedback using elements listed above.
   b. Highlight and prioritize the "gaps".
   c. What issues are condition-specific versus general referral issues?
      i. Parking lot the condition specific issues to focus on the high-level referral process to keep discussion moving. Develop an action plan to address those issues during the wrap up phase OR;
      ii. If this is a discussion between a PCP and one specialist, use this section to outline specific clinical expectations on targeted conditions.
   d. Score current process according to compact elements (1-5, 1 being poor and 5 being excellent)
      i. Score overall process
      ii. Score your practice's ability to deliver on elements
      iii. Score your referring practice's ability to deliver on elements

<u>Improvement & Action Plan:</u>

1. What are suggestions to you have to improve the referral process?
   a. What can you do tomorrow at your practice to improve the referral process?
   b. What do you need to work on either within your practice or with your medical neighborhood in the next 1-3 months?
   c. What are more long-term solutions? (ie. HIE)
2. Map suggestions on quadrants of high/low priority vs. easy/difficult to implement
   a. Identify whose responsibility it would be to make improvement. Break down specifically into physician responsibility vs. practice operations responsibilities and referring physician vs. specialist.
   b. Assign timelines and responsibilities to improvements
3. Physicians create a personal report card outlining your practice's strengths/weakness based on your own assessment and the feedback from your peers. Think about the following:
   a. Who needs to be brought into this process to make it successful?
   b. How will you communicate this new effort to your staff? What are things that you can communicate to them that will help them understand why you are changing the current process? (ie. How/why this is important in improving patient care? What will this effort require of them? What is their role? What is the time commitment?)
   c. Are you doing this for all patient referrals or just those being referred from / to targeted physicians?
   d. How will you know whether there is an improvement?
      i. Feedback from peers and/or patients
      ii. Discrete measurement of process components (ie. % of time transition record sent/received, streamlining process)

Next Steps and Follow Up (30 minutes):

1. How will you know when things have improved? What are the areas of mutual accountability? Is it appropriate to meet again?
2. Introduce tools:
    a. Care Compact,
    b. Compact Score Card
    c. Rapid Improvement Activity

Facilitator Notes:

- Format: can be written on sticky notes or can be verbal exercise)
- Tools
    - Grid for compact elements – step 1
    - Report Card
- "Plug In" Considerations:
    - HIE / HIT abilities and local initiatives
    - Role of hospitals in referrals and specialist network
    - Resources for support (ie. Health TeamWorks, Hospital, IPA, Beacon, other)

Building your Medical Neighborhood: Action Planning

1. Aim Statement: (What specific problem are you trying to solve?)	
2. Measurement: How will you measure success? How will you monitor improvement?	
3. Plan of Action: (What steps will you need to take in order to reach your goal? Who is responsible? When?)	
Internal (Things to do within your practice to set up medical neighbors):	External:
Tracking Referrals & Coordinating Care (rate 1-5); identify steps to improve	Clearly defined specialist/referral network (rate 1-5); identify steps to improve
Clinical Info/Transition of Care Record from specialist (rate 1-5); identify steps to improve	Clinical Info/Transition of Care Record from specialist (rate 1-5); identify steps to improve
Patient Supports (rate 1-5); identify steps to improve	Relationships & Agreements [compacts], (rate 1-5); identify steps to improve
4. Readiness:	
What assets do you have in place to support this effort?	
What barriers do you see?	
What supports/tools will you need to move forward?	
Rate overall confidence in your plan (rate 1-10); What steps can you take to improve that?	

Instructions & Key Questions to Consider

1. Aim Statement:
   - Develop your vision for improving care coordination for your patients.
   - What specific problems are you trying to address?
   - What does success look like?
2. Measurement:
   a. How will you measure success?
   b. How will you measure progress?
   c. What data sources do you have available? Do they capture the relevant data points?
   d. Who will be responsible for tracking care coordination metrics? Who will review the outcomes?
3. Plan of Action:
   a. **Internal Issues** – these are things to get in order internal to your practice before starting to build out your medical neighborhood
      i. Referral Tracking System & Care Coordination: Assess the effectiveness of your referral tracking system (scale of 1-5)
         1. How do you track referrals and transitions in your practice?
         2. What is your feedback loop to ensure the patient has seen the specialist? Are you satisfied with the effectiveness of that process?
         3. How are the patients' preferences and needs communicated to other providers?
      ii. Clinical Information/Transition of Care Record
         1. Do you have a standardized process in place to transfer clinical information shared by all providers within the practice?
         2. Do you clearly identify a care management role in the referral?
         3. What percentage of the time do you think that your practice delivers the appropriate clinical information at the next point of service (ie. outside of your practice)?
      iii. Patient Supports
         1. Do you provide the patient with information about the referral and what to expect?
         2. How do you address barriers to referrals?
         3. Do you follow up on missed appointments?

   b. External Issues –
      i. Defined referral network
         1. Do you have a defined referral network?
         2. Do all providers within your practice refer to the same specialists?
      ii. Clinical Information/Transition of Care Record
         1. Are there certain pieces of information that you would consider required elements for every referral?
         2. Do you receive back clear definitions for ongoing care management from the specialist?
         3. What percentage of the time do your specialist colleagues provide the appropriate clinical information to you after a patient referral?
      iii. Relationships & Agreements (compacts)
         1. Are there existing referral guidelines (formal or informal) with other specialties or within the community that offer guidance on seeing the right patient at the right time?
         2. How will you communicate your expectations? How will you share performance?
4. Readiness:
   a. What assets do you have in place to support this effort?
   b. What barriers do you see?
   c. What supports/tools will you need to move forward?
   d. Rate overall confidence in your plan. What steps can you take to improve?

Report Out:

- **Rate the overall effectiveness of your internal care coordination efforts within your practice (scale of 1-5).**
- **Describe your practices' strengths and identified areas for improvement.**
- **Identify the top 5 practices that you will target to begin to build out your medical neighborhood and why they were chosen?**
- **Briefly describe your outreach strategy to engage your medical neighborhood.**
- **Rate your overall confidence in your plan (scale of 1-5)**

This Care Collaborative Agreement Facilitation Guide has been developed for general distribution with the support of the Colorado Systems of Care/Patient Centered Medical Home Initiative. Please reference the initiative in any reprints or revisions May 2011

AHRQ Care Coordination Measures Atlas

Relation Between the Care Coordination Measurement Framework and Other Key Sources

Framework Domains	Key Sources
Coordination Activities	
Establish Accountability or Negotiate Responsibility	*NQF:* Communication domain includes – all medical home team members work within the same plan of care and are measurably co-accountable for their contributions to the shared plan and achieving the patient's goals.
Communicate	*Antonelli:* Care coordination competency – communicates proficiently; care coordination function – manages continuous communication. *NQF:* Framework domain – Communication available to all team members, including patients and family.
Interpersonal Communication	*Coiera:* All information exchanged in health care forms a "space"; the communication space is the portion of all information interactions that involves direct interpersonal interactions, such as face-to-face conversations, telephone calls, letters, and email.
Information Transfer	*MPR:* Care coordination activity – send patient information to primary care provider. *NQF:* Communication domain includes – availability of patient information, such as consultation reports, progress notes, test results, and current medications to all team members caring for a patient reduces the chance of error.
Facilitate Transitions	*Antonelli:* Care coordination function – supports/facilitates care transitions. *CMS Definition of Case Management:* §440.169(c) Case management services are defined for transitioning individuals from institutions to the community. *NQF:* Framework domain – transitions or "hand-offs" between settings of care are a special case because currently they are fraught with numerous mishaps that can make care uncoordinated, disconnected, and unsafe. Some care processes during transition deserve particular attention, including involvement of team during hospitalization, nursing home stay, etc.; communication between settings of care; and transfer of current and past health information from old to new home.
Assess Needs and Goals	*Antonelli:* Care coordination function – completes/analyzes assessments. *CMS Definition of Case Management:* §440.169(d) Case management includes assessment and periodic reassessment of an eligible individual to determine service needs, including activities that focus on needs identification, to determine the need for any medical, educational, social, or other services. *MPR:* Care coordination activity – assess patient's needs and health status; develop goals.
Create a Proactive Plan of Care	*Antonelli:* Defining characteristic of care coordination – proactive, planned and comprehensive; care coordination function – develops care plans with families; facile in care planning skills. *CMS Definition of Case Management:* §440.169(d)(2) Case management assessment includes development and periodic revision of a specific care plan based on the information

Framework Domains	Key Sources
Coordination Activities	
	collected through an assessment or reassessment that specifies the goals and actions to address the medical, social, educational, and other services needed by the eligible individual, including activities such as ensuring the active participation of the eligible individual and working with the individual (or the individual's authorized health care decisionmaker) and others to develop those goals and identify a course of action to respond to the assessed needs of the eligible individual. *MPR:* Care coordination activity – develop a care plan to address needs. *NQF:* Framework domain – Proactive Plan of Care and Followup is an established and current care plan that anticipates routine needs and actively tracks up-to-date progress toward patient goals.
Monitor, Follow Up, and Respond to Change	*Antonelli:* Care coordination function – manages/tracks tests, referrals, and outcomes. *CMS Definition of Case Management:* §440.169(d)(1) Case management assessment includes periodic reassessment to determine whether an individual's needs and/or preferences have changed. §440.169(d)(2) Case management includes monitoring and followup activities, including activities and contacts that are necessary to ensure that the care plan is effectively implemented and adequately addresses the needs of the eligible individual. If there are changes in the needs or status of the individual, monitoring and followup activities include making necessary adjustments in the care plan and service arrangements with providers. *MPR:* Care coordination activities – monitor patient's knowledge and services over time; intervene as needed; reassess patients and care plan periodically. *NQF:* Plan of Care domain includes – followup of tests, referrals, treatments, or other services.
Support Self-Management Goals	*Antonelli:* Defining characteristic of care coordination – promotes self-care skills and independence; care coordination function – coaches patients/families. *MPR:* Care coordination activity – educate patient about condition and self-care. *NQF:* Plan of Care domain includes – self-management support.
Link to Community Resources	*Antonelli:* Care coordination competency – integrates all resource knowledge. *CMS Definition of Case Management:* §440.169(d)(2) Case management includes referral and related activities (such as scheduling appointments for the individual) to help an individual obtain needed services, including activities that help link eligible individuals with medical, social, educational providers, or other programs and services that are capable of providing needed services to address identified needs and achieve goals specified in the care plan. *MPR:* Care coordination activity – arrange needed services, including those outside the health system (meals, transportation, home repair, prescription assistance, home care). *NQF:* Plan of Care domain includes – community services and resources. The Plan of Care includes community and nonclinical services as well as traditional health care services that respond to a patient's needs and preferences and contribute to achieving the patient's goals.

Framework Domains	Key Sources
Coordination Activities	
Align Resources with Patient and Population Needs	*MPR:* Care coordination activity – arrange needed services, including those within the health system (preventive care with primary care provider; specialist visits; durable medical equipment; acute care). *NQF:* A principle of care coordination is that care coordination is important to all patients, but some populations are particularly vulnerable to fragmented, uncoordinated care on a chronic basis, including (not mutually exclusive): children with special health care needs; the frail elderly; persons with cognitive impairments; persons with complex medical conditions; adults with disabilities; people at the end of life; low-income patients; patients who move frequently, including retirees and those with unstable health insurance coverage; and behavioral health care patients.
Broad Approaches	
Teamwork focused on Coordination	*Antonelli:* Care coordination competency – applies team-building skills; care coordination function – facilitates team meetings.
Healthcare Home	*NQF:* Framework domain – Health Care Home is a source of usual care selected by the patient (such as a large or small medical group, a single practitioner, a community health center, or a hospital outpatient clinic).
Care Management	See elements of CMS case management definition mapped under other domains.
Medication Management	*MPR:* Care coordination activity – review medications. *NQF:* Transitions or "hand-offs" domain includes medication reconciliation.
Health IT-enabled Coordination	*Antonelli:* Care coordination competency – adept with information technology; care coordination function – uses health information technology. *NQF:* Framework domain – information systems – the use of standardized, integrated electronic information systems with functionalities essential to care coordination is available to all providers and patients.
Antonelli = Antonelli RC, McAllister JW, Popp J. Making care coordination a critical component of the pediatric health system: A multidisciplinary framework. New York, NY: The Commonwealth Fund. May 2009. Publication No. 1277. *CMS Definition of Case Management* = Centers for Medicare and Medicaid Services. Medicaid Program; Optional state plan case management services. 42 Code of Federal Regulations 441.18 2007 4 December;72(232):68092-3. *Coiera* = Coeira E. Guide to health informatics. 2nd ed. London, England: Hodder Arnold, a member of the Hodder Headline Group; 2003. *MPR* = Coordinating care for Medicare beneficiaries: Early experiences of 15 demonstration programs, their patients, and providers: Report to Congress. Princeton, NJ: Mathematica Policy Research, Inc.; May 2004. *NQF* = National Quality Forum. National Quality Forum-endorsed definition and framework for measuring care coordination. Washington, DC: National Quality Forum; 2006	

Compact Implementation
Activities and Tool Reference Grid

Setting:	PCMH ⇒ Specialists (1:1 outreach)	Specialists ⇒ PCPs (1:1 outreach)	PCPs ⇔ Specialists (Neighborhood Block Party)	IPA/PHO ⇒ PCPs & Specialists (contracting model)	Physicians ⇔ Hospital	Physician ⇔ Community Ancillary Svcs ⇔ Facilities
Purpose:	PCMH building out PCMH-N through targeted outreach to high volume / high cost specialists	Specialty office utilizes compact to improve bi-directional flow of patient information in the referral process and in patient co-management	Community of physicians looking to identify and establish community standards for physician communication	IPA or PHO utilize compact as performance expectations for participation in network.	Utilize compact to standardize transfer of medical records and protocols pertinent in transitions of care	Community of physicians and ancillary providers
Introduction/Concepts	• 1:1 meeting with specialists • Standardized presentation • Talking points • Key Questions • Relevant Literature	• 1:1 meeting with PCPs or Group Meeting • Standardized presentation • Talking points • Key Questions • Relevant Literature	• Group meeting • Standardized presentation • Talking points • Key Questions • Relevant Literature		Approach not tested	Approach not tested
Agreement	•	• Table Top Exercise • Action Planning: Building Your Medical Neighborhood	• Table Top Exercise • Action Planning: Building Your Medical Neighborhood		Approach not tested	Approach not tested
Implementation	• Implementation Guide • Test Tracking RIA • PCMH Foundations	• Implementation Guide • Test Tracking RIA • IPIP Lite	• Implementation Guide • Test Tracking RIA • IPIP Lite	• Implementation Guide • Test Tracking RIA • IPIP Lite • IPA or PHO resources	Approach not tested	Approach not tested
Measurement	Score Card	Score Card	Score Card		Not tested	Not tested

Creating Medical Home Communities

Systems of Care/Patient Centered Medical Home Initiative

Medical Neighborhood Toolkit
December 2010

Index of Tools

ELEMENT 3A: Guidelines for important conditions

3 pts

LIMITED
Electronic Systems

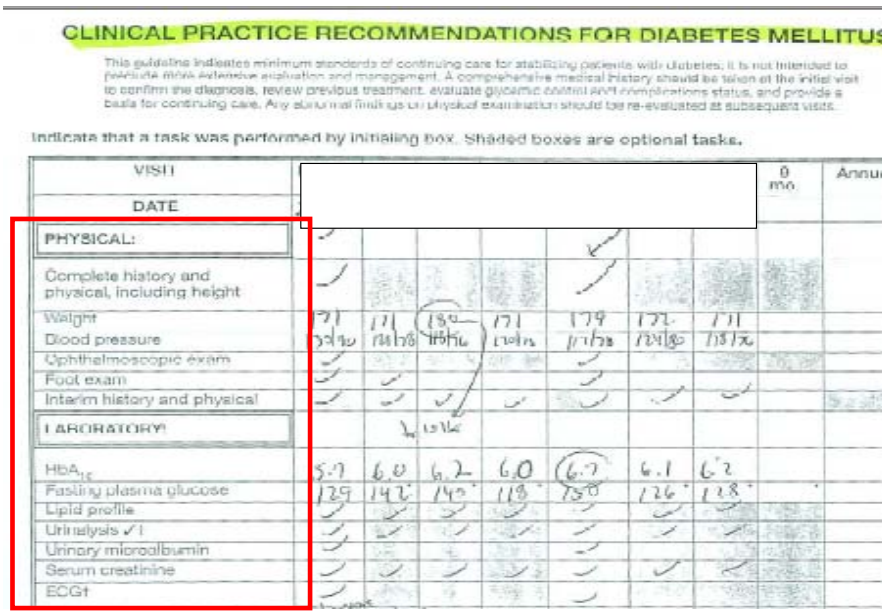
MUST PASS

The practice implements evidence-based guidelines for the three identified clinically important conditions.

This element requires practices to adopt *and* implement evidence-based diagnosis and treatment guidelines for the three clinically important conditions (Element 2E). Practices must use a paper or electronic template ("workflow organizer") to demonstrate consistent implementation of the adopted guidelines and clearly identify the source of the guidelines.

TIP: The practice shows the templates for prompting clinicians to document clinical information, in accordance with adopted guidelines, at the patient's visit. Paper-based supporting documentation includes flow sheets or templates used to document treatment plans or patient progress. Electronic supporting documentation includes screen shots of templates used to document treatment plans and patient progress.

EXAMPLE* Documentation



CLINICAL PRACTICE RECOMMENDATIONS FOR DIABETES MELLITUS

This guideline indicates minimum standards of continuing care for stabilizing patients with diabetes; it is not intended to preclude more extensive evaluation and management. A comprehensive medical history should be taken at the initial visit to confirm the diagnosis, review previous treatment, evaluate glycemic control and complications status, and provide a basis for continuing care. Any abnormal findings on physical examination should be re-evaluated at subsequent visits.

Indicate that a task was performed by initialing box. Shaded boxes are optional tasks.

VISIT								
DATE								
PHYSICAL:								
Complete history and physical, including height								
Weight	171	171	180	171	179	172	171	
Blood pressure								
Ophthalmoscopic exam								
Foot exam								
Interim history and physical								
LABORATORY:								
HbA_{1c}	5.9	6.0	6.2	6.0	6.7	6.1	6.2	
Fasting plasma glucose	129	142	140	118	150	126	128	
Lipid profile								
Urinalysis ✓!								
Urinary microalbumin								
Serum creatinine								
ECG†								

*This is an example and is not an endorsement of a specific software or format.

ADDITIONAL RESOURCES

American College of Physicians PCMH page: http://www.acponline.org/running_practice/pcmh/
American Academy of Family Physicians PCMH page: http://www.aafp.org/online/en/home/membership/initiatives/pcmh.html
American Academy of Pediatrics Medical Home Resource page: http://www.medicalhomeinfo.org/tools/providerindex.html
American Osteopathic Association Home page: http://www.osteopathic.org/index.cfm
NCQA's PPC-PCMH Home Page: www.ncqa.org/ppcpcmh.aspx
ORDER PPC-PCMH Standards and Survey Tool: www.ncqa.org/ppcpubs.aspx
NCQA Customer Support: customersupport@ncqa.org

ELEMENT 3B: Preventive-service clinician reminders

4 pts

LIMITED
Electronic Systems

The practice uses guideline-based reminders to prompt physicians about a patient's preventive care needs at the time of the patient's visit.

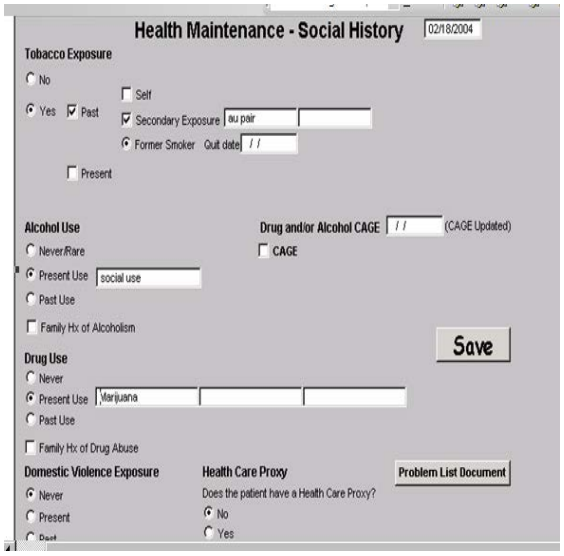
The practice should have systems in place to alert or remind clinicians about preventive services for patients during the patient's office visit. Alerts may be paper-based or electronic prompts for clinicians to order screening tests, immunizations, risk assessments or counseling.

EXAMPLE* Documentation

Paper Reminder for Risk Assessments, Immunizations, Screening Tests

MMR/Polio				
Tetanus				
Pneumovax				
Influenza				
Hepatitis B				
OTHER				
Bone Density Scan				
Healthcare Proxy				
RISK FACTORS				
Smoking				
Smoke Detectors				
Gun Safety				
Alcohol				
Drugs				
Violence (Domestic)				
Mental Health Concerns				

EHR with Risk Assessment Reminders



*This is an example and is not an endorsement of a specific software or format.

ADDITIONAL RESOURCES

American College of Physicians PCMH page: http://www.acponline.org/running_practice/pcmh/
American Academy of Family Physicians PCMH page: http://www.aafp.org/online/en/home/membership/initiatives/pcmh.html
American Academy of Pediatrics Medical Home Resource page: http://www.medicalhomeinfo.org/tools/providerindex.html
American Osteopathic Association Home page: http://www.osteopathic.org/index.cfm
NCQA's PPC-PCMH Home Page: www.ncqa.org/ppcpcmh.aspx
ORDER PPC-PCMH Standards and Survey Tool: www.ncqa.org/ppcpubs.aspx
NCQA Customer Support: customersupport@ncqa.org

ELEMENT 3C: Practice organization

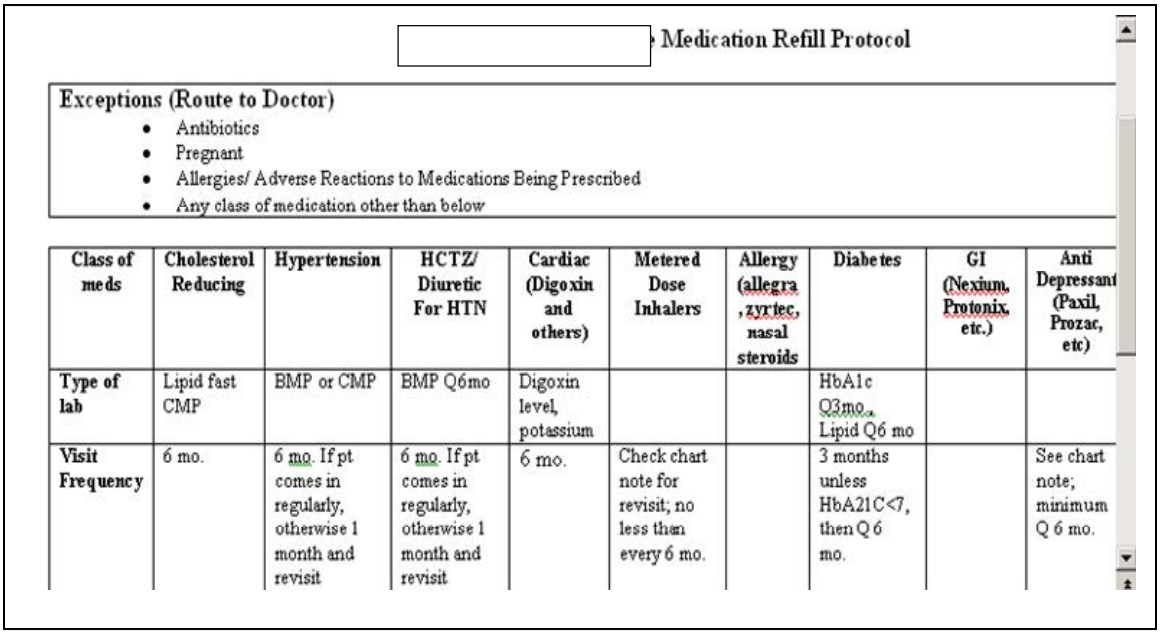
3 pts

LIMITED
Electronic Systems

The practice maintains a team approach to managing patient care.

A team approach includes use of nonphysician staff. Shared responsibilities are designed to maximize each team member's level of training and expertise. In small practices, roles may be designated for the physician, the nurse and existing administrative staff. Supporting documentation for this element includes protocols, job descriptions, standing orders that show how the practice involves nonphysician staff in various aspects of patient care management.

EXAMPLE* Documentation



Medication Refill Protocol

Exceptions (Route to Doctor)

- Antibiotics
- Pregnant
- Allergies/ Adverse Reactions to Medications Being Prescribed
- Any class of medication other than below

Class of meds	Cholesterol Reducing	Hypertension	HCTZ/ Diuretic For HTN	Cardiac (Digoxin and others)	Metered Dose Inhalers	Allergy (allegra, zyrtec, nasal steroids	Diabetes	GI (Nexium, Protonix, etc.)	Anti Depressant (Paxil, Prozac, etc)
Type of lab	Lipid fast CMP	BMP or CMP	BMP Q6mo	Digoxin level, potassium			HbA1c Q3mo., Lipid Q6 mo		
Visit Frequency	6 mo.	6 mo. If pt comes in regularly, otherwise 1 month and revisit	6 mo. If pt comes in regularly, otherwise 1 month and revisit	6 mo.	Check chart note for revisit; no less than every 6 mo.		3 months unless HbA21C<7, then Q 6 mo.		See chart note; minimum Q 6 mo.

*This is an example and is not an endorsement of a specific software or format.

