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| Data and Infrastructure Work Group Report to the Commission: Recommendations on Data Requirements for Monitoring the All-Payer Model |
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**Health Services Cost Review Commission**

**4160 Patterson Avenue Baltimore, MD 21215**

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**May 14, 2014**

## Background

Beginning January 1, 2014, Maryland entered into a 5-year all-payer demonstration with Center of Medicaid and Medicare Innovation (CMMI), in which Maryland agreed to the following specific targets in cost and quality of hospital care:

1. Maintain growth in Maryland acute hospital all payer charge per capita, for Maryland residents, below 3.58%, the 10 year average of Maryland state GDP growth
2. Maintain growth in acute hospital Medicare payment per Maryland beneficiary below the national average, resulting in at least $330m of savings by the end of five years
3. Reduce the Medicare 30-day all-cause hospital readmission rate to below the national Medicare 30-day all-cause hospital readmission rate by the end of five years.
4. Achieve 30% aggregate reduction across all 65 Potentially Preventable Complications in Maryland’s Hospital Acquired Conditions program in five years.

In light of these commitments, HSCRC convened four workgroups to make recommendations on implementation issues. One of the workgroups, Data and Infrastructure Workgroup (“Workgroup”), was charged[[1]](#footnote-1) with making recommendations on the data and infrastructure requirements needed to support oversight and monitoring of the new hospital

All‐Payer Model and successful performance taking into account the needs of the HSCRC, as well as the needs for the health care industry and other stakeholders to achieve the goals of the model. The first task of the Workgroup was to make recommendations on data needed to: support rate setting activities; conduct evaluation activities using the key performance indicators; monitor and evaluate model performance; monitor shifts in care among hospitals and other providers; and, monitor the total cost of care.

This report makes recommendations on the best sources of data to meet the monitoring and compliance requirements of the new model. These initial recommendations are focused on the monitoring requirements included in the agreement with CMS and do not reflect the full range of data monitoring and infrastructure needs that will be needed to achieve the goals of the new model. After the considerations of the initial set of measures, the expanded performance measurement system and related infrastructure needs to support broader goals of the model will be developed in collaboration with other workgroups. The HSCRC will also need to work with CMS on the timing of reporting requirements to address the misalignment of reporting timelines because monitoring measures are due by June 30; however, data for most of the measures will be available in the summer or fall for the calendar year.

## CMS Compliance and Monitoring Commitments

Appendix A provides a list of all measures that were included in the initial set of measures to monitor the progress of the new All-Payer Model Demonstration. We grouped the measures in this list as follows:

Performance Target Data: This set of measures has specific targets determined under the new model and will require close and timely monitoring of the data. HSCRC will be providing the data on all payer per capita test and potentially preventable complications, while CMS will report results on Medicare per beneficiary hospital payments and readmissions.

Guardrails Data: In addition to performance targets, Maryland has committed to certain “guardrails” to ensure the success of the new model. These measures will be monitored and reported by the CMS and will trigger a review process if the conditions are not met.

Compliance Data: These measures include a set of measures HSCRC committed to collect and monitor in the new model contract at least on an annual basis.

Monitoring Data: To monitor Maryland’s progress in achieving three-part aim (patient experience, population health and cost) the new model contract identifies a set of measures in each domain. These domains and examples of these measures are as follows:

* Patient experience of care, such as patient satisfaction scores on HCAHPS
* Population health measures, such as rate of preventable utilization
* Hospital cost measures such as per capita total health care expenditures for all-payers, and utilization of diagnostic imaging testing.

For more specific information on individual measures, please see Appendix A: “Monitoring Commitments and Gap Analysis.”

## Recommended Sources of Data and Gap Analysis

HSCRC staff reviewed the compliance documentation for the new All-Payer Model Demonstration and identified currently available data sources for most of the data reporting and monitoring commitments. These data sources were reviewed with the Workgroup (please refer to Appendix A for the data sources identified for each compliance, guardrail or monitoring measure).

The evaluation of the measure list determined in the contract identified five areas of measurement with gaps in available data. Potential sources of data and strategies for monitoring required more detailed consideration by the Workgroup.

