# POPULATION MANAGEMENT IN COMMUNITY MENTAL HEALTH CENTER-BASED HEALTH HOMES



SAMHSA-HRSA

Center for Integrated Health Solutions





#### SAMHSA-HRSA CENTER FOR INTEGRATED HEALTH SOLUTIONS

The SAMHSA-HRSA Center for Integrated Health Solutions (CIHS) promotes the development of integrated primary and behavioral health services to better address the needs of individuals with mental health and substance use conditions, whether seen in specialty behavioral health or primary care provider settings. CIHS is the first "national home" for information, experts, and other resources dedicated to bidirectional integration of behavioral health and primary care.

Jointly funded by the Substance Abuse and Mental Health Services Administration (SAMHSA) and the Health Resources and Services Administration (HRSA), and run by the National Council for Behavioral Health, CIHS provides training and technical assistance to community behavioral health organizations that received SAMHSA Primary and Behavioral Health Care Integration grants, as well as to community health centers and other primary care and behavioral health organizations.

CIHS's wide array of training and technical assistance helps improve the effectiveness, efficiency, and sustainability of integrated services, which ultimately improves the health and wellness of individuals living with behavioral health disorders.

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#### I. INTRODUCTION TO POPULATION MANAGEMENT

In order to succeed in the new health care ecosystem, integrated health providers need to become experts at population management. Population management requires providers to develop the capacity to utilize data to choose which patients to select for specific evidence-based interventions and treatments. Population management helps providers tailor care to those most in need of particular services, ensuring that children with asthma and ADHD or older adults with diabetes and schizophrenia are getting the right services at the right time for their conditions.

Population management is key to success with providing value-based care — where value is calculated by dividing the outcomes of the care by the costs of the interventions. To succeed in performance-based contracts (whether a provider is in an accountable

care entity or has signed a value-based incentive contract), integrated primary and behavioral health care providers especially need to be able to engage in population management that helps them identify, engage, and intervene with patients who are medical high utilizers. The top 5 percent utilizers within the Medicaid population account for around half of all Medicaid expenses.<sup>1</sup>

## VALUE-BASED CARE VALUE = COST OUTCOMES

Providers engaged in population management also need to be able to track and address key integrated health related outcomes from the Healthcare Effectiveness Data and Information Set (HEDIS) for their patient population.<sup>2</sup> Performance on certain HEDIS metrics is often written into performance-based population management contracts. Community mental health center-based health homes will want to pay special attention to HEDIS metrics related to behavioral health (for instance, percentage of patient population with schizophrenia that has been prescribed an atypical antipsychotic and has had their blood lipids checked in the last year). However, they will also need to pay attention to whole health HEDIS metrics (e.g., whether client has seen their primary care provider for a well visit; whether client has received a mammogram; whether client with diabetes has an HgbA1c metric within acceptable ranges).

#### II. POPULATION MANAGEMENT AND HEALTH HOMES

Throughout the U.S., community mental health centers are increasingly serving their communities as integrated health homes. One of the expectations that states and payers have for health homes is that they engage in population management. For health homes experienced with chronic disease management, electronic health records, web-based information, and open access to scheduling, the adoption of the key principles for population management (see section 3) is not complex. A population management approach to care is required to be data-driven and not based solely on written protocols that are applied individually to one patient at a time.

Since the passage of the 2010 Patient Protection and Affordable Care Act (ACA), the Centers for Medicare and Medicaid Services (CMS) have come out with various payment vehicles to encourage population management approaches. One vehicle, the state option to provide health home services to Medicaid beneficiaries, aims to serve enrollees with chronic conditions by building "a person-centered system of care that achieves improved outcomes for beneficiaries and better services and value for state Medicaid programs.3"

This state option to provide health home services to Medicaid beneficiaries with chronic conditions became effective on January 1, 2011. Federal guidance lays out service requirements for health homes and requires that these include clinical information systems, decision support, and the reorganization of service delivery system design—all components of population management. Additionally, ACA section 2703 health home legislation explicitly requires that health homes utilize a population management approach, requiring that services be quality-driven, cost-effective, culturally appropriate, person- and family-centered, and evidence-

<sup>1.</sup> Boyd C. et al. (2010, December). Clarifying Multimorbidity Patterns to Improve Targeting and Delivery of Clinical Services for Medicaid Populations. Center for Health Care Strategies. Inc.

