Potential Measures for Clinical-Community Relationships:

A Supplement to the Clinical-Community Relationships Measures Atlas

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Potential Measures for Clinical-Community Relationships

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Executive Summary

The Agency for Healthcare Research and Quality (AHRQ) has set a long-term goal of understanding whether fostering relationships between clinical practices and community organizations is an effective and feasible way to enhance the delivery of specific clinical preventive services. AHRQ's *Clinical-Community Relationship Measures (CCRM) Atlas,* published in March 2013, provides a list of existing measures for assessing the structures, processes, and outcomes associated with clinical-community relationships for prevention. The measures are organized according to a measurement framework guided by the relationships between clinicians, patients, and community resources. The framework has 56 domains; however, the literature search on which the *Atlas* was based found no existing measures in 46 of those domains. The search uncovered 22 measures in 10 domains.

In this supplement, the investigators suggest 52 potential measures or measurement concepts that could be developed to fill the gaps in measurements for those domains. Measures outside the domains in the framework are not included, although broader delivery system and community factors beyond the framework may be relevant to measure in some situations.

This report also proposes a core set of 13 measures, culled from both the existing measures in the *Atlas* and the potential measures here that represent the essential aspects of clinical community relationships for prevention. The core set reflects a judgment about which measures may be the most useful and feasible for quality improvement and program evaluation. These measures are suggested for further testing and development to refine their specifications and assess their usefulness for improving process, with the ultimate aim of increasing the delivery of appropriate clinical preventive services. The core set responds to the need for measures that are broadly applicable across settings and programs, while focusing on key aspects of the structures, processes, and outcomes that are important for any type of clinical-community relationship design.

The 52 potential measures can provide a starting point for future measure development and refinement work in the context of specific program implementation efforts, quality improvement initiatives, or program evaluations. (The 13 measures in the core set are particularly promising in this regard.) In some cases it has proved difficult to provide detailed potential measure specifications in the absence of information about the specific program being assessed or the anticipated uses of the measurement data. The investigators provide as much detail as possible in the potential measure definitions, but these definitions should be viewed as concepts for future measure development, testing, and adaptation rather than final specifications. Many of these measures may also be

applicable for broader use in assessing clinical-community relationships for a wider set of services or activities than the specific clinical preventive services that have been the focus of this project.

1. Introduction

A promising approach to enhancing the delivery of preventive services in clinical settings is for providers to coordinate, cooperate, and collaborate with community-based organizations to help deliver these services. The Agency for Healthcare Research and Quality (AHRQ) refers to this collaborative approach to the delivery of preventive services as clinical-community relationships. AHRQ is conducting foundational measure development activities to help improve evaluation, research, and practice in the area of clinical-community relationships for prevention. The project has included developing the *Clinical-Community Relationship Measures (CCRM) Atlas* of existing measures of clinical-community relationships[1] and an *Evaluation Roadmap*[2] to guide research on clinical-community relationship processes and outcomes.

The *Atlas* provides a list of existing measures for assessing the structures, processes, and outcomes associated with clinical-community relationships for prevention. The measures are organized according to a measurement framework guided by the relationships between clinicians, patients and community resources. While the framework has 56 domains, the literature search on which the *Atlas* was based found no existing measures in 46 of those domains. The *Atlas* includes 22 measures covering 10 domains.

In this supplemental report, the investigators suggest 52 potential measures or measurement concepts that could be developed to fill the gap in measurements for those 46 domains. Broader delivery system and community factors not included here may be relevant to measure in some situations.

The measurement framework for organizing the measures is summarized in Appendix Table A-1. Definitions for each domain in the framework can be found in Appendix Table A-2. More details on the framework and the domains can be found in the *Atlas*. For ease of reference, we also include in this report the 22 existing measures included in the *Atlas*. These are listed in Appendix Table A-3 and shown in detail in Appendix Tables A-4 through A-25.

This report also proposes a core set of 13 measures culled from both the existing measures in the *Atlas* and the potential measures in this report, that represent the essential aspects of clinical

[1] Clinical-Community Relationships Measures (CCRM) Atlas. March 2013. Agency for Healthcare Research and Quality, Rockville, MD. http://www.ahrq.gov/professionals/prevention-chronic-care/resources/clinical-community-relationships-measures-atlas/index.html

[2] Clinical-Community Relationships Evaluation Roadmap. July 2013. Agency for Healthcare Research and Quality, Rockville, MD. http://www.ahrq.gov/professionals/prevention-chronic-care/resources/clinical-community-relationships-eval-roadmap/index.html

community relationships for prevention. The core set reflects a judgment about which measures may be the most useful and feasible for quality improvement and program evaluation. These measures are suggested for further testing and development to refine their specifications and assess their usefulness for improving process, with the ultimate aim of increasing the delivery of appropriate clinical preventive services. The core set responds to the need for measures that are broadly applicable across settings and programs, while focusing on key aspects of the structures, processes, and outcomes that are important for any type of clinical-community relationship design. Many of the measures may also be applicable for broader use in assessing and improving clinical-community relationships for a wider set of services or activities beyond the specific clinical preventive services that have been the focus of this project.

This report explains the investigators' approach for developing the potential measures, with important limitations, and presents the potential measures using a standardized template. The report concludes with a discussion of the core measures and next steps.

2. Potential Measure Development Methodology

The potential measures were developed through an iterative process that included review of the *CCRM Atlas*, generation of ideas for potential measures, and periodic review and discussions with the CCRM Expert Panel (listed on page A-27). After the full set of potential measures was developed, staff reviewed both the potential measures and the existing measures in the *CCRM Atlas* to identify a core set of 13 measures to prioritize for future development. The core set reflects a judgment about which measures may be the most useful and feasible for quality improvement and program evaluation. The core set of measures begins on page 45.

2.1 General Measure Attributes

In general, measures intended to be used for quality improvement or program evaluation should meet several basic criteria:

- First, measures must be scientifically sound. In the case of CCRM, this means that the focus should be on evidence-based clinical preventive services suitable for delivery through clinical-community relationships. Applicable services were selected early in the project and are described in the *CCRM Atlas*. Further, measures of the structures, processes, or outcomes associated with the delivery of these services through a clinical-community relationship should be based on established conceptual models and use validated data collection instruments where applicable. Without exception, the potential measures presented in this report need additional development work to establish their scientific soundness. As discussed in the *CCRM Evaluation Roadmap*, there are key unanswered questions related to the conceptual models underlying the design and implementation of clinical-community relationships themselves that must be resolved prior to or in conjunction with the measure development. Even where the potential measures draw on existing measures used in other situations, these measures need to be validated in the context of clinical-community relationships.

- Second, measures must be relevant to the clinicians, community-based organizations, or patients involved in clinical-community relationships. For clinicians and service-delivery organizations, the measures must assess important aspects of service delivery for which they view themselves as accountable, and which they have the potential to improve. For patients, measures should be relevant to the decision to seek and complete preventive services or to the choice of service providers or settings.

- Finally, the measures must be operationally feasible. This includes the availability of needed data and sufficiently large denominators for reliable assessment. Possible data sources for each potential measure are indicated in the measure descriptions.

2.2 Potential Measure Context and Limitations

This supplement provides as much detail as possible in the potential measure definitions, but these definitions should be viewed as concepts for future measure development, testing, and adaptation rather than final specifications. Through the process of developing the list of potential measures, we identified several complexities and limitations that provide important context for understanding the measure set and how it might be used.

1. **Potential Measures Organized According to the CCRM Measurement Framework –** This set of potential measures is organized according to the measurement framework described in the *CCRM Atlas*. The framework focuses on the structures, processes, and outcomes associated with the three core elements of clinical-community relationships (clinics/clinicians, community resources, and patients) and the relationships among these elements. The potential measure set does not include measures that are external to the domains within the framework, although there are broader delivery system and community factors beyond the framework that may be relevant to measure in some situations. Instead, this supplement focuses on filling in gaps in the collection of existing measures relative to the measurement framework.

2. **Lack of Programmatic Context –** In many cases it proved difficult to develop detailed potential measure specifications in the absence of information about the specific program being assessed or the anticipated uses of the measurement data. Adding to the challenge, for most of the measures there is no external referent or standard describing a recommended process or approach to which the measure can be tied in the way that clinical quality measures can be tied to an evidence-based practice guideline. These potential measures should therefore be viewed as a starting point for future measure development and refinement work in the context of specific program implementation efforts, quality improvement initiatives, or program evaluations.

3. **Unit of Measure Reporting –** To help clarify the intent and description of the potential measures, the investigators drew on insights from the Institute of Medicine's Primary Care and Public Health Framework for Action[3] which discussed the traditional focus of clinicians on providing medical services to individual patients with immediate health needs, while public health focuses on offering a broader array of services across communities and populations. This highlights the need to be clear about the unit of measurement for each potential measure, although this is often ambiguous because of the absence of context on the use of the measure. Many of these measures could be reported at different levels depending on the measurement purpose. For example, measure OO – strength of a clinical-community relationship-- could be reported at the level of a particular clinical-community relationship between two organizations, at the

[3] Primary Care and Public Health: Exploring Integration to Improve Population Health. March 2012. Institute of Medicine. http://www.iom.edu/Reports/2012/Primary-Care-and-Public-Health.aspx

level of an organization reflecting all of the clinical-community relationships in which it is engaged, or at the level of the community as a whole reflecting all of the relationships between organizations within the community. Similarly, many patient-focused measures could be reported for patients of a particular clinician/clinic, patients of a particular community resource, or all patients in the community as a whole. In describing the calculation methods for the measures we have tried to indicate the reporting levels that might be useful, but the measures may also be useful at other reporting levels not mentioned.

4. **Definition of "Community" –** The concept of "community" is fundamental to the discussion of clinical-community relationships and can have multiple interpretations. This document recognizes potential ambiguities in the use of the term community and acknowledges the need for additional research to define it appropriately for use in clinical-community relationship implementation and measurement. One might take a geographic or demographic approach to defining communities based on census classifications. However, the CCRM Expert Panel thought that a broader definition that comes from a public health perspective, in which a community is defined as a "group of people with diverse characteristics who are linked by social ties, share common perspectives, and engage in joint action in geographical locations or settings"[4] might be more useful. The Panel also acknowledged that modern telecommunications may be reducing the importance of geographic boundaries in the formation of communities, adding to the complexity of defining units of measurement appropriately.

5. **Definition of "Patient" and "Client" –** The concepts of patient and client are also fundamental to the discussion of clinical-community relationships. The patient is one of three elements that form the base of the conceptual framework and refers to the individual who receives primary care services, including preventive care and chronic illness care, delivered in a clinical setting. If a measure refers to the delivery of services in a community setting or the relationship between an individual and community resource, the term client is used to refer to the individual receiving services, reflecting standard usage in a social service context. The terms patient and client are used in the current context of primary health care reform as described by multiple patient-centered medical home initiatives occurring nationally.

6. **Data Sources –** Each potential measure description includes at least one potential data source. These data sources are suggestions, but other sources of data may turn out to be more useful or feasible. For measures of complex concepts that may be collected through survey instruments, the measure will not necessarily be based on a single survey question. Future development work can help define valid and reliable questions that can be combined to form a coherent composite measure. For measures with a suggested data source of an organizational audit, further development work would focus on testing assessment forms and designing reliable processes for gathering needed information to support measurement.

[4] MacQueen, K.M., McLellan, E., Metzger, D.S., Kegeles, S., Strauss, R.P., Scotti, R., Blanchard, L., Trotter, T.T., II. What Is Community? An Evidence-Based Definition for Participatory Public Health. Am J Public Health: December 2001, Vol. 91, No. 12, pp. 1929-1938.

7. **Broader Applicability of Measures Beyond Clinical-Community Relationships for Prevention –** While the potential measures have been defined in the context of clinical-community relationships for the delivery of selected clinical preventive services, many of the measures could also be useful applied in the context of the delivery of other types of services (e.g., chronic disease management services) through a clinical-community relationship. Further, some of the measures may be applicable to the delivery of services not involving a clinical-community relationship at all.

Because this supplement describes measure concepts rather than detailed specifications, future measure development and adaptation work will need to take into account the availability of data and the specific uses of the measures for performance improvement, evaluation, or research.

2.3 Potential Measures Template

Each potential measure is presented in a standard template in the following format:

Item	Description
Title	A concise title for the measure.
Description	A brief narrative description of the measure. Describes the intent of the measure and what aspect of a clinical-community relationship it is assessing.
Domain	The relevant domain(s) of the CCRM Measurement Framework (Table A-1)
Data source	A description of possible data sources for capturing the measure. Each measure may have one or more acceptable data source including claims or other administrative databases, patient records, patient or professional surveys, or facility or community audits or assessments.
Calculation method	A brief description of the unit of measurement and calculation method, including numerator and denominator definitions where applicable.
Notes	Notes that may help guide the development and use of the potential measure.

3. Potential Measures

A comprehensive list of the potential measures is provided in Table 2 (page 12). A description of each of the 52 potential measures is provided following Table 2 (page 14).

The *letters* before each potential measure correspond to the letters provided in the Master Measure Mapping Table (Table 1, page 10) which indicate the domain within the Measurement Framework in which each measure falls. The Measurement Framework is provided on Table A-1 (page A1). A domain may apply to more than one element/relationship within the CCRM Measurement Framework.

The *numbers* within cells of the Master Measure Mapping Table correspond to the measure number for existing measures from the *CCRM Atlas*. Existing measures from the *CCRM Atlas* are provided for ease of reference in the Appendix on page A-4. The Appendix also contains, in addition to the CCRM Measurement Framework, the definition for each domain (Table A-2, page A2), and a listing of CCRM Expert Panel Members (page A-27).

