

Establishing the Collaborative Care Research Network (CCRN): A Description of Initial Participating Sites

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Collaborative care has increased dramatically in the past decade, yet the variability in collaborative strategies and the diversity of settings in which collaboration is being implemented make it difficult to assess quality and outcomes. Therefore, three aims were addressed in the current study: (a) describe and characterize the sites in the Collaborative Care Research Network (CCRN), (b) identify factors associated with practices' self-identified collaborative care model (e.g., coordinated, integrated, care management), and (c) identify limitations of available survey data elements so as to propose additional elements for future surveys. Initial (CCRN) sites completed surveys regarding several organizational factors (e.g., setting type, size of patient population, number of behavioral health providers). Results from 39 sites showed significant heterogeneity in self-identified type of collaborative care model practiced (e.g., integrated care, coordinated care), type of practice setting (e.g., academic, federally qualified health center, military), size of clinic, and ratio of behavioral health providers to medical providers. This diversity in network site characteristics can provide a rich platform to address a number of questions regarding the current practice of collaborative care. Recommendations are made to improve future surveys to better understand elements of the patient-centered medical home and the role it may play in outcomes.

Keywords: CCRN, Collaborative Care, PCMH, PBRN

Collaborative care has increased dramatically in the past decade, yet the variability in integration strategies and the diversity of settings in which integration is being implemented make it difficult to assess quality and outcomes (Miller,

Kessler, Peek, & Kallenberg, 2011). Multiple models for collaborative care have been described, including colocated, collaborative, integrated, and care management (Blount, 2003), though the definitions of these models have not

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been fully delineated and agreed upon (Miller et al., 2011). Unfortunately, due to the diversity of these models, significant questions remain as to their differential effectiveness and which elements of collaboration are most critical to good patient outcomes (Butler et al., 2008; Miller et al., 2011). The often-cited Agency for Research and Quality systematic review concluded that collaborative care was generally effective, but there was no evidence to support that any particular models were superior and that it was not possible to determine which specific elements of collaborative care contributed most to the effectiveness (Butler et al., 2008). The review's authors called for effectiveness research to respond to these issues.

Kessler and Miller (2011) responded to this call by establishing the Collaborative Care Research Network (CCRN) in conjunction with the American Academy of Family Physicians' National Research Network (AAFP NRN). Support was generated to establish a practice-based research network (PBRN) to include sites developing or practicing some form of collaborative care and integrating into primary care mental health, substance abuse, and health behavior services, referred to collectively as "behavioral health." PBRNs, leverage participation of numerous sites in order to answer questions otherwise difficult to address with small sample sizes. PBRNs have been used for years to understand challenges to implementation of evidence-based treatments and translation of research into practice (Green & Hickner, 2006). Adopting this model, the CCRN is comprised of practices with both behavioral health clinicians and primary care providers interested in conducting primary care-based research focusing on collaborative care. Affiliation with the AAFP NRN provides a support structure through which CCRN can become well established and provides a set of primary care practices representing the heterogeneous population of patients and clinicians of the United States.

Concurrent with these efforts to develop the CCRN has been the national trend to promote the patient-centered medical home (PCMH). A central tenet of the PCMH is that team-based care, designed to enhance coordination and communication among providers, can lead to more efficient and cost-effective health care (American Academy of Family Physicians [AAFP], American Academy of Pediatrics

[AAP], American College of Physicians [ACP], & American Osteopathic Association [AOA], 2007; Ferrante, Balasubramanian, Hudson, & Crabtree, 2010; Nutting et al., 2009; Starfield & Shi, 2004). In an effort to ensure high quality for the PCMH, the National Committee for Quality Assurance (NCQA) set forth six process improvement standards for primary care (NCQA, 2011). The six "must-pass" elements articulated are as follows: (1) access, (2) use of data for population health management, (3) assessing and addressing patients' needs and goals for complex conditions (e.g., behavioral health comorbidities), (4) support for patient self-management of health, (5) tracking and coordinated follow-up of referrals, and (6) measurement of improvement through continuous quality improvement (CQI). NCQA's goal is for these standards to be within the reach of a range of primary care practice sizes and configurations (e.g., solo, community health center [CHC]), electronic capabilities, populations served, and locations (e.g., urban, rural).

