Diverse Care Teams Informational Appendices

These appendices provide additional detail about care team functions and activities, and members who support those functions. The description of care team functions and members are provided for informational purposes rather than as PCM model requirements.

Diverse Care Teams Core Functions

I. Population Health Promotion and Management:

Definition:

"Population health refers to addressing the health status of a defined population. A population can be defined in many different ways including demographics, clinical diagnoses, geographic location, etc. Population health management is a clinical discipline that develops, implements and continually refines operational activities that improve the measures of health status for defined populations."
Source: Richard J. Gilfillan, MD, President and CEO, Trinity Health

Goal: The goal of PHM is to improve the health outcomes of a group (patients with chronic and costly diseases) by using IT solutions that track and manage their care, by reviewing such sources as laboratory, billing, electronic health record and prescription data. The Care Team will have access to an IT solution that will track and address patient needs, and give them real-time insights, allowing them to identify and address care gaps within the patient population.

Role:

1. **Identify populations with modifiable risks**: Practices would implement risk stratification tools to identify targeted population and develop predictive models to support the risk stratification tool. For example, a risk stratification tool may first identify all people with diabetes, but then focus on people with diabetes who are not receiving a particular preventive service (such as foot examinations) and discuss why rates for this service are lower than expected and how the practice might boost them. Or they may seek to identify a broader classification of patients such as all patients who have had an acute inpatient admission, who are at risk for readmission within the next 90 days, and who have one of five chronic conditions: heart disease; diabetes; hypertension; asthma, or chronic obstructive pulmonary disease (COPD) and reach out to this population and more closely manage their treatment.
2. **Patient Assignment**: Before a care team can begin managing a patient population, it must assign each patient to a specific provider and/or team who is responsible for their care.
3. **Patient Registries**: After patients are assigned, (EHRs) can generate patient registries—lists of patients who share selected characteristics, paired with key data elements relevant to their condition and care. Some sites use centralized staff to review registries and send reports to care teams. Others have their front office reception staff, MAs and nurses working with individual providers to review registries (or reports based on registries), identify patients needing service and contacting them.

4. **Actionable Steps Using Evidence Based or Clinical Guidelines**: For each population and data element, the care team must decide on the criteria for action, which is based on clinical guidelines. For example, if the practice wants to provide better follow up for patients with uncontrolled hypertension, it must specify what it means to be beyond the optimal range (e.g., blood pressure higher than 140/90) and actionable steps (e.g., office visit if last visit was more than six months ago).
5. **Pharmacy-focused population health analytics** to inform and direct attention to populations in need of the comprehensive medication management and other pharmacist functions

Care Team Members: Physician, APRN, PA, Pharmacist, Population Health Specialist
Preferred Location: At the Advanced Network/FQHC level to develop patient registries and follow-up steps based on clinical guidelines.

II. **Comprehensive Care Management:**

Definition: "Complex care management is a person-centered process for providing care and support to individuals with complex health care needs. The care management is provided by a multi-disciplinary comprehensive care team comprised of members of the primary care team and additional members, the need for which is determined by means of a person-centered needs assessment."

"Individuals with Complex Health Care Needs: Individuals who have one or more serious medical conditions, the care for which may be complicated by functional limitations or unmet social needs, and who require care coordination across different providers, community supports and settings to achieve positive healthcare outcomes."

Source: CT SIM Clinical & Community Integration Program

Goal: To comprehensively address identified barriers to care and healthy living and engage the individual directly in the direction and management of their care.

Role:

- Identify individuals with complex health care needs
- Conduct Person Centered Assessment (PCA)
- Develop Individualized Care Plan (ICP)
- Establish Comprehensive Care Team
- Establish annual training to successfully integrate and sustain comprehensive care teams.
- Execute and Monitor ICP
- Assess individual readiness to transition to self-directed care maintenance
- Monitor individual need to reconnect with Comprehensive Care Team
- Evaluate and improve the intervention

Preferred Care Team Member: RN as Nurse Care Manager who directs comprehensive care team and assigns responsibilities to other care team members as appropriate.

Preferred Location: At the practice level to play a direct role in patient care.

III. **Care Coordination**:

Definition:
The Agency for Healthcare Research and Quality defines care coordination as "Care coordination involves deliberately organizing patient care activities and sharing information among all of the participants concerned with a patient's care to achieve safer and more effective care. This means that the patient's needs and preferences are known ahead of time and communicated at the right time to the right people, and that this information is used to provide safe, appropriate, and effective care to the patient". Care coordination also includes community focused care coordination to link individuals to needed social services and supports to address social determinants of health needs and culturally and linguistically appropriate self-care management education. Care coordination would support other PCM capabilities, including behavioral health integration and practice specialization in geriatrics, chronic pain and individuals with disabilities.
Source: Adapted from Agency for Healthcare Research and Quality and Community & CT Clinical Integration Program

Goal: To facilitate delivery of the right health care services in the right order, at the right time, and in the right setting.

Role:

1. **Pre-visit Planning**: Track patients to confirm visits, to schedule preventive services, to order labs, to fill or refill prescriptions and to generally monitor patient adherence to mutually agreed-upon diagnostic and treatment plans.
2. **Develop Care Plans and Gaps in Care**: Identify high risk patients and gaps in care for prevention opportunities and develop a plan of care that is jointly created and managed by patients, their families and health care team.
3. **Coordination of Specialist Care**: Develop systems and services that monitor whether recommended specialty referrals have taken place; establish a feedback loop of specialists (via consultation reports) to primary care physicians and patients; disseminate information about the availability and quality of specialty services and community resources.
4. **Transitions of Care**: Identify social and clinical challenges faced by the patient that lead to avoidable hospital visits, and if the patient is admitted, track the patient and work with the hospital discharge staff to ensure patient is discharged to a preferred site (home, rehab, SNF), with a follow-up visit by their primary care physician.
5. **Data Entry**: Populate and update a care registry regarding member activities, problem lists, medication reconciliation, resources, and observed utilization.
6. **Linkages to Community Supports and Resources:** Identify culturally appropriate care and resources in the community including, for example, transportation services, counselors, language translators, hospice care workers or representatives who assist with financial support to address social determinants of health needs and other needs that may be met by community-based supports and resources.
7. **Behavioral Health:** See behavioral health integration capability

Depending on practice needs, care coordination will also support practice specialization in Geriatrics, Individuals with Disabilities, Chronic Pain depending on practice needs and specialization.