<sup>2.</sup> For more information on this information set developed by the National Committee for Quality Assurance and used to evaluate and accredit managed care organizations and health homes, please go to http://www.ncqa.org/HEDISQualityMeasurement.aspx.

CMS, (2010, November 16). Health Homes for Enrollees with Chronic Conditions. Retrieved on February, 9, 2014, from http://downloads.cms.gov/cmsgov/archived-downloads/SMDL/downloads/SMD10024.pdf.

based, ensuring that a full array of services are available and coordinated, and that health information technology is used to look at individual and population level care quality.

Population management is also key for other aspects of health homes. When looking at section 1945(h)(4) of the ACA, the first two of the six required health home services—comprehensive care management and care coordination—are forms of population management.

#### SIX REQUIRED MEDICAID HEALTH HOME SERVICES

#### Comprehensive care management

#### Care coordination

#### Health promotion

Comprehensive transitional care from inpatient to other settings, including follow-up

Individual and family support, which includes authorized representatives

#### Referral to community and social support services, if relevant

These standards are reflected within the CMS standards for qualification as a designated provider for the purpose of being eligible to become a health home.

As of this writing, CMS has not provided definitions of the six required services. Instead, CMS requires states to define each service, describe which team members are responsible for that service, and describe how health information technology (HIT) will be used to deliver and support each service. States have broad flexibility to determine how to use HIT in their health home models.

#### Example: Missouri

Missouri was one of the first states to start implementing health homes for its Medicaid population. To successfully engage in population management, Missouri created these health home service definitions:<sup>4</sup>

**COMPREHENSIVE CARE MANAGEMENT** Comprehensive care management services are conducted by the nurse care manager, primary care physician consultant, the health home administrative support staff and health home director, with the participation of other team members, and involve:

- a. Identification of high-risk individuals and use of client information to determine level of participation in care management services;
- b. Assessment of preliminary service needs; treatment plan development, which will include client goals, preferences, and optimal clinical outcomes;
- c. Assignment of health team roles and responsibilities;

<sup>4</sup> Further definitions and materials related to the Missouri experience of implementing health homes can be found at http://dmh.mo.gov/about/chiefclinicalofficer/healthcarehome.htm.

- d. Development of treatment guidelines that establish clinical pathways for health teams to follow across risk levels or health conditions;
- e. Monitoring of individual and population health status and service use to determine adherence to or variance from treatment guidelines; and
- f. Development and dissemination of reports that indicate progress toward meeting outcomes for client satisfaction, health status, service delivery, and costs.

CARE COORDINATION Care coordination is the implementation of the individualized treatment plan (with active patient involvement) through appropriate linkages, referrals, coordination, and follow-up to needed services and supports, including referral and linkages to long-term services and supports. Specific activities include, but are not limited to: appointment scheduling, conducting referrals and follow-up monitoring, participating in hospital discharge processes, and communicating with other providers and clients/family members. Nurse care managers with the assistance of the health home administrative support staff will be responsible for conducting care coordination activities across the health team. The primary responsibility of the nurse care manager is to ensure implementation of the treatment plan for achievement of clinical outcomes consistent with the needs and preferences of the client.

#### III. KEY PRINCIPLES FOR POPULATION MANAGEMENT

There are four overarching key principles for population management



**Population-Based Care:** Focus on caring for the whole population you are serving, not just the individuals actively seeking care.



**Data-Driven Care:** Utilize data and analytics in order to make informed decisions to serve those in your population who most need care.



**Evidence-Based Care:** Make use of the best available evidence to guide treatment decisions and delivery of care.



Care Management: Engage in actionable care management for the population you serve.

#### Principle 1: Population-Based Care

One of the greatest flaws of current care delivery arrangements is that they usually depend on the patient's ability alone to know when they need care and what care to ask for. One of the key changes an agency must make to become a health home is transitioning from care that is driven by a series of individual patients' current chief complaints to care that is driven by analyzing the whole population or subpopulations served for care gaps, and then using data analytics to select a group of patients with the most urgent care needs for the greatest opportunities for care improvement. Population-based care focuses on the health of an entire patient population by systematically assessing, tracking, and managing the group's health conditions and treatment response across the entire target group, rather than just responding to the patients who actively seek care.