With the specifics of health care reform yet to be worked out, it remains unclear what role behavioral health will have in this evolving model of primary care, though many believe that PCMH will only reach its full potential by addressing patients' behavioral health needs (Croghan & Brown, 2010; deGruy & Etz, 2010). The integration of behavioral health services (i.e., collaborative care) enables the PCMH to meet its goals of enhanced access, coordinated and high-quality care (Hunter & Goodie, 2010). Behavioral health professionals in the PCMH can assist any primary care patient either through immediate coordination with other health care professionals or an improved referral system. As the PCMH incorporating collaborative care is envisioned, when the primary care physician detects a need for a behavioral health provider, the physician can perform a "warm handoff" during the patient's clinic visit, thus increasing the chance the patient will receive timely behavioral health services (compared with referral to similar, but distant carved-out services). Additional potential benefits of collaborative care include (1) improved sensitivity and accuracy of behavioral health diagnosis among partnering primary care physicians; (2) increased screening and intervention of behavioral health issues, which can significantly impact chronic dis-

ease outcomes; and (3) earlier prevention efforts directed at behavioral health issues. Yet to understand if such benefits are realized from collaborative care, a network of practices that implement collaborative care must coalesce and contribute to effectiveness research and inform the field through dissemination.

It is therefore important to understand several structural characteristics of CCRN practices (e.g., type and size of practice), as they carry out various efforts to increase access to and coordination of behavioral health services. It will be left for future research, including the use of focus groups, stakeholder interviews, and other qualitative methods, to assess practices' processes and functions, such as methods of communication. It may be from the very diversity of CCRN sites that comparisons can be made as to predictors of superior patient outcomes. If a PBRN intends to study the impact of various collaborative care models of care on patient outcomes and discover factors associated with optimal outcomes, an effective PBRN must first specify this diversity in its sample of sites, patients, and clinicians represented within the membership. The aim of this study was therefore to describe this diversity.

To begin to understand this diversity and how sites practicing collaborative care differ in type, size, and staffing an initial survey was sent to sites interested in the CCRN. We present analysis of data from responding sites. Such analyses address the three aims of this study: (a) describe and characterize the sites in CCRN, (b) identify factors (e.g., proportion of behavioral health providers to medical staff) associated with practices' self-identified collaborative care model (e.g., integrated, care management), and (c) identify limitations of available survey data elements and propose additional elements for ensuing surveys. The purpose of this current study was *not to test hypotheses*, but rather to describe the CCRN membership to date and to identify information important to gather in the future about participating sites so as to understand potential bias in membership and to maximize the network's research capacity. Rather than attempt to describe the functions of collaborative care as practiced in the field currently, our focus here is to describe how sites that self-describe their model of collab-

orative care differently differ in terms of personnel and organizational structure and capacity.

Methods

Construction of the Survey

Survey items were created by two authors (BM and RK). One source of items came from the AAFP NRN's Practice Demographic Survey. Items specific to collaborative care (e.g., number of behavioral health providers) were created in consultation with several leaders in the field such as select Collaborative Family Health Care Association board members and practicing directors of collaborative care practices. Although items assessing use of electronic medical record systems used at each site and how/where behavioral health services were provided, no attempt was made to capture process variables such as the level of communication/coordination that occurs between providers. Importantly, each site was asked to identify which one of three models of collaborative care best described their program. The definitions provided sites were as follows:

1. The Coordinated Care Model: Behavioral health and primary care providers practice separately within their respective systems. Information regarding mutual patients may be exchanged as-needed, and collaboration is limited outside of the initial referral.

The Integrated Care Model: Tightly integrated, on-site teamwork with a unified care plan. Often connotes close organizational integration as well, perhaps involving social and other services.

The Care Management Model: Specific type of service that is often disease specific (e.g., depression, congestive heart failure) whereby a behavioral health clinician provides assessment, intervention, care facilitation, and follow-up.

Other: Respondents were asked to specify.

The [Appendix](#) shows the survey, with some definitions of terms used in the survey.

Distribution of Questionnaires

Initial site recruitment for the CCRN was done by sending invitations to participate in the network using listserves of health care groups suspected of interest in collaborative

care (e.g., CFHA, Integrated Primary Care Special Interest Group within Society of Behavioral Medicine, etc.) as well as sites enrolled in the AAFP's NRN. A survey was sent to all 55 sites expressing interest in becoming a member of CCRN. At the time that data analysis began, a total of 39 sites had returned completed surveys.

Data from completed surveys were then entered into a spreadsheet and checked for data accuracy. Sites were contacted in order to clarify any responses out of range (e.g., 325 administrative staff) or to provide missing data. Descriptive statistics were calculated including means, percentages, and ranges for all variables, along with cross-tabulations.

Results

Results are presented consistent with the study's intent to describe sites' characteristics, not to test differences between sites on categorical variables. [Table 1](#) describes key variables of the 39 site sample. The table columns show the level of integration into which a site placed itself: providing coordinated care, care management, integrated care, or other. Although five sites did not answer the question, a majority of sites described

themselves as providing integrated care. Although a majority of sites reported caring for between 20,000 and 1,000,000 patients, nearly 25% of sites indicated serving more than one million covered lives. It is unclear if these numbers reflect the size of the institution more generally or the size of the primary care population served in a collaborative care model. A second measure of practice size was the number of physicians serving the practice, with a large range between sites here as well. Unfortunately sites were given only categorical response options on the survey, so for both of these measures more sensitive analyses could not be performed. Also provided are gender and age distributions of patient populations, by site.

