

**Investing in Care Coordination Infrastructure
to Achieve Integrated Care in Support of Maryland's All-Payer
Model**

**A Report by the Care Coordination Work Group of the
Maryland Health Services Cost Review Commission and the Department of
Health and Mental Hygiene**

April 2015

Table of Contents

Investing in Care Coordination Infrastructure to Achieve Integrated Care in Support of Maryland’s All-Payer Model	1
A Report by the Care Coordination Work Group of the	1
Maryland Health Services Cost Review Commission and the Department of Health and Mental Hygiene	1
April 2015	1
Executive Summary	1
Major Findings	1
Immediate Next Steps for the State	2
1. Introduction and Statement of Purpose	5
Purpose	5
Charge	5
Conceptual Framework.....	6
Vision.....	7
2. Background	8
3. The Need for Care Coordination	9
Global Issue	9
The Maryland Context	10
Potential Target Population	10
The Opportunity for Sustainability	13
New Funding Source – New Medicare Payments for Chronic Care Management	13
4. Data Acquisition and Use	14
Data Acquisition and Analysis	16
A Two-Track Approach.....	17
Data Management	18
Plan for the sharing of other data sources	19
Several other data sources are critical to realizing a shared care plan that is meaningful in high-risk patients. These include:	19

5. Care Coordination Infrastructure.....	20
Step 1 - Risk stratification	21
Step 2 - Health risk assessments.....	22
Step 3 - Care Profiles and Data Sharing	22
6. Care Coordination Infrastructure Costs.....	23
7. Summary and Recommendations	23
Immediate Next Step Recommendations	24
HSCRC Care Coordination Work Group	26
Acknowledgements	28
Appendix A: Important Components of Care Coordination and Management	29
Behavioral health integration	29
Incorporation of social services into the delivery model.....	31
Health information technology can support care planning and coordination	32
Medication Management throughout the Care Continuum	33
Well planned transitions of care.....	33
Enhanced Systems for Transition of Care	34
Transitions involving long-term care	34
In Summary: Ingredients of successful care coordination approaches	35
Care plans and care coordination	35
Care management costs	36
Appendix B: Work Group Educational Session.....	37
Appendix C: Opportunities for Maryland Investment in Care Coordination	39
A. Build/secure a data infrastructure to facilitate identification of individuals who would benefit from care coordination. High-level goal: To secure, organize, synthesize, and share data that will support care coordination and enable more robust care management and monitoring.....	39
B. Encourage and support patient-centered care. High-level goal: Identify standard elements of care profiles that can be shared; propose future standards for the creation of Individualized Care Profiles.	40
C. Encourage and support patient engagement, decision-making and self-care.	42
D. Encourage collaboration.....	42
E. Connect providers.....	43

Executive Summary

The Maryland Health Services Cost Review Commission (HSCRC), with the support of the Department of Health and Mental Hygiene (DHMH), established a Care Coordination Work Group to offer advice on how hospitals, physicians, and other key stakeholders can work together with government leaders on effective care coordination to support the Maryland All-Payer model. This Work Group held six meetings from November 2014 through March 2015. The Care Coordination Work Group members are listed at the end of this report.

Major Findings

The major findings of the Work Group are as follows:

1. Numerous care coordination activities are already underway in Maryland, led by hospitals, payers, medical groups, community-based organizations, health departments, and other groups. Smart public investments can support these promising initiatives and help bring them to scale.
2. Given the large number of individuals and providers involved in care management, it is important to develop shared tools such as reports on high-utilizing patients, risk stratification, care gap analyses, strategies for coordinating the managers, and shared patient care profiles. New investments in this infrastructure will reduce duplication of effort, increase efficiency, and improve health outcomes.
3. The challenge is to create opportunities to cooperate even while healthcare organizations compete in other ways.
4. There is a consensus on pursuing the care coordination approach of beginning with high-needs patients in the Medicare fee-for-service system and developing care innovations to include shared care profiles to reduce potentially avoidable utilization.
5. The approach should capitalize on and support medical homes and other primary care providers in serving high-needs patients and leverage funding from Medicare's new Chronic Care Management payment, which generally offers an additional per-member-per-month sum for providing enhanced services to patients with multiple chronic conditions.
6. To better serve this population by moving toward reliability and efficiency, we recommend a dual-track process of data acquisition (1) organizing, synthesizing and using existing data, and (2) acquiring more timely and identified data from the Centers for Medicare & Medicaid Services (CMS).
7. A three-step sequence to care coordination can prove valuable: (1) an effective risk stratification approach to identify people with complex medical and social needs; (2) the development of health risk assessments to ascertain patients' needs; and (3) the formation of patient-driven care profiles and plans addressing the medical and social needs of patients.
8. Key ingredients of an effective care coordination strategy include immediate alerts to notify a patient's medical home and any other care managers about emergency department visits and hospitalizations; face-to-face interaction between care managers and patients on a regular

basis; designating a primary care manager for patients to avoid duplication of services; medication management; data sharing; patient engagement and education for self-care; the integration of behavioral and physical health care; support of medical care in post-acute and long-term care settings; integration of medical and supportive services; smooth transitions between care settings; ensuring an adequate supply and quality of social services; and the use of health information technology to promote data sharing and help providers better serve patients.

9. Partnerships at the regional and local levels are critical to effective care coordination. Success requires a global approach that engages both ambulatory and community partners. Ambulatory partners (e.g., clinics, health centers, and physician offices) and community partners (e.g., public health, community-based, and faith-based organizations) must address non-medical factors affecting health and build community interest and support.
10. Encouraging the development of adequate patient care plans, mobilizing services to the home, and ensuring adequate supply and quality of services to support very fragile people in the community are essential to improving health outcomes for high-need patients.
11. We need to ensure that other players are involved such as commercial payers and Medicaid managed care organizations (MCOs). With all of the potential funding sources for the many health care initiatives that are being explored and implemented across the state, we also need to be sure to avoid duplication of effort and carefully coordinate the various initiatives. Regional collaborative initiatives can pursue this goal.
12. It is important to design care coordination initiatives in a way that yields a positive rate of return on the infrastructure development called for in this report. Many of the recommendations in this report can help ensure a positive rate of return.

Immediate Next Steps for the State

By combining existing care management efforts that are already in place with new public investments in infrastructure, we are creating an environment for acceleration of care coordination. The acceleration is largely related to data and the sharing of information at the state level. Accordingly, the Care Coordination Work Group has developed a two-part strategy to realize the state's goals of real-time care coordination for high-needs patients: 1) create a statewide, collaborative investment to build a core database of information that will facilitate the identification and care management of patients with the most complex needs; 2) accessing this statewide platform would be those implementing care coordination initiatives that would be customized to regional and local factors. Thus, the statewide initiative creates the core, and the regional and local initiatives are layered around the core.

To operationalize this strategy, the Work Group has identified the following sequential steps:

1. **Engage Maryland healthcare leadership** –The conclusions of the Care Coordination work group and the recommendations included in this report have potentially far-reaching implications for Maryland's health care delivery system. It will be critical to engage Maryland's healthcare leaders, including hospital leadership, ambulatory providers, payers and consumers, in

understanding the proposed direction and gain support, particularly as more specific implementation plans and funding needs are developed.

2. **Develop specific budget estimates and implementation plans** – Initial estimates of the potential budget provided work group members with a broad sense of the potential range of start-up and ongoing funding needs. This is critical planning work that will be needed in the short run. These implementation plans should also address the timeline for implementation.
3. **Initiate data process** – Enhance data privacy procedures to enable the analysis and sharing of existing data as well as Medicare data in support of care coordination.
4. **Tap CRISP to organize data** – Designate CRISP to serve in the role of a “general contractor” in the data synthesis, data acquisition, cleaning and storage process. By engaging and overseeing the work of various “sub-contractors,” or vendors, CRISP can also support and lift other promising care coordination initiatives already underway.
5. **Build data infrastructure and identify target populations** – Build and secure a data infrastructure to facilitate the identification and risk stratification of individuals who would benefit most from care coordination. This will permit the identification of the patients with the most complex needs. The investment in data acquisition, along with a parallel effort to organize and synthesize the data already in hand, will allow acceleration of the process of creating individualized care profiles in a standardized format.
6. **Designate CRISP to identify consistent information that can be shared among providers and support different care management platforms**—Enhance data sharing capabilities already built into the CRISP Health Information Exchange (HIE). This holds the promise of ultimately connecting the various provider and payer care coordination initiatives.
7. **Design standardized care profiles** – Encourage patient-centered care through the development of readily visible and usable patient care profiles. These profiles would possess standard data elements, and should be made visible across the continuum of care. Key elements in the care profiles would include patients’ problem lists; medication lists; medical history; and allergies. A longer-term activity involves using the data elements in the care profiles to develop workflow that generates actual care plans, and aggregates them usefully for local system management.
8. **Establish consumer outreach strategy** – Promote patient engagement and self-care through various strategies, including patient education and ability to view data. Adequate resources should be devoted to produce statewide, simplified patient education materials to reduce confusion and patient concerns about this care coordination process. Such an effort could go a long way to encourage patient participation in the care management process. State and county health departments can play a role in this outreach process, bolstered by leadership from the major State health care agencies such as the Department of Health and Mental Hygiene (DHMH). Consumer groups and other stakeholders should also be involved. The HSCRC patient engagement task force may be a good place to start this effort, but they would need resources as well.
9. **Care coordination programmatic efforts** – Encourage (a) health system collaboration by avoiding duplication of resources across provider entities, (b) the use of Medicare’s new Chronic Care Management payments, and (c) increased integration between physical and

behavioral health. Connect a wide range of providers, including those in ambulatory and long-term care settings, to the data infrastructure.

10. **Develop a plan for sustainability of care coordination infrastructure** – including operating costs of the model and helping providers obtain CCM payments.

1. Introduction and Statement of Purpose

Purpose

The purpose of this report is to lay out the investments and strategies necessary to create a sustainable care coordination infrastructure, integrating care in Maryland that supports the All-Payer Model. There are several aspects of care delivery changes and innovation that will need to occur to pave the way for the success of the new Model. Care coordination and integration, particularly for complex patients with chronic conditions, will need to be enhanced.

In Section 1, we review the Charge to the Care Coordination Work Group and lay out the conceptual framework and vision for the report. This is followed by a Background section that briefly reviews the key elements of the All-Payer Model. Section 3 of the Report explains the need for care coordination and provides the Maryland context. This section explains how HSCRC estimated the number of people who will be targeted for care coordination and the costs this group incurs. Section 4 describes our recommended two-track approach to acquiring and organizing the data that will be needed to support effective care coordination, which will ultimately reduce avoidable hospital use and improve the health of the high-need population in Maryland. Section 5 presents the key components of the care coordination infrastructure. Section 6 discusses our ongoing effort to estimate the costs of this new infrastructure. Section 7 offers a summary and recommendations for immediate next steps. Appendix A to the report appears after the summary and recommendations and describes the important components of care coordination and management.

Charge

The purpose of the Care Coordination Work Group is to provide the Health Services Cost Review Commission (HSCRC) and the Department of Health and Mental Hygiene (DHMH) with advice on how hospitals, physicians, and other providers as well as other key stakeholders can work together with government leaders on effective care coordination to support the goals of Maryland's All-Payer model.

The Care Coordination Work Group held six meetings. Experts leading care coordination projects both within Maryland and outside of the State presented at a special educational session held by the Work Group. The highlights of these presentations are described in Appendix B. The main focus of this Work Group is on recommending care coordination strategies and priorities that are timely, scalable, and reflect best practices. The Work Group consensus was to begin with high-needs patients in the Medicare fee-for-service system and develop care innovations to include shared care plans to reduce potentially avoidable hospitalizations.¹

¹ In discussing ways to reduce potentially avoidable hospital utilization, this report relies on the HSCRC definition: "Hospital care that is unplanned and can be prevented through improved care, coordination, effective primary care, and improved population health." This includes: (1) readmissions that can be reduced with care coordination and quality improvements; (2) preventable admissions and ER visits that can be reduced with improved

Numerous care coordination activities are underway throughout Maryland, led by hospitals, medical groups, public and private payers, community-based organizations, health departments, and other groups. The key challenge is to bring care coordination and chronic care management to scale. Given the large number of individuals and providers involved in care management, it is important to develop shared tools such as reports on high-utilizing patients, risk stratification, care gap analyses, and shared patient care profiles. New investments in this infrastructure will reduce duplication of effort, increase efficiency, and improve health outcomes. The challenge is to create opportunities to cooperate even while healthcare organizations compete in other ways.