Care Team Members: Care coordination activities are directed by the PCP or a care coordinator (RN or social worker)[1] and may be delegated to a Community Health Worker, Medical Assistant or other care team member as appropriate.

Preferred Location: At the practice level for coordination and intervention.

IV. Patient Navigation:

Definition:

"Patient navigation may be defined as the process of helping patients to effectively and efficiently use the health care system."
Source: "Translating the Patient Navigator Approach to Meet the Needs of Primary Care," by Jeanne M. Ferrante, MD, MPH, Deborah J. Cohen, PhD and Jesse C. Crosson, PhD

Goal: To assist patients to "navigate" the maze of clinics, administrative systems and patient support services and reduce barriers that may keep them from obtaining timely treatment.

Role:

1. **Identify barriers and increase access to care, including insurance barriers**: Identify barriers to accessing the health care system and increase preventative screenings (breast, cervical and colorectal cancer) by providing individualized advice regarding importance of preventive screening and compliance. Identifying and address insurance related barriers to care (especially for those facing health literacy issues), such as the high cost of prescribed medications, understanding how to use their benefits and how their benefits apply to their clinical needs; and how the benefits can be considered in making decisions regarding choice of provider (e.g., facility fees, smartshopper, reference pricing, tiered networks, etc.).
2. **Address social determinants of health, emotional, financial, practical, cultural/linguistic and/or family needs**: Improve knowledge outcomes and possibly other outcomes related to preventing disease in underserved minority populations and provide access to culturally appropriate care and resources to the community including, for example, transportation services, counselors, language translators, hospice care workers or representatives who assist with financial support. Link patients to community services and supports and help apply for assistance (e.g. SNAP, utilities, public housing) to address social determinants of health
3. **Assist patients with pre-visit planning, getting to appointments, and making follow up appointments**
4. **Ensure timely follow up and reduce delays in care**: For example, patient navigation in cancer care aims to reduce support patients through the continuum of cancer care by emphasizing timeliness of diagnosis and treatment and reducing the number of patients lost to follow up.

[1] "Care Coordinator" is often used as a title in practices. Most patient care coordinator positions require a degree in a specialty healthcare field, such as nursing or social work.

5. **Facilitate communication between providers and patients** to help patients access information needed from providers and providers to understand patient preferences.

Care Team Members: Patient Navigator, Community Health Worker, Social Worker
Preferred Location: At the practice level to facilitate care in the best and most efficient, coordinated fashion, or in the community/home to address social determinants, emotional or financial needs.

V. Disease Prevention and Management:

Definition:

"Disease management programs are designed to improve the health of persons with specific chronic conditions and to reduce health care service use and costs associated with avoidable complications, such as emergency room visits and hospitalizations."
Source: Bodenheimer, T. (1999). "Disease Management -- Promise and Pitfalls," The New England Journal of Medicine, 240(15): 1202-1205.

Goal: To prevent another disease from developing or progression of an existing disease. For example, people with diabetes are at risk of developing heart, nerve or eye problems. Disease management programs are intended to prevent the occurrence of an additional co-morbidity and to help patients better manage their underlying condition, by understanding and monitoring their symptoms more effectively, and possibly, changing their behavior.

Role:

1. **Identify the population who will benefit from disease management program**. Programs are designed to target individuals with a specific disease based upon certain demographic characteristics, health care use and expenditures. Many programs will focus on costly chronic conditions (i.e., asthma, diabetes, congestive heart failure, coronary heart disease, end-stage renal disease, depression, high-risk pregnancy) as well as focusing on individuals with multiple conditions.
2. **Health or lifestyle coaching and patient education**: Disease management programs are based on the concept that individuals who are better educated about how to manage and control their condition receive better care. To assist in self-management, it may be recommended for patients to participate in behavior modification and support groups. Health coaching may also be used to make lifestyle changes to help prevent onset of diseases for patients who are at risk of developing chronic conditions.
3. **Programs must be culturally diverse and remove barriers:** To successfully address the burden of chronic disease among a broad range of disparate population groups, interventions should be developed in a culturally competent manner. For example, the Vermont Blueprint for Heath reduced barriers to health care in Vermont, by eliminating copayments, prior authorization or eligibility restrictions.
4. **Nutritional education and counseling**: Educating patients about their disease is critical. A diabetic educator or nutritionist, for example, will not only obtain physical data (i.e.,height, weight, blood pressure and waist circumference) at each visit, but may provide nutritional

counseling, smoking cessation counseling (if not previously given) and provide documentation of self-management education with goals and timeline. He or she may also assist the patient in completing a functional skill and a quality of life assessment at baseline and post intervention.

5. **Basic screenings and assessments**: In addition to cancer screenings, these programs are intended to screen for common chronic conditions and they may screen for drug/drug, drug/food, drug/lab and drug/disease interactions and adverse drug reactions.

Care Team Members: RN, Dietician, Diabetic or Asthma Educator, Nutritionist, Pharmacist, Community Health Worker, Social Worker
Preferred Location: Both at the Advanced Network/FQHC to identify the targeted population and at the practice level for interventions.

VI. Medication Prescribing and Management Functions:

See Pharmacist Role Detail for additional information

Definition: Medication related functions, such as medication reconciliation, routine medication adjustments, initiating, modifying, or discontinuing medication therapy and medication monitoring/follow-up care coordination that other care team members can perform to assist the primary care clinician as delegated by the PCP/care team, including comprehensive medication management.

Goal: To assure safe and appropriate medication use by engaging patients, caregivers/family members, prescribers, and other health care providers to improve medication-related health outcomes.

