

## Section 3.3 Design

# Population Risk Stratification and Patient Cohort Identification

This tool provides an overview of population risk stratification and patient cohort identification to help identify both the high-risk population and the process to identify specific patients to be served by the community-based care coordination (CCC) program.

**Time required to initially review tool and CMS materials:** 2 hours

**Time required to initially identify patients in community:** 8-12 hours

**Time required to conduct quarterly patient cohort review:** 2-4 hours

**Suggested other tools:** Community Data Collection Form; Technology Tools and Optimization for CCC

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## How to Use

1. **Review** the sections on Accountability for Care to appreciate the context in which risk-stratified care coordination will take place; the Overview of Population Risk Stratification for an appreciation of different approaches to risk stratification; and the Patient Cohort Identification that describes the process recommended for initial use, along with an example.
2. **Review** the providers' case mix and other pertinent data (compiled via the *Community Data Collection Form*) to help the care coordinator understand any resource constraints and to anticipate the volume of patients for recruitment.
3. **Apply** a simple risk stratification technique in order to identify the cohort of high-risk patients and/or Medicare or Medicaid beneficiaries whom you want to invite to participate in the CCC program.
4. **Develop** a means to track care coordination activities with those patients participating the CCC program.

## Accountability for Care

An **accountable care organization** (ACO) is a health care organization that agrees to tie provider reimbursements to quality metrics and reductions in the total cost of care for an assigned population of patients. A group of coordinated health care providers forms an ACO, which then provides care to a group of patients. The ACO is accountable to the patients and the third-party payer for the quality, appropriateness and efficiency of the health care provided. According to the Centers for Medicare and Medicaid Services (CMS), an ACO is "an organization of health care providers that agrees to be accountable for the quality, cost, and overall care of Medicare beneficiaries who are enrolled in the traditional fee-for-service program who are assigned to it."

The success of the ACO model in fostering clinical excellence while simultaneously controlling costs depends on its ability to "incentivize hospitals, physicians, post-acute care facilities, and other providers involved to form linkages and facilitate coordination of care delivery." By increasing *care coordination*, ACOs can help reduce unnecessary medical care and improve health outcomes, leading to a decrease in utilization of acute care services.

One of the key elements of accountability for care is to identify those patients, often with multiple chronic conditions, who are likely to benefit the most from coordinating care among multiple providers and through additional community resource support. These are patients who are most at risk for significant expected health expenditures due to multiple conditions and other factors.

Identifying these patients enables a care coordinator to work with each patient's primary care provider and other health care team members to provide patients:

- Help coordinating care among their different providers; *for example*, by providing medication reconciliation at transitions of care, tracking referrals, scheduling appointments and tracking that appointments are kept
- Tools to help them be more prepared for clinical visits that are more productive for providers and more satisfying for themselves; *for example*, by ensuring that each provider has complete information about the patient from the patient's other providers and that the patient and provider agree on an agenda for each visit
- Help to ensure patient understanding of their providers' instructions
- Development of care plans by and for the patient, in conjunction with caregivers
- Help obtaining needed preventive care services, including ensuring that the services are scheduled and results are available to providers and patients
- Assistance with addressing unmet socio-economic needs, such as by getting patients connected to appropriate community resources and social welfare programs

## Overview of Population Risk Stratification

Risk stratification is a periodic and systematic assessment of the population of patients served by a provider, an ACO or a CCC program to categorize patients according to risk factors. The American Academy of Family Physicians (AAFP)<sup>3</sup> suggests that significant risk factors to consider include:

- Patient health risks as identified through a health risk assessment
- Clinical diagnoses (primary conditions and co-morbidity conditions)
- Utilization data (cost of care) from insurers and/or other sources
- Clinician's personal knowledge related to a patient's social, financial, mental, or physical conditions

Different organizations have proposed different health risk categories and different methodologies to bring the risk factors together.

**AAFP** proposes the following categories:

- *Primary prevention* (level 1 and level 2) includes patients who have low health care resource expenditures:
  - Patients who are healthy and have no known chronic diseases may be assigned to level 1.
  - Patients who are healthy but showing warning signs of potential health risks may be assigned to level 2.
- *Secondary prevention* (level 3 and level 4) includes patients who are moderate users of health care resources:
  - Patients who have a chronic disease but are managing it well and meeting their desired goals may be assigned to level 3.
  - Patients who are not in control of a chronic disease but have not developed complications may be assigned to level 4.
- *Tertiary prevention* (level 5) includes patients with high health care resource expenditures and whose chronic disease has progressed or become unstable, or new conditions and/or significant complications have developed.
- *Catastrophic* (level 6) includes patients who have extremely high health care resource utilization and are under the care of several sub-specialties. This category is reserved for extreme situations such as a pre-term baby who needs intensive long-term care, a patient with a severe head injury, or a patient requiring highly complex treatment over a relatively long period of time.