Table 1. Master measure mapping table with potential measures

Domain	Element			Relationship		
	Clinic/Clinician	Patient	Community Resource	Clinic/Clinician – Patient	Clinic/Clinician – Community Resource	Patient – Community Resource
Ability to access primary care		K				
Ability to access community resource		3				
Accessibility	A, B		S			
Assessment and goal setting				13		RR
Capacity for self-management		L				
Clinician experience					9, 11, 21, JJ	
Communication and follow through/follow up						SS
Community resource experience					KK, LL	
Cost/efficiency				DD	MM, NN	TT
Delivery of service				EE		UU
Delivery system design	C		T, U			
Feedback and communication					12, 20	
Health literacy		M, N				
Information technology infrastructure	D	O	V			
Informed and activated patient				5		VV
Knowledge of and familiarity with community resources	10, 22	P				
Marketing of services			W			
Marketing results			X			
Nature and strength of the inter-organizational relationship					OO	
Organizational infrastructure	E		Y			

Notes

- Gray cell: the domain does not apply to the element or relationship.
- Green cell: a measure exists. See *CCRM Atlas*.
- White cell: the domain applies to the element or relationship and no measure exists.
- Number(s) in the cell correspond with measure number in *CCRM Atlas*.
- Letter(s) in the cell correspond with candidate measure(s) in this supplement.

Table 1. Master measure mapping table with potential measures (continued)

Domain	Element			Relationship		
	Clinic/Clinician	Patient	Community Resource	Clinic/Clinician – Patient	Clinic/Clinician – Community Resource	Patient – Community Resource
Outreach to obtain knowledge of and familiarity with community resources	F	Q				
Patient-centeredness				FF		WW
Patient experience				GG		XX
Proactive and ready clinician				6, 7		
Proactive and ready community resource						YY
Readiness for behavior change	G	2, 18	Z			
Referral process				1, 4, 8, 14, 15, 17,19, 21	PP	16
Self-management support				HH		ZZ
Service capacity	H		AA			
Shared decision-making				II		
Stage of behavior change	I	R	BB			
Timeliness					QQ	
Training	J		CC			

Notes

- Gray cell: the domain does not apply to the element or relationship.
- Green cell: a measure exists. See *CCRM Atlas*.
- White cell: the domain applies to the element or relationship and no measure exists.
- Number(s) in the cell correspond with measure number in *CCRM Atlas*.
- Letter(s) in the cell correspond with candidate measure(s) in this supplement.

Potential measures are organized according to the columns of the Master Measure Mapping Table (Table 1). The measures are listed in Table 2, followed by details for each potential measure presented in the format of the measure template.

Table 2. Potential measures

Letter	Potential measure
A	Patient difficulty in accessing primary care
B	Accessibility of clinic/clinical practices
C	Clinic/clinician delivery system capability
D	Clinic/clinician appropriate use of health information technology
E	Financial sustainability (clinic/clinician)
F	Clinic/clinician actions to learn about community resources
G	Clinician readiness to change
H	Infrastructure to maintain relationships with community resource(s)
I	Progress through the stages of organizational change (clinic/clinician)
J	Staff competency in providing preventive health services (clinic/clinician)
K	Patient has a usual source of primary care
L	Patient ability to achieve prevention goals
M	Patient health literacy
N	Patient health numeracy
O	Patient appropriate use of health information technology
P	Patient awareness of available community resources
Q	Patient actions to learn about community resources
R	Progress through the stages of behavior change (patient)
S	Accessibility of community resources
T	Community resource delivery system infrastructure
U	Community resource capacity to deliver preventive services
V	Community resource appropriate use of health information technology
W	Availability of community resource marketing plans
X	Effectiveness of community resource marketing
Y	Financial sustainability (community resource)
Z	Community resource readiness to change

Table 2. Potential measures (continued)

Letter	Measure
AA	Infrastructure to maintain relationships with clinic(s)
BB	Progress through the stages of organizational behavior change (community resource)
CC	Staff competency in providing preventive health services (community resource)
DD	Clinic/clinician efficiency due to the use of clinical-community relationships
EE	Percentage of patients who received appropriate preventive services
FF	Patient-centeredness of care offered by clinic/clinicians
GG	Patient experience of care with primary care clinic/clinician
HH	Clinician supports patient self-management of prevention
II	Patient report of shared decision making regarding prevention
JJ	Utility of "bridging resources" / informational tools used by clinicians to foster relationships with community resources
KK	Value of clinical-community resource relationship
LL	Utility of "bridging resources" / informational tools used by community resources to foster relationship with clinic/clinicians
MM	Costs to the clinic/clinician and a community resource to establish a clinical-community relationship
NN	Costs to the clinic/clinician and a community resource to maintain a clinical-community relationship
OO	Strength of a clinical-community resource relationship
PP	Percentage of referrals to a community resource that are actionable
QQ	Time to provide preventive services by a community resource.
RR	Prevention goal setting and action planning
SS	Communication between client and community resource
TT	Average total time working with client
UU	Percentage of clients referred to a community resource who received appropriate preventive services
VV	Client interest in accessing preventive services from community resource
WW	Patient-centeredness of care offered by community resources
XX	Patient experience of care with community resource
YY	Proactive steps taken by community resources to engage and interact with patients
ZZ	Community resource supports patient self-management of prevention

Clinic/Clinician Element

Potential Measure A	
Item	**Description**
Title	Patient difficulty in accessing primary care
Description	This measure assesses whether patients have difficulty accessing routine or ongoing primary care.
Domain	Accessibility (clinic/clinician)
Data source	Patient/individual survey
Calculation method	This measure may be reported as the percentage of patients who have difficulty accessing routine or ongoing care from a clinic/clinician. Difficulty obtaining routine or ongoing primary health care services could include: difficulty contacting a clinic/clinician, difficulty scheduling an appointment, waiting too long to obtain an appointment or follow-up visit, in-office waiting time to see clinician, and/or service not being available at the time required.
Notes	This measure may be used to measure accessibility for various patient populations that may be relevant, such as patients who have visited a particular clinic or clinician, patients assigned to a provider panel by an insurer, or patients who live in a specific geographic area. Principles for this measure may be adapted from the Canadian Institute for Health Information: Access Indicators: http://www.cihi.ca/CIHI-ext-portal/pdf/internet/PHC_POLICY_ROUTINEACCESS_EN

Potential Measure B	
Item	**Description**
Title	Accessibility of clinic/clinical practices
Description	This measure assesses whether clinic/clinical practices are accessible within a community.
Domain	Accessibility (clinic/clinician)
Data source	Audit – A standardized evaluation form may assess a clinic/clinical practice's attributes and determine how accessible the clinic/clinical practice is.
Calculation method	This measure may be assessed at the level of an individual clinic/clinician, or as the percentage of clinics or clinicians in a community that are accessible. Attributes of accessibility could include: open scheduling, open hours, proximity to various modes of transportation, etc.
Notes	Similar to measure S in community resource element

Potential Measure C	
Item	**Description**
Title	Clinic/clinician delivery system capability
Description	This measure assesses whether clinics/clinical practices have office/administrative systems and workflow processes to support the delivery of preventive services to patients.
Domain	Delivery system design (clinic/clinician)
Data source	Clinic/clinician self-assessment tool
Calculation method	This measure may be assessed at the level of an individual clinic/clinician, or as the percentage of clinics or clinicians in a community that have the office/administrative systems and workflow processes to support the delivery of preventive services to patients.
Notes	Principles for this measure may be adapted from the Assessment of Chronic Illness Care (ACIC) Quality Improvement tool: Section 5: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1434662/ Similar to measure T in community resource element

Potential Measure D	
Item	**Description**
Title	Clinic/clinician's appropriate use of health information technology
Description	This measure assesses whether clinic/clinical practices in a community use health information technology appropriately to support the delivery of clinical preventive services. Appropriate use of health information technology may be defined in terms of CMS Meaningful Use objectives, or other ways of using technology to improve quality, reduce health disparities, or engage patients and family.
Domain	Information technology infrastructure (clinic/clinician)
Data source	Audit – An auditor may use a standardized evaluation form to assess whether a clinic/clinical practice has access to health information technology and whether it uses the health information technology appropriately to support the delivery of clinical preventive services.
Calculation method	This measure may be assessed at the level of a clinical practice or as the percentage of clinical practices within a community that use health information technology appropriately to support the delivery of clinical preventive services.
Notes	Types of health information technology include: electronic health records, personal health records, health information exchanges or referral systems, and electronic resource lists. Principles for this measure may be adapted from the meaningful use objectives: http://www.healthit.gov/providers-professionals/meaningful-use-definition-objectives The meaning of "appropriate" use of health information technology depends on context, setting, and the particular evaluation goals of any study that uses the measure. Similar to measure V in community resource element

Potential Measure E	
Item	**Description**
Title	Financial sustainability (clinic/clinician)
Description	This measure is a qualitative assessment of the financial sustainability of primary care clinics, taking into account financial performance, governance, organizational affiliations, and contractual arrangements.
Domain	Organizational infrastructure (clinic/clinician)
Data source	Audit - An auditor may conduct a review of relevant financial and organizational documents and gather information from clinic leaders to assess financial sustainability.
Calculation method	This measure may be assessed for a particular primary care clinic, or for primary care clinics in the community as a whole. A report will be developed describing the degree to which primary care is supported by sustainable business models and governance structures.
Notes	Similar to measure Y of community resource element

Potential Measure F	
Item	**Description**
Title	Clinic/clinician actions to learn about community resources
Description	This measure assesses the actions of clinics/clinicians within a community to learn about available preventive services offered by community resources within a community.
Domain	Outreach to obtain knowledge of and familiarity with community resources (clinic/clinician)
Data source	Clinic/clinician survey
Calculation method	This measure may be based on specific survey items (clinician recall of telephone calls to community resource, email inquiries, website visits, etc.) or may be reported as a composite measure that combines responses to several survey items to assess the intensity of actions reported by clinicians in a community to learn about available preventive services offered by community resources.
Notes	Similar to measure Q of patient element

Potential Measure G	
Item	**Description**
Title	Clinician readiness to change
Description	This measure assesses whether clinics/clinical practices in a community are ready to make the changes necessary to participate in clinical-community relationships.
Domain	Readiness for behavior change (clinic/clinician)
Data source	Clinic/clinician survey
Calculation method	This measure may be assessed at the level of an individual clinic/clinician, or as the percentage of clinics or clinicians in a community that indicate willingness to participate in clinical-community relationships for prevention.
Notes	This measure assumes that most clinicians are not already participating in clinical-community relationships for prevention. Principles for this measure may be adapted from Prochaska's Transtheoretical model.[5]

Potential Measure H	
Item	**Description**
Title	Infrastructure to maintain relationships with community resource(s)
Description	This measure assesses whether clinics in a community have the infrastructure to maintain clinical-community relationships with community resource(s).
Domain	Service capacity (clinic/clinician)
Data source	Clinic/clinician survey
Calculation method	This measure may be assessed at the level of an individual clinic/clinician, or as the percentage of clinics or clinicians in a community that have the infrastructure to maintain clinical-community relationships with community resources.
Notes	Relevant infrastructure includes staffing, technology and training. Similar to measure AA of community resource element

[5] James O. Prochaska and Wayne F. Velicer (1997) The Transtheoretical Model of Health Behavior Change. American Journal of Health Promotion: September/October 1997, Vol. 12, No. 1, pp. 38-48. http://ajhpcontents.org/doi/abs/10.4278/0890-1171-12.1.38

Potential Measure I	
Item	**Description**
Title	Progress through the stages of organizational change (clinic/clinician)
Description	This measure assesses how well clinics/clinicians have been able to initiate and sustain organizational changes needed to support clinical community relationships.
Domain	Stage of behavior change (clinic/clinician)
Data source	Clinic/clinician survey
Calculation method	This measure may be assessed at the level of an individual clinic/clinician, or as the percentage of clinics or clinicians in a community that are able to initiate and sustain relevant organizational changes over time.
Notes	Measure should consider principles from Prochaska's Transtheoretical model.[5] Similar to measure R of patient element and BB of community resource element.

Potential Measure J	
Item	**Description**
Title	Staff competency in providing preventive health services (clinic/clinician)
Description	This measure assesses the level of clinical staff competency in providing relevant preventive health counseling services to patients.
Domain	Training (clinic/clinician)
Data source	Audit - An auditor may use a standard rubric to indicate the level of competency the staff of a clinic/clinical practice has in providing various preventive health services.
Calculation method	This measure may be assessed at the level of an individual clinic/clinician, or as the percentage of clinics or clinicians in a community that have achieved competency in providing preventive health counseling to patients.
Notes	This measure applies to USPSTF-recommended preventive counseling services. Similar to measure DD of community resource element

Patient Element

Potential Measure K	
Item	**Description**
Title	Patient has a usual source of primary care
Description	This measure assesses whether patients within a community have a usual source of primary care.
Domain	Ability to access primary care (patient).
Data source	Patient/individual survey
Calculation method	This measure may be assessed for patients of a particular clinic or community practice, or for members of the community as a whole. This measure may be reported as the percentage of patients within a community who report a usual source of care. Usual sources of primary care could include family physicians, nurses of a clinic, obstetricians, etc.
Notes	Principles for this measure may be adapted from 2007 Medical Expenditure Panel Survey: Percent of persons with a usual primary care provider: http://www.healthindicators.gov/Indicators/Usual-primary-care-provider-percent_372/Profile

Potential Measure L	
Item	**Description**
Title	Patient ability to achieve prevention goals
Description	This measure assesses the level of knowledge, capacity, skill, and support patients have to achieve prevention goals.
Domain	Capacity for self-management (patient)
Data source	Patient/individual survey
Calculation method	This measure may be assessed for patients of a particular clinic or community practice, or for members of the community as a whole for their ability to manage their own health to achieve prevention goals.
Notes	Relevant types of support include structural, familial, work, or other environmental factors. This measure should be specific to prevention goals that are the target of clinical-community relationships such as weight loss, smoking cessation, or reducing alcohol misuse.

