NexusMontgomery

Regional Transformation Design Final Report to HSCRC
December 2015

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Introduction

NexusMontgomery received a planning grant from the Maryland Health Services Cost Review Commission (HSCRC) and has developed a program that aims to provide a care management intervention that will reduce overall hospital costs. We have named this pre-emptive program that anticipates health needs Health Stabilization for Seniors (HSS). The program includes the following components: targeted identification and referral, risk stratification, care coordination, and population health improvement interventions. HSS will be provided to Medicare beneficiaries, age 65 and over, including those who are also enrolled in Medicaid (dually eligible). The target population will initially include seniors residing in twenty two (22) independent living facilities (both subsidized and market rate) who are determined to be at risk of hospital utilization in the next six months. By the end of year one, the target population will expand to include eligible seniors living in the defined service areas of the Regional Partnership partner hospitals regardless of place of residence.

The HSCRC's NexusMontgomery planning grant proposal was a collaborative product from Holy Cross Health, Suburban Hospital and the Primary Care Coalition of Montgomery County. Within the first month of the planning grant period, both Adventist HealthCare and MedStar Montgomery Medical Center also provided representatives to the project. As a result, all four hospital systems, representing the six hospitals in Montgomery County, have actively participated in the HSS design.

Project design for HSS has also included input from organizational representatives and residents themselves from 22 independent facilities. Skilled nursing facilities, Montgomery County Department of Health and Human Services, Montgomery County Area Agency on Aging, more than 20 community primary care physicians, home health agencies, pharmacists, Montgomery County Fire and Rescue, and VHQC (the QIO for Maryland) also participated.

Contributing experts have included: Discern Health for payment and financial modeling; CRISP; Montgomery County Medical Society and MedChi for input on physician engagement; LifeSpan for input on senior living facility engagement; LeadingAge for input on housing plus services; several senior living housing programs with care coordination programs; program design and health professionals from the Primary Care Coalition; and a program evaluator. The Primary Care Coalition of Montgomery County, Inc. (PCC) coordinated the planning process during the grant period.

The work to develop NexusMontgomery's plan for Health Stabilization for Seniors was an iterative and transparent process. The PCC led a core planning team meeting on a weekly basis to share results of literature review, interviews with relevant models around the country, and data obtained.

VHQC provided data on Medicare beneficiary hospital and health care utilization at the community level and for the specific senior living facilities. Access to this data was made possible through H.E.A.L.T.H. Partners, a community-driven care transitions pilot project for Medicare/Medicaid dually eligible and other residents of Holly Hall, a Housing Opportunities Commission (HOC) community. H.E.A.L.T.H Partners is designated as a care coordination community under the CMS QIN-QIO 11th Scope of Work.

Reactor panels with representatives from stakeholder constituencies of hospital discharge planners, physicians, administrative and social work professionals from senior living facilities, and representatives from local government were convened to further develop the concepts, solicit feedback, and build engagement with the project throughout the planning grant period.

During HSS implementation planning, the decision was made that – at least initially – buying the care coordination capacity rather than building was the practical solution to ensure rapid start-up capability. A Reactor Panel of stakeholders was formed to develop a care management request for information and to select a vendor. The Reactor Panel evaluated vendor proposals and recommended The Coordinating Center[1] (TCC), a nonprofit organization with extensive experience in Maryland, as the vendor that will perform risk assessment and care coordination. Once The Coordinating Center was selected, their staff helped to refine the HSS population-based risk assessment and care coordination intervention.

As the HSS design phase was beginning, HSCRC provided hospitals with new reporting tools showing inter-hospital readmission and re-hospitalization rates. VHQC also provided data specific to the Medicare population in the target geographic area. The VHQC and HSCRC data identified patient migration between hospitals as an issue:

- Total Medicare population with claims in CY2014 = 16,680
- High utilizers defined as 3 or more admissions in the CY = 1649 (10%)
- The high user cohort had 26% of hospital admissions and 63% of the re-admissions
- 945 (57%) high user beneficiaries were re-admitted to a hospital different than their original admission within the CY (used 2 or more hospitals)
- 1017 (35%) of other Medicare users who had at least two hospital admissions within the year used more than one hospital

The six hospitals in Montgomery County recognized they share the high utilizer population, face similar challenges in reducing admissions and readmissions, and are all similarly committed to improving the health of their shared community. This was the impetus to create a formal Regional Partnership broader than the HSS program. Health Management Associates was hired to facilitate the formation of the NexusMontgomery Regional Partnership (NM RP), a partnership to oversee and direct collaborative efforts to improve population health and achieve the goals of the Maryland

[1] The Coordinating Center is accredited by URAC, a nationally recognized accreditation organization. TCC has also been continuously certified since 2000 under the Standards for Excellence program of the Maryland Association of Non Profit Organizations that certifies nonprofits according to measures of ethical practices and accountability.

All-Payer Model. The Nexus Montgomery Regional Partnership views HSS as one program in a portfolio of projects and programs that are better implemented at the community level than by individual hospitals. Additional information on the NM RP and the management structure that will implement HSS is provided in Domain 2.

With the exception of NM RP governance discussions, this Regional Transformation Design Final Report focuses on the HSS intervention for which the design grant was awarded. Other interventions of the NM RP are detailed in the transformation implementation proposals, to be submitted by the NexusMontgomery Regional Partnership on December 21, 2015.

1. Goals, Strategies, and Outcomes

1a. Goals, Strategies, and Outcomes

Goals: The goals of HSS are consistent with the HSCRC's transformation vision of improving health outcomes, enhancing patient experience, and lowering overall cost. The HSS intervention seeks to identify Medicare and dually eligible seniors age 65 and over who are at high risk for hospital utilization, and reduce that risk to moderate or low through the provision of care coordination services.

The HHS intervention identifies and engages seniors who are not currently served by hospital transitional services aimed at reducing hospital readmissions. The intervention will begin its work with Medicare and dually eligible seniors age 65 and over who live in one of 22 subsidized and market rate independent living senior facilities. The model will be spread to seniors living in the community, outside of these senior living facilities, who are referred from other sources including emergency medical services, and primary care physicians. Finally, the model will be offered to patients who have been discharged from hospital to skilled nursing/post-acute rehab facilities, where active care coordination will begin immediately commensurate with their subacute discharge.

The project's goals include:

- Participants will improve their functional health status.
- Participants will improve their self-management skills, especially for chronic diseases and conditions.
- Participants will experience more coordinated health care and supporting services.
- Participants will reduce their need for acute medical services, especially avoidable hospital and emergency department use.

Strategies: The HSS intervention includes a variety of strategies to achieve these goals, including:

- Creating specific criteria that guide referral sources to identify and refer only those at high risk of hospital utilization.
- Conducting individualized health risk assessments to ensure care coordination services are provided to seniors with high risk for hospital utilization.

- Through care coordination, addressing social determinants of health that contribute to avoidable medical utilization.

Outcomes: Refer to Domain 3 for details of data collection and evaluation. Anticipated outcomes for HSS include:

- Reduced average hospital utilization among targeted population (initially across residents of the 22 senior living facilities; subsequently to the broader target region Medicare population, age 65 and over).
- Improved patient experience of care for seniors participating in care coordination.
- Improved health outcomes for seniors participating in care coordination.
- Availability of a care coordination utility in Montgomery County that reduces health care expenditures and improves outcomes for individuals living in the community who are at risk of hospitalization through early identification and care coordination.

These strategies will improve the health and quality of life of the target senior population and reduce costs associated with avoidable hospital use.

1b. Target Population

The target population for the HSS program includes Medicare beneficiaries age 65 and over, including dually-eligible individuals (Medicare and Medicaid recipients), who are at risk of hospitalization.

The population age 65 and over was selected because in 2015, 12.3% of the Montgomery County Maryland population is age 65 or greater. With a projected annual population growth rate of 3.2% over the next five years, compared to only 0.1% growth for the population under age 65, the 65+ population will be 15.8% of Montgomery County's population by 2020. According to the Maryland hospital discharge database, utilization of inpatient days by the 65 and over population in Montgomery County is five times higher than that of the population under age 65. Therefore, growth in this population group will have a tremendous impact on hospital spending, if not addressed.

The HSS model is a population-based model designed to catch individuals at risk for hospital utilization as they are on their way up the "cost curve." These individuals fall in the second tier from the top of the Health Status Pyramid shown in Figure 1 on page 5—those who are "chronically ill, at risk of high use."

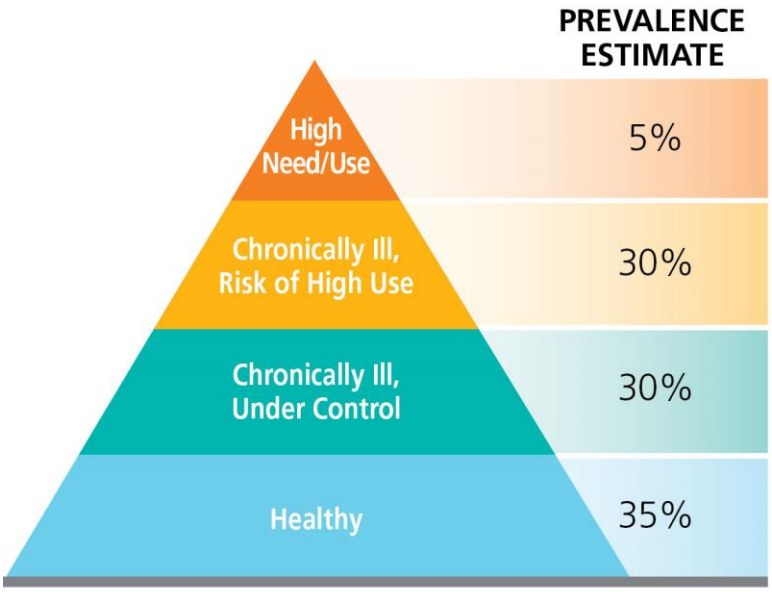


Figure 1: Health Status Pyramid

The HSS intervention aims to keep individuals in Tier 2 from moving into Tier 1, slow their move into Tier 1, or minimize their costs when they do move into Tier 1. HSS's goal is to identify individuals in Tier 2 and provide a care coordination intervention that improves their health and reduces their risk of hospital use.

Initially HSS will target individuals living in 22 subsidized and market rate independent senior living facilities in Montgomery County. Senior housing offers a natural community with a high density of the targeted Medicare and dually eligible population. A survey of the facility administrators, conducted by Life Span, reported that more than three quarters of the residents (76%) living in the independent living facilities were female, the average age was 78, and average number of years living in the facilities was 7.6 years. For service dates in 2014, the top ten chronic conditions documented on Medicare claims for these residents were high blood pressure, high cholesterol, chronic kidney disease, ischemic heart disease, diabetes, arthritis, heart failure, arthritis, Alzheimer's, depression, and chronic obstructive pulmonary disease.

Managers of senior living facilities reported that residents often have difficulties accessing preventive care, need care coordination and require service integration. In interviews with these managers, they reported that residents often need assistance in a wide variety of areas: access to health information and services, such as behavioral health, home health assistance, medication management, occupational or physical therapy; assistance with obtaining durable medical equipment; transportation to medical appointments; and access to food and meal preparation.

The team considered including residents of assisted living facilities in Montgomery County in the initial phases of the care coordination intervention. However by regulation these residents receive services such as daily monitoring; nursing services; personal care: activities of daily living, including feeding, dressing, shaving, etc.; connection to health care services, including home health,

psychiatric, hospice; and medication administration, including medication review on admission. Since these services overlap with the services provided by HSS, spread of the HSS model to assisted living facilities will be considered after gaining experience with the HSS model in the independent living setting. Prior to implementation in assisted living facilities, we will assess whether care management is likely to reduce the risk of hospitalization for assisted living residents.

Once experience is gained with HSS in the independent senior living facilities, it will be piloted for seniors living in the community at large. The referral sources will be EMS and, to start, the primary care providers who are already serving residents of the senior living facilities and are therefore familiar with the HSS program. Critical to test is whether the PCPs will refer only those patients at high risk of near term hospital utilization. In physician focus groups during the HSS design, PCPs stated they are keenly aware when a patient's health status or risk factors such as social support change, and they would welcome a program into which to refer such patients. Once established as an accurate referral source, the participating referral PCPs will be invited to refer other patients in their practices from the wider community.

The initial target population is the residents of the senior living communities, numbering approximately 3,000. As referrals are added for community-residing seniors, the total population of Medicare seniors age 65 and over from which referrals may come is approximately 120,000. This encompasses geography of all Montgomery County, Maryland zip codes (excluding zip codes 20777, 20838, 20839, 20842, 21771, and 21797).

This expansion approach provides a mechanism to develop relationships with PCPs in collaboration and dialogue on behalf of their Medicare and dually eligible senior patients. Though PCPs indicated in their group panel sessions that they were not planning to utilize the Medicare Chronic Care Management (CCM) code now, a positive experience with a care coordination service for their highest risk patients may create opportunity. If there is interest on the part of the PCPs, the NM RP would consider aligning with physicians to build a shared CCM utility. This could be particularly useful in Montgomery County where there are many small physician practices, with fewer resources to take on this investment themselves.

1c. Specific Metrics to Measure Progress

The process evaluation will measure the ability of the program staff and The Coordinating Center to implement the HSS intervention efficiently and with fidelity to the plan. The outcome evaluation will assess the impact of the program on costs and utilization.

Process measures are described in detail in Section 7c. They will include:

- Number of clients identified through each referral mechanism
- Referral Conversion to active case management (percent of referrals with initial health risk assessment as High Risk)
- Number and percent enrolled in active care management
- Cycle time from referral to health risk assessment
- Number and percent of clients that move from one step of care coordination to the next.
- Duration of participation in active case management

- Use of CRISP resources

Outcomes measures are described in Section 3a. They align with the State of Maryland measures under the All Payer Model, including:

- Cost Metrics:
  - Total hospital charges
- Hospital Utilization Metrics:
  - Hospital admission (including observation stays over 24 hours)
  - Readmissions
  - Emergency Department encounters
- Emergency Medical Service Utilization (not an all payer model metric, but measured as an indication of patient self-management efficacy)
  - EMS Calls
  - EMS Calls transported to hospital as percent of total EMS Calls

1d. Current Performance against the Stated Metrics.

The HSS program was designed under the NexusMontgomery Regional Design grant, and is not yet in operation, therefore there is no current performance to report for process measures. For Outcome measures, available baselines for the initial 22 facilities are shown in Table 1 on page 8.

1e. Data Collection and Analytics Capabilities Used to Measure Goal/Outcomes

As described in Domain 2, the NexusMontgomery Regional Partnership is created through Operating and Participation Agreements among the six hospitals in Montgomery County. Rather than creating a new legal entity at start-up, the NM RP is creating a management agreement with the Primary Care Coalition (PCC) to provide Administrative Management services for the NM RP and coordinate the implementation of HSS, a shared regional partnership program. As described in Domain 1, during this design grant period, The Coordinating Center was selected as the organization to provide the care coordination services directly to the Medicare and dually eligible populations described in this report. The hospitals, the Primary Care Coalition and The Coordinating Center have strong data collection and analytics capabilities. These are described in later sections of this report, particularly in Domain 3. Also discussed in Sections 2d, 3b and 4d are the interactions with CRISP for data interchange.

Table 1: Medicare Claims for 2014 Service Dates: Beneficiaries age 65+

Medicare Claims for 2014 Service Dates	Montgomery County	22 Independent Senior Living Facilities
# Admissions	23,501	776
# Readmissions	3,793	105
# Emergency Department visits	12,018	565
# Observation stays	2,775	157
# Died	1,030	1
# Unique Beneficiaries	16,680	554
# Benes with 1+ mental illness claims	7,032	230
# Benes with 1+ depression claims	2,551	102
# Benes with 1+ dementia claims	3,247	92
# Males	6,979	173
# Females	9,698	381
# Benes with 2+ admissions	4,509	134
# Inpatients Admitting to Same Hospital	2,547	80
# Inpatients Admitting to Multiple Hospitals	1,962	54
# Benes with 2+ outpatient claims	3,671	182
# Outpatients Returning to Same Hospital	2,437	119
# Outpatients Visiting Multiple Hospitals	1,234	63
Medicare Part A charges	$615,088,907	$48,623,221
Medicare Part B charges	$327,128,981	$18,416,491

Source: VHQC

1f. Focus Areas for Year One

The first year will implement and measure the effectiveness of a community-based model (HSS) for care coordination of frail seniors. Medicare seniors age 65+ in the community who are at risk for hospital utilization will be preemptively identified and screened. Those determined to be at high risk will be offered the opportunity to receive care coordination to obtain needed medical or social services that improve their health status and help reduce or eliminate avoidable hospital costs.

The HSS model is designed to be a population-based sustainable approach that leverages existing community resources to meet the needs of the target population. This holistic model engages and activates individuals and caregivers in the individual's own self-management. It identifies and addresses the medical and social factors that place individuals at risk of hospital and emergency department utilization. The model is based on "meeting individuals where they are" and providing or arranging for medical and social interventions specific to the individual's needs and readiness to engage. The model leverages available community resources and optimizes the care coordination to

avoid duplication of effort and cost. The model is also structured to accrue data about service gaps in the community, proving analysis of areas for future investment or advocacy for needed services.

Highlights of the model include:

- **Referral Sources:** A network of trained 'referral sources' from participating partners.
  - Senior Living Resident Counselors
  - Emergency Medical Service personnel
  - Hospital discharge planners (all residents of the 22 facilities will be given transitional care management through this HSS program, rather than being referred to the hospital's own post-acute care management)
  - Targeted PCPs (those serving residents of the senior living facilities)
  - DHHS Aging and Disabilities

- **Health Risk Assessment** (HRA) with predictive capabilities for risk of near term hospital utilization[2]. This risk assessment is embedded in the Care at Hand software that is used The Coordinating Center.

- **Individualized Care Plan Development and Care Coordination:** After consent for participation, residents will receive an HRA and enter into either a) Active Case Management (ACM) should their risk score be high or b) periodic HRA if risk score is moderate or low. This is a client- and family-centered approach that facilitates communication between providers of care and services, clients and their families with intensity of interaction based on individual needs at that moment in time. The ACM will include prioritizing the top one to three issues that put the individual at risk of hospital contact, improving medication self-management, assisting individuals and care givers in understanding their condition, ensuring primary care, behavioral health and specialty follow-up, knowledge of red flags about indications of when an individual's condition is worsening, and identification and linking to community resources that will help the individual to address social or medical needs.

- **Population Health Component:** As data is gathered through individual care management, common needs of the senior living communities and their resident population will be determined. The program design includes facilitation of stakeholder work groups to prioritize common needs, and develop plans as a community for addressing. Activities of the stakeholder groups may include developing new services (e.g. on-site clinics in partnership with local hospitals or University of Maryland School of Nursing), advocating

[2] Risk stratification is embedded in the selected software, Care at Hand. See *AHRQ 2014 (AHRQ study).* Avalere Health (study in press); Admission Avoidance calculated at:
Inpatient admissions per beneficiary (all): -0.142 (95% CI -0.306 – 0.021)
Inpatient admissions per beneficiary (3+ admissions in prior year): -0.292 (95% CI -0.626 – 0.043)

for changes to existing services (e.g. transportation), and recruiting existing community services to the buildings (e.g. falls prevention programs, diabetes self-management education). Funds for facilitation are programmed into the design; funds for services themselves would need to be generated from other sources.

- **A Central Call Number** will be available for "observers" and designated referrers if they are concerned about a client's condition or welfare.

- **Leverage Existing Community Services:** During the design planning grant and continuing into implementation, the NM RP will build and continuously update regional services guides. Examples of those completed in CY2015:

    - Local cardiovascular disease and diabetes prevention and self-management sessions, with locations, times and contact information. (this single source has given providers of these services an opportunity to re-align their services to remove overlap and ensure service in underserved communities)

    - Survey of services available from behavioral health providers, including linguistic capabilities.

2. Formal Relationships and Governance

2a. Regional Partnership Participants

A significant outcome of the Transformation Design grant is the formation of a formal Regional Partnership called NexusMontgomery. At the start of the Design grant, though each local hospital was supportive of and involved in the HSS design, there was not a commitment to HSS being a shared endeavor. As the HSS design work advanced, data on shared populations and shared challenges emerged, hospitals participated in the HSCRC Regional Partnership learning collaborative, and the need in this region for a formal Regional Partnership became clear.

