

**Additional file 1.** PCMH Care Coordination Conceptual Model

**PCMH Care Coordination Conceptual Model**

Care Coordination Domains		Structure (Inputs)	Process (Activities)	Short Term Outcomes	Long Term Outcomes
Healthcare Home	Care Coordination Practice Infrastructure	<ul style="list-style-type: none"> <li>- has the function of care coordination embedded into its organizational structure either on site or remotely</li> <li>- has a procedure to identify high risk patients who need care coordination services, based on clinical outcomes, utilization and/or cost</li> <li>- has documented policies and guidelines to direct care coordination activities</li> <li>- provides access to designated care coordinators to support high risk patients</li> <li>- has primary care teams that collaborate to bring coordinated care to patients</li> <li>- has a designated function to assist patients with referrals to specialists</li> <li>- has a tracking system to track and monitor critical referrals</li> </ul>	<ul style="list-style-type: none"> <li>- identifies patients needing care coordination</li> <li>-Care coordinators work closely with primary care providers to coordinate and manage care for complex patients needing additional support</li> <li>-High risk patients receive care coordination support from a designated care coordinator</li> <li>-Care coordinators assist patients with needed referrals</li> <li>-Care coordinators track and monitor critical referrals</li> </ul>	<ul style="list-style-type: none"> <li>-Patients at high risk for adverse outcomes are identified and receive frequency contact and support</li> <li>-Improved patient satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>-Improved clinical outcomes</li> <li>-Reduced hospital/ER utilization</li> <li>-Reduced costs</li> </ul>
	Accountability	<ul style="list-style-type: none"> <li>- has clearly defined roles and responsibilities for patient care (e.g. provision of chronic and preventive care, supporting self-management, coordinating care)</li> </ul>	<ul style="list-style-type: none"> <li>- negotiates roles and responsibilities of each member of the primary care team, including the patient</li> <li>-Primary care team, including the patient, understands roles and responsibilities that each member of the team has for patient care and carrying out the care plan</li> </ul>	<ul style="list-style-type: none"> <li>-Improved staff satisfaction</li> <li>-Improved communication and trust</li> </ul>	<ul style="list-style-type: none"> <li>-Improved patient outcomes (e.g. chronic disease outcomes, preventive care measures, hospital/ER utilization rates)</li> </ul>

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	IT Capacity	<ul style="list-style-type: none"> <li>- has a computerized information system (e.g. electronic medical records or registry) to identify patients needing care coordination, track their outcomes, document patient education and self-management, and record plans of care</li> </ul>	<ul style="list-style-type: none"> <li>-Patients receive care from a primary care team that uses technology and information systems to assist in meeting their needs</li> </ul>	<ul style="list-style-type: none"> <li>-Clinical decisions are supported by data</li> <li>-Medical records are accessed in a timely fashion</li> <li>-Care plans are better documented</li> <li>-Information transfers are timely and accurate</li> <li>-Increased staff satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>-Reduced costs and hospital/ER utilization</li> <li>-Improved clinical outcomes, quality, safety, and efficiency of care</li> <li>-Reduced medical errors</li> <li>-Improved care delivery processes</li> <li>-Reduced duplicative testing</li> </ul>
<b>Plan of Care</b>		<ul style="list-style-type: none"> <li>- has a documented care plan for each patient receiving care coordination that is available to all members of the primary care team, including the patient</li> <li>- provides access to care coordinators who establish, review and update care plans for all patients receiving care coordination services</li> </ul>	<ul style="list-style-type: none"> <li>-Care coordinators meet with appropriate care team members, including patient and PCP, to establish a care plan</li> <li>-Care coordinators review and update care plans on a recurring basis</li> <li>-Patients receive a copy of their care plan</li> </ul>	<ul style="list-style-type: none"> <li>-Care plans are better documented</li> <li>-Communication amongst all participants in patient's care is enhanced</li> <li>-Improved patient satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>-Improved chronic disease outcomes</li> <li>-Reduced hospital/ER utilization</li> <li>-Increased medication adherence</li> </ul>
<b>Self-Management</b>		<ul style="list-style-type: none"> <li>- has a process to provide patient self-management education and support for all appropriate patients (e.g. peer mentoring and counseling groups)</li> <li>- provides access to care coordinators or other patient educators to instruct patients on self-management</li> </ul>	<ul style="list-style-type: none"> <li>-Care coordinators and/or other primary care team members educate and empower patients with chronic illnesses to take an active role in managing their illness through self-management education, problem-solving skill development, and goal setting</li> <li>-Patients with chronic illness meet face to face with care coordinators or other patient educators for self-management education</li> <li>-Patients work with the primary care team to</li> </ul>	<ul style="list-style-type: none"> <li>-Enhanced patient self-efficacy (e.g. patients better identify their own problems, make decisions, and take appropriate actions)</li> <li>-Increased self-management goal setting</li> <li>-Increased patient</li> </ul>	<ul style="list-style-type: none"> <li>-Improved chronic disease outcomes</li> <li>-Increased health literacy</li> </ul>