Elements of delivery of behavioral health services associated with different collaborative care models are presented in [Table 2](#). One site reporting more than five times the number of behavioral health providers because medical providers inflated the average ratio for the "other" group and resulted in a relatively broad range of ratios for the group overall; otherwise the normative response appears to be one behavioral health provider for every five or six medical providers, regardless of collaborative care model used to describe the

Table 1
Provider Size and Patient Populations Served, by Self-Reported Type of Collaborative Care Model

| | Coordinated care (n = 7) | Integrated care (n = 21) | Care management (n = 1) | Other (n = 5) |
|--------------------------------------|-----------------------------|-----------------------------|----------------------------|------------------|
| Patient population size | <2.5 K (0) | 1 | 0 | 0 |
| | 2.5–20 K (1) | 3 | 0 | 2 |
| | 20K–250 K (4) | 8 | 0 | 1 |
| | 250K–1M (1) | 3 | 0 | 0 |
| | >1M (1) | 5 | 1 | 2 |
| Average number of physicians (range) | 33 (2–158) | 52 (3–181) | 44 (—) | 36 (3–67) |
| 10 | 3 | 4 | 0 | 2 |
| 11–50 | 3 | 8 | 1 | 0 |
| 51–100 | 0 | 6 | 0 | 3 |
| 101–150 | 0 | 2 | 0 | 0 |
| 151–200 | 1 | 1 | 0 | 0 |
| % Female patients (avg.) | 41 | 48 | 100 | 56 |
| Age of all patients seen at site | | | | |
| 0–17 years (%) | 11 | 13 | 2 | 14 |
| 18–24 years (%) | 10 | 9 | 30 | 14 |
| 25–44 years (%) | 26 | 23 | 58 | 39 |
| 45–64 years (%) | 32 | 33 | 8 | 24 |
| 65–74 years (%) | 10 | 11 | 2 | 10 |
| 75 years and older (%) | 13 | 10 | 0 | 3 |

Table 2
Behavioral Health Resources, by Self-Reported Type of Collaborative Care Model

| | Coordinated care (<i>n</i> = 7) | Integrated care (<i>n</i> = 21) | Care management (<i>n</i> = 1) | Other (<i>n</i> = 5) |
|--|-------------------------------------|-------------------------------------|------------------------------------|-----------------------|
| Ratio of behavioral health providers to medical providers (avg.; range) | .19 (.12–.37) | 0.18 (0.0–0.57) | 0.16 (—) | 1.16 (0.0–5.56) |
| % BH services within practice | 85 | 74 | 0 | 60 |
| % BH services within building | 15 | 16 | 0 | 0 |
| % BH services outside building | 0 | 10 | 100 | 40 |

Note. BH = behavioral health.

site. A majority of sites report behavioral health services being delivered within the primary care practice.

Data presented in Table 3 displays differences between practice type (i.e., academic, military, a Federally Qualified Health Centers [FQHC], or CHC) and a site's practicing model of collaborative care. Approximately one quarter of sites indicated they were academic practices, another quarter of sites were reported to be FQHCs, with nearly 20% reported to be military practices, and the remainder being CHCs, and solo or group practices.

Data presented in Table 4 displays behavioral health delivery variables (i.e., ratio of providers, location of behavioral health services) by practice type (i.e., academic, military, an FQHC, or CHC). As expected, the community mental health center had a higher ratio of behavioral health to medical providers. Aside from that community mental health center and one site in the "other" category, the range of behav-

ioral health-to-medical health provider ratios ranged generally between .03 and .30, suggesting a broad range between sites with some having one behavioral health professional for every three physicians, whereas others had as few as one behavioral health professional for every 30 physicians.

Table 5 shows the type of practice and the presence/absence of and type of electronic medical records (EMR) used. Only two of the 39 sites surveyed indicate they do not use an EMR. The most commonly reported EMR brands used are Epic, Centricity, Allscripts, and computerized patient records system.

Table 6 presents data related to the issue of factors associated with the location of a site. Location appears to influence (to some degree) the model of collaborative care practiced, with perhaps less influence on the likelihood that behavioral health services are delivered within the practice and whether or not the practice has an EMR.