The CEOs of the 6 hospitals created a Program Interventions Work Group and charged it with determining the shared populations and challenges that would benefit from the hospitals working collaboratively, rather than individually. The report to the CEOs noted the following areas as benefiting from collaborative solutions.

1. Care Management (shared teams, shared care plans, best practice learnings, etc.)

2. Special Populations: a) Severely Mentally Ill, and b) Uninsurable (note: interventions for these special populations are discussed in a separate proposal also submitted by the NexusMontgomery Regional Partnership)

By August 2015, the Transformation Design work plan included formalization of a Regional Partnership. Health Management Associates (HMA) was contracted as part of the design grant team to lead this formalization process. The CEOs of the 6 hospitals designated decision-making representatives to a Governance Work Group. This Work Group has and continues to meet regularly, with HMA facilitation, to finalize the Governance structure details. The CEOs meet at intervals to review and approve the details of the collaborative partnership.

Formal Relationships

The NexusMontgomery Governance structure will be a Collaborative Partnership governed by an Operating Agreement and a Participation Agreement. Most details of the Operating Agreement have been completed, with another meeting of the Governance Work Group scheduled for December 11th to finalize. The Regional Partnership Governance work continues after this final report is submitted, with the following time line and deliverables agreed to by the hospital CEOs. Agreements are being drafted by Health Management Associates.

- **Draft Operating Agreement (MOU):** To be completed by January 9, 2016. Operating Agreement to include charter elements, key aspects of governance, roles, and responsibilities (see Appendix A for Governance Recommendations to CEOs, as reviewed by the CEOs on November 18, 2015).

- **Final Operating Agreement (MOU):** Executed agreement to be in place by mid-February (target date pending counsel review).

- **NexusMontgomery Board of Directors:** To be appointed at the time Operating Agreement is executed and constituted within 20 business days of execution. Recommendation is to retain the current Governance Work Group members as founding Directors.

- **Participation Agreement:** Completion target date is February 26, 2016. This Agreement includes partner roles, responsibilities, expectations; process for addressing non-performance of an RP Member; Data Management and Sharing Plan; Patient Protection plan; mechanisms for financial accountability, conflict of interest; reporting requirements.

- **Management Agreement:** Execution to coincide with constitution of the Board of Directors. Secures a managing entity to support implementation, employ resources and contract with vendors for the NM RP.

Table 2: Hospital Partners in NexusMontgomery Regional Partnership

Hospital	Health System
Shady Grove Medical Center	Adventist HealthCare
Washington Adventist Hospital	Adventist HealthCare
Holy Cross Germantown Hospital	Holy Cross Health
Holy Cross Hospital	Holy Cross Health
Suburban Hospital	Johns Hopkins Medicine
MedStar Montgomery Medical Center	MedStar Health

The NexusMontgomery Regional Partnership Governance Board, in its first year, will be comprised of six board seats, one for each hospital participant. Each hospital partner (see Table 2 above) appoints one board director. Thereafter the board may have up to nine seats, with the additional seats held by community partners. In the first year, NM RP develops the working relationships and trust between the hospital partners while implementing the selected interventions. As the interventions are implemented, the Governance Board will expand to nine seats to enhance community partner representation and to ensure that the Board has specific expertise represented. The NM RP intends to build a governance structure that can manage a portfolio of collaborative projects that grows over time.

The NM RP Governance Board will initially have two standing committees to support the Board and inform decision-making: Partnership Program Intervention Committee (P-PIC) and a Finance Committee. The P-PIC is to be chaired by a board director; each hospital will appoint one designated committee member and community partners will have up to 5 committee seats, pending board approval. Responsibilities of the P-PIC:

- Develop key performance and outcome metrics to be recommended to the Board
- Monitor key performance and outcome metrics as approved by the Board
- Monitor any needed continuous quality improvement initiatives
- Evaluate and recommend proposed projects, developing materials for Board discussion (includes both new and ongoing projects) ensuring that the Board has the information they need to make informed decisions

The Finance Committee is chaired by the NexusMontgomery Board Treasurer and made up of one appointee of each hospital (total of six committee members). Responsibilities include:

- Financial and resource oversight
- Recommends the budget to the Board for approval
- Serves as the "audit" committee of the Board, if needed
- Determines financial viability of proposed project(s) and sustainability post-implementation
- Evaluates and recommends potential funding opportunities and mechanisms to the board
- Reviews and monitors contracts, insurance needs/policies

In addition, the Governance Work Group recommended formation of a Physician Advisory Board comprised of a scope of provider types to foster communication, engage physicians, advise the Board and inform work of the committees. In Montgomery County, there is no single practice, physician leader or organization that can speak with one voice for the many physicians and small practices in Montgomery County. For this reason, the formation of the Physician Advisory Board engages a broader range of physician voices than a single physician seat on the Governance Board.

Until such time as the NM RP becomes a legal entity, which is not planned in the first year, the NM RP will retain a *management partner* for the following functions:

1. **Fiscal and Administrative Functions**
    - Fiscal management of the NM RP shared funds; Finance Committee reports.
    - Governance Board and Physician Advisory Board Support.
    - NM RP communication activities.
    - Grant writing, as needed.

2. **Evaluation and Learning: input and support to P-PIC.**
    - Evaluation of all programs within the NM RP
    - Best practices research; provide promising and best practices to P-PIC.

3. **Implementation and Operations of Shared Programs, Projects, and RP Infrastructure**
    - Maintain RP work plan. Employ staff for shared program and project functions, as well as RP infrastructure (fiscal and administrative, evaluation and best practices)
    - Contractor Management**:** on behalf of NM RP, issue RFPs and make recommendations to the RP Governance Board for care management and other program vendors. Manage contracting, invoicing, payment. Performance monitoring of vendors; recommendations to NM RP Governance Board on potential for risk-base or shared savings in future contracts as program data and experience build.
    - Stakeholder Engagement**:** For each NM RP program, engage the appropriate stakeholders and partners (e.g. EMS, Senior Living, PCPs, DHHS, community-based organizations, patients & families).
    - Coordinate hospital and other partner resources per work plan (e.g. data collection, care plan design, CRISP connections).

The Governance Work Group recommended and CEOs approved the Primary Care Coalition of Montgomery County, Inc. as the management partner for the first 12 to 15 months of the NM RP. In parallel with the drafting of the NM RP Operating Agreement, Health Management Associates is working with the Governance Work Group and PCC to draft a Management Agreement between each of the 6 hospitals and the PCC, to be executed to coincide with constitution of the NM RP Governance Board.

The HSS design team recommended that the NM RP utilize existing care coordination services, at least in the initial phases, rather than build a team among the hospital partners. The HSS design process, with the Governance Work Group and hospital CEO endorsement, selected The Coordinating Center (TCC) as the care coordinating partner for NM RP shared interventions.

HSS Partnerships & Participation

The NM RP will undertake a portfolio of projects and interventions, within the scope, resources, scale and geography criteria approved by the Governance Board. One of these interventions is the HSS. Each project and intervention will, by design, have its distinct set of partners and stakeholders. The NM RP Transformation Implementation Proposals, due December 21, 2015, describe the

partnerships and participation for additional projects and interventions to be undertaken by the NM RP.

The partners for Year One of HSS implementation are listed in Table 3 below. As new processes and means for sharing of information are developed (refer to Domain 8b), more community partners may join. In addition, many providers including physicians, home care, home health, and hospice services will be program participants. These relationships will develop through the care coordination function, and these providers will become participants once the intervention is in implementation.

Appendix B includes an abbreviated contact list, including names, titles, and participation during the planning period.

Table 3: NexusMontgomery HHS Year One Partners

Senior Living Facility Partners	
Andrew Kim	Victory Housing
Arcola Towers	Housing Opportunities Commission
Asbury Methodist Village	Asbury Communities
Bauer Park Apartments	Housing Opportunities Commission
Brooke Grove	Brooke Grove Foundation
Charter House	Charter House
Elizabeth House	Housing Opportunities Commission
Forest Oak Towers	Housing Opportunities Commission
Friends House Retirement	Friends House
Homecrest	B'nai Brith
Holly Hall	Housing Opportunities Commission
Revitz House	Charles E. Smith Life Communities
Ring House	Charles E. Smith Life Communities
The Oaks at Four Corners	Housing Opportunities Commission
The Village at Rockville	National Lutheran Communities and Services
Town Center Apartments	Housing Opportunities Commission
Victory Court	Victory Housing
Victory Forest	Victory Housing
Victory Oaks	Victory Housing
Victory Terrace	Victory Housing
Victory Tower	Victory Housing
Waverly House	Housing Opportunities Commission
Montgomery County Hospital Partners	
Shady Grove Medical Center	Adventist HealthCare
Washington Adventist Hospital	Adventist HealthCare
Holy Cross Germantown Hospital	Holy Cross Health
Holy Cross Hospital	Holy Cross Health
Suburban Hospital	Johns Hopkins Medicine

MedStar Montgomery Medical Center	MedStar Health
Program Implementation and Facilitation Partners	
	Primary Care Coalition of Montgomery County
Care Management Vendor Partners	
	The Coordinating Center
	ALFA Pharmacy (Medication Therapy Management)
Local Government Partners	
	Montgomery County Department of Health and Human Services
	Montgomery County Fire and Rescue
	Montgomery County Area Agency on Aging
Association Partners	
	Montgomery County Medical Society/MedChi
	LifeSpan
Data Partners	
	VHQC
	CRISP

2b-c. Governance Structure, Decision Making, and Types of Decisions

The NM RP governance described above (Section 2a) is depicted in Figure 2 on page 17. The Board will have four officers (Chair, Vice Chair, Treasurer and Secretary) elected by the directors, one officer from each system for a one year term each, elected annually up to three terms. A quorum for the Board, in the initial year, will be comprised of attendance of five of the six directors. The Board will meet in-person ten times per year. Board directors are expected to attend at minimum 75% of the in-person meetings, with a proxy in attendance no more than 25% of the Board meetings. In the event a special meeting must be called in between one of the regularly scheduled Board meetings, the chair may convene a meeting with at minimum 5 business days' notice; the meeting may be held via teleconference or web based communication. An Annual Meeting will be held (one of the ten regularly scheduled Board meetings) where the following will take place:

- Election of Board officers
- Review of previous year's performance including finances, program progress and outcomes, and strategic direction

Decisions are made by vote of the Board of Directors, with the following votes.

Unanimous Votes required for the following:

- Administrative/Governance
  - Management Agreement
  - Participation Agreement
  - Voting rights among RP Members, Quorum requirements (any changes)
  - Removal of an RP Member (without the partner in question)

- Addition of a Member to the RP
- Formation of a joint venture with a third party
- Evolution of the NexusMontgomery Regional Partnership to a legal entity

- Project or Program Approval (intervention and infrastructure)
  - Changes to scope, resources, scale and geography (who, how, what and where) of any existing project or interventions
  - Addition or deletion of projects or interventions
  - RP Member roles, responsibilities, and resource contributions for projects and interventions
  - Performance expectations for projects and interventions, including return on investment and timing expectations.

Super-Majority Votes (based on a six member board requires five votes) for the following:

- Administrative/Governance
  - Termination of the NexusMontgomery Operating Agreement
  - Amendments to Operating, Management, or Participation agreements
  - Termination of Operating, Management, or Participation agreements
  - Vendor contracts
  - Marketing or Communications activities, materials, and branding specific to the NexusMontgomery Regional Partnership

- Financial
  - Budget
  - Budget revisions

- Clinical Integration Programs/Implementation
  - Definition and eligibility criteria for target patient population
  - New processes, workflows, and tools of any substance
  - Metrics and measures that will be used to monitor performance
  - Contingency and sustainability plans for the clinical initiative(s)

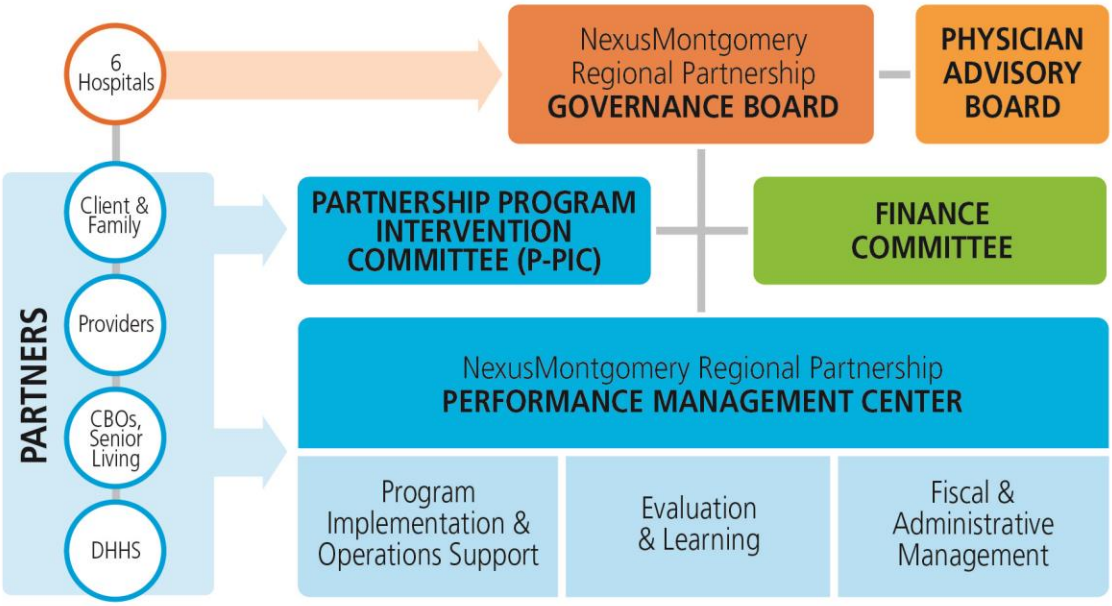
The above describes the governance structure and decision-making process for the NM RP. The HSS intervention is one of the shared resource programs within the NM RP. Operations of the HSS will be overseen by the NM RP management partner, the Primary Care Coalition of Montgomery County (PCC). The Coordinating Center (TCC) will provide the direct care coordination services for the target population, under the oversight and management of the PCC. Both the PCC and TCC have extensive experience managing and coordinating health care services for vulnerable populations.

Project decision making and responsibilities will vary with the scale of the decision being made. The TCC will manage day-to-day client care coordination decisions, and conduct quality assurance and quality improvement on their care coordination service based on their internal data. The PCC will maintain the program work plan, make day-to-day operational decisions for the program, provide evaluation and recommendation to the Partnership Program Intervention Committee (P-PIC), and

provide financial reporting to the Finance Committee. Decisions about program scope, resources, scale, geography, and vendors are made by the NM RP Governance Board.

The HSS intervention touches Medicare and dually eligible seniors. As the program matures and grows, decisions about the program must be informed by stakeholders, including seniors and their families, senior living facilities, hospitals, community physicians, and other project partners. As part of its management responsibilities, PCC facilitates regular input from these stakeholders, which will inform both operational change for the program and decisions of the Governance Board. During the planning process, stakeholders have already held meetings to provide feedback on plans and to develop the process for ongoing feedback during implementation.

Figure 2 **NexusMontgomery Regional Partnership First Year Governance and Management**



2d. Patient Consent Process

The HSS program initially receives referrals of Medicare seniors age 65 and over into the program from the resident coordinators at senior living facilities, from Emergency Medical Services and from hospital discharge planners. The referrals are made directly to the care coordination entity, The Coordinating Center (TCC). TCC has been obtaining patient consent from and coordinating care for vulnerable individuals for thirty years. TCC has altered existing consent forms consistent with the specific circumstances of the HSS program. A draft consent form is included as Appendix C (TCC Consent to Release Information).

The first step upon contact with a newly referred senior is to obtain consent for program participation. The consent process includes:

- Explanation of the goals of the program

- Explanation of the program process: an enrollment health risk assessment; active coordination when the risk score is high; periodic re-assessment when risk score is moderate; a telephone hotline for concerns about change in risk levels
- Obtaining contact information and permission to contact caregivers and physician(s)
- Clarification that the program is voluntary and at no cost to the senior
- Transparency that the senior will be part of TCC's 'care management panel', their Care Plan will be shared through CRISP, and that TCC will receive Alerts (Electronic Notification System) from CRISP regarding the senior participant

There have been two pilot tests for obtaining consent from the target population. In one subsidized housing facility with nearly 100 units, resident coordinators worked with the residents to obtain consent for sharing hospital discharge plans, regardless of whether there had been or was expected to be a hospitalization in the near term. Approximately 60% of residents provided consent. In a second pilot specifically testing the HSS consent and health risk assessment model, resident coordinators identified a test set of seniors deemed most at risk of a near term hospitalization. 100% of the identified seniors (46) provided consent for the health risk assessment.

2e. Process for Legal and Appropriate Sharing of Care Plans, Alerts, Etc.

The NM RP considered building infrastructure for sharing care plans, alerts and – of particular importance to the NM RP – data on care manager-to-patient relationships. CRISP has determined it can meet the needs of the NM RP, therefore the NM RP does not seek to develop separate technology for these functions. This allows the RP to benefit from the legal and technical efforts CRISP has undertaken to-date and CRISP's funding and technical skills to build the framework for such sharing.

In addition, the NM RP recognizes that patients seek care across the region and across the State. Efficiency, effectiveness, and patient experience of care will be improved if all providers utilize a common HIE for data sharing. The NM RP will educate providers and care management entities in the NexusMontgomery region and link them to CRISP to establish connectivity.

NM RP and CRISP have drafted an MOU detailing the needed functionality and the responsibilities of each party. The CRISP-NM RP Draft MOU forms Appendix D and includes:

- **Sharing Care Plans:** to utilize the CRISP Clinical Query Portal as the venue for sharing care plans. CRISP will assure that its protocols permit community-based care management organizations to sign participation agreements with CRISP, upload their patient panels to CRISP, access the Clinical Query Portal's Care Profile to view care plans and subscribe to ENS notifications for their patient panel. By subscribing to ENS notifications for their panel, community-based care management organizations, such as The Coordinating Center, will be listed on the care profile as an ENS subscriber. The NM RP and CRISP will work together, within constraints of other CRISP priorities, to improve this feature to add Care Manager to the ENS upload and notification or display. In addition the NM RP will provide

input to the Care Profile design that could include ENS subscriber type (e.g. care manager) and date subscribed, with potential for this information aging off the Care Profile.

- **Provider Connectivity to CRISP:** The NM RP will educate skilled nursing facilities, behavioral health and other providers on the importance of connectivity with CRISP for sharing admit/discharge/transfer feeds, ambulatory data and care plans. The NM RP will refer interested providers and community-based organizations to CRISP, and CRISP will work directly with the providers to attain connectivity.

- **Program Process and Evaluation Data:** CRISP will provide cross-hospital utilization reports, panel reports for pre/post intervention evaluation and custom reports.

Performance data for all interventions funded under the NM RP will be shared for process improvement and evaluation purposes through PCC, the NM RP management entity. Patient level data will be aggregated and/or de-identified on evaluation reports.

Further details on data management and sharing will be in the NM RP Participation Agreement, currently under development with a target completion date of February 26, 2015.

2f. HIPAA Compliance Rules for Implementation

Partners in the Nexus Montgomery Regional Partnership include covered entities (hospitals, health care providers, or payers). The management agreement with PCC will create a business associate relationship between PCC and each of the six hospitals. The terms of such agreement will be conveyed in the subcontract with The Coordinating Center. Both the Primary Care Coalition and The Coordinating Center have written HIPAA policies that include a designated compliance officer, privacy and security officers, regular employee training, network and computer security practices, and plans for handling any breach should one occur. A copy of TCC's "Safeguard for PHI" is included as Appendix E. The PCC's complete HIPAA policy and procedure manual is available on request.

Partners such as senior housing facilities or community social service organizations are not covered entities nor business associates. They are independent entities providing services on behalf of their residents or clients. The MOUs with these organizations will detail the types of information that can and will pass between these organizations and entities of the NM RP, and any required protections.