Role:

- Medication reconciliation/ best possible medication list
- Medication monitoring/follow-up care coordination across multiple prescribers and pharmacies
- Initiating, modifying, or discontinuing medication therapy
- Comprehensive medication management

Comprehensive Medication Management Definition: "A process of whole-person care that begins with the individual and seeks to optimize medications by identifying and resolving medication-related problems that stand in the way of reaching the patients' therapy goals."

Source: Cited in
http://www.pharmacist.com/sites/default/files/JCPP_Pharmacists_Patient_Care_Process.pdf (2014) in presentation by Marie Smith, "Primary Care Medication Management as a Team Sport"
http://www.ehcca.com/presentations/medhomesummit8/smith_t2_1.pdf

Comprehensive Medication management services may be implemented through collaborative practice agreements (CPAs) between physicians and pharmacists. CPAs are written documents between physicians and pharmacists that have the ability to increase access to care, expand available services to patients, increase the efficiency and coordination of care, and leverage pharmacists' medication

expertise to complement the skills and knowledge of the other health care team members. A variety of patient care functions—such as initiating, modifying, or discontinuing medication therapy; ordering lab tests; and administering medications—can be delegated to a pharmacist using a CPA (allowed in CT; will vary on a state-by-state basis).

Care Team Members: PCP, Pharmacist, RN, Medical Assistant
Preferred Location: Both at the Advanced Network/FQHC level and the practice level

VII. **Behavioral Health Integration**: Developed by adult behavioral health integration design group.

Definition: A team-based primary care approach to managing behavioral health problems and bio-psychosocially influenced health conditions

Goal: Increase PCP capacity and resources to improve access to behavioral health services and achieve better patient outcomes.

Roles:

- Behavioral health screenings and initial assessments
- Brief interventions, consultations, medication, and episodic care
- Referrals to extended therapy/counseling, medication and higher levels of care (day treatment, partial hospitalization
- Dedicated behavioral health care coordination to help patients make connections to treatment and community-based services, follow up and track process, and facilitate care team communication with behavioral health clinicians

Care Team Members: Behavioral Health Clinician (psychologist, APRN, LCSW), care coordination conducted by care team member with behavioral health expertise
Preferred Location: Practice level on-site or available via telemedicine

Diverse Care Team Member Role Descriptions

The following list of care team role descriptions are provided for informational purposes only and are not PCM model requirements.

Team Member	Role
Physician/NP/PA	• Prepares for, attends and participates in team meetings • Collaborates in developing team priorities and patient goals and care plans • Keeps problem list, medication list and patient care plan updated for team members • Approves orders and referrals for health maintenance Source: Cambridge Health Alliance (CHA)
RN/LPN	• Prepares for, attends and participates in team meetings • Collaborates in developing team priorities and patient goals & care plans • Actively educates patients, sets goal, assists with self-management teaching & coaching • Administers medications and vaccines • Reconciles medications • Engages in chronic disease care management • Provides telephone advice and triage Source: CHA and see also, "Primary Care Nursing Role and Care Coordination: An Observational Study of Nursing Work in a Community Health Center" Daren R. Anderson, MD, Daniel St. Hilaire, Margaret Flinter, PhD, APRN

Medical Assistant	• Prepares for, attends and participates in team meetings
	• Responsible for patient flow on day of visit:
	  ○ Completes required pre-visit and visit preparation using the MA Standards of Care checklist
	  ○ Reviews and completes any overdue health maintenance and open orders at every visit
	  ○ Completes appropriate documentation of questionnaires
	  ○ Completes follow up work after visit
	• Completes planned care team outreach assignments between visits
	• Maintains room stocking
	Source: CHA

Care Coordinator	Recommended to be a nurse (RN/LPN) or social worker (LCSW) to conduct and oversee care coordination functions. Other care team members support care coordination functions and report to the PCP or care coordinator. • **Pre-visit Planning**: Track patients to confirm visits, to schedule preventive services, to order labs, to fill or refill prescriptions and to generally monitor patient adherence to mutually agreed-upon diagnostic and treatment plans. • **Develop Care Plans and Gaps in Care**: Identify high risk patients and gaps in care for prevention opportunities and develop a plan of care that is jointly created and managed by patients, their families and health care team.

	• **Coordination of Specialist Care**: Develop systems and services that monitor whether recommended specialty referrals have taken place; establish a feedback loop of specialists (via consultation reports) to primary care physicians and patients; disseminate information about the availability and quality of specialty services and community resources. • **Transitions of Care**: Identify social and clinical challenges faced by the patient that lead to avoidable hospital visits, and if the patient is admitted, track the patient and work with the hospital discharge staff to ensure patient is discharged to a preferred site (home, rehab, SNF), with a follow-up visit by their primary care physician. • **Data Entry**: Populate and update a care registry regarding member activities, problem lists, medication reconciliation, resources, and observed utilization. • **Linkages to Community Services:** Identify culturally appropriate care and resources in the community including, for example, transportation services, counselors, language translators, hospice care workers or representatives who assist with financial support to address social determinants of health needs and other needs that may be met by community-based services. • **Behavioral Health:** See behavioral health integration capability Depending on practice needs, care coordination will also support practice specialization in Geriatrics, Individuals with Disabilities, Chronic Pain depending on practice needs and specialization
Clinical Pharmacist	See Pharmacist Role Detail
Community Health Worker	See Community Health Worker Detail
Nutritionist	• Assists patients with nutritional counseling • Provides expert consultation and supports the work of the primary care relationship and overall health of the patient. Source: CHA
Dietician	A dietician works collaboratively with care members to evaluate and treat patients of all ages identified as possessing nutrition risk. Areas of responsibility include assessment of nutritional needs, provision of medical nutrition therapy and nutrition education. He or she will also serve as a resource to care team members to improve patient outcomes to physician staff and others. He or she may facilitate and participate in group visits for patients living with chronic disease conditions. Source: Memorial Hermann Health System
Nurse Care Manager	Has responsibility for the care management of a patient in partnership with the patient's Primary Care Physician: • Coordinates services for patients (including coordinating care with specialists, across settings, and for conditions/diseases); • Prepares individualized patient health care plans (especially for patients with complex conditions); assess/routinely reassess patient care needs;