Table 3
Type of Practice, by Self-Reported Type of Collaborative Care Model

| Type of setting (<i>n</i>) | % Coordinated | % Integrated | % Care management | % Other |
|--|---------------|--------------|-------------------|---------|
| Academic practice (9) | 13 | 50 | 37 | 0 |
| FQHC (9) | 17 | 83 | 0 | 0 |
| Military practice (7) | 29 | 71 | 0 | 0 |
| CHC (6) | 33 | 67 | 0 | 0 |
| Solo (2) | 50 | 0 | 0 | 50 |
| Family practice group (1) ^a | 0 | 0 | 0 | 0 |
| Multispecialty group (1) | 0 | 100 | 0 | 0 |
| PCMH (1) | 0 | 0 | 0 | 100 |
| Substance abuse treatment program (1) | 0 | 100 | 0 | 0 |
| Other (2) | 50 | 50 | 0 | 0 |

Note. FQHC = federally qualified health center; CHC = community health center; PCMH = patient-centered medical home.

^a This site did not respond to the survey item.

Table 4
Behavioral Health Resources, by Practice Type

| Type of setting (<i>n</i>) | Avg. ratio of BH/ medical (range) | % BH services w/in practice | % BH services w/in bldg | % BH services outside bldg |
|--|--------------------------------------|--------------------------------|----------------------------|-------------------------------|
| Academic practice (9) | 0.15 (0.04–0.25) | 43 | 0 | 57 |
| FQHC (9) | 0.3 (0.0–0.57) | 83 | 0 | 17 |
| Military Practice (7) | 0.11 (0.03–0.22) | 43 | 57 | 0 |
| CHC (6) | 0.17 (0.06–0.37) | 100 | 0 | 0 |
| Solo (2) | 0 | 100 | 0 | 0 |
| Family practice group (1) | 0.08 | 0 | 0 | 100 |
| Multispecialty group (1) | 0 | 100 | 0 | 0 |
| PCMH (1) | 5.56 | 100 | 0 | 0 |
| Substance abuse treatment program (1) | 0.43 | 100 | 0 | 0 |
| Other (2) | 5.2 (0.04–10) | 100 | 0 | 0 |

Note. BH = behavioral health; FQHC = federally qualified health center; PCMH = patient-centered medical home.

Discussion

One step to maximize the utility of data from a PBRN is to understand the characteristics of the cohort providing data and how variability in these characteristics can help explain (or can contribute to) the differences in observed outcomes. Increasing sample size without maintaining reasonable practice variation would add less value to the research, whereas correctly managing variability promotes comparative effectiveness research. The current report describes the initial participating sites in the

CCRN. The current results suggest a good range of diversity in the sites involved to date in regard to size, location, and electronic technology being used to coordinate health care services. This diversity bodes well for the ability to ask essential questions about collaborative care, with great potential for collaborative and comparative effectiveness research.

A majority of CCRN sites self-categorize their model of care delivery as “integrated.” The practice sites and organizations in which they are embedded vary in size from a two-physician clinic serving 2,500 patients to an organization

Table 5
Type of Electronic Medical Records, by Practice Type

| | No EMR | % Epic | % Centricity | % Allscripts | % CPRS | % Other EMR (vendors) |
|--|-----------|-----------|-----------------|-----------------|-----------|---|
| Academic practice (9) | 0 | 33 | 0 | 33 | 11 | 0 |
| FQHC (9) | 22 | 0 | 11 | 0 | 0 | 33% (MicroMD RPMS, Practice Partners) |
| Military practice (7) | 0 | 0 | 0 | 0 | 71 | 28% (AHLTA) |
| CHC (6) | 0 | 0 | 16 | 0 | 0 | %33 Nextgen Office MD, E-clinical works, E-MDs) |
| Solo (2) | 0 | 0 | 0 | 0 | 0 | 0 |
| Family practice group (1) | 0 | 0 | 0 | 0 | 0 | 100 (Center Powerchart) |
| Multispecialty Group (1) | 0 | 0 | 0 | 100 | 0 | 0 |
| PCMH (1) | 0 | 0 | 0 | 0 | 0 | 100 (CareLogic) |
| Substance abuse treatment program (1) | 0 | 0 | 100 | 0 | 0 | 0 |
| Other (2) | 0 | 0 | 0 | 0 | 0 | 0 |

Note. Rows across do not total 100% due to some sites not responding to survey item. EMR = electronic medical records; CPRS = computer patient records system; FQHC = federally qualified health center; RPMS = Resource Patient Management System; AHLTA = Armed Forces Health Longitudinal Technology Application; CHC = community health center; PCMH = patient-centered medical home.