Conceptual Framework

It is critically important to select and prioritize high-needs individuals for whom care management has a good potential to improve care and reduce costs. The Work Group consensus was to begin by selecting a sub-group of Medicare fee-for-service beneficiaries with a goal of reducing recurrent, potentially avoidable hospital use. One can use prior acute care utilization to assist in identification, but this list must be narrowed to focus on those with mutable factors as well as broadened to include high-risk individuals who do not yet have high use of acute care services but are at high risk for poor outcomes. This can be accomplished through a hybrid approach that incorporates information about utilization and also information obtained from a health risk screening or by direct referral from a clinician.

Once needs are understood, health care providers and payers can implement more integrated approaches to improve care, and where indicated, use care coordinators to meet patients' needs and intervene rapidly and effectively to address any changes in health status. The combination of a health needs assessment, consideration of the likely course with various intervention strategies, and incorporation of the patient and family preferences and priorities is what yields a workable care plan.

In addition to the consensus around the need to move quickly on care coordination for high-needs Medicare patients already experiencing frequent hospitalizations and those with multiple chronic conditions, the Work Group also reached consensus that ultimate success requires the ability to more effectively address the needs of high-risk patients across the life cycle.

Medical homes, care teams, home-based primary care, hospice, and other workable arrangements can be built into the work flow of conventional care. Care coordination should not be put in a silo outside of this work flow. That said, care coordinators can complement these initiatives or even be an integral part of them, and resources will be needed to implement care coordination and bring it to scale. Yet personnel and the supporting infrastructure are expensive, and so must be allocated in a fashion to produce a positive return on investment to enable sustainability.

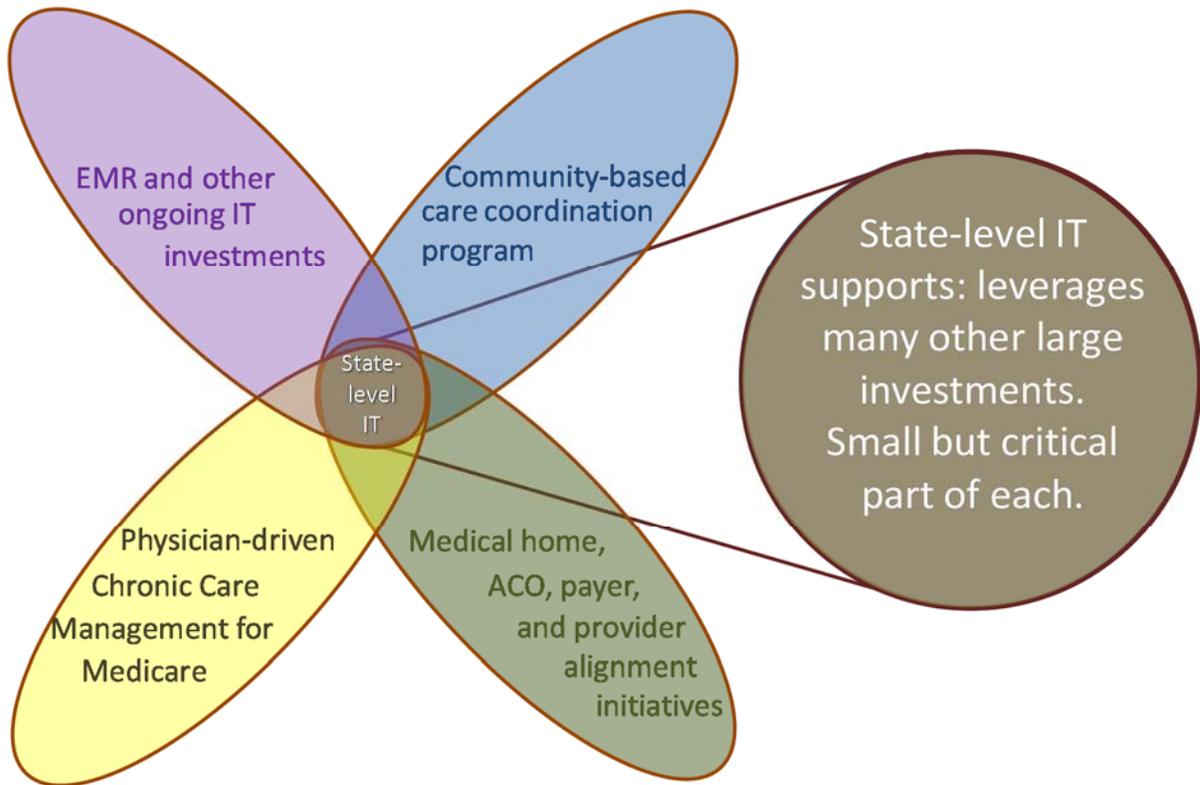
community-based care; (3) avoidable admissions from skilled nursing facilities and assisted living residents that can be reduced with care integration, remote services, and prevention; (4) health care-acquired conditions that can be reduced with quality improvements; and (5) admissions and ER visits for high-needs patients that can be moderated with better chronic care and care coordination.

Vision

Maryland has a long history of using a collaborative model to achieve its health care aims. From installing and maintaining the all-payer rate setting system over several decades that has reduced the growth of hospital spending and reduced cost-shifting within the hospital sector, to the successful development of a sustainable health information exchange (now statewide in scope), Maryland continues to demonstrate that health care transformation can be achieved in a market model. Today, Maryland's health care leaders come together to offer new solutions under the All-Payer Model. Again, in a collaborative way, Maryland's health care leaders are designing smart investments to improve coordination for the highest-need patients in the state, while recognizing local differences. This will be done in a way that leverages the state's existing health information technology organization, CRISP, to oversee acquiring additional technology and vendors to collect, analyze, and standardize health information centrally in what we term the state's "care coordination infrastructure."

The vision of a high-functioning health care system that coordinates care across the continuum by leveraging data is diagrammed in Figure 1 below.

Figure 1: Robust Care Coordination Infrastructure



2. Background

The State of Maryland is leading a transformative effort to improve care and reduce the growth in health care spending. Stated in terms of the “Three-Part Aim,” the goal is a health care system that delivers better care, improves population health, and reduces costs to all.²

Maryland worked closely with the Centers for Medicare & Medicaid Services (CMS) throughout 2013 to design an innovative plan that would make the state a national leader in achieving the Three-Part Aim and permit the federal government to continue to participate in the four-decade long all-payer hospital payment system that has proven to be both successful and enduring. The federal government approved Maryland’s new Model Design application, and implementation began in January 2014.

The Model, as approved by CMS, includes cost savings and quality improvement requirements including:

- All-Payer total hospital per capita annual revenue growth no greater than 3.58 percent;
- Medicare hospital payment savings of \$330 million over five years relative to the national growth rate;

² AHRQ. (2015). *National Quality Strategy*. <http://www.ahrq.gov/workingforquality/nqs/overview.htm>

- Reduce Medicare 30-day unadjusted, all-cause, all-site readmission rate to the corresponding national average over five years;
- An annual aggregate reduction of 6.89 percent in Potentially Preventable Conditions (PPCs) over five years, which will result in a cumulative reduction of 30 percent in PPCs over the life of the model.
- Other outcomes and quality indicators to be measured and monitored.

Significant progress has been made in the first phase of implementation of the All-Payer model.

Accomplishments include:

- The All-Payer target is being met. Per capita revenue for Maryland residents grew 1.47% for CY 2014 as compared to CY 2013. The annual limit is 3.58 percent.³
- Hospital revenues (95 percent) are now under global budgets, paving the way for needed care improvements and ensuring performance within the limits of the all-payer requirements;
- Reduction in hospital acquired conditions is taking place, putting the state on track to meet the five-year goal under the Model. The state has already made strides with a year-over-year reduction of 24.27 percent in 2014 compared to 2013.⁴
- Key quality payment policy enhancements have been adopted to be consistent with the new Model; and
- Broad groups of stakeholders are engaged in implementation workgroups to maximize opportunities for success.

3. The Need for Care Coordination

A key component of the strategy to meet the goals of Maryland's All-Payer Model is improved care management for people with chronic diseases and complex needs – individuals at high risk of increased utilization.

Global Issue

In order to meet the targets in the All-Payer Model, it is imperative to address the high incidence of chronic illness, and in particular, people with multiple chronic illnesses.

- ✚ Half of all US adults—117 million people—have one or more chronic health conditions.⁵
- ✚ One of four adults has two or more chronic health conditions.⁶

³ HSCRC. *Monitoring of Maryland's All-Payer Model: Biannual Report*. (Oct 2014). <http://www.hscrc.state.md.us/documents/Legal-Legislative/Reports/HSCRC-Biannual-Report-on-All-Payer-Model-Monitoring-October-2014.pdf>

⁴ HSCRC. *Monitoring of Maryland's All-Payer Model: Biannual Report*.

⁵ <http://www.cdc.gov/chronicdisease/overview/>

⁶ Ward BW, Schiller JS, Goodman RA. Multiple chronic conditions among US adults: a 2012 update. *Prev Chronic Dis*. 2014;11:130389.

- ✚ Seven of the top ten causes of death in 2010 were chronic diseases.⁷
- ✚ Chronic medical conditions account for 86 percent of total health spending, according to the Centers for Disease Control and Prevention.⁸
- ✚ In Maryland, 14 percent of Medicare beneficiaries with 6+ chronic conditions account for nearly half of Medicare's total health spending.
- ✚ Obtaining a positive “rate of return” on care coordination and management is not automatic—evaluations of some interventions have shown no favorable impact. But carefully targeted and well-designed initiatives have been shown to yield a positive “ROI.”⁹

We need more coordination among primary care providers and specialist physicians, and better transitions of care with a particular emphasis on smooth transitions from hospitals to post-acute care and long-term care facilities. Remote monitoring of patients and medication reconciliation and management need to be adequately resourced for high-risk patients.

Transcending the silos that separate medical providers is important. There is an equal need to link physical and behavioral health, and to build bridges to housing and transportation, food and personal care, and family caregivers. An important rationale for care coordination is the ongoing shift from physical conditions that can be “fixed” by a specific medical intervention such as surgery to serious, ongoing chronic conditions that entail needs in multiple medical domains and also in personal finance, family caregiving, and living arrangements, among other areas of need.

Maryland’s new hospital payment model provides strong new incentives for hospitals to work with physicians and community partners to reduce potentially avoidable ED use, hospital admissions, and readmissions by improving care and care coordination. Now the challenge is to develop new approaches to care delivery and holistic patient management to achieve such reductions.

The Maryland Context

In order to put the need for care coordination resources and infrastructure in a Maryland context, HSCRC and DHMH staff prepared a patient-centered analysis of hospital utilization and costs in Maryland and utilized chronic condition summaries for Maryland Medicare beneficiaries that were prepared by CMS.

Potential Target Population

The HSCRC and DHMH aggregated de-identified hospital utilization and costs on a patient-centered basis using HSCRC hospital discharge abstract data for CY 2012 that contained inpatient and emergency room services. They used the CRISP unique ID to combine records for each patient across hospitals. This allows us to conduct patient-centered analysis with de-identified data that protects patient privacy.

⁷ Centers for Disease Control and Prevention. Chronic Diseases: The leading causes of death and disability in the United States. <http://www.cdc.gov/chronicdisease/overview/>

⁸ <http://www.cdc.gov/chronicdisease/>

⁹ For example, a program operated by Health Quality Partners (HQP) in Southeast Pennsylvania (described later in this report) found that after including care management costs, the net monthly expenditures for HQP’s treatment group were \$397 lower than those for the matched control group, a statistically significant new savings for Medicare.