**Mayo Clinic** has performed an Assessment of Risk Stratification Methods.<sup>4</sup> This assessment highlights various statistical techniques and classification systems that may be considered as an ACO or CCC program matures. It also describes the State of Minnesota Tiering Model for describing risk, which is based on number of conditions patients have:

- Tier 0: Low (0 conditions)
- Tier 1: Basic (1-3 conditions)
- Tier 2: Intermediate (4-6 conditions)
- Tier 3: Extended (7-9 conditions)
- Tier 4: Complex (10+ conditions)

### **Patient Cohort Identification**

For the purpose of identifying patients to participate in the CCC program, the following process is suggested. As this is performed, keep in mind the various risk stratification methods others have proposed, recognizing that it is the Tertiary Prevention or Tier 3 and above patients who typically need the most help and account for the most cost. In fact, the Center for Health Care Research & Transformation notes that 20 percent of the U.S. population accounts for 80 percent of total health care expenditures.<sup>5</sup>

As patients are identified for participation in the CCC program, also consider the Quality Performance Scoring Methods for ACOs<sup>6</sup> and how the ACO's payments for performance will be phased in over the first agreement period.<sup>7</sup> For example, CMS will measure quality of care using 33 nationally recognized measures in four key domains:

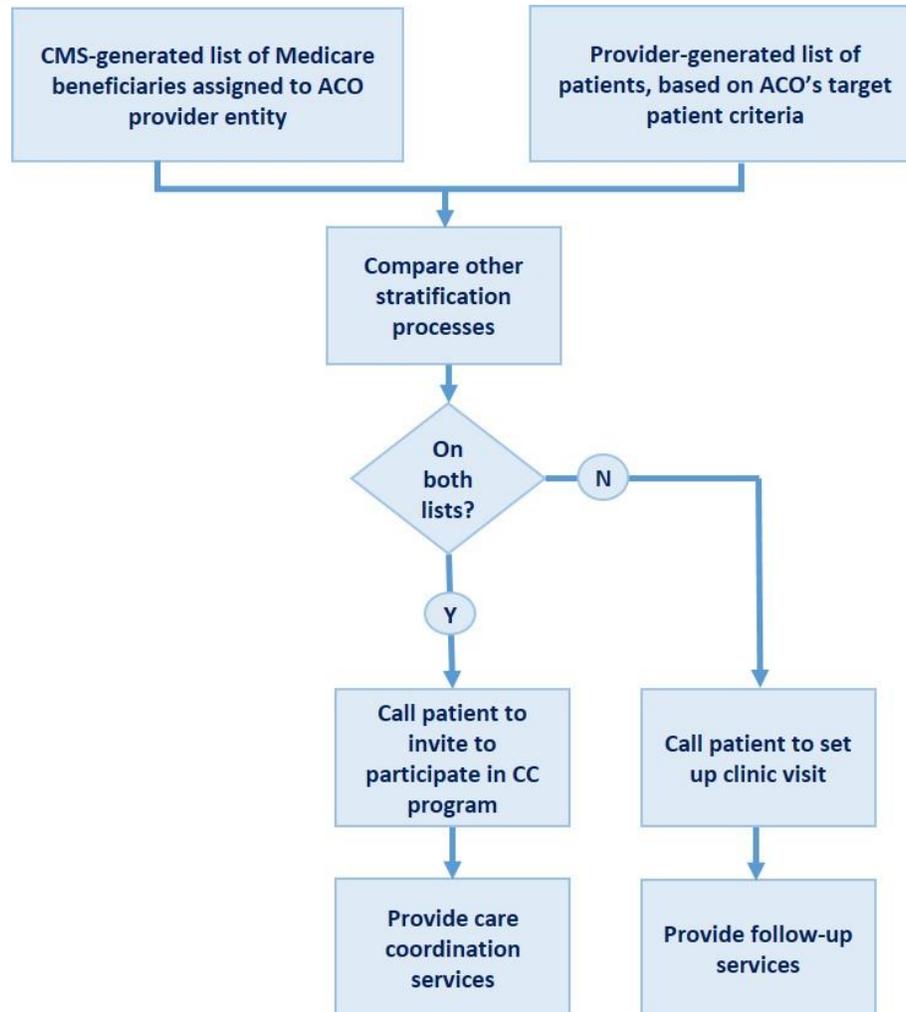
- **Patient/caregiver experience** (7 measures comprised of scores from the Clinicians & Groups Consumer Assessment of Health care Providers and Systems [GC-CAHPS] on timely care/information provision, provider communications, provider rating, access to specialists, health promotion and education, shared decision making, and health status/functional status)
- **Care coordination/patient safety** (6 measures covering COPD/asthma, medication reconciliation, fall risk, congestive heart failure, readmission risk, and primary care provider meaningful use of electronic health record [EHR])
- **Preventive health** (8 measures covering immunizations, pneumonia vaccination, BMI, tobacco use, depression, colorectal cancer screening, breast cancer screening, and high blood pressure)
- **At risk population:**
  - Diabetes (6 measures)
  - Hypertension (1 measure)
  - Ischemic vascular disease (2 measures)
  - Heart failure (1 measure)
  - Coronary artery disease (2 measures)

## **Patient Cohort Identification Process – An Example**

The following is an example of a patient cohort identification process for a group of providers participating in a Medicare Shared Savings Program (MSSP) ACO. The general concept can be applied to other types of ACOs or CCC programs.