Table 6
Type of Collaborative Care Model, Behavioral Health Service Location, and Level of EMR Integration, by Site Location

| | Inner city of urban area | Urban | Suburban | Rural |
|---|--------------------------|-------|----------|-------|
| Number of practices | 7 | 14 | 10 | 8 |
| % Coordinated | 0 | 28 | 23 | 20 |
| % Integrated | 100 | 43 | 55 | 80 |
| % Care management | 0 | 7 | 0 | 0 |
| % Other | 0 | 22 | 22 | 0 |
| BH services within practice | 50 | 72 | 70 | 100 |
| BH services within building | 34 | 7 | 10 | 0 |
| BH services outside building | 16 | 21 | 20 | 0 |
| No EMR | 16 | 35 | 40 | 0 |
| BH EMR separate from medical info (code 6) | 17 | 22 | 0 | 0 |
| BH EMR separate from medical info but with increased access (code 7) | 0 | 0 | 10 | 20 |
| Fully integrated EMR including billing (code 8) | 0 | 0 | 20 | 40 |
| Fully integrated EMR including billing and patient education materials (code 9) | 67 | 43 | 30 | 40 |

Note. BH = behavioral health; EMR = electronic medical records.

of 180 physicians serving more than a million covered lives. Future surveys of sites will need to clarify if the larger numbers truly reflect the patients served by collaborative care or reflect the population touched by any provider throughout a regional institution. Most sites tend to report one behavioral health provider (BHP) for every five or six physicians. This ratio should be considered in the context of the National Naval Medical Center summit, which recommended a ratio of a 0.25 full-time BHP for every full-time primary care physician (PCP), assuming each PCP had a patient panel size of 1,200, translating one full-time BHP for every 4,800 patients, which is roughly equivalent to the Department of Defense working group staffing recommendations if patient empanelment had been used instead (Hunter & Goodie, 2010).

A majority of sites indicate behavioral health services are provided within the practice setting itself, with less than 15% of sites indicating such services are provided outside the clinic building. This collocation of providers is not surprising given the method of recruitment into the CCRN. A significant minority (25%) of sites report having no EMR to facilitate service coordination, yet nearly one third of sites indicate

their EMR supports full integration of medical services and BHS. Again, this diversity portends valuable comparisons that can be made in identifying factors most responsible for positive outcomes that result from collaborative care.

Although the goals of the current efforts were limited to describing initial members of a research network, several limitations of this study need to be addressed. First, given the burgeoning presence of collaborative care, many more sites need to participate for research from this group to be representative of collaborative care nationally. In fact, it would prove invaluable for comparative effectiveness research to have a cohort of sites that do not practice collaborative care for comparison purposes. Second, information collected in future surveys need to possess greater clarity on sites' resources and practices. For example, rather than ask how many behavioral health providers are present at a site, a better representation of a resource may be the total number of full-time equivalent (FTE) providers who participate in that site's patient care, as many anecdotal reports suggest part-time behavioral health providers as well as part-time physicians are often found in academic practices. Improvement in the sensitivity of the survey to different data types should be improved

in subsequent surveys, such as avoiding premature categorization of continuous data (i.e., number of patients served).

A significant limitation of this initial survey was in the use of categories of collaborative care. Much more work is needed to create mutually exclusive categories, with one example of “definitional confusion” resulting in only one site self-describing itself as “care management.” Future mixed methods may reveal that mutually exclusive categories used in the current survey are not useful or possible given the tremendous diversity of sites that practice collaborative care. For example, greater specificity in characterizing care coordination is needed that may include the methods and frequency of communication between medical and behavioral health providers per patient treatment episode. Simplistically self-defining one’s CCRN site as “integrated” or “coordinated” may be insufficient in accurately describing the delivery of behavioral health services in different settings.

Using qualitative methods to focus on the care delivery elements that *define* these labels appears to be an essential next step. Such an approach may avoid the distraction of labeling or categorizing sites, allowing the focus to be on what system and care elements are associated with the best individual patient and patient population outcomes. After such models and their definitions are clarified, perhaps future surveys may have sites match their practice patterns to descriptions of model-prototype sites; these methods may be superior in having sites self-identify the model they practice. As the CCRN develops, it will be essential to describe contemporary collaborative care using a variety of methodologies and to do so with sites that are at various “levels” of integration of services. This broader perspective of research is critical if we are to advance our understanding of what works best across a multitude of organizational structures and patient populations.

A final aim of this study was to use the current data to propose improvements in survey terminology and methodology so as to more clearly characterize CCRN member practices. Therefore in addition to better understanding terms and models used (i.e., coordinated care, integrated care), improvements should be directed toward the goal of better understanding how collaborative care elements contribute to the essential elements of a PCMH as articulated

by NCQA. It is worth noting again that this survey data was *not designed to answer research questions directly*, but rather to inform future CCRN research projects as to practice variation in structure and design. In addition, some of the survey elements suggested below may be better viewed as specifically gathered in future studies so as to add to the overall database; proposed elements are not to be seen as adding to an omnibus lengthy questionnaire to be completed at a single point in time. However, over time the data elements to be known about participating sites, informed through an iterative process with qualitative methods, can ultimately help understand how to achieve optimal patient outcomes through collaborative care. Thus, the CCRN plans to focus future survey efforts in the following areas.