They used the Agency for Healthcare Research and Quality's Clinical Classification Software (CCS) to collapse diagnoses reported in the data into more clinically meaningful categories that could be used to describe the conditions reported for each patient. This data set was used to estimate the number and types of patients with high use of hospital services who might benefit from care coordination and management.

The HSCRC and DHMH also used data from Medicare's Chronic Condition warehouse to estimate the number of Medicare beneficiaries with multiple chronic conditions who might benefit from enhanced primary care under Medicare's Chronic Care Management payment.

For purposes of the analysis, HSCRC and DHMH defined high-needs patients based on their use of inpatient hospital services. Table 1 provides summary statistics for those patients who had three or more hospital admissions. There were 40,601 patients with three or more admissions. Two-thirds of these high-utilizers were Medicare patients, including patients who were eligible for both Medicare and Medicaid. The average hospital cost per patient was approximately \$70,000. For Medicare, these approximately 27,000 high-utilizing patients constitute about 3 percent of the 830,000 Medicare beneficiaries in Maryland in 2012, and about one-third of the included Medicare hospital charges. Based on this and other analyses, about 3 to 5 percent of Medicare beneficiaries are very high users of care who could potentially benefit from more intense care planning and care coordination activities.

Table 1: Patients with Three or More Admissions in Maryland (CY 2012)

Payer Group	# of Patients	% of Patients	Total Charges	% of Charges
Medicaid, Other, Self Pay	13,731	34%	\$ 1.03 billion	35%
Medicare	20,592	51%	\$ 1.42 billion	49%
Dual Eligible	6,278	15%	\$.46 billion	16%

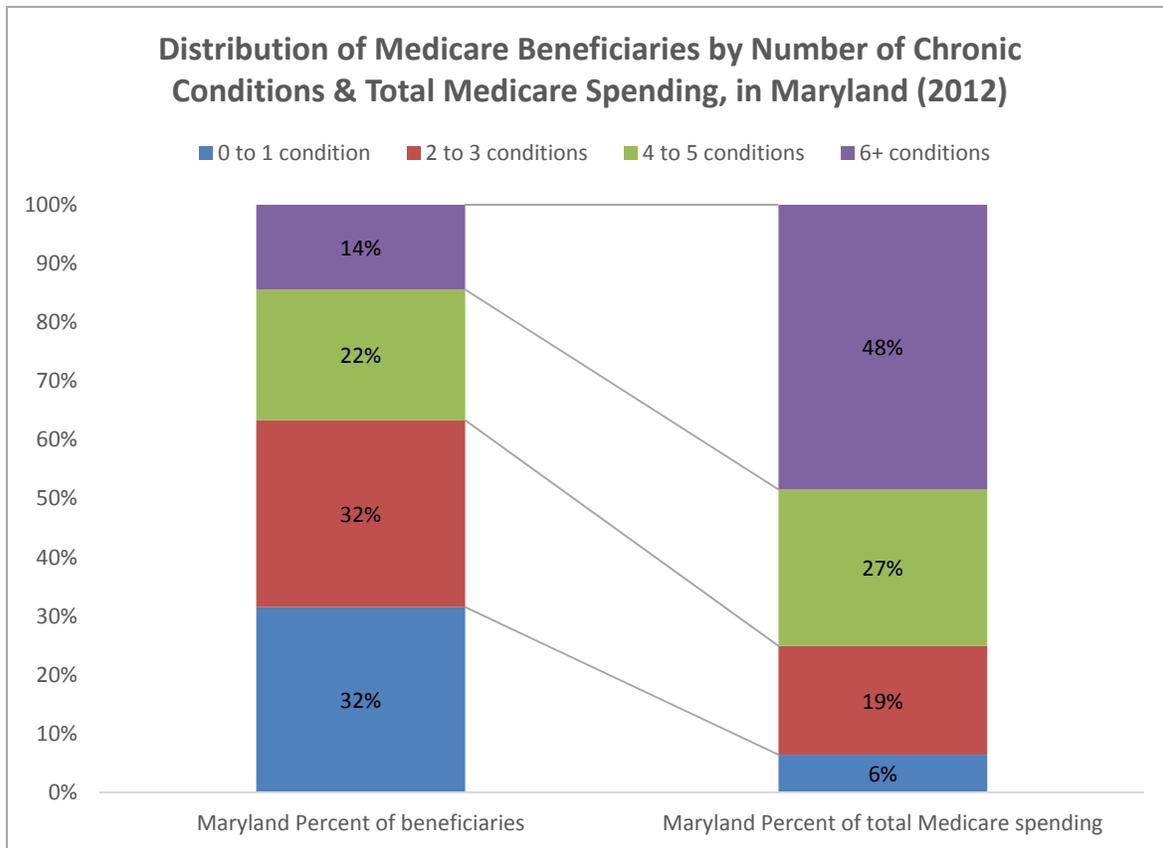
Source: CY12 HSCRC Discharge Data. Includes Inpatient and ER Charges, excludes Obstetrics.

Relative to Medicare's Chronic Care Management (CCM) payment, explained in more detail below, patients with two or more serious chronic conditions are able to enroll in the program. This represents more than 60 percent of all Medicare patients. In order to focus attention on those patients most likely to benefit from this program, HSCRC and DHMH focused on the two highest categories of patients with multiple chronic conditions--those with 4 to 5 conditions and those with 6+ conditions. Those with 6+ conditions include approximately 14 percent of Medicare beneficiaries and account for 48 percent of Medicare's expenditures. Those with 4 to 5 conditions include an additional 22 percent of Medicare beneficiaries and represent approximately 27 percent of Medicare spending. Together, they comprise approximately 36 percent of beneficiaries and 75 percent of Medicare spending (see Figure 2 below).

Translating this back to Maryland, 35 percent of Medicare beneficiaries total approximately 280,000 individuals who could benefit from this program and also generate the most extensive reductions in potentially avoidable hospital utilization. If all 280,000 patients were enrolled in the CCM program, this

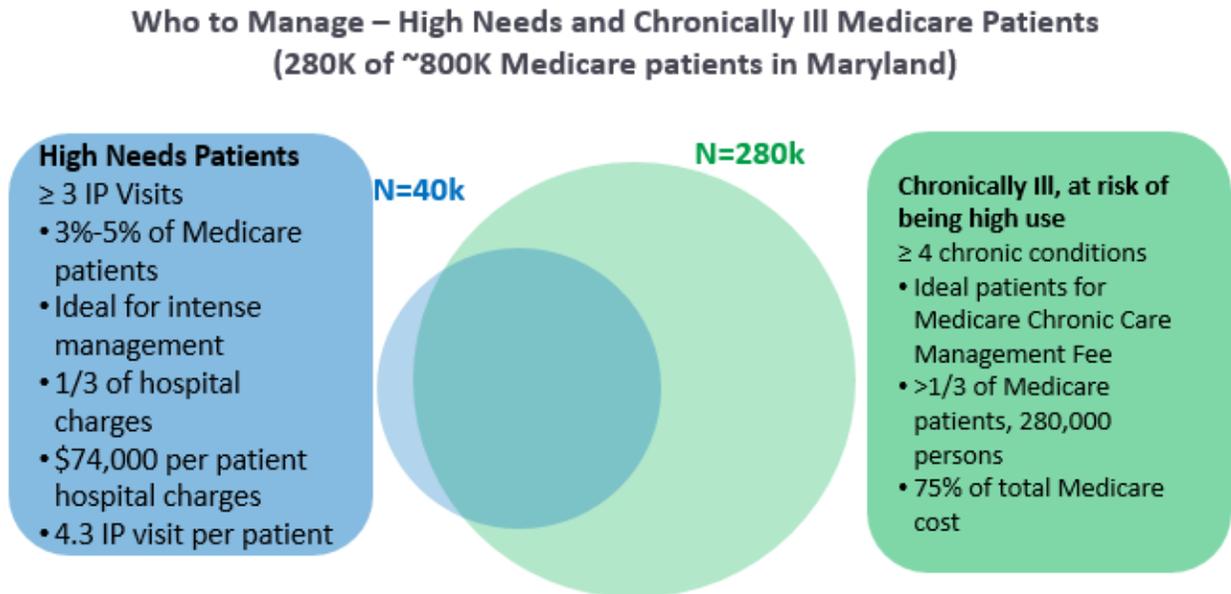
would generate nearly \$140 million in revenues from Medicare that could be used to help manage the chronic illnesses of these patients. This is a major opportunity for alignment of interests of primary care and other community providers with those of hospitals in providing improved chronic care and care planning and management. It is also a major financial opportunity to create sustainability and alignment for primary care and other community providers. It is in the interest of the All Payer Model as well as ACOs to ensure that this program is implemented in a targeted manner to patients who can most benefit from the interventions. The cost of the program will be part of the total cost of care that is included in the evaluation of the success of the All Payer Model, and is also part of the determination of cost for ACOs' shared savings calculations.

Figure 2: Distribution of Medicare Beneficiaries by Chronic Disease and Total Medicare Spending, 2012



The chart below, Figure 3, summarizes this analysis. While this analysis can be refined, it provides a basis for discussion regarding the scope of infrastructure and support that will be needed to bring care coordination and chronic care management to scale for the benefit of Marylanders, beginning with Medicare patients.

Figure 3: High Needs and Chronically Ill Medicare Patients



- Two-thirds of highest need patients are Medicare (HSCRC discharge data and CRISP EID)
- About one-fourth dually eligible for Medicare and Medicaid
- Nearly 2/3 of Medicare patients have 2+ chronic conditions

Analysis excludes maternity cases and hospital OP services except ER and observation

The Opportunity for Sustainability

New Funding Source – New Medicare Payments for Chronic Care Management

Effective January 1, 2015, Medicare made a very significant change to primary care payment when it introduced a non-visit-based payment for chronic care management (CCM). This change has the potential to better align primary care efforts and hospitals around the opportunity to improve chronic care and to reduce hospitalizations.¹⁰

¹⁰ CMS adopted a CPT code (99490), which is defined as “Chronic care management services, at least 20 minutes of clinical staff time directed by a physician or other qualified health care professional, per calendar month, with the following required elements: two or more chronic conditions expected to last 12 months, or until the death of the patient; chronic conditions place the patient at significant risk of death, acute exacerbation/decompensation, or functional decline; comprehensive care plan established, implemented, revised, or monitored.” For the first quarter of 2015, the national average monthly reimbursement was projected to be \$40.39. A provider cannot bill for CCM until the provider has secured the patient’s consent. (Pershing Yoakley and Associates [PYA]. “Providing and Billing Medicare for Chronic Care Management.” Updated March 2015.)

CCM payments are a breakthrough in permitting Medicare to pay for non-face-to-face care management services such as medication reconciliation, coordination among providers, arrangements for social services, and remote patient monitoring.¹¹ Arranging for such services requires physicians' time as well as the time of office staff, administrative costs, and technology outlays. Prior to this new CMS billing code and payment system for care management, medical practices have had to absorb these costs without any reimbursement.

The Medicare chronic care management fee allows nurse practitioners and physician assistants to be involved in the care management that is billed as well as physicians.

The new CCM payments create helpful incentives for physicians to coordinate with other medical providers and organizations providing complementary social services, potentially fostering a more holistic and comprehensive approach to meeting patients' needs. To the extent CCM is done well, more continuity of care will be provided for patients with complex needs and ongoing chronic conditions who might otherwise go from one episode of ED use and/or hospital admission to another, with little care management in between a series of complications.

In implementing the new CCM payments, it will be helpful to remember that patients will be making a co-payment equal to about \$9 a month, or roughly \$110 a year. The majority of Maryland patients will be covered for this copayment, through employer- or union-sponsored health plans, Medigap policies, or Medicare Advantage plans. But about one-quarter of Maryland residents would not have any of these sources of coverage—mostly people with incomes a little too high to qualify for Medicaid but low enough to be very sensitive to even small cost-sharing levels. Some assistance for such patients would be helpful to encourage their participation in care coordination activities. In addition, some direct outreach to physicians, nurse practitioners, and physicians' assistants would be helpful to foster their participation in this new CCM opportunity.