#### Shared Savings Amounts from Medicare Programs for Maryland Hospitals

#### The new model contract stipulates that “The State shall require all Regulated Maryland Hospitals that are participating in Medicare programs, demonstrations, or models involving shared savings to provide information to the State no less than annually on the amount of any and all shared savings payments distributed to the hospital, regardless of the entity receiving the payment from CMS. The State must transmit all such information to CMS no later than 60 days following receipt.” Since the required information is not easily available from public resources and from CMS, the best approach to receive this information is for HSCRC to develop an instrument to collect directly from hospitals.

#### 2. Physician Participation in Public Programs and Engagement in Innovative Models of Care

Physician participation and engagement is a critical success factor for the new model. The All Payer Demonstration model requires the continued participation of providers in public programs and innovative models of care. As part of its reporting requirements on patient experience of care, CMS requires Maryland to report the number of physicians participating in Medicare and Medicaid, as well as, healthcare reform initiatives such as ACOs and bundled payments. This will allow Maryland to monitor trends in access to physicians as it aims to reduce hospital admissions and drive care to lower cost settings.

With input from the Workgroup, HSCRC staff identified several potential sources for physician participation data including:

* Provider participation in Patient Centered Medical Home Initiatives:

The National Committee for Quality Assurance (NCQA) is a potential source to identify the number of providers recognized as Medical Homes. NCQA has a readily available on-line directory of clinicians and sites that have received NCQA reorganization as a medical home, including their level of reorganization. Another advantage of relying on the NCQA reorganization is that represents a standardized definition of medical homes that enable cross state comparisons. However, relying solely on NCQA as a source of data could underestimate the number of providers participating in other medical home initiatives in Maryland. There is an All-Payer Medical Home initiative through CareFirst with significant participation in its PCMH program. The different payer PCMH initiatives may have different requirements for recognition and unfortunately, there is not a single source of information regarding provider participation in PCMH programs.

* Provider participation in ACOs or Bundled Payment Initiatives:

The HSCRC should rely on CMS to provide data for the number of providers participating in ACOs or Bundled Payment Initiatives. It is important to note that, to date, CMS has not permitted Maryland hospitals to participate in bundled payment demonstrations; however, the agreement with CMS encourages Maryland to come forward with proposals under different CMMI initiatives.

* Medicare participating physicians:

Medicare maintains the Medicare.gov Physician Compare directory to provide information on physicians and other providers participating in Medicare. This data source has some challenges, including potential duplication in provider data and a lack of current information on whether providers are actively seeing Medicare beneficiaries or open for new patients. However, this data source was preferable to trying to collect self-reported data on participation in public programs through provider surveys.

* + - Medicaid participating physicians per enrollee:

The Medicaid program maintains a directory for all providers participating in the HealthChoice program. Medicaid also issues ID numbers to all participating providers. There are some challenges to relying on the HealthChoice provider directory and Medicaid provider IDs as a resource, including potential duplication of providers, or providers who are not actively seeing Medicaid patients or other inaccuracies. Nonetheless, this is the best data source available. As this data is reported in the future it will be important to distinguish when changes in participating providers may actually be a result of further efforts to clean up the provider data.

#### 3. Discharges with Primary Care Provider (PCP) Identified

The monitoring plan with CMS requires measures to assess patient experience of care. One of these measures is the frequency of the primary care provider being identified on discharge to support care transitions between providers. The Workgroup's recommendation for monitoring this data will build on a solution already being deployed in Maryland to support hospital efforts to meet meaningful use requirements (Stage 2 Summary of Care/Transitions of Care Measure). CRISP currently operates an Electronic Notification Service (ENS), which sends admission and discharge information on a real-time basis to providers. ENS works by gathering patient panels directly from providers rather than relying on self-reported data from patients during the admission process which is known to be unreliable in Maryland as well as nationally. CRISP has recently started providing a service to send discharge summaries to providers who subscribe to the ENS. HSCRC staff is proposing to use data from CRISP on the number of discharges for which there is an associated ENS alert to a provider. Additionally, this data source will allow us to provide information on the number of discharges where a discharge summary was sent. While this measure is not exactly consistent with CMS requirement, there is a strong case to be made that this measure is a better indicator of supporting transitions in care and more consistent with meaningful use requirements.