ADDITIONAL RESOURCES

American College of Physicians PCMH page: http://www.acponline.org/running_practice/pcmh/
American Academy of Family Physicians PCMH page: http://www.aafp.org/online/en/home/membership/initiatives/pcmh.html
American Academy of Pediatrics Medical Home Resource page: http://www.medicalhomeinfo.org/tools/providerindex.html
American Osteopathic Association Home page: http://www.osteopathic.org/index.cfm
NCQA's PPC-PCMH Home Page: www.ncqa.org/ppcpcmh.aspx
ORDER PPC-PCMH Standards and Survey Tool: www.ncqa.org/ppcpubs.aspx
NCQA Customer Support: customersupport@ncqa.org

ELEMENT 3D: Care management of important conditions

5 pts

LIMITED
Electronic Systems

The practice demonstrates the use of various components of care management for patients with one or more of the clinically important conditions.

The practice documents care management support that physician and nonphysician staff provide to patients who have one of the three clinically important conditions (Element 2E). Using information documented in the patient record, the practice provides a report ***or*** a completed Medical Record Review Workbook, showing that clinicians provided specific components of care management: individualized care plans and treatment goals; medication review; assessment of barriers to patient goals.

EXAMPLE* Documentation

Patient Number	Clinically Important Condition	Review Medication?	Review Self-Monitored Results	Assess Treatment Goal Barriers?	Assess Medication Barriers?	Follow-Up Missed Appointments?	Review Clnical Measurement?	Complete After-Visit Follow-Up?	Total Number of Component Used
		3 D - Care Management Support Components							
1	diabetes	yes	yes	yes	no	yes	yes	yes	5
2	hypertension	yes	no	no	no	yes	yes	yes	4
3	diabetes	yes	no	no	no	yes	yes	no	3
4	diabetes	yes	yes	yes	yes	yes	yes	yes	7
5	hyperlipidemia	yes	no	no	no	yes	yes	no	3
6	hypertension	yes	yes	no	no	yes	yes	no	4
7	hypertension	yes	yes	no	no	yes	yes	yes	5
23	hyperlipidemia	yes	no	no	no	no	yes	no	2
24	hyperlipidemia	yes	no	yes	yes	yes	yes	yes	6
32	diabetes	yes	no	yes	no	yes	yes	no	4
33	hyperlipidemia	yes	no	yes	no	yes	yes	yes	5
34	hypertension	yes	yes	no	no	yes	yes	no	4
35	diabetes	yes	yes	no	yes	yes	yes	yes	6
36	hyperlipidemia	yes	yes	no	no	yes	yes	no	4
Patient Files (Yes)									11
Patient Files (No)									25
Patient Sample Size (Yes+No)									36
Percentage of Patients (Yes/Sample)									30.6%

*This is an example and is not an endorsement of a specific software or format.

ADDITIONAL RESOURCES

American College of Physicians PCMH page: http://www.acponline.org/running_practice/pcmh/
American Academy of Family Physicians PCMH page:
http://www.aafp.org/online/en/home/membership/initiatives/pcmh.html
American Academy of Pediatrics Medical Home Resource page:
http://www.medicalhomeinfo.org/tools/providerindex.html
American Osteopathic Association Home page: http://www.osteopathic.org/index.cfm
NCQA's PPC-PCMH Home Page: www.ncqa.org/ppcpcmh.aspx
ORDER PPC-PCMH Standards and Survey Tool: www.ncqa.org/ppcpubs.aspx
NCQA Customer Support: customersupport@ncqa.org

ELEMENT 3E: Continuity of care

5 pts

LIMITED
Electronic Systems

The practice coordinates care with external organizations and other physicians.

The practice identifies patients treated in inpatient and outpatient settings and contacts them after discharge to provide or coordinate follow up care. It maintains processes for coordinating care for patients who receive care management or disease management services and provides coordination for patients who receive care from other physicians.

EXAMPLE* Documentation

Date of ER Visit	Diagnosis	Follow up call	Follow up appointment
	SOB	We admitted pt	Pt has problems with providing care for his wife.
	Cath drop	Yes	no f/u necessary
	Fever dialysis pt	F/u to specialist	no f/u with us
	Injured L. Hand	no f/u necessary	
	Diarrhea,fever, vomiting	Told to go to ER	Pt told to go to Er by us
	Flu	F/u scheduled	
	Leg Bleed	F/u scheduled	
	Dialysis Pt C/p		Pt referred to pt assist for meds
	Blood Test	F/u scheduled	
	Sodium Level Dropped Ams	f/u scheduled	
	Chest Pain	Pt has been called	Not been in since

*This is an example and is not an endorsement of a specific software or format.

ADDITIONAL RESOURCES

American College of Physicians PCMH page: http://www.acponline.org/running_practice/pcmh/
American Academy of Family Physicians PCMH page: http://www.aafp.org/online/en/home/membership/initiatives/pcmh.html
American Academy of Pediatrics Medical Home Resource page: http://www.medicalhomeinfo.org/tools/providerindex.html
American Osteopathic Association Home page: http://www.osteopathic.org/index.cfm
NCQA's PPC-PCMH Home Page: www.ncqa.org/ppcpcmh.aspx
ORDER PPC-PCMH Standards and Survey Tool: www.ncqa.org/ppcpubs.aspx
NCQA Customer Support: customersupport@ncqa.org

This project was sponsored by a grant from Pfizer Inc.

Creating Medical Home Communities Systems of Care/Patient Centered Medical Home Initiative

Last Updated: April 29, 2011

Coordination and Continuity of Care
Policy and Protocol

Westminster Medical Clinic (WMC) provides external care coordination and ensures continuity of care in collaboration with outside facilities and organizations. Continuity of care protocols outline comprehensive and safe care for patients who receive inpatient and/or outpatient care between WMC and facilities such as hospitals, nursing homes, specialty care, disease management services and others.

WMC provides internal care coordination by identifying high acuity patients, as well as those treated in outpatient and inpatient settings and contacting these patients after discharge to provide and/or coordinate follow up care.

WMC maintains processes for evaluating, prioritizing and coordinating care for patients who receive in-house care management and provides coordination for patients who receive care from other physicians.

Coordination and Continuity of Care
Table of Contents

External Care Protocol
Hospitals and Skilled Nursing Home Facilities

Identifies patients who receive care in hospital, ED and/or skilled nursing home facilities:

A. The Care Coordinator at WMC reviews and tracks admissions and discharges, transfers, inpatient lists via fax, email, telephone, and hospital electronic portals for external care facilities each day to identify established patients who have already accessed care in the outside medical facility.
    1. The Care Coordinator reviews communication documents daily to cross-check WMC patients with health information technology or outside medical facility new admissions, discharges, transfers, patient medications, laboratory results, and patient summaries. To cross-check with external medical facilities, follow the process below:
        a. Access the current inpatient list at Centura Health Systems.
            1. Open Internet Explorer and follow protocol.
        b. Access the list of patients who have been in the emergency room at Centura Health Systems.
            1. Open Internet Explorer and follow protocol.

Systematically sends clinical information to facilities with patients as soon as possible:

A. In response to new patient admission notification from the external medical facility, the Care Coordinator communicates pertinent medical information to the specified contact at each external medical facility, to include all information in the patient's *PCP Transition of Care Record*. The *PCP Transition of Care Record* is communicated by the PCMH Care Coordinator within 30 minutes but no later than 2 hours after admittance notification, limited to normal business hours, 8am-5pm.
    1. If patient admission occurs after normal business hours, the Care Coordinator will respond the following business day, by 9:30 AM providing notification of patient admittance was received by 9am from the external medical facility or from the on-call provider
    2. During weekends or after-hours, MAs and providers will send:
        a. Telephone Encounter (TE) to care coordinator.
        b. After the Care Coordinator sends the TCR to the facility, the care coordinator sends the TE back to the patient's PCP for review.
    3. If a patient admission and facsimile communication occurs between the PCMH Care Coordinator and the external medical facility Care Coordinator and/or additional personnel, the PCMH Care Coordinator:
        a. Enters the following into the EMR in New Telephone Encounter

1. Documents ER, hospital admit or discharge' in the Reason field and facility, admitting provider, diagnosis, etc in the comment box.

b. Collects pertinent information about the patient from the patient chart and/or EMR, faxes the pertinent information back to the external medical facility within 30 minutes but no later than 2 hours after initial notification.
c. Documents in the EMR, the time, date, location and to whom the medical records were faxed.
    1. See *Appendix A* for the *PCP Transition of Care Record*, which details the pertinent information the PCMH Care Coordinator transmits in response to new admittance of a PCP patient.

4. If a patient admission and telephone encounter occurs between the PCP Care Coordinator and the respective external medical facility Care Coordinator and/or additional personnel, the PCP Care Coordinator:
    a. Records the conversation in EMR in New TE, including name of facility, admitting provider, diagnosis.
    b. Assigns the telephone encounter to the PCP at the PCMH facility for their review.
5. Current contact information for hospitals is seen below.
    a. The list of hospital information is updated yearly.

Hospital System	Hospital Name	Main #	Contact Person	Contact Person #	Contact Fax #
Centura Health	St Anthony's North	303.426.2151	Jenny Kosovich, RN	303.501.2198	303.430.2611
	St. Anthony's Central		Kim Taylor Ktaylor@soundphysicians.com	303.509.9322 Pager	
HealthOne	North Suburban Medical Center	303.451.7800	Andy Baker Abaker@soundphysicians.com	303.201.2626	303.453.2203
Exempla	Lutheran Medical Center Good Samaritan Medical Center	303.425.4500	Ryan Soliz Rsoliz@soundphysicians.com	303.509.4247	

Last Update: 10/28/10

6. Current contact information for skilled nursing homes is seen below.

Skilled Nursing Home	Main #	Contact Person	Contact Person #
Alpin Living Center	303.452.6101	Leah Rogers, MSW	303.829.4429
Bear Creek Nursing Center	303.697.8181	Shannon Smith, BSW	720.300.2810
Broomfield Care Center	303.785.5800	Leah Rogers, MSW	303.829.4429
Cambridge Care Center	303.232.4405	Leah Rogers, MSW	303.829.4429
Cherrelyn Care Center	303.798.8686	Shannon Smith, BSW	720.300.2810
Cherry Hill Care Center	303.789,2265	Shannon Smith, BSW	720.300.2810
Clear Creek Care Center	303.427.7101	Leah Rogers, MSW	303.829.4429
Elms Haven Care Center	303.450.2700	Pat Faughnan, RN	303.910.4496
Greenwood Village Care Center	303.773.1000	Pat Faughnan, RN	303.910.4496
Life Care of Westminster	303.412.9121		
Malley Care Center	303.452.4700	Leah Rogers, MSW	303.829.4429
Villa at Sunny Acres	303.255.4181		
Wheat Ridge Manor	303.238.0481	Leah Rogers, MSW	303.829.4429

Last update: 9/12/10

Reviews information from care facilities and communicates pertinent information to the patient's provider:

A. At the end of each business day, the PCMH Care Coordinator updates patient admissions and discharges by detailing patient name, facility name, attending provider, diagnosis, and updates. The Care Coordinator enters the external medical facility database login portal (if available) periodically to access new information regarding the patient and/or makes follow-up phone calls to the external medical facility Care Coordinator to gather updates on patient progress and new information. The Care Coordinator electronically or manually posts the information in a

designated area at the end of the day for review by the care team and/or sends the information if new or relevant to the provider/care team.

1. During normal or after hours, the Care Coordinator opens a Telephone Encounter or New Action to log the patient admission. The Telephone Encounter is left open until the patient is discharged from the external medical facility and has completed a follow-up appointment at the PCMH facility.
2. The Care Coordinator follows up with the patient after discharge within 2 normal business days via phone call.

Systematically facilitates transfer of clinical information to and from specialty facilities:

A. The Referral Coordinator at WMC reviews referral requests via fax, email, and telephone (up to primary care facility discretion) from PCMH facilities each day to identify patients who will have any care or who have already received care in the specialty care facility.

1. The Referral Coordinator notifies the selected PCMH-N Specialist facility of any new patient referrals within 1 business day of referral request. Referrals are sent to specialty care facilities either same-day or next-day.
    a. A complete *PCP Transition of Care Record* and any additional pertinent information regarding the patient is sent to the PCMH-N facility with the initial referral notification to the Specialist
    b. In the event that insurance eligibility is denied, the Referral Coordinator will contact the Care Coordinator to consider revising the patient care plan or confirmation to proceed with the referral appointment with the patient.

See below for a list of PCMH-N Specialists. (to be updated every 6 months).

Specialty	Specialty Care Office	Provider Names	Office Main #	Contact Person	Contact Person #	Contact Fax #
Gastro PENDING	*Rocky Mountain Gastroenterology*	Paul Deneault Bruce Walker Gareth Weiner		**Stephanie**	303.255.6777	303.255.2190
Gastro Cardiology PENDING	*Gastro of the Rocky Mountain Rockies* *Cardiovascular Associates*	Donald Thompson Martin Yussman Claudia Benedict	303.426.5154	**Todd LeVeigne** **Christie Kiefer**	720.932.7724 303.428.2207	303.426.0318
Heme-Oncology	*Rocky Mountain Cancer Centers*	Alvin Otsuka Praveena Solipuram		**Duane Hoxie**	303.775.0529	
Dermatology	*Denver Dermatology Consultants*	Robert Wright Russell Tolley Ziari		**Tym Johnson**	303.426.4525	
Neurology	*Neurospecialty Associates*	Scott London		**Sylvia Pastrana**	303.629.5600	
Gastro PENDING	*Rocky Mountain Gastroenterology*	Paul Deneault Bruce Walker Gareth Weiner		**Stephanie**	303.255.6777	303.255.2190

Ophthalmology	*Eye Surgery Center of CO*	William Self	303.426.4810	**Jackie McAdams**	303.426.4810 ext. 112	
Orthopedic-Spine	*Center for Spinal Disorders*	Michael Janssen George Leimbach Joseph Morreale Monroe Levine Donald Calley Ruth Beckham Alicia McCown	303.287.3800	**Debbie Lucero**	303.328.2490	303.287.7357
Orthopedic-Spine	*Panorama Westminster Office*	Amit Agarwala Christopher Brian Premjit Deol Bharat Desai Douglas Foulk Tom Friermood James Johnson Karen Knight Lonnie Loutzenhiser Nimesh Patel Mitchel Robinson		**Eric Worthan, CEO** **Brandi Ramirez** **Pat Viduya**	303.274.7324	
Surgery PENDING	*Front Range Surgical Associates*	Ciccoletti(sp?) James Garlitz David Long Kyle Nickel		**Elaine**	303.428.0004	
Surgery-Hand, Plastics		Mitch Fremling	303.466.3261	**Eunice Diaz**	303.466.3261	
Urology	*Foothills Urology*	David Cahn	303.985.2550	**Debbie Krieder**	303.985.2550	

Last Update: 10/28/10

Communicates with patients who cancel or fail to attend visit to specialist or testing facility (no-show):

A. Prior to the end of each business day, the PCMH Care Coordinator or PCMH Referral Coordinator updates the Referral Requests log to ensure follow-up care with the patient.

1. If notified by a specialist, patient or medical facility that a referred patient did not attend the appointment (no-show or cancellation), the Referral Coordinator at the PCMH-N will attempt to contact the patient to either confirm rescheduling of the appointment or address the barriers and/or challenges the patient has regarding the referral. If the PCMH-N attempts to reschedule the patient twice within a 4 week period of appointments and the patient no-shows twice, then the Referral Coordinator or appropriate personnel at the PCMH-N contacts

the specified Care Coordinator at the PCMH. The Care Coordinator will attempt to contact the patient to either confirm rescheduling of the appointment or address the barriers and/or challenges the patient has regarding the referral. The Care Coordinator then records any patient responses in General Notes under Notes tab in the Referral Section.

a. In the event that the patient agrees to reschedule the referral to the PCMH-N, the Referral Coordinator engages the patient a second time and confirms the referral appointment has been scheduled. The Care Coordinator additionally notifies the PCMH-N facility of the contact and re-appointment.
b. If the patient declines to re-appoint for the visit, the reason is noted General Notes under Notes tab in the Referral Section and sent to the provider for review.

Internal Care Coordination Protocol
PCMH Westminster Medical Clinic

Contacts patients after hospital or ER discharge for further care coordination and identifies and contacts patients who are at risk for adverse outcomes following discharge:

A. The Care Coordinator reviews information from facilities to identify patients who require proactive contact outside of patient-initiated visits or who are at risk for adverse outcomes.
    1. Based upon clinical orders from clinician (patient needs contact after review of discharge log/report), the Care Coordinator contacts each discharged patient within 2 business days to:
        a. Schedule follow-up appointments with the patient's PCP or specialist.
        b. Complete the *Personal Care Assessment and Plan* form for each discharged patient and place the form in corresponding patient record or designated file
            1. See *Appendix B* for an example of the *Personal Care Assessment and Plan.*
        c. Reconcile medication from hospital/SNF to PCMH office at time of phone contact.
    2. The Care Coordinator enters the patients who have been hospitalized or admitted to the ER ≥ 3 in the past 1 year into a high-risk patient registry indicating the following: patient name, hospital admission/discharge, diagnosis, and any noteworthy information. A care plan is developed with input from the patient's medical provider.

3. If the data is available, the Care Coordinator tracks ER discharges, to include the following information.
    a. See *Appendix C* for an example of the *ER Visits Tracker*.

Total Visits
Avoidable Visits
Percentage Avoidable
Chronic
Acute
Mode of Weekday
Mode of Time
Mode of Location
Age: 0-30
Age: 31-64
Age: 65 +
Calls WMC Clinic prior
Percentage Calls Prior
ER Co-Pay

Reviews information from specialty care facilities to ensure appropriate follow-up care:

A. The medical provider reviews the following within 4 business days of receiving the information from the PCMH-N facility:
    1. *Specialist Transition of Care Record*
        a. See *Appendix D* for an example what will be included in the *Specialist Transition of Care Record.*
    2. Specialist care plan summaries
    3. Completed medical testing results
    4. Secondary referrals outside of the PCMH-N agreement
    5. Recommendations for further patient medical testing and follow-up to the PCP.
B. The PCP provider determines the appropriate follow-up and provides instructions to the Medical Assistant or Care Coordinator to complete the new care plan.

The PCMH facilitates communication between the patient, PCMH, and PCMH-N facility for well-coordinated transfer of care:

A. For patients referred to other care, the PCP, if appropriate, develops a written transition care plan through shared decision making with the patient and family.
    1. If the PCP initiates a referral, the PCP provides a written explanation of the recommendations in understandable language to the patient.
        a. See *Appendix E* for the *Patient Referral Rx*.

b. See *Appendix A* for an example of the patient's *PCP Transition of Care Record* for written care plan location.

2. The PCP sends the referral to the Referral Coordinator and the Referral Coordinator confirms the PCMH-N specialist contact information with the patient.

The PCMH staff fosters well-coordinated care by engaging and informing patients of the PCMH benefits:

A. The Medical Assistants at the PCMH distributes *PCMH ID Cards* to the patients, explains what a PCMH is, and explains rationale for having a *PCMH ID Card*.

1. When a new patient attends an appointment for the first time, the Medical Assistant delivers a short, pre-determined script that details what is a patient-centered medical home and gives the new patient an ID Card that lists the PCMH providers and contact information, as well as, PCMH educational material.
    a. See *Appendix F* for an example of the *PCMH ID Card*.
    b. An example of the script is as follows:

> "Hi [insert patient name] . . . I just wanted to give you an ID Card from WMC[us]."
>
> "Always show this ID Card at any other office or hospital. You can even show this card to the receptionist with your insurance card."
>
> "This ID Card says you are a patient at a 'medical home'. That means we are your home base for your [health]care."
>
> "So remember, always show this to every specialist or hospital you go to so that they know whom to contact if they need more information and to allow us to stay involved with your care."

B. WMC as a whole promotes the PCMH model through printed materials.

1. Practice brochures, cards, and posters
    a. General PCMH "What is it?" information
    b. Extended office hours/open access
    c. Medical Neighborhood information
    d. Website and web patient portal
        a. www.westmedprimarycare.com
    e. Group office visits
        a. Healthier Living CO
            1. See *Appendix G* for an example of a *RX: Healthier Living CO*
        b. Diabetes
2. Patient health education information regarding chronic diseases.

Continuous Quality Improvement
PCMH Westminster Medical Clinic

Facilitates quality improvement preparation, implementation, and evaluation methods to maintain continuity of care

A. The Care Coordinator participates in strategizing ways with the medical provider(s) to stay connected with external medical facilities such as specialty offices, skilled nursing homes, and hospitals.
    1. The Care Coordinator will communicate with the medical provider(s) in a bi-weekly meeting to discuss updates on coordination of patient care issues and maintain continuity.
        a. The Care Coordinator participates in patient care team meetings.
        b. The Care Coordinator sends eCW messages to providers on issues of patient care.
    2. To engage a specialty office, skilled nursing home, or hospital to improve bi-directional communication with the PCMH, the Care Coordinator follows the steps below:
        a. Send the specific organization a *Medical Neighborhood Invitation* letter written by a medical provider.
            1. See *Appendix H* for an example of the *Medical Neighborhood Invitation*.
            2. When Specialty offices and/or providers initiate communication with the PCMH to improve bi-directional communication with the PCMH <u>before</u> receiving a *Medical Neighborhood Invitation*, the Care Coordinator sends the *Medical Neighborhood Guide* (a packet of information detailing how to become a Medical Neighbor) to the specific organization or refers them to the appropriate State organization .
                i. See *Appendix I* for an example of the *Medical Neighborhood Guide*.
            3. Log the date when the *Medical Neighborhood Invitation* was sent in the *Medical Neighborhood Tracker* and Specialist Supplemental Tracker.
                i. See *Appendix J* for an example of the *Medical Neighborhood Tracker*.
                ii. See *Appendix K* for an example of the *Specialist Supplemental Tracker*.

b. Schedule a meeting with the external medical facility at the PCMH and/or refer to the State facilitator or Webinar.
    1. Before the meeting, send a copy of the *Medical Neighborhood Guide* to the specific organization.
    2. Set a date with the specific organization as to when a decision can be expected to formally agree on improving bi-directional communication via the Systems of Care/PCMH Initiative Compact.
    3. Log the date of the meeting in the *Medical Neighborhood Tracker*.
c. Follow-up with the external medical facility on the date set at the previous meeting. Ask if the specific organization and/or any providers individually would like to proceed with the Compact agreement.
d. If the external medical facility or any providers decide to agree to the Compact, ask the office manager to check the boxes in the Compact that are applicable to all providers in the office who agreed to the Compact. If time allows or circumstances dictate, a meeting may be scheduled to facilitate the process.
e. Assist the external medical facility personnel to facilitate the Compact, ie.
    1. How will the office personnel alert themselves that the PCMH has referred a patient,
    2. How will the provider know the patient is from the PCMH, and
    3. How the Transition of Care Record process will occur.
f. Send the *Medical Neighborhood Toolkit* to the office manager and additional personnel.
    1. See *Appendix L* for an example of the *Medical Neighborhood Toolkit*.
    2. Share information and processes that the other Medical Neighbors are doing to improve bi-directional communication.
g. Ask the external medical facility specific questions to help fill out the *Medical Neighbor Specialist Practice Profile*.
    1. See *Appendix M* for an example of the *Medical Neighbor Specialist Practice Profile*.
h. Make a copy of the Compact that already has boxes checked off by the office manager, which represents what the office providers agree to in the Compact.
i. Write down all providers that wish to participate in the Medical Neighborhood on the top of the copied Compact
j. Complete the *Medical Neighbor Specialist Practice Profile* and journal the dialog and conversation at the external medical facility at the end of the *Assessment*.

1. Log the date of the completed work, the external medical facility name, and the associated providers in the *Medical Neighborhood Tracker*.

k. Send the medical provider(s) the *Medical Neighbor Specialist Practice Profile* for approval to accept the external medical facility in the Medical Neighborhood.

l. Update the list of Medical Neighbors in the following documents:
    1. *Care Coordination Policy and Protocol*
    2. *Westmed Primary Care website*
    3. *Medical Neighborhood Tracker*
    4. *Specialist Supplemental Tracker*
    5. *List of Medical* Neighbors for PCMH providers
        i. Send an updated list to the PCMH providers.

B. The Care Coordinator participates in PCMH practice redesign and systems improvement.

1. The Care Coordinator participates in data collection through a registry and conducts clinical audits.
    a. Queries registry on monthly basis to monitor patients with chronic disease according to protocol.
        1. Performs or supervises population management of at least 3 chronic diseases.
    b. Provides a report to the providers to determine a monthly action plan.
    c. Facilitates outreach and coordinates the action plan with appropriate personnel.
    d. Sends provider and practice level performance data to providers
    e. Under direction of medical director, monitors other levels of performance, such as, cost utilization, data on vulnerable populations and overuse of services or treatment.
    f. Directs collection of patient satisfaction surveys
2. Each quarter, the Care Coordinator conducts a clinical audit for all PCMH providers regarding the *PCP Transition of Care Record*.
    a. Audit each provider separately using the *PCP Transition of Care Record Checklist* to determine what percentage of the *PCP Transition of Care Record* is being captured in any outbound referral to a PCMH-N hospital, skilled nursing home, and/or specialty care facility.
        1. See *Appendix N* for the *PCP Transition of Care Record Checklist* to reference as to what needs to be recorded and where each element is located in the EMR.
    b. Enter the results in the *PCP-TCR Tracker* from the PCMH Audit just performed.
        1. See *Appendix O* for the *PCP-TCR Tracker* tool to conduct the audit, record the results, create updated graphic representation of the results for each PCMH provider, and aggregate the data for the PCMH clinic.

c. Prepare clinical reports and provider reports regarding the Transition of Care Record quarterly using the *PCP-TCR Tracker* tool. Send an electronic copy or hand a hard copy to each provider.