4. Data Acquisition and Use

Success for Maryland will require hospitals, community-based providers, long-term care facilities, and post-acute care providers to work together to effectively coordinate patient care, reducing the need for hospitalizations. Data sharing and data analytics are foundational requirements for this effective care coordination. In order to pave the way for successful implementation of these efforts, the Care Coordination Work Group discussed the key elements of care coordination, which can serve as a road map for future work. Data sharing and data analytics are among the foundational requirements for this effective care coordination, and thus, this section begins with critically important data needs.

To that end, the Care Coordination Work Group looked comprehensively at data sources, uses, and processes, and developed opportunities for Maryland to invest in care coordination. The Work Group identified opportunities at the state, regional, and local levels, as well as associated implementation strategies, including addressing data privacy and participation choice. For example, the Work Group

¹¹ PYA., *supra*. p. 2.

concluded that building a secure data infrastructure to facilitate the identification of individuals who would benefit from care coordination and developing standard elements for Health Risk Assessments and Care Profiles for such patients that could be shared would best be undertaken on a statewide basis. In similar fashion, the Work Group also concluded that standardizing elements that would be shared in hospital discharge summaries could be done at a statewide level, as would a campaign to encourage individuals to participate in care plans and an effort to connect community providers to CRISP. In order to ensure that care profiles and health risk assessments are readily understandable by patients, their representatives, or advocates should be part of this process.

Activities such as care management programs, developing processes to avoid duplication of resources across provider systems, and facilitating physical and behavioral health integration would best be led at the regional and local levels.

Table 2, extracted from the full table shown in Appendix B, outlines the Work Group’s recommendations:

Table 2: Recommended Investments in Care Coordination (including non-data investments)

Activity
A. Build/secure a data infrastructure to facilitate identification of individuals who would benefit from care coordination. High-level goal: To secure, organize, synthesize, and share data that will support care coordination and enable more robust care management and monitoring.
1. Develop procedures and policies to secure patient consent for the sharing of data for purposes of care coordination.
2. Combine existing data sources for the purpose of identifying individuals who would benefit from care coordination.
3. Secure new data sources. Specifically, request the use of Medicare patient-level data for the purpose of identifying individuals who would benefit from care coordination and chronic care management.
4. Engage CRISP to contract with a qualified vendor to store, clean, and normalize the Medicare data and other Medicare related data sets Maryland may be able to obtain.
5. Use data to identify individuals who would benefit from care coordination and chronic care management; use alert mechanisms to connect these patients to the physicians and hospitals who care for them (e.g. alerts to PCPs when their patients are in the ED or admitted to the hospital).
B. Encourage and support patient-centered care. High-level goal: Identify standard elements of care profiles that can be shared; propose future standards for the creation of Individualized Care Profiles.
1. Provide resources to design basic patient care profiles that are standardized and interoperable; make these profiles readily viewable across the continuum of care: Restated, care profiles should be “doable and viewable” after establishment, to facilitate implementation and monitor ongoing use.
2. Standardize health risk assessment elements
3. Standardize elements in discharge summaries to aid transitions to long-term and post-acute care (LTPAC) providers as well as home-based settings.
4. Develop approach to identify patients with care plans through CRISP, together with identification of care managers and providers. Explore feasibility of CRISP providing a useful version of care plans, using a “whiteboard” attached to ADT files. Set up process for learning, monitoring, and managing the system to determine the effectiveness of this effort over time, and make needed adjustments.
C. Encourage and support patient engagement, decision-making, and self-care.
1. Lead a state-level campaign to encourage individuals to 1) participate in care plans and 2) complete and share medical orders for life sustaining treatment.
2. Educate patients about care coordination resources and opportunities, and mobilize self-care.

Activity
D. Encourage collaboration.
1. Facilitate physical and behavioral health integration.
2. Facilitate care integration between hospitals and long-term care/ post-acute services
3. Facilitate collaborative relationships among providers, patient advocates, public health agencies, faith-based initiatives and others with a particular focus on resource planning, resource coordination, and training.
4. Develop processes to avoid duplication of resources across provider systems, including coordination of resources for health risk assessments.
5. Support practice transformation through technical assistance and dissemination of information on best practices.
6. Create standard gain sharing and pay for performance programs.
7. Encourage providers to take advantage of new Medicare Chronic Care Management payments
E. Connect providers.
1. Help CRISP promote the connection of community-based providers to CRISP.
2. Help CRISP connect long-term and post- acute providers (LTPAC) to CRISP. Develop approaches to meet needs of LTPAC.
3. Purchase/develop applications to facilitate interoperability among providers' EMRs to make clinically relevant information available to providers
4. Coordinate the effort to use Medicare data with initiatives to use EMR data, information on high-needs patients in Medicaid and private plans for population health and outcomes measurement.
5. Encourage and support Regional Partnerships in their efforts to connect providers as they manage patients' care plans, local service quality and supply, and engage local citizens and caregivers in shaping priorities.

Data Acquisition and Analysis

Establishing the data infrastructure necessary to support Maryland's efforts is a significant undertaking. The Work Group thought these efforts would be best pursued through statewide efforts that could be brought to scale efficiently. While data and technology infrastructure are essential parts of Maryland's strategy, they are not sufficient to achieve the goals of the new model. Regional and local planning efforts will be needed to identify how to collaborate on data sharing, workforce and other efforts.

Thus, Maryland has initiated a grant program to encourage regional partnerships among hospitals, providers, and community-based organizations to facilitate the implementation of care coordination. The Regional Transformation Grant program, a joint effort of DHMH and HSCRC, will begin funding planning processes of worthy collaboratives in the spring of 2015. The regional partnerships will be expected to design sustainable plans to support the All-Payer Model. Functionalities of successful awardees will include infrastructure for data analytics, care coordination models, and value-based financing mechanisms for care delivery. Colorado's Regional Care Collaborative Organization (RCCO) and San Diego's Care Transitions Partnership are examples of this type of regional collaboration to transform the health care delivery system, smooth transitions of care, reduce spending, and improve performance.

A Two-Track Approach

Maryland policymakers, hospitals and other providers are focused on first implementing strategies to coordinate the care of higher-risk patients in the Medicare fee-for-service population. Effective care coordination will require collaboration among hospitals, health systems, independent providers, and community-based organizations. Most high-utilizers are using multiple hospitals, multiple doctors and many prescriptions. In most instances a single hospital will not have a comprehensive understanding of a patient's prior utilization, medical conditions, and opportunities to improve care through targeted care coordination initiatives. Consequently, access to meaningful, actionable data is one important tool to achieve effective care coordination. In order to obtain the necessary data, a two-track approach that uses data to inform and support care coordination is advisable.

1. Capitalize on Existing Data Sources

First, *existing data sources* could be used to identify patients and categories of patients with the most complex medical needs that are already frequent hospital utilizers. This would include data currently available through CRISP, such as real time Hospital Administrative, Discharge, and Transfer (ADT) data, hospital inpatient and outpatient data available on a monthly basis through the HSCRC abstract, and other clinical data available through CRISP. The new use of existing data requires a thorough understanding and often modification of data use agreements and privacy policies. Additionally, other sources of data should be evaluated for possible use in these efforts, including: pharmacy data obtained from pharmacy benefit managers (PBMs), Outcome and Assessment Information Set (OASIS) data on home care, Minimum Data Set (MDS) records on nursing home care, and other information sources. It is also important to use clinical data such as prescribed medications, medication lists, problem lists, lab values, and immunization records. *This work could begin immediately, and CRISP could take the lead in this effort.* Indeed, CRISP has started this work and is exchanging ideas with innovative HIEs in other parts of the country.

2. Request Medicare Data from CMS

To support multiple care management models already in place, the state should also request patient-level data for care coordination. *Maryland should take steps as soon as possible to acquire Medicare claims data under its existing CMMI grant.* The federal government's agreement with Maryland recognizes that providers will need access to patient-level Medicare data to implement strategies to meet the goals of the All Payer agreement. Specifically, claims data will be helpful in attributing patients, refining risk models and reporting, particularly to inform gain sharing. It might also provide fuel for optimizing the targeting of coordination activities.

In order to obtain this data, initial efforts should focus on working with the CMMI Demonstration Project Manager to request an amendment that includes care coordination as a part of the demonstration. Once the demonstration is amended to include care coordination, Maryland's existing Data Use Agreement (DUA) will allow the State to obtain the requested data. According to Maryland's All Payer Model Agreement:

*“CMS is willing to accept data requests from the State or its agents for **data necessary to achieve the purposes of the Model**. Such data could include de-identified (by patient or by provider) data or individually identifiable health information such as claims level data. All such requests for individually-identifiable health information must clearly state the HIPAA basis¹² for requested disclosure. CMS will make best efforts to approve, deny or request additional information within 30 calendar days of receipt. Appropriate privacy and security protections will be required for any data disclosed under this Model.”*

The next step is to create a detailed request to CMS for Medicare data to support care coordination that will include:

- Description of the purpose of the data (purpose is defined by demonstration agreement)
- Specific data, data files and timing requested
- Description of how the data will be used and shared for the purpose of care coordination
- Description of privacy and security protections that will be in place

The Maryland Hospital Association can coordinate with hospitals to make a special request to CMS, in concert with the State, for access to Medicare data to support care coordination and chronic care management. The demonstration contract is between CMS and the collective State of Maryland, which includes the Governor, the Department of Health and Mental Hygiene, and the Health Services Cost Review Commission (HSCRC). However, the hospitals are also bound to the demonstration project through state law, which means that providers need to fully support and comply with the acquisition and use of the data. The State should obtain any necessary legal advice from its Demonstration project manager as it moves through the process.

Data Management

Finally, there is a need to identify and hire a vendor or vendors to:

- a) Act as the central repository of this data
- b) Manipulate and link Medicare, CRISP, clinical and other data for the purpose of association, risk stratification, and analysis for continuous improvement
- c) Have the capability to push meaningful, actionable data to the provider community
- d) Maintain privacy and security protections
- e) Engage patients in the new system

In order to select the ideal vendor(s) able to manipulate, link, and provide meaningful, actionable data to the provider community, the CRISP board of directors needs to establish an expert committee to address technical questions and select vendors. Working through the CRISP structure will also ensure coordination between Medicare data analytics and use of existing data sources.

Although other types of tools are also needed for care coordination, the focus of this recommendation involves obtaining data following this dual-track approach. *The two complementary efforts will give the delivery system in Maryland an unprecedented opportunity to serve its patients.*

¹² Care coordination is a valid HIPAA basis for individually-identifiable health data.