Practice Characteristics

(a) Several elements important to structural and institutional practice of collaborative care may be specified and available in the process of a site gaining NCQA recognition as a PCMH (e.g., NCQA level 1, 2, or 3, or number of points accrued). As an example, the sophistication of a site’s health information technology may be associated with several processes essential to collaborative care, i.e., communication, use of data for behavioral health screening, and population health management.

(b) Increase data sensitivity of survey items (i.e., avoid categorization of continuous variables). Refine survey items to more accurately portray site resources; for example, quantifying behavioral health FTEs rather than number of behavioral health providers. Increasing sensitivity increases the power to detect relationships between variables.

Process of Care Elements (Clinical, Operational, Financial)

(a) Better descriptions of the process by which healthcare team members share in problem identification and patient care (e.g., every patient sees each team member as part of their care, patients are identified by screening, only the physician identifies patient need, etc.).

(b) More specific information is needed on how a site’s treatment is collaborative. For example, are referrals accomplished via face-to-face/warm

Table 7
Sample CCRN Survey 2.0 Questions

| PCMH element | Sample CCRN survey 2.0 questions |
|--|--|
| Access | How long is the average wait for a patient referred to a behavioral health provider? What is the "panel size" for your behavioral health professionals? What proportion of patients referred for behavioral health services, receive behavioral health services? |
| Use of data for population management | Are screening mechanisms used to identify patients in need of services? Do you use registries as a form of behavioral health needs assessment? How does the practice identify vulnerable patient populations? |
| Care management | How are patients' progress toward health goals quantified? |
| Support self-care process | What proportion of patients with a chronic medical condition have been counseled/educated on self-management principles? |
| Track referrals and follow-up | What mechanism is in place to identify when a patient has been adequately followed up after care is provided? How often do behavioral health providers communicate about a patient's care with the patient's physician? What are the communication mechanisms for following care provided by an outside referral source? |
| Implement continuous quality improvement | What measures are used to assess quality of care? What is the mechanism for developing and instituting practice improvements? |

Note. PCMH = patient-centered medical home; CCRN = Collaborative Care Research Network.

handoff with immediate patient interaction, warm handoff without direct patient interaction, or chart or other messaging system. Communication channels and frequency of provider-provider communication should be quantified.

(c) More information is needed as to the types of services provided, including the average number of behavioral health visits per episode of care, the level of standardization of behavioral health treatments, the type of treatment paradigms/orientation that are most commonly used, and those that are involved in these decisions and their evaluation.

(d) Specific communication patterns between collaborating collaborative care team members should be specified (e.g., occurs intermittently as need arises, occurs routinely with every visit by any collaborative care team member, occurs verbally, by chart, or by e-mail).

(e) Better articulation of the level and method by which care plans are shared or worked on jointly by collaborative care team members.

(f) Data elements that better describe the options being used to pay for services delivered by a collaborative care team and how challenges in reimbursement have been overcome.

(g) Elements that describe involvement of patients' families or community resources are important to practicing a collaborative care approach, and so more effort will focus on collecting this information from sites.

(h) More descriptors about how sites are implementing CQI, given that all sites are engaged in implementing these practices.

One way to conceptualize information that will be most useful to the CCRN going forward is to map survey elements onto the core elements of a PCMH outlined by NCQA. Table 7 displays examples of how survey items may be mapped onto the PCMH elements.

We look forward to increasing membership in the CCRN in order to allow us to achieve our goal of conducting effectiveness research on collaborative care. As we continue to grow the network, we will focus on better identifying factors describing how sites practice their version of collaborative care so that we can better identify those elements most predictive of good patient outcomes.

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Appendix

Collaborative Care Research Network

In Association With the AAFP National Research Network

Practice Demographics Questionnaire

Instructions.

The questions found within this survey ask for information about your practice. Most questions can be answered by checking or circling the response that corresponds to your answer. Other items ask you to fill in the blank spaces provided for your answer. This questionnaire should be completed only once for all CCRN members in your practice.

If you have questions about particular survey items, please contact Mindy Spano, Research Network Coordinator, at 800-274-2237 x3178 or by e-mail at mspano@aafp.org.

After completing this survey, please fax it to the attention of Mindy Spano at 913-906-6099 or e-mail to mspano@aafp.org. Thank you!