3. Quarterly or bi-annually, the Care Coordinator works with the Referral Coordinator to conduct an audit for the organizations which are members of the Medical Neighborhood.
    a. Produce a report of patients referred to each Medical Neighborhood office over the previous 3 months.
    b. Randomly select 4 patients from each Medical Neighborhood office listed on the report and conduct a phone survey or use e-messaging through the Patient Portal using 4 pre-determined questions listed in the *Medical Neighborhood Phone Survey Tracker*.
        1. The Care Coordinator documents responses to the phone or electronic survey in the *Medical Neighborhood Phone Survey Tracker*.
            a. See *Appendix P* for an example of the *Medical Neighborhood Phone Survey Tracker*.
        2. If the Care Coordinator does not speak with the patient on the phone, a message is left.
            a. The Care Coordinator attempts one more time to contact the patient for the phone survey.
        3. Audit each Medical Neighborhood office or organization separately using the *Specialist Transition of Care Record Checklist* to determine what percentage of the Transition of Care Record is being captured in any inbound notes back to a PCMH.
            a. See *Appendix Q* for an example of the *Specialist Transition of Care Record Checklist*.
        4. Enter the Transition of Care Record results into the *Score Care Template*: *TCR Worksheet*.
            a. See *Appendix R* for an example of the *Score Card Spreadsheet.*
    c. Send the *Score Card Spreadsheet* to all PCMH providers and the Referral Coordinator to complete the Provider Worksheets and Referral Worksheets respectively within 1 week.
    d. Once the *Score Card Spreadsheet* is received back from all PCMH providers and the Referral Coordinator, manually enter averaged scores into the *Score Card Spreadsheet: Final* for each Medical Neighbor office. Then copy + paste the *Score Card Spreadsheet: Final* into the *Score Card Template*, a Microsoft Word document.
        1. Save the *Score Card Template* document as [officename.month] into a file folder named [monthScoreCards].

a. See *Appendix S* for an example of the *Score Care Template* to copy+paste the *Final Spreadsheet* in.
2. Publish the document as an Adobe PDF for each Medical Neighborhood office.
3. Send the Adobe PDF document to providers and e-mail to the Medical Neighborhood offices using the contact information in the *Medical Neighborhood Tracker* or Care Coordination Policy and Protocol lists.

4. Sends PCP score card to specialists to complete and return. Collates information.
5. Quarterly or bi-annually, updates the Medical Neighborhood Newsletter with a letter from the Care Coordinator, Referral Coordinator, PCMH Project Manager, or a PCMH medical provider and send to the Medical Neighborhood offices via email.
6. Facilitates communication between the PCMH providers and the Medical Neighborhood offices and/or providers regarding any concerns or questions from either party.
7. Under supervision of the medical provider, the Care Coordinator evaluates clinical care and utilization of resources and assists in development of new clinical tools/forms/procedures.
8. The Care Coordinator arranges, supervises or conducts group visits amongst any member of the Medical Neighborhood and the PCMH and/or if any member requests so.

CARE PLANNING
PCMH Westminster Medical Clinic

Identifies patients at high-risk for poor outcomes (multi-morbidity conditions or high utilization of ED services) or those who require help in coordination of services:

A. The Care Coordinator maintains a patient registry by entering selected patients who have ≥ 3 chronic diseases, ≥ 3 hospital or ED visits in the past year, patients on long-term anticoagulation (ex. warfarin), or identified by their clinician as being non-engaged/non-adherent with care recommendations or requiring help in care coordination/case management into the Care Management registry to include:
    1. Patient contact information
    2. Patient hospitalizations
    3. Personal Care Plan
        a. Evaluates and prioritizes patient's medical, social, psychological needs and assists in solving barriers to their health care and recovery
        b. Helps patient set goals and provide education informational to help care for illness

c. Advocates for patient and family and link the patient to the appropriate community resources
    1. Community Resource Book
d. Promotes adherence to care plan with support in self-management skills and facilitate healthy behavior changes
e. Regularly communicates with patient/family
    1. Provides written summary
    2. Provides written care plan
f. Adjusts medications or changes treatment per practice standing orders or clinician's directions

B. The Care Coordinator should take the following other steps when identifying high-risk patients and/or coordinating services:
    1. Notifies patient's medical provider of progress, barriers or important issues effecting the care plan
        a. Conducts biweekly care management meetings with the provider(s).
    2. Monitors tickler file and ensures timely intervention
        a. Lab and referral tracking
        b. Specific patient alerts
    3. Communicates with external disease management or case management organizations
        a. Maintains list of contacts
        b. Establishes a timeframe for communication with the agency regarding the specific patient
        c. Agrees on a mutual care plan for each patient
        d. Enters appropriate patient information into high-risk patient registry
    4. Facilitates transfer of care
        a. If known, recommends a PCP or specialist in the area the patient is relocating.
        b. Arranges for medical records to be sent to the new provider after obtains signed release in compliance with HIPAA regulations.

References

"Complete Physician Practice Connections-Patient Centered Medical Home Companion Guide." *A Companion Guide to NCQA's PCP-PCMH Standards*. National Committee of Quality Assurance / Pfizer Inc., 2008. Web. 25 Feb. 2010. <http://www.ncqa.org/tabid/629/Default.aspx>.

Hammond, Scott, MD. "Primary Care – Specialist Physician Compact." Colorado Systems of Care/Patient-Centered Medical Home Initiative. (2009).

WestMed Primary Care
Care Coordinator Job Description

Job Title: Care Coordinator
Reports To: Medical Director, Practice Manager and/or Patient-Centered Medical Home Manager
Position: Part-time/Full-time (start PT with opportunity to expand to FT)

Summary of Duties:

- Assists all patients through the healthcare system by acting as a patient advocate and navigator.
- Participates in Patient-Centered Medical Home team meetings and quality improvement initiatives.
- Facilitates health and disease patient education, including leading group office visits.
- Supports patient self-management of disease and behavior modification interventions.
- Coordinates continuity of patient care with external healthcare organizations and facilities, including the process hospital admission and discharge and referrals from the primary care provider to a specialty care provider.
- Coordinates continuity of patient care with patients and families following hospital admission, discharge, and ER visits.
- Manages high risk patient care, including management of patients with multiple co-morbidities or high risk for readmission to a hospital setting, including a registry.
- Conducts comprehensive, preventive screenings for patients and/or assists all support staff in daily patient interactions as needed.
- Promotes clear communication amongst a care team and treating clinicians by ensuring awareness regarding patient care plans.
- Facilitates patient medication management based upon standing orders and protocols.
- Participates on a team for data collection, health outcomes reporting, clinical audits, and programmatic evaluation related to the Patient-Centered Medical Home and Medical Neighborhood initiatives.
- Evaluates clinical care, utilization of resources, and development of new clinical tools, forms, and procedures.

Education and Experience:

- Essential:
    - Graduation from an accredited university with a background in science, including a BA or BS in Biology, Chemistry, Nursing, Anatomy and Physiology, Public Health, Behavioral Science, or a similar degree
    - Proficient computer skills, including Microsoft Office (specifically Word and Excel)
    - 2-5 years experience in a clinical setting
    - Self-disciplined, energetic, passionate, innovative
    - A team player that can follow a system and protocol to achieve a common goal
    - Highly organized and well-developed oral and written communication skills
    - Demonstrates sound judgment, decision-making and problem-solving skills
    - Able to maintain confidentiality with all aspects of information in accordance with practice, State and Federal regulations
    - Confidence to communicate and outreach to other community health care organizations and personnel

- Preferred:
    - BSN (Licensed to practice as a Registered Nurse (RN) in Colorado) or MPH (Community & Behavioral Health; Health Systems, Management, & Policy; or with a science background)
    - 1 year in a Patient-Centered Medical Home clinical setting or knowledge of the Patient-Centered Medical Home initiative
    - 2-5 years experience in chronic disease management, case management, utilization management, and adult acute care
- Optional:
    - Other licensed medical professionals who possess the appropriate clinical skills are also eligible.
    - Experience with public speaking
    - Experience with electronic medical records

Salary or hourly compensation based upon education and experience. Expectation for position is part-time with the opportunity to expand into a full-time position.

Building a *Medical Neighborhood!*

Refer to The 5 A's Folders for Tools and Materials.

ASK

- Create a list of Specialists you'd like in your *Neighborhood.*
- Send an invitation to the Specialists with a person touch.

ADIVSE

- Schedule meetings with Specialists that respond.
- Share the MN concept, review literature, discuss provider goals for patient care and improved provider relationships, review Compact, set next steps (and timeline for follow up if Compact not filled out at this meeting).

ASSESS

- Evaluate your own performance to represent adoption of the concept and the Compact.
- Evaluate the Neighbors' performance to represent their adoption of the concept and the Compact.
- Since "patient-centeredness" is important, conduct a patient satisfaction survey.

ASSIST

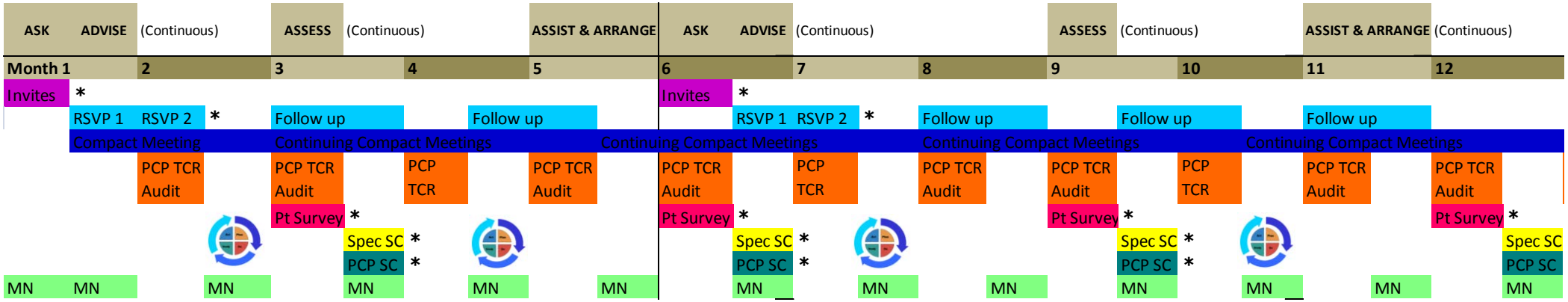
- Use and improve current tools and/or develop new tools to facilitate process improvements in both the PCP and Neighbors' offices.

ARRANGE

- Promote continuous quality improvement in both the PCP and Neighbors' offices with continuous communication, dialogue, and payment reform advocacy.
- Promote "patient-centeredness" by sharing the Neighborhood YOUR PATIENTS!

Created by R.Scott Hammond, M.D. and Caitlin Barba, MPH, Systems of Care-PCMH Initiative, Colorado Medical Society Foundation, 2010

Building a Medical Neighborhood: A Proposed Timeline



PCP sends invitations out to Specialists

Attempts to gather RSVPs from specialists who don't respond; two attempts: 1)Email; 2)Call; Follow up with PENDING Neighbors

Compact Meeting scheduled with specialists, PCP, and supporting personnel

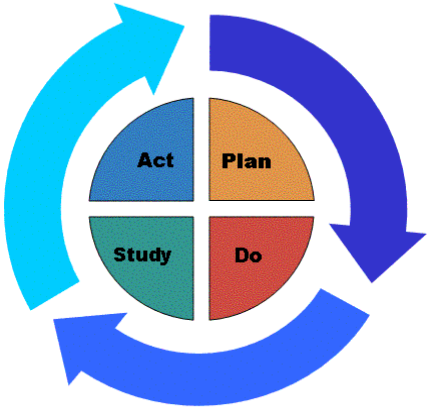
PCP Transition of Care Record monthly audit

PCP conducts TCR quarterly audit, sends Score Cards to Specialists

Specialists send report cards to PCP

PCP initiates Patient Satisfaction Survey

MN bimonthly meetings for strategizing/planning, Score Card grading, preparation for PDSAs/Action Plans with Specialists



Created by R.Scott Hammond, M.D. and Caitlin Barba, MPH, Systems of Care-PCMH Initiative, Colorado Medical Society Foundation, 2010

Primary Care-Specialty Care Collaborative Guidelines

Transition of Care

Mutual Agreement

Maintain accurate and up-to-date clinical record.

Expectations

Primary Care	Specialty Care
☐ Clarify type of transition: co-management, advice, complete transfer and be clear about the question being asked	☐ Provide single source contact person to coordinate services with specialist or primary care practice and easy access to PCP for coordination of care
☐ Transfer detailed baseline information, including methods tried to date and tests performed (including copies of labs and other studies)	☐ When PCP is uncertain of appropriate laboratory or imaging diagnostics, assist PCP prior to the appointment regarding appropriate pre-referral work-up
☐ Provide patient with specialist contact information	
☐ Review information sent from the specialist	☐ Review information sent from the PCP

Access

Mutual Agreement

Be readily available for urgent help to both the physician and patient via phone.
Be prepared to respond to urgencies.
Provide alternate back-up when unavailable for urgent matters.

Expectations

Primary Care	Specialty Care
☐ Determine reasonable time frame for specialist appointment	☐ Have timely consultation appointments available to meet patient and referral source requests
☐ Be open to preferences about location of admit	☐ Be open to preferences about location of admit
☐ Provide specialist easy access to discuss case by phone if need be	☐ Discuss special arrangements, as needed

Collaborative Care Management

Mutual Agreement

Define responsibilities between PCP, specialist and patient.
Clarify who is responsible for specific elements of care (drug therapy, referral management, diagnostic testing, care teams, patient calls, patient education, monitoring, follow-up).
Give and accept respectful feedback when expectations, guidelines or standard of care are not met.

Expectations

Primary Care	Specialty Care
☐ Review information sent by Specialist and follow-up on questions	☐ Review information sent by PCP and follow-up on questions
☐ Resume care of patient when patient returns from specialist care and act on care plan developed by specialist	☐ Send timely reports to PCP to include a care plan, follow-up, test results and studies and clear recommended next steps
☐ If surgery needs to be done, perform pre-operative evaluation	☐ If surgery needs to be done, perform pre-operative evaluation
☐ Order labs, radiological studies, etc., as applicable	☐ Order labs, radiological studies, etc., as applicable
	☐ Return care to PCP once patient is stable

Patient Communication

Mutual Agreement

Consider patient/family choices in care management, diagnostic testing and treatment plan.
Provide to and obtain informed consent from patient according to community standards.

Expectations

Primary Care	Specialty Care
☐ Explain specialist results and treatment plan to patient, as necessary	☐ Inform patient of diagnosis, prognosis and follow-up recommendations
☐ Identify whom the patient wishes to be included in their care team	☐ Recommend appropriate follow-up with specialist and PCP

This document was created by R. Scott Hammond, M.D. and the Systems of Care/Patient Centered Medical Home Initiative (Colorado Medical Society Foundation) and modified for use with Physician Health Partners and its Specialty partners.

Dear Colleague,

This letter is an open invitation to you and your group to participate in an exciting collaboration that may have dramatic effects on the health care system of Colorado. You have been selected for this opportunity because of our current professional relationship and/or your reputation for excellence.

Colorado is at the leading edge of health care reform. We are fortunate to host numerous pilots and initiatives, not only, aimed at providing improved quality, access and safety to our patients, but also, at decreasing health care costs and improving practice viability.

I am participating in 2 programs, the Multi-Stakeholder, Multi-State Patient-Centered Medical Home (PCMH) Pilot and the Systems of Care- PCMH grant. Both of these projects work on building systems of care to overcome many of the present obstacles to effective and efficient medical care. Our practice has recently been recognized as a Level 3 Patient-Centered Medical Home. This required a major redesign and restructuring on how we deliver medical care in order to achieve the rigorous standards of the National Committee of Quality Assurance (NCQA).

Our next goal is to invite our specialists into our system and create the 'medical neighborhood'. As you know, the **transition of care is the most dangerous time for our patients.** Patients are often sent to different doctors or facilities without crucial medical information. This creates risk to the patient and frustration and inefficiencies for the specialist. We can change that.

Westminster Medical Clinic is looking to develop a preferred relationship with a limited selection of specialists in order to ensure that our patients receive the very best care. This involves outlining mutual responsibilities and expectations for a 'partnership of care'.

You will benefit in many ways:

- More referrals, clear expectations,
- Timely and complete information,
- Prepared patient, and
- Assurance of appropriate follow-up.

We want you to be part of our team with the patient as the winner.

If you are interested in pursuing this matter, please contact me at **shammond@evcohs.com**. For more information, go to www.pcpcc.net or www.cms.org and click on Creating Medical Home Communities.

Yours truly,

R. Scott Hammond, M.D.

Creating Medical Home Communities

Systems of Care/Patient Centered Medical Home Initiative

Practice Profile

1. Contact Information: Date: _____ Organization:_____

Name of Contact Person:

_____

Name of Practice:

_____

Address of Practice:

_____

Address 2:

_____

City/ Town:

_____

Zip/ Postal Code:

_____

Email Address:

_____

Best Contact Phone Number:

(_____)_____-_____

2. Physicians:

First Name	Last Name	Degree	Specialty[4]	"Champion" Provider

3. Staff:

Name (First, Last, Degree)	Role	FT/PT	Date of Employment (approx length)	"Champion" Staff Member

4. Type of Practice:

- o Solo
- o Single Specialty Group
- o Multi Specialty Group
- o Residency Practice
- o Other (please Specify) _____

5. Do members of this practice serve as preceptors to medical students? -

- o Yes If yes, what medical school(s)? _____
- o No

6. Do members of this practice serve as preceptors to residents?

- o Yes If yes, what program(s)? _____
- o No

7. Are you part of a network?

- o Yes
- o No

8. If yes, please list the name and type of network ?

- o Independent Practice Association _____
- o Hospital affiliated network _____
- o Safety Net Clinic (CCHN)
- o Other (please specify)_____(ex. Colorado Rural Health Network)

9. Does this practice accept Medicaid patients?

- o Yes
- o No

If yes, is the practice accepting new Medicaid patients? _____Yes _____No

Can you provide an approximate number of pediatric Medicaid patients at this location?_____

Can you provide an approximate number of adult Medicaid patients at this location?_____

10. Does this practice accept Medicare patients?

- o Yes
- o No

If yes, is the practice accepting new Medicare patients? _____Yes _____No

Can you provide an approximate number of Medicare patients at this location?_____

11. What year was this practice established? _____

12. Have there been any of the following major changes in this practice in the last 12 months?

- o No major changes
- o Change in ownership
- o New electronic health record system
- o New billing system
- o Move to a new office
- o New physician joined the practice

13. Have you had employee turnover in the past 12 months? (please indicate the number lost to all listed below)

Physicians_____
Mid-level Provider (NP/PA) _____
Clinical Staff (RN/MA) _____
Office Manager _____
Front Office _____
Back Office _____
Other: _____

14. How long, on average, does it take for patients to be seen for: (# of days)

Urgent care: (chest pain asthma attack etc.)

- o < 4 hours
- o > 4 hrs (same day)
- o 1-2 days
- o >2 days

Acute care: (cold, sore throat etc.)

- o <1 day
- o 2-3 days
- o 3-5 days
- o >5 days

Routine care: (chronic care, physicals etc.)

- o <1 day (same day)
- o 2-3 days
- o 3-5 days
- o 1-2 weeks
- o >2 weeks

15. How many referrals from Westminster Medical Clinic (Hammond, Smith, Sarah, PA-C, Cela, PA-C) does the practice make each week?

- o None
- o <5
- o 5-10
- o >10

16. What is the average number of patient visits per provider in your specialty office, per day? _____

17. How often does this practice hold regular practice meetings to discuss clinical issues?

- o Weekly
- o Monthly
- o Quarterly
- o Annually
- o Never
- o Other:_____

18. If clinical meetings are held, who attends meetings regularly?

- o Physicians
- o Mid-Levels
- o Clinical Staff
- o Office Manager/Practice Administrator
- o Front Office
- o Back Office

19. How often does this practice hold regular meetings to discuss business issues?

- o Weekly
- o Monthly
- o Quarterly
- o Annually
- o Never
- o Other:_____

20. If business meetings are held, who attends meetings regularly?

- o Physicians
- o Mid-Levels
- o Clinical Staff
- o Office Manager/Practice Administrator
- o Front Office
- o Back Office

21. Do you primarily use:

- o Paper charts
- o Electronic health records
- o Both

22. Are there plans to purchase or make major modifications to the current practice computer system in the next 12 months?

- o Yes
- o No

23. If yes, what computer functions will these additions/ modifications affect:

- o Patient scheduling
- o Coordination of care
- o E-mail
- o Network Server
- o Patient communication
- o Website marketing
- o Patient clinical management
- o Financial data management
- o General clinical information retrieval
- o Electronic prescribing

24. A registry is a list of your patients with a particular condition, allowing you to better manage your care for those patients as a group. Is there a registry in your current practice? If so, please list out the conditions that you track

- o Yes: Conditions: _____
- o No

25. Do you currently create reports or use a patient tracking system or registry to manage patients with similar conditions (such as diabetes)?

- o Yes
- o No

26. Does the practice have a formal process for routinely measuring patient satisfaction? If yes, how often? _____

- o Yes
- o No

27. Has your practice participated in any quality improvement projects?

- o Yes (if yes, what focus) _____
- o No

28. Are you currently in involved in one or more of the following programs, please select all that apply?

- o Pay for Performance
- o Bridges to Excellence
- o Physician Quality Reporting Initiative (PQRI)
- o Health Plan Designation Program
- o Health Information Exchange, if so please list name: _____
- o CORHIO/REC Services, if so please list REC partner: _____
- o Colorado Children's Health Access Program (CCHAP)
- o Improving Performance in Practice (IPIP)
- o Chronic Care Model / Disease Registry
- o Care Transitions Program
- o Other practice based Quality Improvement Program (ex. Sponsored by a health plan, IPA, or Hospital. If so, please list name of program: _____
- o No

29. Are you certified by any of the following Recognition Programs? (Please check all that apply)

- o NCQA Back Pain (BPRP)
- o NCQA Diabetes (DPRP)
- o NCQA Heart/ Stroke (HSRP)
- o NCQA Patient Centered Medical Home (PPC-PCMH)
- o Medical Home Index

If so, please list the physicians certified in the programs and dates of certification:

30. Please tell us briefly why you believe you are, or can become a Patient-Centered Medical Home *Neighbor*.

6 Steps to Becoming a Patient-Centered Medical Home *Neighbor!*

- **Read** the background information and Patient – Centered Medical Home Neighborhood Primary Care – Specialty Care Compact.
- **Schedule a meeting** with the Patient – Centered Medical Home advisor to discuss the Compact and to clarify any questions, thoughts, concerns regarding the Compact from any personnel involved in the care coordination system.
- **Mark the boxes** that your practice can in the Compact and indicate which providers in your practice plan to participate in the Neighborhood.
- **Establish a contact person(s),** such as your office manager to act as the Care Coordinator in your block of the Neighborhood and coordinate the care for your specialty.
- **Schedule a meeting** between the Patient – Centered Medical Home and Medical Neighbor Care Coordinator to review the responsibilities and process details of the care coordination system.
- **Agree and facilitate** follow up communication for review and evaluation of how we are all doing as Neighbors.

There's really no place like *Home*. . . You make it a great Neighborhood . . . We Thank You . . . Our Patients Thank You!

Created by R.Scott Hammond, M.D. and Caitlin Barba, MPH, Systems of Care-PCMH Initiative, Colorado Medical Society Foundation, 2010

Patient-Centered Planned Care

COLORADO CLINICAL GUIDELINES COLLABORATIVE

Before the Visit

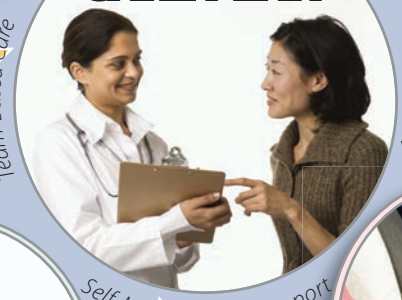
Prepared Care Team
- labs/screenings
- team huddles
- specialist reports

by visit
by e-mail
by phone

Access

Leadership

CARE PLAN



Team-Based Care

Technology

Self-Management Support

Care Coordination

Medical Neighborhood
(co-located or referred)
- specialists
- mental health
- dental/vision services
- hospitals
- community resources
- social work
- home health
- complex case managers
- peer programs
- other ancillary services

Front Office
- build relationships
- explore needs and preferences

Nurse/MA
- initial screening
- standing orders
- flow sheets

Provider (MD/PA/NP)/Care Team
- set shared agenda for visit
- review chronic, preventive, acute care issues
- collaborate to set SM goals
- create care plan using shared decision making
- review patient experience

During the Visit

After the Visit

Population Management
- registry/reporting
- outreach
- prioritize population

Follow-Up
- test and referral tracking
- review/revise plan
- problem solve

Care Plan Management/Coordination
- coach and SM support
- implement plan
- assess barriers/stressors
- support change

Gather Patient Experiences
- progress/symptom monitoring
- medication assessment
- self-efficacy

Improved Outcomes
- Increased Healthy Behaviors
- Improved Quality, Safety, and Clinical Outcomes
- Increased Collaboration between Patient, Care Team, and Medical Neighborhood
- Improved Physician and Staff Satisfaction and Retention
- Reduced Cost Trends

Adapted from:
www.NewHealthPartnership.org

tients would be free to leave their medical home at any time — with no explanation required — and either enroll in another one or return to the traditional fee-for-service model.

The demonstration program, if successful, will be one small step along what many policymakers view as a path toward slower growth of expenditures and improved care under Medicare. Further steps would involve restructuring the delivery system by providing physicians with financial incentives to aggregate into larger, more integrated groups that could coordinate care more effectively. Such a goal is outlined in the June 2008 report of the Medicare Payment Advisory Commission, an influential agency created by Congress to provide legislators with health policy options.[4] Noting that if it is left unchanged, Medicare will be fiscally unsustainable, the commission asserted that "fundamental change in the organization and delivery of health care is needed." It urged Congress to pursue three initiatives "expeditiously": a medical-home demonstration program, the bundling of Medicare payments for all care provided during a given hospitalization (to be paid to a single provider entity composed of a hospital and its affiliated physicians),[5] and the creation of accountable care organizations that would resemble existing multispecialty group practices.[5]

The commission, while underscoring the need for fundamental change, recommended only targeted reforms, perhaps by way of acknowledging the limits of the American (and Congressional) appetite for sweeping change, as reflected in the decisive defeat of the Clinton administration's comprehensive plan. Should the next administration and Congress take up the challenge of reform in 2009, they would do well to heed the commission's advice, in its latest report, to recognize that "the process of fundamental reform is evolutionary, and not knowing the final design should not deter us from beginning."