	• Effectively communicates with patients and all of the patient's specialists/healthcare providers; • Arranges medication management for patients using several medications; • Coordinates patient education programs/encourage self-management for patients with chronic conditions such as asthma or diabetes; • Helps patients navigate the system; and connects patients to community resources and social services Source: The Michigan Care Management Resource Center PCMH Care Managers: http://micmrc.org/
Social Worker	• Receives Complex Care Management referrals, assesses appropriateness for Complex Care, works with patient/caregiver/co-learner to develop goals, informs care team if inappropriate for complex care and makes recommendations for care plan in usual care team meetings • Provides mental health support, linkage to ongoing mental health treatment, direct care management including patient education, goal setting, self-management teaching & coaching for the care team's top 5% highest risk patients. • Assess readiness for transition back to usual care team or to more intensive level of care such as SNF Source: CHA
Patient Navigator	The Patient Care Navigator (PCN) has several different responsibilities when it comes to providing patients with access to quality care. The PCN coordinates patient-centered care which ensures that patients feel comfortable and understand their medical needs. Navigators are there to educate and guide patients in an efficient and simple manner. • Identify client needs in terms of access to healthcare, and any barriers to a treatment plan • Coordinating appointments with providers to ensure timely delivery of diagnostic and treatment services. • Facilitating the process for charity care for uninsured patients. • Maintaining communication with patients and the health care providers. • Ensuring that appropriate medical records are available at scheduled appointments. • Arranging transportation if needed. • Encourage patients to comply with treatment goals and routinely review their progress toward these goals. • Educate and explain to patients how to follow the prescribed care plan. Source: Medina Community Clinic, medinahealthcare.org
Population Health Specialist (PHS):	A PHS works directly in collaboration with physician practices with opportunities for improved performance, and is a valuable resource in process improvement, providing practice staff assistance in quality reporting, and helping the practice to meet organizational quality and efficiency goals through optimizing practice work flow and focusing on patient engagement. Source: Steward Health Care
Health Coach	A Health Coach is responsible for a panel of patients and, in collaboration with other members of an integrated primary care team, helps patients meet their preventive, chronic and acute care needs. Specifically, a health coach's primary duties include: • Serve as an integral part of an outreach team either with care management or care transitions • Accompany patients to their appointments with the health care and social service systems

	• Coach patients to schedule their own health care appointments and transportation • Assist patients to arrange for food and housing • Assist patients in their chronic disease management as directed by a nurse clinical coordinator • Coach patients to better their communication with physicians, nurses, and other members of the health care system • Assist patients in meeting their goals • Perform other duties assigned by the care team to better the health and wellness of patients Source: Camden Coalition of Healthcare Providers
Medical Interpreter	Medical interpreters provide medical translation services to non-English speakers. They help patients communicate with medical staff, doctors, and nurses.
Certified Diabetic Educator	A certified diabetic educator functions within a health team; possesses comprehensive knowledge of and experience in diabetes prevention, prediabetes, and diabetes management; and provides community based nutritional and health assessments, nutritional care services, self-management education, insulin management and behavior change support for patients with type 2 diabetes. Source: see NCBDE
Certified Asthma Educator	An expert in teaching, educating, and counseling individuals with asthma and their families in the knowledge and skills necessary to minimize the impact of asthma on their quality of life. Source: National Asthma Educator Certification Board. Certified Asthma Educator (AE-C) Candidate Handbook. http://www.naecb.org.Accessed May 4, 2013.
Behavioral Health Clinician (APRN, Psychologist, LCSW)	Behavioral Health Clinicians (BHCs) work side-by-side with all members of the clinical care team (including primary care providers (PCPs) and nursing staff) to enhance preventive and clinical care for behavioral health problems. BHCs support the team in conducting behavioral health screenings and initial assessments, brief interventions, consultations, medication and episodic care. BHCs are trained in defined core competencies, such as • Population care • The culture of primary care • Common chronic medical conditions • Brief screening/assessment • Brief intervention • Brief documentation • Team functioning Source: Behavioral Health Integration design group recommendations

Pharmacist Role Detail

Understanding the Need

The Problem:
Medications are the most common medical intervention in primary care practices to treat chronic conditions.

- Approximately 80% of primary care office visits involve medication therapy (i.e., drug provided, prescribed, or continued at a visit).
- Most primary care medication-related problems (MRPs) result from breakdowns in medication appropriateness, effectiveness, safety, and care coordination.
- Estimated 74-90% of ambulatory care MRPs are associated with clinician or system-influenced gaps in care, including lack of evidence-based prescribing, clinical inertia, incomplete or inaccurate medication lists, inadequate drug monitoring, poor care coordination across multiple providers, and inconsistent monitoring and care plan management between PC office visits. Only 10-26% of MRPs are attributed to patient non-adherence.

It is estimated that 37% of community-based PCP time is spent on chronic care management -- including complex medication management and monitoring. Most physicians are resource- and time-strained; they often do not have sufficient time to verify and assess extensive medication lists with a patient during a routine office visit. Pharmacists can fill that gap with chronic medication management services. In CT, pharmacists have the ability to develop collaborative practice agreements with physicians (called Collaborative Drug Therapy Management protocols in CT).

Proven Strategy: ***Pharmacist Integration with Primary Care Teams***
Definition: Integrate pharmacists into team-based care delivery models (pharmacist working in practices) to assume roles and responsibilities such as:

- Medication reconciliation/ best possible medication list
- Comprehensive medication management for patients with multiple chronic conditions using evidence-based guidelines:
  - Medication regimen optimization (e.g., most effective dosing, evidence-based treatment guidelines)
  - Decrease medication waste (e.g., meds with no indication, meds patient not filling or taking)
  - Prevent potential medication interactions or adverse events
  - Improved medication adherence
  - Cost-effective therapy
- Medication monitoring/follow-up care coordination across multiple prescribers and pharmacies
- Tailored medication action plans for patients
- Pharmacy-focused population health analytics to inform and direct attention to populations in need of the aforementioned services

Intended Outcomes: Address medication-related use and safety challenges at the practice, provider, and patient level while reducing workload burden on the provider

Consumer Needs:

- Achieve treatment outcomes with most cost-effective medications
- Expanded time to discuss medication questions, concerns, and adherence challenges
- Monitoring medications between office visits
- Better coordination of medications from multiple prescribers/pharmacies

Health Equity Lens: Pharmacist integration will increase the ability of address medication-related issues that stem from social determinants though increased patient touch points and pharmacist's ability to address and resolve healthcare barriers.