Name and Location of Practice:

Section I: Information About Your Practice

1. Practice type (if you practice in more than one location, please select the practice type where you see most of your patients [your primary practice site]): (*practype*)

- ₁ Solo practice
- ₂ Two-person partnership
- ₃ Family practice group
- ₄ Military practice (e.g., VA, Air Force)
- ₅ Multispecialty group
- ₆ Federally qualified health center

(Appendix continues)

- ₇ Community health center
₈ Community mental health
₉ Substance abuse treatment program
₁₀ Academic practice (residency program, faculty practice)
₁₁ Other (please specify) (*pracoth*)

2. Who is the *majority* owner of your primary practice? (*pracown*)

- ₁ Self
₂ Medical group practice (single- or multi-specialty)
₃ Hospital or health system
₄ Managed care organization
₅ Federal, state, or local government, community board, etc.
₆ Other (please specify) (*ownoth*)

3. Is your practice a family practice/family medicine residency program? (*fpresid*)

- ₁ YES ₂ NO

4. Please select the category that best describes the *population size* of the community in which your primary practice is located:

- ₁ Less than 2,500 people
₂ 2500 to 19,999 people
₃ 20,000 to 249,999 people
₄ 250,000 to 999,999 people
₅ Greater than or equal to 1,000,000 people

5. Do you consider your primary practice location to be

- ₁ Inner city of urban area
₂ Urban (not inner city)
₃ Suburban
₄ Rural

Please indicate number in each category at your primary practice site:

6. Physicians:
 a. Family physicians ___
 b. Internists ___
 c. Pediatricians ___
 d. OB/GYN ___

- e. Nurse practitioners (*NP*) ___
 f. Physician assistants (*PA*) ___
 g. Nursing staff (RN and LPN) (*RN-LPN*) ___
 h. Medical assistants (*MA*) ___
 i. Allied health staff (lab, x-ray, EKG tech, physical therapy, occupational therapy) (*allied*) ___
 j. Administrative staff (*admstaff*) ___
 k. Psychologists (*psych*) ___
 l. Social workers ___
 m. Marriage and family therapist ___
 n. Licensed mental/substance abuse counselor ___
 o. Care/case manager (*social*) ___
 p. Dieticians (*diet*) ___
 q. Patient educators (*pteduc*) ___
 7. Do you have a business/practice manager?
₁ YES ₂ NO (*busmgr*)

Section II: Practice Population Characteristics (Based on All Active Charts):

You may want your office manager to complete items 8–39. If your practice site is part of a multisite group practice, please respond for your practice site only.

8. Approximate number of ambulatory patient visits for all clinicians in your practice in an average week (include *all* practice sites) (*practct*):

9. Source of estimates (e.g. EMR, billing data, best guess) (*source1*):

10. Patient gender (total % should equal 100%):

a. Male: ___ % (*ptgendm*)

b. Female: ___ % (*ptgendf*)

11. Source of gender estimates (e.g., EMR, billing data, best guess) (*source2*):

(Appendix continues)

12. Patient age (total should equal 100%):
- Under 3 years: ___ % (*under3*)
 - 3–17 years: ___ % (*age3_17*)
 - 18–24 years: ___ % (*age18_24*)
 - 25–44 years: ___ % (*age25_44*)
 - 45–64 years: ___ % (*age45_64*)
 - 65–74 years: ___ % (*age65_74*)
 - 75 years and older: ___ % (*over75*)
13. Source of estimates (e.g., EMR, billing data, best guess) (*source3*):
14. Can your billing system produce an age–gender distribution of *all* patients seen in the past year?
- ₁ YES ₂ NO (*agesex*)
15. Patient ethnicity (total should equal 100%):
- Hispanic or Latino: ___ %
 - Not Hispanic or Latino: ___ %
16. Patient race (total should equal at least 100% but may exceed 100% due to multiple races chosen by one or more individuals):
- American Indian/Native Alaskan: ___ % (*ptindian*)
 - Asian: ___ % (*ptasian*)
 - Black: ___ % (*ptblack*)
 - Native Hawaiian/Pacific Islander: ___ % (*ptpacific*)
 - White: ___ % (*ptwhite*)
 - Other: ___ % (*ptother*)
17. Source of patient race/ethnicity estimates (e.g. EMR, billing data, best guess) (*source4*)
18. Does your practice routinely ask for race/ethnicity information as a part of each patient’s medical record?
- ₁ YES ₂ NO
19. Patient payment method (total should equal 100%):
- Private health insurance (prepaid): ___ % (*prepaid*)
 - Private health insurance (fee for service): ___ % (*fee4svc*)
 - Medicare: ___ % (*medicare*)
 - Medicaid/other government assistance: ___ % (*medicaid*)
- Other: ___ % (*otherpay*)
 - Uninsured: ___ % (*uninsure*)
20. Source of payment method estimates (e.g., EMR, billing data, best guess) (*source5*):
- Services provided in your practice:
21. Where do a *majority* of your patients go for mental health/behavioral health services? (*beh*)
- ₁ Mental health/behavioral health provider located within the practice
- ₂ Mental health/behavioral health located outside the practice but within the same building
- ₃ Mental health/behavioral health located away from the building where your practice is located
22. If a mental health/behavioral health provider is located within your practice, choose the model you believe to offer; please refer to definitions below to determine which model is most consistent:
- ₁ Coordinated Care Model: Behavioral health and primary care providers practice separately within their respective systems. Information regarding mutual patients may be exchanged as-needed, and collaboration is limited outside of the initial referral
- ₂ Integrated Care Model: Tightly integrated, on-site teamwork with unified care plan. Often connotes close organizational integration as well, perhaps involving social and other services.
- ₃ Care Management Model: Specific type of service which is often disease specific (e.g. depression, congestive heart failure), whereby a behavioral health clinician provides assessment, intervention, care facilitation, and follow up.
- ₄ Other (please specify):
23. Where do a *majority* of your patients go for psychotropic/psychiatric medications?
- ₁ Nowhere, all medications prescribed on site
- ₂ Outpatient specialty mental health