Potential Measure M	
Item	**Description**
Title	Patient health literacy
Description	This measure assesses patients' ability to understand health information needed to manage their own health and make appropriate health care decisions. Appropriate use of health information technology may be defined in terms of CMS Meaningful Use objectives, or other ways of using technology to improve quality, reduce health disparities, or engage patients and family.
Domain	Health literacy (patient)
Data source	Patient/individual survey
Calculation method	This measure may be assessed for patients of a particular clinic or community resource or for members of the community as a whole. This measure may be reported as the percentage of patients achieving adequate health literacy.
Notes	Principles for this measure may be adapted from the Rapid Estimate of Adult Literacy in Medicine—Short Form (REALM): http://www.ahrq.gov/professionals/quality-patient-safety/quality-resources/tools/literacy/index.html The determination of reading comprehension should take into account actionable knowledge that the patient may use to improve his/her care. The meaning of "appropriate" use of health information technology depends on context, setting, and the particular evaluation goals of any study that uses the measure.

Potential Measure N	
Item	**Description**
Title	Patient health numeracy
Description	This measure assesses patients' ability to understand numerical information needed to manage their own health and make appropriate health care decisions. Appropriate use of health information technology may be defined in terms of CMS Meaningful Use objectives, or other ways of using technology to improve quality, reduce health disparities, or engage patients and family.
Domain	Health literacy (patient)
Data source	Patient/individual survey
Calculation method	This measure may be assessed for patients of a particular clinic or community resource, or for members of the community as a whole. This measure may be reported as the percentage of patients achieving adequate health numeracy.
Notes	Principles for this measure may be may be adapted from the Subjective Numeracy Scale (SNS): http://cbssm.med.umich.edu/how-we-can-help/tools-and-resources/subjective-numeracy-scale The determination of mathematical skill should take into account actionable knowledge that the patient may use to improve his/her care. The meaning of "appropriate" use of health information technology depends on context, setting, and the particular evaluation goals of any study that uses the measure.

Potential Measure O	
Item	**Description**
Title	Patient appropriate use of health information technology
Description	This measure assesses whether patients use health information technology appropriately to achieve preventive health goals. Appropriate use of health information technology may be defined in terms of CMS Meaningful Use objectives, or other ways of using technology to improve quality, reduce health disparities, or engage patients and family.
Domain	Information technology infrastructure (patient)
Data source	Survey – A patient survey to assess the use of health information technology for achieving prevention goals such as weight loss or smoking cessation, as well as reminders to receive applicable clinical preventive services.
Calculation method	This measure may be reported as the percentage of patients of a clinical practice, or other relevant patient population who use health information technology appropriately to facilitate achieving preventive health goals.
Notes	Types of health information technology could include: personal health records, activity logs, or appointment reminder systems that may be linked to electronic health records. Principles of this measure may be adapted from Stage 3 Meaningful Use Recommendations related to Engaging patients and families in their care: The meaning of "appropriate" use of health information technology depends on context, setting, and the particular evaluation goals of any study that uses the measure. http://www.healthit.gov/sites/default/files/draft_stage3_rfc_07_nov_12.pdf

Potential Measure P	
Item	**Description**
Title	Patient awareness of available community resources
Description	This measure assesses the level of awareness of patients regarding available community resources that provide preventive services.
Domain	Knowledge of and familiarity with community resources (patient)
Data source	Patient/individual survey
Calculation method	This measure may be assessed for patients of a particular clinic, or for members of the community as a whole. This measure may be reported as the average level of awareness about availability of community resources that provide preventive services. This measure may be specific to particular preventive services.
Notes	N/A

Potential Measure Q	
Item	**Description**
Title	Patient actions to learn about community resources
Description	This measure assesses the actions of patients within a community to learn about available preventive services offered by community resources within a community.
Domain	Outreach to obtain knowledge of and familiarity with community resources (patient)
Data source	Patient/individual survey
Calculation method	This measure may be based on specific survey items (patient recall of telephone calls to community resource, email inquiries, website visits, etc.) or may be reported as a composite measure that combines responses to several survey items to assess the intensity of actions reported by patients in a community to learn about available preventive services offered by community resources.
Notes	Similar to measure F of clinic/clinician element

Potential Measure R	
Item	**Description**
Title	Progress through that stages of behavior change (patient)
Description	This measure assesses how well patients have been able to initiate and sustain behavior changes necessary to achieve prevention goals.
Domain	Stage of behavior change (patient)
Data source	Patient/individual survey
Calculation method	This measure may be reported as the percentage of patients of a clinical practice, or other relevant patient population who have been able to initiate and sustain behavior changes over time.
Notes	Measure should consider principles from Prochaska's Transtheoretical model.[5] Similar to measure I of clinic/clinician element and BB of community resource element

Community Resource Element

Potential Measure S	
Item	**Description**
Title	Accessibility of community resources
Description	This measure assesses whether relevant community resources are accessible within a community.
Domain	Accessibility (community resource)
Data source	Audit – A standardized evaluation form would be used to assess a community resource's attributes to determine how accessible the community resource is.
Calculation method	This measure may be reported as the percentage of community resources within a community that are accessible. Attributes of accessibility could include: open scheduling, open hours, proximity to various modes of transportation, etc.
Notes	A supplementary data source could include a database that lists all available community resources within a community. This information may be gathered from various sources including Web sites and the Community Information and Referral Systems: http://www.airs.org/i4a/pages/index.cfm?pageid=3301 Similar to measure B in clinic/clinician element

Potential Measure T	
Item	**Description**
Title	Community resource delivery system infrastructure
Description	This measure assesses whether community resources have office/administrative systems and workflow processes to support the delivery of preventive services to patients.
Domain	Delivery system design (community resource)
Data source	Community resource self-assessment tool
Calculation method	This measure may be assessed at the level of an individual community resource or as the percentage of community resources in a community that have the office/administrative systems and workflow processes to support the delivery of preventive services to patients.
Notes	Principles of this measure may be derived from the Assessment of Chronic Illness Care (ACIC) Quality Improvement tool: Section 5: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1434662/ Similar to measure C in clinic/clinician element

Potential Measure U	
Item	**Description**
Title	Community resource capacity to deliver preventive services
Description	This measure assesses whether the preventive services offered by community resources are sufficient to meet a community's needs.
Domain	Delivery system design (community resource)
Data source	Community assessment - An auditor would use a standard rubric to assess the capacity of the community resources in a community to meet the need for the delivery of preventive services.
Calculation method	This measure may be assessed at the level of a single community resource organization or as a descriptive report of a particular community determining whether the services offered sufficiently meet a community's needs.
Notes	N/A

Potential Measure V	
Item	**Description**
Title	Community resource appropriate use of health information technology
Description	This measure assesses whether community resources in a community use health information technology appropriately to support the delivery of preventive services and help patients achieve prevention goals. Appropriate use of health information technology may be defined in terms of CMS Meaningful Use objectives, or other ways of using technology to improve quality, reduce health disparities, or engage patients and family.
Domain	Information technology infrastructure (community resource)
Data source	Audit – An auditor would use a standardized evaluation form to indicate whether a community resource has access to health information technology and assess whether it uses the health information technology appropriately to support the delivery of clinical preventive services and help patients achieve prevention goals.
Calculation method	This measure may be assessed at the level of a single community resource organization or as the percentage of community resource organizations within a community that use health information technology appropriately to support the delivery of clinical preventive services and help patients achieve prevention goals.
Notes	Types of health information technology could include: electronic health records, personal health records, health information exchanges, or referral systems. Principles for this measure may be adapted from the meaningful use objectives: http://www.healthit.gov/providers-professionals/meaningful-use-definition-objectives The meaning of "appropriate" use of health information technology depends on context, setting, and the particular evaluation goals of any study that uses the measure. Similar to measure D in clinic/clinician element

Potential Measure W	
Item	**Description**
Title	Availability of community resource marketing plans
Description	This measure assesses whether community resources have an adequate marketing plan guiding how they will advertise and promote their available preventive services to clinics/clinicians and to the public.
Domain	Marketing of services (community resource)
Data source	Audit – Review of administrative management data and/or organizational policies and procedures
Calculation method	This measure may be assessed at the level of a single community resource organization or as the percentage of community resource organizations within a community that have an adequate marketing plan.
Notes	N/A

Potential Measure X	
Item	**Description**
Title	Effectiveness of community resource marketing
Description	This measure assesses awareness and interest by patients and/or clinic/clinicians in utilizing community resource services after a marketing plan is implemented.
Domain	Marketing results (community resource)
Data source	Patient and/or clinic/clinician survey
Calculation method	This measure may be assessed for a particular community resource or for community resources in a community as a whole. This measure will be reported as the percentage of the target population for the marketing effort that is aware of the services provided by a community resource and intends to or already has utilized them.
Notes	This measure will need to consider the target audience of the community resource marketing to determine the appropriate population to assess. Besides surveys, web analytics and/or social media tracking could be used as supplementary data sources.

Potential Measure Y	
Item	**Description**
Title	Financial sustainability (community resource)
Description	This measure is a qualitative assessment of the financial sustainability of community organizations that can provide applicable clinical preventive services, taking into account financial performance, governance, organizational affiliations, and contractual arrangements.
Domain	Organizational infrastructure (community resource).
Data source	Audit - An auditor would conduct a review of relevant financial and organizational documents, and gather information from organizational leaders to assess financial sustainability.
Calculation method	This measure may be assessed for a particular community organization, or for relevant organizations in the community as a whole. A report may be developed describing the degree to which community resources are supported by sustainable business models and governance structures.
Notes	Similar to measure E of clinic/clinician element

Potential Measure Z	
Item	**Description**
Title	Community resource readiness to change
Description	This measure assesses whether community resources in a community are ready to make the changes necessary to participate in clinical-community relationships.
Domain	Readiness for behavior change (community resource)
Data source	Community resource survey
Calculation method	This measure assumes that most community resources are not already participating in clinical-community relationships for prevention. This measure may be reported as the percentage of community resources in a community willing to participate in clinical-community relationships for prevention.
Notes	Principles for this measure may be adapted from Prochaska's Transtheoretical model.[5] Similar to measure G of clinic/clinician element

Potential Measure AA	
Item	**Description**
Title	Infrastructure to maintain relationships with clinic(s)
Description	This measure assesses whether community resources in a community have the infrastructure to maintain clinical-community relationships with a clinic(s).
Domain	Service capacity (community resource)
Data source	Community resource survey
Calculation method	This measure may be assessed for a particular community resource or for community resources in a community as a whole. This measure may be reported as the percentage of community resources within a community that have infrastructure to maintain clinical-community relationships with a clinic(s).
Notes	Relevant infrastructure includes staffing, technology, and training. Similar to measure H of clinic/clinician element.

Potential Measure BB	
Item	**Description**
Title	Progress through the stages of organizational behavior change (community resource)
Description	This measure assesses how well community resources have been able to initiate and sustain organizational changes needed to support clinical community relationships.
Domain	Stage of behavior change (community resource)
Data source	Community resource survey
Calculation method	This measure may be assessed for a particular community resource or for community resources in a community as a whole. This measure may be reported as the percentage of community resources that have been able to initiate and sustain relevant organizational changes over time.
Notes	Measure should consider principles from Prochaska's Transtheoretical model.[5] Similar to measure I of clinic/clinician element and R of patient element

Potential Measure CC	
Item	**Description**
Title	Staff competency in providing preventive health services (community resource)
Description	This measure assesses the level of community resource staff competency in providing relevant preventive health counseling services to patients.
Domain	Training (community resource)
Data source	Audit - An auditor would use a standard rubric to indicate the level of competency the staff of a community resource has in providing various preventive health services.
Calculation method	This measure may be assessed at the level of an individual community resource organization or as the percentage of community resources in a community that have achieved competency in providing preventive health counseling to patients.
Notes	This measure applies to USPSTF-recommended preventive counseling services provided by community resources. Similar to measure J of clinic/clinician element

Clinic/Clinician-Patient Relationship

Potential Measure DD	
Item	**Description**
Title	Clinic/clinician efficiency due to the use of clinical-community relationships
Description	This measure assesses the time savings clinicians experience by referring patients to a community resource(s) for selected preventive services compared to providing those services within the clinic.
Domain	Cost/efficiency (clinic/clinician-patient)
Data source	Clinic/clinician survey
Calculation method	This measure will report the total time savings a clinic reports in referring patients to community resources for selected preventive services compared to providing the service within the clinic.
Notes	Efficiency may be determined by evaluating referral time, actual time to administer services, etc. Clinic/clinician administrative data may serve as supplementary data sources for this measure. Clinicians may not have the time to deliver all recommended clinical preventive services given reimbursement limitations for office visits. Clinical-community relationships have the potential to save clinicians time while ensuring that recommended services are delivered.

