UCSF Department of Family & Community Medicine
Center for Excellence in Primary Care

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Facilitating care integration in Community Health Centers:

A conceptual framework and literature review on best practices for integration into the medical neighborhood

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Executive summary

Background

The four pillars of primary care practice articulated by Dr. Barbara Starfield -- first contact care, continuity of care, comprehensive care, and coordination of care - are the foundation for all future elaborations of high-performing primary care. Care integration between the medical home and its surrounding medical neighborhood is increasingly complex. The typical primary care clinician interacts with as many as 229 other providers in 117 different practices and the probability that a clinician visit will result in a referral to another clinician almost doubled from 1999 to 2009. Forty-two percent of adults with health problems report problems with the coordination of their care.

Community Health Centers (CHCs) and other safety net primary care practices have long served as the bedrock of comprehensive, high quality, and cost-effective health care for underserved and disenfranchised populations in California and across the nation. However, patients in these settings face significant barriers to care, which are magnified due to the combined problems of a poorly integrated medical neighborhood, fragile access to care, and a majority of patients who are either uninsured or Medicaid recipients. Addressing CHC integration is a particularly compelling topic in California, as California CHCs care for 15% of all community health center patients in the United States and surpass the national average in percent of CHC patients who are racial/ethnic minorities, at or below 200% of the federal poverty level, uninsured, or with Medicaid coverage.

For CHCs to be successful in achieving these missions, they need strategies to overcome the significant barriers to cultivating relationships with patients and other providers and integrate into the medical neighborhood.

Study design and methods

In this Blue Shield of California Foundation funded study, *Facilitating Care Integration in California Community Health Centers*, we sought to answer two important questions through literature reviews, environmental scans, interviews, and collaboration with an advisory committee representing key stakeholders in CHCs and safety net settings in California. The two questions we sought to answer

were: 1) How integrated are community health centers with their surrounding medical neighborhood? and 2) What strategies have community health centers implemented to improve integration for their patients, in the interfaces between primary care-specialty care, primary care-oral health care, primary care-diagnostic imaging services, primary care-pharmacy services, and primary care-hospital care? (Figure 1). The primary care-behavioral health interface is covered in a separate report under this program.

Figure 1: The five domains of primary care integration included in this report

From those questions, we also examined the literature on conceptual models for integration strategies, and unable to find a model that classified integration-centered interventions and innovations in these settings, we derived a conceptual model for our findings (Figure 2).

Our findings present evidence-based and practical examples of innovations, interventions and models that CHC and safety net settings have employed to better integrate with the medical neighborhood in California and across the nation. Finally, we assembled a compendium of resources that CHCs can utilize for guidance on implementation, development, and better understanding of the models.

Results

We defined Barbara Starfield's pillars of comprehensiveness and coordination of care as the two faces of effective integration between primary care and the rest of the medical neighborhood. Comprehensiveness entails bringing the medical neighborhood into the medical home, making it the "one-stop shop" for all health-related needs, while coordination requires seamless interactions with outside participants and providers in the medical neighborhood.

At its heart, care integration is about strengthening relationships among care providers and between care providers and patients, recognizing that patients – within their primary care home – are at the hub of the medical neighborhood. Various strategies have been developed to achieve these aims, and we classified those interventions, models, and innovations into a number of categories within each of the pillars of Comprehensiveness and Coordination. *Comprehensiveness* – or bringing services into primary care – includes a) Colocation of additional services into primary care; and b) capacity building of primary care providers. *Coordination* – or building relationships with services outside of primary care - includes these categories: a) defining and developing a network of service providers; b) improving patient navigation and engagement; and c) improving communication and collaboration. Cultivating personal and technology-assisted relationships and activating patients for a greater role in their care are foundational for all these categories.