- ₃ Inpatient specialty mental health
₄ Other (please specify):

Section III: Electronic Medical Records/ Electronic Data-Gathering Capabilities

24. Do you use electronic medical records in your practice?

- ₁ YES ₂ NO (*EMR*)

25. If YES, what is the name of your software: (*EMRname*):

26. If YES, are mental health/behavioral health records integrated:

- ₁ YES ₂ NO

27. If YES, is a computer program used to protect the records:

- ₁ YES ₂ NO

28. If YES, what is the name of the computer software/program:

29. If NO, are there any plans to integrate an EMR in the next year?

- ₁ YES ₂ NO

30. Is your practice connected to the Internet?

- ₁ YES ₂ NO (*internet*)

31. If YES, what method does your practice use for internet access? (*intmeth*)

- ₁ Dial-up (modem)
₂ DSL
₃ T-1 Line (or better)
₄ Other (please specify) (*intother*)

32. Do you use the Internet in your practice?

- ₁ YES ₂ NO (*intuse*)

33. If available, would you use the Internet to collect and/or submit research study data (using a secure server) to the AAFP network office?

- ₁ YES ₂ NO (*intres*)

34. Do you have access to e-mail at your practice site? ₁ YES ₂ NO (*email*)

35. If you use e-mail in your practice, do you use it to communicate with your patients?

- ₁ YES ₂ NO

36. If YES, for which purposes? (check *all* That apply) (*emailwhy*)

- ₁ Answering patients' questions
₂ Follow-up screening
₃ Follow-up consultation
₄ Scheduling appointments
₅ Other (please specify):

37. If you use e-mail in your practice, do you use it to communicate with other providers?

- ₁ YES ₂ NO

38. If YES, for which purposes? (check *all* that apply):

- ₁ Patient follow-up
₂ Communicating screener results
₃ Follow-up consultation
₄ Scheduling joint appointments
₅ Other (please specify):

39. Please indicate where your practice falls on the following continuum: (*contin*)

Please read all of these before checking the one that *best fits* your practice style:

- ₁ Paper charts: handwritten. separate mental health billing system
₂ Paper charts: dictation/transcription. Separate mental health billing system
₃ Paper charts with dictation/transcription plus desktop computers for word processing and faxing needs, plus separate mental health billing system
₄ Paper charts with dictation/transcription plus desktop computers for word processing, faxing, e-mail, and Internet access, plus separate mental health billing system

(Appendix continues)

₅ Desktop computers for word processing, faxing, e-mail, and Internet access. Computerized voice dictation to be printed and filed in the paper chart. Separate mental health billing system

₆ Electronic medical records software for mental health/behavioral health notes. Used in conjunction with paper charts for filing consultation notes, process notes, screening results, etc. Separate mental health billing system

₇ Electronic medical records software for mental health/behavioral health notes. Used in conjunction with paper charts for filing consultation notes, process notes, screening results, etc. plus scanning all documents into the computer and storing by patient numbers or Social Security number

₈ Electronic medical records with compatible billing system (mental health/behavioral health and medical combined). Billing software

improves coding and risk management. Distribute patient education materials provided by outside sources

₉ Electronic medical records with compatible billing system. Scan in consultation notes, process notes, screening results, etc. Incorporates a patient education module to print out personalized patient education materials (e.g. action plans, psychoeducational materials). A paperless office. No paper charts. No dictation or transcription costs

Thank you for completing this survey.

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