3. Data and Analytics

3a. Data Collection and Analytic Capabilities

As the program management entity for HSS, the Primary Care Coalition will oversee data collection and analytics for HSS on behalf of the NM RP, the Partnership Program Intervention Committee, and the Governing Board. As a non-profit program management entity in Montgomery County since 1993, the PCC is committed to collecting and using data to assess the impact of all programs. For 15 years, the PCC and its Center for Community-Based Health Informatics (CCBHI) has managed health informatics for the uninsured population in Montgomery County, informing public policy, public budgets, and program design. PCC's team includes the chief information officer (an MD), data analysts, and multiple certified HIT professionals to assist providers in achieving meaningful use and CRISP connectivity. The PCC developed and managed an open-source electronic medical record used in county safety-net clinics for more than ten years. In 2013, PCC's team implemented a new commercial electronic health record (eClinicalWorks) in eight safety-net clinics. The CCBHI team works closely with providers and County payers on custom reporting and analytics to meet operational and program planning needs. Program evaluations are conducted with rigor, partnering with evaluation consultants and academic institutions when appropriate. An example of PCC program evaluation and academic partnership is the emergency department diversion project (2009-2012) evaluation, conducted with the University of Maryland School of Public Health.[3]

Evaluation will include both outcome and process measures; this section discusses outcome measures for cost of care, hospital and EMS utilization, and patient activation. The outcome evaluation will assess the effectiveness of the intervention to decrease health care utilization and costs, especially high-cost hospital utilization. Discussion of process measures, including referrals for case management, distribution of health risk assessment, number enrolled in care coordination, and duration of services, is found in section 7c.

Beginning with seniors in 22 senior residences, the intervention will draw clients from multiple sources: referral from staff of senior living facilities, primary care physicians, emergency medical services, and hospital discharge planners. The expected impact of the intervention varies for each referral source, and presents unique challenges. For example, clients referred from the hospital may be high utilizers prior to the intervention and many of these high utilizers reduce their subsequent utilization even in the absence of the intervention. In contrast, residents referred by the staff of the facility may have had no hospital use in the past 6-12 months but are "at risk" of becoming high users in the immediate term. For this group, an increase in utilization may indicate that the intervention is ineffective or it may be that the treatment was effective because it prevented an even larger increase. If utilization does not increase it may result from effective case management or the

[3] Kim TY, Mortnesen K, Eldridge B. Linking Uninsured Patients Treated In The Emergency Department To Primary Care Shows Some Promise In Maryland, *Health Affairs*. 2015 34:796-804. http://content.healthaffairs.org/content/34/5/796.abstract

clients may not have been at imminent risk of utilization. In the absence of a case control study, it is difficult to tease out these causal relationships.

The planning team considered several evaluation methods that could address these challenges including; (1) standard pre/post measurement (2) experimental/control group design; (3) comparison of program recipients and a statistically constructed group; and (4) measurement of changes in utilization by a specified population. The team concluded that the evaluation should use a multi-pronged approach to produce the most powerful results. The outcome evaluation will use population-based and pre/post approaches.

Population-based Evaluation

Method: The population-based analysis is designed to identify the ability of the program to reduce overall hospital utilization and costs. It captures the effect of the case management as well as the referral and selection criteria. A population-based evaluation method is most appropriate for the cohort of residents in the senior living facilities, since this population is well-defined and the intervention will reach a substantial proportion of this cohort over time. A population-based evaluation is not useful for the broader population of residents living throughout the county, since the intervention will reach too small a proportion of these residents to detect change.

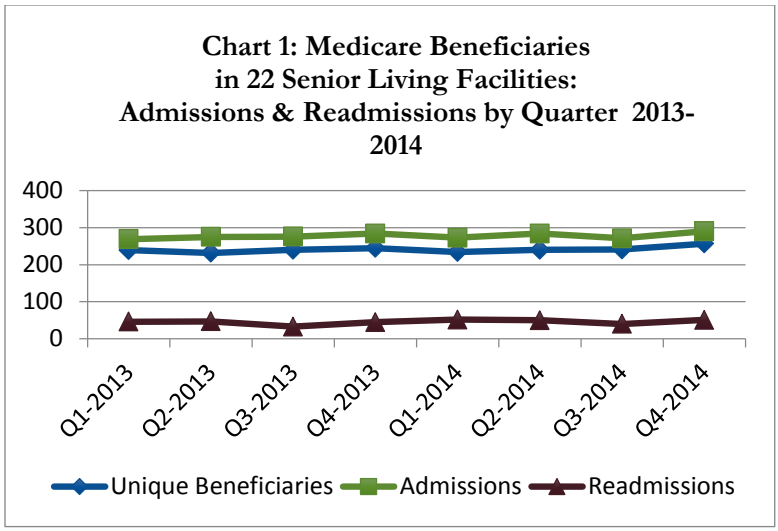
On a quarterly basis, the project will track aggregate and per capita costs, hospital utilization, and EMS calls among all residents of the 22 senior living facilities regardless of whether they received HSS services. The evaluator will assess quarterly data as well as annual data updated quarterly (e.g. rolling 12 months).

In the first year, only a small percentage of residents will receive service. Over time, a higher percentage of the residents will have been touched by the program. Thus, we expect hospital costs and utilization to continue to decrease. The evaluator will monitor any changes in the average age of the population and age-adjust the results if necessary. Over time, the evaluator will be able to plot the costs and utilization to determine if the project has "bent the cost curve."

Interpreting the results will require care because this approach does not account for normal year-to-year variation. In baseline data from independent and assisted living facilities for 2013-2014 provided by VHQC, admissions, ED and observations were relatively stable but, readmissions increased substantially (Table 4 below). There is also some variability in quarterly statistics (Chart 1 on page 22).

Table 4: Total Hospital Usage in Senior Living Facilities: Baseline Data 2013-2014

	2013	2014	Percent Change 2013-2014
Admissions	1,104	1,118	1.3%
Readmissions	171	193	12.9%
ED Visits	758	745	-1.7%
Observations	187	188	0.5%



Metrics: Evaluation will calculate the change in aggregate cost and utilization (based on measures shown in Table 5 on page 24) in the targeted senior living facilities. The senior living facilities represent a unique opportunity to track the cost and utilization metrics shown among a well-defined population that maintains substantially the same size from year to year, although people will enter or exit the cohort. Only a portion of the population will receive direct services and the results will be measurable in the population-based statistics if the program effectively identifies and reduces utilization among high cost residents.

The analysis will rely on data from two sources.

- VHQC will provide aggregate data for each of the outcome indicators for each senior living residence. In developing baseline data, VHQC has demonstrated its ability to identify residents in the Medicare claims database based on the addresses of the senior living facilities.

- Montgomery County Emergency Medical Service (EMS) will provide data on the number and type and disposition of ambulance calls to the addresses of the independent living facilities.

Pre/Post Intervention Evaluation

Method: Recognizing that high utilizers may reduce their utilization even in the absence of the intervention and that low utilizers who are "at risk" may increase their utilization even with a successful program, we will focus on changes in health status and health activation using Insignia Health Patient Activation Measure (PAM)scores. This Pre/Post Approach will be utilized for all program participants, including those living in senior living facilities, referred from hospital to SNF, and referred by EMS or community physicians regardless of the patient's residence. The Coordinating Center will include the PAM questions during the intake evaluation and then repeat it during the last session. TCC will submit baseline data and follow-up data on a quarterly basis for

those clients that completed active case management. The program evaluator will use a paired-sample t-test approach to determine if there is a statistically significant change in PAM scores. To supplement these findings, the evaluator will calculate hospital utilization (using the measures in Table 5) pre- and post-intervention for all individuals referred to the program. Again, the program evaluator will use a paired-sample t-test approach to identify trends.

Metrics: The PCC will implement a pre-post evaluation for all program participants, regardless of residence, using two types of data. First, the PCC will evaluate changes in health status and health activation using Patient Activation Measure scores described below. Second, the evaluator will measure changes in the cost and utilization measures shown in Table 5. Recognizing the limitations of this approach, the findings will be used only to supplement the population-based approach.

This portion of the evaluation will rely on data from CRISP and The Coordinating Center.

- CRISP will provide retrospective data for individual clients enrolled in the intervention. The Coordinating Center will submit to CRISP a panel of patients and the date in which they entered the panel. For each patient, CRISP will provide hospital cost and utilization as defined in Table 5 for one year prior to the patient's enrollment with HSS and one year after their enrollment.

- Through an agreement with VHQC, the project will have access to the PAM questions that will be incorporated in the initial health risk assessment and at the final care coordination session. PAM questions rate the active understanding and health self-management of participants. The Coordinating Center will provide these scores to the evaluator

The selected outcome measures for changes in the hospital and health care costs, utilization, and self-efficacy outcomes include:

- Cost Metrics:
    - Total hospital charges
- Utilization Metrics:
    - Hospital admission (including observation stays over 24 hours)
    - Emergency Department Encounters
    - Potentially avoidable utilization
- Emergency Medical Services
    - EMS Calls
    - EMS Calls transported to hospital as % of total EMS Calls
- Patient Activation: Research indicates that PAM, which rates participants on a scale of 0-100 based on self-reported knowledge, skill, and confidence for self-management, is predictive of future emergency department visits and hospital use.[4]

[4] Greene, Jessica; Hibbard (November 2011). "Why Does Patient Activation Matter? An Examination of the Relationship Between Patient Activation and Health-Related Outcomes". *Journal of General Internal Medicine.* ***27*** *(5): 520–6*

Table 5: Cost, Hospital Utilization, EMS Utilization, and Patient Activation Outcome Measures

Measure	Source/Time Period/Population	Expected Outcomes
Costs		
Total hospital charges	Population-based VHQC: Quarterly & Annual aggregate for the Sr. Facilities Pre/Post (hospital charges only) CRISP: Semi-Annual evaluation based on HSS patients 6 and 12 months prior to and post enrollment.	Population-based: Reduction from baseline year of CY14 and from previous year. Pre/Post: Reduction in utilization one year prior and one year after enrollment in program Note: use of outpatient care is expected to increase, but to be offset by reduced hospital charges.
Hospital Utilization		
Hospital admission (including observation stays over 24 hours)	Population-based VHQC: Quarterly & Annual aggregate for the Sr. Facilities Pre/Post CRISP: Semi-Annual evaluation based on HSS patients 6 and 12 months prior to and post enrollment.	Population-based: Reduction from baseline year of CY14 and from previous year. Pre/Post: Reduction in charges one year prior and one year after enrollment in program
Emergency Department Encounters		
Readmissions (All Cause 30-day Readmits based on HSCRC definition)		
EMS Utilization		
Number of EMS Calls	Population-based: EMS: Quarterly; aggregate for the Sr. Facilities	Population-based: Reduction from baseline year of CY15 and from previous year. (EMS used a different system in CY14)
EMS Calls transported to hospital as percentage of total EMS Calls		Increase in the percentage of calls transported to hospital indicating a decrease in inappropriate use of EMS
Health Behaviors Related to Cost Utilization		
Patient Activation Measure	Pre/Post: Collected by The Coordinating Center at intake and when active care coordination is ending. Transmitted quarterly to the PCC for clients who complete active care coordination in that quarter.	Increase in PAM score

3b. Plan for Use of CRISP Data

See section 2e and Appendix D (CRISP-NM RP Draft MOU) for details on the NM RP plans for promoting provider connectivity to CRISP for admit/discharge/transfer feeds, sharing of care plans, alerts and notifications and use of the Care Profile and Clinical Query portal. The Coordinating

Center will use CRISP to receive notification of hospital admission and emergency department use of empaneled clients.

See section 3a for details on use of CRISP data for evaluation purposes. CRISP has agreed to provide the NM RP with the following reports:

- Until the PaTH reports becomes available, a CRISP resource will work with NexusMontgomery to identify patients for care management
- Provide a cross-hospital utilization report for the region.
- Provide a Tableau-based "pre/post" analysis of one or more cohorts of patients that are relevant to the RP.
- Develop custom reports that can be put into production on an on-going basis based on the specifications provided.

4. Risk Stratification, Health Risk Assessments, Care Profiles & Care Plans

4a. Plans for Risk Stratification

The HSS planning team worked to develop a method of stratifying the risk of community-based seniors and identifying seniors at near term risk of becoming high utilizers of health care services, especially hospital services. The team explored two approaches: (1) a data analytic approach and (2) a risk assessment tool administered to seniors referred through select sources (senior housing resident counselors, PCPs, EMS).

Data Analytic Approach: The NexusMontgomery evaluation team worked with VHQC to conduct both univariate analyses and multivariate analyses using 2013 and 2014 Medicare data from the senior living facilities and from the community.

- The univariate analyses provide a profile of the population, their chronic diseases, and differences between high and low utilizers.

- The multivariate analyses sought to determine an algorithm using one year of hospital data (2013) that could predict future hospital use (2014). Such an algorithm could then theoretically use 2015 data to predict the high users in the implementation year (2016), and subsequent year pairings going forward.

The resulting best algorithm from multivariate analysis predicted just 23% of the variation in hospital admissions in 2014. Further, analysis based on hospital data has limited applicability to stratifying residents who did not use the hospital in 2013 or 2014. Given that the best algorithm has a relatively low predictive value, a risk assessment strategy was pursued instead.

Risk Assessment Tool: In reactor panel discussions, both PCPs and resident counselors indicated high confidence in their ability to stratify risk and identify patients/residents who are at or have recently entered a higher risk for hospital utilization. Working with three senior residences (two subsidized and one market-rate), the NM design team tested the hypothesis that resident counselors

at the senior living facilities can identify seniors with high risk for a hospital encounter.[5] Resident counselors referred a sample of seniors they considered "most at risk". Health risk assessments were conducted with this sample of seniors by The Coordinating Center using a Care at Hand risk evaluation tool. A complete list of survey questions used in this pilot test is included as Appendix F (Referral and Resident Survey Questions). Section 4 b-c describes important features of the Care at Hand tool and approach, including the survey questions.

Results demonstrated 78% concurrence between the resident counselors' referrals and a moderate to high risk score on the health risk assessment. Hypertension, diabetes, arthritis, and fall risk were the most common active medical issues. The characteristics of the residents who were at high risk included: not having an active caregiver, more than half took more than 5 medications, nearly half had difficulty performing independent activities of daily living (IADLs), and nearly a third needed help with obtaining medications and medical paperwork.

The results confirmed that characteristics not found in hospital claims data impact risk scores, supporting the use of carefully selected and trained referral sources and a health risk assessment as the means to identifying seniors at risk of near term preventable hospital utilization. This approach complements the approach hospital care transition programs take in identifying discharged patients into their care transition programs. Those risk stratification methods utilize information available in the hospital, in large part hospital use, age, and disease state. Because the target population for HSS has not necessarily had a recent hospital contact, the approach to risk stratification utilizes data from direct interviews with residents and home-based observation. Should CRISP add risk stratification scores to the planned Care Profile on the Clinical Query Portal, the Care at Hand risk stratification tool may be able to incorporate these scores to inform risk stratification for seniors recently hospitalized.

4b-c. Risk Stratification and Health Risk Assessments Accountability

The HSS will use a web-based mobile application called Care at Hand to perform the health risk assessments and risk stratification. The Care at Hand system[6] begins with an enrollment survey, which takes about 30 minutes to complete and stratifies patients into one of four risk categories (lowest risk, low risk, medium risk, and high risk). In addition to an overall risk level, the survey provides information to the care team (nurse case manager with community health coach) that identifies the client's primary active issues during the enrollment process.

Subsequently, the Care at Hand algorithm creates a custom survey of up to 15 questions that is tailored to the client's active issues. For example, a client with congestive heart failure may be asked

[5] The Coordinating Center staff interviewed a total of 46 referred seniors from three senior residences using a risk assessment tool, Care-at-Hand. Interviewed seniors ranged in age from 60 to 100 and included 70% women. Interviews took place at the senior residences, and interviewees were stratified as high, medium or low risk of hospital utilization.

[6] The Care at Hand system was developed by a team based on input from outside experts and on the literature about care coordination. It has been validated through a process including expert review by geriatricians and community nurses, psychometric evaluation among nonmedical workers, and field testing.

how many pillows he or she slept on the night before. The client's answers to these questions may trigger one or more high-risk alerts to be sent to the nurse care manager in real time. The community health coach, nurse, and client communicate while the coach is still in the room with the client and develop a plan to resolve the risk factors that led to the alert(s). (Domain 5 includes a detailed description of the triaging and referral process triggered by the alert). On the next encounter with the community health coach, the client will be asked a new set of 15 questions, which change based on proprietary algorithms that predict upcoming risk factors for hospital admission or readmission. The alerts generated in each encounter allow the algorithm to continually adjust and refine the overall predicted risk level of the client.

The questions used by the application are all in lay language and are designed to cater to the scope of practice of the non-licensed community health coaches. The assessment questions may be delivered in person or telephonically. The survey questions are organized into three categories: issues intrinsic to the patient's pathophysiology, such as a heart failure exacerbation; extrinsic issues pertaining to care coordination breakdowns, such as a physician's office that never returned a phone call; and extrinsic issues pertaining to social and environmental factors, such as financial or food insecurity.

Care at Hand was created to serve patients who had been admitted to the hospital and were at risk of readmission; the algorithm was designed to generate risk alerts based on the client's risk of being re-admitted to the hospital within 30 days of the index admission. However, research performed by Care at Hand as well as The Coordinating Center's capabilities demonstrate that this technology is also appropriate for clients who have not yet reached the peak of their utilization, which is the target population for this project. Analysis of the Care at Hand tool (to be published in January 2016[7]) showed that the risk score is predictive for up to 120 days (the longest time period measured), and that the difference in risk of hospitalization between the high-risk and baseline-risk group remains statistically significant for at least 120 days post-discharge. This analysis was based on actual usage of hospital services by clients included in the study. Care at Hand will tailor the questions, especially the enrollment survey, to meet the needs and risk factors of a population of clients who have not recently been hospitalized. The Coordinating Center used Care at Hand for the pilot test of resident counselor referral described in Domain 4a and 5b. In that case, the questions were tailored to the needs of seniors in residential communities.

The information on risk levels will be recorded in the Care at Hand mobile app. Clients who fall into the "high risk" category will automatically be enrolled in intensive care coordination. Clients who generate moderate risk scores may be enrolled at the discretion of the care coordination team but will not automatically be enrolled into active care management.

Clients who have "graduated" from care management will be monitored via periodic health risk assessments on an ongoing basis so the care coordination team will become aware of an increase in risk level before the client needs acute medical care. Based on the status of the individual client, Community Health Coaches will contact these clients either telephonically or in-person, every one to three months to deliver a brief (2-5 minute) risk survey.

[7] Ostrovsky A, O'Connor L, et al. Predicting 30-120 day readmission risk among Medicare FFS patients using non-medical workers and mobile technology. PHIM. Jan 2016 *in press.*

4d. Care Profiles and Care Plans

Care coordination for the HSS program will be provided by The Coordinating Center (TCC). TCC uses two information systems to capture, track and analyze client data. TCC uses Care at Hand for predictive risk and CARMA, a proprietary software system that tracks care coordination clients with care plans. CARMA includes client's personal goals, conditions, physician appointments, and encounter details. See section 5a for additional elements of the care plan.

The Coordinating Center, in support of its many care coordination programs of which HSS is one, is partnering with CRISP on a participation agreement that brings capacity to upload client panels, receive ENS and Alerts, and ultimately upload care plans.

For the care coordination team working directly with clients, care plans are accessed through TCC's systems. For providers also serving these same clients, care plans will be available through the CRISP Clinical Query Portal when TCC's CRISP connection is completed.

4e. Training Plans for New Tools

The Coordinating Center already uses CARMA and Care at Hand in services to other organizations and training is a part of the organization's 30 day comprehensive orientation program. Throughout their employment, TCC employees have focused training on the specific work and processes of the program for which they were hired.

TCC's RN care coordinators are licensed professionals. In addition to active licensure, coordinators are expected to have at least three years community or case management experience. All licensed coordinators are encouraged to become certified in case management within three years of employment. The community health coaches have an associate's or bachelor's degree in a health/human services or related field, two years related experience and/or training and working knowledge of housing, social service and individual support services, and Medicare/ Medicaid services or Home and Community-based Waivers experience.