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			<p>set self-management goals that are recorded in their care plan</p> <p>-Patients engage in peer mentoring/counseling groups to learn from others with similar health conditions</p>	satisfaction	
Communication	Interpersonal Communication	<ul style="list-style-type: none"> <li>- has an effective system to ensure timely and effective communication with patients and outside care providers</li> <li>- provides access to care coordinators who directly contact (e.g. in person, phone, secure message) patients needing care coordination to assist them in carrying out care plans</li> </ul>	<ul style="list-style-type: none"> <li>-Care coordinators communicate with outside care providers to ensure timely information sharing and coordination of care</li> <li>-Care coordinators communicate seamlessly and frequently with patients needing care coordination to assist them in carrying out care plans</li> </ul>	-Increased patient satisfaction	<ul style="list-style-type: none"> <li>-Reduced costs</li> <li>-Improved clinical outcomes</li> <li>-Reduced medical errors</li> <li>-Reduced duplicative testing</li> </ul>
	Information Transfer	<ul style="list-style-type: none"> <li>- provides access to care coordinators to ensure that needed clinical information is transferred between the medical home and outside entities (e.g. hospitals, VNA, specialists)</li> <li>- has needed patient information in the electronic health record system available to all primary care team members</li> </ul>	<ul style="list-style-type: none"> <li>-Care coordinators ensure the timely transfer and receipt of needed patient information (e.g. test results, specialist notes)</li> <li>-Patients experience a seamless transition between outpatient and specialist care with close follow up</li> <li>-All entities providing care for the patient possess all needed care information</li> </ul>	<ul style="list-style-type: none"> <li>-Enhanced information sharing between primary care team and outside providers</li> <li>-Improved patient and staff satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>-Reduced duplicative tests</li> <li>-Reduced number of specialist visits</li> <li>-Reduced adverse drug events</li> <li>-Reduced medical costs</li> </ul>
Patient Assessment and Support	Needs Assessment	<ul style="list-style-type: none"> <li>- has a process to routinely and proactively assess needs of patients with complex health issues and/or uncontrolled chronic illness</li> </ul>	<ul style="list-style-type: none"> <li>-Complex patients have a comprehensive assessment of their medical and psychosocial needs by care coordinators</li> <li>-Care coordinators regularly collect and review patient information from multiple sources (e.g. medical record, discussion with care team and patient) to develop a complete assessment of patient's needs</li> </ul>	<ul style="list-style-type: none"> <li>-Increased patient satisfaction</li> <li>-Enhanced patient self-efficacy</li> <li>-Better alignment with community resources</li> </ul>	-Improved clinical outcomes
	Monitoring,	<ul style="list-style-type: none"> <li>- has a system for identifying and</li> </ul>	<ul style="list-style-type: none"> <li>-Care coordinators systematically follow up</li> </ul>	-Increased contact	-Reduced ambulatory

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	Follow Up, and Responding to Status Changes	<ul style="list-style-type: none"> <li>responding to changes in status for patients receiving care coordination</li> <li>- provides access to care coordinators who monitor, follow up, and respond to changes in status</li> </ul>	<ul style="list-style-type: none"> <li>on tests, treatments, and services for patients receiving care coordination</li> <li>-Care coordinators closely monitor patients receiving care coordination and respond to changes in a timely fashion</li> <li>-Care coordinators routinely review patient status</li> </ul>	<ul style="list-style-type: none"> <li>between primary care team and patients receiving care coordination</li> </ul>	<ul style="list-style-type: none"> <li>sensitive admissions</li> <li>-Reduced hospital re-admissions</li> <li>-Reduced hospital/ER utilization</li> <li>-Reduced medical errors</li> </ul>
	Linkage to Community Resources	<ul style="list-style-type: none"> <li>- has a comprehensive listing of supportive community resources (e.g. financial, social, educational)</li> <li>- provides access to care coordinators who link patients to community resources</li> </ul>	<ul style="list-style-type: none"> <li>-Care coordinators constantly seek to link patients to all appropriate supportive resources in their community to maximize achievement of all care plan goals</li> </ul>	<ul style="list-style-type: none"> <li>-Increased patient satisfaction</li> <li>-Increased patient access to community based services</li> </ul>	<ul style="list-style-type: none"> <li>-Improved patient outcomes</li> </ul>
<b>Care Transitions</b>		<ul style="list-style-type: none"> <li>- receives timely notification of all patients discharged from hospitals and other acute care facilities</li> <li>- provides access to care coordinators who contact patients in a timely fashion after hospital/acute care discharge</li> </ul>	<ul style="list-style-type: none"> <li>-Patients experience a seamless transition between inpatient and outpatient care with close follow up and attention to changes in care plan</li> <li>-Care coordinators receive timely notifications of all hospital discharges</li> <li>-Care coordinators make contact with patients by phone and, if necessary, in person within 48 hours post discharge to assess patient status and support care plan as needed</li> <li>-Care coordinators reconcile medication at every transition event</li> </ul>	<ul style="list-style-type: none"> <li>-Reduced 30 day re-admission rate</li> <li>-Increased patient satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>-Reduced overall medical costs</li> <li>-Reduced mortality</li> <li>-Reduced medication errors</li> </ul>