Mr. Iglehart is a national correspondent for the *Journal*.

1. American Academy of Family Physicians, American Academy of Pediatrics, American College of Physicians, American Osteopathic Association. Joint principles of the patient-centered medical home. February 2007. (Accessed September 2, 2008, at http://www.pcpcc.net/content/joint-principles-patient-centered-medical-home.)
2. American Academy of Family Practice, Robert Graham Center. The patient centered medical home: history, seven core features, evidence and transformational change. Washington, DC: Robert Graham Center, November 2007. (Accessed September 2, 2008, at http://www.adfammed.org/documents/grahamcentermedicalhome.pdf.)
3. American Academy of Family Physicians. 2008 State medical home legislation. (Accessed September 2, 2008, at http://www.trendtrack.com/texis/app/viewrpt?event=483e340d37b.)
4. Report to the Congress. Reforming the delivery system. Washington, DC: Medicare Payment Advisory Commission, June 2008. (Accessed September 2, 2008, at http://www.medpac.gov/documents/Jun08_EntireReport.pdf.)
5. Hackbarth G, Reischauer R, Mutti A. Collective accountability for medical care — toward bundled Medicare payments. N Engl J Med 2008;359:3-5.

Building a Medical Neighborhood for the Medical Home

Elliott S. Fisher, M.D., M.P.H.

Recent efforts to improve primary care in the United States have focused largely on the development and implementation of practice models and payment reforms intended to create a "medical home" for patients. The notion of a medical home makes intuitive sense and indeed has great promise. But unrealistic expectations about this approach abound, and insufficient attention is being paid to several important barriers to the clinical and financial success of the medical-home model.

The concept of a medical home first emerged in pediatrics, where it was recognized that children with special needs would benefit from a delivery model that effectively coordinated the complex clinical and social services that many patients require. More recently, organizations representing the major primary care specialties — the American Academy of Family Practice, the American Academy of Pediatrics, the American Osteopathic Association, and the American College of Physicians — have worked together to develop and endorse the concept of the "patient-centered medical home," a practice model that would more effectively support the core functions of primary care and the management of chronic disease.[1] The coalition also argued for payment reforms that would provide support for services that tend to be inade-

Table 1. Eligibility Criteria for Participation in Medical-Home Programs.*

Medical-Home Capacities	How Capacities Are Measured in Most Current Medical-Home Certification Programs
Improved access and communication	Have written standards for key components of access and communication (4 points) and use data to document how standards are met (5). Assess language preference and communication barriers (2). (Total: 11 points)
Use of data systems to enhance safety and reliability	Use data system for nonclinical (2) and clinical (6) information to track patients' diagnoses (4) and clinical status (6) and to generate reminders (3). Track referrals (4) and laboratory results systematically (7). Use electronic system to order, retrieve, and flag tests (6); write prescriptions (3) and check their safety (3) and cost (2); and improve safety and communication (4). (Total: 50 points)
Care management and coordination	Adopt and implement evidence-based guidelines (3) and use reminders for preventive services (4). Coordinate care with other providers (5) and use nonphysician staff to manage patient care (3). (Total: 15 points)
Support for patient self-care	Develop individualized patient care plans, which assess progress and address barriers to achieving plan goals (5). Actively support patient self-care (4). (Total: 9 points)
Performance reporting and improvement	Measure (3) and report performance to physicians in the practice (3) using standardized measures (2). Report performance externally (1). Survey patients about their experience (3). Set goals and take action to improve (3). (Total: 15 points)

* Qualification requirements for receiving extra payments under current medical-home demonstration programs generally rely on qualification as a patient-centered medical home by the National Committee for Quality Assurance, with greater payments generally granted to practices achieving higher scores (points are shown in parentheses). Practices are expected to perform the core functions of primary care, which include first contact and comprehensive care. Primary care physicians (in family medicine, general internal medicine, pediatrics, or osteopathic medicine) are generally the focus of these programs. Whether specialty practices should be eligible to participate is controversial.

quately reimbursed in current fee-for-service practice, such as care coordination outside the context of a specific office visit, the adoption of health information technology, and interaction with patients by telephone or e-mail. The payment reforms currently being tested generally involve an additional per-patient monthly payment to practices that meet the qualification requirements developed under the auspices of the National Committee on Quality Assurance (see Table 1). Although one recently announced demonstration program focuses on practices in a single integrated delivery system,[2] most current or planned projects simply select qualified practices in a region or state.

Expectations are high. States, health plans, and the Medicare program are making substantial financial bets that implementation of the medical home will lead not only to improved care but also to long-term savings, largely by reducing the number of avoidable emergency room visits and hospitalizations for patients with serious chronic illness. Some see the medical-home model as a means of reversing the decline in interest in primary care among medical students and residents, and others argue that broad implementation would reduce health care spending overall.[3]

But there are several barriers that require attention if the medical home is to live up to its promise. First, effective care coordination for patients with either acute or chronic conditions requires not only full access to all the necessary clinical information obtained at multiple sites (physicians' offices, laboratories, hospitals, and nursing homes) but also a willingness by all the physicians involved in a patient's care to participate in collaborative decision making. The current medical-home model rewards practices for establishing electronic health records, regardless of how well they are integrated with other providers' systems, and leaves coordination entirely up to the primary care physician. There are no incentives for other physicians or hospitals to share information, improve coordination, or support shared decision making for patients who are in the medical home.

Second, it is still unclear how the public and other providers will respond to the model. Early reports from focus groups suggest that the term "medical home" makes many consumers think of nursing homes, with all the unfortunate connotations. Although the approach may be most likely to succeed when patients are required to choose a medical home, the public's enthusiasm for gatekeepers was sorely tested in the 1990s. Whether other physician groups support the strategy will depend on how it is implemented. To the extent that

Table 2. Strengthening Medical-Home Models.

Barrier to Success of Medical Home	Approaches to Overcoming Barrier
Resistance to collaboration	**Share information among providers**
There are few incentives for hospitals and specialists to collaborate with primary care physicians	Require medical homes to specify practice network for performance measurement and information sharing
Single-practice data systems are insufficient	Require providers to meet connectivity standards
Lack or uncertainty of public and political support	**Establish performance measurements and rewards**
Acceptability to patients is unknown; fear of gatekeeping could undermine	Institute transparent performance measurement across continuum of care
Specialists will probably oppose if their incomes are threatened	Reward collaboration through payment updates, pay for performance, or shared savings
Difficulty controlling costs	**Institute broad accountability for population-based costs**
There are outside influences on costs	Foster integrated delivery systems that share savings from improved quality of care and lower costs for all patients
Savings in a subpopulation are probably offset by increased spending in others	

Medicare or other payers strive to keep the overall pool of physician-payment funds constant, any increase in total payments to primary care physicians would have to come at the expense of payments to other physicians — surely a nonstarter.

Finally, it is far from clear how spending more on medical homes will lead to lower overall spending. Most of us believe that improved care coordination and more effective disease management will result in better quality and lower utilization rates among patients in medical homes. But whether these savings will more than offset the increased payment to those medical homes is doubtful. Moreover, several countervailing forces may limit the effect of the medical home on spending. In current medical-home models, primary care physicians have no real leverage to persuade specialists to change their practices in keeping with the goals of the program. To the extent that the income of other providers continues to depend on service volume, it is unlikely that either specialists or hospitals will respond to fewer visits and stays from medical-home patients by allowing their incomes to fall. Given the discretionary nature of most clinical decisions — for instance, choices about how frequently to see patients with chronic illnesses or to order diagnostic tests — the response of these providers will probably be to increase the volume (or intensity) of the services they provide to other patients to maintain their current incomes. The gains in quality may be valuable in their own right, but advocates need to recognize the underlying determinants of health care spending.

These barriers all point to the importance of context: patients and other health care providers have key roles to play in the success of the model. Success will be more likely if primary care reforms such as the medical-home model are aligned with reform strategies that foster shared accountability among all providers for measurably and transparently improving the quality of care and reducing its cost.[4] Several approaches to overcoming these barriers should be considered (see Table 2).

The first is to make sure that steps toward implementation of medical-home models are aligned with the more general long-term goals of effective communication and care coordination among all providers. Most physicians already practice in coherent and stable local referral networks.[5] Continued (or increased) payments to the medical home could be based on stepwise progress toward shared electronic health records and communication standards in an explicitly delineated local practice network.

Second, performance measures should be broadened to include comprehensive evaluations of patients' experiences with care (including the effectiveness of care coordination), routine assessment of functional outcomes (that is, whether patients' health and quality of life are actually improved as a result of care), and the total costs for all patients in these defined networks. Advances in measurement have made the adoption of reliable performance measures in these domains feasible; transparency would not only be reassuring to the public but would also augment the effectiveness of professional norms, giving primary care physicians, specialists, and hospitals an incentive to collaborate effectively to improve

the coordination of care and mend the current fragmentation of the delivery system.

The third step would be to explore ways of integrating medical-home payments with other approaches to payment reform that foster shared accountability and shared rewards among all providers across the continuum of care. Medicare's Physician Group Practice demonstration, for example, offers each participating group of physicians (and its affiliated hospitals) a share of any savings achieved from providing better and more cost-efficient care to the Medicare beneficiaries who receive the preponderance of their care from that group. Such an approach would provide an incentive for all providers in the group to work together to improve coordination and reduce costs. And the opportunity for shared savings could allow physicians' net incomes to be preserved even while their total billings declined.

The medical home has great potential to improve the provision of primary care and the financial stability of primary care practice. What has been missing so far has been an effort to implement this model in concert with other reforms that more effectively align the interests of all physicians and hospitals toward the improvement of patient care. To deliver on its promise, the medical home needs a hospitable and high-performing medical neighborhood.

No potential conflict of interest relevant to this article was reported.

Dr. Fisher is a professor of medicine and of community and family medicine and director of the Center for Health Policy Research, Dartmouth Institute for Health Policy and Clinical Practice, Lebanon, NH.

1. Joint principles of a patient-centered medical home released by organizations representing more than 300,000 physicians. Philadelphia: American College of Physicians, 2007. (Accessed September 2, 2008, at http://www.acponline.org/pressroom/pcmh.htm.)
2. CIGNA and Dartmouth-Hitchcock launch 'patient-centered medical home' program to provide better care coordination. Bloomfield, CT: CIGNA, June 10, 2008. (Accessed September 2, 2008, at http://newsroom.cigna.com/article_display.cfm?article_id=914.)
3. Keckley PH, Underwood HR. The medical home: disruptive innovation for a new primary care model. Washington, DC: Deloitte Center for Health Solutions, 2008.
4. Shortell SM, Casalino LP. Health care reform requires accountable care systems. JAMA 2008;300:95-7.
5. Fisher ES, Staiger DO, Bynum JP, Gottlieb DJ. Creating accountable care organizations: the extended hospital medical staff. Health Aff (Millwood) 2007;26:w44-w57.

The Medical Home: Growing Evidence to Support a New Approach to Primary Care

Thomas C. Rosenthal, MD

Introduction: **A medical home is a patient-centered, multifaceted source of personal primary health care. It is based on a relationship between the patient and physician, formed to improve the patient's health across a continuum of referrals and services. Primary care organizations, including the American Board of Family Medicine, have promoted the concept as an answer to government agencies seeking political solutions that make quality health care affordable and accessible to all Americans.**

Methods: **Standard literature databases, including PubMed, and Internet sites of numerous professional associations, government agencies, business groups, and private health organizations identified over 200 references, reports, and books evaluating the medical home and patient-centered primary care.**

Findings: **Evaluations of several patient-centered medical home models corroborate earlier findings of improved outcomes and satisfaction. The peer-reviewed literature documents improved quality, reduced errors, and increased satisfaction when patients identify with a primary care medical home. Patient autonomy and choice also contributes to satisfaction. Although industry has funded case management models demonstrating value superior to traditional fee-for-service reimbursement adoption of the medical home as a basis for medical care in the United States, delivery will require effort on the part of providers and incentives to support activities outside of the traditional face-to-face office visit.**

Conclusions: **Evidence from multiple settings and several countries supports the ability of medical homes to advance societal health. A combination of fee-for-service, case management fees, and quality outcome incentives effectively drive higher standards in patient experience and outcomes. Community/provider boards may be required to safeguard the public interest. (J Am Board Fam Med 2008;21: 427–440.)**

"*The better the primary care, the greater the cost savings, the better the health outcomes, and the greater the reduction in health and health care disparities.*"[1]

The term "medical home" was first coined by the American Academy of Pediatrics in 1967.[2] The American Academy of Family Physicians embraced the model in its 2004 Future of Family Medicine project[3] and the American College of Physicians issued a primary care medical home report in 2006.[4] The concept of the medical home has recently received attention as a strategy to improve access to quality health care for more Americans at lower cost.

In the medical home, responsibility for care and care coordination resides with the patient's personal medical provider working with a health care team.[5] Teams form and reform according to patient needs and include specialists, midlevel providers, nurses, social workers, care managers, dietitians, pharmacists, physical and occupational therapists, family, and community.[4] Medical home models vary but their success depends on their ability to focus on the needs of a patient or family one case at a time, recruiting social services, specialty medical services, and patient capabilities to solve problems.[6] In the United States primary care has been viewed largely as a discrete hierarchical

This article was externally peer reviewed.
Submitted 31 December 2007; revised 18 May 2008; accepted 20 May 2008.
From the Department of Family Medicine, University of Buffalo, NY.
Funding: none.
Conflict of interest: none declared.
Corresponding author: Thomas C. Rosenthal, MD, Department of Family Medicine, University of Buffalo, 462 Grider Street, Buffalo, NY 14215 (E-mail: trosenth@acsu.buffalo.edu).

See Related Commentary on Page 370.

level of care. Recently, however, business organizations taking a systems approach to problem solving typical of industry have endorsed the concept of a personal primary care physician as an efficient strategy for delivering a broad range of services to consumers on an as-needed basis.[7,8] In its most mature form, a medical home may integrate medical and psychosocial services in a model more in concert with documented patient health beliefs.[9–11]

Most developed nations assure patient access to primary care physicians whose payments are, at least in part, based on guidelines and outcomes established by consumer/provider oversight. However, high utilization of technology and procedures in the United States have created the misperception that universal access to health care is too expensive, and some countries struggle to match Americans' access to procedures.[12] Unfortunately, the reliance on high technology and procedures has exposed Americans to adverse events and errors possibly related to overuse.[13,14]

Although many Americans are not certain about what constitutes primary care, they want a primary care physician.[15] They assume quality and appreciate technology but value relationship above all else.[16,17] Racial and ethnic disparities are significantly reduced for families who can identify a primary care provider who facilitates access to a range of health providers.[18] Urban and rural communities that have an adequate supply of primary care practitioners experience lower infant mortality, higher birth weights, and immunization rates at or above national standards despite social disparities.[19–22] This article reviews both the peer-reviewed literature and program evaluations of medical homes to assist primary care providers and health planners in assessing the usefulness of the model in their own communities and practices.

Methods

The outline and subtitles for this article are from the 2006 Joint Principles of the Patient-Centered Medical Home issued by the American Academy of Family Physicians, the American College of Physicians, and the American Academy of Pediatrics.[4] They have been used to facilitate the application of findings presented in this paper to policy development at the medical office and government levels.

PubMed was searched using "medical home" and "patient-centered care" as search phrases. The Internet sites of the Commonwealth Fund, the Center for Health Care Strategies, the State of North Carolina, the National Health Service of the United Kingdom, and Web sites were searched. US Family Medicine Department Chairs were surveyed by e-mail in October 2007 to expand the list of medical home evaluation studies. The American Academy of Family Physicians' Graham Center supplied their growing bibliography on the medical home concept. These sources led to secondary searches of cited literature and reports. More than 200 publications and several books were reviewed by the author. Articles were selected for citation if they offered original research, meta-analyses, or evaluation of existing programs. The unique characteristics of programs and variations in methodologies made meta-analysis at this level inappropriate. An annotated bibliography of cited references was circulated to members of the New York State Primary Care Coalition, the New York State Health Department, and members of the Association of Departments of Family Medicine for response and reaction. Some key thought pieces are referenced to assist readers who may use this for policy development.

Medical Home Principles

Table 1 summarizes several principles of medical homes and the quality of the literature supporting the principle.

Personal Physician

Each patient has an ongoing relationship with a personal physician trained to provide first contact and continuous and comprehensive care.[4]

Supporting Literature

When people become sick, they use stories to describe their experience. Patient-oriented care is bound up in the physician's ability to accurately perceive the essence of a patient's story.[31,32] Perception, or empathy, is enhanced by a doctor–patient relationship which, like any relationship, develops incrementally.[33] Relationships do not replace technical expertise and patients accept that quality specialty care often means being cared for by providers with whom they have a limited relationship.[34]

In primary care, a longitudinal relationship is an important tool to enlighten a personalized applica-

Table 1. Support for Medical Home Features: Quality of Literature

Recommendation	Evidence Rating	References	Comments
Patients who have a continuity relationship with a personal care physician have better health process measures and outcomes.	1	23, 34, 41, 47, 52	Continuity is most commonly associated with primary care, but cancer care, dialysis, and diabetes care are examples of specialty continuity.
Multiple visits over time with the same provider create renewed opportunities to build management and teaching strategies tailored to individual progress and receptivity.	2	24, 25, 38, 39, 46, 49, 54, 55	Neither primary care nor specialty care can meet their full potential if provided in a vacuum. All studies are challenged to evaluate any piece of the system in isolation from the context of specialty or other community services.
Minorities become as likely as non-minorities to receive preventive screening and have their chronic conditions well managed in a medical home model.	2	19, 20, 22, 26, 27	Rigorous program evaluations, secondary population analyses, and observational comparison studies show consistent findings.
In primary care, patients present at most visits with multiple problems.	1	06, 64, 65	The use of each office visit to care for multiple problems is a property of primary care.
Specialists generate more diagnostic hypotheses within their domain than outside and assign higher probabilities to diagnoses within that domain.	2	73, 74	The interface between primary care and specialty care needs further research.
The more attributes of the medical home demonstrated by a primary care practice, the more likely patients are to be up to date on screening, immunizations, and health habit counseling, and the less likely they are to use emergency rooms.	2	28, 29, 94, 95, 106, 107, 121	

1 = consistent, good quality evidence; 2 = limited quality, patient-oriented evidence; 3 = consensus, usual practice, expert opinion, or case series.[30]

tion of strategies that will achieve incremental improvements in health sustainable through the ever challenging events of life.[35,36] Specialty care can often be judged by how well something is done to the patient. Primary care is often best judged by how well the patient changes behavior or complies with treatment, activities the patient must do themselves. This difference becomes blurred in areas of chronic kidney disease (nephrologist), cancer care (oncologist), and diabetic management (endocrinologist) because of the long-term management relationship with the patient.

A relationship over time between patient and generalist also modifies resource utilization. A survey of physicians in Colorado by Fryer et al[37] demonstrated that in communities with high numbers of specialists or low numbers of generalists, specialists may spend 27% of patient contact time performing primary care services. Just as with anyone practicing outside of their area of comfort, this inevitability should raise concerns. Chart reviews of over 20,000 outpatient encounters by Greenfield[38] and 5,000 inpatient encounters by Weingarten[39] demonstrated that specialists practicing outside of their area of expertise order more tests and make more referrals than generalists.

Americans spend less time with a primary care physician than patients in countries with better health outcomes.[40] Yet, community-level studies indicate that availability of primary care lowers mortality.[41] The influence of primary care is second to socioeconomic conditions in lowering the frequency of strokes and cancer deaths.[42–45] In a study of 11 conditions, Starfield et al[46] found that patients had more monitoring of more parameters for all their conditions if they received care within a continuous primary care physician relationship as opposed to disease-specific specialty care.

Quality care is not solely dependent on insurance coverage. An analysis of administrative data in a Midwestern Canadian city with universal coverage documented that patients who had a continuous relationship with a personal care provider were more likely to receive cancer screening, had higher

vaccination rates, and had lower emergency department use.[47] In a critical review of the literature on continuity, Saultz and Lochner[34] analyzed 40 studies tracking 81 care outcomes, 41 of which were significantly improved by continuity. Of the 41 cost variables studied, expenditures were significantly lower for 35. Saultz and Lochner[34] concluded that the published literature could not reveal if patient satisfaction with a provider lead to continuity or if continuity lead to satisfaction, but findings were generally consistent with a positive impact on measured outcomes.

A Norwegian study determined that 4 visits with a provider were necessary for accumulated knowledge to impact use of laboratory tests, expectant management, prescriptions, and referrals.[48] Each visit in a continuous relationship renews an opportunity to build management and teaching strategies tailored to individual progress, receptivity, and capacity for compliance and change across the multiple medical conditions faced by many patients.[48] Gulbrandsen et al's[50] review of visits by 1401 adults attending 89 generalists demonstrated that continuity of care increased the likelihood that the provider was aware of psychosocial problems impacting health. Others[51–53] studied the impact of a primary care "gatekeeping" model's impact on Medicaid health management organization patients in Missouri and showed an increase of visits to primary care and fewer visits to emergency rooms, specialists, and nonphysician providers. Continuity has generally been shown to achieve quality at a lower cost.[54,55] In a qualitative analysis, Bayliss et al[56] concluded that patients with multiple comorbidities experienced barriers to self care, such as medication problems, chronic disease interactions, and adverse social and emotional environments requiring coordination of strategies across the comorbidities. Patients attribute health care errors to the breakdown of the doctor–patient relationship 70% of the time.[57]

Team-directed Medical Practice

A personal medical provider, usually a physician, leads a team of caregivers who take collective responsibility for ongoing patient care.

Supporting Literature

Eighty-seven percent of primary care physicians think an interdisciplinary team improves quality of care.[58] Separate studies of primary care offices in upstate New York and California, identified by their positive community reputation, found that all used a coordinated team model regardless of structure (private practice, community health center, hospital-owned). The practices either directly provided or coordinated a spectrum of services including social/behavioral services, rehabilitation, and coordinated specialty care.[10,59]

A team expands on the inherent limits in a 15-minute office visit during which demands for preventive care, chronic disease management, and new complaints compete.[60] Team care increases the contact points between patient and health care team and decreases the likelihood that acute complaints will distract providers from making appropriate adjustments in the care of chronic conditions.

Comprehensive patient management implies more than office visits. In one model a medical assistant measures vital signs and takes an interim history in the examination room then remains with the patient during the physician encounter and stays behind for a debriefing with the patient after the visit. The same assistant contacts the patient after the visit and before the next visit.[61] Phelan et al[63] found that a interdisciplinary geriatric team model screened for more syndromes and improved care at 12 months, although there was little significant improvement thereafter. Disease-specific team models produce good results for the focal disease but are less successful with comorbidities.[45] Multidisciplinary team care of disabled adults in sheltered housing shifted expenditures from unproductive repeat hospitalizations to personal care and increased outpatient visits.[63]

Whole-Person Orientation

The personal physician or provider maintains responsibility for providing for all of the patient's health care needs and arranges care with other qualified professionals as needed. This includes care for all stages of life: acute care, chronic care, preventive services, and end-of-life care.[4]

Supporting Literature

Family physicians manage 3.05 problems per patient encounter. They chart 2.82 problems and bill for 1.97. Ninety percent of patients have at least 2 concerns.[64] Patients over the age of 65 average 3.88 problems per visit and diabetics average 4.6.[65] In a study of 211 patient encounters, Parchman et al[66]

found that the number of complaints raised by patients tended to decrease the likelihood that a diabetic would have an adjustment made to a needed medication. Providers compensated by shortening the time to next visit by an average of 8.6 days.

By way of illustration, headache is often a secondary complaint in primary care. Only 3% of patients seen in a primary care office with a headache will have a computed tomography scan, and of these only 5% will have significant findings.[67] If the history and physical fail to raise suspicion of an intracranial process, headache patients are often treated according to symptoms and encouraged to return if symptoms do not resolve as expected while still receiving care for the primary chronic condition. Tactical options include follow-up contact by a member of the health team or earlier recheck.

The recheck plan for nonurgent conditions is a critical element of primary care. Continuity in the relationship establishes the mutual confidence needed for a watchful waiting or recheck strategy.[68] Whereas an immediate diagnostic work-up may quickly arrive at a specific diagnosis, a measured wait and see approach in the absence of "red flags" often confirms the initial impression. "Wait and see" has become a legitimate focus of research in otitis media and some pain syndromes.[69,70]

Care Is Coordinated and/or Integrated Across All Domains of the Health Care System

Modern health care presents several effective strategies for any single complaint, creating important options for diagnosis and treatment but also increasing the potential for overuse and confusion.[4]

Supporting Literature

The integration of primary care as an overarching approach to population health management is perhaps best elucidated by a discussion of care integration in a robust modern health care system. Medical homes should not function as entry-level care providers but rather as strategic access managers.

Back pain is a frequent primary care complaint. Patients with "red flag" orthopedic or neurologic complications need to be identified and urgently referred for specialty care. Most will require supportive care including pain relief, exercise, stretching, and physical therapy. A minority of patients who fail to respond still need help selecting a surgeon or a rehabilitation program and need guided readjustment to their workplace.[8] Fears and misunderstandings are the greatest threat to recovery but receiving an magnetic resonance imaging scan early in the course of back pain is more strongly associated with eventual surgery than are clinical findings.[71] The challenge is to meet the patient's need for management and order additional tests at the precise point in the course of illness to be productive.

The skills associated with specialty care must be learned in centers that see preselected patients with a high likelihood of needing specialty procedures. An intense experience essential for training predisposes toward overestimation of the likelihood of severe or unusual conditions in the general population and contributes to an overuse of diagnostic and therapeutic modalities.[72–74] Care across the continuum is more than access to procedures.