Community health coaches receive training on the delivery of a modified evidence-based care transition intervention. Training focuses on medication management, understanding the medical record, appropriate follow-up, and red flags that signal increased risk of readmission (Coleman's model). All TCC employees attend comprehensive training on all technology components of their role. Training includes the following areas and systems:

- Comprehensive HIPAA training program
- CARMA, TCC's care coordination information system
- CRISP notifications
- Care at Hand Mobile Technology
    - Secure access to the device
    - Use of the software application
    - Enrolling a client and delivering the Care at Hand survey
    - Responding to an alert (Coach or RN Care Coordinator)
    - Responding to care loops

The Coordinating Center is responsible for training the non-clinical staff (resident counselors) at independent senior living facilities in the specific referral criteria. Training will expand to Montgomery County Emergency Medical Services and primary care physician offices. As the program expands, the latter two referral sources may refer seniors from the community beyond the senior living facilities. TCC and the PCC will share responsibility for training these additional referral sources, with oversight from the NM Regional Partnership Program Intervention Committee (P-PIC).

The NM RP Governance Board will make decisions regarding expansion to referrals for community-based seniors and approve communication materials. The NM RP Physician Advisory Board and the P-PIC will develop recommendations for expansion of referrals from PCPs.

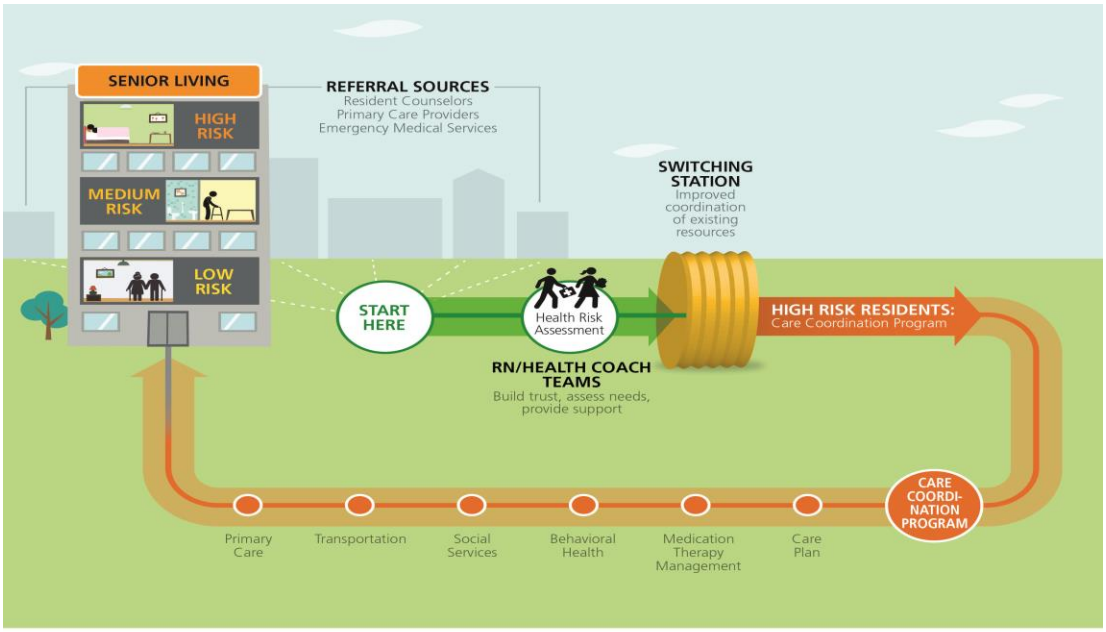


Figure 3: Risk Assessment and Care Coordination

5. Care Coordination

5a & c. New Care Coordination Capabilities and Accountability

The Coordinating Center will provide direct care coordination services for the HSS project, using a data-driven model and Care at Hand technology. (Figure 3 on page 29 depicts risk assessment and care coordination activities in the senior living facilities.) Key features include:

- **Risk Stratification:** Following referral to HSS, a health risk assessment (HRA) using Care at Hand technology will be conducted. A completed HRA will categorize referred individuals to low, medium, or high risk of a hospital encounter in the next 120 days. Stratification will be based on medical and social factors demonstrated to be predictors of hospital utilization, and will help to determine the level and frequency of interventions required.

- **Individualized Care Plans:** Based on findings from the HRA, an individualized care plan for coordinated services that includes in-person and telephonic contacts will be developed for high risk individuals. Care management will be provided based on each individual's needs, not on a standardized model that is applied to all individuals. Some individuals may require only a single in-person visit followed by periodic telephonic follow-up over a period of months. Others may require frequent in-person visits over a period of weeks or months to reduce their risk of hospital utilization.
  Note: Moderate risk seniors will receive follow-up calls on a periodic basis to identify individuals early as they begin to trigger high risk alerts. Low risk individuals will not be invited to participate further in HSS.

- **Optimized Team:** A care coordination team includes both licensed and unlicensed personnel, each working to the maximum of their skills and training. A team includes regular staff (RNs, community health coaches, community health workers, and social workers) and consultative staff (e.g. clinical pharmacists, psychiatrists, physical and occupational therapists, home care services).

- **Communication and Coordination:** This is a client- and family-centered approach characterized by frequent communication between providers of care (RNs and community health coaches) and clients and their families.

- **Leveraged Community Services:** Considerable resources are already available in Montgomery County, though many serve a limited number of residents or are not well coordinated. Care Coordination will leverage and utilize, but not duplicate these services. These resources include, but are not limited to:
  - Behavioral Health Services
  - Durable Medical Equipment

- End of life planning/palliative care
- Exercise and Recreation
- Health and Wellness Classes and Recreational Opportunities
- Home Health Aides
- Nursing
- Occupational Therapy
- Physical Therapy
- Social connectedness/community centers
- Transportation
- Wellness and education/ engaging in self-management

- **A Central Call Number** will be available for "observers" and designated referrers if they are concerned about a client's condition or welfare.

- **The individualized care plan** may include any or all of the following activities based on a client's needs:
  - Comprehensive assessment to prioritize the top 1-3 issues that put the client at risk of hospital contact in the next 6 months. Assessment may include: home environment and fall risk; assistive device and equipment requirements; prior hospital contacts (ED, inpatient, observation); polypharmacy; Activities of Daily Living (e.g. feeding, toileting, grooming, continence, bathing, walking/transferring); Instrumental Activities of Daily Living (e.g. managing medication, managing transportation, managing assistive devices, shopping, meal preparation); standardized screening and assessments (e.g. nutrition, depression, quality of life, functional ability, mental status, gait and balance); health literacy
  - Engage and communicate with family and with medical and social providers involved in client's life as authorized by the client
  - Accompany client to medical appointments to supplement communication, coordination and health literacy
  - Expedite applications for welfare benefits, home health, and hospice services as appropriate
  - Provide/refer for housing assistance for clients desiring to age in place or find alternative housing
  - Provide/refer for behavioral health services

- **Provide/refer for Medication Therapy Management** (medication reconciliation, potential adverse effects, regimen simplification, indications for different or additional medications). On a pilot basis, ALFA Pharmacy[8] medication therapy management program will be provided

[8] Alfa Pharmacy is a specialty pharmacy with over 30 years of experience in patient care, across various inpatient, outpatient, and long term care settings and populations. They are staffed by licensed pharmacists, as well as by certified pharmacy technicians, a social worker, and other ancillary support staff. Licensed pharmacists from ALFA Pharmacy have participated in providing award winning clinical services, including Medication Therapy Management, in safety-net clinics in Montgomery County for more than five years.

to seniors for whom polypharmacy or other medication issues are significant concerns. These individuals will be identified during the care coordination enrollment process.

5b. Identifying Patients Eligible for Care Coordination

Refer to Domain 1 for target population, both initially and during rollout. In Year One the intervention will initially target residents aged 65 and over living in 22 independent living facilities. By year-end of 2016, the target population will expand with up to 11 additional independent living facilities, to the broader Maryland catchment areas of the NM RP hospitals, and to additionally target patients who were referred from hospital to SNF/rehab in order to begin active care coordination commensurate with their subacute discharge.

Within these populations, only individuals who are identified by the risk stratification process outlined in Domain 4 will be enrolled in active care coordination. This will occur through the initial Care at Hand health risk assessment combined with the clinical and non-clinical expertise of the care coordination team members.

The care coordinating team will accept referrals from several sources: senior living resident counselors, EMS, hospital discharge planners, and PCPs. The eligibility of an individual for care coordination is determined by the HRA and accompanying risk stratification process. Residents of facilities will primarily be identified by their resident counselors (or equivalent staff position). Please refer to Domain 4 for a description of a pilot study that was conducted to validate this referral source. In the pilot study conducted during the planning process, the following referral criteria were given to residential facility staff:

1. Chronic life-limiting conditions (e.g. heart failure, dementia, etc.)
2. Frequent users of EMS
3. Residents with little family support
4. Residents with a noticeable decline in functioning (e.g. gait, grooming, cognition, activities of daily living)
5. Resident you "just worry about."

The Coordinating Center will train non-clinical staff (resident counselors) at independent living facilities in specific referral criteria. However, the intuition or "gut feeling" of these staff members has already demonstrated efficacy as a referral source in the pilot test.

HSS will accept referrals from EMS and participating hospitals of patients who are residents at these target facilities. For hospital referrals, the hospitals will use the criteria for enrollment in their own transitional care and readmission prevention programs. If a resident of the target facility is being discharged from the hospital and meets the criteria for the hospital's care transitions program, the resident will instead be invited into HSS. This places the HSS program as responsible for population health within the targeted senior living facilities, supporting the evaluation method and creating potential for shared-risk with The Coordinating Center in future years.

After HSS is implemented in the senior living facilities, the program will expand to other residents in the community who may be at risk of hospitalization. The PCC and TCC will partner to train professionals, including community primary care physicians, and EMS on how to identify residents in the community who may be at risk of hospitalization. These professionals will use their professional judgment and the criteria listed above to refer to HSS.

5d. Staffing Models for Care Coordination

The staffing model for a care coordination team (a hub) is one RN care coordinator at the core of each hub/team working with six community health coaches. The RN care coordinator is responsible for interacting with the community health coaches as well as responding to risk alerts generated by the mobile technology used during each encounter with an individual. A scheduler/administrative person for each hub/team works closely with external entities to support referrals, monitor CRISP notifications, and assist with scheduling client visits.

Up to three hubs can be supported by a program manager and a program liaison (typically an LCSW-C). The program liaison has extensive experience in hospital and community relationship building and conducts outreach to participating organizations, including the 22 senior living facilities, hospitals, PCPs, community providers, and other entities involved with the project. Staffing roles are described in further detail in Table 6 on page 34 and responsibilities may be modified to meet the nuances of the NM intervention as it evolves to achieve the desired outcomes.

Because the program manager and project liaison can support up to three hubs at one time, a three-hub configuration is the most cost effective.

Staffing for medication therapy management (MTM) will include pharmacists experienced in MTM, pharmacy technicians, social workers, and support personnel under the leadership of ALFA Pharmacy.

Table 6: Care Coordination Staffing Model

Program Manager	• Project oversight, management, and supervision of team • Monthly dashboard/reporting • Facilitates changes in response to rapid cycle improvements • Attendance at collaborative meetings
Scheduler	• Schedules visits • CRISP uploads and ENS alerts • Enters Care at Hand enrollments
6 Community Health Coaches **(25 – 35 clients per coach)**	• Introduce Program to Patient / Caregiver • Register Patient in CARMA • Deliver Care Coordination Intervention • Conducts Care at Hand survey • Identify trends that contribute to barriers or success • Document interventions in CARMA • Address barriers and identify resources for immediate and long term needs ▫ Transportation (medical or other related) ▫ Pharmacy ▫ Housing ▫ Mental Health/Substance Abuse ▫ Service Support dollars for critical services: transportation, meals, communication, medications, other Community Services
Nurse Care Coordinator	• Responds to Care at Hand Alerts • Coordinates care with internal and external care providers
Liaison	• Responsible for managing referral process from all entities • Develop relationships with all entities • Promote communication between entities and Care Coordination team • Conduct surveillance surveys for those at moderate risk

5e. Patient Engagement Techniques

The HSS plan for patient engagement will encompass all areas of the continuum of engagement, from an unaware patient with no understanding of the intervention to an actively engaged patient. This plan will also be inclusive of seniors' care networks, and will target family members and other caregivers as well as the patients themselves. Furthermore, all communication and marketing will be accessible to seniors with varying levels of reading ability, executive function and other cognitive abilities, English language proficiency, and health literacy.

As described in Domain 5b. The Coordinating Center will be training senior living facility staff (resident counselors), and eventually other medical staff (eg. EMS, PCPs) in referral criteria. As part of this training process, TCC will also provide these referring individuals with marketing materials that meet the specifications described above, and will train individuals to describe the program in a manner that is consistent across providers and is sensitive to patient needs. TCC's Community Health Coaches will also conduct outreach and education during the rollout phase of the care coordination program, and will receive training (see Domain 4e and 5b) about how to educate and engage members of this target population, with their specific needs and priorities.

Once patients are enrolled into active care coordination, they will be part of a model that has as its central focus a patient-centered, facilitative approach (see above and 7d, below). The role of the Community Health Coach is to equip patients to be fully engaged in and take ownership of their health and health care. This role and aim aligns with the priorities laid out in the final report of the HSCRC Consumer Engagement Task Force (CETF).[9]

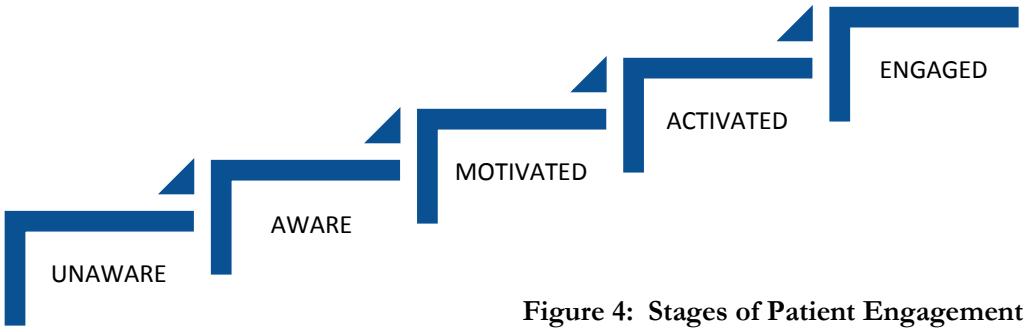


Figure 4: Stages of Patient Engagement

Both the Primary Care Coalition and The Coordinating Center had representation on this the HSCRC CETF. The two organizations are committed to working together to develop materials and plans that give a consistent message tailored to the needs of patients and caregivers at different stages of the engagement continuum (Figure 4 above).

6. Physician Alignment

6a. Creating Physician Alignment

During the planning phase, two physician group discussions were held with primary care physicians in collaboration with the Montgomery County Medical Society. Primary care physicians identified three key areas of alignment with HSS:

a. **Patients at Risk:** PCPs stated they know when a patient's health status or risk factors such as social support change, and they would welcome a program into which to refer such patients. Most PCPs in Montgomery County are in small practices. In a survey conducted by the Montgomery County Medical Society, of 184 physician respondents, 71% do not participate in a care management program or PCMH.

b. **Standardized Care Plans:** PCPs requested more ready access to and standardization of hospital discharge care plan elements. With limited time for patients, different care plan formats, data definitions and sheer volume of pages was not conducive to effective utilization of care plans. Physicians welcomed facilitated discussion to improve format and content.

[9] http://hscrc.state.md.us/documents/md-maphs/wg-meet/ce/09-02/CETF-Commission-Report-FINAL.pdf

c. **CRISP Utilization:** The Medical Society physician survey reported 75% of physicians were not using CRISP. This difference from CRISP statistics on numbers of hospitalized patients for whom there is an ENS subscriber likely reflects the many small practices in Montgomery County.

The HSS program will further develop alignment with physicians in the three areas above. Physicians will be engaged in referring at risk patients, and will be represented in discussions on care plan elements. HSS staff will advise physician groups directly involved with HSS on the value of the CRISP Query Portal, Care Profile for accessing care plans, and ENS and Alerts.

After HSS gains experience in the independent senior living facilities, the program will be piloted for seniors living in the community at large. Primary care providers who are already serving residents of the senior living facilities and are therefore familiar with the HSS program will serve as the pilot referral source to test how to engage PCPs to refer only those patients at high risk of near term hospital utilization. Once the process is established to support PCPs in serving as appropriate referral sources, HSS will be offered to additional PCPs throughout the community. Physician practices located in census blocks with higher rates of Medicare hospitalizations will be oriented first to the referral criteria and the benefits of enrolling their patients in HSS.

The program expects that physicians will see the benefits to their patients from care coordination and find that the process enhances their practices, thereby developing trust with HSS. The HSS program will reinforce health education and help to address patients' social needs, resulting in greater patient engagement and compliance with their physicians' plans of care and improved health. For example, resolving transportation issues helps patients keep appointments and reduce office "no-shows." As appropriate, health coaches are available to attend appointments, and nurse coordinators can share care plans with physicians; reinforcing and facilitating physicians' efforts to care for patients.

PCPs indicated in their group panel sessions and in the Medical Society survey that they are not utilizing the Medicare Chronic Care Management (CCM) code now nor planning to in the near future. A positive experience with a care coordination service for their highest risk patients may create opportunity to re-visit use of CCM. As noted in 6a above, if there is interest on the part of the PCPs, the NexusMontgomery Regional Partnership would consider aligning with physicians to build a shared CCM utility. This could be particularly useful in Montgomery County where there are many small physician practices, with fewer resources to take on this investment themselves.

6b. New Processes/Procedures/Tools for Connecting Community Physicians, Behavioral Health, and Other Providers

During the project design process, community physicians observed that coordination between all involved parties after hospital discharge often results in confusion and missed follow-up appointments. Community physicians recommended that a single liaison between the patient's home and the physician's office would help to assure that patients got to their appointments and would provide a single care coordinator who could follow-up on urgent problems. Community physicians indicated that they knew which patients needed more support or were at risk for hospitalization, but could not help the patients when they did not come in for their appointments. Responding to this

input, the HSS health coaches will serve in the role of coordinating care and connecting residents to their PCPs.

During the HSS project design process physicians noted there was significant lack of mental health services for geriatric patients available in the community. HSS recognizes that connections with behavioral health providers is an area of priority focus, and can help to leverage and coordinate the limited mental health services for HSS clients. It is noted that very few psychiatrists accept Medicare because of the high demand for their services and low Medicare reimbursement. This may be an area for special projects the NM RP can seek with new funding or savings from HSS (e.g. new care delivery models such as geriatric social workers or telemedicine to increase availability of psychiatric services for Medicare beneficiaries).

See section 2e for discussion of the promotion of CRISP tools and CRISP connectivity for improved sharing of care plans, notifications and alerts, and care manager-to-patient relationships.

6c. Value-based Payment Models

Initially, neither the NexusMontgomery RP nor specifically the HSS program, introduces new value-based payment models. The HSS program is designed such that the care coordination hubs serving the senior living facilities have responsibility for the health of that fixed-place population. In the future, NM RP will consider value based or shared risk contracting for the care coordination services to the senior housing facilities.

As the program expands to serve seniors living throughout the community, the expansion of HSS is expected to foster trusting relationships with primary care providers who have large Medicare or Medicare/Medicaid practices. The NexusMontgomery Physician Advisory Board will also grow in its capacity to provide input that is representative of physician needs in this community. As providers see the benefits of care management, the NM RP will consider aligning with physicians to build a shared CCM utility.

7. Organizational Effectiveness Tools

7a. Implementation Plan

Please see the project workplan on pages 38-41, describing project implementation with task accountabilities and timeline. This timeline represents a continuation of work started in the design phase. It assumes a February 1, 2016 award announcement by HSCRC for implementation funds and a March 1, 2016 start to implementation activities that require contractual relationships.