Potential Measure EE	
Item	**Description**
Title	Percentage of patients who received appropriate preventive services
Description	This measure assesses whether patients are receiving appropriate preventive services (delivered either by the clinician or by a community resource), focusing on services suitable for delivery by a community resource.
Domain	Delivery of service (clinic/clinician-patient)
Data source	Patient survey – Patients may be the most reliable reporters of the receipt of preventive services, especially counseling services.
Calculation method	This measure will report the percentage of patients who received each applicable preventive service as well as the percentage of patients who receive all applicable preventive services. This measure may focus on patients of a particular primary care practice or on a representative sample of patients from the community as a whole.
Notes	The meaning of “appropriate” received preventive services depends on context, setting, and the particular evaluation goals of any study that uses the measure.

Potential Measure FF	
Item	**Description**
Title	Patient-centeredness of care offered by clinic/clinicians
Description	This measure assesses the level of patient-centeredness of the services patients receive from clinic/clinicians.
Domain	Patient-centeredness (clinic/clinician-patient)
Data source	Patient/individual survey
Calculation method	This measure may be reported for patients of a particular primary care clinic or for primary care patients in the community as a whole. It may be targeted to patients participating in a clinical-community relationship or be reported more generally. The measure will be reported as the average level of patient-centeredness of the care received from clinic/clinicians in a community. Subscale domains for this measure may include levels of the following: enabling of informed decisions, coordination of care, and patient value reflected in care.
Notes	Principles of the measure may be adapted from work by CAHPS Patient Centered Medical Home survey: https://www.cahps.ahrq.gov/surveys-guidance/cg/pcmh/index.html Similar to measure WW in patient-community resource relationship

Potential Measure GG	
Item	**Description**
Title	Patient experience of care with primary care clinic/clinician
Description	This measure assesses aspects of a patient's experience with a clinic/clinician to achieve a desired preventive health goal.
Domain	Patient experience (clinic/clinician-patient)
Data source	Patient/individual survey
Calculation method	This measure may be reported for patients of a particular primary care clinic or for primary care patients in the community as a whole. This measure may be based on specific survey items (patient recall of interactions with clinic/clinician, experience with treatment, etc.) or may be reported as a composite measure that combines responses to several survey items to assess relevant aspects of patient experience.
Notes	This measure may focus on preventive services amenable to the clinical-community relationships approach to support a comparison between the delivery of these services in the clinical setting and the community setting. Similar to measure XX of patient-community resource relationship

Potential Measure HH	
Item	**Description**
Title	Clinician supports patient self-management of prevention
Description	This measure assesses clinician support for patient self-management of prevention activities.
Domain	Self-management support (clinic/clinician-patient)
Data source	Patient/individual survey
Calculation method	This measure may be reported for patients of a particular clinical practice or for patients in the community as a whole. It may be targeted to patients participating in a clinical-community relationship or be reported more generally. This measure may report the percentage of patients who report clinician support of self-management for prevention. Support may include clinician involvement in the development, implementation, and monitoring of a prevention plan and the encouragement of patients to use self-support groups, programs, or tools.
Notes	Principles for this measure may be adapted from Canadian Institute for Health Information: Self-management support indicator: https://secure.cihi.ca/free_products/Pan-Canadian_PHC_Indicator_Update_Report_en_web.pdf Measure principles may also be adapted from IHI self-management support measures: http://www.ihi.org/knowledge/Pages/Measures/SelfManagementSupportMeasures.aspx This measure is most relevant in the context of a clinical-community relationship. Similar to measure ZZ of the patient-community resource relationship.

Potential Measure II	
Item	**Description**
Title	Patient report of shared decision making regarding prevention
Description	This measure assesses the patient's perception of the level of shared decision-making regarding prevention as reflected in perceived information sharing, and the incorporation of patient preferences and values in the delivery of preventive services.
Domain	Shared decision-making (clinic/clinician-patient)
Data source	Patient/individual survey
Calculation method	This measure may be reported as the average level of shared decision making between a patient and a particular clinician/clinical practice.
Notes	Principles for the measure may be adapted from the Partnership Self-Assessment Tool: http://www.lmgforhealth.org/node/190 This measure is most relevant in the context of a clinical-community relationship.

Clinic/Clinician-Community Resource Relationship

Potential Measure JJ	
Item	**Description**
Title	Utility of "bridging resources" / informational tools used by clinicians to foster relationships with community resources
Description	This measure assesses clinicians' perceived value from the use of bridging resources/tools to facilitate referrals to community resources.
Domain	Clinician experience (clinic/clinician-community resource).
Data source	Clinic/clinician survey.
Calculation method	This measure may be reported as the percentage of clinics/clinicians who report that the bridging resources/informational tools they use to make referrals to community resources in a community are useful.
Notes	Measure may also collect qualitative information on ease of use, utility of resource, quality of information, or other aspects of usefulness relevant to the measurement goals. Measure responses may be compared to perspective of community resources. Similar to measure LL of clinic/clinician-community resource relationship

Potential Measure KK	
Item	**Description**
Title	Value of clinical-community resource relationship
Description	This measure assesses the level of perceived value of clinical-community resource relationships from the perspective of community resources.
Domain	Community resource experience (clinic/clinician-community resource)
Data source	Community resource survey
Calculation method	This measure may be reported the average level of perceived value of clinical-community resource relationships reported by community resources in a community.
Notes	N/A

Potential Measure LL	
Item	**Description**
Title	Utility of "bridging resources"/informational tools used by community resources to foster relationship with clinic/clinicians
Description	This measure assesses community resources' perceived value from the use of bridging resources/tools to facilitate referrals from clinicians.
Domain	Community resource experience (clinic/clinician-community resource)
Data source	Community resource survey
Calculation method	This measure may be reported as the percentage of community resources in a community that report that the bridging resources/informational tools they use to complete referrals from a clinic/clinician are useful.
Notes	Measure may also collect qualitative information on ease of use, utility of resource, quality of information, or other aspects of usefulness relevant to the measurement goals. Measure responses may be compared to perspective of clinics/clinicians. Similar to measure JJ of clinic/clinician-community resource relationship

Potential Measure MM	
Item	**Description**
Title	Costs to the clinic/clinician and a community resource to establish a clinical-community relationship
Description	This measure assesses the costs associated with establishing a relationship between a clinic/clinician and community resource organization.
Domain	Cost/efficiency (clinic/clinician-community resource).
Data source	Audit – Using administrative management data to determine costs of establishing clinical-community relationships for both the clinicians and the community resources
Calculation method	This measure may report as the cost associated with establishing a particular clinical-community relationship.
Notes	Measure may consider various start-up costs including staff time, staff salaries, hiring costs, training time, technology infrastructure costs, opportunity costs, etc.

Potential Measure NN

Item	Description
Title	Costs to the clinic/clinician and a community resource to maintain a clinical-community relationship
Description	This measure assesses the costs associated with maintaining a relationship between a clinic/clinician and community resource organization.
Domain	Cost/efficiency (clinic/clinician-community resource)
Data source	Audit – Using administrative management data to determine costs of maintaining clinical-community relationships for both the clinicians and the community resources
Calculation method	This measure may report the costs associated with maintaining a particular clinical-community relationship.
Notes	Measure should consider new compensation policy for delivering preventive services and using community resources to do so. Measure may consider various costs including staff time, staff salaries, opportunity costs, licensing, etc.

Potential Measure OO

Item	Description
Title	Strength of a clinical-community resource relationship
Description	This measure assesses the strength of a relationship between a particular community resource and a particular primary care clinic/clinical practice
Domain	Nature and strength of the inter-organizational relationship (clinic/clinician-community resource)
Data source	Audit – A standardized evaluation form would be used to assess a clinical-community relationship's attributes and determine how strong the relationship is.
Calculation method	This measure may be reported on an ordinal scale that includes rating of elements such as networking, coordinating, cooperating, and collaborating. While this measure applies to a particular clinical-community relationship, it might also be of interest to assess all of the relationships that an organization engages in or all the relationships within a community to understand how the relationships differ.
Notes	Principles for this measure may be adapted from Himmelman's model of collaboration for a change: http://depts.washington.edu/ccph/pdf_files/4achange.pdf The audit would need to consider/evaluate both the clinic/clinician and the community resource.

Potential Measure PP	
Item	**Description**
Title	Percentage of referrals to a community resource that are actionable
Description	This measure reports the percentage of referrals that a community resource receives that include all necessary information for the community resource to take action.
Domain	Referral process (clinic/clinician-community resource)
Data source	Audit – Auditor would review administrative clinical data to determine whether referrals are actionable by a community resource.
Calculation method	This measure may be assessed for a particular community resource or for all community resources in a community. It may be targeted to community resources participating in a clinical-community relationship or be reported more generally. This measure may be reported as the percentage of referrals received that include all necessary information for the community resource to begin the process of delivering services.
Notes	A referral may be actionable even if the service is not actually delivered.

Potential Measure QQ	
Item	**Description**
Title	Time to provide preventive services by a community resource
Description	This measure assesses the time it takes a community resource to provide preventive services once the community resource receives a referral from a clinic/clinician.
Domain	Timeliness (clinic/clinician-community resource)
Data source	Audit – A review of administrative or clinical data at the community resource to determine the amount of time it takes the community resource to provide preventive services once it receives referrals from clinic/clinicians
Calculation method	This measure may be reported for individual community resource organizations or community resource organizations within a defined community as a whole. It may be targeted to community resources participating in a clinical-community relationship or be reported more generally. It may be reported as the average amount of time between the receipt of a referral and the delivery of the service averaged across all referrals for which the service is delivered.
Notes	This is related to measure VV, the percentage of referrals from a clinician to a community resource that result in the delivery of the preventive service.

Patient-Community Resource Relationship

Potential Measure RR	
Item	**Description**
Title	Prevention goal setting and action planning
Description	This measure assesses whether there are prevention goals and a plan for achievement of those goals that were jointly developed between a client and his/her community resource organization.
Domain	Assessment and goal setting (patient-community resource)
Data source	Patient/individual survey
Calculation method	This measure may be reported for patients of a particular community resource clinic or for patients in the community as a whole. It may be targeted to patients participating in a clinical-community relationship or be reported more generally. This measure may report the percentage of clients who receive services from a particular community resource who have a jointly developed action plan with goals and milestones.
Notes	N/A

Potential Measure SS	
Item	**Description**
Title	Communication between client and community resource
Description	This measure assesses the level of interaction between a client and a community resource organization.
Domain	Communication and follow through/follow up (patient-community resource)
Data source	Patient/individual survey
Calculation method	This measure may be reported for patients of a particular community resource clinic or for patients in the community as a whole. It may be targeted to patients participating in a clinical-community relationship or be reported more generally. This measure may be reported as the percentage of clients who receive services from a particular community resource that report communication with the community resource after an initial visit.
Notes	This measure may further evaluate the modes of communication (e.g., in-person, telephone, texting, email, group meetings, etc.) as well as the timeliness of communication.

Potential Measure TT	
Item	**Description**
Title	Average total time working with client
Description	This measure assesses the average amount of time community resources spend in providing a preventive service to their clients.
Domain	Cost/efficiency (patient-community resource)
Data source	Audit – An auditor will use administrative management data to determine the average total time community resources spend working with clients.
Calculation method	This measure may be reported for patients of a particular community resource clinic or for patients in the community as a whole. It may be targeted to patients participating in a clinical-community relationship or be reported more generally. This measure may report the average total time (including scheduling services, providing services, follow-up calls, etc.) per patient it takes community resources to provide a preventive service to their clients.
Notes	Measure should consider new compensation policy for delivering preventive services and using community resources to do so. This measure will be assessing total time working with client while the client is participating in a clinical-community relationship intervention. It may be assessed relative to specific clinical preventive services.

Potential Measure UU	
Item	**Description**
Title	Percentage of clients referred to a community resource who received appropriate preventive services
Description	This measure assesses whether clients referred to a community resource through a clinical-community relationship are receiving appropriate preventive services from the community resource.
Domain	Delivery of service (patient-community resource)
Data source	Patient/individual survey
Calculation method	This measure may be reported for patients of a particular community resource clinic or for patients in the community as a whole. It may be targeted to patients participating in a clinical-community relationship or be reported more generally. This measure may report the percentage of referrals from a clinic/clinician to a community resource that result in the delivery of the preventive service.
Notes	Appropriate preventive services should be based on USPSTF recommendations based on a patient's age, sex, and risk factors. This measure should focus on the delivery of preventive services for which the patients were referred by a clinic/clinician. Supplementary data sources may include administrative client tracking data and/or electronic client record and/or paper client records. The meaning of "appropriate" preventive services depends on context, setting, and the particular evaluation goals of any study that uses the measure.

Potential Measure VV	
Item	**Description**
Title	Client interest in accessing preventive services from community resource
Description	This measure assesses the level of interest clients have in continuing to access preventive services from a community resource after their initial encounter with the community resource.
Domain	Informed and activated patient (patient-community resource)
Data source	Patient/individual survey
Calculation method	This measure may be reported for patients of a particular community resource clinic or for patients in the community as a whole. It may be targeted to patients participating in a clinical-community relationship or be reported more generally. This measure may report the average level of interest of patients who had an encounter with a particular community resource in continuing to receive preventive services from the community resources.
Notes	Measure may be adapted from measure 5 of the *CCRM Atlas* - Safety Check Practitioner Post-Visit Survey. Should take into account Prochaska's Transtheoretical model.[5] This measure will be assessing client interest while the client is participating in a clinical-community relationship intervention.