#### All-Payer Total Cost of Care Measures

The All Payer Demonstration Model requires Maryland to monitor the total cost of care for Maryland Medicare beneficiaries, as well as, all Maryland residents. Specifically, Maryland must monitor trends in healthcare costs outside of regulated space and any shifts of cost to unregulated settings. This measure is also of interest to many payers in Maryland.

Knowing the critical nature of this measure, the HSCRC requested white papers from interested stakeholder to help identify methods for monitoring total cost of care and potential shifts from inpatient and outpatient hospital settings to non-regulated providers. The topic was also discussed in the Workgroup. The consensus of the white papers and the Workgroup was that the Medical Care Data Base is the best long-term source for robust analysis of total cost of care because it is a claims-level database. However, because of current limitations (i.e., timeliness of data and potential coverage gaps), this was considered a longer-term strategy. In the short-term, the Workgroup pursued a strategy of collecting aggregated data directly from the payers on a voluntary basis.

A subgroup was convened to develop a reporting template for payers to report aggregate total care cost and utilization information. The subgroup tried to balance a number of different goals when developing the recommended template. Because the total cost data would be collected from payers on a voluntary basis, the subgroup agreed that the template needed to meet the following criteria:

* Must be simple enough to be feasibly reported on a regular basis;
* Provide clear definitions to ensure consistent reporting across payers and build on definitions that can be validated by other data sources;
* Build upon existing and well-documented reporting models; and
* Sufficiently disaggregate data to allow HSCRC and stakeholders to understand the shifts between regulated and non-regulated settings.

The subgroup reviewed examples of total cost of care reporting templates to develop a proposed reporting template (see Appendix C). The group gave focused attention to the Medicaid program's HealthChoice Financial Monitoring Report (HFMR), which is a reporting template that was developed by the Medicaid program to support their rate setting activities with managed care organizations and has been in place for over fifteen years. The HFMR provided a relatively simple model to collect cost and utilization information from different payers and was used as a starting point for subgroup to develop a proposed reporting template. Payers on the subgroup emphasized the importance of providing clear and detailed instructions for reporting in sufficient time to produce the requested data. Medicaid, Medicare Advantage and commercial payers were engaged in the subgroup discussions. Medicaid, in particular was actively engaged, noting the administrative challenges of reporting the data and the need to recognize the limitations of collecting aggregate data.

The recommendations for collecting total cost of care data include:

* **Collect aggregate total cost of care data from payers on a voluntary basis consistent with the initial reporting template developed by the subgroup (Total Cost of Care Report)**: This reporting template is designed to collect data that will help understand shifts in care settings from regulated to unregulated settings in the short-term. The reporting template relies on aggregate data and will not be able to replace a longer-term strategy of relying on the Medical Care Claims Database for robust analysis of claim level data. The services included in the template are intended to be sufficient to understand shifts. Reporting will need to be disaggregated by market segment so that shifts in care setting or changes total cost of care may be understood in the context of benefit design and changes in coverage. Data should be collected based on the county of residence of plan member and age breaks that are consistent with other policies implemented by the Commission..
* **Develop detailed template reporting instructions in sufficient time for payers to report data**: The HSCRC should continue to engage the subgroup to review detailed reporting instructions for the Total Cost of Care Report. The goal is to finalize the reporting instructions by July 2014 with at least three months prior to reporting deadlines as requested by the payers.
* **Begin to collect data by October 2014 and establish a routine reporting schedule**: The goal is to collect the first payer Total Cost of Care Report by the Fall of 2014 and to engage the subgroup to finalize the subsequent reporting schedule.

#### Outpatient Hospital Cost Measures

In addition to aggregate total amounts of total cost of care, the monitoring list for hospital cost included outpatient imaging measures reported by the CMS Hospital Compare. All Maryland regulated hospitals signed permissions to allow CMS to calculate and report these measures as of Jan 1, 2014. The workgroup identified that calculation of similar measures using all-payer claims should be considered within the timelines of all-payer claims data base.