To engage in population-based care, providers need to use systems such as registries that track the patient care data over time and can select for a particular condition, set of characteristics, practice/provider group, or other parameter. Providers need staff assigned to actively and systematically assess, track, and manage the group's health conditions and treatment responses. Health homes must develop the capacity to gather and aggregate data to use in three ways:

- 1. To develop a comprehensive picture of overall care received and current care gaps for each individual patient/client.
- 2. To sort out which individual patient/client should receive immediate attention that day/week out of their total health home population.
- 3. To track improvement in both process and clinical outcome performance indicators, both internally and in comparison to other health problems.

Population-based care requires health homes to change from the traditional way of thinking about the problems of the people they serve as a series of anecdote-driven activities to understanding the problems of the people they serve using explicit quantitative and qualitative analysis. This shift requires significant cultural and workflow changes that should not be underestimated. As the TransforMED National Demonstration Project (a 2-year nationwide pilot of patient centered medical homes<sup>5</sup>) identified, significant resources are needed for success, especially in the areas of IT and change management.<sup>6</sup>

#### Principle 2: Data-Driven Care

Data-driven care is essential for successful population management and makes the difference between success and failure for health homes with value-based contracts. Providers engaged in population management are continuously engaged in collecting, organizing, sharing, and applying objective, valid clinical data to guide treatment.

For providers new to data-driven care, the first step in health home population management is to develop an inventory of potentially available data sets with individual demographic, health, and community status information and a strategy for obtaining and integrating the available data sets into a relational database for program planning and individual care management. There are two major sources of individual personal health information usually available for this initial analysis: 1) payer patient claims information and 2) electronic medical record data extracts. There are advantages and shortcomings to both sources.

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Patient claims information has the advantage of providing a limited record of all care by all providers funded by that individual payer. Claims provide a record of all medications, emergency room visits, hospital admissions, outpatient visits, and specialty services that includes the date of service, specific provider, diagnosis, specific identifier code for each specific service, and the type, dosage, prescriber, dispensing pharmacy, and days' supply of medications. Claims data have limitations. For instance, they do not provide important specific clinical values such as vital signs and laboratory results and do not include any health care situation that is not directly linked to a billable service (for example, use of tobacco or if a patient received a follow-up contact within 72 hours after admission). However, claims have the advantage of already being in a standardized data format and aggregated database.

Electronic medical record (EMR) extracts have the advantage of containing much greater clinical detail—in particular, vital signs and specific lab values. They have the disadvantage of each individual health home EMR having to be individually programmed to extract the data and then combine it in a single integrated database. Also, EMR data extracts are often available only from practices willing to participate actively in care coordination. Most patients in health homes will be going to multiple providers, many of whom will not be providing EMR data extracts. Overall, EMR data extracts can provide much greater detail from a few providers, but due to lack of interoperable EMRs across providers, lack of internal data analytics expertise to securely transfer data, and varying policies and concerns regarding patient data protection across the spectrum of integrated care providers, it can be difficult to obtain information from many key providers. Ideally, data sets would include information from both claims and EMR extracts.

<sup>5.</sup> http://www.transformed.com/ndp.cfm

<sup>6.</sup> Loxterkamp, D. & Kazal, LA. (2009). Changing horses midstream: The promise and prudence of practice redesign. Annals of Family Medicine 6(2): 167–170.

The second step for starting to provide data-driven care is to develop a clinical information system that serves as a flexible, interactive patient registry. This key population management tool supports the health home with analytics data to increase the efficiency and effectiveness of care, maximize the outcomes for specific patient groups and supports the provision of population-based care. A health home clinical information system must be capable of organizing data on key subgroups of consumers with particular conditions or characteristics (e.g., schizophrenia, diabetes, or asthma), delivering reminders to providers and providing feedback to clinicians. A patient registry is a database in which key data about a target population is organized in one place. The data may include consumers' diagnoses, assessment or lab results, current and past treatment regimens, and appointments that allow for the effective tracking of all the consumers seen in the practice with a particular provider.

Registry data need to be sortable, allowing providers to select a particular subgroup of patients (e.g., patients with schizophrenia and diabetes and recent multiple hospitalizations) or individual patients with specific treatment needs (e.g., patients without a primary care visit in three or more years). Registries can identify subgroups of patients who are overdue for a follow-up appointment or necessary procedure. When set up in a format that allows multiple users to access it (e.g., a Web-based registry), registries can facilitate communication and coordination of care across multiple health care providers and, when not all services are provided on-site, across organizations. The data can also be sorted by provider or by practice in larger systems, allowing organizations to evaluate performance and identify training needs.