1. Provider entities participating in the MSSP ACO receive a list of the MSSP-attributed Medicare beneficiaries in their catchment area as identified by the ACO. This list is the baseline list to be used to identify patients to invite to participate in the care coordination program. However, it is possible that there are other patients that the provider has seen who are high risk and may not have been attributed. This may be because they are new to Medicare, they have been attributed to another ACO, or they have received a plurality of care (more charges) from another provider (likely an urban specialist). It is important, therefore, to compare the Medicare beneficiary attribution list from CMS to the provider entity's list of high-risk patients (i.e., most expensive, have Medicare at-risk measures (see above list), and generally would be considered high risk on other stratification processes).
2. Once this reconciliation is performed, the provider entity should have the lists of target patients that were and were not attributed to the ACO. High risk target patients, who are attributed to the ACO, should be invited to participate in the care coordination program.
3. Those patients not on the Medicare attribution list, but on the target list of high-risk patients, should be contacted to schedule an appointment with a primary care physician. Once these patients have been seen by the provider entity, they will eventually be attributed to the ACO on an updated cohort list generated quarterly from CMS.

The following flowchart illustrates this example cohort identification process:



An example of this process might be:

1. Provider entity has received a list of 1,000 Medicare beneficiaries from CMS
2. Provider entity has generated a list of 200 most expensive (high-risk) patients
3. Comparing the lists identifies:
  - 175 Medicare or Medicare-eligible, most expensive, and high risk patients
    - 150 of the patients are the same as on the CMS-generated list
    - 25 of the patients are not on the CMS-generated list
  - 25 Non-Medicare eligible, most expensive, and high risk patients
4. Contact the 25 Medicare or Medicare-eligible patients not on the CMS-generated list and invite them to a clinic visit
5. Contact the remaining 150 Medicare patients on both lists and invite them to participate in the care coordination program

Note: While only 10% of the Medicare patients (100 out of 1,000) may be expected to participate in the care coordination program, there could be patients contacted who do not want to participate, as well as patient attrition over time. Therefore, it may be prudent to select more patients than the top 10%. Balance the need to include only the needed number of patients, or more patients, with the resources of the provider entity.

## Tracking Database

Those patients to be contacted for recruitment into the CCC program should ideally be entered into a database or registry (see *Technology Tools and Optimization for CCC*) to aid in keeping track of contacts, needed follow up, agreement to participate, data sharing preferences (as they may change), and ongoing care coordination activities.

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## References

<sup>1</sup> See an example article, “CMS: Medicare & Medicaid ACOs are Saving Money,” available at: <http://www.healthdatamanagement.com/news/cms-medicare-medicare-acos-are-saving-money-47194-1.html?zkPrintable=true>

<sup>2</sup> See an example article, “Embracing ACOs,” available at: <http://www.modernhealthcare.com/article/20130810/MAGAZINE/308109970/>

<sup>3</sup> See “Risk-stratified Care Management,” available at: <http://www.aafp.org/practice-management/pcmh/initiatives/cpci/rscm.html> [Note: AAFP uses the term “care management” where CMS and this Toolkit uses the term “care coordination.” See the *Glossary of Terms for CCC* in this Toolkit to distinguish among these terms.]

<sup>4</sup> See “Lindsey R. Haas, Assessment of Risk Stratification Methods, a presentation from the Academy Health Conference, June 26, 2012, available at: <http://www.academyhealth.org/files/2012/tuesday/haas.pdf> Subsequently published by Haas, et al, Risk-Stratification Methods for Identifying Patients for Care Coordination, American Journal of Managed Care, <http://www.ajmc.com/publications/issue/2013/2013-1-vol19-n9/Risk-Stratification-Methods-for-Identifying-Patients-for-Care-Coordination#sthash.Bw6Jn6HY.dpuf> [Note: While authors published in a managed care publication, CMS clarifies that an ACO is not a form of managed care, Medicare Advantage Plan, or HMO as patients assigned to an ACO remain in Original Medicare and have the right to use any doctor or hospital that accepts Medicare.]

<sup>5</sup> See: Health Care Cost Drivers: Chronic Disease, Comorbidity, and Health Risk Factors in the U.S. and Michigan, Issue Brief, July 2010. Available at: <http://www.chrt.org/assets/price-of-care/CHRT-Issue-Brief-August-2010.pdf>

<sup>6</sup> See: Guide to Quality Performance Scoring Methods for Accountable Care Organizations, available at: <http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/sharedsavingsprogram/Downloads/2012-11-ACO-quality-scoring-supplement.pdf>

<sup>7</sup> For list of 33 Measures, see: Accountable Care Organization 2013 Program Analysis, available at: <http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/sharedsavingsprogram/Downloads/ACO-NarrativeMeasures-Specs.pdf>

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