Potential Measure WW	
Item	**Description**
Title	Patient-centeredness of care offered by community resources
Description	This measure assesses the level of patient-centered care a patient received from community resources.
Domain	Patient-centeredness (patient-community resource)
Data source	Patient/individual survey
Calculation method	This measure may be reported for patients of a particular community resource clinic or for patients in the community as a whole. It may be targeted to patients participating in a clinical-community relationship or be reported more generally. This measure may be reported as the average level of patient-centered care received from community resources in a community. Subscale domains for this measure may include levels of the following: enabling of informed decisions, coordination of care, and patient value reflected in care.
Notes	Principles of this measure may be adapted from work by CAHPS Patient Centered Medical Home survey: https://www.cahps.ahrq.gov/surveys-guidance/cg/pcmh/index.html This measure will be assessing patient-centeredness while the patient is participating in a clinical-community relationship intervention. Similar to measure FF in clinic/clinician-patient relationship

Potential Measure XX	
Item	**Description**
Title	Patient experience of care with community resource
Description	This measure assesses aspects of a patient's experience with a community resource to achieve a desired preventive health goal.
Domain	Patient experience (patient-community resource)
Data source	Patient/individual survey
Calculation method	This measure may be reported for patients of a particular community organization or for all patients who receive services from community resources in the community as a whole. This measure may be based on specific survey items (patient recall of interactions with community resource, experience with treatment, etc.) or may be reported as a composite measure that combines responses to several survey items to assess relevant aspects of patient experience.
Notes	This measure may focus on preventive services amenable to the clinical-community relationships approach to support a comparison between the delivery of these services in the clinical setting and the community setting. Similar to measure GG of clinic/clinician-patient relationship.

Potential Measure YY	
Item	**Description**
Title	Proactive steps taken by community resources to engage and interact with patients
Description	This measure assesses the degree of proactivity demonstrated by community resources in seeking out, engaging, and interacting with patients who have been referred for services.
Domain	Proactive and ready community resource (patient-community resource)
Data source	Audit – An auditor will assess policies and procedures, plus activities undertaken by the community resource organization to follow up on referrals received from clinicians.
Calculation method	This measure may be assessed for an individual community resource or for community resource organizations in the community as a whole. This measure will be reported as a composite measure reflecting relevant aspects of community resource follow up.
Notes	This measure will be assessing community resource proactivity in working with clients who have been referred through a clinical-community relationship intervention.

Potential Measure ZZ	
Item	**Description**
Title	Community resource supports patient self-management of prevention
Description	This measure assesses community resource support for patient self-management of prevention activities.
Domain	Self-management support (patient-community resource)
Data source	Patient/individual survey
Calculation method	This measure may be reported for patients of a particular community resource clinic or for patients in the community as a whole. It may be targeted to patients participating in a clinical-community relationship or be reported more generally. This measure may report the percentage of patients who report community resource support of self-management for prevention. Support may include community resource involvement in the development, implementation, and monitoring of a prevention plan, and encouraging patients to use self-support groups, programs, or tools.
Notes	Principles for this measure may be adapted from the Canadian Institute for Health Information: Self-management support indicator: https://secure.cihi.ca/free_products/Pan-Canadian_PHC_Indicator_Update_Report_en_web.pdf Measure may also be adapted from IHI self-management support measures http://www.ihi.org/knowledge/Pages/Measures/SelfManagementSupportMeasures.aspx This measure is most relevant in the context of a clinical-community relationship intervention. Similar to measure HH of the clinic/clinician-patient relationship

4. Recommended Core Measures and Next Steps

This report includes 52 potential measures plus 22 existing measures from the *CCRM Atlas*. All need additional development and refinement to ensure that the resulting measures are scientifically sound, relevant, and feasible for assessing clinical-community relationships for prevention. To help stakeholders focus resources and effort, we have selected a core set of 13 measures to prioritize for future development. The core set reflects a judgment about which measures may be the most useful and feasible for quality improvement and program evaluation. The recommended set of core measures highlights the complex interactions between patients, clinicians, and community organizations involved in clinical-community relationships. It reflects the need for measures that are broadly applicable across settings and programs, while focusing on key aspects of the structures, processes, and outcomes that are important for any type of clinical-community relationship design. The suggested core measures are listed below, divided among Donabedian's measure categories[6]:

Structure Measures

a) Clinic/clinician and community resource infrastructure to maintain clinical-community relationships (Potential Measures H and AA)

b) Community resource capacity to deliver preventive services (Potential Measure U)

c) Strength of a clinical-community resource relationship (Potential Measure OO)

Process Measures

d) Percentage of referrals to a community resource that are actionable (Potential Measure PP)

e) Clinician receipt of treatment plan from the service coordinator (*CCRM Atlas* Measure 12)

Outcome Measures

f) Percentage of clients referred to a community resource who received appropriate preventive services (Potential Measure UU)

g) Percentage of patients who received appropriate preventive services (Potential Measure EE)

h) Patient experience of care with community resource (Potential Measures XX)

[6] Donabedian A. The quality of care: how can it be assessed? Archives of Pathology and Laboratory Medicine. 1997;121:1145–1150.

i) Utility of "bridging resources"/informational tools used by clinicians and community resources to foster clinical-community relationships (Potential Measures JJ and LL)

j) Costs to the clinic/clinician and a community resource to establish and maintain a clinical-community relationship (Potential Measures MM and NN).

Stakeholders with interest in the advancement of the clinical-community relationships approach may include integrated health systems, accountable care organizations, or safety-net providers. This research can take place within these delivery systems or may take advantage of other types of research infrastructure such as practice-based research networks.

Clinical service providers and community organizations have the potential to work together for the delivery of a range of services, including, but not limited to, the clinical preventive services that have been the focus of this project. These relationships can take a variety of forms, ranging from awareness, to cooperation, to collaboration, to partnership. Further work on refining the core set of measures can help advance the development of these relationships, and the science of designing and evaluating interventions.

Appendix

Table A-1. Clinical-community relationships measurement framework

Type of measures in measurement domain	Element			Relationship		
	Clinic/clinician	Patient	Community resource	Clinic/clinician-patient	Clinic/clinician-community resource	Patient-community resource
Structure domains	Information technology infrastructure Service capacity Accessibility Training Delivery system design Organizational infrastructure	Information technology infrastructure Capacity for self-management Ability to access primary care Ability to access the community resource Health literacy	Information technology infrastructure Service capacity Accessibility Training Delivery system design Organizational infrastructure	Proactive and ready clinician Informed and activated patient	Nature and strength of the inter-organizational relationship	Proactive and ready community resource Informed and activated patient
Process domains	Readiness for behavior change Outreach to obtain knowledge of and familiarity with community resources	Readiness for behavior change Outreach to obtain knowledge of and familiarity with community resources	Readiness for behavior change Marketing of services	Referral process Assessment and goal setting Self-management support Shared decision-making	Referral process Feedback and communication Timeliness	Referral process Assessment and goal setting Self-management support Communication and follow-through/follow-up
Outcome domains	Stage of behavior change Knowledge of and familiarity with community resources	Stage of behavior change Knowledge of and familiarity with community resources	Stage of behavior change Marketing results	Patient experience Cost/efficiency Delivery of service Patient-centeredness	Clinician experience Community resource experience Cost/efficiency	Patient experience Cost/efficiency Delivery of service Patient-centeredness

Table A-2. Measurement framework domains and definitions

Domain	Definition
Ability to access primary care	The degree to which a patient has or perceives that he or she has the ability to access primary care services
Ability to access the community resource	The degree to which a patient has or perceives that he/she has the ability to access the community resource
Accessibility	The degree to which the attributes of the clinic/clinician or the community resource affect how accessible its services are (e.g., open scheduling and open hours)
Assessment and goal setting	The degree of interaction between a clinic/clinician or referred community resource and a patient to develop a plan of action for preventive services
Capacity for self-management	The degree of environmental support that a patient has for his or her health management, which could include family, community, psychological, and social support
Clinician experience	The level of utility from a clinic/clinician's perspective of participation in the clinical-community resource relationship
Communication and follow-through/follow-up	The level of interaction between a community-based resource and patient after the initial connection between them
Community resource experience	The level of utility from a community resource's perspective of participation in the clinical-community resource relationship
Cost/efficiency	The amount of resources, time, energy, and productivity associated with the provision of the services and activities connected with the relationship
Delivery of service	The rate of completion or receipt of services
Delivery system design	The scope of professional services provided and how those services are provided by a clinic/clinician and/or community resource (i.e., this domain contains measures of the presence or degree to which certain professional services exist as well as measures of the methods of providing such services)
Feedback and communication	The level and means of communication between the community resource and the clinic/clinician
Health literacy	The degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions
Information technology infrastructure	The degree of availability and use of relevant aspects of information technology within a clinic/clinician organization, patient, or community resource
Informed and activated patient	The level of trust and increase in level of information a patient has (or is perceived to have) for participating in a relationship
Knowledge of and familiarity with community resources	The clinician's and/or patient's degree of awareness of the availability, range of services, level of cultural competency, and quality of services provided by various community resources
Marketing of services	The level of action and effort taken by a community resource to share information with clinics/clinicians and patients about the availability and types of preventive services provided
Marketing results	The results of marketing activities that a community resource could be engaging in

Table A-2. Measurement framework domains and definitions (continued)

Domain	Definition
Nature and strength of the inter-organizational relationship	The level of intensity of a relationship between a clinic/clinician and community resource (based on Himmelman's definitions of networking, coordinating, cooperating, or collaborating). This includes the degree to which the relationship can overcome common barriers of working together—time, trust, and turf (Himmelman, 2002).
Organizational infrastructure	The way in which a clinic/clinician and/or community resource organizes the people and office process components of its business; the degree to which it is supported by a sustainable business model and governance structure (i.e., this domain contains measures of the presence or degree to which such organizational infrastructure exists)
Outreach to obtain knowledge of and familiarity with community resources	The level of action and effort taken by a clinic/clinician or patient to learn about the availability of community resources and the services provided
Patient-centeredness	The degree to which attributes of whole-person care, family-centered care, respectfulness, cultural sensitivity, and advocacy for a patient exist
Patient experience	The level of utility from a patient's perspective of participation in the clinician-patient or patient-community resource relationship
Proactive and ready clinician	The level of involvement a clinician provides in a clinical-patient relationship
Proactive and ready community resource	The level of involvement a community-based resource provides in a patient-community resource relationship
Readiness for behavior change	The level and/or type of activity that a clinic/clinician, patient, or community resource engages in to prepare for behavioral change that might be affected by a referral to a community resource
Referral process	Data (e.g., frequency) related to the process of developing, obtaining, and confirming a referral among all of the relationships
Self-management support	The level of interaction between the clinician or community resource and the patient aimed at helping patients stay informed about recommended clinical preventive services, and overcoming any barriers to the receipt of services that would prevent them from being active participants in their own care
Service capacity	The level of capacity, including amount of staff, resources, etc. that a clinic/clinician and/or community resource has to provide preventive services as well as manage the relationship(s)
Shared decision-making	The level of clinician-patient information sharing regarding the preventive health services being addressed and the level of patient expression of his or her preferences and values
Stage of behavior change	The level, movement, or degree of sustainability achieved by a clinic/clinician, patient, and/or community resource among the various stages of readiness for behavioral change (i.e., pre-contemplation, contemplation, preparation, action, and maintenance)
Timeliness	The amount of time it takes for clinical preventive services to be delivered when clinicians make referrals to community resources
Training	The level of education and/or competency of individuals within a clinic/clinician and/or community resource to provide preventive services

Table A-3. List of Measures from the *CCRM Atlas*

#	Measure name
1	Patient recall of referral to local agencies (Safety Check Parental/Guardian Post-Visit Survey)
2	Parental interest in following up on the local agency referral (Safety Check Parental/Guardian Post-Visit Survey)
3	Parental confidence in being able to use a local agency referral (Safety Check Parental/Guardian Post-Visit Survey)
4	Clinician recall of referral to a local agency (Safety Check Practitioner Post-Visit Survey)
5	Clinician perception of parent interest in referral (Safety Check Practitioner Post-Visit Survey)
6	Clinician confidence in ability to instruct patient/family in proper use of local agency referral (Safety Check Practitioner Post-Visit Survey)
7	Information about area (community) resources is offered by clinician (Wrap-Around Observation Form-2)
8	Plan of care includes at least one public and/or private community service/resource (Wrap-Around Observation Form-2)
9	Physician satisfaction with service coordination (Alzheimer's Service Coordination Program [ASCP] Physician Survey)
10	Changes in clinicians' knowledge of available services in the local community (ASCP Physician Survey)
11	Whether or not a clinician would refer any family caregiver to intervention in the future (ASCP Physician Survey)
12	Clinician receipt of treatment plan from the service coordinator (ASCP Physician Survey)
13	Clinician discussion of treatment plan with patients or family caregivers (ASCP Physician Survey)
14	Patients referred to a community health educator referral liaison (CHERL)
15	Patient engagement with CHERL
16	CHERL referrals to community resources
17	Referral rate for intensive counseling from a community program
18	Rate of patients that were ready to improve a targeted behavior
19	Connection to resource (Continuity of Care Practices Survey – Practice Level [CCPS-P])
20	Coordination of care (CCPS-P)
21	The effectiveness of communication between practice and community resource (GP-LI)
22	The quality of the service provided by community resource to a practice (GP-LI)

Table A-4. *CCRM Atlas* Measure 1: Patient recall of referral to local agencies (Safety Check Parental/Guardian Post-Visit Survey)

Domain:	Referral process	**Element/ relationship:**	Clinic/clinician-patient
Instrument:	Safety Check Parental/Guardian Post-Visit Survey		
Purpose:	Clinicians in the *Pediatric Research in Office Settings* program were trained on providing violence prevention related community referrals. This measure tracks patient recall of referrals to local agencies.		
Format/data source:	Patient/Individual Survey		
Measure type:	Process	**Date:**	2006
Preventive service/ USPSTF:	Other – Mental Health*		
Clinical practice:	Primary care – Pediatrics		
Denominator:	Number of respondents to parent/guardian post-visit survey (Q2)		
Numerator:	Number of respondents who selected "Yes" to local agency referral (Q2d)		
Development & testing:			
Past or validated application:			
Citation(s):	Barkin, S., Ip, E. H., Finch, S., et al. Clinician practice patterns: linking to community resources for childhood aggression. *Clinical Pediatrics* (2006) 45:750-756.		
Notes:	Please be aware that this measure is using only a selected section of an entire survey instrument. Therefore, this individual measure may need to undergo further reliability and validation testing to ensure that it can be applied in a clinical-community relationship setting.		