When generalist physicians are less available than specialists, specialists often refer secondary problems to other specialists. For example, after a myocardial infarction a patient may be referred by the cardiologist to an endocrinologist, pulmonologist, and a rheumatologist to manage the patient's long-standing diabetes, cardiac obstructive pulmonary disorder, and osteoarthritis. Specialists who feel unsupported by primary care services schedule more follow-up appointments, many of which duplicate services provided by the primary care physician.[73,75]

However, even in universal coverage societies like the United Kingdom, patients report greater satisfaction when they are able to access specialty care directly.[76] The lesson here is that medical homes should not become barriers to specialty access. The personal care team should facilitate referral to the most appropriate specialist at the appropriate time, consistent with patient concerns.

There is evidence to suggest that primary care involvement in a referral to another physician may improve quality. Children with tonsillitis who are referred by primary care physicians to surgeons have fewer postoperative complications than do children whose parents bypassed the primary care provider.[77] At Kaiser Permanente, primary care physician-facilitated referrals have lower hospitalization rates than do self referrals.[78] Primary care physicians who care for their hospitalized patients provide care that is as efficient as that provided by hospitalists.[76]

Mental health coordination is no different. Smith et al[80] reviewed the literature on management of patients with unexplained symptoms and psychosocial distress, concluding that 80% of these patients accept management by primary care physicians but only 10% will attend a psychosocial referral. When a referral is made, the primary care physician plays an important role in outcome success.[81] Full integration of primary medical care with mental health care improves outcomes in both arenas.[82–84]

Quality and Safety

Clinical excellence is enhanced by integration of information technology into medical practice and tracking of quality measures.[4]

- *Evidence-based medicine* and clinical decision support tools should be incorporated into practice.

Supporting Literature

One challenge to medical home evaluation will be establishing outcome measures that truly affect patient wellness. Specialists are good at adhering to guidelines within their field of expertise.[85–87] However, Hartz and James[88] reviewed 42 published articles comparing cardiologist to generalist care of myocardial infarctions and found that none of the studies took into account patient preferences, severity of comorbid disease, general health status, or resource availability. Confounding comorbidities, physical or behavioral, frequently exclude patients from the clinical trials that generate disease specific guidelines.[89,90]

Yet when primary care group practices systematically organize themselves to meet guideline standards they achieve equivalent outcomes.[91–93] It is a challenge to primary care that generalists perform better at meeting patient-centered guidelines such as exercise, diet, breastfeeding, smoking cessation, and the use of seat belts and less well at meeting disease-specific guidelines. However, patients who report having a continuous relationship with a personal care provider are very likely to receive evidence-based care.[94,95]

- Physicians will accept *accountability for continuous quality* improvement through voluntary engagement in performance measurement.

Supporting Literature

Public reporting of health care measures encourages physicians to meet benchmarks. The conundrum is that reporting variations does little to *explain* variations.[96] Fifty-five percent of generalists agree that patients should have access to performance data although there is little consensus yet on parameters.[58] Whereas the Healthplan Employer Data Information Set has more than 60 different measures (including immunizations, women's health, maternity care, behavioral health, and asthma), accuracy has been limited because the data are based on billing records. Efforts to collect data directly from the patient's primary care record have been piloted by the Wisconsin Collaboration for Health Care Quality but the lack of standard interoperability of records is challenging.[97]

Because continuity is central to patient satisfaction with, and the function of, a medical home, quality should be trended over time and include aspects of care that reflects functions of the whole team.[98] One model incorporates all office personnel (assistants, nurses, and providers) in interviews that identify perceived challenges to quality. Together the office staff and physicians rank priorities, brainstorm solutions, implement action, and monitor results.[99] The science of quality measurement in primary care is evolving and more research is needed. However, waiting for perfect measures should not delay implementation of good measures.

- *Patients actively participate* in decision making, including seeking feedback to ensure that patients' expectations are being met.

Supporting Literature

Only 36% of generalists and 20% of specialists survey their patients.[58] A recent survey of all primary care and ambulatory specialty physicians in Florida showed only modest advances in the adoption of e-mail communication, and little adherence to recognized guidelines for e-mail correspondence.[100] A study of 200 patients with rheumatoid arthritis who initiated their own follow-up found patients were significantly more confident and satisfied with their care and used fewer specialty services, including fewer hospitalizations, and saw their primary care physician as frequently as a matched control group for whom specialty care was more limited.[76] These findings again suggest that

the primary care physician's role as a gate opener and advisor may be more efficient than as a gatekeeper. Such a role requires effective communication.

- *Information technology* has potential to support optimal patient care, performance measurement, patient education, and communication.

Supporting Literature

Primary care is at a tipping point for implementation of electronic medical records. Twenty-three percent of practices currently use electronic medical records; another 23% would like to implement electronic records within the next year.[58] Electronic records have not yet automated collection of consultant reports and test results for patient visits. Eventually a system of health information management will network electronic records in offices, hospitals, and ancillary care centers within a well-protected national grid capable of managing huge amounts of data.[101]

A qualitative study of family medicine practices suggests that approximately a year after implementation, practices with electronic records initiate but struggle with effective tracking of clinical outcomes data.[102] At 5 years, practices with electronic records document more frequent testing of glycosylated hemoglobins and lipid levels but do not achieve better control.[103] High quality primary care groups find having an electronic medical record a useful tool but not essential to meeting guidelines.[104]

- Practices go through a *voluntary recognition* process by an appropriate nongovernmental entity to demonstrate that they have the capabilities to provide patient centered services consistent with the medical home model.

Successful implementation of the medical home model will necessitate recruitment of early adopting, high-performing practices that wish to be measured against benchmarks. During this period measures that lead to improved patient management can be identified and actual costs of care and savings demonstrated. Realistically, it will take years to roll out an evolution in health care of this magnitude and early innovators may be more highly motivated and successful than later implementers.[105]

- *Enhanced access* to care through systems such as open scheduling, expanded hours, and new options for communication between patients, their personal physician, and office staff.

Medical homes should be challenged to assure that patients have access to the right care at the right time in the right place, including the right specialty care. Many of these strategies are focused on viewing services from the patient's perspective, including extended hours and open access.[106–108]

E-mail or Internet-based communication promises to increase patient/physician interaction and interfere less with the patient's work schedule. To be embraced in health care, electronic communication will need to be reimbursed. Kaiser Permanente of Colorado is paying 95% of the CPT 99213 office visit fee for virtual office visits.[109] Internet-based portals are also available to provide secure communication.[110]

Demonstration Projects

Reorganization of primary health care in the United States may be reaching its own tipping point. In 2007 the UnitedHealth Group in Florida, CIGNA, Humana, Wellpoint, and Aetna began supporting primary care practices willing to incorporate quality improvement and active patient management in medical home systems.[111] North Carolina's Medicaid managed care program, North Carolina Community Care, offers a per-member/per-month management fee to physician networks that use evidence-based guidelines for at least 3 conditions, track patients, and report on performance.[112] By 2005 primary care practices realized $11 million in enhanced fees but generated savings of $231 million.[113] Erie County, NY, implemented a primary care partial capitation program in 1990 for Medicaid/Medicare patients with chronic disabilities, including substance abuse. A per-member/per-month management fee improved quality of care, decreased duplication, lowered hospitalization rates, and improved patient satisfaction while saving $1 million for every 1000 enrollees.[114] The Veterans Affairs Administration integrated information technology with a primary care-based delivery system for qualified Veterans and improved quality of care. It now costs $6,000 less per year to care for a veteran over the age of 65 than for a Medicare recipient.[115]

The Netherlands offers physicians incentives for efficiency, outcomes, and quality in a universal coverage model originally proposed for the United States.[116] Everyone must purchase basic community-rated health insurance through private insurers. The plan has improved compensation for primary care services and has improved distribution of services into previously underserved communities.[117,118]

In 2001, the United Kingdom's National Health Service contracted with general practitioners to provide medical home services to patients. By 2005 these contracts had improved quality of care.[119] The rate of improvement further accelerated when financial incentives were added in 2005.[105,120]

Limitations of This Review

Primary care practices are very complex. Each practice has a philosophy, style, and culture within which physicians and staff deliver patient care.[121] Any review of the medical home should be balanced by a concern that many practices already feel burdened by existing work demands and perceive little capacity to accept new responsibilities in patient care. Measuring outcomes further adds to the workload and may not be successful in unmotivated practices.[122] It is possible that placing additional responsibilities on a primary care visit may actually interfere with secondary detection of conditions such as skin cancers or depression.[123–125]

Finally, there are limitations in the methods used in this review. The quality of each study was subjectively determined and could not be analyzed in the aggregate because most studies and evaluations used different interventions and approaches to data collection. Studies often reflect unique characteristics of providers and patients in incomparable settings. Generalizations are possible only in light of the consistency of the conclusions drawn by a large body of work.

Reimbursing the Medical Home

Institutionalizing the medical home as the foundational approach to health delivery strategy in the United States will require a reformulation of reimbursement policy. Overall, the average salary of American physicians is 7 times greater than that of the average American worker. Primary care physicians in the United States earn 3 times the average worker's income. In most of the industrialized world the overall physician-to-average worker income ratio is 3:1.[126] The Centers for Medicare and Medicaid Services' (CMS) Resource-Based Relative Value Scale, designed in 1992 to reduce inequality between fees for primary care and payment for procedures, has failed. As structured, the committee that advises CMS has 30 members, 23 of whom are appointed by medical specialty societies.[127] This group has tended to approve procedural services resulting in increased revenues for procedural specialties.[128] Between 2000 and 2004, primary care income increased 9.9% whereas specialty incomes rose 15.8%.[129] A 2007 effort to increase primary care reimbursement improved payments by 5%, not the 37% projected by Medicare.[130]

Compounding these salary discrepancies, 40% of the primary care work load (arranging referrals, completing forms, communicating with patients, emotional support, and encouragement) is not reimbursed by a face-to-face fee-for-service methodology.[131] A sophisticated payment system would support team care, health information technology, quality improvement, e-mail and telephone consultation, and be adjusted by case mix.[132]

Where Will the Money Come From?

The need for change in the reimbursement structure has even reached the popular press. Consumer Reports blames reimbursement policies for the overuse of 10 common procedures, concluding that the US payment system discourages counseling, care coordination, and evidence-based assessment.[133] A primary care-based system may cost 30% less[134] because patients experience fewer hospitalizations, less duplication, and more appropriate use of technology.[75,135] Case-adjusted rates of hospitalizations for heart disease and diabetes are 90% higher for cardiologists and 50% higher for endocrinologists than for primary care physicians.[38,136] Even acute illnesses, such as community-acquired pneumonia, cost less for equivalent outcomes when managed by a primary care physician.[137]

Federally funded Community health centers form the largest network of primary care medical homes in the United States. In 2005 the average cost of caring for a patient in a community health center was $2,569 compared with $4,379 for the general population.[138]

Variations in expenditures from one community to another also suggest opportunities for reducing

expenditures while preserving quality. New York State and California spend over $38,000 per Medicare recipient in the last 2 years of life compared with Missouri, New Hampshire, and North Carolina, where expenditures are below $26,000.[139] If half of the expenditure variation could be captured, there would be adequate resources to provide uninsured Americans with a personal physician in a patient-centered medical home.[134zrefx]

Improved quality will also cut expenditures. An analysis by Bridges to Excellence estimated that maintaining the glycohemoglobin at 7 in a diabetic patient saves $279 a year in health costs per patient. Keeping a diabetic's low-density lipoprotein below 100 saves $369 per year, and keeping the blood pressure below 130/80 saves $494. Keeping all measures at target saves $1,059 per patient per year.[140]

Reimbursement Models

Medical practices are business entities. Rewards for change must exceed the cost of change.[141,142] A 3-component fee schedule considered by the American Academy of Family Physicians, the American Academy of Pediatrics, and the American College of Physicians would consist of (1) a fee for service (per visit); (2) a monthly management fee for practices contracting to provide medical home services; and (3) an additional bonus for reporting on quality performance goals.[143,144]

Maintaining *fee-for-service* reimbursement supports provision of essential face-to-face services. However fee-for-service reimbursement should be broadened to embrace e-mail or Web-based virtual office visits, perhaps pegging them to some proportion of a routine office visit.[109]

A *per-member/per-month management fee* for Medicaid patients with or without chronic disease was enough to trigger case management and quality reporting in the North Carolina Medicaid program.[112] In one upstate New York county the enhanced management fee for patients with both mental and physical health problems approximates $10 per member/per month.[114] Other models have paid fractional fees for specific activities such as chronic disease registries, guideline implementation, and outcomes tracking. A capitation of $5.50 per member/per month ($66 per year) is roughly half of the $110 per year savings projected by the Bridges to Excellence project for well persons enrolled in a medical home.[140] The fee would be expected to support physician management time, outcomes reporting, electronic record maintenance cost, and a full-time professionally trained case manager. Enhanced services include patient education, telephonic case management, and improved patient access.

The *quality incentive* is a pay-for-performance fee that recognizes achievement of standards of care. HMOs have traditionally relied on claims data for tracking billed procedures. The patient record is more accurate but will require new resources to harvest.[145] When paid at 3-month intervals, quality incentives are frequent enough to trigger continuous improvement efforts but spaced sufficiently to reflect impact of changes. Observation studies have confirmed that practices add staff, install electronic records, and network with community agencies to be eligible for incentives.[105,144] To be effective, criteria must be measurable, based on evidence, and amenable to medical management. Both the measures and incentives must be chosen and incentivized with care to assure providers do not simply deselect complex patients, for it is the complex patients who have the most to gain in a medical home environment.[146] Eventually, public reporting of physician data will facilitate greater patient participation and trust.[147] Studies for as long as 6 years show that appropriately selected incentives can maintain physician satisfaction, patient satisfaction, and long-term performance.[148] Incentives also reinforce the office team structure.[149]

Oversight is essential to the ultimate success of a patient centered medical home system of care. The United Kingdom established the National Institute for Health and Clinical Excellence to manage incentives and define objectives of their health system. Using full-time investigators, National Institute for Health and Clinical Excellence publishes and updates clinical appraisals on efficacy. Oversight of National Institute for Health and Clinical Excellence is provided by a board of health professionals, patients, and employers.[150]

References

1. Epstein AJ. The role of public clinics in preventable hospitalizations among vulnerable populations. Health Serv Res 2001;36:405–20.
2. Sia C, Tonniges TF, Osterhus E, Taba S. History of the medical home concept. Pediatrics 2004;113(5 Suppl):1473–8.
3. Future of Family Medicine Project Leadership

Committee. The Future of Family Medicine: a collaborative project of the family medicine community. Ann Fam Med 2004;2(Suppl 1):S3–32.

4. Barr M. The advanced medical home: a patient-centered, physician-guided model of health care. Philadelphia (PA): American College of Physicians; 2006.
5. Grumbach K, Bodenheimer T. A primary care home for Americans: putting the house in order. JAMA 2002;288:889–93.
6. Lantz PM, Lichtenstein RL, Pollack HA. Health policy approaches to population health: the limits of medicalization. Health Aff (Millwood) 2007; 26:1253–7.
7. Finch RA. An employer's guide to behavioral health services: a roadmap and recommendations for evaluating, designing, and implementing behavioral health services. Washington, DC: National Business Group on Health; 2005.
8. Enthoven AC, Crosson FJ, Shortell SM. 'Redefining health care': medical homes or archipelagos to navigate? Health Aff (Millwood) 2007;26:1366–72.
9. Engel GL. The need for a new medical model: a challenge for biomedicine. Science 1977;196:129–36.
10. Rosenthal T, Campbell-Heider N. The rural health care team. In: Geyman JP NT, Hart G, eds. Textbook of rural health care. New York: Mcgraw-Hill; 2001.
11. Bodenheimer T, Lorig K, Holman H, Grumbach K. Patient self-management of chronic disease in primary care. JAMA 2002; 288:2469–75.
12. Royal College of General Practitioners. The future direction of general practice: a roadmap. London, UK: Royal College of General Practitioners; 2007.
13. Schoen C, Osborn R, Huynh PT, et al. Primary care and health system performance: adults' experiences in five countries. Health Aff (Millwood) 2004;(Suppl Web Exclusives):W4–487-503.
14. Woolf SH, Johnson RE. The break-even point: when medical advances are less important than improving the fidelity with which they are delivered. Ann Fam Med 2005;3:545–52.
15. Green LA, Graham R, Bagley B, et al. Task Force 1. Report of the Task Force on patient expectations, core values reintegration, and the new model of family medicine. Ann Fam Med 2004;2(Supp 1):S33–S50.
16. Main DS, Tressler C, Staudenmaier A, Nearing KA, Westfall JM, Silverstein M. Patient perspectives on the doctor of the future. Fam Med 2002; 34:251–7.
17. Coulter A. What do patients and the public want from primary care? BMJ 2005;331:1199–201.
18. Beal AC, Doty MM, Henandez SE, Shea KK, Davis K. Closing the divide: how medical homes promote equity in health care. Results from the Commonwealth Fund 2006 Health Care Quality Survey. New York, NY June 2007 2006.
19. Parchman ML, Culler S. Primary care physicians and avoidable hospitalizations. J Fam Pract 1994; 39:123–8.
20. Gadomski A, Jenkins P, Nichols M. Impact of a Medicaid primary care provider and preventive care on pediatric hospitalization. Pediatrics 1998;101: E1.
21. Shi L, Macinko J, Starfield B, et al. Primary care, infant mortality, and low birth weight in the states of the USA. J Epidemiol Community Health 2004; 58:374–80.
22. Shi L, Macinko J, Starfield B, Politzer R, Wulu J, Xu J. Primary care, social inequalities, and all-cause, heart disease, and cancer mortality in US counties, 1990. Am J Public Health 2005;95:674–80.
23. Berry LL, Parish JT, Janakiraman R, et al. Patients' commitment to their primary physician and why it matters. Ann Fam Med 2008;6:6–13.
24. Moscovice I, Rosenblatt R. Quality-of-care challenges for rural health. J Rural Health 2000;16: 168–76.
25. Moore LG. Escaping the tyranny of the urgent by delivering planned care. Fam Pract Manag 2006;13: 37–40.
26. Shi L, Macinko J, Starfield B, Politzer R, Wulu J, Xu J. Primary care, social inequalities and all-cause, heart disease and cancer mortality in US counties: a comparison between urban and non-urban areas. Public Health 2005;119:699–710.
27. Fiscella K, Holt K. Impact of primary care patient visits on racial and ethnic disparities in preventive care in the United States. J Am Board Fam Med 2007;20:587–97.
28. Flocke SA, Stange KC, Zyzanski SJ. The association of attributes of primary care with the delivery of clinical preventive services. Med Care 1998;36(8 Suppl):AS21–30.
29. Ryan S, Riley A, Kang M, Starfield B. The effects of regular source of care and health need on medical care use among rural adolescents. Arch Pediatr Adolesc Med 2001;155:184–90.
30. Ebell MH, Siwek J, Weiss BD, et al. Strength of Recommendation Taxonomy (SORT): a patient-centered approach to grading evidence in the medical literature. J Am Board Fam Pract 2004;17:59–67.
31. Brody H. Edmund D. Pellegrino's philosophy of family practice. Theor Med 1997;18:7–20.
32. Groopman J. How doctors think. New York (NY): Houghton Mifflin Co.; 2007.
33. Pink DH. A whole new mind: why right-brainers will rule the future. New York (NY): Riverhead Books; 2006.
34. Saultz JW, Lochner J. Interpersonal continuity of

care and care outcomes: a critical review. Ann Fam Med 2005;3:159–66.
35. Charon R. Narrative medicine: a model for empathy, reflection, profession and trust. JAMA 2001; 286:1897–902.
36. Halpern J. From detached concern to empathy: humanizing medical practice. London: Oxford University Press; 2001.
37. Fryer GE, Jr., Consoli R, Miyoshi TJ, Dovey SM, Phillips RL Jr, Green LA. Specialist physicians providing primary care services in Colorado. J Am Board Fam Pract 2004;17:81–90.
38. Greenfield S, Nelson EC, Zubkoff M, et al. Variations in resource utilization among medical specialties and systems of care. Results from the medical outcomes study. JAMA 1992;267:1624–30.
39. Weingarten SR, Lloyd L, Chiou CF, Braunstein GD. Do subspecialists working outside of their specialty provide less efficient and lower-quality care to hospitalized patients than do primary care physicians? Arch Intern Med 2002;162:527–32.
40. Bindman AB, Forrest CB, Britt H, Crampton P, Majeed A. Diagnostic scope of and exposure to primary care physicians in Australia, New Zealand, and the United States: cross sectional analysis of results from three national surveys. BMJ 2007;334: 1261.
41. Shi L. The relationship between primary care and life chances. J Health Care Poor Underserved 1992; 3:321–35.
42. Vogel RL, Ackermann RJ. Is primary care physician supply correlated with health outcomes? Int J Health Serv 1998;28:183–96.
43. Campbell RJ, Ramirez AM, Perez K, Roetzheim RG. Cervical cancer rates and the supply of primary care physicians in Florida. Fam Med 2003;35:60–4.
44. Shi L, Macinko J, Starfield B, Xu J, Politzer R. Primary care, income inequality, and stroke mortality in the United States: a longitudinal analysis, 1985–1995. Stroke 2003;34:1958–64.
45. Starfield B, Shi L, Macinko J. Contribution of primary care to health systems and health. Milbank Q 2005;83:457–502.
46. Starfield B, Lemke KW, Bernhardt T, Foldes SS, Forrest CB, Weiner JP. Comorbidity: implications for the importance of primary care in 'case' management. Ann Fam Med 2003;1:8–14.
47. Menec VH, Sirski M, Attawar D. Does continuity of care matter in a universally insured population? Health Serv Res 2005;40:389–400.
48. Hjortdahl P, Borchgrevink CF. Continuity of care: influence of general practitioners' knowledge about their patients on use of resources in consultations. BMJ 1991;303:1181–4.
49. Higashi T, Wenger NS, Adams JL, et al. Relationship between number of medical conditions and quality of care. N Engl J Med 2007;356:2496–504.
50. Gulbrandsen P, Hjortdahl P, Fugelli P. General practitioners' knowledge of their patients' psychosocial problems: multipractice questionnaire survey. BMJ 1997;314:1014–8.
51. Hurley RE, Paul JE, Freund DA. Going into gatekeeping: an empirical assessment. QRB Qual Rev Bull 1989;15:306–14.
52. O'Malley AS, Forrest CB. Continuity of care and delivery of ambulatory services to children in community health clinics. J Community Health 1996; 21:159–73.
53. Richman IB, Clark S, Sullivan AF, Camargo CA Jr. National study of the relation of primary care shortages to emergency department utilization. Acad Emerg Med 2007;14:279–82.
54. Raddish M, Horn SD, Sharkey PD. Continuity of care: is it cost effective? Am J Manag Care 1999;5: 727–34.
55. De Maeseneer JM, De Prins L, Gosset C, Heyerick J. Provider continuity in family medicine: does it make a difference for total health care costs? Ann Fam Med 2003;1:144–8.
56. Bayliss EA, Steiner JF, Fernald DH, Crane LA, Main DS. Descriptions of barriers to self-care by persons with comorbid chronic diseases. Ann Fam Med 2003;1:15–21.
57. Kuzel AJ, Woolf SH, Gilchrist VJ, et al. Patient reports of preventable problems and harms in primary health care. Ann Fam Med 2004;2:333–40.
58. Audet AM, Davis K, Schoenbaum SC. Adoption of patient-centered care practices by physicians: results from a national survey. Arch Intern Med 2006; 166:754–9.
59. Feifer C, Nemeth L, Nietert PJ, et al. Different paths to high-quality care: three archetypes of top-performing practice sites. Ann Fam Med 2007;5: 233–41.
60. Jaen CR, Stange KC, Nutting PA. Competing demands of primary care: a model for the delivery of clinical preventive services. J Fam Pract 1994;38: 166–71.
61. Bodenheimer T, Laing BY. The teamlet model of primary care. Ann Fam Med 2007;5:457–61.
62. Phelan EA, Balderson B, Levine M, et al. Delivering effective primary care to older adults: a randomized, controlled trial of the senior resource team at group health cooperative. J Am Geriatr Soc 2007; 55:1748–56.
63. Yaggy SD, Michener JL, Yaggy D, et al. Just for us: an academic medical center-community partnership to maintain the health of a frail low-income senior population. Gerontologist 2006;46:271–6.
64. Fortin M, Bravo G, Hudon C, Vanasse A, Lapointe L. Prevalence of multimorbidity among adults seen in family practice. Ann Fam Med 2005;3:223–8.
65. Beasley JW, Hankey TH, Erickson R, et al. How many problems do family physicians manage at each encounter? A WReN study. Ann Fam Med 2004;2:405–10.