Plan for the sharing of other data sources

Several other data sources are critical to realizing a shared care plan that is meaningful in high-risk patients. These include:

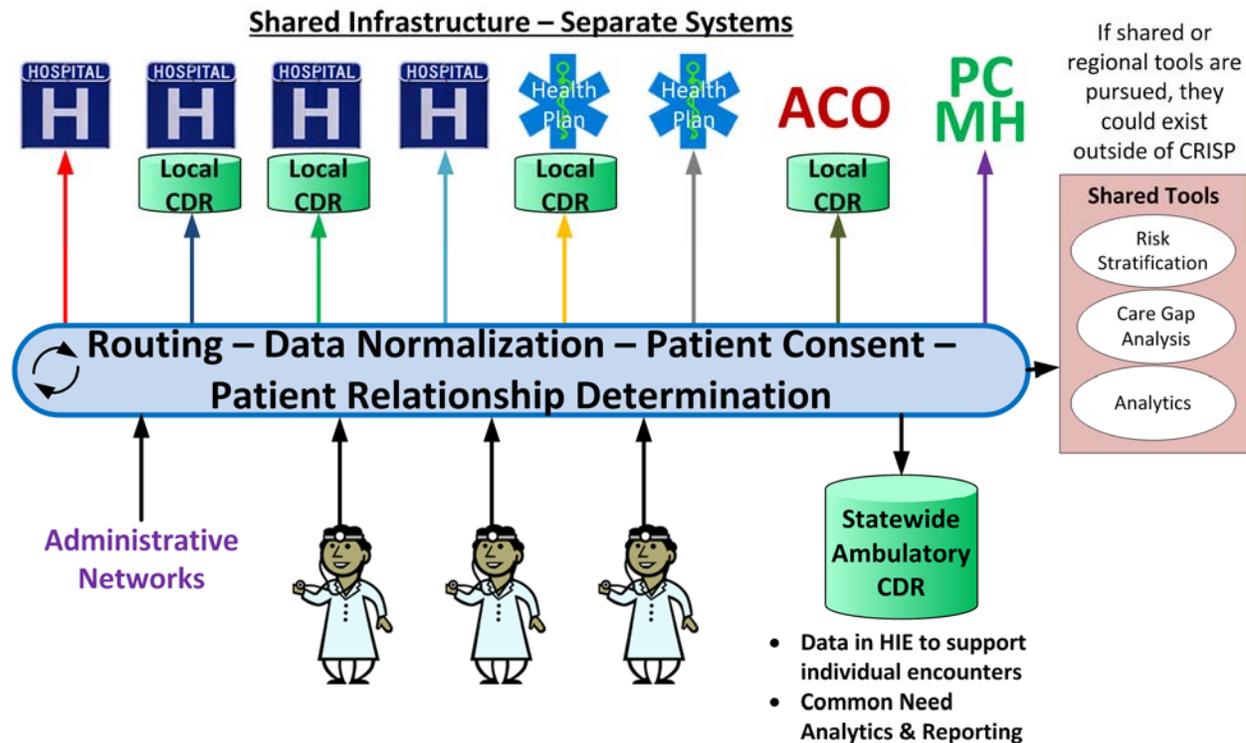
- Ambulatory EMRs
- Behavioral health provider information
- Long-term care facility information
- Other data from community providers and public health that will assist in care coordination and planning

Connecting to ambulatory providers and long-term care facilities is identified as the initial action step. The expert committee should select vendors for this important step that also have the ability to connect to the other data sources. The privacy and security environment should be developed with consideration for the range of likely data sources in the near future. This effort could be aided by two federal funding opportunities being pursued together by CRISP and the Maryland Health Care Commission (MHCC).

Data sharing must be done in the context of strong procedures and policies to secure patient consent for the specific purpose of care coordination. These procedures and policies and subsequent stratification of patients should be vetted by consumers themselves. In order to ensure that patients' needs and concerns are addressed, patient representatives or advocates, and local community organizations working in this area should be consulted, especially if attribution is being considered.

A shared data system might look like the following as illustrated in Figure 4.

Figure 4: Shared Statewide Infrastructure



Source: CRISP Presentation to HSCRC, February 2015¹³

5. Care Coordination Infrastructure

Care coordination and management hold the potential to reduce hospital use by reducing the likelihood and severity of deterioration and complications of chronic conditions. This can occur by reducing modifiable risks, integrating care across the spectrum of providers, responding rapidly to changes in patients' conditions, and improving patient self-management and following treatment plans. It also can reduce hospital use by increasing support for people living with fragile health and disabilities in the community. It is important to engage hospitals, primary care providers, as well as payers, in an effort to provide care management at the local level or through regional partnerships. In turn, these care management programs will leverage statewide investments and collaboration to maximize care coordination. CRISP can enable and support the healthcare community in Maryland and our region to appropriately and securely share data in order to facilitate care, reduce costs, and improve health outcomes.¹⁴

To reduce hospital use, leading to better health outcomes and lower total spending, the Work Group puts forward a three-step sequence that can prove valuable: (1) an effective risk stratification approach to identify people with complex medical and social needs; (2) the development of health risk

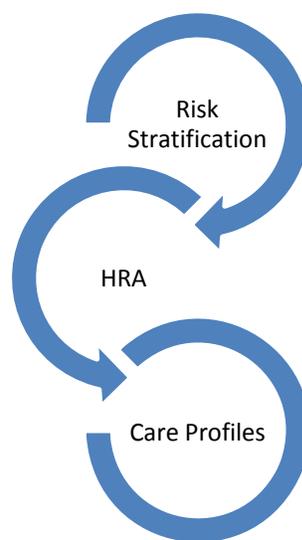
¹³ CDR refers to Central Data Repository.

¹⁴ David Horrocks. Presentation of CRISP Care Management Report. February 2015.

assessments to ascertain patients' situation, needs, and likely outcomes with various strategies; and (3) the formation of care profiles and plans addressing the medical and social needs of patients, using each patient's priorities and preferences.^{15 16}

The culminating product of this three-step sequence – the creation of patient care profiles and plans – is an essential piece of the care coordination infrastructure. It gives providers and patients access to standardized information via care profiles, which enables efficient care coordination. Care profiles will pull in vital information on high-risk patients based on a common set of elements, allowing all providers to access real-time information on the patient. Figure 5 lays out the process of reaching comprehensive and integrated care profiles including the necessary precursors for effective care profiles.

Figure 5: Pathway to the Care Profile



Step 1 - Risk stratification

Risk stratification is a systematic process of selecting patients who are at modifiable high risk for poor outcomes and high utilization, and for whom a particular care management program is equipped to mitigate the likelihood of that occurrence. It helps to match individuals to the appropriate type and intensity of care interventions and resources. This involves prioritizing care coordination resources to patients most at risk.¹⁷ Having an algorithm to stratify patients according to risk is a key to the success of any population health management initiative.¹⁸

¹⁵ Ensslin, B. & Barth, S. (Nov. 2014). *Risk Stratification to Inform Care Management for Medicare-Medicaid Enrollees: State Strategies*. Center for Health Care Strategies, Inc.

¹⁶ Cohen, R., Lemieux, J., Schoenborn, J, & Mulligan, T. (2012). "Medicare Advantage Chronic Special Needs Plan Boosted Primary Care, Reduced Hospital Use Among Diabetes Patients". *Health Affairs* 31 (1): 1-10.

¹⁷ http://www.njafp.org/sites/ethos.njafp.org/files/risk_strat_peskin_distribution_final.pdf

¹⁸ <https://www.healthcatalyst.com/understanding-risk-stratification-comorbidities>

Step 2 - Health risk assessments

Health risk assessments (HRAs) are a collection of health-related data, including information about social supports, financial issues, and community services, that a medical provider or care team can use to understand the health status and health risks of an individual, and the likely courses with various service strategies. HRAs complement historical claims data to identify chronic diseases, injury risks, modifiable risk factors, and changing health needs. They reveal health behaviors and risk factors such as smoking, a lack of physical activities, and poor nutritional habits for which the medical provider can offer tailored feedback to reduce the potential inevitability of the diseases to which the risk factors are related.¹⁹

Section 4103 (b) of the Affordable Care Act states that for Medicare patients an HRA should be completed before or as a part of an annual wellness visit with a health professional who may be a physician, medical practitioner, health educator, dietician, and other licensed personnel under the eligible provider's supervision, including social workers and pharmacists.

Step 3 - Care Profiles and Data Sharing

Risk stratification and health risk assessments facilitate the formation of individualized care profiles. The formation of these care profiles should be a top-level goal as they can be the building blocks for achieving the longer-term objective of improving the health care delivery system and reducing hospital use.

We draw an important distinction between care profiles and care plans. Care profiles would be standardized and based largely on interoperable data elements that are automatically updated from sources. Key elements in the care profiles could include patients' problem lists; medication lists; certain lab results and other defined diagnostic results (some noted only as a date, or not done); certain immunizations; visit dates; existence or not of a comprehensive care plan; enrollment status in certain programs; and PCP (ideally with other care team members as well). Thus, the care profile provides in one readily viewable place the key characteristics of the patients and their current medical status, including diagnosed conditions and current treatments/medications that they are receiving and the relevant places to go for more detailed data.

The care plan is the comprehensive plan of services and other activities aimed at assisting patients and their care givers achieve individualized and prioritized goals; care planning is the process that generates a care plan. Care plans have the information in the care profile but also include a much broader sweep of services. Care plans identify the range of problems, the current plans for each of the problems and the overall plan that the patient and care team have made for their optimal care and well-being. These care plans need regular maintenance. Care coordination designates the processes that the care team uses to ensure that the care plan is implemented across time and settings.

There is frequently a lack of communication, consultation, and coordination when an individual has more than one medical provider, even when the primary care provider makes a direct referral to a specialist, therapist, social worker, or other professional. The broader the care team, the more this

¹⁹ Paula Staley, Paul Strange, and Chelsey Richards. Centers for Disease Control and Prevention.

becomes a potential problem. Inadequate care coordination increases the likelihood of unnecessary duplication of services, medication errors, and other avoidable poor patient outcomes.

Important data to share include problem lists, prescription fill data, lab values, immunization records, and other information not typically available from claims data. This information can be shared after connecting records of ambulatory practices and other providers to a broader data infrastructure. The data will also facilitate dynamic risk-level modification as clinical status changes.

6. Care Coordination Infrastructure Costs

The infrastructure and initiatives envisioned by the work group are a significant undertaking. The investments necessary to support a care coordination infrastructure are substantial. Yet, in the context of all of the health care spending in the State, the duplication of effort and missed opportunities for savings, the cost of the proposed investments will seem much more reasonable, particularly when the savings that will result from such investments are taken into account.

Maryland has the opportunity to leverage collective investments that provide a far more efficient and patient-centric care coordination strategy. The Work Group was provided with initial estimates of a common care coordination infrastructure. A sophisticated method will be needed to assess the best approach to implementation and the magnitude and scope of the necessary investments. This is critical planning work that will be needed in the short-term.

7. Summary and Recommendations

Many promising models of care coordination have emerged in recent years, though we have also learned that interventions that are not risk-tiered and managed with excellence do not improve patient outcomes, service use, or net spending.

A number of guides and clues to successful care coordination emerge from demonstrations and research studies. Care coordinators working closely with physicians and having face-to-face contact with patients, timely alerts to primary care physicians when patients are in the ED or hospital, careful medication management, behavioral health integration, smooth transitions of care, data sharing, and including social services in care plans are among the important ingredients of success. These ingredients of successful care coordination will be easier to achieve with delivery system reform featuring integrated care networks (see Appendix A at the end of this report for a more complete discussion of the key elements of care coordination). A number of Maryland initiatives, some of which are highlighted in this report, are putting these best practices in place around the state. The investments described in this report are designed to build on such initiatives, and bring them to scale. It is important to design care coordination initiatives in a way that yields a positive rate of return on the infrastructure development called for in this report. Many of the recommendations in this report can help ensure a positive rate of return.

Immediate Next Step Recommendations

As immediate next steps, the Care Coordination Work Group recommends the following:

1. **Engage Maryland healthcare leadership** –The conclusions of the Care Coordination work group and the recommendations included in this report have potentially far-reaching implications for Maryland’s health care delivery system. It will be critical to engage Maryland’s healthcare leaders, including hospital leadership, ambulatory providers, payers and consumers, in understanding the proposed direction and gain support, particularly as more specific implementation plans and funding needs are developed.
2. **Develop specific budget estimates and implementation plans** – Initial estimates of the potential budget provided work group members with a broad sense of the potential range of start-up and ongoing funding needs. This is critical planning work that will be needed in the short run. These implementation plans should also address the timeline for implementation.
3. **Initiate data process** – Enhance data privacy procedures to enable the analysis and sharing of existing data as well as Medicare data in support of care coordination.
4. **Tap CRISP to organize data** – Designate CRISP to serve in the role of a “general contractor” in the data synthesis, data acquisition, cleaning and storage process. By engaging and overseeing the work of various “sub-contractors,” or vendors, CRISP can also support and lift other promising care coordination initiatives already underway.
5. **Build data infrastructure and identify target populations** – Build and secure a data infrastructure to facilitate the identification and risk stratification of individuals who would benefit most from care coordination. This will permit the identification of the patients with the most complex needs. The investment in data acquisition, along with a parallel effort to organize and synthesize the data already in hand, will allow acceleration of the process of creating individualized care profiles in a standardized format.
6. **Designate CRISP to identify consistent information that can be shared among providers and support different care management platforms**—Enhance data sharing capabilities already built into the CRISP Health Information Exchange (HIE). This holds the promise of ultimately connecting the various provider and payer care coordination initiatives.
7. **Design standardized care profiles** – Encourage patient-centered care through the development of readily visible and usable patient care profiles. These profiles would possess standard data elements, and should be made visible across the continuum of care. Key elements in the care profiles would include patients’ problem lists; medication lists; medical history; and allergies. A longer-term activity involves using the data elements in the care profiles to develop workflow that generates actual care plans, and aggregates them usefully for local system management.
8. **Establish consumer outreach strategy** – Promote patient engagement and self-care through various strategies, including patient education and ability to view data. Adequate resources should be devoted to produce statewide, simplified patient education materials to reduce confusion and patient concerns about this care coordination process. Such an effort could go a long way to encourage patient participation in the care management process. State and county health departments can play a role in this outreach process, bolstered by leadership from the major State health care agencies such as the Department of Health and Mental Hygiene

(DHMH). Consumer groups and other stakeholders should also be involved. The HSCRC patient engagement task force may be a good place to start this effort, but they would need resources as well.