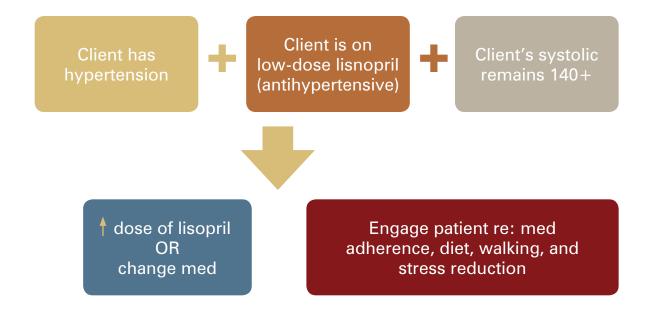
Some EMRs can be customized to provide a registry function or can be modified to allow for integration with the registry.

#### Principle 3: Evidence-Based Care

Evidence-based care is a core principle of population management. It means using the best available evidence to guide treatment decisions and delivery of care. Health homes need to utilize care guidelines in order to condense and summarize all available research regarding the best way to address a clinical problem (e.g., a care guideline for treat-to-target depression care).

Embedding evidence-based guidelines in the routine provision of care through electronic medical records (EMRs), patient registries, and other computerized systems allows providers and consumers access to evidence needed for care decisions. Embedded decision flow charts for various conditions help users sort through the evidence-based treatment options and decide upon the best course of action. Finally, clinical decision support using data analytics to match a single evidence-based care recommendation out of a whole guideline to an individual specific clinical situation is invaluable. Clinical decision support embedded within EMRs means that health care providers need not memorize multistep guidelines or spend their limited time looking up care guidelines.

Example flow chart:



#### Principle 4: Care Management—Putting Population Management into Action

Providers need to engage in care management to be successful with population management, especially with value-based contracts. Care managers use data to select patients with high utilization of avoidable services (such as ER and hospital). After selection, the program enrollees are analyzed as a population to identify their common characteristics (e.g., particular diagnoses, comorbid mental health and substance use conditions, chronic pain, polypharmacy), which allows for identification of patient-specific actionable care gaps for patients not receiving the best care for their conditions.

When a care manager engages with an identified priority patient for intervention one on one, this typically includes a health risk assessment followed by patient education about their conditions, how to manage them, and recommended best treatments. Care managers are charged with identifying care gaps and remediating them. Care gaps include not having received a recommended preventive care screening, not having received recommended monitoring laboratories for the selected chronic conditions, not receiving the recommended best practice treatment for chronic conditions, nonadherence to medications, and lack of periodic follow-up with primary care or behavioral health providers.

The care manager uses the provider's clinical information system/disease registry to monitor and identify care gaps. Once care gaps are identified, the care manager and the integrated care team decides who will intervene regarding the identified care gap. The team should include all members of the traditional mental health treatment team and the care manager, and should not be set up as a separate team or service. The nurse care manager or another delegated member of the team reaches out to the patient on a regular basis (often weekly at the start and then more infrequently as the patient begins to improve) to assess how he/she is doing, educate, and intervene in additional care gaps. The check-ins can be brief (usually 15 to 20 minutes), and some can be conducted by phone or in person. The provision of care management solely by telephone (i.e., with the care manager never having met face-to-face with the consumer), however, has not been found to be as effective as in-person care management.<sup>7,8,9</sup>

Care management by phone contact is effective when there is already an established face-to-face personal relationship between the care manager and the client, and combining telephone and in-person check-ins can be effective. Care managers typically use a registry as described earlier to keep track of their panel of clients and to make sure that they are followed up with regularly. The care team meets on a regular basis (usually weekly) and at the meeting reviews their panel of clients, prioritizes which present the greatest immediate need for care or opportunity for improvement, and plans which members of the team will be responsible for which interventions with which clients. The selected care team member conveys recommendations to the treating provider (could be primary care or behavioral health provider), who then works with the patient to change the treatment plan and fix the identified care gap.