* This is a measure that was originally applied in a mental health setting, but it could be adapted for a primary care setting.

Table A-5. *CCRM Atlas* Measure 2: Parental interest in following up on the local agency referral (Safety Check Parental/Guardian Post-Visit Survey)

Domain:	Readiness for behavior change	**Element/ relationship:**	Patient
Instrument:	Safety Check Parental/Guardian Post-Visit Survey		
Purpose:	Clinicians in the *Pediatric Research in Office Settings* program were trained on providing violence prevention-related community referrals. This measures the parent's level of interest in following up on the local agency referral.		
Format/data source:	Patient/Individual Survey		
Measure type:	Process	**Date:**	2006
Preventive service/ USPSTF:	Other – Mental Health*		
Clinical practice:	Primary care – Pediatrics		
Denominator:	Number of respondents to parent/guardian post-visit survey (Q3)		
Numerator:	Number of respondents who selected "Interested" or "Very interested" in following up on the local agency referral (Q3d)		
Development & testing:			
Past or validated application:			
Citation(s):	Barkin, S., Ip, E. H., Finch, S., et al. Clinician practice patterns: linking to community resources for childhood aggression. *Clinical Pediatrics* (2006) 45:750-756.		
Notes:	Please be aware that this measure is using only a selected section of an entire survey instrument. Therefore, this individual measure may need to undergo further reliability and validation testing to ensure that it can be applied in a clinical-community relationship setting.		

* This is a measure that was originally applied in a mental health setting, but it could be adapted for a primary care setting.

Table A-6. *CCRM Atlas* Measure 3: Parental confidence in being able to use a local agency referral (Safety Check Parental/Guardian Post-Visit Survey)

Domain:	Ability to access the community resource	Element/ relationship:	Patient
Instrument:	Safety Check Parental/Guardian Post-Visit Survey		
Purpose:	Clinicians in the *Pediatric Research in Office Settings* program were trained on providing violence prevention related community referrals. This measures the parents' confidence that they will be able to use the local agency referral.		
Format/data source:	Patient/Individual Survey		
Measure type:	Structural	Date:	2006
Preventive service/ USPSTF:	Other – Mental Health*		
Clinical practice:	Primary care – Pediatrics		
Denominator:	Number of respondents to parent/guardian post-visit survey (Q4)		
Numerator:	Number of respondents who selected "Confident" or "Very confident" in following up on the local agency referral (Q4d)		
Development & testing:			
Past or validated application:			
Citation(s):	Barkin, S., Ip, E.H., Finch, S., et al. Clinician practice patterns: linking to community resources for childhood aggression. *Clinical Pediatrics* (2006) 45:750-756.		
Notes:	Please be aware that this measure is using only a selected section of an entire survey instrument. Therefore, this individual measure may need to undergo further reliability and validation testing to ensure that it can be applied in a clinical-community relationship setting.		

* This is a measure that was originally applied in a mental health setting, but it could be adapted for a primary care setting.

Table A-7. *CCRM Atlas* Measure 4: Clinician recall of referral to a local agency (Safety Check Practitioner Post-Visit Survey)

Domain:	Referral process	**Element/ relationship:**	Clinic/clinician-patient
Instrument:	Safety Check Practitioner Post-Visit Survey		
Purpose:	Clinicians in the *Pediatric Research in Office Settings* program were trained on providing violence prevention-related community referrals. This measure tracks the clinicians' recall of referrals to local agencies.		
Format/data source:	Health Professional Survey		
Measure type:	Process	**Date:**	2006
Preventive service/ USPSTF:	Other – Mental Health*		
Clinical practice:	Primary care – Pediatrics		
Denominator:	Number of respondents to practitioner post-visit survey (Q4)		
Numerator:	Number of respondents who selected "Yes" to Local Agency Resource (Q4d)		
Development & testing:			
Past or validated application:			
Citation(s):	Barkin, S., Ip, E.H., Finch, S., et al. Clinician practice patterns: linking to community resources for childhood aggression. *Clinical Pediatrics* (2006) 45:750-756.		
Notes:	Please be aware that this measure is using only a selected section of an entire survey instrument. Therefore, this individual measure may need to undergo further reliability and validation testing to ensure that it can be applied in a clinical-community relationship setting.		

* This is a measure that was originally applied in a mental health setting, but it could be adapted for a primary care setting.

Table A-8. *CCRM Atlas* Measure 5: Clinician perception of parent interest in referral (Safety Check Practitioner Post-Visit Survey)

Domain:	Informed and activated patient	**Element/ relationship:**	Clinic/clinician-patient
Instrument:	Safety Check Practitioner Post-Visit Survey		
Purpose:	Clinicians in the *Pediatric Research in Office Settings* program were trained on providing violence prevention-related community referrals. This measures the clinicians' perception of their patient's interest in the local agency referral.		
Format/data source:	Health Professional Survey		
Measure type:	Structural	**Date:**	2006
Preventive service/ USPSTF:	Other – Mental Health*		
Clinical practice:	Primary care – Pediatrics		
Denominator:	Number of respondents to practitioner post-visit survey (Q5)		
Numerator:	Number of respondents who selected "Interested" or "Very interested" in following up on the local agency referral (Q5d)		
Development & testing:			
Past or validated application:			
Citation(s):	Barkin, S., Ip, E.H., Finch, S., et al. Clinician practice patterns: linking to community resources for childhood aggression. *Clinical Pediatrics* (2006) 45:750-756.		
Notes:	Please be aware that this measure is using only a selected section of an entire survey instrument. Therefore, this individual measure may need to undergo further reliability and validation testing to ensure that it can be applied in a clinical-community relationship setting.		

* This is a measure that was originally applied in a mental health setting, but it could be adapted for a primary care setting.

Table A-9. *CCRM Atlas* Measure 6: Clinician confidence in ability to instruct patient/family in proper use of local agency referral (Safety Check Practitioner Post-Visit Survey)

Domain:	Proactive and ready clinician	Element/ relationship:	Clinic/clinician-patient
Instrument:	Safety Check Practitioner Post-Visit Survey		
Purpose:	Clinicians in the *Pediatric Research in Office Settings* program were trained on providing violence prevention related community referrals. This measures the clinicians' level of confidence in instructing the patient/family in the proper use of a local agency referral.		
Format/data source:	Health Professional Survey		
Measure type:	Process	Date:	2006
Preventive service/USPSTF:	Other – Mental Health*		
Clinical practice:	Primary care – Pediatrics		
Denominator:	Number of respondents to practitioner post visit survey (Q6)		
Numerator:	Number of respondents who selected "Confident" or "Very confident" in ability to instruct this patient-family in the proper use of a local agency referral (Q6d)		
Development & testing:			
Past or validated application:			
Citation(s):	Barkin, S., Ip, E.H., Finch, S., et al. Clinician practice patterns: linking to community resources for childhood aggression. *Clinical Pediatrics* (2006) 45:750-756.		
Notes:	Please be aware that this measure is using only a selected section of an entire survey instrument. Therefore, this individual measure may need to undergo further reliability and validation testing to ensure that it can be applied in a clinical-community relationship setting.		

* This is a measure that was originally applied in a mental health setting, but it could be adapted for a primary care setting.

Table A-10. *CCRM Atlas* Measure 7: Information about area (community) resources is offered by clinician (Wrap-Around Observation Form-2)

Domain:	Proactive and ready clinician	**Element/ relationship:**	Clinic/clinician-patient
Instrument:	Wrap-Around Observation Manual – Second Version		
Purpose:	For families involved in a care team receiving wrap-around services, the question assesses whether information about resource interventions in the area is offered to the team.		
Format/data source:	External audit. Question 1 of the 48-item Wrap-Around Observation Form-2, which elicits information from a trained observer on whether a team mentions at least one specific resource/intervention (e.g., A.A, vocational rehab, Teammates) to the parent or asks if the parent is involved or needs community resources/intervention.		
Measure type:	Structural	**Date:**	2003
Preventive service/ USPSTF:	Other – Mental Health*		
Clinical practice:	Other		
Denominator:	Number of patients or families eligible for wraparound services and form filled by observer. (Question 1)		
Numerator:	Number of "yes" responses noted by observer during family meeting with care coordinator. "Yes" if the team mentions or asks if the parent is involved in resources/interventions. "Yes" if the team asks about or mentions resources/interventions and the parent is already involved or does not show an interest in such services, and thus the team does not provide contact information. (Question 1)		
Development & testing:	Reliability of the WOF-2 was assessed during 30 family planning meetings with 26 different families during a 24-month period. Data were collected by eight graduate students and one research assistant who served as observers at the family planning meetings. To assess reliability at each meeting, two observers went to the meeting to collect data using the WOF-2.		
Past or validated application:	Those in Lancaster County, Nebraska, who participated in an evaluation designed to examine the impact of a system of care for children with serious emotional disturbance and their families.		
Citation(s):	Nordness, P.D. and Epstein, M.H. Reliability of the Wraparound Observation Form-Second Version: an instrument designed to assess the fidelity of the Wraparound approach. *Mental Health Services Research* (2003) 5(2):89-96. Epstein, M.H., Nordness, P.D., Kutash, K., et al. Assessing the Wraparound process during family planning meetings. *Journal of Behavioral Health Services & Research* (2003) 30:352-362.		
Notes:	Please be aware that this measure is using only a selected section of an entire survey instrument. Therefore, this individual measure may need to undergo further reliability and validation testing to ensure that it can be applied in a clinical-community relationship setting.		

* This is a measure that was originally applied in a mental health setting, but it could be adapted for a primary care setting.

Table A-11. *CCRM Atlas* Measure 8: Plan of care includes at least one public and/or private community service/resource (Wrap-Around Observation Form-2)

Domain:	Referral process	**Element/ relationship:**	Clinic/clinician-patient
Instrument:	Wrap-Around Observation Manual – Second Version		
Purpose:	For families involved in a care team receiving wrap-around services, the question assesses if information about resource interventions in the area is offered to the team.		
Format/data source:	External audit. Question 2 of the 48-item Wrap-Around Observation Form-2, which elicits information from a trained observer of whether a team specifically identifies at least one public (e.g., Health and Human Services, Lincoln Public Schools, Social Security Income) and/or private (e.g., private therapists/counselors, drug rehab centers) community service/resource in the plan of care.		
Measure type:	Process	**Date:**	2003
Preventive service/ USPSTF:	Other – Mental Health*		
Clinical practice:	Other		
Denominator:	Number of patients or families eligible for wraparound services and form filled by observer. (Question 1)		
Numerator:	Number of "yes" responses noted by observer during family meeting with care coordinator. "Yes" only if one public and/or private service is included in the plan. These agencies must be accessible from the client's community. (Question 1)		
Development & testing:	Reliability of the WOF-2 was assessed during 30 family planning meetings with 26 different families during a 24-month period. Data were collected by eight graduate students and one research assistant who served as observers at the family planning meetings. To assess reliability at each meeting, two observers went to the meeting to collect data using the WOF-2.		
Past or validated application:	Those in Lancaster County, Nebraska, who participated in an evaluation designed to examine the impact of a system of care for children with serious emotional disturbance and their families.		
Citation(s):	Nordness, P.D. and Epstein, M.H. Reliability of the Wraparound Observation Form—Second Version: An instrument designed to assess the fidelity of the Wraparound Approach. *Mental Health Services Research* (2003) 5(2):89-96. Epstein, M.H., Nordness, P.D., Kutash, K., et al. Assessing the wraparound process during family planning meetings. *Journal of Behavioral Health Services & Research* (2003) 30:352-362.		
Notes:	Please be aware that this measure is using only a selected section of an entire survey instrument. Therefore, this individual measure may need to undergo further reliability and validation testing to ensure that it can be applied in a clinical-community relationship setting.		

* This is a measure that was originally applied in a mental health setting, but it could be adapted for a primary care setting.