- access barriers to obtain or store medications (i.e., costs, transportation, home environment)
- patient health beliefs or health literacy challenges that impact adherence
- selection and dosing of medications for certain populations based on gender, race, ethnicity

Implementing the Strategy

1. Comprehensive medication management service priorities:
CMM services should align with patient population and practice needs. How can medication management services:

- improve practice workflows or provider efficiencies?
- complement the skills of other health care practitioners?
- align with care management or population health program goals?
- improve medication-related quality/performance goals?

2. Patient selection priorities:
Medication management services should not be selected simply based on administrative claims review for highest utilization or costs. Here are some patient selection criteria that should be considered in the implementation process:

- high-risk patients with chronic conditions and multiple comorbidities
- patients with high-risk medications
- patients with complex medication regimens, have difficulty taking medications as intended
- patients who have not achieved a treatment goal for a chronic condition
- patients with frequent care transitions
- patients who need to be monitored for treatment outcomes or adverse drug events between primary care office visits
- patients with multiple prescribers and multiple pharmacies

3. Collaborative practice agreements (CPAs) between physicians and pharmacists
CPAs are written documents between physicians and pharmacists that have the ability to increase access to care, expand available services to patients, increase the efficiency and coordination of care, and leverage pharmacists' medication expertise to complement the skills and knowledge of the other health care team members. A variety of patient care functions—such as initiating, modifying, or discontinuing medication therapy; ordering lab tests; and administering medications—can be delegated to a pharmacist using a CPA (allowed in CT; will vary on a state-by-state basis).

HIT Requirements: Pharmacists access to and documentation in the EHR, population health registries.
Implementation Concerns:

- Workflow redesign to maximize efficiency/effectiveness of a pharmacist on a primary care team
- Need to educate patients on the pharmacist's role as a primary care team member
- Payment for pharmacist services

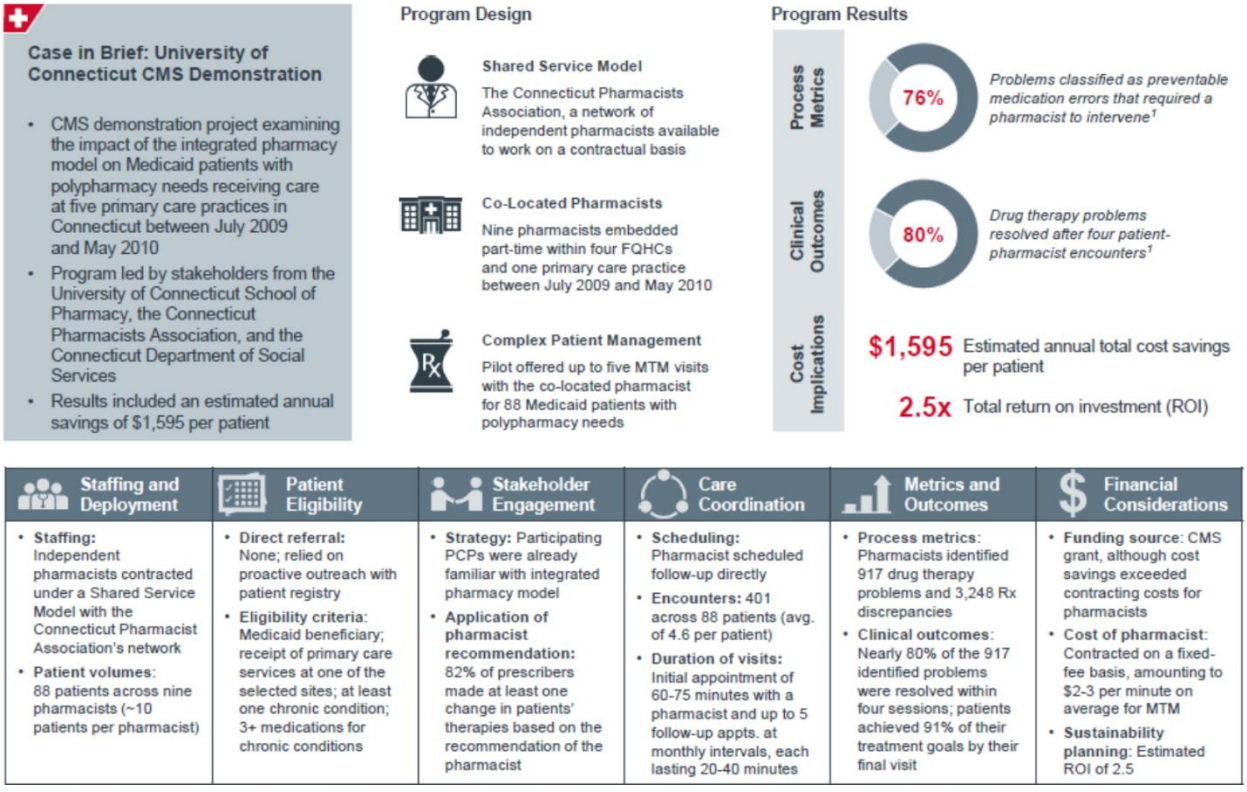
Impact: a brief summary of the available evidence on impacts of this capability, according to the criteria below.