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Health Stabilization for Seniors WorkPlan			
ACTIVITIES	**Responsible Persons/Organizations**	**Timeline**	
		Start Date	**End Date**
Project Management			
Establish and maintain regular meeting and reporting schedule with NM RP and P-PIC	NM Regional Partnership	3/15/2016	ongoing
Develop MOU with VHQC detailing utilization reports and deliverable dates	NM Regional Partnership	12/1/2015	2/15/2016
Develop MOU with CRISP detailing utilization reports and deliverable dates	NM Regional Partnership	12/1/2015	2/1/2016
Complete contracts or service agreements with project vendors and partners: • TCC (care coordination) • Senior Living Facilities • Evaluation partner	Primary Care Coalition with Vendors and Partners	3/1/2016	3/15/2016
Contractor Oversight	Primary Care Coalition	3/1/2016	ongoing
Establish and convene Learning Collaboratives (eg. facility counselors; TCC; EMS; hospitals)	Primary Care Coalition	3/1/2016	ongoing
Customize Consents for Participation in Care Coordination Program	TCC and Primary Care Coalition	2/1/2016	3/1/2016
Administration			
Develop go live checklist for each facility	TCC and Primary Care Coalition	2/1/2016	3/1/2016
Engage Resident Counselors in relationship building	TCC and Primary Care Coalition	2/1/2016	ongoing
Refine referral criteria and customize workflow processes for referral and implementation of care coordination	TCC	1/15/2016	3/1/2016

Develop materials for training hospital, EMS, and PCP on program and referral process.	TCC	1/15/2016	2/15/2016
Train resident counselors, EMS personnel, PCPs on referral process and criteria	TCC	2/1/2016	3/15/2016
Customize outreach and supporting materials for hospitals, PCPs, EMS, residents, caregivers, etc.	Primary Care Coalition	1/1/2016	2/15/2016
Update resource directory - providers and services used most often by residents; ongoing processes	Primary Care Coalition and TCC	11/15/2015	2/1/2016
Reach out to expansion senior living facilities to confirm interest in participating	Primary Care Coalition and TCC	4/1/2016	9/30/2016
Engage skilled nursing facilities in relationship building	TCC and Primary Care Coalition	5/1/2016	ongoing
Operations			
Continue implementation meetings with essential stakeholders within Regional Partnership to detail key program elements and milestones and set ongoing schedule for meetings	TCC and Primary Care Coalition	12/20/2015	3/1/2016
Deploy Care Coordination Team 1 nurses/coaches to designated residential facilities to begin identifying high risk target population using CAH survey tool	TCC	3/1/2016	ongoing
Accept referrals from resident counselors	TCC	4/1/2016	ongoing
Educate hospitals, EMS and PCPs regarding referral process for expanded residential facilities, hospital discharges to SNFs (regardless of residence), and PCPs already engaged with TCC for their patients (regardless of residence).	TCC	4/15/2016	ongoing
Deploy Team Care Coordination 2 nurses/coaches support residential surveying for high risk referrals, while developing deployment activities for SNFs, EMS, and PCPs	TCC	6/1/2016	ongoing
Deploy Team 2 to accept referrals from EMS and PCPs	TCC	7/1/2016	ongoing

Meet with three most active physician offices surrounding each senior living facilities	TCC	4/1/2016	9/30/2016
Develop weekly schedule of educational programs for high need issues - each facility will have at least one quarterly program	TCC	4-1-2016	ongoing
Launch pilot on focused MTM	PCC/TCC and ALFA Pharmacy	4/1/2016	6/30/2016
Promotion			
Define outreach plan for Care Coordination Program at senior housing facilities	TCC and Primary Care Coalition	1/2/2016	3/1/2016
Conduct Kick Off Meeting with all stakeholders	TCC and Primary Care Coalition	3/1/2016	3/15/2016
Define outreach plan for care coordination for PCPs, EMS, and hospital-to-SNF	TCC and Primary Care Coalition	2/15/2016	3/15/2016
Activate resident education program	Primary Care Coalition and TCC	Quarterly	3/31/2016 6/30/2016 9/30/2016 12/20/2016
Data and Evaluation			
Set up data warehouse with baseline information on each senior living facility and each SNF	Primary Care Coalition	1/15/2016	3/1/2016
Apply to CRISP for NM Panel; develop schedule for uploading panel	TCC	12/1/2016	2/28/2016
Establish CRISP functionality to include shared care plans and designated care manager	Primary Care Coalition and TCC with CRISP	2/1/2016	6/30/2016
Implement documentation enhancements for residential referrals	TCC	3/15/2016	5/1/2016
Develop process and evaluation reports for NM RP and P-PIC	Primary Care Coalition and TCC	3/15/2016	6/30/2016
Develop secure online method for sending referrals	TCC	2/1/2016	4/1/2016

Transmit pre and post intervention Patient Activation Measures to the Program Manager for all clients who complete the program in quarter	TCC/PCC	Quarterly	3/31/2016 6/30/2016 9/30/2016 12/20/2016
Conduct paired sample t-test on pre and post activation measures for clients who complete the program in given quarter and all clients served to date	Program Evaluator	Quarterly	3/31/2016 6/30/2016 9/30/2016 12/20/2016
Review evaluation metrics with stakeholders.	Program Evaluator with PCC/TCC	Quarterly	3/31/2016 6/30/2016 9/30/2016 12/20/2016
Performance Improvement			
Establish and conduct Learning Collaboratives with key stakeholders	Primary Care Coalition and TCC	3/1/2016	ongoing
Quarterly meetings of care coordination teams	PCC/TCC	Quarterly	3/31/2016 6/30/2016 9/30/2016 12/20/2016
Program Evaluation			
Finalize Evaluation Plan consistent with project interventions and metrics	Regional Partnership	3/31/2016	6/3/2016
Produce quarterly and annual reports	Evaluator with PCC	6/1/2016	ongoing

7b. Continuous Improvement Methods

To ensure continuous improvement in the HSS program, project activities will utilize the Model for Improvement (MFI). The MFI approach was developed by Dr. Tom Nolan, a statistician, author, and consultant,[10] specializing in the improvement of quality and productivity with whom the PCC has worked for many years on multiple successful projects. Dr. Nolan's MFI has been referenced by the Centers for Medicare and Medicaid Services.

The MFI approach supports continuous improvement by identifying and testing changes, while rigorously measuring results to determine what changes actually result in improvement. The method starts with three fundamental questions: (1) what are we trying to accomplish (the aim)? (2) how will we know that a change is an improvement (metrics)? and (3) what changes can we make that will result in improvement? Proposed changes are tried in rapid sequences of Plan-Do-Study-Act (PDSA) cycles that test their impact on real world settings. Multidisciplinary teams propose and test changes, observe the results, and act on what is learned to refine or "scale up" and sustain improvements.

7c. Metrics Dashboard to Manage, Monitor, and Improve Performance

The progress of the HSS program will be monitored at multiple levels. As the direct care coordination provider, The Coordinating Center will monitor their caseload and details of the care management process at the program and participant level, including progress of each client, client satisfaction, and progress toward overall goals. The process measures and targets are listed in Table 7.

Table 7: HSS Process Measures

Program Level Process Measures	Process Target
a. Referral Conversion to active Case Management (% of referrals with initial HRA as High Risk)	a. 70%
b. Number of people enrolled in "active" care coordination	b. 200 unique high risk Medicare beneficiaries > 65 per month
c. Duration of participation in Active care coordination	c. 60 days on average
d. Average days from date of referral to initial site visit	d. 3 days if hospitalized in the past 30 days, otherwise 5 days

[10] Dr. Nolan is a founding member of Associates in Process Improvement and a Senior Fellow at the Institute for Healthcare Improvement.

Participant Level Process Measures	Process Target
a. Personal goal achieved	a. 90% of Participants will achieve or make progress toward their stated personal goals.
b. For non-English speaking participants: Use of interpreter or translation services	b. 100%
c. Functional needs (contributors to hospital encounters)	c. By Needs Class: percent of functional needs met. No target, this is an operational measure to bring to the NM RP Governance Board for consideration of other services to fund or facilitate.
d. Client Activation and client satisfaction scores	d. Targets to be set after initial data collection

For the Governance Board and the Partnership Program Intervention Committee (P-PIC), a project dashboard (Figure 5 on page 44) will be used to monitor overall program management. The dashboard will track characteristics of the referral and intervention process to gauge the overall progress of the program and to guide quality improvement efforts. The following measures will be included as part of the dashboard:

1. Number of clients identified through each referral mechanism. This will give the PCC program manager the ability to identify referral sources that are under or over performing.

2. Distribution of risk levels of clients referred from each referral source. This metric will highlight the extent to which sources are using appropriate criteria to refer patients that need services.

3. Amount of time from referral to health risk assessment.

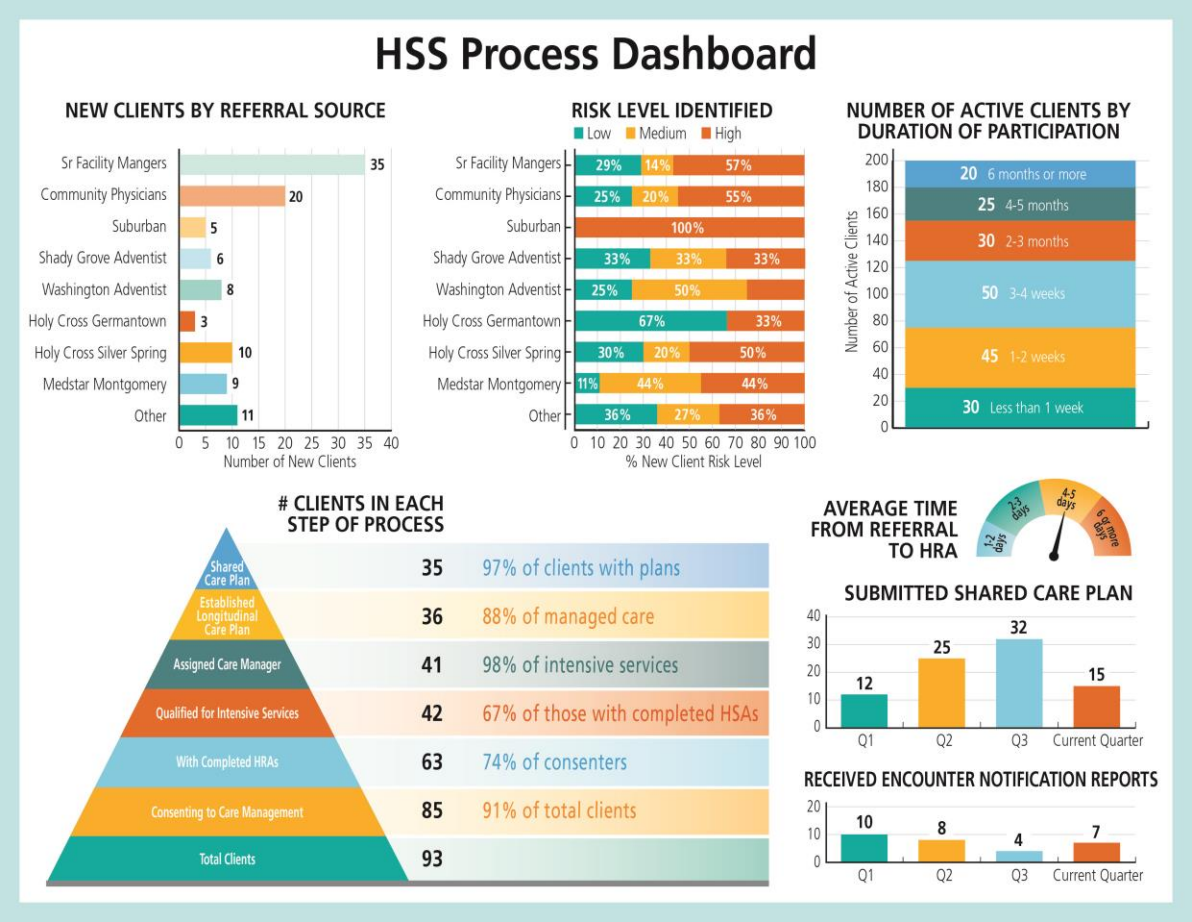
4. Number and percent of clients that move from one step of care coordination to the next. The program manager can use this data to identify steps of the process that create obstacles for clients. Steps include:
   - Consented to care management
   - Completed an initial health risk assessment
   - Qualified for intensive services
   - Assigned to RN care manager and community coach
   - Established longitudinal care plan
   - Developed shared care profile

5. Use of CRISP resources

- Registered for Encounter Notification Alerts
- Received Encounter Notification Alerts
- Submitted shared care profile

Process monitoring is one part of the program oversight, in addition to outcomes measurement and monitoring (see Section 3a). See Section 7b for the process to be used to improve performance.

Figure 5: Dashboard for HSS Program Management



7d. Effecting a Patient-Centered Culture.

The Coordinating Center is responsible for direct client contact for care coordination services. The TCC will promote a patient-centered culture by providing assessment and services that are individualized to the needs of each patient and their family members. Work will focus on issues or areas to reduce risk of hospitalization determined in consultation with the resident. The schedule of contacts and interventions will vary according to the needs of the resident and will vary over time as the resident's risk level declines. Bilingual Spanish-English community coaches are in sufficient number to meet the needs of the many Spanish-speaking immigrants living in Montgomery County. Additional languages will be sought for community health coaches as trends in linguistic needs are

determined. Language interpretation services will be available for languages not available through the bilingual community of health coaches.

Further, as described in Section 5e, TCC was represented on the HSCRC Consumer Engagement Task Force and will use the HSCRC approach in its work.

8. New Care Delivery Models

8a. New Delivery Models to Support the Care Coordination Outcomes.

The HSS project will utilize a mobile application for health risk assessment and ongoing follow-up assessment. Using this technology, Care at Hand, the community health coaches will interview residents to determine risk, issues areas, and appropriate interventions. As the coach works with the resident, Care at Hand will generate new, individualized questions to assess progress and changing risk levels. This flexible technology is designed to customize the services provided to each resident. The technology also allows the community health coach, while onsite with the client, to visually or telephonically connect with the RN nurse coordinator to immediately address health risk alerts together with the client.

8b. Identifying Patients, New Processes, New Technology and Sharing of Information

For the HSS program, new patients are identified through referral sources, as discussed previously in this report. New or improved processes will be developed through application of the Model for Improvement (see section 7b). Sharing of information between providers will be facilitated through increased utilization of CRISP services.

At the NexusMontgomery governance level, multiple programs including HSS will be monitored for performance against expected outcomes. As described in Section 2a, the NM Regional partnership framework includes a management partner charged with providing input and support to the Partnership Program Intervention Committee (P-PIC), including;

- Evaluation of all programs within the NM RP
- Best practices research; identifying promising and "best" practices for P-PIC consideration

Among the responsibilities of the Partnership Program Intervention Committee (P-PIC) is to evaluate and recommend new processes, projects, technologies or evidence-based practices. The P-PIC makes recommendations to the NM RP Governance Board which has decision-making authority to direct NM RP funds towards new technologies or interventions.

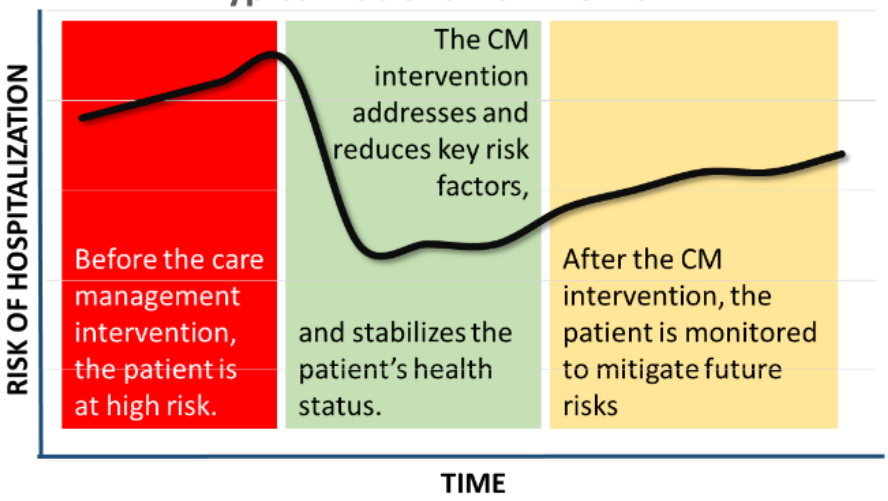
9. Financial Sustainability Plan

9a. Financial Sustainability Plan

To estimate the potential return on investment from the Health Stabilization for Seniors intervention, planning consultants built a financial model that predicts hospital savings and program expenses over a three-year time horizon. The model is a computer simulation of the hospitalization risk for the NexusMontgomery patient population that assumes reductions in expected risk when patients receive care management. The model then predicts reductions in hospital admissions and costs due to care management, and compares these to program costs. To achieve positive return-on-investment, cumulative cost savings must exceed program costs, ideally over a limited time horizon.

The patient-level performance profile of the care management intervention is illustrated at right. As detailed elsewhere in this report, the program will work as follows: (1) Medicare seniors age 65 or over at high risk of near-term hospitalization are identified by trained community sources and by hospitals for hospital-to-SNF-to-home discharges, (2) referred seniors are risk assessed with a prospective risk screening; (3) the program coordinates care intensively with the patient for as long as needed (average≈60 days) to address and mitigate key risk factors; and (4) after this period of intensive care coordination ends, the program will continue to monitor and support the patient to minimize risk. However, it is to be expected that risk will rise over time as the patient ages. By reducing risk for our target population, the program will prevent hospitalizations that would have occurred in the absence of the intervention. The evaluation assumes that risk will rise again over time as the patient ages.

Figure 6: Typical Patient Risk Profile



Our return-on-investment model replicates this individual risk reduction and aggregates it over a large population to estimate the overall benefits of the care management intervention. For the ROI model, the team used assumptions about program costs and performance. The most important assumptions are defined in Table 8 on page 47.

Table 8: ROI Assumptions

Variable	Value Used	Comments
Hospital savings per avoided admission	$5,000	This is based on an analysis of HSCRC data for the costs of ambulatory sensitive condition admissions, which average $10,000.[11] We assume (based on guidance from HSCRC and hospital CFOs) that the hospitals' variable cost per admission is 50%, which yields the $5,000 figure. (Further discussion of this assumption is found later in this section.)
Base Hospitalization Risk	15% to 20% each month	The care management intervention will focus on the highest risk patients (including recently hospitalized patients). 15% to 20% per month is a hospitalization risk typical of recently hospitalized patients, and high risk patients with chronic health conditions.
Hospitalization risk reduction	33%	The model assumes a 1/3 reduction in the probability that an individual patient will go into the hospital. For example, a patient with an 18% base risk would see that reduced to 12% due to the CM intervention. A 15% base risk would be reduced to 10%, and so on. (Further discussion of this assumption is found in the risk reduction section on page 50.)
Savings per avoided ER encounter	$335	Based on HSCRC data of $1,339 per ER encounter and assuming a variable cost avoidance of 25% (Hospitals report that their variable costs are lower for ER than for inpatient admissions).
Pre-intervention ER utilization	.511	Expressed as a ratio of hospital admission. Based on data from VHQC.
ER utilization risk reduction	15%	Conservative estimate based on results of other ER diversion programs.
CM monthly patient census	200	This is the number of patients that will be in active CM each month (after an initial ramp up period) for each care management team. [12]
2016 budget	$1,470,278	This includes administration during the ramp-up period and costs for a care management team launched in April.
2017 budget	$1,223,807	This includes ongoing administration and costs for one care management team for the full year.
2018 budget	$1,247,384	This includes ongoing administration and costs for one care management team for the full year.

[11] The following document from HSCRC uses $16,648 as the cost per admission. However, this figure represents an average cost of all admissions, instead of only the cost of ambulatory sensitive condition admissions, which tend to be less expensive. http://www.hscrc.state.md.us/documents/commission-meeting/2015/05-13/HSCRC-Draft-Recommendation-on-Shared-Savings-05-14-2015.pdf

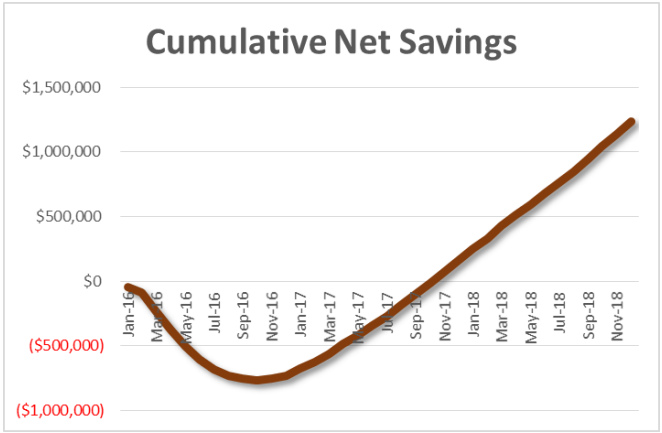
[12] Three care management teams are the most cost effective, as described in Section 5d. With approximately 4,000 residents in the senior living facilities, over 4,000 SNF-to-Home discharges, and approximately 120,000 Medicare age 65+ beneficiaries in the Region, sufficiently high risk referrals can be generated to fill three teams. Cost estimates for this analysis utilize the average cost of a single care management team and assume roll-out and cost of three teams as previously described. Cost estimates factor in the startup costs and initially reduced workloads for each team as they ramp up. Cost estimates include program management costs such as evaluation, outreach and training, stakeholder feedback & learning collaborative, and contract management.