9. **Care coordination programmatic efforts** – Encourage (a) health system collaboration by avoiding duplication of resources across provider entities, (b) the use of Medicare’s new Chronic Care Management payments, and (c) increased integration between physical and mental health. Connect a wide range of providers, including those in ambulatory and long-term care settings, to the data infrastructure.
10. **Develop a plan for sustainability of care coordination infrastructure** – including operating costs of model and helping providers obtain CCM payments.

The Care Coordination Work Group recommends that Maryland develop a carefully coordinated initiative to put data already in hand, or readily available, to use in care coordination. A CRISP-convened expert committee can accomplish this in an organized, collaborative fashion.

In parallel, we recommend that Maryland gain access to Medicare data for the purposes of collaborative care coordination. A plan needs to be developed with sufficient detail to make the case to CMS that Maryland hospitals, physicians, and other providers should be granted access to Medicare data for care coordination purposes, consistent with the goals of the new all payer model, similar to ACOs and numerous other Medicare demonstrations.

HSCRC Care Coordination Work Group

Carmela Coyle, Co-Chair

President and CEO
Maryland Hospital Association

Laura Herrera Scott, MD, Co-Chair

Deputy Secretary, Public Health Services
Maryland Department of Health and Mental Hygiene

Gene Ransom CEO

MedChi
(The Maryland State Medical Society)

Howard Haft, MD, MMM, CPE, FACPE

Consultant in Quality and Population Health
Shah Associates, LLC

Stephen Schenkel, MD, MPP

Associate Professor, Emergency Medicine
University of Maryland School of Medicine
Chief, Emergency Medicine
Mercy Medical Center

Marla Oros, RN, MS

Mosaic Group

Mark Kelemen, MD, MBA

Sr. VP, Chief Medical Information Officer
University of Maryland Medical Center

Nancy Adams, MBA, RN

Sr. VP, Chief Operations Officer, Chief Nurse Executive
Western Maryland Health System

Patricia MC Brown, Esq.

SVP, Johns Hopkins Medicine
President, Johns Hopkins HealthCare, LLC

Robb Cohen

CEO
Advanced Health Collaborative

Farzaneh L. Sabi, MD, FACOG

Associate Medical Director
Hospital Operations, Perioperative Services, Utilization Management and Network/Contracting
Mid-Atlantic Permanente Medical Group

Tori Bayless

President & CEO
Anne Arundel Medical Center

Debi Kuchka-Craig

Corporate Vice President, Managed Care
MedStar Health

Warren Slavin

President/CEO
Charles E. Smith Life Communities

Adrienne Ellis

Director, Maryland Parity Project
Mental Health Association of Maryland

Lori Doyle

Public Policy Director
Community Behavioral Health Association of Maryland

Jon Shematek, MD

Sr. VP and Chief Medical Officer
CareFirst BlueCross BlueShield

Ernest L. Carter, MD, PhD

Deputy Health Officer
Prince George's County Health Department

Donna Kinzer (Ex Officio)

Executive Director
Health Services Cost Review Commission

Acknowledgements

The Care Coordination Workgroup would like to thank the following people who helped to make this report possible. First, we would like to thank Jack Meyer from Health Management Associates who facilitated the Advisory Council discussions and was the primary author of this Care Coordination Workgroup report. We also thank Deborah Gracey, Greg Vachon, Art Jones, Matt Roan, Meghan Kirkpatrick, Chad Perman, and Jessica Foster from Health Management Associates who provided staff support to the Work Group and contributed to this final product. Thanks also go to Alice Burton who provided excellent guidance and advice to the facilitation team on substantive matters covered in the report. We also thank the staff of the HSCRC, in particular Steve Ports and Sule Calikoglu, who have made vital contributions to the planning and execution of HSCRC's stakeholder engagement efforts. Additional gratitude goes to our experts, who have regularly provided guidance on key issues on care coordination, including Joanne Lynn and Amy Boutwell. Lastly, the Council would like to thank the stakeholders and members of the public who attended our meetings and offered comments that informed our discussion and the content of this report.

Appendix A: Important Components of Care Coordination and Management

This section of the report focuses on the longer-term challenges in improving care coordination and care planning. It highlights a number of essential components of good care coordination and management. Particular emphasis is placed on the need to transcend the silos that have fragmented care delivery and given short shrift to many of the important factors that drive people into the health care system. Smart investments in public health, prevention, behavioral health, and social services can complement the impressive work done every day inside the acute medical care system. Similarly, well-timed investments in health information technology are vital to the success of care coordination.

Behavioral health integration

Behavioral health needs adequate funding and linkages to the physical health care system across the full continuum of care. This includes forging important handoffs from primary care physicians to behavioral health providers, but also involves two-way linkages that connect specialist physicians with behavioral health providers. Those physicians can also ensure that their patients who present physical health problems but also seem to have related mental and emotional issues are urged and facilitated to see behavioral health providers. In turn, those providers treating people with serious mental illness should recognize the numerous physical health problems that frequently emerge from mental health treatment, as may occur when medications generate side effects such as substantial weight gain, diabetes, and other illnesses, and make appropriate referrals so that those conditions are controlled and managed. In addition, people leaving the hospital after a stay related to a severe episode involving mental health and/or substance abuse problems should be linked to ongoing care and affordable medications to help avoid repeated hospitalizations.

This should occur across all payers in both the public and private sectors. A related challenge is to develop linkages across public agencies both inside and external to the medical system—including housing, employment, and the justice systems.

Despite a long history of treating physical health conditions separately from behavioral health, the two are inextricably linked. Many medical visits are for issues with a behavioral health component. A high proportion of adults with behavioral health conditions have one or more physical health issues. Having a chronic medical condition is a risk factor for having a chronic behavioral health condition, and vice versa. Depression and anxiety in particular are common in primary care settings but are frequently inadequately identified and treated, making it more difficult to manage physical health conditions.

Patients with severe mental illness live from 10-20 fewer years than an otherwise matched cohort who do not have these conditions. This finding reported in June 2014 by researchers at Oxford University is based on 20 major studies covering 1.7 million people and 250,000 deaths.²⁰

²⁰ Edward Cheney, Guy M. Goodwin, and Seena Fazel. Risks of all-cause and suicide mortality in mental disorders: a meta-review. *World Psychiatry* June 2014. Vol. 13, Issue 2:153-160.

Our mental health system is crisis oriented, with resources concentrated heavily in institutions while shortages abound in community-based care. There are many existing community-based services that are successful in providing integrated approaches to service delivery that avert the unnecessary use of emergency departments and inpatient care. However, these services are limited by underfunding in the public sector and restrictive behavioral health benefits packages and provider panels in the commercial sector. Patients with mental illness frequently touch not only the medical care system, but also the criminal justice system, the school system, and housing authorities. Yet, there is frequently scant coordination across these systems.

Health care providers are learning that resources invested in behavioral health, particularly linkages with primary care and acute services, pay off. Anecdotal evidence shows that psychiatric patients inherently ignore their physical health. Through dedicated behavioral health care management programs and similar efforts, providers are reducing avoidable utilization and improving outcomes by managing both the physical and behavioral health needs of an individual patient. Better managed patients and reduced utilization result in savings, which ultimately can be reinvested in traditional underfunded initiatives.

While physical and behavioral health care are intertwined, behavioral health is frequently walled off from the rest of the medical system. Co-locating services, behavioral health homes, PCPs screening for signs of mental illness and drug and alcohol use and misuse, and behavioral health professionals recognizing the impact of their treatment on physical health with appropriate referrals are approaches to breaking down the silos.

Since a key focus of the care coordination strategy is on high-needs Medicare patients, there is also a need to develop effective strategies for assisting patients with dementia, Alzheimer's disease, and delirium. It is also important to include initiatives aimed at younger disabled populations who may become eligible for Medicare after a waiting period if they meet the federal government's definition of disability.

Mosaic Community Services, the largest community-based behavioral health service provider in Maryland, provides a number of behavioral health services that involve coordination with physical health care providers to prevent or mitigate costly hospital stays and ED visits. For example, Mosaic has 20 residential crisis beds on the campus of Sheppard Pratt Hospital for patients in mental health crisis or at imminent risk of crisis who need to be stabilized before going to less intensive community-based mental health programs.

Similarly, a behavioral health home implemented by Way Station, Inc., a nonprofit mental health organization, serves about 750 patients in Frederick, Howard and Washington counties who have serious mental illness (SMI) and other co-occurring medical conditions, substance abuse, and/or developmental disabilities. This program brings primary care into community mental health clinics where patients with SMI are accustomed to seeking care and provides them with intensive medical case management and other enhanced services and supports.²¹

²¹ Way Station's Three-County Health Home Pilot Executive Summary, October 31, 2014.

Incorporation of social services into the delivery model

The group broadly agreed that successful care coordination must transcend the boundaries that separate medical care from social supports and services. We have a sophisticated medical system capable of diagnosing and treating illness, improving quality of life and prolonging life expectancy. Yet, with an aging population, and socio-economic disparities, many of the needs of our high-risk populations cannot be adequately addressed by a strict medical model.

For the elderly, particularly the “old-old” (e.g. people 85 years of age and older), these needs include fall risks, an unsafe home environment, a lack of transportation, social isolation, and inadequate nutrition. A recent study, for example, determined that social isolation is associated with earlier mortality among older people.²² Many seniors face serious financial barriers to accessing health services. Of particular concern are people with incomes a little too high to be eligible for Medicaid, which would cover most of their cost-sharing under Medicare. Yet, such people cannot afford Medigap policies that would protect them from this substantial cost sharing. Seniors with multiple chronic illnesses may need adult day care, meals-on-wheels, and other supportive services that help them stay in their homes and avoid going into long-term care facilities. Others need physical, occupational, or speech therapy following acute care episodes such as strokes or surgery. Regional and local planning initiatives should factor in these social and financial needs of the elderly with chronic illnesses.

Among the non-elderly adult population, homelessness and unsafe housing, obesity, long-term joblessness, and chemical dependency are very serious problems that drive people into the health care system. The homeless population is at-risk for serious health problems, including worse outcomes for chronic diseases. Others live in “food deserts,” and have poor nutrition. About one of three Americans is obese, constituting one of the nation’s most serious health problems. Substance use and violence contribute to potentially avoidable visits to hospital emergency departments. Smoking, though decreasing, is highly dangerous to health.

Addressing these serious risk factors should be part of effective care plans. Effective interventions can include adult day care, meals-on-wheels, home inspections to identify and remove dangerous situations in the home, nutrition improvement programs, and transportation assistance.

It is also important to address the supply and quality of these various social services. Patients cannot use the services if they are capped and the funds run out before the patients need them. Real service integration is not just at the patient level—it is also needed at the system management level.

An important challenge is to identify people who have not yet hit ERs and hospitalizations on a repeat basis but are at high risk of doing so. This group has diverse needs and circumstances. It includes people with multiple chronic illnesses who have not yet experienced likely serious complications from them.