Aim	Summary of Evidence
Health promotion/prevention	Patient education is one type of pharmacist intervention included in comprehensive medication management (CMM) services in primary care settings. Studies below included patent education on disease state, medication adherence, and importance on non-pharmacological treatment.
Improved quality and outcomes	1. **Multiple Chronic Diseases** - in a study of CT Medicaid patients with hypertension, diabetes, lipid disorders, asthma/COPD, depression: • Evidenced-based patient treatment goals improved from 63% (first visit) to 91% (last visit) over a 6 month period • 80% of medication-related problems resolved after 4 patient-pharmacist encounters • 78% of medication problems were resolved without requiring the patient to make a separate appointment with his or her primary care provider [Smith, Health Affairs 2011] 2. **Hypertension** In a study evaluating the effectiveness of a physician-pharmacist collaboration: • Blood pressure control at 9 months was 43% in intervention offices (n=401) compared to 34% in the control group (n=224) • Blood pressure control at 9-months was 37% in minority intervention subjects and 28% in minority control subjects [Carter, Circ Cardiovasc Qual Outcomes 2015] 3. **Diabete**s In a study analyzing the effectiveness of pharmacist intervention on chronic diabetes management: • 54% of intervention group patients achieved individual goal attainment for A1c compared to 23% for the usual care group • The intervention group had an average A1c reduction of 1.4%, compared with an average reduction of 0.8% in the usual care group [Prudencio, Journal of Managed Care & Specialty Pharmacy 2018]

	4. **Depression** With the integration of a part-time pharmacist to provide behavioral health medication management services for 96 indigent patients in a community health center (CHC) • Patient scores for depression and anxiety improved by 50% after 12 weeks of medication therapy. • There was an estimated cost avoidance of $22,380 over a 15-month period by managing patients at the CHC instead of external psychiatrist referrals. [Caballero, Am J Health-Syst Pharm Clinician 2008] 5. **ACO study** In a study evaluating the impact of pharmacist performed comprehensive medication management (CMM) on ACO patient outcomes: • The percentage of diabetes patients optimally managed was significantly higher for patients receiving CMM (21% vs. 45%, $P < 0.01$). • Pharmacists have focused on the highest-risk members and have seen over 670 ACO patients, resolving over 2,780 medication-related problems. [Brummel, J Manag Care Spec Pharm 2014]
Patient experience	1. When the pharmacist met with patients in the primary care office, patients viewed the pharmacist as a member of their medical home team. Patients were surveyed and here is a patient quote: "The most important part of meeting with my pharmacist was [that] she communicated with my doctor and then when we met we were all on the same page." [Smith, Health Affairs 2011]
Provider satisfaction	1. 82% of primary care providers made at least one drug therapy change as a result of pharmacist recommendations [Smith, Health Affairs, 2011] 2. Primary care providers report pharmacists positively impact quality of care (mean = 5.5 on Likert scale of 1-6; standard deviation = 0.72), high satisfaction with pharmacy services provided (5.5; standard deviation = 0.79), and no increase in workload as a result of clinical pharmacists (5.5; standard deviation = 0.77). Primary care providers would recommend clinical pharmacists to other primary care practices (5.7; standard deviation = 0.59). Primary care providers perceived specific types of pharmacy services to have the greatest impact on patient care: medication therapy management (38.6%), disease-focused management (29.82%), and medication reconciliation (11.4%). Primary care providers indicated the most

	valuable disease-focused pharmacy services as diabetes (58.78%), hypertension (9.65%), and pain (11.4%). [Truong, 2017]
Lower Cost	1. Estimated annual total cost savings of $1595/Medicaid patient [[Smith, Health Affairs, 2011] 2. Total health expenditures decreased from $11,965 to $8,197 per person for hypertension and cholesterol management [Issetts, J Am Pharm Assoc 2008] 3. 12:1 return on investment when comparing the overall health care costs of patients receiving pharmacist medication managementservices with patients who did not receive those services. [Brummel, J Manag Care Spec Pharm 2014]

Case Study



Additional Reading:

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Community Health Worker Detail

Understanding the Need

The Problem:
There are numerous barriers to improving population health and controlling chronic disease, including lack of family support, failure to adhere to treatment, lack of support for self-management, lack of access to care and being uninsured, differences in perceptions of health that are culturally based, the complexity of treatment, costs of transportation and other expenses, and an insufficient focus on prevention and on support from social and health care systems. These barriers as well as the need for health equity improvement are most prevalent in underserved communities. Finding a way to bridge gaps between providers (and the healthcare system) and consumers is paramount to address social determinants of health.

Proven Strategy:
Name: Community Health Workers
Definition: Connecticut law defines a Community Health Worker (CHW) as a "a public health outreach professional with an in-depth understanding of the experience, language, culture and socioeconomic needs of the community who:

1) serves as a liaison between individuals within the community and health care and social services providers to facilitate access to such services and health-related resources, improve the quality and cultural competence of the delivery of such services and address social determinants of health with a goal toward reducing racial, ethnic, gender and socioeconomic health disparities, and
2) increases health knowledge and self-sufficiency through a range of services including outreach, engagement, education, coaching, informal counseling, social support, advocacy, care coordination, research related to social determinants of health and basic screenings and assessments of any risks associated with social determinants of health" (CT SIM DRAFT Report of CHW Advisory Committee July 2018).

CHWs are integrated into the primary care team to build individual and community capacity by increasing health knowledge and self-sufficiency through a range of culturally appropriate services including (CT SIM Report of CHW Advisory Committee May 2017):

- Outreach and engagement;
- Education, coaching, and informal counseling;
- Social support;
- Advocacy;
- Support care coordination functions
    - Participating in care coordination and/or case management
    - Making referrals and providing follow-up
    - Facilitating transportation to services and helping to address other barriers to services
    - Documenting and tracking individual and population level data
    - Informing people and systems about community assets and challenges
    - Facilitating the participant-provider relationship and effective communication

- Research related to social determinants of health and basic screenings and assessments of any risks associated with social determinants of health