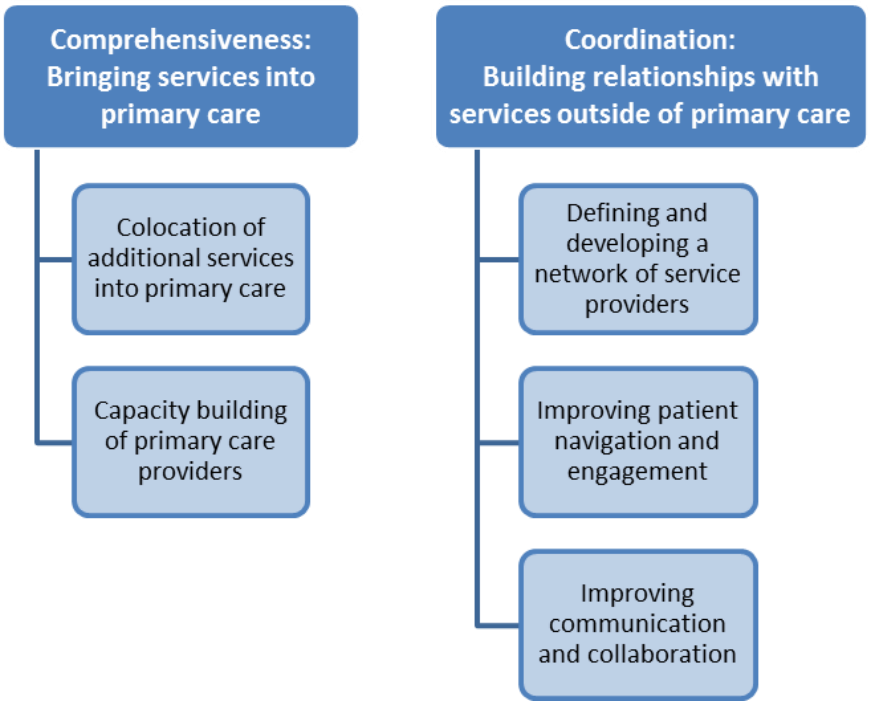

Figure 2. Conceptual model for community health center integration strategies

Classifying the innovations in each of our domains yielded a matrix of integration strategies, summarized in Table 1.

Table 1: Summary of findings

	Comprehensiveness: Bringing services into primary care		**Coordination: Building relationships with services outside of primary care**		
	Colocation of additional services into primary care	Capacity building of primary care providers	Defining and developing a network of service providers	Improving patient navigation and engagement	Improving communication and collaboration
Specialty Care					
Specialty services within primary care	√				√
Hospital-CHC partnerships	√				√
Specialty-trained NPs/PAs	√				
Increasing PCP capacity through training and electronic consultation		√	√		√
Building formal partnership network			√		
Integrated systems			√	√	√
Improving access to specialty care through use of care coordinators				√	√
Increasing the availability and coordination of specialty care through telemedicine			√	√	√
Oral Health					
Dental services on site	√				√
School-based dental services	√				
Academic-CHC partnerships	√				√
Training PCPs and non-dental professionals		√			

	Comprehensiveness: Bringing services into primary care		Coordination: Building relationships with services outside of primary care		
	Colocation of additional services into primary care	Capacity building of primary care providers	Defining and developing a network of service providers	Improving patient navigation and engagement	Improving communication and collaboration
Community Partnerships			√	√	√
Mobile dental services			√	√	
Patient education				√	
Virtual Dental Homes			√	√	√
Teledentistry			√	√	√
Diagnostic Imaging					
In-house imaging	√				
Private facility discounts			√	√	
Integration with hospitals			√		√
Access to a public hospital			√	√	
Referral coordination				√	√
Referral guidelines					√
Pharmacy Services					
In-clinic 340B pharmacy	√		√		√
In-clinic medication therapy management	√				√
Pharmacist Networks			√		
Patient assistance program enrollment navigators				√	
Pharmacy-based medication therapy management			√		
Prescription fill information shared					√

	Comprehensiveness: Bringing services into primary care		Coordination: Building relationships with services outside of primary care		
	Colocation of additional services into primary care	Capacity building of primary care providers	Defining and developing a network of service providers	Improving patient navigation and engagement	Improving communication and collaboration
with PCP					
Provision of medication organization services by pharmacy				√	
Hospital Care					
PCP in the inpatient setting	√				
Direct communication between PCPs and hospitalists			√		√
Electronic exchange of information between hospitals and primary care			√		√
Coordination of care using a hospital-based nurse			√	√	√
Coordination of care using a primary care-based nurse			√	√	√
Post-discharge access to primary care medical home				√	√

The context in which a CHC operates offers opportunities and places constraints on its ability to cultivate relationships with the medical neighborhood. For example, CHCs in county systems with shared electronic medical records may have opportunities for seamless electronic communication that are not feasible in more fragmented systems. As a tool for CHCs seeking to implement these strategies, we classified each intervention based on depth of the integration, magnitude of the costs of the intervention (e.g., financial, human resources), and an estimate of the burden level on the primary care provider/practice and the medical neighborhood partner to implement and sustain the intervention. We have also provided links to practical resources for implementation.

Conclusions

Care integration is a timely topic given the expansion of CHCs propelled by the Affordable Care Act. As CHCs in California and around the nation transform into Patient-Centered Medical Homes, their success will depend in part on the extent to which they can effectively build the pillars of comprehensiveness and coordination in the medical neighborhood. This report offers a practical guide to care integration, providing both a framework for thinking about strategies as well as links to practical tools and examples of implementation.

Implementing the strategies described in this report requires engaged leadership, capital and human resource investments, maintenance costs, relationship-building within the practice or the neighborhood, and evidence for sustaining the efforts. Realizing the primary care pillars of comprehensive and coordinated care requires strengthening the level of integration between community health centers and their medical neighborhoods.