Given these inputs, we estimate the following key outcomes after three years. Note that each of these values is an average of multiple runs of our model. Because our model uses probabilities, each run produces slightly varying results.

Table 9: ROI Key Projected Outcomes

Variable	Estimate	Comments
Patients served (through December 2018)	3,204	This number represents unique patients, and reflects the fact that some patients will require care management for longer than 60 days to achieve adequate risk reduction.
Hospitalizations avoided (through December 2018)	1,008	Our model estimates the number of hospitalizations for our population based on the risk reduction from care management, and compares the result to expected hospitalizations for the same population with no risk reduction. The difference in predicted hospitalizations is "hospitalizations avoided".
ER Visits avoided (through December 2018)	406	Our model estimates the number of ER encounters for our population based on the risk reduction from care management, and compares the result to expected ER encounters for the same population with no risk reduction. The difference in predicted ER encounters is "ER encounters avoided".
Cumulative Net Savings (through December 2018)	$1,233,473	This is the total dollars from avoided hospital utilization through December 2018, minus program operating costs for the same period.

Figure 7



We predict that the program will pass break-even in fall 2017. The graph at right illustrates the predicted financial path for the program. During the ramp-up period (January –November 2016) the program will generate losses as it implements patient services and incurs start-up administrative costs. After the ramp-up period, monthly savings from avoided hospitalizations will begin to exceed costs. The program will achieve break-even status by the end of 2017, and continue to generate a positive return for partner hospitals thereafter.
If the program achieves its goals, it can be expanded to include more patients, thereby spreading administrative costs over a broader population to further enhance ROI.

The two key assumptions in our model are (1) the effectiveness of the intervention at driving down admissions to the hospital and (2) the costs that hospitals are able to avoid as a result of each prevented admission.

See Appendix G for NM RP month-by-month financial projections for the NM RP ROI.

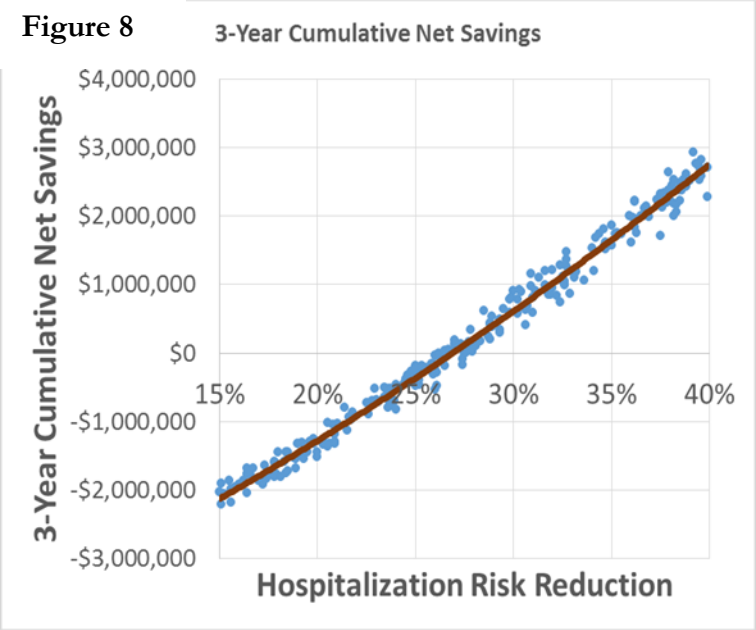
Risk Reduction: There have been a significant number of studies of the impact of care management on inpatient hospital use. The following study suggests that a 33% reduction in risk is achievable.

A study by Andrey Ostrovsky published by the Health Information and Management Systems Society (HIMSS) found that care management reduced patient risk of re-admission to the hospital within 30 days of discharge by 39%.[13] This study is useful in predicting the outcomes that are possible in the Region because the author examined the impact of an intervention that has significant similarities to the HHS intervention. This study examines an intervention that used the same:

- Risk stratification tool, the Care at Hand system, and
- Staffing model, community health workers overseen by an RN

There are important differences between the NM RP intervention and the intervention studied by Ostrovsky. In contrast to the HHS intervention, the intervention studied by Ostrovsky targeted only patients during the 30 days post-discharge. The HSS program will target a broader population of high risk patients, including those at risk of first admission and those who are beyond the 30 day post-discharge window. In total, the impact of these differences is likely to mean that the intervention proposed for the NM RP will achieve slightly lower reductions in patients' risk. This is the reason we are assuming a 33% reduction in risk rather than a 39% reduction.

Figure 8



A sensitivity analysis of our model used different values for risk reduction and included 250 iterations of a Monte Carlo simulation to estimate program results under various degrees of hospitalization risk reduction. The results are illustrated in Figure 8. In the graph, the x-axis displays the risk reduction achieved by the intervention (the independent variable). The y-axis displays the program net savings (the dependent variable). Each blue dot represents the results of one iteration of the model.

[13] Ostrovsky, Andrey, "Case Study: Decreasing Costs and Improving Outcomes Through Community-Based Care Transitions and Care Coordination Technology," 2014, accessed at http://www.himss.org/ResourceLibrary/genResourceDetailPDF.aspx?ItemNumber=2830

Our analysis found that the care management intervention can still produce a positive ROI over a three-year time horizon with risk reduction rates as low as 27%. Therefore, even if the 33% risk reduction estimate is high, it will still be possible to generate positive results. Monitoring risk reduction should be an important program management and evaluation task.

Savings per Avoided Hospitalization: Our team calculated $5,000 savings per avoided hospitalization as follows:

1. Assume that care coordination is likely to be most effective at avoiding hospitalization that result from the exacerbation of chronic conditions.

2. Determine the average cost per admission for three of the most common chronic conditions, CHF, COPD and Diabetes. Data from CRISP made available to the regional partnerships indicates that the cost per admission for these conditions averages approximately $10,000.

3. Assume 50% variable cost per admission. Not all of hospitals' costs are variable, many are fixed. The HSCRC assumes that 50% of hospital costs are variable and that this represents the proportion of funds "saved" from an avoided admission that are available to be used for some other purpose. This takes us to the figure of $5,000/avoided admission saved by the hospital and/or payers.

Other studies of Maryland hospital costs have cited a $17,000 average cost per admission (i.e., an $8,500 variable cost). Such a figure would greatly increase the predicted savings from this program. However, the planning team believes our $10,000 figure to be more realistic, since it is derived from the admitting diagnoses (chronic disease exacerbations) most likely to be prevented by effective care management.

9b. Financial Arrangements to Incent Provider Participation

As described in Domain 6c, the program seeks to expand physician engagement. The HSS care coordination model offers many indirect financial incentives for providers to participate through referral of their high risk patients. Improved engagement of participating patients is expected to lead to a reduction in missed appointments. Healthier patients age in place longer, leading to a more stable patient panel for the physician. Improved chronic disease self-management results in better biometrics, providing financial benefit to any physicians already involved in pay-for-performance programs. Finally, the work done by care coordinators reduces the need for health education and care management on the part of providers for their highest risk seniors. Most of this work by physician practices is uncompensated; the vast majority of physicians in Montgomery County are not billing CCM for this time.[14]

[14] Montgomery County Medical Society Survey, 2015

These indirect financial benefits are expected to incentivize providers to participate in the program by referring patients. The NM RP P-PIC will closely monitor the referral conversion rate from primary care providers. If the conversion rate is high (referred patients score at high risk for hospital utilization), the PCPs are referring exactly the patients the NM RP is targeting. If the referral conversion rate is lower, the physicians are utilizing the program for patients in Tier 3 of the Health Pyramid – Chronically Ill but Stable. This population would be more cost effectively served through an infrastructure providing the services under the Medicare Chronic Care Management (CCM) code. The NM RP and physicians could explore a jointly held or contractually developed CCM service as a community offering if it provided sufficient financial return to both providers and the NM RP.

Conclusion: Population Health Improvement Plan

Participants in the design of HSS and the Nexus Montgomery Regional Partnership are actively engaged with the county's population health improvement plan. Goals for HSS closely aligned with the goals of Montgomery County's Local Health Improvement Coalition and hospital goals identified through their individual community needs assessments; each contributing to and strengthening activities to improve population health.

The Local Health Improvement Coalition in the NexusMontgomery region is called Healthy Montgomery. The six NexusMontgomery Regional Partnership hospital partners are funders of Healthy Montgomery, are represented on the Healthy Montgomery Steering Committee and participate on its work groups. The local health department, Montgomery County DHHS, facilitates Healthy Montgomery and has been a part of the NM RP Design grant as well as the proposal development for the Health System Transformation Implementation proposal due December 21, 2015.

The RP partner hospitals' Community Health Needs Assessments and community health efforts align with the Healthy Montgomery priorities (obesity, diabetes, behavioral health, cardiovascular health, cancers). These priorities reflect the prevalence of chronic conditions in those aged 65 and over in the target region (hypertension, high cholesterol, depression, obesity, diabetes). These priorities are also consonant with most of the adult-focused goals of Maryland in the State Health Improvement Process, including: healthy living, healthy communities, access to health care, and quality preventive care.

To meet the goals of the New All Payer Model, initial interventions under the NM RP focus on care management and risk reduction for those identified at highest risk of near term preventable hospital utilization. Alongside these interventions, the NM RP works to improve population health through more effective and efficient care across providers, through greater connectivity to and utilization of CRISP services.

As the interventions of the NM RP produce return on investment, the RP Governance Board determines how to utilize savings. As a starting point, the Governance Board anticipates a prioritized framework of reinvestment as:

- Programs targeting high hospital utilization
- Population health programs
- Programs mutually beneficial to payers and the NM RP partners

Population health interventions will address more upstream components of disease and poor health, with a priority focus on prevalent chronic conditions. The targeted population for population health interventions will be tiers 3 and 4 of the health pyramid shown in Section 1b; the healthy and those who are living with stable chronic conditions. The impact of social determinants over a lifetime have been shown to result in health disparities, especially for persons of color, low-income or foreign-born individuals, and those who do not speak English well. The NexusMontgomery region faces a particular challenge in that the population is highly diverse, with one third of residents foreign-born, and 39% of residents speaking a language other than English at home.

Population health interventions will align with the stated priorities for this region, as determined by Healthy Montgomery and the hospital CHNAs. Interventions and investments by NM RP will also be informed by the resource/service gaps found among community services as care coordinators work to link patients to services that address social determinants such as housing, food, energy, and transportation. Services may also include primary prevention (such as exercise and nutrition programs), secondary prevention (such as screenings), and tertiary prevention (such as chronic disease self-management and health coaching). The HSS model incorporates feedback loops to define the gaps; the P-PIC and NM RP Governance Board can then assess and evaluate the impact of potential investment in such services.

The NM RP aims for a portfolio of population health interventions that reduces preventable factors resulting in a decreased burden of chronic conditions and their associated long term health care costs as demonstrated by improvement in health indicators and reduction in overall hospital utilization.

NexusMontgomery

Regional Transformation Design Final Report to HSCRC

December 2015

List of Appendices

Appendix A

NexusMontgomery Regional Partnership

Governance Recommendations

As of November 18, 2015

Background:

CEOs/Presidents appointed designees to develop recommendations regarding a governance structure based on the Maryland NexusMontgomery Planning Grant in preparation for the Implementation RFP. The following key recommendations have been agreed to and the committee requests your endorsement of the following:

1) NexusMontgomery will form a collaborative partnership governed by an Operating Agreement (legally non-binding) which details a memorandum of understanding between the six Montgomery County hospitals.

2) The NexusMontgomery Regional Partnership will have a six member board with each hospital appointing one board director with each having one vote. Specific board expectations to be detailed in the Operating Agreement include:
   a. One designated proxy named upon execution of the Operating Agreement; proxies may attend up to 25% of board meetings
   b. Four officers will be elected by the board – chair, vice-chair, treasurer and secretary – representing each of the hospital systems
   c. Ten in-person meetings the first year
      i. Quorum to meet will equal 2/3 (5 board directors present) however any vote will require all six hospitals to cast a vote
   d. Two initial standing committees will be charged with making recommendations to the board for approval (committees have no formal decision-making authority other than to recommend actions to the board):
      i. The Partnership Program Intervention Committee (P-PIC)
         1. Chaired by a NexusMontgomery board director and made up of one appointee of each hospital (total of six committee members) and up to five community partner members, approved by the board (total of up to 11 committee members)
            a) Develop key performance and outcome metrics to be recommended to the board
            b) Monitor key performance and outcome metrics as approved by the board
            c) Monitor any needed continuous quality improvement initiatives
            d) Evaluate and recommend proposed projects, developing materials for board discussion (includes both new and ongoing projects) ensuring the board has the info they need to make an informed decision
      ii. The Finance Committee

1. Chaired by the NexusMontgomery Board Treasurer and made up of one appointee of each hospital (total of six committee members)
    a) Financial and resource oversight
    b) Recommends the budget to the board for approval
    c) Serves as the "audit" committee of the board, if needed
    d) Determines financial viability of proposed project(s) and sustainability post-implementation
    e) Evaluates and recommends potential funding opportunities and mechanisms to the board
    f) Reviews and monitors contracts, insurance needs/policies

3) Unanimous agreement of board directors will be required to implement a specific project. Project approval will be based on scope, resources, scale and geography (who, how, what and where). A project could include an intervention that directly impacts patients or an infrastructure project that supports the NexusMontgomery Regional Partnership. Agreed guidelines for undertaking a project include an understanding that:
    a. Not all interventions will have the same return on investment (ROI) for each hospital; the impact on community and target population health will be given priority
    b. ROI is to be considered on behalf of the community
    c. ROI to hospitals includes: reduce readmissions, reduce unnecessary ED utilization, other potentially avoidable utilization, and reduce inpatient length of stay
    d. Proposed service area will be the Maryland zip codes that contribute the first 80% of discharges from Montgomery County hospitals collectively. Exceptions will be made on a case by case basis (to be confirmed by data provided); hospitals are in the process of analyzing this methodology to determine if it is appropriate methodology to define the service area

4) Funds allocated to NexusMontgomery Regional Partnership will be contributed by each hospital based on proportion (%) of funds each hospital receives (rates or other sources in the future)
    a. Initial focus for governance structure is to leverage Implementation RFP opportunity with longer term goal to manage a portfolio of projects

5) Governing member responsibilities
    a. Be active participants in meetings and work to build good will and trust among colleague members based on current partnership
    b. Participate in and evaluate governance actions based on the benefit to the partnership and the community, not only your hospital
    c. Be purposeful in soliciting and providing input
    d. Work towards defined shared goals
    e. Representatives involved in governance and committees are decision makers and empowered to act on behalf of the organizations they represent
    f. Respect time commitments by starting and ending meetings on time
    g. Respect deadlines agreed upon and communicate clearly barriers to meeting deadline
    h. Educate colleagues about their respective hospital/system priorities and new programs
    i. Identify opportunities and be open to redesign or repurpose of existing resources
    j. Look for opportunities to include all-payers in potential financing of the partnership
    k. Set clear and realistic expectations for each partner
    l. Explore potential consequences of any payment reform on each partner

6) Secure a managing entity to support implementation, employ resources and contract with vendors for the NexusMontgomery Regional Partnership
   a. Craft and execute for board approval a 12 to 15 month Management Agreement with the Primary Care Coalition (PCC) to serve as the management entity, scope to include:
      i. Data Standardization, Data Sharing and Care Management System Interoperability
      ii. Evaluation, Best Practices
      iii. Operations Support
      iv. Shared Care Management Program Implementation and Process Improvement

Proposed Timeline

Draft Operating Agreement January 9, 2016

Executed Operating Agreement – target mid-February 2016

Board directors appointed when Operating Agreement executed and constituted within 20 business days of execution

Draft Management Agreement target to coincide with constitution of board

- To be approved by board

Draft Participation Agreement end of February 2016

- To be approved by board

Governance Committee Recommendations (Detail):

- Governance structure to be a Collaborative Partnership that will be governed by an agreed upon Operating Agreement and Participation Agreement
  - Timeline for completion of draft Operating Agreement (MOU) January 9, 2016 with executed agreement in place by mid-February (target date pending counsel review)
  - Operating Agreement to include charter elements, key aspects of governance, roles, and responsibilities
  - Management Agreement to be reviewed and accepted by board at initial meeting
  - Participation Agreement to include HIT and data sharing strategy for phase one of partnership, mechanisms for financial accountability, conflict of interest, partner expectations and reporting requirements based on projects to be chosen to be approved by board (target date end of February)

- Unanimous agreement based on scope, resources, scale and geography (who, how, what and where). A project could include an intervention that directly impacts patients or an infrastructure project that supports the NexusMontgomery Regional Partnership. Agreed guidelines for undertaking a project also include an understanding that:
  - Not all interventions will have the same return on investment (ROI) for each hospital however all hospitals agree to participate
  - ROI is to be considered on behalf of the community
  - ROI to hospitals includes: reduce readmissions, reduce unnecessary ED utilization, other potentially avoidable utilization, and reduce inpatient length of stay
  - Service area will be the Maryland zip codes that contribute the first 80% of discharges from Montgomery County hospitals collectively. Exceptions will be made on a case by case basis (to be confirmed by data provided).
  - The board will come quickly to an agreement on the service area based on the following analysis:
    - Identify the number of discharges by zip code for each hospital, add them together and determine those that comprise 80% of their collective discharges
    - Compare to zip codes that comprise 80% of each hospitals' population (based on each of the hospitals' discharges), to ensure each hospital's primary service area zip codes are included

- Initial focus for governance structure is to leverage Implementation RFP opportunity with longer term goal to manage a portfolio of projects

- Funds allocated to NexusMontgomery will be contributed by each hospital based on proportion (%) of funds each hospital receives (rates or other sources in the future)

Board Structure

- Each hospital will hold one board seat
- Board members to be appointed by each hospital with the intent of each director serving for two years
- Initial board, first year will be comprised of the six board seats, with up to nine seats thereafter, which may be held by community partners
- Board will have four officers (Chair, Vice Chair, Treasurer and Secretary) elected by the directors

- One officer from each system
- One year term each, elected annually up to three terms

- Quorum for the board will be comprised of attendance of five of the six directors
- Each hospital will appoint its' board director and proxy at the time the Operating Agreement is executed
- Board will convene within 20 business days of the Operating Agreement being executed

- Board will meet in-person ten times per year
  - Board directors are expected to attend at minimum 75% of the in-person meetings, with proxy in attendance no more than 25% of the Board meetings
  - Each Board director will appoint at the time the Operating Agreement is executed, one proxy who will attend the in-person board meeting in the event the director is not able to participate;; it is the board director's responsibility to keep his or her designated proxy up to date on activities of the board
  - In the event a special meeting must be called in between one of the regularly scheduled board meetings, the chair may convene a meeting with at minimum 5 business days' notice; the meeting may be held via teleconference or web based
  - Any guests will be approved by the chair and named in the meeting agenda

- An Annual Meeting will be held (one of the ten regularly scheduled board meetings) where the following will take place:
  - Election of board officers
  - Review of previous year's performance including finances, quality and strategic direction

- Recommend formation of a Physician Advisory Board comprised of a scope of provider types to foster communication venues, engage physicians, advise the Board and inform work of the committees

<u>Board Committees</u>

- Two committees will be formed to support the Board and inform Board decision-making: *Partnership Program Intervention Committee* (P-PIC) and a *Finance Committee*
  - Require at minimum one board director and preferably two, participate in each committee
  - The committees will not have the authority to make decisions binding the Regional Partnership. The Committees will make recommendations to the Board, which will be the ultimate decision-maker for the Regional Partnership.