Table A-12. *CCRM Atlas* Measure 9: Physician satisfaction with service coordination (Alzheimer's Service Coordination Program [ASCP] Physician Survey)

Domain:	Clinician experience	Element/ relationship:	Clinic/clinician-community resource
Instrument:	Alzheimer's Service Coordination Program (ASCP) Physician Survey		
Purpose:	Questionnaire asked clinician's satisfaction with the Alzheimer's Service Coordination Program - the program was a care partnership arrangement linking primary care physicians with a community organization that specializes in dementia education and support.		
Format/data source:	Health Professional Survey		
Measure type:	Outcome	Date:	1997
Preventive service/ USPSTF:	Other – Mental Health*		
Clinical practice:	Primary Care – Family Practice; Primary Care – Internal Medicine		
Denominator:	Clinicians in the area who have at least six dementia patients and who referred family caregivers diagnosed with dementia to a service coordinator and responded to question (Q10)		
Numerator:	Number of clinicians responding "Very Satisfied" or "Satisfied"		
Development & testing:	Tested versions of the survey with academic general internists for clarity and brevity before the instrument was fielded.		
Past or validated application:			
Citation(s):	Fortinsky, R.H., Unson, C.G., and Garcia, R.I. Helping family caregivers by linking primary care physicians with community-based dementia care services: The Alzheimer's Service Coordination Program. *Dementia: The International Journal of Social Research and Practice* (2002) 1(2), 227-240.		
Notes:	Please be aware that this measure is using only a selected section of an entire survey instrument. Therefore, this individual measure may need to undergo further reliability and validation testing to ensure that it can be applied in a clinical-community relationship setting.		

* This is a measure that was originally applied in a mental health setting, but it could be adapted for a primary care setting.

Table A-13. *CCRM Atlas* Measure 10: Changes in clinicians' knowledge of available services in the local community (ASCP Physician Survey)

Domain:	Knowledge and familiarity with community resource	Element/ relationship:	Clinic/clinician
Instrument:	Alzheimer's Service Coordination Program (ASCP) Physician Survey		
Purpose:	Physicians are asked whether their knowledge of community resources available to their patients with dementia and these patients' families increased, remained unchanged, or decreased compared with before their participation in the Alzheimer's Service Coordination Program.		
Format/data source:	Health Professional Survey		
Measure type:	Outcome	Date:	1997
Preventive service/ USPSTF:	Other – Mental Health*		
Clinical practice:	Primary Care – Family Practice; Primary Care – Internal Medicine		
Denominator:	Clinicians in the area who have at least six dementia patients and who referred family caregivers diagnosed with dementia to a service coordinator and responded to question (Q7)		
Numerator:	Number of clinicians responding "Yes"		
Development & testing:	Tested versions of the survey with academic general internists for clarity and brevity before the instrument was fielded.		
Past or validated application:			
Citation(s):	Fortinsky, R.H., Unson, C.G., and Garcia, R.I. Helping family caregivers by linking primary care physicians with community-based dementia care services: The Alzheimer's Service Coordination Program. *Dementia: The International Journal of Social Research and Practice* (2002) 1(2), 227-240.		
Notes:	Please be aware that this measure is using only a selected section of an entire survey instrument. Therefore, this individual measure may need to undergo further reliability and validation testing to ensure that it can be applied in a clinical-community relationship setting.		

* This is a measure that was originally applied in a mental health setting, but it could be adapted for a primary care setting.

Table A-14. *CCRM Atlas* Measure 11: Whether or not a clinician would refer any family caregiver to intervention in the future (ASCP Physician Survey)

Domain:	Clinician experience	Element/ relationship:	Clinic/clinician-community resource
Instrument:	Alzheimer's Service Coordination Program (ASCP) Physician Survey		
Purpose:	Physicians are asked whether they would refer their patients to the Alzheimer's Service Coordination Program after participating in the program.		
Format/data source:	Health Professional Survey		
Measure type:	Outcome	Date:	1997
Preventive service/ USPSTF:	Other – Mental Health*		
Clinical practice:	Primary Care – Family Practice; Primary Care – Internal Medicine		
Denominator:	Clinicians in the area who have at least six dementia patients and who referred family caregivers diagnosed with dementia to a service coordinator and responded to question (Q9)		
Numerator:	Number of clinicians responding "Yes"		
Development & testing:	Tested versions of the survey with academic general internists for clarity and brevity before the instrument was fielded.		
Past or validated application:			
Citation(s):	Fortinsky, R.H., Unson, C.G., and Garcia, R.I. Helping family caregivers by linking primary care physicians with community-based dementia care services: The Alzheimer's Service Coordination Program. *Dementia: The International Journal of Social Research and Practice* (2002) 1(2), 227-240.		
Notes:	Please be aware that this measure is using only a selected section of an entire survey instrument. Therefore, this individual measure may need to undergo further reliability and validation testing to ensure that it can be applied in a clinical-community relationship setting.		

* This is a measure that was originally applied in a mental health setting, but it could be adapted for a primary care setting.

Table A-15. *CCRM Atlas* Measure 12: Clinician receipt of treatment plan from the service coordinator (ASCP Physician Survey)

Domain:	Feedback and communication	Element/ relationship:	Clinic/clinician-community resource
Instrument:	Alzheimer's Service Coordination Program (ASCP) Physician Survey		
Purpose:	Physicians are asked whether they received a service plan from the ASCP Service Coordinator while participating in the program.		
Format/data source:	Health Professional Survey		
Measure type:	Process	Date:	1997
Preventive service/ USPSTF:	Other – Mental Health*		
Clinical practice:	Primary Care – Family Practice; Primary Care – Internal Medicine		
Denominator:	Clinicians in the area who have at least six dementia patients and who referred family caregivers diagnosed with dementia to a service coordinator and responded to question (Q1)		
Numerator:	Number of clinicians responding "Yes" (a or b)		
Development & testing:	Tested versions of the survey with academic general internists for clarity and brevity before the instrument was fielded.		
Past or validated application:			
Citation(s):	Fortinsky, R.H., Unson, C.G., and Garcia, R.I. Helping family caregivers by linking primary care physicians with community-based dementia care services: The Alzheimer's Service Coordination Program." *Dementia: The International Journal of Social Research and Practice* (2002) 1(2), 227-240.		
Notes:	Please be aware that this measure is using only a selected section of an entire survey instrument. Therefore, this individual measure may need to undergo further reliability and validation testing to ensure that it can be applied in a clinical-community relationship setting.		

* This is a measure that was originally applied in a mental health setting, but it could be adapted for a primary care setting.

Table A-16. *CCRM Atlas* Measure 13: Clinician discussion of treatment plan with patients or family caregivers (ASCP Physician Survey)

Domain:	Assessment and goal setting	Element/ relationship:	Clinic/clinician-patient
Instrument:	Alzheimer's Service Coordination Program (ASCP) Physician Survey		
Purpose:	Physicians are asked whether they reviewed or discussed treatment plan with patients or family caregivers while participating in the program.		
Format/data source:	Health Professional Survey		
Measure type:	Process	Date:	1997
Preventive service/ USPSTF:	Other – Mental Health*		
Clinical practice:	Primary Care – Family Practice; Primary Care – Internal Medicine		
Denominator:	Clinicians in the area who have at least six dementia patients and who referred family caregivers diagnosed with dementia to a service coordinator and responded to question (Q2). Must have answered "Yes" (a or b) to (Q1) as well.		
Numerator:	Number of clinicians responding "Yes"		
Development & testing:	Tested versions of the survey with academic general internists for clarity and brevity before the instrument was fielded.		
Past or validated application:			
Citation(s):	Fortinsky, R.H., Unson, C.G., and Garcia, R.I. Helping family caregivers by linking primary care physicians with community-based dementia care services: The Alzheimer's Service Coordination Program. *Dementia: The International Journal of Social Research and Practice* (2002) 1(2), 227-240.		
Notes:	Please be aware that this measure is using only a selected section of an entire survey instrument. Therefore, this individual measure may need to undergo further reliability and validation testing to ensure that it can be applied in a clinical-community relationship setting.		

* This is a measure that was originally applied in a mental health setting, but it could be adapted for a primary care setting.

Table A-17. *CCRM Atlas* Measure 14: Patients referred to a community health educator referral liaison (CHERL)

Domain:	Referral process	Element/ relationship:	Clinic/clinician-patient
Instrument:	N/A		
Purpose:	This measure calculates the proportion of eligible patients who received referrals to a CHERL by a clinician if the patient was identified by the clinician as needing improvement in one or more of the four unhealthy behaviors.		
Format/data source:	Electronic health/medical record. A computerized support system was developed to collect patient data; track patient calls, dates of service, and clinician feedback; and guide the counseling. Patient-specific health behavior and demographic information was entered by the CHERL based on self-report by the patients.		
Measure type:	Process	Date:	2006
Preventive service/ USPSTF:	Alcohol Misuse Counseling; Healthy Diet Counseling; Obesity Screening and Counseling – Adults; Tobacco Use Counseling and Interventions – Non-Pregnant		
Clinical practice:	Primary Care - Family Practice; Primary Care – Internal Medicine		
Denominator:	Number of eligible patients (those identified by the clinician as needing improvement in one or more unhealthy behaviors): Patients eligible for improvement were those who had smoked one puff or more in the past 7 days; had drunk two alcoholic drinks per one occasion most days in the past month; did not eat a low-fat diet or at least five total fruits and/or vegetables per day; and/or did not participate in moderate exercise at least 5 days per week, or vigorously at least 3 days per week.		
Numerator:	This was an accounting of the number of faxes received for each CHERL (the practices faxed referrals to the CHERL)		
Development & testing:	The Reach, Efficacy/Effectiveness, Adoption, Implementation, Maintenance (RE-AIM) model provided the framework for the analysis of study results.		
Past or validated application:	Adult patients at fifteen practices selected for convenience in three Michigan communities were eligible for CHERL referral if a patient was identified by the clinician as needing improvement in one or more of the four unhealthy behaviors.		
Citation(s):	Holtrop, J.S., Dosh, S.A., Torres, T., Thum, Y.M. The community health educator referral liaison (CHERL): A primary care practice role for promoting healthy behaviors. *American Journal of Preventive Medicine* (2008) 35:S365-S372.		
Notes:	N/A		

Table A-18. *CCRM Atlas* Measure 15: Patient engagement with CHERL

Domain:	Referral process	**Element/ relationship:**	Clinic/clinician-patient
Instrument:	N/A		
Purpose:	This measure calculates the proportion of eligible patients who received referrals to a CHERL by a clinician if the patient was identified by the clinician as needing improvement in one or more of the four unhealthy behaviors.		
Format/data source:	Electronic health/medical record. A computerized support system was developed to collect patient data; track patient calls, dates of service, and clinician feedback; and guide the counseling. Patient-specific health behavior and demographic information was entered by the CHERL based on self-report by the patients.		
Measure type:	Process	**Date:**	2006
Preventive service/ USPSTF:	Alcohol Misuse Counseling; Healthy Diet Counseling; Obesity Screening and Counseling – Adults; Tobacco Use Counseling and Interventions – Non-Pregnant		
Clinical practice:	Primary Care – Family Practice; Primary Care – Internal Medicine		
Denominator:	Number of eligible patients (those identified by the clinician as needing improvement in one or more unhealthy behaviors): Patients eligible for improvement were those who had smoked one puff or more in past 7 days; had drunk two alcoholic drinks per one occasion most days in the past month; did not eat a low-fat diet or at least five total fruits and/or vegetables per day; and/or did not participate in moderate exercise at least 5 days per week, or vigorously at least 3 days per week.		
Numerator:	This was a count of the number of patients who had at least one "visit" with a CHERL (visits were by phone).		
Development & testing:	The Reach, Efficacy/Effectiveness, Adoption, Implementation, Maintenance (RE-AIM) model provided the framework for the analysis of study results.		
Past or validated application:	Adult patients at 15 practices selected for convenience in three Michigan communities were eligible for CHERL referral if a patient was identified by the clinician as needing improvement in one or more of the four unhealthy behaviors.		
Citation(s):	Holtrop, J.S., Dosh, S.A., Torres, T., Thum, Y.M. The community health educator referral liaison (CHERL): A primary care practice role for promoting healthy behaviors. *American Journal of Preventive Medicine* (2008) 35:S365-S372.		
Notes:	N/A		

Table A-19. *CCRM Atlas* Measure 16: CHERL referrals to community resources

Domain:	Referral process	Element/ relationship:	Patient-community resource
Instrument:	N/A		
Purpose:	This measure calculates the proportion of patients working with a CHERL who were referred to at least one community resource that provided assistance with one or more of the four unhealthy behaviors.		
Format/data source:	Electronic health/medical record. A computerized support system was developed to collect patient data; track patient calls, dates of service, and clinician feedback; and guide the counseling. Patient-specific health behavior and demographic information was entered by the CHERL based on self-report by the patients.		
Measure type:	Process	Date:	2006
Preventive service/ USPSTF:	Alcohol Misuse Counseling; Healthy Diet Counseling; Obesity Screening and Counseling – Adults; Tobacco Use Counseling and Interventions – Non-Pregnant		
Clinical practice:	Primary Care – Family Practice; Primary Care – Internal Medicine		
Denominator:	Number of eligible patients (those identified by the clinician as needing improvement in one or more unhealthy behavior): Patients eligible for improvement were those who had smoked one puff or more in past 7 days; had drunk two alcoholic drinks per one occasion most days in the past month; did not eat a low-fat diet or at least five total fruits and/or vegetables per day; and/or did not participate in moderate exercise at least 5 days per week, or vigorously at least 3 days per week. The patient must have completed a baseline call with the CHERL.		
Numerator:	The number of clients who received at least one referral from the CHERL to a community resource.		
Development & testing:	The Reach, Efficacy/Effectiveness, Adoption, Implementation, Maintenance (RE-AIM) model provided the framework for the analysis of study results.		
Past or validated application:	Adult patients at 15 practices selected for convenience in three Michigan communities were eligible for CHERL referral if a patient was identified by the clinician as needing improvement in one or more of the four unhealthy behaviors.		
Citation(s):	Holtrop, J.S., Dosh, S.A., Torres, T., Thum, Y.M. The community health educator referral liaison (CHERL): A primary care practice role for promoting healthy behaviors. *American Journal of Preventive Medicine* (2008) 35:S365-S372.		
Notes:	N/A		