66. Parchman ML, Pugh JA, Romero RL, Bowers KW. Competing demands or clinical inertia: the case of elevated glycosylated hemoglobin. Ann Fam Med 2007;5:196–201.
67. Becker LA, Green LA, Beaufait D, Kirk J, Froom J, Freeman WL. Use of CT scans for the investigation of headache: a report from ASPN, Part 1. J Fam Pract 1993;37:129–34.
68. Rosenthal TC, Riemenschneider TA, Feather J. Preserving the patient referral process in the managed care environment. Am J Med 1996;100:338–43.
69. Spiro DM, Tay KY, Arnold DH, Dziura JD, Baker MD, Shapiro ED. Wait-and-see prescription for the treatment of acute otitis media: a randomized controlled trial. JAMA 2006;296:1235–41.
70. Calnan M, Wainwright D, O'Neill C, Winterbottom A, Watkins C. Making sense of aches and pains. Fam Pract 2006;23:91–105.
71. Jarvik JG, Hollingworth W, Martin B, et al. Rapid magnetic resonance imaging vs radiographs for patients with low back pain: a randomized controlled trial. JAMA 2003;289:2810–8.
72. Mathers N, Hodgkin P. The gatekeeper and the wizard: a fairy tale. BMJ 1989;298:172–4.
73. Franks P, Clancy CM, Nutting PA. Gatekeeping revisited–protecting patients from overtreatment. N Engl J Med 1992;327:424–9.
74. Hashem A, Chi MT, Friedman CP. Medical errors as a result of specialization. J Biomed Inform 2003; 36:61–9.
75. Franks P, Fiscella K. Primary care physicians and specialists as personal physicians. Health care expenditures and mortality experience. J Fam Pract 1998;47:105–9.
76. Hewlett S, Kirwan J, Pollock J, et al. Patient initiated outpatient follow up in rheumatoid arthritis: six year randomised controlled trial. BMJ 2005;330: 171.
77. Roos NP. Who should do the surgery? Tonsillectomy-adenoidectiomy in one Canadian Province. Inquiry 1979;16:73–83.
78. Feachem RG, Sekhri NK, White KL. Getting more for their dollar: a comparison of the NHS with California's Kaiser Permanente. BMJ 2002; 324:135–41.
79. Lindenauer PK, Rothberg MB, Pekow PS, Kenwood C, Benjamin EM, Auerbach AD. Outcomes of care by hospitalists, general internists, and family physicians. N Engl J Med 2007;357:2589–600.
80. Smith RC, Lein C, Collins C, et al. Treating patients with medically unexplained symptoms in primary care. J Gen Intern Med 2003;18:478–89.
81. Rosenthal TC, Shiffner JM, Lucas C, DeMaggio M. Factors involved in successful psychotherapy referral in rural primary care. Fam Med 1991;23: 527–30.
82. Blount A. Integrated primary care: the future of medical and mental health collaboration. New York (NY): W.W. Norton & Company; 1998.
83. Griswold KS, Greene B, Smith SJ, Behrens T, Blondell RD. Linkage to primary medical care following inpatient detoxification. Am J Addict 2007; 16:183–6.
84. Griswold KS, Servoss TJ, Leonard KE, et al. Connections to primary medical care after psychiatric crisis. J Am Board Fam Pract 2005;18:166–72.
85. Bartter T, Pratter MR. Asthma: better outcome at lower cost? The role of the expert in the care system. Chest 1996;110:1589–96.
86. Hirth RA, Fendrick AM, Chernew ME. Specialist and generalist physicians' adoption of antibiotic therapy to eradicate Helicobacter pylori infection. Med Care 1996;34:1199–204.
87. Harrold LR, Field TS, Gurwitz JH. Knowledge, patterns of care, and outcomes of care for generalists and specialists. J Gen Intern Med 1999;14:499–511.
88. Hartz A, James PA. A systematic review of studies comparing myocardial infarction mortality for generalists and specialists: lessons for research and health policy. J Am Board Fam Med 2006;19:291–302.
89. Kravitz RL, Duan N, Braslow J. Evidence-based medicine, heterogeneity of treatment effects, and the trouble with averages. Milbank Q 2004;82:661–87.
90. Rothwell PM. External validity of randomised controlled trials: "to whom do the results of this trial apply?" Lancet 2005;365:82–93.
91. James PA, Cowan TM, Graham RP, Majeroni BA, Fox CH, Jaen CR. Using a clinical practice guideline to measure physician practice: translating a guideline for the management of heart failure. J Am Board Fam Pract 1997;10:206–12.
92. Donohoe MT. Comparing generalist and specialty care: discrepancies, deficiencies, and excesses. Arch Intern Med 1998;158:1596–608.
93. Grumbach K, Selby JV, Schmittdiel JA, Quesenberry CP Jr. Quality of primary care practice in a large HMO according to physician specialty. Health Serv Res 1999;34:485–502.
94. Bindman AB, Grumbach K, Osmond D, Vranizan K, Stewart AL. Primary care and receipt of preventive services. J Gen Intern Med 1996;11:269–76.
95. Villalbi JR, Guarga A, Pasarin MI, et al. [An evaluation of the impact of primary care reform on health]. Aten Primaria 1999;24:468–74.
96. Berwick DM. Public performance reports and the will for change. JAMA 2002;288:1523–4.
97. Wisconsin Collaborative for Healthcare Quality. Wisconsin Collaborative for Healthcare Quality [Homepage]. Available from www.wchq.org. Accessed 7 May 2008.
98. Nutting PA, Goodwin MA, Flocke SA, Zyzanski SJ, Stange KC. Continuity of primary care: to whom

does it matter and when? Ann Fam Med 2003;1: 149–55.
99. Singh R, Singh A, Taylor JS, Rosenthal TC, Singh S, Singh G. Building learning practices with self-empowered teams for improving patient safety. J Health Management 2006;8:91–118.
100. Brooks RG, Menachemi N. Physicians' use of email with patients: factors influencing electronic communication and adherence to best practices. J Med Internet Res 2006;8:e2.
101. Kaushal R, Blumenthal D, Poon EG, et al. The costs of a national health information network. Ann Intern Med 2005;143:165–73.
102. Crosson JC, Stroebel C, Scott JG, Stello B, Crabtree BF. Implementing an electronic medical record in a family medicine practice: communication, decision making, and conflict. Ann Fam Med 2005;3:307–11.
103. O'Connor PJ, Crain AL, Rush WA, Sperl-Hillen JM, Gutenkauf JJ, Duncan JE. Impact of an electronic medical record on diabetes quality of care. Ann Fam Med 2005;3:300–6.
104. Mehrotra A, Epstein AM, Rosenthal MB. Do integrated medical groups provide higher-quality medical care than individual practice associations? Ann Intern Med 2006;145:826–33.
105. Campbell S, Reeves D, Kontopantelis E, Middleton E, Sibbald B, Roland M. Quality of primary care in England with the introduction of pay for performance. N Engl J Med 2007;357:181–90.
106. Parente DH, Pinto MB, Barber JC. A pre-post comparison of service operational efficiency and patient satisfaction under open access scheduling. Health Care Manage Rev 2005;30:220–8.
107. O'Connor ME, Matthews BS, Gao D. Effect of open access scheduling on missed appointments, immunizations, and continuity of care for infant well-child care visits. Arch Pediatr Adolesc Med 2006;160:889–93.
108. Kopach R, DeLaurentis PC, Lawley M, et al. Effects of clinical characteristics on successful open access scheduling. Health Care Manag Sci 2007;10: 111–24.
109. Eads M. Virtual office visits: a reachable and reimbursable innovation. Fam Pract Manag 2007;14: 20–2.
110. Medfusion, Inc. Medfusion [Homepage] Available from http://www.medfusion.net. Accessed 26 December 2007.
111. Backer L. The medical home: an idea whose time has come.again. Fam Pract Manag 2007;14:38–41.
112. NC Foundation for Advanced Health Programs, Inc. Community Care of North Carolina. Program overview. Available from http://www.communitycarenc.com/. Accessed 1 May 2008.
113. Arvantes J. Support for medical home to be focus of upcoming bill. AAFP NewsNow. September 9, 2007.
114. Rosenthal TC, Horwitz ME, Snyder G, O'Connor J. Medicaid primary care services in New York state: partial capitation vs full capitation. J Fam Practice 1996;42:362–8.
115. Moran DW. Whence and whither health insurance? A revisionist history. Health Aff (Millwood) 2005;24:1415–25.
116. Enthoven AC. Consumer-choice health plan (second of two parts). A national-health-insurance proposal based on regulated competition in the private sector. N Engl J Med 1978;298:709–20.
117. Enthoven AC, van de Ven WP. Going Dutch–managed-competition health insurance in The Netherlands. N Engl J Med 2007;357:2421–3.
118. Knottnerus JA, ten Velden GH. Dutch doctors and their patients–effects of health care reform in The Netherlands. N Engl J Med 2007;357:2424–6.
119. Campbell S, Steiner A, Robison J, et al. Do personal medical services contracts improve quality of care? A multi-method evaluation. J Health Serv Res Policy 2005;10:31–9.
120. Pollock AM, Price D, Viebrock E, Miller E, Watt G. The market in primary care. BMJ 2007;335: 475–7.
121. Crabtree BF, Miller WL, Aita VA, Flocke SA, Stange KC. Primary care practice organization and preventive services delivery: a qualitative analysis. J Fam Pract 1998;46:403–9.
122. Valderas JM, Kotzeva A, Espallargues M, et al. The impact of measuring patient-reported outcomes in clinical practice: a systematic review of the literature. Qual Life Res 2008;17:179–93.
123. Aitken JF, Janda M, Elwood M, Youl PH, Ring IT, Lowe JB. Clinical outcomes from skin screening clinics within a community-based melanoma screening program. J Am Acad Dermato. 2006;54: 105–14.
124. Fraguas R Jr, Henriques SG Jr, De Lucia MS, et al. The detection of depression in medical setting: a study with PRIME-MD. J Affect Disord 2006;91: 11–7.
125. Rodriguez GL, Ma F, Federman DG, et al. Predictors of skin cancer screening practice and attitudes in primary care. J Am Acad Dermatol 2007;57:775–81.
126. Gawande A. Complications: a surgeon's notes on an imperfect science. New York (NY): Picador USA; 2003.
127. American Medical Association. RVS Update Committee (RUC). Available from http://www.ama-assn.org/ama/pub/category/16401.html. Accessed 4 December 2007.
128. Goodson JD. Unintended consequences of resource-based relative value scale reimbursement. JAMA 2007;298:2308–10.
129. Bodenheimer T, Berenson RA, Rudolf P. The primary care-specialty income gap: why it matters. Ann Intern Med 2007;146:301–6.

130. Ginsburg PB, Berenson RA. Revising Medicare's physician fee schedule–much activity, little change. N Engl J Med 2007;356:1201–3.
131. Gottschalk A, Flocke SA. Time spent in face-to-face patient care and work outside the examination room. Ann Fam Med 2005;3:488–93.
132. Landon BE, Schneider EC, Normand ST. Quality of care in Medicaid managed care and commercial health plans. JAMA 2007;298:1674–81.
133. Reports C. Treatment traps to avoid: insured? You're money in the bank to the health care system. Consumer Reports 2007;72:12–7.
134. Mahar M. Money-driven medicine: the real reason health care costs so much. New York (NY): Harper-Collins Publishers; 2006.
135. Mark DH, Gottlieb MS, Zellner BB, Chetty VK, Midtling JE. Medicare costs in urban areas and the supply of primary care physicians. J Fam Pract 1996;43:33–9.
136. Basu J, Clancy C. Racial disparity, primary care, and specialty referral. Health Serv Res 2001;36(6 Pt 2):64–77.
137. Whittle J, Lin CJ, Lave JR, et al. Relationship of provider characteristics to outcomes, process, and costs of care for community-acquired pneumonia. Med Care 1998;36:977–87.
138. National Association of Community Health Centers. [Homepage.] Available from www.nachc.com. Accessed 28 September 2007.
139. Dartmouth Atlas of Health Care. Performance report for chronically ill beneficiaries in traditional Medicare. Available from http://www.dartmouthatlas.org/data/download/perf_reports/STATE_perf_report.pdf. Accessed 18 December 2007.
140. Bridges to Excellence. Diabetes care analysis-savings estimate. Available from http://www.bridgestoexcellence.org. Accessed 2 August 2008.
141. Casalino LP, Devers KJ, Lake TK, Reed M, Stoddard JJ. Benefits of and barriers to large medical group practice in the United States. Arch Intern Med 2003;163:1958–64.
142. Pham HH, Ginsburg PB, McKenzie K, Milstein A. Redesigning care delivery in response to a high-performance network: the Virginia Mason Medical Center. Health Aff (Millwood) 2007;26:w532–44.
143. Davis K. Paying for care episodes and care coordination. N Engl J Med 2007;356:1166–8.
144. McDonald R, Harrison S, Checkland K, Campbell SM, Roland M. Impact of financial incentives on clinical autonomy and internal motivation in primary care: ethnographic study. BMJ 2007;334:1357.
145. Pawlson LG, Scholle SH, Powers A. Comparison of administrative-only versus administrative plus chart review data for reporting HEDIS hybrid measures. Am J Manag Care 2007;13:553–8.
146. Snyder L, Neubauer RL. Pay-for-performance principles that promote patient-centered care: an ethics manifesto. Ann Intern Med 2007;147:792–4.
147. Dunbar L, Hiza D, Hoffman J, et al. Outcomes-based compensation: performance design principles. Paper presented at 4th Annual Disease Management Outcomes Summit, Rancho Mirage, California, 2004.
148. Gilmore AS, Zhao Y, Kang N, et al. Patient outcomes and evidence-based medicine in a preferred provider organization setting: a six-year evaluation of a physician pay-for-performance program. Health Serv Res 2007;42(6 Part 1):2140–59.
149. Campbell SM, McDonald R, Lester H. The experience of pay for performance in English family practice: a qualitative study. Ann Fam Med 2008;6:228–34.
150. National Institute for Health and Clinical Excellence. [Homepage.] Available from www.nice.org.uk. Accessed 2 August 2008.

Creating Medical Home Communities

Systems of Care/Patient Centered Medical Home Initiative: Physicians gather to discuss vision for the future

Sara Burnett, CMS project specialist

Karen Leamer, MD, addresses physicians during the SOC/PCMH summit.

Inside a CMS conference room on a recent Saturday morning, more than 30 physicians gathered in groups of three or four – each comprised of both specialists and primary care doctors – to talk about how they could work together to create a better health care system.

In one group were a cardiologist, an OB/GYN and a family medicine physician. In another were an urologist from Boulder and primary care doctors from Lakewood and Westminster.

Their shared vision: A system where (among other things) every patient has a long-term, trusted relationship with a physician in a medical "home"; primary care doctors and specialists communicate rapidly and effectively; quality, patient satisfaction and efficiency are improved; and physicians are rewarded for savings and better outcomes.

It's more than a healthcare daydream. The talks were part of a two-day Systems of Care/Patient Centered Medical Home Summit held Oct. 30-31, through an $893,000 grant from the Colorado Health Foundation (TCHF).

TCHF awarded the two-year grant to the Colorado Medical Society and its partners, Colorado Academy of Family Physicians; American Academy of Pediatrics, Colorado Chapter, Colorado Society of Osteopathic Medicine, Colorado Chapter of the American College of Physicians, and the Colorado Clinical Guidelines Collaborative, earlier this year.

The aim of the grant is to educate physicians about the Patient Centered Medical Home (PCMH) model, provide training and technical support to help lay the groundwork for those interested in pursuing the model, and bring together physicians from across the state to transform practices into medical homes and medical neighborhoods.

The PCMH model is included in the health reform talks happening in Washington, D.C., in large part because it has been shown to improve quality while reducing costs. Colorado and at least 43 other states already have medical home projects underway.

"Change is inevitable," Karen Leamer, MD, and chair of the Systems of Care/PCMH Initiative's Executive Steering Committee told participants at the conclusion of the summit. "We clearly need to be at the table. By being here today you're all bringing this together in a more cohesive way."

The What and Why of PCMH

Scott Hammond, MD, medical director of the SOC/PCMH Initiative, also spoke at the summit about the reasons to adopt the PCMH model and how it has worked in his practice.

The American Academy of Pediatrics created the PCMH in the 1960s as a way to better serve children with special healthcare needs. It gained popularity in recent years, and in 2007, the AAP, American Academy of Family Practice, American College of Physicians and the American Osteopathic Association came up with Joint Principles for PCMH. They are:

- Personal physician - each patient has an ongoing relationship with a personal physician trained to provide first contact, continuous and comprehensive care.
- Physician directed medical practice – the personal physician leads a team of individuals at the practice level who collectively take responsibility for the ongoing care of patients.
- Whole person orientation – the personal physician is responsible for providing for all the patient's health care needs or taking responsibility for appropriately arranging care with other qualified professionals. This includes care for all stages of life; acute care; chronic care; preventive services; and end of life care.
- Care is coordinated and/or inte-

About 30 speciailists and primary care physicians participate in the summit.

grated across all elements of the complex health care system (e.g., subspecialty care, hospitals, home health agencies, nursing homes) and the patient's community (e.g., family, public and private community-based services).

- Quality and safety are hallmarks.
- Enhanced access to care is available through systems such as open scheduling, expanded hours and new options for communication between patients, their personal physician, and practice staff.
- Payment appropriately recognizes the added value provided to patients who have a patient-centered medical home.

Across the country, the PCMH model has met with solid results, Hammond said. In North Carolina's Medicaid program, it helped save $400 million over four years. Geisinger Health System in Pennsylvania saw a 20 percent reduction in hospitalizations. "We don't have to question whether the model works," Hammond said. "It does."

Medical Neighborhood

Many advanced medical homes are spinning their wheels in terms of connecting to their communities. After he adopted the PCMH model in his own practice, Hammond said he had a great sense of accomplishment and relief. Then he realized something was missing. It was the rest of the team – the specialists, hospitals and others who could create a "medical neighborhood" with which his practice and patients could interact. "I feel like a Ferrari on a dirt road," Hammond said. "I'm ready to go … but there's no asphalt."

One of the first projects funded by the grant was a statewide poll of physicians aimed at gauging interest in and knowledge of the medical home concept and identifying barriers to adoption. Several focus groups also were conducted.

Pollster Benjamin Kupersmit revealed findings of the poll during the first night of the summit. There is a solid base of physicians interested in the PCMH model, Kupersmit said. The poll found those doctors – both primary care and specialists – are motivated largely by better patient outcomes, care coordination and patient satisfaction.

Summit participants then spent the bulk of the summit contemplating how those primary care doctors and specialists could work together to create medical communities or neighborhoods.

Several themes emerged. The neighborhood should be patient-centered, with the patient involved in decisions about his or her care and free to make his or her own choices, they said. Physicians within the neighborhood should come up with expectations for communication, and should utilize health information technology and health information exchange when possible so physicians have the information they need, when they need it. And it should all occur simultaneously with a push for payment reform.

M. Eugene Sherman, MD, welcomes physicians to the two-day event at CMS.

"We have to do this at the same time," said Marjie Harbrecht, MD, Medical/Executive Director of CCGC. "We've got to figure out, how can we do some of the culture changes in the system that we have … while we're pushing very hard for (payment reform)."

Hammond agreed, saying these projects were designed so payers "will know what they're going to get."

"In this country, they won't give you the money and say 'Go do it,'" Hammond said. "We have to show them that it's worth it."

The executive steering committee and operations committee of the SOC/PCMH Initiative will use input from the summit to create a strategic and communication plan and action plan for implementation. Another summit is expected to be held after the holidays. Early next year, resource advisers will also begin meeting one-on-one in practices, and work will begin to create a "toolbox" for practices interested in becoming a PCMH.

"I feel like a Ferrari on a dirt road. I'm ready to go … but there's no asphalt."
- Scott Hammond, MD

"The grant has served as a wake up call to our profession about the changes that are needed in the future," Leamer said. "The summit provided the momentum and cemented the leadership to make this transformation a meaningful one for our patients, for our communities and for the state."

For more information about the grant, contact: Karen Frederick-Gallegos in the CMS offices at Karen_Frederick-Gallegos@cms.org or at 720-858-6323. ■

The Colorado Health Foundation works to make Colorado the healthiest state in the nation by investing in grants and initiatives to health-related nonprofits that focus on increasing the number of Coloradans with health insurance; ensuring they have a access to quality, coordinated care; and encouraging healthy living. For more information, please visit www.ColoradoHealth.org.

HEALTH CARE REFORM

A Typology of Specialists' Clinical Roles

Christopher B. Forrest, MD, PhD

High use of specialist physicians and specialized procedures coupled with low exposure to primary care are distinguishing traits of the US health care system. Although the tasks of the primary care medical home are well established, consensus on the normative clinical roles of specialist physicians has not been achieved, which makes it unlikely that the specialist workforce is being used most effectively and efficiently. This article describes a typology of specialists' clinical roles that is based on the conceptual basis for health care specialism and empirical evaluations of the specialty referral process. The report concludes with a discussion on the implications of the typology for improving the effectiveness and efficiency of the primary-specialty care interface. *Arch Intern Med. 2009;169(11):1062-1068*

Americans' high use of specialist physicians[1] and specialized procedures[2] are distinguishing characteristics of our health care system, as is our low exposure to primary care physicians (ie, family physicians, general practitioners, general internists, and general pediatricians).[3] If current

For editorial comment see page 1024

specialist use patterns are maintained, demand will outstrip their supply as the baby boomer generation retires,[4] even though increases in the number of specialists has accounted for the majority of recent growth in physician supply.[5] Amid the discussion of how many specialists are required to meet the needs of the nation, calls for examining whether we are using the existing workforce most appropriately to meet the clinical needs of the population have been muted.

The most important role for primary care physicians is to establish a medical home for patients.[6,7] Responsibilities include ensuring that the medical home is accessible, gives continuous care over time, addresses the majority of health needs, integrates services across providers and time, and facilitates linkages with relevant community resources.[8-10] The benefits of these primary care tasks are well established empirically: better performance of the primary care medical home is strongly associated with higher levels of quality, efficiency, and better health.[6,11] Comparable consensus on the normative roles of specialist physicians has not been achieved, nor has evidence accrued on the unique contribution of specialists to health system performance.

There is no shortage of research that pits the specialist against the generalist in contests on who provides better care, although the methodological rigor of these studies has been called into question.[12] Overall, the literature suggests that care provided by specialists compared with that provided by generalists is more costly, more likely to be evidence based within their area of expertise,[13,14] and associated with poorer outcomes outside their domain area of expertise.[15] Several studies provide intriguing evidence that generalist/specialist-comanaged care for patients with chronic disease produces superior outcomes in comparison with specialists or generalists acting alone.[16-19]

The absence of clarity in the specialist physician clinical role makes it unlikely that specialists are being used effectively and efficiently. We lack agreement on the

Author Affiliation: University of Pennsylvania School of Medicine, Philadelphia.

core clinical functions of health care specialism, when patients should be referred to specialists, and how long specialists should be involved in a referral. This uncertainty is a likely contributor to the marked variation in the use of specialty care across the country.[20] Furthermore, a national study of office-based specialists found that routine follow-up of patients comprised half of all visits[21]; it is probable that some portion of these visits would be more appropriately delivered in the primary care medical home.

This article develops and describes a typology of specialists' clinical roles and associated responsibilities. The typology is based on the conceptual basis for health care specialism and empirical evaluations of the specialty referral process. It is intended to help elaborate the unique contribution of specialists to the performance of the health care delivery system. By clarifying the core clinical functions of specialists, we can begin to evaluate when these physicians are used most effectively and efficiently during episodes of referral care. The report concludes with a discussion on the implications of this typology for transforming health care at the primary-specialty care interface.

RATIONALE FOR HEALTH CARE SPECIALISM

The exponential growth in medical knowledge—more than 16 million citations in MEDLINE as of 2007—along with advances in diagnostic and therapeutic technologies have been primary drivers of health care specialism.[22] New specialties also form to address needs for more focused research programs in a narrowly defined content area.[23] Although not well established, it is possible that as patients with specific disorders survive longer, the demand for disease-specific expertise has stimulated an expansion of the market for specialists. There is little doubt that financial support for the growth in specialism has been provided by the long-standing federal commitment to fund medical training with Medicare and Medicaid Graduate Medical Education payments to academic health centers.[24]

Advice: To obtain specialist's opinion on a patient's diagnosis, abnormal laboratory or imaging study result, treatment, or prognosis

- For unusual, uncommon, and uncertain problems
- For common problems with unusual manifestations
- For problems that have failed conventional treatment
- Evaluate need for a new medication or treatment
- Get reassurance that the diagnosis is correct and/or the most effective treatments are being applied
- Patient request
- Medicolegal concerns

Technical Procedure: To obtain a technical procedure for diagnostic, therapeutic, or palliative purposes

- Minor surgery, such as excision of skin masses
- Major surgical procedures that require general anesthesia
- Invasive procedures, such as endoscopy, cardiac catheterization, and invasive radiology
- Procedures for common conditions that require the use of complex equipment (eg, optical refraction)
- Pathological evaluations
- Anesthetic interventions

Comanagement: To share the ongoing management of a patient's unstable health condition

- Long-term medical disorders that require frequent alterations in a treatment plan
- Complex anatomical problems that need multiple surgical procedures to correct congenital or acquired anomalies

Figure. Primary care physicians' reasons for making a specialty referral. Reasons for referral were derived from several studies on the specialty referral process.[29-42]

The Accreditation Council for Graduate Medical Education (ACGME) currently recognizes a total of 126 specialties and related subspecialties.[25] The value that the US health care system derives from so many different categories of medical practice is unclear. It is remarkable that there are no explicit criteria for deciding when a new subspecialty should be formed. The ACGME evaluates requests to accredit new subspecialty fellowship training programs, and these reviews use implicit criteria (ie, the judgment of experts) regarding such factors as distinctiveness of medical concepts, knowledge base, and practice.[25] An alternative approach to ensure that the US health care system derives value from a new specialty would also require a demonstration that the specialty provides previously unrealized gains in health status or more efficient use of resources.

The expertise of specialists benefits patients with uncommon problems that are seen infrequently by primary care physicians.[26] The cost, quality, and health outcome benefits of the volume-outcome relationship—concentrating the care of patients with uncommon problems with a small number of professionals or centers—are well established[27] and are an important justification for a specialty care system. The actual number of patients with a given condition that a physician needs to treat to maintain clinical competence is unknown and would be valuable in helping to define the epidemiological contours of the interface between primary and specialty care.

Specialists are problem-focused experts in the care of patients with specific disorders. Generalists sort out disease from symptom and manage the totality of patients' problems over time; they are person focused. Each month, less than 2% of individuals within a population obtain care from specialists, while virtually all health concerns are managed in home and primary care settings.[28]

When asked why they refer patients to specialists, physicians report that they need advice on diagnosis, management, or both; want a technical procedure, surgery, or psychiatric intervention to be performed; or desire to comanage a long-term health condition.[29-42] Within each of these categories, there are multiple reasons for referral (**Figure**).