- Committees will meet in-person ten times per year
- Committee members are expected to attend at minimum 75% of the in-person meetings; proxies may not participate in more than 25% of committee meetings
- Each committee member will select in advance, one proxy who will attend the in-person meeting in the event the member is not able to participate; it is the member's responsibility to keep his or her designated proxy up to date on activities of the committee
- With the approval of the chair and with at minimum 5 business days' notice, if a special meeting must be called in between one of the regularly scheduled committee meetings, it may be held via teleconference or web based

- Committees will have no delegated authority, however are to make specific recommendations to the board for approval; any recommendation to the board must include information needed to make an informed decision

- *Finance Committee* is to be chaired by the Board Treasurer and will be comprised of one appointee from each hospital
    - Any recommendation to be brought to the board must be approved a super-majority (at least five votes) of the committee
    - Finance Committee responsibilities include monitoring and recommendations to the board related to:
        - Financial and resource oversight
        - Recommends the budget to the board for approval
        - Serves as the "audit" committee of the board, if needed
        - Determines financial viability of proposed project(s) and sustainability post-implementation
        - Evaluates and recommends potential funding opportunities and mechanisms to the board
        - Reviews and monitors contracts, insurance needs/policies

- *Partnership Program Interventions Committee* is to be chaired by a board director; hospitals will encourage participation on the committee by community partners
    - Each hospital will appoint one designated committee member and community partners will be offered up to 5 committee seats, pending board approval
    - Any recommendations to be brought to the board must be approved by a super-majority (two-thirds) vote of the committee
    - Program Intervention Committee responsibilities include:
        - Developing key performance and outcome metrics to be recommended to the board
        - Monitor key performance and outcome metrics as approved by the board, including: population health data, access to care, and numbers served
        - Monitor any needed continuous quality improvement initiatives
        - Evaluating and recommending proposed projects, developing materials for board discussion (includes both new and ongoing projects) and ensures the board has the information needed to make an informed decision

<u>Governing Member Responsibilities</u> (applies to board directors, committee members and designated proxies)

- Governing member responsibilities include:
    - Be active participants in meetings and work to build good will and trust among colleague members based on current partnership
    - Participate in and evaluate governance actions based on the benefit to the partnership and the community, not only your hospital
    - Be purposeful in soliciting and providing input
    - Work towards defined shared goals
    - Representatives involved in governance and committees are decision makers and empowered to act on behalf of the organizations they represent

- Respect time commitments by starting and ending meetings on time
- Respect deadlines agreed upon and communicate clearly barriers to meeting deadline
- Educate colleagues about priorities and new programs
- Identify opportunities and be open to redesign or repurpose of existing resources
- Look for opportunities to include all-payers in potential financing of the partnership
- Set clear and realistic expectations for each partner
- Explore the potential consequences of any payment reform on each partner
-

Conflict of Interest

- In order to ensure transparent communication and foster the partnership, board directors agree to
  - Declare any personal or professional conflicts related to employment, business interests or financial gains as related to NexusMontgomery Regional Partnership

Voting Rights

Unanimous Votes required for the following:

- Administrative/Governance
  - Management Agreement
  - Participation Agreement
  - Voting rights among RP Members, Quorum requirements (any changes)
  - Removal of an RP Member (without the partner in question)
  - Addition of a Member to the RP
  - Formation of a joint venture with a third party
  - Evolution of the NexusMontgomery Regional Partnership to a legal entity

- Project Approval (intervention and infrastructure)
  - To include scope, resources, scale and geography (who, how, what and where), RP Member roles, responsibilities, performance expectations, reporting, etc.

Super-Majority Votes (based on a six member board requires five votes) for the following:

- Administrative/Governance
  - Termination of the NexusMontgomery Operating Agreement
  - Amendments to Operating, Management or Participation agreements
  - Termination of Operating, Management or Participation agreements
  - Vendor contracts
  - Marketing/Communications activities, materials and branding specific to the NexusMontgomery Regional Partnership
- Financial
  - Budget
  - Budget revisions
- Clinical Integration Programs/Implementation
  - Definition and eligibility criteria for target patient population
  - New processes, workflows and tools of any substance
  - Metrics/measures that will be used to monitor performance

- Contingency and sustainability plans for the clinical initiative(s)

Items to be detailed in the Participation Agreement include:

- Roles, responsibilities and expectations
- Process for addressing non-performance of an RP Member
- Data Management plan
- Patient Protection plan

Management Entity (details)

- Evaluation, Best Practices: Support NM RP Governance Board and Partnership Program Interventions Committee in their assessment of progress on program ROI targets; draft plans for program changes; alert on special populations or challenges to address through shared RP programs
  - Evaluation: common data collection and evaluation of ROI for all programs in RP, including the independent hospital Care Transition programs funded under RP
  - Best practices: literature review and interviews of similar programs; distribute condensed updates on promising and best practices
  - Support Partnership Program Interventions Committee: engage consultants and/or provide analysis for new and existing program planning

- Fiscal and Administrative Functions
  - Fiscal Management**:** consolidation and manage funds from the 6 hospitals (and grants) for Operational Infrastructure and the shared Programs. Provide reports to Finance Committee
  - Governance Board Support**:** provide administrative support, fiscal and program reporting. Support Physician Advisory Committee
  - RP Marketing and Communication activities
  - Grant writing, as needed

- Implementation and Operations of Shared Programs, Projects and RP Infrastructure
  - Employ staff for shared program and project functions, as well as RP infrastructure (fiscal and administrative, evaluation and best practices)
  - Contractor Management**:** on behalf of the RP, issue RFPs and make recommendations to the RP Governance Board for care management and other program vendors. Manage contracting, invoicing, payment. Performance monitoring of vendors. Develop shared risk contracting terms with vendors in later years, if possible
  - Stakeholder Engagement**:** Specific to shared RP programs and projects, engage stakeholders and partners (EMS, Sr. Living, PCPs, DHHS, patients & families)
  - Coordinate with in-kind hospital resources. E.g. data collection, IT, care plans

Appendix B: Nexus Montgomery Regional Partnership: Planning Contact List

Company	Building/ Site	First Name	Last Name	Job Title
Adventist Healthcare	Adventist Healthcare	Katherine	Barmer	Director of Case Management and Population Health
Adventist Healthcare	Adventist Healthcare	Terry	Forde	CEO
Adventist Healthcare	Adventist Healthcare	James	Lee	CFO
Adventist HealthCare	Shady Grove	Jo	Cimino	
Adventist HealthCare	Takoma Park	Zach	Goodling	Population Health Supervisor
Adventist HealthCare	Takoma Park	Patrick	Garrett	Sr. Vice President Physician Integration
Adventist HealthCare	Takoma Park	Erik	Wangsness	President
Asbury Methodist Village	Asbury Methodist Village	Brad	Andrus	Associate Executive Director
Asbury Methodist Village	Asbury Methodist Village	Erika	Baylor	Director of Social Work
Asbury Methodist Village	Asbury Methodist Village	Henry	Moehring	Executive Director
Asbury Methodist Village	Asbury Methodist Village	Jesse	Sadikman	Internal Medicine
B'nai Brith	Homecrest Health	Joe	Podson	Executive Director
Brooke Grove Retirement Village	Brooke Grove Retirement Village	Dennis	Hunter	Vice President
Brooke Grove Retirement Village	Brooke Grove Retirement Village	Larry	Willett	Executive Director
Charles E. Smith Life Communities	Charles E. Smith Life Communities	Beth	DeLucenay	Vice President, Planning
Charles E. Smith Life Communities	Revitz House	Kyle	Hreben	Administrator, Revitz Housing Operations West Campus
Charles E. Smith Life Communities	Revitz House	Diane	Stern	Administrator
Charter House	Charter House	Haley	Mixson	Resident Activities Manager
Department of Housing and Community Affairs	Department of Housing and Community Affairs	Leslie	Marks	Senior Fellow
DHHS	Montgomery County DHHS	John J.	Kenney	Chief, Aging and Disability
DHHS	Montgomery County DHHS	Odile	Brunetto	Director, Area Agency on Aging
DHHS	Montgomery County DHHS	Dianne	Fisher	
DHHS	Montgomery County DHHS- Aging	Uma	Ahluwalia	Director, Montgomery County DHHS
DHHS	Montgomery County DHSS	Ulder	Tillman	County Health Officer
DHHS	Montgomery County HHS	Emily	Glazer	
Friends House	Friends House	Barbara	Galloway	Resident Counselor
Friends House	Friends House	Kelly	Pike	Social Services
Friends House	Friends House	Jean	Raiche	Administrator

HOC	Arcola Towers	Augusta	Sannoh	Resident Counselor
HOC	Bauer Park Apartments	Terrie	Robbins	Resident Counselor
HOC	Elizabeth House	Paula	Phillips	Resident Counselor III
HOC	Forest Oak Towers	Jean	McCloskey	Resident Counselor III
HOC	Forest Oak Towers	Marsha	Weber	Resident Services
HOC	Holly Hall	Thomas	Dundas	Resident
HOC	Holly Hall	Martha	Myers	Resident
HOC	Holly Hall	Lecia	Stein	Resident Counselor
HOC	HOC Administration	Gail	Gunod-Green	Resident Services Manager
HOC	HOC Administration	Stacy	Spann	Executive Director
HOC	HOC Administration	Stephanie	Moore	Senior Programming Supervisor
HOC	Town Center Apartments	Jia-Wei	Chen	Resident Services
HOC	Waverly House	Nancy	Davachi	Resident Counselor III
Holy Cross	Holy Cross	Annice	Cody	President, Holy Cross Health Network
Holy Cross	Holy Cross	Jessica	Hardy	Director Population Health Management
Holy Cross	Holy Cross	Cathy	Livingston	Director, Care Transitions
Holy Cross	Holy Cross	Kevin	Sexton	CEO
Holy Cross Health	Holy Cross Health	Anne	Gillis	Chief Financial Officer
Holy Cross Health	Holy Cross Health	Sarah	McKechnie	Manager, Community Fitness and Chronic Disease Manager
Holy Cross Health	Holy Cross Health	Yancy	Phillips	Chief Quality Officer
Holy Cross Hospital	Holy Cross Hospital	Wendy W.	Friar	Chief Development Officer
Holy Cross Hospital	Holy Cross Hospital	Colleen	Ralph	Transitional Care Nurse
LifeSpan	LifeSpan	Izzy	Firth	CEO
MedChi	MedChi	Colleen	George	Director, Center Practice of Medicine
MedStar	MedStar	Dairy	Marroquin	Community Outreach Coordinator
Medstar Montgomery General	Medstar Montgomery General	Peter	Monge	President
Medstar Montgomery General	Medstar Montgomery General	TJ	Senker	COO/CEO-Elect
Medstar Montgomery General	Medstar Montgomery General	Nikki	Yeager	Vice President for Strategic Planning
Medstar Montgomery Medical Center	Medstar Montgomery Medical Center	Tara	Holland	Social Worker
Medstar Montgomery Medical Center	Medstar Montgomery Medical Center	Diana	Saladini	Director of Case Management
Montgomery County Medical	Montgomery County Medical	Susan	D'Antoni	CEO

Society	Society			
Montgomery County Medical Society	Montgomery County Medical Society	Stephen	McDow	Physician Engagement Specialitst
National Lutheran Communities & Services	National Lutheran Communities & Services	Daniel	Look	Chief Strategy Officer
National Lutheran- The Village at Rockville	National Lutheran- The Village at Rockville	Jason	Gottschalk	Executive Director
Suburban	Suburban	Brian	Ebbitt	Chief of Staff
Suburban	Suburban	Monique	Sanfuentes, MA	Director of Community Health and Wellness
Suburban Hospital	Suburban	Cathy	Clark	Transitional Guide Nurse
Suburban Hospital	Suburban	Margie	Hackett	Transitional Guide Nurse
Suburban Hospital	Suburban	Tom	Stuart	
Victory Housing	Andrew Kim House	Tamar	Shaw	Community Manager
Victory Housing/Habitat America	Habitat America	Linda	Daly	Regional Property Manager
Victory Housing/Habitat America	Victory Court	Lethea	Williams	Community Manager
Victory Housing/Habitat America	Victory Forest	Melan	Perez	Resident Counselor
Victory Housing/Habitat America	Victory Forest	Karen	Smith	Community Manager
Victory Housing/Habitat America	Victory Administration	Sister Irene	Dunn	Vice President for Assisted Living
Victory Housing/Habitat America	Victory Administration	John	Spencer	Senior Vice President
Victory Housing/Habitat America	Victory Oaks	Emily	Barra	Community Manager
Victory Housing/Habitat America	Victory Terrace	Ingrid	Geissler	Community Manager
Victory Housing/Habitat America	Victory Tower	Jannice	Bray	Community Manager
Victory Housing/Habitat America	Victory Tower	Deborah	Grey	Resident Counselor

Appendix C: NM RP

THE COORDINATING CENTER
INSPIRED SOLUTIONS

CONSENT TO RELEASE INFORMATION

I hereby give consent to release the following type of information regarding _____ _____to The Coordinating Center to locate, coordinate and monitor healthcare and community based services. Please check all that apply.

☐ Medical records ☐ Psychosocial ☐ Educational ☐ Developmental

☐ Financial ☐ Mental Health ☐ Nutritional ☐ Therapy (OT/PT/Speech)

☐ Vocational ☐ Housing ☐ Provider records ☐ Hospital providers

☒ Other (specify) - _____

I also authorize The Coordinating Center to release the information obtained regarding the client to relevant health care providers, local, state and federal agencies or their representative, and/or insurance companies, in order to obtain medical and community based services. I understand that The Coordinating Center will not release the name of the person or any identifying information other than for the purpose listed above, without my expressed written consent. I may withdraw my consent at any time, by written notice of such withdrawal, delivered either personally by phone or by mail to The Coordinating Center. Following the withdrawal of my consent, no further disclosure of information will be made effective on the date of receipt of said request.

I understand that this authorization is voluntary and that my access to services will not be altered if I do not sign this form. I also understand that referrals for external services may be dependent upon the ability to transfer information to other providers of service on a need to know basis. I further understand that if the organization authorized to receive information is not a health plan or health care provider and if such information is re-disclosed by the recipient, the released information may no longer be protected by federal privacy regulations, but may be protected under state law.

I give consent to discuss my care with the following individuals who are personally involved with my needs:

1) _____ 2)_____
(Name/relationship) (Name/relationship)

Signed this_____ day of_____2_____
This consent will expire one year from the date signed above.

_____ _____
Signature of Participant Signature of Witness

_____ _____
Print Name of Signor Print Name of Witness

ICN Infrastructure Support - Memorandum of Understanding

This Memorandum of Understanding (MOU) between Chesapeake Regional Information System for our Patients (CRISP) and the NexusMontgomery Regional Partnership ("NexusMontgomery" or "RP") sets forth the terms and understanding to enhance coordination services provided through the state-designed health information exchange (HIE) Integrated Care Network (ICN) infrastructure with the goal of facilitating care, reducing costs, and improving health outcomes.

Purpose

CRISP goals are to support the care transformation, quality improvement and cost reduction initiatives of the Health Services Cost Review Commission's System Transformation Implementation initiative and achievement of the New All Payer Model metrics. CRISP overall goals, not specific to the NM RP, include the following;

Clinical Query Portal Enhancements

CRISP is improving the functionality of the existing Clinical Query Portal to include elements that are relevant to improve coordinated care services. Examples of this improved functionality include:

- A listing of current notification subscribers
- A dedicated section that lists care plans that have been provided to CRISP
- A dedicated "Care Profile" section that provides a care summary for each patient
- A risk score derived from risk-stratified case mix data

Community Provider Connectivity

CRISP is connecting ambulatory practices, long-term care/post-acute facilities, local health departments, and other relevant community health providers in order to:

- Easily understand where a patient has received care or has a treatment relationship with a non-hospital provider.
- Achieve clinical document transfer from the non-hospital provider to the CRISP clinical query portal for treatment decisions at the point of care.

Alerts and Notifications Enhancements

CRISP is improving the functionality of the existing Clinical Query Portal to include elements that are relevant to more coordinated care. Examples of potential use cases for further support via alerts and notifications:

- Notification that a care plan is available on the Clinical Query Portal
- Notification that a patient has a provider or entity newly subscribing to ENS
- Alerts that a patient's risk score has changed.

Reporting and Analytics

CRISP Reporting Services provides information to hospitals and provider organizations to facilitate outcome measurement, strategic planning, and care coordination including reporting and mapping such as:

- Cross-hospital utilization reports by geographic region, and by patient panels. This includes pre-post intervention reports for evaluation purposes.
- Risk scoring reports that assist in identifying patients most appropriate for care management

Scope of Work for the NM RP & CRISP under this MOU

The RP recognizes that increasing the number and type of entities sharing ADT, ambulatory, post-acute and other provider data and care plans via CRISP enhances the value of CRISP to all providers. A tipping point of participating providers sharing data must be reached after which all providers will see and gain benefit from CRISP participation for ENS and Alert notifications for their patient panels.

- The RP will conduct outreach, education and referral to CRISP with providers engaged with the NM RP to promote CRISP connectivity: a) ADT and care plans to CRISP, and b) patient panel upload and subscription for ENS and Alert notification. Focus will start with the 6 hospitals of the NM RP and Skilled Nursing Facilities (SNFs) in the region. Further efforts will encompass the region's **inpatient and large community behavioral health providers**, DHHS, and select PCPs involved in the RP shared Care Coordination interventions. When making a referral to CRISP, the RP will provide a contact name, email and the system that would interface with CRISP.
- CRISP will
    i. Educate RP communication and provider relations staff on provider technical criteria for CRISP connectivity; assist with development of talking points and materials for RP staff to use with providers.
    ii. Engage with entities referred by the RP, creating participation agreements and connectivity for ADT and care plan feeds to CRISP when technically feasible.

The RP recognizes that patients seek and receive care across the region and throughout the State. Accordingly, operational efficiencies, cost effectiveness and the overall patient experience of care will be improved if all providers utilize a common HIE for data sharing. To the extent CRISP can provide the data, care plan and care manager-to-patient relationship sharing infrastructure needed by the RP, the RP will not need to develop and implement separate technology solutions for these functions. This allows the RP to benefit from the legal and technical efforts CRISP has undertaken to-date and CRISP's funding and technical skills to build the framework to facilitate such sharing efforts. Therefore, CRISP's responsibilities under this MOU with the NexusMontgomery RP include the following:

- Within a definition to be informed by the RP, community-based care management and care coordination entities which may not be business associates of a 'covered entity', will be able to enter into participation agreements with CRISP. Such participation agreements would detail access for loading patient panels for ENS, sharing their care plans via the Query Portal, receiving ENS notification and alerts, and viewing care plans and ENS/Care Manager panels via the Query Portal.

Hospital and ambulatory providers have requested the RP facilitate standardization in care plans to improve ease of use across providers and to facilitate sharing of care manager-to-patient relationships, for both somatic and behavioral health providers. In support, the RP and CRISP shall undertake the following.

- The RP will facilitate regional provider meetings by provider type and across provider types to:

i. Define care plan, care manager and care management program information that would be most useful for inclusion on the CRISP Query Portal or Care Profile (through extract from Care Plans or upload with ENS panels).
ii. Gather input for CRISP on Care Profile design.

- CRISP will:
  i. Take recommendations on Care Profile to CRISP's Clinical Committee for consideration; incorporate changes that are approved.
  ii. CRISP will make data (to be determined) on care manager-to-patient relationships that are included in ENS panels available for view in the Query Portal.
  iii. If feasible, work with 1-2 pilot organizations to incorporate select care plan data elements into Care Profile or Alerts, possibly including data on care manager-to-patient relationships.

CRISP Reporting Services provides information to hospitals and provider organizations to facilitate outcome measurement, trategic planning, and care coordination. CRISP recognizes its role in facilitating program evaluation in support of Health System Transformation and achievement of New All Payer Model goals. CRISP will enhance available reports based on RP feedback and provide custom reports based on RP specifications.