²² Andrew Steptoe, Apana Shankar, Panayotes Demakakos, and Jane Wardle. Social isolation, loneliness, and all-cause mortality in older men and women. *Proceedings of the National Academy of Sciences*. 2014. Vol. 110, No. 15:5797-5801.

Patients with diabetes, asthma, and hypertension, for example, may not have yet experienced diabetic end organ damage, severe pulmonary complications, or a stroke, but are at risk of these serious events.

A homeless person may be struggling with drug and alcohol addiction, depression, hunger and malnutrition and perhaps undiagnosed heart disease. Hennepin Health in Minneapolis runs a pilot program for about 10,000 poor adults, mostly men, many homeless and with a high incidence of substance abuse. A number of those participating once worked, are experiencing long-term unemployment, and would like to work again.²³ Hennepin County got its Social Services department involved and workers helped people get phones and mailboxes, and take care of unpaid utility bills that could lead to insulin spoiling in non-functioning refrigerators and losing heating. A location for inebriated people to get sober instead of going to the ER has been started. The hospital, Hennepin County Medical Center, is paid a fixed amount per patient and can keep the savings if the help outside the medical model keeps the enrollees from using the hospital (an incentive in synch with the All-Payer Model Design).²⁴

Health information technology can support care planning and coordination

HIT can facilitate communication between patients and clinicians, and provide information and decision support to clinicians in real time as they are seeing patients. Functional interoperability with seamless integration in workflows is essential for broad use. This will make clinically relevant information available to hospitals, physicians, and other providers at the point of care.

A system that provides this information sharing can reduce prescribing errors, facilitate medication management, and ensure that treating providers have timely lab data, imaging results, allergy information, past medical and surgical history, and up-to-date patient problem lists. Procedures need to be developed to secure patient consent for the sharing of data for the purposes of care coordination.

Kaiser Permanente of the Mid-Atlantic States uses health information technology to integrate primary, specialty and behavioral health care across its hospitals and facilities in Maryland, Virginia and Washington, DC. Every patient has a primary care physician and a care plan, which is embedded in the EMR so that any Kaiser Permanente provider a patient comes in contact with, whether in an inpatient or outpatient setting, is working from the same plan. Kaiser Permanente has also been engaged in pilot programs that aim to reach high-risk patients with preventive efforts and remote monitoring in their homes. For example, it has instituted home monitoring for congestive heart failure patients. The patient does daily weight and blood pressure check-ins, and if there is a critical change, a nurse will go to the home and do an evaluation. As a result of these and other efforts, Kaiser Permanente has seen hospital

²³ <http://www.hennepin.us/healthcare>

²⁴ Sabrina Tavernise. "Health Care Systems Try to Cut Costs by Aiding the Poor and Troubled." New York Times, March 22, 2015. http://www.nytimes.com/2015/03/23/health/taming-health-costs-by-keeping-high-maintenance-patients-out-of-the-hospital.html?emc=eta1&_r=0

days per 1,000 decline by 22% from 2009 through August 2014, and ED visit rates per 1,000 decline by 26% between 2009 and May 2014.²⁵

Medication Management throughout the Care Continuum

A key aspect of managing high needs patients is constant supervision of medications from the hospital stay to the community. Central to this process is incorporation of pharmacists. Hospitals including those that have been under global budgets for several years have leveraged the expertise of pharmacists as a vital component of the care model. Pharmacists first see patients on the inpatient units and continue to follow the patient throughout the care and discharge planning process. Pharmacists serve a number of functions when directly incorporated into care coordination early on, including educating the staff, the patients (especially high-risk patients), and their families. The patient benefits from enhanced care coordination as direct clinical staff like nurse managers and physicians report that having a pharmacist on the patient unit is invaluable. As a result, care coordination continues outside the inpatient setting. By making medication management a central component and incorporating pharmacists into the care team, hospitals have also increased medication adherence in the post-acute and community setting through better coordination with PCPs as well as understanding of patient's ability to follow a medication regimen.²⁶

Well planned transitions of care

An important aspect of the fragmented care system described earlier is poorly managed transitions in care. Transitions occur among providers across the full continuum of care.

Hospital discharge presents one of the biggest threats to patients if not properly handled. Nearly one of five Medicare patients discharged from a hospital is readmitted in the 30 days following discharge. Maryland's rate of readmissions for Medicare patients is among the highest in the nation; under the All-Payer Model, Maryland is required to sharply reduce the rate to come in line with the rest of the country. Evidence-based care transition approaches can reduce readmissions. However, to make an impact on high readmission rates and the associated health complications affecting high-needs patients, more comprehensive and integrated approaches will need to be undertaken.

Medicare pays for short-term skilled nursing and therapy services for patients recovering after hospitalization, typically provided by home health agencies, skilled nursing facilities, inpatient rehabilitation hospitals, and long-term care hospitals. In 2012, Medicare spending for these services totaled \$62 billion.²⁷ Under the current All-Payer Model, Maryland hospitals are at risk for high readmissions. This provides an incentive for them to discharge patients to the most cost-effective, clinically appropriate setting.

²⁵ Sabi, F. (Dec 2014). Kaiser Permanente Mid - Atlantic States Journey Over the Past 5 years. Presentation to Care Coordination Work Group. <http://www.hsrc.maryland.gov/documents/md-maphs/wg-meet/cc/2014-12-12/2-HSRC-Care-Coordination-Work-Group-MAPMG-12-12-14-v2.pdf>

²⁶ Barry Ronan. Western Maryland Health System.

²⁷ Robert Mechanic. *N Engl J Med* 2014; 370:692-694. February 20, 2014.

Frederick Memorial Hospital offers a Coordinated Care team that assists patients with the transition from the hospital to the next phase of their care. They engage patients during their hospital stay with education on chronic disease, identification of barriers to compliance and development of a Personal Health Record. Prior to discharge, patients are connected to a medical home or PCP if they do not already have one. Then, the hospital staff remains connected with the patient after discharge and strive to link patients with an array of community resources, such as home health agencies, the Department of Aging, or hospice care.²⁸

Enhanced Systems for Transition of Care

In order to reduce readmissions and improve care transitions, care must be systematically coordinated across settings. This is vitally important particularly as the patient moves from the acute to post-acute settings. Accordingly, the discharge process must be informed by standard data elements, which are shared among providers, the patient, and caretakers. Discharge planning documents must include key elements that guide providers in all settings. Furthermore, patient consent and participation is integral to obtaining adherence to a successful plan of care.

Hospital discharge planning should start well before discharge, and should include educating patients to recognize early symptoms of clinical deterioration, to follow dietary instruction, to manage medications, to use appropriate social services, and to gain skills and confidence in self-management. The patient's plan of care for this episode of illness should be comprehensive and user-friendly. Timely home visits by nurses, nurse practitioners, or other providers can be an integral part of many care plans.

Maryland hospitals and the Maryland Hospital Association, along with many long term care and post-acute providers (LTPAC), have undertaken extensive efforts to improve transitions. There is still much to be accomplished, and ongoing collaborations as well as integration with community-based efforts will be important to sustainability and success. For example, LifeSpan (an LTPAC trade association) and the Maryland Hospital Association are hosting a summit in May 2015 that will convene top national leaders from hospitals and post-acute care providers to highlight specific examples of how interdependent, cross-organizational partnerships can improve patient outcomes, avoid unnecessary utilization and help reduce health care costs. This summit is intended to carefully capture the essence of hospital and post-acute business relationships and describe the precise care delivery and support strategies needed to support care in non-hospital settings.

Another element of continuity of care occurs when a patient leaves such post-acute care facilities and goes home. Some will need physical and occupational therapy. Home visits by medical professionals, social workers, or others can help educate the patient about medication adherence, fall risks, danger signals requiring immediate action, and the availability of a range of social services such as meals-on-wheels and adult day care.

Transitions involving long-term care

An important area of need for better transitions of care involves reducing avoidable ED use and inpatient admissions for patients who are currently residing in long-term care facilities. Dr. Amy

²⁸ <http://blog.fmh.org/index.php/2014/06/20/coordinated-care-offering-support-every-step-of-the-way/>

Boutwell notes that nursing homes can frequently treat such conditions such as a fever, a cough, or similar conditions at their own sites rather than following the instinct to send all such patients right to the ER, which, she observes, almost always results in an admission, very typically, an avoidable one.

The INTERACT (Interventions to Reduce Acute Care Transfers) program is a quality improvement strategy focusing on the management of changes in conditions of patients who are residents in long-term care facilities. Interact provides clinical and education tools and strategies for use in everyday practice in these facilities.²⁹ INTERACT is one of several types of newer interventions with an evidence base showing impact on reducing hospitalizations and spending.³⁰ Others include the Transitional Care Model, the Bridge Model, Project RED, and efforts led by teams such as Evercare.³¹

In Summary: Ingredients of successful care coordination approaches

A number of key ingredients of successful care coordination approaches emerge from research, demonstrations, and practice. A successful care coordination strategy should target high-needs patients, assess their situation and its likely outcome, establish a care plan, manage the implementation with ongoing, face-to-face interaction and continuity with the care team, integrate social supports and behavioral health with medical care, support self-care by patients and family members, and provide the infrastructure that can enable effective communication and measurement.

Patients should have a medical home, and specialist physicians and other providers should coordinate their work with each other and with that medical home. Immediate alerts should be sent to the patient's medical home when the patient goes to an emergency department and/or gets admitted to a hospital. The results of diagnostic tests such as imaging and lab work should also be reported promptly to the medical home independent of who ordered them. Embedding care coordinators in primary care practices with access to patients' electronic medical records has also emerged as an important element of successful care management strategies.³²

It is vital for hospitals and physicians to coordinate closely with post-acute and long-term care providers. Care coordinators, physicians, and family members can all play important roles in managing these transitions of care. Dedicated hospital contacts should be available 24 hours a day for long-term care and post-acute facility partners.

Care plans and care coordination

The patient (and other caregivers as appropriate) should participate along with physicians in creating a care plan designed to address the immediate problem he or she is facing. But the care plans should also

²⁹ <http://interact2.net/index.aspx>

³⁰ Joseph G Ouslander, Alice Bonner, Laurie Herndon, and Jill Shutes. The Interventions to Reduce Acute Care Transfers (iINTERACT) quality improvement program: An overview for medical directors and primary care clinicians in long-term care. *JAMDA* 15 (2014):162-170.

<http://interact2.net/docs/publications/Overview%20of%20INTERACT%20JAMDA%202014.pdf>

³¹ Naylor, MD, Brooten, DA, Campbell RI et al. Transitional care of older adults hospitalized with heart failure: A randomized controlled trial. *J Am Geriatr Soc* 2004; 52:675-684; Kane RI, Keckhafer G, Flood S, et al. The Effect of Evercare on hospital use. *J Am Geriatr Soc* 2003; 51

³² Lyle Nelson, "Lessons from Medicare's Demonstration Projects on Disease Management and Care Coordination." January 2012. Congressional Budget Office. Working Paper 2012-01. January 2012.

be longitudinal and comprehensive—not just reactive to the immediate health problem. This is the critical difference between acute care “fix-it” medicine and chronic care “live-with-it well” care plans. Patient education and engagement is important to the success of these care plans. The care coordinator should be responsible for helping carry out this care plan and have face-to-face interaction with the patient on a regular basis, supplemented by telephonic contacts.

The care coordinators should have direct interaction and develop a strong rapport with their patients’ physicians through in-person contact with the physicians’ offices or clinics. Care coordinators should act as a communications hub across the patient’s providers, and between patients and their providers. Care coordinators should interact directly with patients during their hospital stays and physician office visits, be culturally competent, and have access to a pharmacist who is skilled in comprehensive medication management.

Engaging trusted community partners (e.g. community-based organizations, faith-based organizations) can also contribute to success by addressing non-medical health factors and building community interest and support.

Care management costs

Care management costs should be controlled to the extent possible, through such strategies as ensuring that staff work at the top of their training, and incorporating the services of non-RN and non-LCSW staff for patients with less complicated conditions. At least a portion of care management fees can be placed “at risk,” depending on the achievement of improved outcomes.

In order to achieve a positive return on investment, care coordination resources should be focused on the highest-risk individuals.