Care management functions can be taken on by different types of providers. The training and credentials of the care managers will determine what functions they can appropriately and effectively take on, with more limited services being provided by those with less training. Historically, care management has been provided mostly by nurses and social workers (or equivalent master's-level professionals). Social workers are trained in their professional schooling to do coordination activities, whereas nurses have been schooled in medical management and education. Mental health case managers, peer specialists, community health workers, and health navigators (more often seen in the medical field) are increasingly being trained in care management to augment nurses and social workers. While these individuals have less formal training than nurses and social workers, peer specialists and community health workers often have lived experience successfully addressing multiple chronic conditions for themselves or their loved ones and can support clients with a high degree of cultural competence. When using non-credentialed staff, it is important to provide regular supervision and support from licensed team members, especially those with nursing backgrounds that can address specific medication concerns. Additionally, non-credentialed staff have the advantage of being lower-cost than licensed care managers. Care management teams integrating both are likely to more be effective and lower-cost than either used alone.

<sup>7.</sup> Bowels KH, Holland DE, Horowitz DA (2009). A comparison of in-person home care, home care with telephone contact and home care with telemonitoring for disease management. Journal of Telemedicine and Telecare. 15(7): 233-250.

<sup>8.</sup> Steventon A, Tunkel S, Blunt I, & Bardsley M. (2013). Effect of telephone health coaching on hospital use and associated costs: Cohort study with matched controls. BMJ. 347:f4585.

<sup>9.</sup> Currell R, Urquhart C, Wainwright P, & Lewis R. (2000). Telemedicine versus face to face patient care: Effects on professional practice and health care outcomes. The Cochrane Library. DOI: 10.1002/14651858.CD002098

<sup>10.</sup> Mery J & Smith B. (ND). Chronic Disease Management: evidence of Predictable Savings. Retrieved on August 29, 2014 from https://www.idph.state.ia.us/hcr\_committees/common/pdf/clinicians/savings\_report.pdf

Care management differs in several significant ways from managed care.

#### APPLES AND ORANGES: MANAGED CARE AND CARE MANAGEMENT

#### Managed-Care Care Management

Primary focus = avoidable overutilization

Mostly communicates with providers

Administrative relationship

Mostly email, fax, or telephone

Intermittent contact by different care managers

Strangers working together

Do not have to provide service to be paid

#### Health Home Care Management

Primary focus = underutilization

Mostly communicates with patients directly

Face-to-face personal relationship

Mostly in-person communication

Ongoing contact with stable team

You know them and they know you

Have to provide service to receive payment

#### IV. STEPS TO IMPLEMENTING POPULATION MANAGEMENT

Here are 10 of the most essential steps to being a provider with successful population health management practices.

- 1) Survey all of your currently available aggregated databases or any that contain information regarding diagnosis, clinical values (such as lab results, blood pressure, etc.) and treatment received by your individual patients.
- 2) Aggregate the data that you already are collecting and have available in a single database that will form the initial nucleus of your patient registry. Options for database platforms include the following:
  - a. **EXCEL** Is easy-to-use but cannot support advanced analytic tools and is error-prone due to its inability to embed specific data definition criteria. Its biggest shortcoming is that you cannot program it to produce standardized reports. It is probably an appropriate choice only for very small agencies.
  - b. ACCESS Has the advantages of being able to support specific data definition criteria and being programmable to produce standardized reports. However, it cannot handle extremely large data sets and therefore is probably a good choice only for small to medium-size agencies.
  - c. SEQUEL (and other large-scale relational databases) These are the optimal long-term choice because they can handle extremely large data sets and be used with more powerful analytic software, such as SAS and SPS. These database analytic tools have the drawback of requiring licensing of an existing analytics database or requiring significant in-house IT and data analytics staff with specialized skills. These are essential for large agencies.
- 3) Carefully consider what care gaps you can identify and act on without gathering additional data. It is often quickest and most acceptable for staff to first use the data that is available before undertaking the added administrative burden of collecting more data.

4) Begin an ongoing dialogue with your agency staff about the difference between population management-based care delivery and patient complaint-based care delivery. Staff will not be able to effectively use your new patient care registry until they understand this new "big picture" way of thinking about the care that they provide. In particular, unless they have done care management before, the nurses you hire to be care managers will feel responsible for getting every aspect of care correct for every patient in a very short period of time. This is simply not feasible and will lead to burnout and staff turnover.