- By Q2 2016 CRISP will provide RP with a Tableau-based "pre/post" analysis for cohorts of patients (panels) that are relevant to the RP. Panels may be specific to care management programs, skilled nursing facilities, or other relevant groups. CRISP will provide retrospective data (hospital cost and utilization including admissions/observation stays over 24 hours, 30 day all cause readmissions, and ED encounters) for individual clients enrolled in an intervention. Data will be provided for up to one year prior to the patient's involvement with the intervention and one year after their involvement. The RP and CRISP will work together to test and refine the report to meet RP evaluation needs.
- By end of Q2 2016, CRISP will provide access to a cross-hospital utilization report for the region.
- By Q4 2016 the RP will provide specifications to CRISP for custom reports; CRISP and the RP will work together to design reports feasible for ongoing production.

As the CRISP ICN infrastructure matures, CRISP will provide information to the RP for further education and engagement of RP participating providers and care coordination entities with CRISP services.

Deliverables/Milestones

NM-RP	CRISP	by end of quarter 2016
Community Provider Connectivity, Care Plans Sharing, ENS Notifications		
Provider outreach materials developed based on CRISP criteria/process Provider relations staff trained on engaging providers re: ADT connectivity, ENS panel uploads, addition of care managers to ENS panel uploads, upload of care plans	Technical criteria/process for Provider Connectivity provided to RP Ensure CRISP protocols permit community-based care management organizations to sign participation agreements with CRISP, upload their patient panels to CRISP, access the Clinical Query Portal's Care Profile to view care plans and subscribe to ENS notifications for their patient panel. By subscribing to ENS notifications for their panel, community-based care management organizations will be listed on the care profile as an ENS subscriber. Care coordination vendors under contract to the hospitals or RP have participation agreements with CRISP, uploading patient panels with Care Manager, access to Query portal and receive ENS notification on their managed panels. • The Coordinating Center (Care at Hand/CARMA) • Family Services Inc/CareLink (BestCareConnect)	Q1
Educate/Engage provider interest in CRISP connectivity • Refer up to 5 SNFs technologically ready for ADT connectivity. • Refer 1 inpatient behavioral health provider	Outreach plan for notifying providers who upload ENS panels, how to upload care manager information in conjunction Pilot inpatient behavioral health (Adventist) for CRISP connectivity.	Q2
Continue to Educate/Engage provider interest in CRISP connectivity (ADT, Care Plans, ENS/Panel) • Refer additional SNFs for ADT connectivity.	Establish an ADT interface with at least three of the five SNFs and make available for ENS notifications. In process with other referred providers	Q3

• Refer additional behavioral health providers • Engage with PCPs		
Engage for CRISP connectivity: • PCPs (target: 5) for ambulatory data, panel upload and ENS/Alert subscription • DHHS for ambulatory clinics, and care plans/ care manager from Core Service Agency (BH)	Establish an interface with at least three PCPs. In process with DHHS and other referred providers Ongoing: In process with referred organizations for ADT, Care Plan and ENS connectivity	Q4
Clinical Query Portal, Care Plan Sharing and Care Profile		
1st Care Plan Standards Meeting (hospitals and PCPs): discuss care plan, care manager and care management program information for common definition	Functionality of Clinical Query Portal includes shared care plans, listing of ENS subscribers and, when uploaded with panel, care manager designated.	Q1
1 RP hospital completes Care Plan upload (Adventist) 2nd and 3rd Care Plan Standards Meeting (PCPs, hospitals, Care Coordination providers/CBOs): • Select key elements of care plans, common definitions.	Pilot hospital (Adventist) uploads care plans; available for view on Clinical Query Portal. Care managers that are included in ENS panels are available to view in the CRISP query portal. All 6 Hospitals uploading care plans	Q2
4th Care Plan Standards Meeting (PCPs, hospitals, Care Coordination providers/CBOs): • Obtain feedback on benefits and challenges of using the Care Profile, to the extent providers are using. • recommend care plan, care manager and care management program information most useful for **inclusion in Query Portal/Care Profile.**	Using recommendation from RP Care Plan Standards Committee, develop specifications for additional information about care managers/care management programs with data elements that are technically feasible for either sharing via Care Profile or via Alerts. Seek approval by CRISP's Clinical committee.	Q3

Continue to provide input to CRISP on Care Profile design and Alerts. Develop feedback loops with CRISP for ongoing input to CRISP functions and services	As feasible, work with 1-2 pilot organizations to incorporate select care plan data elements into Care Profile or Alerts, possibly including data on care manager-to-patient relationships Develop feedback loops with NM RP for ongoing input to CRISP functions and services	Q4
Reporting and Analytics		
Provide specifications for CRISP custom reports, including Pre/Post evaluation report	Develop CRISP custom reports per specs, for ongoing production.	Q1
Test the Tableau-based pre/post analysis report.	Tableau-based "pre/post" analysis report available for cohorts of patients (panels) for program evaluation purposes. PaTH Cross-hospital utilization report available for the region	Q2
Provide input to CRISP risk scoring reports, as related to needs of the RP interventions Provide feedback on PaTH report	Pre-Post evaluation report available: retrospective hospital cost and utilization for one year prior to the patient's panel enrollment and one year after their panel enrollment.	Q3
Finalize any revisions needed to pre-post report and other custom reports Develop feedback loops with CRISP for ongoing reporting	Complete revisions to pre-post and other custom reports. Develop feedback loops with NM RP for ongoing reporting	Q4

In future years, NM RP will continue to engage and refer PCPs, SNFs, community care management providers, behavioral health providers, and others in connectivity to CRISP. CRISP will work to establish connectivity with these referred entities. CRISP and NM RP will develop feedback loops, so NM RP can follow-up with provider on progress or status as needed.

CRISP will continue to seek NM RP input to the Care Profile design, and its effectiveness in RP partners sharing care plans and knowing current care manager-to-patient relationships across the region.

Commitment of Resources

The RP and CRISP will work jointly and in good faith to meet the objectives listed in this MOU. The RP and CRISP are each responsible for providing the resources needed to meet the objectives. This MOU does not include reimbursement between the two parties for MOU activities.

Duration

The duration of the MOU shall be until the sooner of either the completion of all of the deliverables within this document or December 31, 2016. CRISP and RP will work in good faith to meet the timelines for each deliverable. The MOU can be revised and/or amended anytime through written consent of both parties.

Communications regarding changes in the MOU and other correspondence related to this documents shall be coordinated by the following individuals:

Primary CRISP Contact
Name: David Horrocks, President
Phone: 877-952-7477
Email: David.horrocks@crisphealth.org

Primary RP Contact
Name: Leslie Graham
Phone: 301 628-3410
Email: Leslie_Graham@primarycarecoalition.org

Acknowledgement

CRISP

_____

By:

Date:

On behalf of NexusMontgomery RP

(Primary Care Coalition, as the appointed Management Entity for the NM RP)

_____

By:

Date:

Appendix E: NM RP

The Coordinating Center

Safeguards for PHI

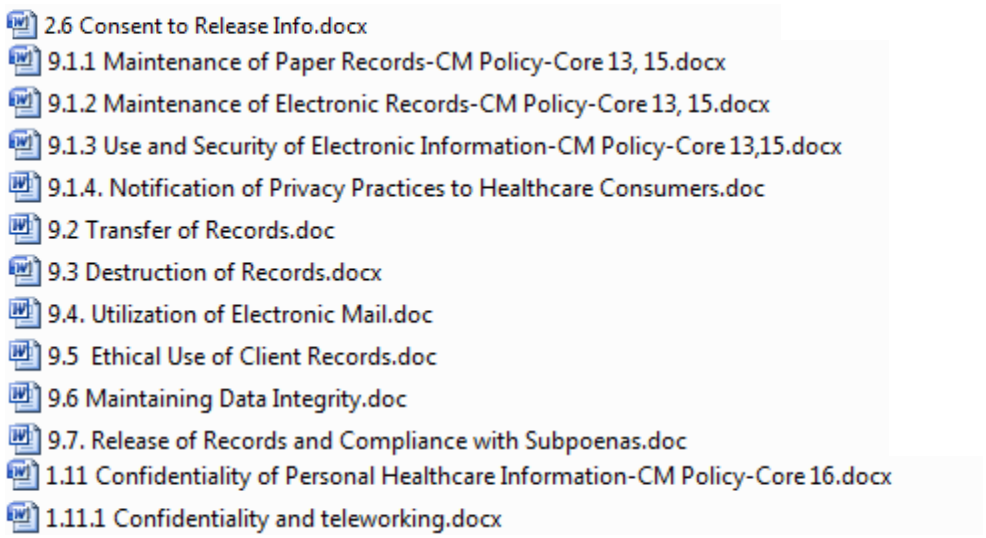
The Coordinating Center regards confidentiality of Personal Health Information (PHI), network security and data protection seriously and has a fully operational HIPAA Program. The Center implements and maintains sound network and computer security practices and follows standard operation procedures consistent with industry standards and HIPAA regulations. A fully executed HIPPA program is led by Carol Marsiglia MS, RN, CCM as the designated Privacy Officer and Michael Bowman, IS Manager as the designated Security Officer. All employees at The Coordinating Center are trained during orientation to their role and as a mandatory annual training to the requirements of HIPAA including the Hi-tech component of the regulation. Each employee is required to sign a confidentiality statement upon employment to ensure their understanding and agreement to follow organization policies.

For the purpose of the care coordination work proposed to the Baltimore CARES Program, PHI data will be stored in the fully compliant CARMA information system as well as in the Care at Hand technology. Vendors who support these systems have active Business Associate Agreements to ensure their understanding and commitment to compliance and protection of PHI. The Coordinating Center currently uses hardware and software compatible with DHMH requirements set forth in recent proposals for care management services in addition to meeting the Core Standards for accreditation by URAC for Information Management, Information Confidentiality and Security and Confidentiality of Individually-Identifiable Health Information. URAC accreditation is a rigorous process involving desktop policy and practice review as well as onsite auditing. The Center currently holds accreditation. In addition to meeting the standards for Information Management, the organization implements a business continuity plan for program operations in the event of unanticipated interruption or disaster.

The network is managed by the Information Systems division of The Coordinating Center composed of a four-person team. Workstations used by the Center's staff include office and mobile work stations that are in a secure and encrypted wireless network. Access to mobile devices is protected by biometric and or personal security codes. This includes desktop computers, mobile computers and smart phones.

Practices at The Coordinating Center include, but not limited to host based security mechanisms such as password – protected logins, file protections, ensuring encryption use for emailing sensitive file

attachments , and security patch maintenance on all machines. IS requires staff members to select secure password and change them regularly according to organization's Password Policy guidelines, and to use security – minded access tools. The Center uses Symantec Enterprise applications for antivirus and spyware protection on all networked computers and email traffic. Because data security is one of the most important elements of today's computing environment, The Coordinating Center's mobile workstation baseline standard has been designed with this in mind. Mobile workstations included SMART Card and biometric fingerprint readers along with a pre-boot encrypted password for the initial operation system to boot up. These components help ensure optimal performance and data security for mobile hardware. Written policies that govern the use of PHI at The Coordinating Center include but are not limited to:



In the unfortunate event of a breach, The Coordinating uses a Breach Risk Assessment and follows a Breach Notification Policy.

In regards to managing and access to hospital data, The Coordinating Center works with each hospital to meet their unique requirements including participation in hospital orientation, completing required orientation modules related to information systems and following all policies that address hospital specific practices around PHI.

Business Associate Agreements are in place with Groupware Technology, technical vendor for our CARMA information system and for Care at Hand and are available upon request.

Please address any further questions you may have to Carol Marsiglia at 410-987-1048, ext 146 or email cmarsiglia@coordinatingcenter.org.

Appendix F: NM RP

The Coordinating Center
Referral and Resident Survey Questions

Survey Method: Part 1 of the survey involved asking the following set of questions referred to as "onboarding survey questions." Following this initial round of questions, the Care at Hand system used the active issues identified at the end of the onboarding survey to determine a second set of survey questions referred to as a "field survey." Since the second set of questions is based on an individual's active issues, the questions will vary from person to person and are tailored to the individual's particular active issue(s).

Onboarding Survey Questions

These 'onboarding" questions are posed to each resident:

- How many times has the resident been to the emergency department or in the hospital in the past 6 months?
- Does the resident have someone within their residence who assists them in their care?
- Did the resident get a new diagnosis during the past 6 months?
- Does the resident have any of the following diagnoses? Select all that apply.
- Ask resident: Do you ever have someone else help you read of fill out paperwork at the doctor's office?
- Ask resident: Over the past week have you been sad, depressed, or anxious?
- Does the resident take 5 or more medications (polypharmacy)?
- Does the resident take Coumadin/Warfarin, Insulin or Digoxin?
- Does the resident use oxygen, inhalers, or a nebulizer at home?
- Does the resident require help with taking or managing their medications?
- Ask resident: Do you need assistance with bathing or going to the bathroom?
- Ask resident: Does your health limit your ability to push a vacuum, do laundry, or stand to prepare meals?
- Ask resident: During the past month, has your health interfered with your social activities like visiting friends, relatives?
- Ask resident: Have you had any difficulty getting transportation to pick up your medications or get to your doctor appointments in the past month?
- Ask client: Did you fall or touch the ground within the past week?

- ** What is the most concerning active issue for the resident? Select one from the list.
- ** What is the second most concerning active issue for the resident? Select one from the list.

** Additional questions will be generated based on the final two questions relating to identification of active health issues.

Active Issues In Nexus Montgomery Resident Pilot

The Active Issues list represents the issue and frequency within the 46 people surveyed for NexusMontgomery. Active issues are not mutually exclusive. One resident can have hypertension and COPD and be counted in each. Hypertension, Diabetes, and Arthritis were the most common active issues identified.

Hypertension	15
Diabetes	14
Arthritis	11
Fall Risk	9
Atrial Fibrillation/Arrythmia	5
COPD	5
Dementia	5
Coronary Artery Disease	4
Peripheral Vascular Disease	4
Vertigo	3
Gout	3
Peripheral Neuropathy	2
Depression	1
Hypotention	1
Medication Side Effects	1
Urinary Tract Infection	1
Parkinson's	1
Wound	1
CHF	1
Blindness	1
Pain in legs (occasional Tylenol use)	1

Appendix G: NM RP Month-By-Month Financial Projections

Please refer to the Domain 9 on return-on-investment for details of these calculations.

These results are based on a probabilistic simulation that accounts for variability in program outcomes. Therefore, each run of the simulation produces somewhat varying results. The results presented here are typical for the program. The ROI summary in the body of this document presents average results derived from multiple runs of the finncial simulation model.

2016

	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16
Program Volume												
New Patients	0	0	0	35	44	63	85	103	130	115	96	108
Total Patients	0	0	0	35	69	104	139	174	210	210	210	210
Program Results												
Prevented Hospitalizations	0	0	0	3	3	9	19	17	27	20	20	27
Prevented ER Encounters	0	0	0	1	1	3	7	7	11	8	8	11
Cost Savings - Hospital	$0	$0	$0	$15,000	$15,000	$45,000	$95,000	$85,000	$135,000	$100,000	$100,000	$135,000
Cost Savings - ER	$0	$0	$0	$335	$335	$1,004	$2,343	$2,343	$3,682	$2,678	$2,678	$3,682
Total Cost Savings	$0	$0	$0	$15,335	$15,335	$46,004	$97,343	$87,343	$138,682	$102,678	$102,678	$138,682
Operating Costs												
Care Management	$0	$0	$99,417	$99,417	$99,417	$86,246	$86,246	$81,810	$81,810	$81,810	$81,810	$81,810
Overhead for CM @ 8.3%	$0	$0	$8,252	$8,252	$8,252	$7,158	$7,158	$6,790	$6,790	$6,790	$6,790	$6,790
Admin Infrastructure	$43,122	$43,122	$43,122	$43,122	$43,122	$43,122	$43,122	$43,122	$43,122	$43,122	$43,122	$43,122
Operating Costs	$43,122	$43,122	$150,791	$150,791	$150,791	$136,526	$136,526	$131,722	$131,722	$131,722	$131,722	$131,722
Overall Results												
Net Savings	($43,122)	($43,122)	($150,791)	($135,456)	($135,456)	($90,522)	($39,183)	($44,379)	$6,960	($29,044)	($29,044)	$6,960
Cumulative Net Savings	($43,122)	($86,244)	($237,035)	($372,490)	($507,946)	($598,469)	($637,652)	($682,030)	($675,070)	($704,114)	($733,158)	($726,197)

2017

	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17
Program Volume												
New Patients	108	90	104	102	104	97	92	118	94	97	102	106
Total Patients	210	210	210	210	210	210	210	210	210	210	210	210
Program Results												
Prevented Hospitalizations	30	33	47	37	40	47	34	41	36	35	30	33
Prevented ER Encounters	12	13	19	15	16	19	14	17	15	14	12	13
Cost Savings - Hospital	$150,000	$165,000	$235,000	$185,000	$200,000	$235,000	$170,000	$205,000	$180,000	$175,000	$150,000	$165,000
Cost Savings - ER	$4,017	$4,352	$6,360	$5,021	$5,356	$6,360	$4,687	$5,691	$5,021	$4,687	$4,017	$4,352
Total Cost Savings	$154,017	$169,352	$241,360	$190,021	$205,356	$241,360	$174,687	$210,691	$185,021	$179,687	$154,017	$169,352
Operating Costs												
Care Management	$54,351	$54,351	$54,351	$54,351	$54,351	$54,351	$54,351	$54,351	$54,351	$54,351	$54,351	$54,351
Overhead for CM @ 8.3%	$4,511	$4,511	$4,511	$4,511	$4,511	$4,511	$4,511	$4,511	$4,511	$4,511	$4,511	$4,511
Admin Infrastructure	$43,122	$43,122	$43,122	$43,122	$43,122	$43,122	$43,122	$43,122	$43,122	$43,122	$43,122	$43,122
Operating Costs	$101,984	$101,984	$101,984	$101,984	$101,984	$101,984	$101,984	$101,984	$101,984	$101,984	$101,984	$101,984
Overall Results												
Net Savings	$52,033	$67,368	$139,376	$88,037	$103,372	$139,376	$72,703	$108,707	$83,037	$77,703	$52,033	$67,368
Cumulative Net Savings	($674,164)	($606,796)	($467,420)	($379,383)	($276,011)	($136,634)	($63,932)	$44,775	$127,812	$205,515	$257,548	$324,916

2018

	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18
Program Volume												
New Patients	95	110	107	98	104	90	95	103	100	116	106	103
Total Patients	210	210	210	210	210	210	210	210	210	210	210	210
Program Results												
Prevented Hospitalizations	31	41	38	43	32	26	37	41	36	28	36	32
Prevented ER Encounters	12	17	15	18	13	10	15	17	15	11	15	13
Cost Savings - Hospital	$155,000	$205,000	$190,000	$215,000	$160,000	$130,000	$185,000	$205,000	$180,000	$140,000	$180,000	$160,000
Cost Savings - ER	$4,017	$5,691	$5,021	$6,026	$4,352	$3,348	$5,021	$5,691	$5,021	$3,682	$5,021	$4,352
Total Cost Savings	$159,017	$210,691	$195,021	$221,026	$164,352	$133,348	$190,021	$210,691	$185,021	$143,682	$185,021	$164,352
Operating Costs												
Care Management	$56,165	$56,165	$56,165	$56,165	$56,165	$56,165	$56,165	$56,165	$56,165	$56,165	$56,165	$56,165
Overhead for CM @ 8.3%	$4,662	$4,662	$4,662	$4,662	$4,662	$4,662	$4,662	$4,662	$4,662	$4,662	$4,662	$4,662
Admin Infrastructure	$43,122	$43,122	$43,122	$43,122	$43,122	$43,122	$43,122	$43,122	$43,122	$43,122	$43,122	$43,122
Operating Costs	$103,949	$103,949	$103,949	$103,949	$103,949	$103,949	$103,949	$103,949	$103,949	$103,949	$103,949	$103,949
Overall Results												
Net Savings	$55,068	$106,742	$91,073	$117,077	$60,403	$29,399	$86,073	$106,742	$81,073	$39,734	$81,073	$60,403
Cumulative Net Savings	$379,984	$486,726	$577,799	$694,875	$755,278	$784,677	$870,750	$977,492	$1,058,565	$1,098,298	$1,179,371	$1,239,774