There are many examples of promising programs illustrating these key ingredients. A stand-out demonstration with excellent results has been conducted in Southeast Pennsylvania by Health Quality Partners (HQP). This program relies heavily on home visits to targeted high-needs Medicare patients, focusing on patients with congestive heart failure, coronary artery disease, or chronic obstructive pulmonary disease, and who had at least one hospitalization in the year prior to enrollment. The high-risk group comprised 14% of HQP’s enrollees. These high-risk enrollees experienced 39% fewer hospitalizations than corresponding control group enrollees in a study conducted by Mathematica. After including care management costs, the net monthly expenditures for HQP’s treatment group were \$397 lower than those for the matched control group, a statistically significant net Medicare savings.³³

Many of these ingredients of success will be easier to achieve in integrated care networks. Thus, delivery system reform can be supportive of care coordination.

³³ Jennifer Schore, Deborah Peikes, Greg Peterson, Angela Gerolamo, and Randall Brown. Fourth Report to Congress on the Evaluation of the Medicare Coordinated Care Demonstration. Mathematica 6555-440. March 2011.

Appendix B: Work Group Educational Session

The Care Coordination Work Group conducted an educational session on December 12, 2014. Leaders of care coordination initiatives showing promising results made presentations to the Work Group. Heather Kirby, Assistant Vice President for Integrated Care Delivery at Frederick Memorial Hospital, presented the Care Transitions Program conducted in partnership with community-based organizations. This program has pre-hospital initiatives conducted with community partners, ED, and hospital components. Key elements include patient engagement, medication management, and home and facility visits by physicians and other providers post-discharge. On Day 1 of the hospital stay, a version of the LACE tool³⁴ is used to screen for care coordination needs and risk of readmission, and then the Care Transitions teams engage high-risk patients. During the hospital stay, patients receive education about chronic diseases, identification of barriers to compliance, and personal health records. The Care Transitions Team conducts home visits and weekly calls for a month, and uses tele-monitoring and links to PCP and specialist appointments. Pharmacists ensure that medication reconciliation is complete across settings. Hospital readmissions have declined by 20% since the inception of this program.³⁵

The key elements of the Kaiser Permanente approach to care coordination were presented by Dr. Farzaneh Sabi, Associate Medical Director at the Mid-Atlantic Permanente Medical Group at Kaiser Permanente, and a member of the Work Group. Dr. Sabi explained that the risk stratification system used at Kaiser Permanente features four layers of need, with individuals at highest risk getting strong care management while those in the next-highest category receive care coordination through health coaching to address modifiable risk factors in patients with sub-optimal self-care behaviors. Over a five-year period (2009-August 2014), Kaiser Permanente patients experienced a 22% reduction in hospital days per 1,000. From 2009 through May 2014, Kaiser patients experienced a 26% reduction in total ED visits per 1,000.³⁶

A collaborative effort by four major hospital systems to address the underlying cost drivers and reduce avoidable use of hospital care in San Diego, CA was explained by Julianne Howell, Senior Health Policy Adviser in the County of San Diego Health and Human Services Agency. Four major hospital systems—Sharp, Scripps, University of San Diego Health System and Palomar, with 11 hospitals in total, collaborated on an intervention to improve the transition of care from the hospital to the home. The program included early nurse-led discharge planning during an inpatient stay to support care coordination, medication reconciliation, and education, relying on the Eric Coleman model. Among those participating in the program who were judged to be at high risk, the 30-day, all-cause readmission

³⁴ Length of Stay; Acuity of Admission; co-morbidities; number of ER visits in the last six months.

³⁵ Heather Kirby. Care Coordination at Frederick Regional Health System. Presentation to the HSCRC Care Coordination Work Group. December 12, 2014.

³⁶ Farzaneh L. Sabi. Kaiser Permanente Mid-Atlantic States: Journey Over the Past 5 Years. Presentation to the HSCRC Care Coordination Work Group. December 12, 2014.

rate fell from 39.8% in the 2012 baseline period to 13.9% for program enrollees, and 11.7% for those who completed the program (a 70.6% drop in the latter case).³⁷

Activities by the Coordinating Center in Maryland focus on meeting the needs of people with complex health, social, and disability needs. An overview of their work was presented by Carol Marsiglia, Senior Vice President of Strategic Initiatives and Partnerships, along with Afyrea Brown, Director of Outcomes Management and Social Work at Bon Secours Baltimore Health System. This program features the use of claims data and other information to identify high-needs patients; home visits post-discharge; weekly follow-up calls over the 30 days after discharge; and mobile technology to track health indicators and issue alerts if danger signals emerge. At Bon Secours hospital, the care coordination team uses peer recovery coaches and assistance from a Health Enterprise Zone grant to meet the needs of patients, particularly those with lower incomes. The initiative includes a Homeless Outreach Program and a Transitional Housing Program, and also works with the Baltimore Area Agency on Aging.

³⁷ Julianne R. Howell, San Diego Care Transition Partnership: Transferring Care Across the Continuum. Presentation to the HSCRC Care Coordination Work Group, December 12, 2014.

Appendix C: Opportunities for Maryland Investment in Care Coordination

Activity	State-level	Regional-level	Local-level	Implementation Strategy
A. Build/secure a data infrastructure to facilitate identification of individuals who would benefit from care coordination. <u>High-level goal:</u> To secure, organize, synthesize, and share data that will support care coordination and enable more robust care management and monitoring.				
1. Develop procedures and policies to secure patient consent for the sharing of data for purposes of care coordination.	X			1. Use for BRFA funds: Ask CRISP to develop three-part patient consent in standardized format.
2. Combine existing data sources for the purpose of identifying individuals who would benefit from care coordination.	X			2. Use for BRFA funds: Provide financial support to CRISP to create, for example, high-utilizer report from Hospital Case Mix and ENS data and attribute patients to PCPs.
3. Secure new data sources. Specifically, request the use of Medicare patient-level data for the purpose of identifying individuals who would benefit from care coordination and chronic care management.	X			3. MHA to coordinate hospitals to make a special request to CMS, in concert with the State, for access to Medicare data in this form and for this purpose. The theme is to “get it, organize it, synthesize it, and use it.”
4. Engage CRISP to contract with a qualified vendor to store, clean, and normalize the Medicare data and other Medicare-related data sets Maryland may be able to obtain.	X			4. Use BRFA funds to purchase capabilities from an existing qualified vendor.

Activity	State-level	Regional-level	Local-level	Implementation Strategy
5. Use data to identify individuals who would benefit from care coordination and chronic care management; use alert mechanisms to connect these patients to the physicians and hospitals who care for them (e.g. alerts to PCPs when their patients are in the ED or admitted to the hospital. The alerts are set in motion by enrolling providers in the CRISP ENS system)	X			5. Use BRFA funds to secure contractor to convene leaders, community organizations, and patient advocates, in developing best possible approaches to stratifying patients, based on needs of hospitals and other providers; attribute patients; and store and view care profiles and HRAs.
B. Encourage and support patient-centered care. <u>High-level goal:</u> Identify standard elements of care profiles that can be shared; propose future standards for the creation of Individualized Care Profiles.				
1. Provide resources to design basic patient care profiles that are standardized and interoperable; make these profiles readily viewable across the continuum of care: Restated, care profiles should be “doable and viewable” after establishment, to facilitate implementation and monitor ongoing use.	X			1. Use BRFA funds: Create patient care profiles in standardized format. <ul style="list-style-type: none"> • First priority: the approximately 40,000 highest-needs Medicare FFS patients. • Second priority: additional patients who would qualify for providers to get federal CM payments for care management, many of whom will also be included in the First Priority
2. Standardize health risk assessment elements	X			2-3. Use BRFA Funds:

Activity	State-level	Regional-level	Local-level	Implementation Strategy
<p>3. Standardize elements in discharge summaries to aid transitions to long-term and post-acute care (LTPAC) providers as well as home-based settings.</p>	X			<p>Use BRFA funds to secure contractor to convene providers and create health risk assessments, and care profile elements; patient representatives (including health literacy experts) will be engaged in the process to ensure these profiles are readily understandable to the patient and their caregivers. The information in the profiles could be made available “along the highway” connecting different providers across a continuum of care.</p>
<p>4. Develop approach to identify patients with care plans through CRISP, together with identification of care managers and providers. Explore feasibility of CRISP providing a useful version of care plans, using a “whiteboard” attached to ADT files. Set up process for learning, monitoring, and managing the system to determine the effectiveness of this effort over time, and make needed adjustments.</p>	X			<p>4. Use BRFA funds to have CRISP create easily visualized access to care plan data elements. A care coordination team needs this information to help keep patients out of the hospital. These care coordinators should have information about social services as well as medical services that the patient may need and should have access to a catalogue of available medical, social service, and community-based resources.</p>

Activity	State-level	Regional-level	Local-level	Implementation Strategy
c. Encourage and support patient engagement, decision-making and self-care.				
1. Lead a state-level campaign to encourage individuals to 1) participate in care plans and 2) complete and share medical orders for life-sustaining treatment.	X			1. State and county health departments lead state-level campaign for engaging patients and families in care planning and consents, together with consumer groups (e.g., the HSCRC Consumer Engagement, Education and Outreach Task Force) and other stakeholders. Adequate funding for these entities is required for success. Clear and consistent messaging should be developed and used across the state.
2. Educate patients about care coordination resources and opportunities, and mobilize self-care. Giving patients appropriate and timely information is the key to patient activation.	X		X	2. Health departments can play a lead role in educating patients and convening local leaders; the HSCRC, consumer groups such as the Consumer Engagement, Education and Outreach Task Force, MHA, MedChi, and Health Departments can lead statewide education campaigns. Hospitals and physicians can help educate patients. In addition, patient self-activation is very important so that patients can become their own managers.
D. Encourage collaboration.				
1. Facilitate somatic and behavioral health integration.		X		1. Use BRFA funds. BRFA funds can provide financial support for planning approaches.
2. Facilitate care integration between hospitals and long-term care/ post-acute services	X			2. Use BRFA funds. Use BRFA funds to develop approaches to care integration that can be deployed on a regional and local level.

Activity	State-level	Regional-level	Local-level	Implementation Strategy
3. Facilitate collaborative relationships among providers, patient advocates, public health agencies, faith-based initiatives and others with a particular focus on resource planning, resource coordination, and training.	X			3. Use BRFA funds to provide regional planning resources, including technical resources to support regional planning efforts. Make the DHMH web-based inventories of community services more exhaustive, up-to-date, and accessible across the State.
4. Develop processes to avoid duplication of resources across provider systems, including coordination of resources for health risk assessments.		X	X	4. Work with DHMH to create web-based inventories of community services available in the State. Use BRFA regional planning processes to avoid duplication of resources.
5. Support practice transformation through technical assistance and dissemination of information on best practices.	X			5. Funding source TBD.
6. Create standard gain sharing and pay for performance programs.	X			6. Use BRFA funds: Use BRFA funds to develop standard approaches to pay for performance and gain sharing opportunities in Maryland. Work in coordination with MHA approach for hospital-based services and the establishment of gain sharing programs between hospitals and ambulatory providers focused on high-risk patients.
7. Encourage providers to take advantage of new Medicare Chronic Care Management payments.	X			7. Funding source TBD.
E. Connect providers.				
1. Help CRISP promote the connection of community-based providers to CRISP.	X			1-4. Funding source TBD.
2. Help CRISP connect long-term and post- acute providers (LTPAC) to CRISP. Develop approaches to meet needs of LTPAC.	X			
3. Purchase/develop applications to facilitate interoperability among providers' EMRs to make clinically relevant information available to providers	X			

Activity	State-level	Regional-level	Local-level	Implementation Strategy
4. Coordinate the effort to use Medicare data with initiatives to use EMR data, information on high-needs patients in Medicaid and private plans for population health and outcomes measurement.	X			
5. Encourage and support Regional Partnerships in their efforts to connect providers as they manage patients' care plans, monitor local service quality and supply, and engage local citizens and caregivers in shaping priorities.		X		5. Funding source TBD.