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| **Appendix A: Monitoring Commitments and Data Sources Outlined in the CMS Contract** |  |  |
| **Measurement** | **Data Files** | **Source Agency** | **Monitoring Timeline** | **Reporting Timeline** | **CY Data Availability** |
| **Performance Target Data** |  |  |  |  |  |
| All Payer per Capita Test | Financial Database | HSCRC | Monthly, 45 days after the end of the month | May 1st  | March 1st  |
| Population Projections and Estimates | MD Department of Planning | Annual, December | May 1st  | December 31st |
|  |  |  |  |  |  |
| Medicare per Beneficiary Hospital Payments | National and Maryland Medicare Part-A Claims | CMS | Monthly, with 4 month lag | May 1st | May 1st  |
|   | Beneficiary Enrollment Data | CMS | Monthly, with 4 month lag | May 1st | May 1st  |
|  |  |  |  |  |  |
| Readmissions | National and Maryland Medicare Claims | CMS | Monthly, with 4 month lag | June 30th | May 1st  |
|  |  |  |  |  |  |
| Potentially Preventable Complications | Casemix Database | HSCRC | Monthly, with 2 month lag | June 30th  | March 1st  |
|  |  |  |  |  |  |
| **Guardrails Data** |   |   |   |   |   |
| Medicare per Beneficiary Total Payments | National and Maryland Medicare Part A and Part B Claims | CMS | Monthly, with 4 month lag | May 1st  | May 1st |
|   | Beneficiary Enrollment Data | CMS |   | May 1st  | May 1st |
|  |  |  |  |  |  |
| Percent of Revenue from Out of State Patients in Maryland (Medicare and All Payer) | Medicare Claims Data | CMS | Monthly, with 4 month lag | May 1st  | May 1st  |
| Financial Database | HSCRC |   |   |   |
|  |  |  |  |  |  |
| **Compliance Data** |   |   |   |   |   |
| Shared Savings Amounts from Medicare Programs for Maryland Hospitals (from ACO's, bundled payments, etc, paid outside of claims) | To be developed | HSCRC | At Least Annually | 60 days after reciept  | TBD |
|  |  |  |  |  |  |
| All Payer Total Cost and Shifts to unregulated space | See Appendix B "Rec Data Source for Gaps" | TBD  | TBD | Fall |
|  |  |  |  |  |  |
| **Monitoring Data** |   |   |   |   |   |
| **PATIENT EXPERIENCE OF CARE MEASURES** |   |   |
| HCAHPS: Patient’s rating of the hospital | Survey | CMS | Annual  | June 30th | October |
| HCAHPS: Communication with doctors |
| HCAHPS: Communication with nurses |
| HCAHPS : Three-item care transition measure (CTM-3)  |
| Home Health CAHPS: Patient’s rating of home health agency  | Survey | CMS | Annual | June 30th | October |
| Home Health CAHPS: Communication with the home health team |
| Nursing Home CAHPS (State-administered survey based on) : Family members’ perceptions of nursing home care | Survey | CMS | Annual | June 30th | Summer |
| Clinician and Group CAHPS: Patient’s perceptions of care provided by a physician in an office. | Survey | CMS | Annual | June 30th | TBD |
| Short Stay Nursing Home Resident’s discharge needs met  | Survey  | MHCC | Annual | June 30th | Summer |
| Short Stay Nursing Home Resident’s Discharge planning and information about medicines and symptoms  |
| Rate of physician follow up after discharge  | Claims - Medicare, Medicaid, MCDB | CMS, DHMH, MHCC | Annual | June 30th | TBD |
| Discharges with PCP identified | See Appendix B "Rec Data Source for Gaps" |  | June 30th | Fall |
| Medicaid participating physicians per Medicaid enrollee;  | See Appendix B "Rec Data Source for Gaps" |   | June 30th | Fall |
| Medicare participating physicians per Medicare enrollee | See Appendix B "Rec Data Source for Gaps" |   | June 30th | Fall |
| Participation of providers in patient centered medical home models | See Appendix B "Rec Data Source for Gaps" |   | June 30th | Fall |