TYPOLOGY OF SPECIALIST ROLES

The **Table** presents a typology of specialist roles and associated responsibilities. For a given patient, a specialist's role falls within 1 of 5 categories: (1) cognitive consultant, (2)

Table. Typology of Clinical Roles and Associated Responsibilities of Specialists

Clinical Role	Responsibilities
Cognitive consultation: provide diagnostic or therapeutic advice to reduce clinical uncertainty	Gather and interpret clinical information Perform necessary testing and imaging Interpret new data Make recommendations Timely communication of opinion
Procedural consultation: perform a technical procedure to aid diagnosis, cure a condition, identify and prevent new conditions, or palliate symptoms	Evaluate need for procedure Assess risks and benefits Ensure that patient provides informed consent Perform procedure, ensuring safety Timely communication of procedure findings
Comanager with shared care: share long-term management with a primary care physician for a patient's referred health problem	Provide evidence-based management Clarify accountability with primary care physician for management tasks related to referred health problem Timely communication of recommendations and changes in management
Comanager with principal care: assume total responsibility for long-term management of a referred health problem	Provide evidence-based management Assume full accountability for management tasks related to referred health problem Timely communication of recommendations and changes in management
Primary care physician: provides a medical home for a group of patients	Ready access to medical home Continuous care over time Comprehensive service package that meets most needs of population served Integrate care across providers and time Facilitate linkages with community resources

procedural consultant, (3) comanager with shared care, (4) comanager with principal care, and (5) primary care physician.

For both consultant roles, the specialist's involvement in the care process is short, involving a minimal number of contacts (in many cases a single visit) required to gather information, perform a procedure, interpret test results or imaging studies, and ensure that an opinion is effectively communicated. Routine monitoring is the responsibility of the referring primary care physician. However, guidelines for when a referred patient should be followed up in primary vs specialty settings are rare, which contributes to the high burden of routine follow-up care in specialists' practices.[21]

The cognitive consultant reduces medical decision-making uncertainty, empowering the primary care physician and patient to care for the referred condition outside of the specialty setting. For patients with chronic disorders, the specialist acting as cognitive consultant may provide input episodically (eg, patients with diabetes who obtain annual disease management review with an endocrinologist).

As a procedural consultant, the specialist ensures that the benefits of a procedure outweigh its risks, safely and effectively executes the procedure, and communicates results to the referring physician and patient. A gastroenterologist who evaluates the need for endoscopy for patients with persistent dyspepsia is acting as a procedural consultant by weighing the value of the information provided by the endoscopy against its associated risks and, if justified, performing the endoscopy.

With the 2 comanager roles, the specialist is involved in the ongoing care of the referred health problem, either sharing responsibility for its management (shared care) or assuming total responsibility (principal care). For all comanaged patients, the primary care physician provides a medical home that serves as the first contact site for new, unrelated health concerns, medication refills, new referrals, and shared responsibility for patient and family education.[43] The accountability for these tasks is usually not clarified during a referral, and as a result, care can be uncoordinated across the primary-specialty interface, resulting in inefficiency, waste, and physician dissatisfaction with the process.[44,45]

Approximately 1 in 10 visits made to specialists are for patients for whom they provide a medical home as a primary care physician.[21] The proportion of these specialists who are providing primary care services only vs those who mix specialty and primary care within their practice is unclear. The quality of primary care services appears to be lower when provided by specialists than by generalists.[46] For patients with highly complex, dominant chronic medical conditions (eg, end-stage renal disease, unstable congestive heart disease), an internal medicine subspecialist may appropriately act as the principal care and primary care physician.[47]

A significant concern with the mixing of primary care with specialist roles is that they require different decision-making styles. The clinical approach to a diagnostic workup depends in part on the expected likelihood of disease (ie, prior probability), which is low for primary care and high for specialty care.[48] Most health concerns newly presented to primary care physicians are being brought to medical attention for the first time and will not evolve into a serious disorder. They call for symptom rather than disease management. Primary care physicians therefore appropriately impart a cautious decision-making style, tending to "try out" different treatments and use watchful waiting as diagnostic tools.[49] New health

concerns that are presented to specialists have usually been previously evaluated by another physician, which raises the likelihood of disorder substantially. Therefore, compared with primary care physicians, specialists appropriately use a more resource intensive diagnostic style known as a "rule-out" approach, which drives to a diagnosis and disease management as rapidly as possible. It is unlikely that a single clinician can use clinical judgment that flips back and forth between patient groups with differing and unknown prior probabilities of disease. This suggests that careful attention should be given to discerning the right types of patients for whom specialists may serve as a primary care physician.

INNOVATIONS AT THE PRIMARY-SPECIALTY CARE INTERFACE

Gate keeping, utilization review, and financial incentives that managed health plans use to alter rates of specialty referral have little actual effect on use of specialists.[50,51] An alternative to these blunt organizational and financial constraints on decision making is a clinically focused approach that matches the specialist's clinical role to a patient's specialty needs. In this section, strategies and specific innovations for improving the effectiveness and efficiency of the primary-specialty interface are discussed and placed within the context of the specialist clinical role typology.

Strengthen Primary Care

The first-contact responsibility of primary care triages patients' needs to the appropriate type and level of service.[9] Effective triage of patients to specialty care is critical for health systems seeking to ensure safety by protecting patients from unnecessary specialty interventions and potential harm.[52] Patients who have a longer duration of relationship with a primary care clinician are less likely to be referred to a specialist[53] or to self-refer.[54] Strengthening primary care by linking all individuals with a primary care medical home and creating systems that support long-term relationships helps to ensure that those patients who require a consultation or comanagement relationship actually get it.

Enhancing the knowledge base and skill sets of primary care physicians, particularly for management of common problems, can improve their capacity to care for problems without referral. For example, primary care clinics with a high burden of hepatitis C or advanced liver disease may invest in building management expertise for these problems among clinicians in their practice. This can be accomplished by continuing medical education (CME), which is most effectively delivered using specialist visits to primary care practices, multimedia formats, and multiple exposures.[55] Another approach is to educate physicians using several week-long minifellowships. Surgeons have successfully used minifellowships to teach minimally invasive surgery skills.[56,57] A minifellowship in musculoskeletal conditions for British general practitioners was associated with lower use of orthopedists and higher surgical yield (ie, shift from cognitive consultation to procedural consultation) for referred patients.[58] Expansion of procedural skill sets was the top strategy that primary care physicians identified for avoiding the need for referral.[59]

Decision Support and e-Referral

The relatively passive approaches involved in distributing management guidelines or providing written feedback on referral rates have not been effective in altering the volume or types of specialty referrals made.[60] However, the electronic health record can be used to incorporate care management pathways into physician workflow to create more dynamic interactions between clinicians and information on evidence-based practices. When this type of decision support is used, rates of specialty referral increase for conditions that are underreferred.[61] Providing the right information at the point of care ought to reduce primary care clinicians' clinical uncertainty, thereby enhancing their confidence and capacity to care for a given condition in its entirety.

Some referrals could be avoided if specialists' knowledge bases were available to primary care physicians for routine queries.[59] A small number of provider organizations have implemented Web-based e-referral systems to fill this gap.[62] These systems provide rapid turnaround responses to questions, give management advice, transfer patient information, and facilitate access for patients requiring face-to-face encounters with specialists.[62] One study found that a formal system of e-mail consultation resulted in just 1 in 10 patients needing a face-to-face specialty visit.[63]

Telemedicine

Telephone hotlines have been used to make cognitive consultations readily available to primary care physicians. The state of Massachusetts provides a free service that makes cognitive consultation available to virtually all practices desiring advice on the care of children with behavioral health problems.[64] Academic health centers have established similar types of rapid telephone access to consultation for referring physicians.[65]

New medical devices are transforming conventional procedural consultation with disruptive technologies that enable primary care physicians to perform procedures previously in the scope of practice of specialists only. For example, retinopathy cameras can accurately detect diabetic retinopathy in primary care settings, reducing the rate of ophthalmology referral by 70%.[66] Video-otoscopes have been used to obtain digitized images of the still tympanic membrane, which are transmitted to otolaryngologists for review of more complex cases.[67]

Consultation via videoconferencing increases patient access to cognitive consultations, particularly for specialties for which there is constrained capacity. In stroke care requiring consultation with vascular neurologists, Internet-enabled laptop computers are superior to telephone-based communication in terms of appropriate decision making regarding thrombolytic

therapy.[68] A school-based intervention that linked children via video consultation with an asthma specialist was associated with improved asthma control.[69] Videoconferencing may also be more effective than telephone follow-up by adding clinical observation, such as parental worry, to the information exchange.[70] More research is needed to determine if video consultation can substitute for office visits among comanaged patients.

Integrating Primary-Specialty Care

Colocation of primary care and specialist physicians is the surest way to ensure effective communication and collaboration[71]; however, only approximately 1 in 10 physicians practice in multispecialty group practices.[72] Specialist outreach clinics have been used in primary care practices for medical education, cognitive consultation, procedural consultation, and comanager functions. For instance, a dermatologist who visits a primary care practice can provide cognitive consultation regarding rashes that are not responding to conventional therapy and procedural consultation regarding excision of masses outside the skill of the primary care physicians. A systematic review found that outreach clinics are effective at substituting specialist services conventionally applied in specialty clinics.[73] In addition to providing better access to both types of consultation, their impact could support shifts from principal care to comanaged shared care and from comanaged care to consultation.

In cases of physicians being separated by space or time, a shared electronic health record enhances coordination and communication by providing access to a common clinical database, facilitating interactions between health care providers through secure electronic messaging and embedding guidelines for diagnosis, treatment, and referral into the health record to better support decision making.[74] In the Colorado region of Kaiser Permanente, introduction of a common electronic medical record in multispecialty-integrated delivery systems was associated with a reduced rate of specialist use.[75]

EDUCATIONAL AND FINANCIAL BARRIERS

Much attention has been given to the roles of specialist physicians as educators and scientists.[76] Conventional postgraduate training, however, pays little heed to the structure and optimal processes of consultation and comanagement. The typology of specialist's clinical roles provides a framework for learning about when patients should be referred, methods for coordinating referrals, ways for developing effective comanaged relationships, and what it means to be a consultant. Transforming the content and approach of specialty care needs to begin with better education on the appropriate clinical roles of a given specialty for their referred patient population.

However, education alone will not be enough to ensure appropriate use of specialists. We need to fundamentally overhaul the existing pay-for-production, fee-for-service payment system that financially rewards specialists to "take over" care and perform excessive routine follow-up. Until we get these financial incentives right, we have little hope of appropriately using the expertise and skills of the specialist workforce.

There is a substantial amount of discussion and tentative movement toward paying physicians based on the content, quality, and outcomes of episodes of care, that is, clusters of services applied in the management of a specific condition.[77,78] The specialist role typology has important implications for episode-based payment. Because the impact on resource use differs between comanagement and consultation and between principal and shared care, payment for episodes will stimulate providers and their organizations to define the most appropriate role given a patient's need. For example, low-severity gastroesophageal reflux disease would be a candidate for cognitive consultation, whereas high-severity gastroesophageal reflux disease that affects the growth of a young child should be jointly managed in a shared care arrangement.

CONCLUSIONS

Specialists impart their expertise to subclasses of patients defined by a specific disorder, organ system, etiology, locus of care, or demographic group. They attend to health problems referred to them, and their skills are sought to provide advice, perform a procedure, or share in the care of patients with unstable health conditions. Their roles in the health care delivery system include cognitive consultation to reduce clinical uncertainty; procedural consultation to perform a needed test or procedure; comanagement with shared care to jointly manage treatment for patients with long-term health problems with primary care physicians; comanagement with principal care for patients with conditions they manage in their entirety; and, uncommonly, provide a primary care medical home.

A rationally organized health care system ensures that patients who can benefit from specialty care gain timely access but retains within primary care settings those patients who would not derive benefit from specialty services. We have proposed a typology of specialists' clinical roles and related responsibilities and illustrated how this framework can be used to develop and evaluate health policy and delivery system innovations that foster improvements in the quality and efficiency of care at the primary-specialty care interface.

Accepted for Publication: February 26, 2009.
Correspondence: Christopher B. Forrest, MD, PhD, University of Pennsylvania School of Medicine, 3400 Civic Center Blvd, ABR 1335, Philadelphia, PA 19104 (forrestc@email.chop.edu).
Financial Disclosure: None reported.
Funding/Support: The California HealthCare Foundation provided financial support for this article.

REFERENCES

1. Forrest CB, Majeed A, Weiner JP, Carroll K, Bindman AB. Comparison of specialty referral rates in the United Kingdom and the United States: retrospective cohort analysis. *BMJ*. 2002;325(7360):370-371.

2. Technological Change in Health Care (TECH) Research Network. Technological change around the world: evidence from heart attach care. *Health Aff (Millwood)*. 2001;20(3):25-42.
3. Bindman AB, Forrest CB, Britt H, Crampton P, Majeed A. Diagnostic scope of and exposure to primary care physician in Australia, New Zealand, and the United States: cross sectional analysis of results from three national surveys. *BMJ*. 2007;334(7606):1261.
4. Cooper RA, Getzen TE, McKee HJ, Laud P. Economic and demographic trends signal an impending physician shortage. *Health Aff (Millwood)*. 2002;21(1):140-154.
5. Organization for Economic Corporation and Development. OECD health data 2007. Organization for Economic Co-operative and Development Web site. 2007. http://www.oecd.org/document/10/0,3343,en_2649_33729_38976778_1_1_1_1,00.html. Accessed October 25, 2008.
6. Cooley WC. Redefining primary pediatric care for children with special health care needs: the primary care medical home. *Curr Opin Pediatr*. 2004;16(6):689-692.
7. Barr M, Ginsburg J. *The Advanced Medical Home: A Patient-Centered, Physician-Guided Model of Health Care: A Policy Monograph of the American College of Physicians*. Philadelphia, PA: American College of Physicians; 2006.
8. Donaldson MS, Yordy KD, Lohr KN, Vanselow NA, eds. *Primary Care: America's Health in a New Era*. Washington, DC: National Academies Press; 1996.
9. Starfield B. *Primary Care: Balancing Health Needs, Services, and Technology*. New York, NY: Oxford University Press US; 1998.
10. Rosenthal TC. The medical home: growing evidence to support a new approach to primary care. *J Am Board Fam Med*. 2008;21(5):427-440.
11. Starfield B, Shi L, Macinko J. Contribution of primary care to health systems and health. *Milbank Q*. 2005;83(3):457-502.
12. Smetana GW, Landon BE, Bindman AB, et al. A comparison of outcomes resulting from generalist vs specialist care for a single discrete medical condition: a systematic review and methodologic critique. *Arch Intern Med*. 2007;167(1):10-20.
13. Donohoe MT. Comparing generalist and specialty care: discrepancies, deficiencies, and excesses. *Arch Intern Med*. 1998;158(15):1596-1608.
14. Harrold LR, Field T, Gurwitz JH. Knowledge, patterns of care, and outcomes of care for generalists and specialist. *J Gen Intern Med*. 1999;14(8):499-511.
15. Weingarten SR, Lloyd L, Chiou CF, Braunstein GD. Do subspecialists working outside of their specialty provide less efficient and lower-quality care to hospitalized patients than do primary care physician? *Arch Intern Med*. 2002;162(5):527-532.
16. Willison DJ, Soumerai SB, McLaughlin TJ, et al. Consultation between cardiologists and generalists in the management of acute myocardial infarction: implications for quality care. *Arch Intern Med*. 1998;158(16):1778-1783.
17. Lafata JE, Martin S, Morlock R, Divine G, Xi H. Provider type and the receipt of general and diabetes-related preventive health services among patients with diabetes. *Med Care*. 2001;39(5):491-499.
18. Ayanian JZ, Landrum MB, Guadagnoli E, Gaccione P. Specialty of ambulatory care physicians and mortality among elderly patients after myocardial infraction. *N Engl J Med*. 2002;347(21):1678-1686.
19. Earle CC, Neville BA. Under use of necessary care among cancer survivors. *Cancer*. 2004;101(8):1712-1719.
20. Fisher ES, Wennberg DE, Stukel TA, Gottlieb DJ, Lucas FL, Pinder EL. The implications of regional variations in Medicare spending, part 1: the content, quality, and accessibility of care. *Ann Intern Med*. 2003;138(4):273-287.
21. Valderas JM, Starfield B, Forrest CB, Sibbald B, Roland M. Ambulatory care provided by office-based specialists in the United States. *Ann Fam Med*. 2009;7(2):104-111.
22. Mullan F. Time-capsule thinking: the health care workforce, past and future. *Health Aff (Millwood)*. 2002;21(5):112-122.
23. Block RW, Palusci VJ. Child abuse pediatrics: a new pediatric subspecialty. *J Pediatr*. 2006;148(6):711-712.
24. Iglehart JK. Medicare, graduate medical education, and new policy direction. *N Engl J Med*. 2008;359(6):643-650.
25. Accreditation council for graduate medical education. Policies and procedures. February 9, 2009. http://www.acgme.org/acWebsite/about/ab_ACGMEPoliciesProcedures.pdf. Accessed October 25, 2008.
26. Forrest CB, Reid RJ. Prevalence of health problems and primary care physicians' specialty referral decisions. *J Fam Pract*. 2001;50(5):427-432.
27. Halm EA, Lee C, Chassin MR. Is volume related to outcome in health care? a systematic review and methodologic critique of the literature. *Ann Intern Med*. 2002;137(6):511-520.
28. Green LA, Fryer GE Jr, Yawn BP, Lanier D, Dovey SM. The ecology of medical care revisited. *N Engl J Med*. 2001;344(26):2021-2025.
29. Forrest CB, Glade GB, Baker AE, Bocian AB, Kang M, Starfield B. The pediatric primary-specialty care interface: how pediatricians refer children and adolescents to specialty care. *Arch Pediatr Adolesc Med*. 1999;153(7):705-714.
30. Williams TF, White KL, Andrews LP, et al. Patient referral to a university clinic: patterns in a rural state. *Am J Public Health Nations Health*. 1960;50(10):1493-1507.
31. Carey K, Kogan WS. Exploration of factors influencing physician decisions to refer patients to mental health services. *Med Care*. 1971;9(1):55-66.
32. Metcalfe DH, Sischy D. Patterns of referral from family practice. *N Y State J Med*. 1973;73(12):1690-1694.
33. Shortell SM. Determinants of physician referral rates: an exchange theory approach. *Med Care*. 1974;12(1):13-31.
34. Askham J. Professionals' criteria for accepting people as patients. *Soc Sci Med*. 1982;16(24):2083-2089.
35. Ludke RL. An examination of the factors that influence patient referral decisions. *Med Care*. 1982;20(8):782-796.
36. Dowie R. *General Practitioners and Consultants: A Study of Outpatient Referrals*. London, England: King Edward's Hospital Fund for London; 1983.
37. Halvorsen JG, Kunian A. Radiology in family practice: experience in community practice. *Fam Med*. 1988;20(2):112-117.
38. Coulter A, Noone A, Goldacre M. General practitioners' referrals to specialist outpatient clinics, I: why general practitioners' refer patients to specialist outpatient clinics. *BMJ*. 1989;299(6694):304-306.
39. Langley GR, MacLellan AM, Sutherland HJ, Till JE. Effect of nonmedical factors on family physicians' decisions about referral for consultation. *CMAJ*. 1992;147(5):659-666.
40. McCrindle BW, Shaffer KM, Kan JS, Zahka KG, Rowe SA, Kidd L. Factors prompting referral for cardiology evaluation of heart murmurs in children. *Arch Pediatr Adolesc Med*. 1995;149(11):1277-1279.
41. Brock C. Consultation and referral patterns of family physicians. *J Fam Pract*. 1977;4(6):1129-1137.
42. Tabenkin H, Oren B, Steinmetz D, Tamir A, Kitai E. Referrals of patients by family physicians to consultants: a survey of the Israeli family practice research network. *Fam Pract*. 1998;15(2):158-164.
43. Miller MR, Forrest CB, Kan JS. Parental preferences for primary and specialty care collaboration in the management of teenagers with congenital heart disease. *Pediatrics*. 2000;106(2, pt 1):264-269.
44. Forrest CB, Glade GB, Baker AE, Bocian A, von Schrader S, Starfield B. Coordination of specialty referrals and physician satisfaction with referral care. *Arch Pediatr Adolesc Med*. 2000;154(5):499-506.
45. Bodenheimer T. Coordinating care—a perilous journey through the health care system. *N Engl J Med*. 2008;358(10):1064-1071.
46. Rosenblatt RA, Hart LG, Baldwin L, Chan L, Schneeweiss R. The generalist role of specialty physicians: is there a hidden system of primary care? *JAMA*. 1998;279(17):1364-1370.
47. Bender FH, Holley JL. Most nephrologists are primary care providers for chronic dialysis patients: results from a national survey. *Am J Kidney Dis*. 1996;28(1):67-71.
48. Sox HC Jr, Hickam DH, Marton KI, et al. Using the patient's history to estimate the probability of coronary artery disease: a comparison of primary care and referral practices. *Am J Med*. 1990;89(1):7-14.
49. Rosenthal TC, Riemenschneider TA, Feather J. Preserving the patient referral process in the managed care environment. *Am J Med*. 1996;100(3):338-343.
50. Ferris TG, Chang Y, Blumenthal D, Pearson SD. Leaving gatekeeping behind—effects of opening access to specialists for adults in a health maintenance organization. *N Engl J Med*. 2001;345(18):1312-1317.
51. Forrest CB, Nutting P, Werner JJ, Starfield B, von Schrader S, Rohde C. Managed health plan effects on the specialty referral process: results from the ambulatory sentinel practice network referral study. *Med Care*. 2003;41(2):242-253.
52. Franks P, Clancy CM, Nutting PA. Gatekeeping revisited—protecting patients from over treatment. *N Engl J Med*. 1992;327(6):424-429.
53. Jabaaij L, de Bakker DH, Schers HJ, Bindels PH, Dekker JH, Schellevis FG. Recently enlisted patients in general practice use more health care resources. *BMC Fam Pract*. 2007;8:64.
54. Braun BL, Fowles JB, Forrest CB, Kind EA, Foldes SS, Weiner JP. Which enrollees bypass their gatekeepers in a point-of-service plan? *Med Care*. 2003;41(7):836-841.
55. Marinopoulos SS, Dorman T, Ratanawongsa N, et al. Effectiveness of continuing medical education. *Evid Rep Technol Assess (Full Rep)*. 2007;149(149):1-69.
56. McIntyre T, Jones JB. Training methods for minimally invasive bariatric surgery. *Surg Technol Int*. 2005;14:57-60.
57. Cottam D, Holover S, Mattar SC, et al. The mini-

fellowship concept: a six-week focused training program for minimally invasive bariatric surgery. *Surg Endosc*. 2007;21(12):2237-2239.
58. Duckett S, Casserly H. Orthopedic GP fellowship: does it work? *Ann R Coll Surg Engl*. 2003; 85(3):195-196.
59. Donohoe MT, Kravitz RL, Wheeler DB, Chandra R, Chen A, Humphries N. Reasons for outpatient referrals from generalists to specialists. *J Gen Intern Med*. 1999;14(5):281-286.
60. Grimshaw JM, Winkens RAG, Shirran L, et al. Interventions to improve outpatient referrals from primary care to secondary care. *Cochrane Database Syst Rev*. 2005;(3):CD005471.
61. Safran C, Rind DM, Davis RB, et al. Guidelines for management of HIV infection with computer-based patient's record. *Lancet*. 1995;346(8971): 341-346.
62. Metzger J, Zywiak W. Bridging the care gap: using web technology for patient referrals. California HealthCare Foundation Web site. September 2008. http://www.chcf.org/topics/view.cfm?itemid=133761. Accessed October 24, 2008.
63. Bergus GR, Emerson M, Reed DA, Attaluri A. Email teleconsultations: well formulated clinical referrals reduce need for clinical consultation. *J Telemed Telecare*. 2006;12(1):33-38.
64. Connor DF, McLaughlin TJ, Jeffers-Terry M, et al. Targeted child psychiatric services: a new model of pediatric primary clinician—child psychiatry collaborative care. *Clin Pediatr (Phila)*. 2006;45 (5):423-434.
65. Rayburn WF, Crosby WM, Thurnau GR, Fishburne JI, Stanley JR, Coleman FH. A statewide, toll-free telephone service to improve obstetric care. *J Okla State Med Assoc*. 1995;88(8):342-344.
66. Farley TF, Mandava N, Prall FR, Carsky C. Accuracy of primary care clinicians in screening for diabetic retinopathy using single-image retinal photography. *Ann Fam Med*. 2008;6(5):428-434.
67. Eikelboom RH, Mbao MN, Coates HL, Atlas MD, Gallop MA. Validation of tele-otology to diagnose ear disease in children. *Int J Pediatr Otorhinolaryngol*. 2005;69(6):739-744.
68. Meyer BC, Raman R, Hemmen T, et al. Efficacy of site-independent telemedicine in the STRokE DOC trial: a randomized, blinded, prospective study. *Lancet Neurol*. 2008;7(9):787-795.
69. Bergman DA, Sharek PJ, Ekegren K, Thyne S, Mayer M, Saunders M. The use of telemedicine access to schools to facilitate expert assessment of children with asthma [published online November 19, 2007]. *Int J Telemed Appl*. doi:10.1155/2008/159276.
70. Morgan GJ, Craig B, Grant B, Sands A, Doherty N, Casey F. Home videoconferencing for patients with severe congenital heart disease following discharge. *Congenit Heart Dis*. 2008;3(5):317-324.
71. Valenstein M, Klinkman M, Becker S, et al. Concurrent treatment of patients with depression in the community: provider practices, attitudes, and barriers to collaboration. *J Fam Pract*. 1999; 48(3):180-187.
72. Hing E, Burt CW. Office-based medical practices: methods and estimates from the national ambulatory medical care survey. *Adv Data*. 2007; 383(383):1-15.
73. Gruen RL, Weeramanthri TS, Knight SE, Bailie RS. Specialist outreach clinics in primary care and rural hospital settings. *Cochrane Database Syst Rev*. 2004;(1):CD003798.
74. Shekelle PG, Morton SC, Keeler EB. Costs and benefits of health information technology: evidence report/technology assessment No. 132 (prepared by the Southern California Evidence-Based Practice Center under contract no. 290-02-0003). Rockville, MD: Agency for Healthcare Research and Quality; April 2006. AHQR publication 06-E006.
75. Garrido T, Jamieson L, Zhou Y, Wiesenthal A, Liang L. Effect of electronic health records in ambulatory care: retrospective, serial, cross sectional study. *BMJ*. 2005;330(7491):581.
76. Balistreri WF, Jobe A, Boat TF. Pediatric subspecialty training fellowships at Cincinnati children's hospital medical center (CCHMC). *J Pediatr*. 2005;147(3):277-278.
77. Prometheus Payment Inc Web site. http://www.prometheuspayment.org/. Accessed October 25, 2008.
78. Davis K. Paying for care episodes and care coordination. *N Engl J Med*. 2007;356(11):1166-1168.