One helpful analogy is to explain population management in your agency like public health nursing, where the clinic population is the community receiving the public health service. Public health nurses see themselves as successful if they are able to increase the percentage of people in the community they serve who receive only a few key selected interventions (immunization, HIV screening, etc.). Similarly, care managers in community mental health-based health homes are successful if they decrease the percentage of patients in the health home who have the targeted care gaps.

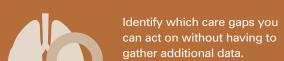
#### 10 STEPS

to implement population health management in your organization

Map out all the places (databases, records, etc) your organization



stores information on diagnosis, clinical values (lab results, blood pressure, etc.), and treatment.



Focus on quick and easy interventions (such as treatment of hypertension) before long-term interventions (such as weight loss).



Identify a set of responses to the indicator (e.g., referral to a primary care provider, patient inquiry/ follow-up, medication adherence check), and work with the treatment team to confirm the response and assign a team member to take action.



Benchmark your progress as an organization and by teams.



REMEMBER: Focus on pursuit of a

Aggregate all the data you collect into a single database.





Talk with your staff about the difference between population health-based care delivery and patient complaint-based care delivery.



Select a care gap which is easily and rapidly treated (such as hypertension), and have a care manager generate a list of all patients with this.



Educate staff and patients on the current care gap being pursued.

10

Identify additional data that can be easily collected to address other actionable care gaps.



- 5) Focus on interventions that are quick and easy, such as treatment of hypertension, before focusing on interventions that are long-term undertakings, such as weight loss. Long-term risk factors like weight loss and smoking are better addressed as psychosocial lifestyle interventions than as targets for care management.
  - Do not use population management tools to get all care correct, look at it individual patient by individual patient. Staff who are new to population management care delivery often use the patient registry to select a patient with a particular care gap and then proceed to look for all the other care gaps that one individual patient has. This is inefficient. The true population-based approach would be to pursue a specific care gap across your entire agency population.
- 6) Choose care gaps that are easily and rapidly treated (such as high blood pressure), and have a care manager generate a list of all patients with this condition.
- 7) Identify a set of responses to the indicator (e.g., referral to a primary care provider, patient inquiry/follow-up, medication adherence check), and work with the treatment team to confirm the response and assign a team member to take action.
- 8) Provide staff and patients education specific to the current care gap being pursued. In the case above, it is extremely helpful for both staff and patients to receive some patient education/staff training on the causes, consequences, and treatments of hypertension.
- 9) Benchmark your progress as an agency and by individual team. Aggregate reporting of progress or the lack thereof is a key part of population management. In the example above, it would be helpful to quarterly show each individual treatment team how much progress their team had made in improving control of blood pressure compared to the other teams and the agency as a whole.
- 10) After you have made use of all the significant opportunities available to identify care gaps with the data you are already collecting, conduct a gap analysis of what additional data could be collected easily that would identify actionable care gaps that can be rapidly addressed.

#### **Example: Population Management for High Blood Pressure**

The care manager generates a list of all persons who have above normal blood pressure. Out of that group, they identify those who are not getting any antihypertensive medication. Then, work with the treatment team to decide who will get the patient to a primary care provider to start the patient on antihypertensive medication. For the remaining patients who are already prescribed an antihypertensive medication, the care manager works with the treatment team to decide who on the treatment team will inquire with the patient to find out if they are actually taking that medication on a regular basis or are nonadherent (if you have access to pharmacy claims, this can be done by data analytics instead of by patient inquiry). For those who are on mono-therapy antihypertensive medication and are taking it regularly, they may need a second antihypertensive medication.

In this way, the care manager is pursuing a single specific disease indicator (high blood pressure) across the whole agency patient population by looking at three specific care gaps in the sequence—untreated hypertension, nonadherence to antihypertensive medication, and hypertension requiring more than mono-therapy. The care manager is able to impact many more patients than if they had looked across all possible care gaps in those patients with high blood pressure one at a time. This approach also integrates the care management functions within the whole mental health treatment team rather than leaving it as a freestanding service outside of the rest of the treatment the team services and supports. When the work is organized in this manner, most of the individual patient-staff interactions do not require a nurse. Any member of the treatment team can work with the patient to get them an appointment with their primary care provider or to do a medication adherence check.