Resources for Networks and Practices to Integrate CHWs into Primary Care

Connecticut's Hispanic Health Council's *Policy brief: Addressing Social Determinants of Health through Community Health Workers: A Call to Action*, puts forward a set of recommendations for CHW payment, caseload assignment, recruitment, training, mentoring and supervision, integration, and documentation of impact on social determinants of health. These recommendations present a model for integrating CHWs into care teams in primary care in a way that supports CHWs and practices and focuses on addressing patients' social determinants of health needs. Their recommendations for "Integration of CHWs into the Care Team"[2] include (Hispanic Health Council, 2018):

- "A CHW champion should be designated within the organization to help ensure that the role of CHWs is valued, understood and supported.
- Training for all members of the healthcare team should be conducted to establish a thorough understanding of the history and current status of the CHW profession before bringing a CHW onto the team.
- Adequate time should be allocated to provide an intensive orientation for the CHW to the organization.
- CHWs should be included in care team meetings and empowered to provide insights about their participants/the community during and between meetings.
- CHW services should be documented as part of the electronic health record, to facilitate sharing of their work with other team members and tailoring their support to individual needs."

The Hispanic Health Council's brief also offers guidance on CHW caseloads, including a caseload estimator. Caseloads depend on intensity in the service model and population needs. Caseloads should allow CHWs to perform their full roles including addressing social determinants of health, and provide "sufficient time for: 1) significant, extended face-time with clients, and often, families; 2) individual visits in the home and/or clinic; and 3) active engagement with clients to plan for future care" (Hispanic Health Council, 2018). From their experience, caseloads vary from:

- 30 served per year
- Caseload of 40 at any one time, 100 served per year
- Caseload of 50 at any one time, 125 served per year

To advance the use of CHWs within care teams across the state, the SIM CHW Advisory Council has also produced draft recommendations to the State legislature to pass legislation establishing CHW Certification in Connecticut. These include recommended requirements for certification, methods for administering a certification and requirements for recognizing training programs with sufficient curricula to meet certification requirements.

Penn Center for CHWs Individualized Management for Patient-Centered Targets (IMPaCT) model

The Penn Center for Community Health Workers is a national center of excellence for Community Health Worker research, application and dissemination. They have developed the IMPaCT model, an evidence-based model for Community Health Worker recruitment, training, care and integration with health care

[2]Excerpted from Policy Brief: Addressing Social Determinants of Health through Community Health Workers: A Call to Action, Section 6 Integration of Community Health Workers into Care Teams, available at http://hispanichealthcouncil.org/images/Brief2018.pdf

teams. The model focuses on hiring people from within local communities to provide social support, advocacy and navigation to high-risk individuals and also provides technical assistance to organizations around the country in creating, launching, and sustaining effective CHW programs (Penn Center for Community Health Workers).

In a recent study, nearly 600 patients living in poverty-stricken, Philadelphia communities were randomly assigned to receive standard primary care or six months of support from an IMPaCT community health worker (in addition to standard primary care). This was a multi-site trial that included a VA medical center, a federally-qualified health center, and an academic family practice clinic. Patients had received a diagnosis of two or more targeted chronic diseases (diabetes, obesity, tobacco dependence, and hypertension), at least one of which was in poor control. Between January 2015 and March 2016, 288 patients were assigned to usual primary care, while 304 patients were assigned to receive community health worker support. The community health worker-supported group received six months of hands-on, tailored support that included coaching, social support, advocacy, and health care navigation (UPenn Medicine, 2018).

Evidence (UPenn Medicine, 2018):

- Compared to patients in the typical primary care group, those who received community health worker support were nearly twice as likely to report high-quality primary care and spent fewer total days in the hospital at six months (155 days vs. 345 days) and at nine months (300 days vs. 471 days).
- Patients receiving community health worker support also had lower rates of repeat hospitalizations, including 30-day readmissions.
- According to the IMPaCT website, this model is proven to improve patients' post-hospital primary care access, chronic disease control, and mental health while reducing hospital admissions by 30%.

Intended Outcomes:

- Address social determinants of health needs of patients
- Assist individuals and communities to adopt healthy behaviors.
- Provide information on available resources, social support and informal counseling and make the appropriate linkages to information and services.
- Enhance the cultural and linguistic appropriateness of care and help to counteract factors such as social exclusion, poverty, and marginalization.
- Improve patient navigation of the health care system and assist with discharge planning from the hospital.
- Improve the engagement of patients with providers.

Consumer Needs: The Community Health Worker can address the following consumer needs:

- Support navigating the healthcare system, making lifestyle changes, connecting with other providers, coordinating care, managing chronic conditions and making their environments healthier.
- Provide support services beyond traditional medical care.
- Address cultural differences so patients and providers can speak freely.
- Break down religion, race and language barriers.

Health Equity Lens:

- Helps to identify social determinants of care as well as cultural and linguistic barriers possibly interfering with self-care.
- Effective at reducing health disparities by using health information to change health seeking-behaviors among underserved populations
- Reduces access barriers such as transportation and ability for caretaker to manage getting patient to appointments.
- Provides better access to patients who are homeless or are experiencing unstable housing by knowing the community and where best to 'find' patients in need of care.
- Provides culturally competent health education, counseling, and sometimes renders direct health services.
- As a trusted member of the community may help to minimize barriers to care resulting from health beliefs and health values.

Implementing the Strategy

A patient with asthma has had three visits to the emergency department in the past two months. The PCP asks the CHW to outreach to the patient and schedule a home visit. The patient is home with his adult son when the CHW arrives. The CHW is able to conduct an environmental assessment and is able to identify and address several potential asthma triggers. Health education tips are reviewed (in the patient and son's spoken language), and written information left behind. The CHW makes a follow-up appointment for the patient to see his PCP, arrange transportation and meet the patient at the PCP's office at the time of the appointment. The CHW agrees to call to remind the son of his father's appointment in advance.