Specialty Office:
Points Possible `100: Points Received: 48
Total % Received: 48%
Neighbor Designation: ACTION PLAN

80-100%: Preferred Medical Neighbor
60-79%: Medical Neighbor
<60%: ACTION PLAN; needs improvement; reassess next cycle**
Must Have requires ≥ 2.5 points

Medical Neighborhood Score Card

		Always or almost always (5)	Usually (2.5)	Occassionally (0)	Rarely (-5)	N/A	Final Score	Comments
SUBJECT								
Transition of Care						13		
1a	Determines or confirms insurance eligibility	5				5		
1b Must Have	Ease of Communication		2.5			2.5		
1c	Communicates readily with PCP on pre-referral workup	5				5		
Access						10		
2a	Insurance Participation			0		0		
2b	No-show notification			0		0		
2c	Access to scheduling		2.5			2.5		
2d Must Have	Provides list of 'neighborhood' providers	5				5		
2e Must Have	First visit with physician		2.5			2.5		
2f	Readily available to PCP for questions/help			0		0		
Collaborative Care Management						13		
3a Must Have	TCR sent to PCP in a timely manner		2.5			2.5		
3b	Sends complete TCR		2.5			2.5		
3c	Notifies PCP of major interventions		2.5			2.5		
3d	Prescribes pharmaceuticals in line with insurance formulary			0		0		
3e Must Have	Confers with PCP prior to secondary referral			0		0	ACTION PLAN NEEDED; Not in agreement with Compact	
3f	Provides respectful feedback	5				5		
Patient Commucation						13		
4a	Patient Complaints		2.5			2.5		
4b Must Have	Informs patient of diagnosis and follow-up		2.5			2.5		
4c	Provides written or educational material			0		0		
4d	Responds to patient phone calls	5				5		
4e	Participates with care team when indicated		2.5			2.5		
TOTAL POINTS RECEIVED						48		

***N/A** indicates the element was not scored because inadequate information was available to make an assessment. "Points Possible" reflects this adjustment.
******All specialty offices **must pass all MUST HAVE** elements to be designated a Medical Neighbor, otherwise, <60% is automatically assigned to the office. An **ACTION PLAN** or supplemental information is recommended.

☐ Included
O Missing

Transition of Care Record
Specialist Checklist

1. **Practice details**
   - ☐ O **Practice name and address**
   - ☐ O **Contact numbers (regular, emergency, fax, e-mail)**
2. **Patient demographics**
   - ☐ O **Patient name,**
   - ☐ O **Identifying and contact information,**
   - ☐ O **Insurance information,**
   - ☐ O **PCP designation.**
3. **Communication**
   - ☐ O **<u>Communication preference</u> --Mail, fax, phone call, e-mail**
4. **Diagnosis**
   - ☐ O **ICD-9 codes for diagnoses**
5. **Clinical Data provided:**
   - ☐ O **Problem list**
   - ☐ O **Current medications**
   - ☐ O **Pertinent labs and diagnostics tests**
   - ☐ O **Medical/surgical history**
   - ☐ O **List of other medical providers**
6. **Recommendations**
   - ☐ O **<u>Consultation/Co-management</u> - communicate opinion and recommendations for further diagnostic testing/imaging, additional referrals and/or treatment. Develop an evidence-based care plan with responsibilities and expectations of the specialist and primary care physician that clearly outline:**
     - **new or changed diagnoses**
     - **medication or medical equipment changes, refill and monitoring responsibility.**
     - **recommended timeline of future tests, procedures or secondary referrals and who is responsible to institute, coordinate, follow-up and manage the information.**
     - **secondary diagnoses.**
     - **patient goals, input and education provided on disease management .**
     - **care teams and community resources.**
7. **Procedures**
   - ☐ O **<u>Technical Procedure</u> – summarize the need for procedure, risks/benefits, the informed consent and procedure details with timely communication of findings and recommendations.**
8. **Follow-up status**
   - ☐ O **<u>Follow-up</u> – Specify time frame for next appointment to PCP and specialist. Define collaborative relationship (Consultation, Shared management, Technical procedure, Transfer of care) and individual responsibilities.**

		Points Available	Points Received		
Practice Details					
1a **Must Have**	Specialist Name and Address	5			
1b **Must Have**	Regular Number	5			
1c	Emergency Number	2			
Patient Demographics					
2a **Must Have**	Patient Name	5			
2b **Must Have**	DOB	5			
2c	Contact Information	2			
2d	Insurance Information	2			
2e **Must Have**	PCP Designation	5			
Communication Preference					
3a	Phone, Fax, Letter, Email	3			
Diagnoses					
4a	ICD 9 Codes	5			
Clinical Data					
5a **Must Have**	Diagnoses/Problem list	5			
5b **Must Have**	Medical/Surgical history	5			
5c **Must Have**	Current Medications	5			
5d **Must Have**	Labs and Diagnostic tests	5			
5e	List of other providers	5			
Recommendations					
6a **Must Have**	New or changed diagnoses	5			
6b **Must Have**	Medication or medical equipment changes	5			
6c **Must Have**	Recommended timeline for future tests, procedures, or secondary referrals; who is responsible to institute, coordinate, followup and manage the information	5			
6d	Secondary diagnoses	4			
6e **Must Have**	Patient goals, input and eduation materials provided on a disease state and management	5			
6f	Care teams and community resources	3			
6g	Technical procedures	4			
Followup status					
7a **Must Have**	Consultaton, co-management with principle care of the disease, co-management with share care of the disease, specialty medical home network, technical procedure	5			
Total Possible Points		100			

Creating Medical Home Communities

MEDICAL NEIGHBORHOOD
Patient Survey

	Yes	No
1. Have you been referred to a Specialist in the last **12 months by our practice?**		
2. **If No to #1**, are you aware of the "Medical Neighborhood" Specialists that work with our practice?		
3. **If Yes to #1**, are you aware of the "Medical Neighborhood" Specialists that work with our practice?		

If Yes to #1, please continue with the following questions.	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**	**N/A**
4. Our practice explained why you were seeing a Specialist and you understood this reason clearly.						
5. You did not have difficulty scheduling your appointment with the Specialist you were referred to.						
6. You did not have to wait a long time on the phone to schedule your appointment with the Specialist.						
7. You were able to schedule an appointment with the Specialist according to your needs for visit time. (Example: within 2-4 weeks of calling the Specialist)						
8. The staff at the Specialist office was helpful, respectful, and caring when you scheduled your appointment with the Specialist.						
9. You felt like our practice communicated with your Specialist prior to your Specialist appointment regarding your health.						
10. You were seen on time for your appointment with the Specialist.						
11. The staff treated you with dignity and respect while at your Specialist appointment.						
12. The Specialist asked and listened to your concerns and goals for your health.						
13. The Specialist informed you of your diagnosis and treatment plan for care.						
14. You understood the care plan the Specialist recommended.						
15. The Specialist or the staff was accessible for your phone calls, questions, or concerns.						
16. You would recommend the Specialist to other family and friends if they needed the same care.						

Medical Neighborhood PCP Score Card

Specialist or Group _____

Date _____

	Always or almost always	Usually	Occasionally	Rarely	Comments
Points Possible	**5**	**2.5**	**0**	**-5**	
Transition of care					
Sends complete patient information					
Orders appropriate tests prior to referral					
Informs patient of need, purpose, expectations and goals of the specialty visit					
Access					
No-show patient F/U					
Requests appointments with reasonable time frames					
Readily available to specialist for questions/help					
Collaborative Care Management					
Follows practice guidelines and/or specialist care plan					
Provides respectful feedback					
Patient Communication					
Responds to patient phone calls					
Participates with care team when indicated					

Total Points_____

Types of Care Transition

(from the American College of Physicians)

1. **Scenario:** A PCP has a 26-year-old patient with a single lesion he suspects is a MRSA carbuncle and who has a sulfa allergy.
   Action: He contacts his Infectious Disease consultant who gives him advice regarding how to treat the patient.
   a. Pre-consultation exchange
   b. Consultation
   c. Co-Management with Shared Care
   d. Co-Management with Principle Care of the disease
   e. Co-Management with Principle Care of the patient
   f. Technical Procedure

2. **Scenario:** A PCP calls an oncologist concerning a patient with a palpable liver and a history of colon cancer surgery 5 years previous.
   Action: There is clear acknowledgement between both physicians that the patient will need to be seen by an oncologist, however they are able to prioritize studies prior to the visit.
   a. Pre-consultation exchange
   b. Consultation
   c. Co-Management with Shared Care
   d. Co-Management with Principle Care of the disease
   e. Co-Management with Principle Care of the patient
   f. Technical Procedure

3. **Scenario:** A PCP physician has a 26-year-old patient with recurrent and persistent MRSA carbuncles, some of which have required surgical drainage. The patient has not responded to the PCP attempts at preventing recurrences.
   Action: The PCP sends the patient to his Infectious Disease consultant for recommendations.
   a. Pre-consultation exchange
   b. Consultation
   c. Co-Management with Shared Care
   d. Co-Management with Principle Care of the disease
   e. Co-Management with Principle Care of the patient
   f. Technical Procedure

4. **Scenario:** A patient with chronic hepatitis C and hepatic steatosis with known early fibrosis in whom prior antiviral therapy had been unsuccessful is seen by the hepatologist for help with management. The patient has concomitant diabetes mellitus and dyslipidemia requiring insulin secretagogue and statin therapy, which is managed by PCP. Liver associated enzymes remain abnormal, but no active hepatology interventions are imminent.
   Resolution: Annual follow-up and a care plan is recommended by the hepatologist and responsibility for long-term outcome is shared between PCP and specialist.

a. Pre-consultation exchange
b. Consultation
c. Co-Management with Shared Care
d. Co-Management with Principle Care of the disease
e. Co-Management with Principle Care of the patient
f. Technical Procedure

5. **Scenario:** A transplant hepatologist would primarily manage the multisystem complications of a post-liver transplant patient in the first post-transplant year. The transplant hepatologist would also take care of secondary referrals (renal, infectious disease, cardiology), if necessary.
   Resolution: Gradual transition back to primary management by the PCP would be initiated after stabilization of acute issues by the specialist.
   a. Pre-consultation exchange
   b. Consultation
   c. Co-Management with Shared Care
   d. Co-Management with Principle Care of the disease
   e. Co-Management with Principle Care of the patient
   f. Technical Procedure

6. **Scenario:** A PCP has a patient with papillary thyroid cancer with nodal mets at the time of presentation. His post operative management was arranged by the endocrinologist who is now following his thyroid hormone suppressive therapy and monitoring disease status. The endocrinologist orders the tests for neck US and TG panel and TSH. He/She orders, refills and adjusts the LT4 doses. If the patient obtains a TSH from another provider or as part of a health fair, the patient knows that only the endocrinologist is to make adjustments in the LT4 dose.
   Resolution: The patient sees his PCMH for all other issues.
   a. Pre-consultation exchange
   b. Consultation
   c. Co-Management with Shared Care
   d. Co-Management with Principle Care of the disease
   e. Co-Management with Principle Care of the patient
   f. Technical Procedure

Answers:
1) a 2) a 3) b 4) c 5) e 6) d

Westminster Medical Clinic
Phone 303.487.5171
Fax 303.487.5196
Patient-Centered Medical Home
NCQA Level III Recognized (June 2009 – June 2012)

Westmed Family Healthcare
Phone 303.457.4497
Fax #: 303.254.4369

"Transforming Healthcare One Neighborhood at a Time."

To: _____

Fax: _____ Date: _____

Patient: _____

From: _____

Integrated & Coordinated Care

SOC – Patient-Centered Medical Home Neighborhood Initiative

- *Contact **Westminster Medical Clinic** to join our PCMH-Neighborhood!*

Features of a Medical Home

- *Whole-person orientation of care*
- *Promotes greater access to scheduling visits*
- *Focuses on care coordination*
- *Promotes prevention programs & chronic disease management*
- *Uses evidence-based medicine and treatment protocols*
- *Emphasizes patient self-management goals*
- *Electronic health records*

Transition of Care Record Checklist
MAs

Instructions: 1) Add elements in shaded box to TCR

1. Practice details
   - ☐ Practice name and address
   - ☐ Contact numbers (regular, emergency, fax, e-mail)
2. Patient demographics
   - ☐ Patient name,
   - ☐ Identifying and contact information,
   - ☐ Insurance information,
   - ☐ PCP, referring provider and contact information.
3. Diagnosis
   - ☐ ICD-9 code
4. Query/Request
   - ☐ Provide a clear clinical reason for patient transfer and anticipated goals of care and interventions.
5. Clinical Data provided:
   - ☐ Problem list

ADD:

- ☐ **Medical and surgical history**
- ☐ **Current medication**
- ☐ **Immunizations**
- ☐ **Allergy/contraindication list**
- ☐ **Caregiver status**
- ☐ **Advanced directives**

   - ☐ Care plan
   - ☐ Patient cognitive status
   - ☐ Pertinent labs and diagnostics tests
   - ☐ List of other medical providers
6. Type of transition of care
   - ☐ Consultation, Shared management, Technical procedure, Transfer of care
7. Visit status
   - ☐ Routine, urgent, emergent (specify time frame).
8. Follow-up request
   - ☐ Mail, fax, phone call, e-mail

Transition of Care Record Checklist
Providers

Instructions: Add red elements in shaded box to designated location in [black brackets]**.**

1. Practice details
   - ☐ Practice name and address
   - ☐ Contact numbers (regular, emergency, fax, e-mail)
2. Patient demographics
   - ☐ Patient name,
   - ☐ Identifying and contact information,
   - ☐ Insurance information,
   - ☐ PCP, referring provider and contact information.
3. Diagnosis
   - ☐ ICD-9 code

4. Query/Request
- ☐ **Provide a clear clinical reason for patient transfer and anticipated goals of care and interventions.** [Referral(Outgoing) → Diagnosis/Reason]

5. Clinical Data provided:
   - ☐ Medical and surgical history
   - ☐ Current medication
   - ☐ Immunizations
   - ☐ Allergy/contraindication list
   - ☐ Caregiver status
   - ☐ Advanced directives

- ☐ **Problem list** [Progress Note → Problem List OR Medical Summary Attachment]
- ☐ **Care plan** [Progress Note → Treatment]
- ☐ **Patient cognitive status** [Referral → Diagnosis → Browse OR Exam → Neuro]
- ☐ **Pertinent labs and diagnostics tests** [Referral → Diagnosis/Reason → Attachments]
- ☐ **List of other medical providers** [Progress Note → Medical History]

6. Type of transition of care
- ☐ **Consultation, Shared management, Technical procedure, Transfer of care** [Referral → Diagnosis →Browse]

7. Visit status
- ☐ **Routine, urgent, emergent (specify time frame)** [Referral →Diagnosis→Browse]

8. Follow-up request
- ☐ **Mail, fax, phone call, e-mail** [Referral → Diagnosis → Browse]

Transition of Care Record Checklist
Referral Coordinator

Instructions: 1) Add elements in shaded box to TCR
2) Verify all other elements are present; if not, send back to appropriate person

1. Practice details — *Should be automatic*
   - ☐ Practice name and address
   - ☐ Contact numbers (regular, emergency, fax, e-mail)
2. Patient demographics
   - ☐ Patient name,
   - ☐ Identifying and contact information,
   - ☐ Insurance information,
   - ☐ PCP, referring provider and contact information.
3. Diagnosis
   - ☐ ICD-9 code

4. Query/Request — *Providers*
   - ☐ Provide a clear clinical reason for patient transfer and anticipated goals of care and interventions.

5. Clinical Data provided: — MAs
   - ☐ Medical and surgical history
   - ☐ Current medication
   - ☐ Immunizations
   - ☐ Allergy/contraindication list
   - ☐ Caregiver status
   - ☐ Advanced directives

- ☐ **Relevant notes**
  - Includes previous office visit, recent hospitalization and labs/DI for previous 2 months unless otherwise specified.
- ☐ **Pertinent labs and diagnostics tests (if not added by provider)**

- ☐ Problem list — *Providers*
- ☐ Care plan
- ☐ Patient cognitive status
- ☐ Pertinent labs and diagnostics tests
- ☐ List of other medical providers

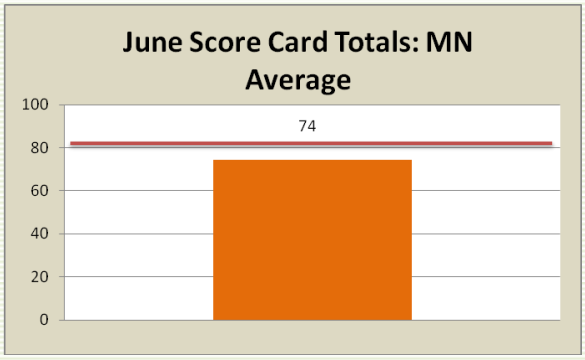
6. Type of transition of care
   - ☐ Consultation, Shared management, Technical procedure, Transfer of care
7. Visit status
   - ☐ Routine, urgent, emergent (specify time frame).
8. Follow-up request
   - ☐ Mail, fax, phone call, e-mail

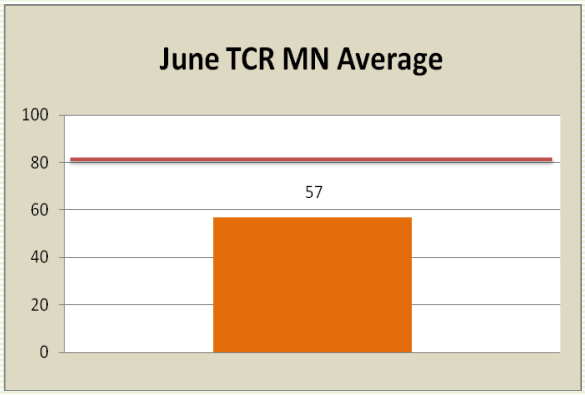
July 2010

Westminster Medical Clinic
Medical Neighborhood

Preferred Medical Neighbor:
~ Restoration Plastic Surgery PC
Medical Neighbor:
~ Denver Dermatology Consultants
~ Neurospecialty Associates PC
~ Panorama Orthopedics, Westminster
~ Rocky Mtn Cancer Centers, Thornton
~ Rocky Mtn Cardiovascular Associates
Neighbors with Action Plans or Pending:
~ Center for Spinal Disorders
~ Rocky Mtn Gastroenterology
~ North Denver Pulmonary
~ Front Range Surgical
~ Western Nephrology

Please feel free to refer to any of your Neighbors! They all have a similar standard of care.





Next Issue: September 2010

- The Medical Neighborhood Block Party

- **FYI: The next Score Card cycle will be in September!!!**

Creating Medical Home Communities — Systems of Care/Patient Centered Medical Home Initiative

Dear Neighbors, July 13, 2010

I hope I find you all doing well. A hardy thank you goes to your staff and providers for participating in the Medical Neighborhood. We, at Westminster Medical Clinic, are very grateful—as our patients are—for your participation! After surveying patients referred to your offices, patients reported that they enjoyed each of your offices very much. Patients feel that your staff is engaging, caring, and sincere. Most patients had a good understanding of their treatment plans when they left your offices.

As for the Score Card, the major section needing improvement was the *Transition of Care Record*. We would really like to help each of your offices improve this section of your Score Card. I surveyed *Records* from each of your offices and found common threads absent in each. This is a critical piece of being a Medical Neighbor—improving bi-directional communication. At Westminster Medical Clinic, our goal is to help our Neighborhood reach 80% proficiency. The graphs left show that the Medical Neighborhood Pilot Score Card average and The *Transition of Care Record* average: 74 and 57 points respectively. See the attached page for the "Must Have(s)" of the *Transition of Care Record*! We waived the last "Must Have" for this Score Card cycle but will not do so for the September Score Card. Please focus your attention on this element of our agreement.

EXCITING NEWS!!! Dr. Hammond and I are speaking about the Medical Neighborhood experience to the healthcare community around the state, nationally, and possibly internationally!!! I presented the Westminster Medical Neighborhood program to the other 15 Patient-Centered Medical Homes in Colorado in June at the Health TeamWorks *IPIP/PCMH Shared Learning Collaborative*. At the end of June, Dr. Paul Grundy, IBM Global Wellbeing Services and Health Benefits, Director of Healthcare, Technology, and Strategic Initiatives, Adrienne White, Managing Consultant, IBM Global Business Services, Healthcare Practice Business Analytics and Optimization, Dr. Frank deGruy, University of Colorado School of Medicine, Department of Family Medicine Chair and Professor, and Dr. Larry Green, University of Colorado School of Medicine, Professor of Family Medicine and Epperson-Zorn Chair for Innovation in Family Medicine visited Westminster Medical Clinic. We presented to them how Westminster implemented the Patient-Centered Medical Home model of care and developed the Medical Neighborhood pilot. The four of them were excited and impressed with this level of coordinated care.

Recently, Dr. Hammond was accepted as a lecturer for the *2010 American Academy of Family Physicians Scientific Assembly* in October in Denver. Dr. Hammond will be presenting, Implementing Care Coordination and building the Medical Neighborhood. Dr. Hammond submitted a similar proposal for the *12th Annual International Summit on Improving Patient Care in the Office Practice and the Community,* an Institute for Healthcare Improvement annual conference. You all are pioneering this pilot alongside Westminster . . . let's make it even more successful!

Gratefully,
Caitlin
Westminster Medical Clinic, PCMH Project Manager
caitlinbarba@yahoo.com

		Points Available	Points Received		
Practice Details					
1a **Must Have**	Specialist Name	5			
1b **Must Have**	Regular Number	5			
1c	Emergency Number	2			
Patient Demographics					
2a **Must Have**	Patient Name	5			
2b **Must Have**	DOB	5			
2c	Identifying and contact information	2			
2d	Insurance Information	2			
2e **Must Have**	PCP Designation	5			
Communication Preference					
3a	Phone, Fax, Letter, Email	3			
Diagnoses					
4a	ICD 9 Codes	5			
Clinical Data					
5a **Must Have**	Diagnoses/Problem list	5			
5b **Must Have**	Medical/Surgical history	5			
5c **Must Have**	Current Medications	5			
5d **Must Have**	Labs and Diagnostic tests	5			
5e	List of other providers	5			
Recommendations					
6a **Must Have**	New or changed diagnoses	5			
6b **Must Have**	Medication or medical equipment changes	5			
6c **Must Have**	Recommended timeline for future tests, procedures, or secondary referrals; who is responsible to institute, coordinate, followup and manage the information	5			
6d	Secondary diagnoses	4			
6e **Must Have**	Patient goals, input and eduation materials provided on a disease state	5			
6f	Care teams and community resources	3			
6g	Technical procedures	4			
Followup status					
7a **Must Have**	Consultaton, co-management with principle care of the disease, co-management with share care of the disease, specialty medical home	5			
Total Possible Points		100			

Transition of Care **"Must-Have(s)"**

- **Each of these Must-Have elements needs to be somewhere in the note back to Westminster Medical Clinic after you've seen a referred patient.**
- **Call me if you have questions or need clarity on what an element means or how to implement these items into your note back.**

BENEFITS for YOU

when you see the

doctors in our

Medical Neighborhood . . .

- Your **health goals** are our focus
- Your care is discussed between all doctors & YOU—because we are a **TEAM**
- Your **care is coordinated** by both offices as a TEAM
- You won't go through unnecessary **tests or procedures**
- You can schedule your appointments within a **reasonable** length of time
- You will be seen by specialists in our community recognized for **quality, safe care**
- You will be treated with **dignity, respect,** and **understanding**

What is a Medical Neighborhood?

Our "Medical Neighborhood" is the group of specialists committed to meet your personal health goals and medical needs.

We work closely with our specialists to be sure you receive the right care at the right time and in the right place.

Westminster Medical Clinic has found the best, highest quality specialists in our community to serve YOU.

Created by R.Scott Hammond, M.D. and Caitlin Barba, MPH
Systems of Care-PCMH Initiative, Colorado Medical Society Foundation, 2010

◯ **CARDIOLOGY**
Rocky Mountain Cardiovascular Associates

◯ **DERMATOLOGY**
Denver Dermatology Consultants

◯ **NEUROLOGY**
Neurospecialty Associates

◯ **ONCOLOGY**
Rocky Mountain Cancer Center

◯ **OPHTHALMOLOGY**
Eye Surgery Center of Colorado

◯ **ORTHOPEDICS**
Precision Orthopedics
Panorama Orthopedics
Center for Spinal Disorders

◯ **SURGERY**
Front Range Surgical
Restoration Plastics

◯ **UROLOGY**
Foothills Urology

◯ **OTHER**
_____

Go to our PATIENT PORTAL

for a complete list

of the specialists in the

Medical Neighborhood!

Creating Medical Home Communities

. . Providing the best medical care to Westminster Medical Clinic patients – YOU!

Welcome to Your *Medical Neighborhood* Of Specialists

WESTMINSTER MEDICAL CLINIC

OUR MISSION
We are dedicated to provide our patients with the highest quality and safest health care possible.

Patient Name: _____ **Date:** _____

Neighborhood Specialist: _____

Time frame: _____

Reason for Referral/Consultation: _____

_____

_____

_____

Alternatives: _____

_____

_____

_____

Non-urgent referrals take about 4-5 days to process. You will be notified through the Patient Portal. If you do not have Internet, we will call you or mail your confirmation. **Do not go or make an appointment** for the visit/test until you have received your referral confirmation and insurance approval. If for some reason, you do not make or keep your appointment, please let us know so that we may cancel the referral.

Created by R.Scott Hammond, M.D. and Caitlin Barba, MPH
Systems of Care-PCMH Initiative, Colorado Medical Society Foundation, 2010