Table A-20. *CCRM Atlas* Measure 17: Referral rate for intensive counseling from a community program

Domain:	Referral process	Element/ relationship:	Clinic/clinician-patient
Instrument:	N/A		
Purpose:	An electronic linkage system (eLinkS) tracked the promotion of health behavior counseling and automation of patient referrals to community counseling services. This measure calculated the proportion of all patients with risk factors referred for intensive counseling.		
Format/data source:	Electronic health/medical record. Utilizing the electronic medical record as a platform, eLinkS was designed to (1) help clinicians systematically perform elements of the 5A's that are feasible in busy practice settings (i.e., asking about health behaviors, offering brief advice, and agreeing on next steps); (2) make it fast and easy to refer patients to intensive counseling outside the office; and (3) establish bidirectional communication between practices and community counselors.		
Measure type:	Process	Date:	2008
Preventive service/ USPSTF:	Alcohol Misuse Counseling; Healthy Diet Counseling; Obesity Screening and Counseling – Adults; Tobacco Use Counseling and Interventions – Non-Pregnant		
Clinical practice:	Primary Care – Family Practice; Primary Care – Internal Medicine		
Denominator:	Patients who reported they wanted to address an unhealthy behavior and engaged to address the unhealthy behavior (A1-A3)		
Numerator:	Number of patients referred to intensive counseling (A4)		
Development & testing:	Prompts of the eLinkS were applied to the 5A's of health behaviors.		
Past or validated application:	Nine primary care practices in the Tidewater region of Virginia were recruited. The practices, members of a single medical group and of the Virginia Ambulatory Care Outcomes Research Network (ACORN), share a common type of EMR (GE Centricity Physician Office©) that is managed by a central informatics staff. The practices have used the EMR for 3 to 10 years. Practice size ranged from 1 to 30 clinicians (median = 3), and 48 (87%) clinicians participated in the study. Two sites were solo practices, five had three clinicians, one had eight clinicians, and one (a family medicine residency program) had 30 part-time clinicians and residents.		
Citation(s):	Krist, A.H., Woolf, S.H., Frazier, C.O., et al. An electronic linkage system for health behavior counseling effect on delivery of the 5A's. *American Journal of Preventive Medicine* (2008) 35:S350-S358.		
Notes:	N/A		

Table A-21. *CCRM Atlas* Measure 18: Rate of patients that were ready to improve a targeted behavior

Domain:	Readiness for behavior change	Element/ relationship:	Patient
Instrument:	N/A		
Purpose:	An electronic linkage system (eLinkS) tracked the promotion of health behavior counseling and automation of patient referrals to community counseling services. This measure calculated the proportion of all patients who were engaged to address an unhealthy behavior.		
Format/data source:	Electronic health/medical record. Utilizing the electronic medical record (EMR) as a platform, eLinkS was designed to (1) help clinicians systematically perform elements of the 5A's that are feasible in busy practice settings (i.e., asking about health behaviors, offering brief advice, and agreeing on next steps); (2) make it fast and easy to refer patients to intensive counseling outside the office; and (3) establish bidirectional communication between practices and community counselors.		
Measure type:	Process	Date:	2008
Preventive service/ USPSTF:	Alcohol Misuse Counseling; Healthy Diet Counseling; Obesity Screening and Counseling – Adults; Tobacco Use Counseling and Interventions – Non-Pregnant		
Clinical practice:	Primary Care – Family Practice; Primary Care – Internal Medicine		
Denominator:	Patients who reported an unhealthy behavior and were advised by clinician to change their behavior (A1-A2)		
Numerator:	Number of patients engaged to modify their behavior (A3)		
Development & testing:	Prompts of the eLinkS were applied to the 5A's of health behaviors.		
Past or validated application:	Nine primary care practices in the Tidewater region of Virginia were recruited. The practices, members of a single medical group, and of the Virginia Ambulatory Care Outcomes Research Network (ACORN), share a common type of EMR (GE Centricity Physician Office©) that is managed by a central informatics staff. The practices have used the EMR for 3 to 10 years. Practice size ranged from 1 to 30 clinicians (median = 3), and 48 (87%) clinicians participated in the study. Two sites were solo practices, five had three clinicians, one had eight clinicians, and one (a family medicine residency program) had 30 part-time clinicians and residents.		
Citation(s):	Krist, A.H., Woolf, S.H., Frazier, C.O., et al. An electronic linkage system for health behavior counseling effect on delivery of the 5A's. *American Journal of Preventive Medicine* (2008) 35:S350-S358.		
Notes:	N/A		

Table A-22. *CCRM Atlas* Measure 19: Connection to resource (Continuity of Care Practices Survey – Practice Level [CCPS-P])

Domain:	Referral Process	**Element/ relationship:**	Clinic/clinician-patient
Instrument:	Continuity of Care Practices Survey – Practice Level [CCPS-P]		
Purpose:	This measure assesses whether clinicians and their staffs participating in the Veterans Affairs Substance Use Disorder (SUD) treatment program were able to arrange for their patient to connect with a community resource.		
Format/data source:	Health professional survey that is completed for each practice by a designated member of that practice.		
Measure type:	Process	**Date:**	2004
Preventive service/ USPSTF:	Alcohol Misuse Counseling		
Clinical practice:	Other		
Denominator:	N/A		
Numerator:	N/A		
Development & testing:	Program-level CCPS data were obtained from directors/coordinators of 129 intensive inpatient/residential and outpatient Department of Veterans Affairs SUD programs. These data were used to examine the internal consistency and discriminant validity of the CCPS-P. CCPS-P demonstrated acceptable psychometric properties. CCPS-P subscales and the overall CCPS-P score predicted corresponding continuity of care services that staff provided to patients within programs, offering support for predictive validity. Lack of significant correlations between CCPS-P subscales and SUD program characteristics (e.g., size, staffing) provided preliminary evidence for discriminant validity.		
Past or validated application:	129 intensive SUD treatment programs (58 inpatient/residential and 71 outpatient); methadone maintenance programs were excluded. Directors of the programs completed the CCPS by mailed questionnaire or telephone interview.		
Citation(s):	Schaefer, J.A., Cronkite, R., Ingudomnukul, E. Assessing continuity of care practices in substance use disorder treatment programs. *Journal of Studies on Alcohol* (2004) 65:513-520.		
Notes:	A composite measure using the Connect to Resources Subscale – Add 7A-F (except E) and subtract the number of responses without missing data, (e.g., if one item has missing data, subtract 5, the number of complete responses). Please be aware that this measure is using only a selected section of an entire survey instrument. Therefore, this individual measure may need to undergo further reliability and validation testing to ensure that it can be applied in a clinical-community relationship setting.		

Table A-23. *CCRM Atlas* Measure 20: Coordination of care (CCPS-P)

Domain:	Feedback and communication	**Element/ relationship:**	Clinic/clinician-community resource
Instrument:	Continuity of Care Practices Survey – Practice Level [CCPS-P]		
Purpose:	This measure assesses whether a clinician and his staff participating in the Veterans Affairs Substance Use Disorder (SUD) treatment program were able to arrange for their patient to connect with a community resource.		
Format/data source:	Health professional survey that is completed for each practice by a designated member of that practice.		
Measure type:	Process	**Date:**	2004
Preventive service/ USPSTF:	Alcohol Misuse Counseling		
Clinical practice:	Other		
Denominator:	N/A		
Numerator:	N/A		
Development & testing:	Program-level CCPS data were obtained from directors/coordinators of 129 intensive inpatient/residential and outpatient Department of Veterans Affairs SUD programs. These data were used to examine the internal consistency and discriminant validity of the CCPS-P. CCPS-P demonstrated acceptable psychometric properties. CCPS-P subscales and the overall CCPS-P score predicted corresponding continuity of care services that staff provided to patients within programs, offering support for predictive validity. Lack of significant correlations between CCPS-P subscales and SUD program characteristics (e.g., size, staffing) provided preliminary evidence for discriminant validity.		
Past or validated application:	129 intensive SUD treatment programs (58 inpatient/residential and 71 outpatient); methadone maintenance programs were excluded. Directors of the programs completed the CCPS by mailed questionnaire or telephone interview.		
Citation(s):	Schaefer, J.A., Cronkite, R., Ingudomnukul, E. Assessing continuity of care practices in substance use disorder treatment programs. *Journal of Studies on Alcohol* (2004) 65:513-520.		
Notes:	This is a composite measure using the Coordinate Care Subscale – Add 8A-E and subtract the number of responses without missing data, (e.g., if one item has missing data), subtract 4, the number of complete responses). Please be aware that this measure is using only a selected section of an entire survey instrument. Therefore, this individual measure may need to undergo further reliability and validation testing to ensure that it can be applied in a clinical-community relationship setting.		

Table A-24. *CCRM Atlas* Measure 21: The effectiveness of communication between practice and community resource (GP-LI)

Domain:	Referral Process	Element/ relationship:	Clinic/clinician-patient
Instrument:	Capacity for Chronic Disease Management in General Practice Research Study Practice Profile Interview – Linkages with External Organisations of Providers (GP-LI)		
Purpose:	This question assesses the clinician's perception of the effectiveness of communication with the community resource(s).		
Format/data source:	Health professional survey		
Measure type:	Outcome	Date:	2005
Preventive service/ USPSTF:	Other – Non-Mental Health*		
Clinical practice:	Primary Care – Family Practice; Primary Care – Internal Medicine		
Denominator:	N/A		
Numerator:	N/A		
Development & testing:	The interview to measure surgery-level (rather than individual clinician-level) clinical linkages was developed, piloted, reviewed, and evaluated with 97 Australian general practices. Two validated survey instruments were posted to patients, and a survey of locally available services was developed and posted to participating Divisions of General Practice (support organizations). Hypotheses regarding internal validity, association with local services, and patient satisfaction were tested using factor analysis, logistic regression, and multilevel regression models.		
Past or validated application:	Setting: General practices in Australia Population: General practitioners and practice managers		
Citation(s):	Amoroso, C., Proudfoot, J., Bubner, T., et al. Validation of an instrument to measure inter-organisational linkages in general practice. *International Journal of Integrated Care* (2007).		
Notes:	This question is part of a composite measure for one practice: For each provider or organization the clinician has a linkage with, rate on a scale of 0 – 5 (0 being the lowest and 5 being the highest), the effectiveness of the communication between the two organizations. This tool was originally developed to examine both the clinical and nonclinical links in general practice that exist at a practice level with external providers or organizations. This tool is only designed to look at links that are at the practice level, as defined by a link which the principal GP would tell a new GP about when they joined the practice. The links are recognized in regards to the functions they fulfill, for example, does the practice have a link for referral or advice for asthma. For the purposes of this *Atlas*, the composite scoring was broken and one question was identified as a measure of clinical-community relationships. Please be aware that this measure is using only a selected section of an entire survey instrument. Therefore, this individual measure may need to undergo further reliability and validation testing to ensure that it can be applied in a clinical-community relationship setting.		

* This is a measure that was originally applied in a chronic care setting, but it could be adapted for a primary care setting.

Table A-25. *CCRM Atlas* Measure 22: The quality of the service provided by community resource to a practice (GP-LI)

Domain:	Knowledge and familiarity with community resources	Element/ relationship:	Clinic/clinician
Instrument:	Capacity for Chronic Disease Management in General Practice Research Study Practice Profile Interview – Linkages with External Organisations of Providers (GP-LI)		
Purpose:	This question assesses a provider's view of the quality of service provided by the community resource(s).		
Format/data source:	Health professional survey		
Measure type:	Outcome	Date:	2005
Preventive service/ USPSTF:	Other – Non-Mental Health*		
Clinical practice:	Primary Care - Family Practice; Primary Care – Internal Medicine		
Denominator:	N/A		
Numerator:	N/A		
Development & testing:	The interview to measure surgery-level (rather than individual clinician-level) clinical linkages was developed, piloted, reviewed, and evaluated with 97 Australian general practices. Two validated survey instruments were posted to patients, and a survey of locally available services was developed and posted to participating Divisions of General Practice (support organizations). Hypotheses regarding internal validity, association with local services, and patient satisfaction were tested using factor analysis, logistic regression, and multilevel regression models.		
Past or validated application:	Setting: General practices in Australia Population: General practitioners and practice managers		
Citation(s):	Amoroso, C., Proudfoot, J., Bubner, T., et al. Validation of an instrument to measure inter-organisational linkages in general practice. *International Journal of Integrated Care* (2007).		
Notes:	This question is part of a composite measure for one practice: For each provider or organization the clinician has a linkage with, rate on a scale of 0 – 5 (0 being the lowest and 5 being the highest), the quality of service provided to your practice. This tool was originally developed to examine both the clinical and nonclinical links in general practice that exist at a practice level with external providers or organizations. This tool is only designed to look at links that are at the practice level, as defined by a link which the principal GP would tell a new GP about when they joined the practice. The links are recognized in regards to the functions they fulfill, for example, does the practice have a link for referral or advice for asthma. For the purposes of this *Atlas*, the composite scoring was broken and one question was identified as a measure of clinical-community relationships. Please be aware that this measure is using only a selected section of an entire survey instrument. Therefore, this individual measure may need to undergo further reliability and validation testing to ensure that it can be applied in a clinical-community relationship setting.		

* This is a measure that was originally applied in a chronic care setting, but it could be adapted for a primary care setting.

Clinical-Community Relationships Measures Expert Panel

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