HIT Requirements:

- Scheduling module that can accommodate and automate routing is optimal.
- Remote access to EHR and laptops or handheld devices to document assessments and notes (for efficiency) and ideally tap into PCP scheduling software
- Access to resource library (web-based or cloud based) that contains available social resources (and *ideally* portable printer)

Implementation Concerns[3]:

- Certification/Credentialing with decisions regarding 'grandfathering', training, experience in lieu of formal training, continuing education requirement, registry, and State agency responsibility
- Adequate workforce
- Training and orientation to provider models and systems
- Acceptance of CHW role and integration into care team
- Provide adequate support for complex patients, often with co-existing behavioral health needs
- Ensure that CHWs have adequate support from behavioral health as well as medical clinicians.

Impact

[3] Payment for new capabilities will be determined as part of payment model options

Aim	Summary of Evidence
Health promotion/prevention	Interventions incorporating CHWs have been found to be effective for improving knowledge about cancer screening, as well as screening outcomes for both cervical and breast cancer. (CDC Policy Brief, 2016)
Improved quality and outcomes	The current body of scientific evidence demonstrates the value of CHW services to improve health care outcomes. Many interventions that integrate CHW services into health care delivery systems are associated with reductions in chronic illnesses, better medication adherence, increased patient involvement, improvements in overall community health, and reduced health care costs. Although more research is needed, CHWs may positively affect health outcomes (CDC Policy Brief,2015) The implementation of CHW programs might be effective in improving health care access, health behavior, and, to a lesser extent, health outcomes of older adults belonging to ethnic minorities, but further research is required to draw more solid conclusions (Verhagen,2014). In a systematic review, 32 total studies reported positive findings in health outcomes and/or resource utilization associated with a CHW intervention while 18 studies evaluated found no difference in outcomes between CHW interventions and control groups. These results should be viewed with caution given the likelihood of publication bias in favor of studies with positive results (ICER, 2013).
Patient experience	Four studies explored patient perception of CHW services, all of which reported high satisfaction. Patients reported that they could easily understand the CHW role and described CHWs as polite, respectful, and easy to understand as teachers. Patients also valued that CHWs were able to give them more time than providers listened actively and did well with establishing rapport and trust (Gutierrez, 2014).
Provider satisfaction	Providers reported that CHWs enhanced patient care in various capacities. Most often discussed was their role in facilitating

	doctor patient communication and improved access to culturally-appropriate services in the patient's language and took into account patient literacy level, family situations, and other relevant factors (Gutierrez 2014).
Lower Cost	One study of a CHW outreach program targeting 590 underserved men in Denver for a variety of health services found a return on investment of more than $2 for each dollar invested. Another study found that CHWs generated an annual cost savings of around $2,000 per Medicaid patient with diabetes in West Baltimore. Another program used CHWs for outreach to people in need of home and community-based services, which resulted in lower growth in Medicaid spending among program participants and an estimated savings of $3.5 million in Medicaid expenditures. After accounting for program costs, Medicaid realized net savings of $2.6 million (CDC Policy Brief, 2016).

APPENDIX

Learning from Others

State and National Scan:
Case Study #1 (Findley, 2014):
In 2007, the Chair of Family Medicine at Bronx-Lebanon Hospital (BLHFM)'s PCMH, in South Bronx, NY introduced CHWs. The practice is situated in a very low-income community with persistent inequities in health. Key drivers for the project included inability to achieve lasting health improvements with complex patients, providers did not have enough time for discussions with patients and they could not reach patients who would not come in for care. The CHWs are the care managers and keep the patients connected to community partners. Expectations are a caseload of 33 patients, 2 home visits/day, 3 joint clinic visits/day in addition to outreach calls, and follow-up.

Best Practice:
- Multistep recruitment and pre-training prior to second interviews. Explicit and ongoing refinement of position description. Training after hire according to NY State recommendations.
- Multi-faceted approaches to integrate into care teams (rounds, CMEs, team meetings)
- Shared group visits with a CHW and physician
- Productivity and outcome tracking

Lessons Learned:
- Crucial to have a CHW champion among medical leadership and organizational commitment to the program
- Recruitment and training paramount to program success- finding the right people!
- Empower CHW leadership (e.g., CHW supervisor and/or administrator) to convey support and build career ladder
- Demonstration of improved outcomes and lower costs early on and ongoing was crucial

Results (as in Findley, 2014- methodology not reported) :

- ROI of 2.3, net savings of $1135/patient
- Emergency department admissions decreased by 5% and hospitalizations by 12.6% among patients with diabetes and other chronic conditions

Case Study #2

Connecticut was one of three states (Western MA and CA) where pharmacists partnered with Cambodian-American CHWs to test the effectiveness for improving medication use in older Cambodian Americans while demonstrating cost savings. The Center for Technology and Aging's Medication Optimization Technology utilized videoconferencing and other technologies to connect socially isolated persons in poor health with an organization that specializes in the health care needs of Cambodian refugees and other victims of torture and trauma. The CHWs went to the patients' homes or to clinic settings and used high definition video conferencing equipment and a medication therapy management (MTM) documentation system. They completed medication assessments and provided medical interpretation. When necessary, they operated the teleconferencing hardware and software to enable the culturally trained CT pharmacist to provide remote MTM services. Using culturally competent CHWs helped establish relationships with patients and helped them connect with the pharmacist and the technology to provide MTM and support communication, documentation and patient engagement. Goals were to improve drug therapy outcomes and reduce inappropriate medication use by 20% and demonstrate the cost of the program did not exceed the cost of the services.

This was part of a grant program affiliated with the Public Health Institute and supported by the SCAN Foundation[4].

Lessons Learned:

- Uneven availability of 4G wireless technology impeded implementation of the program.
- Pharmacists and CHWs experienced a steep learning curve on use of the equipment
- Additional time was needed to ensure CHW understanding of the project goals and cultural training to pharmacists.
- Payment reform needs to be more widely implemented for this model to be adopted on a broad scale.
- This was a relatively short and small-scale project

Results (Overall Program Highlights):

- Virtual Medication Therapy Management (MTM) was as effective as Face-to-Face MTM
- 604 potentially harmful medication related problems (MRPs) were identified among
- 96 patients 93% of MRPs resolved by final MTM visit
- For every dollar spent on the program, $4.80 to $6.10 were saved
- Projected costs of health care services avoided totaled $291,114

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