| Participation of providers in ACOs and bundled payments | See Appendix B "Rec Data Source for Gaps" |   | June 30th | Fall |
| Quality score using process of care measures in AMI, HF, SCIP, PN, CAC | Hospital Inpatient Quality Reporting Program | CMS | Annual | June 30th | October |
| Quality score using process of care measures in outpatient setting | Hospital Outpatient Quality Reporting Program | CMS | Annual | June 30th | October |
| NHSN CLASBI SIR | Hospital Compare | CMS | Annual | June 30th | TBD |
| Admission Rates from Home Health Agencies to Acute Inpatient Hospital  | Home Health Compare | CMS | Annual | June 30th | October |
| Unplanned, urgent visits to the Emergency Departments for patients receiving Home Health care | June 30th | October |
| Readmission rates from nursing home to acute care hospital | Hospital Inpatient Discharge Abstract | HSCRC | Annual | June 30th  | March 1st  |
| Readmissions per 1000 residents | Casemix Data Set and | HSCRC  |   |   |   |
| Population estimates | MD Department of Planning | Annual | June 30th  | March 1st  |
| National Readmissions Reduction Program Measures:  | Hospital Inpatient Discharge Abstract | HSCRC | Annual | June 30th  | March 1st  |
| Heart Failure |   |   |   |   |   |
| Pneumonia  |   |   |   |   |   |
| Acute Myocardial Infarction |   |   |   |   |   |
| Chronic Obstructive Pulmonary Disease  |   |   |   |   |   |
| Hip/Total Knee Arthoplasty  |   |   |   |   |   |
| **POPULATION HEALTH MEASURES** | June 30th  |   |
| SHIP Objective 1\*: Increase life expectancy  | Vital Statistics Administration, Department of Health and Mental Hygiene | DHMH | Annual | June 30th | July  |
| Prevention Quality Indicator (PQI) Composite Measure of Preventable Hospitalization  | HSCRC Casemix Data Set | DHMH | Annual | June 30th | July  |
| SHIP Objective 32: Reduce the % of adults who are current smokers | Behavioral Risk Factor Surveillance System (BRFSS) | DHMH | Annual | June 30th | March  |
| SHIP Objective 33: Reduce the % of youth using any kind of tobacco product | Maryland Youth Tobacco Survey | DHMH | Annual | June 30th | June |
| SHIP Objective 24: Increase the % vaccinated annually for seasonal influenza | CDC National Immunization Survey; BRFSS | DHMH | Annual | June 30th | March  |
| SHIP Objective 23: Increase % of children with recommended vaccinations | CDC National Immunization Survey | DHMH | Annual | June 30th | September |
| SHIP Objective 20: Reduce new HIV infections among adults and adolescents | MD HIV surveillance system; US Census Bureau; ACS 5 year Census | DHMH | Annual | June 30th | March  |
| SHIP Objective 27: Reduce diabetes-related emergency department visits | Casemix Data Set | DHMH | Annual | June 30th | July |
| SHIP Objective 28: Reduce hypertension related emergency department visits | Casemix Data Set | DHMH | Annual | June 30th | July  |
| SHIP Objective 31: Reduce the % of children who are considered obese | Maryland Youth Tobacco Survey | DHMH | Annual | June 30th | June |
| SHIP Objective 30: Increase the % of adults who are at a healthy weight | Behavioral Risk Factor Surveillance System (BRFSS) | DHMH | Annual | June 30th | March  |
| SHIP Objective 17: Reduce hospital ED visits from asthma | Casemix Data Set | DHMH | Annual | June 30th | July  |
| SHIP Objective 34: Reduce hospital ED visits related to behavioral health  | Casemix Data Set | DHMH | Annual | June 30th | July  |
| Fall-related death rate | Mortality database | Maryland Vital Statistics Administration | Annual | June 30th | July  |
| **HOSPITAL COST MEASURES** |   |   |
| OP-8 : MRI Lumbar Spine for Low Back Pain | Medicare Claims (Hospital Compare);See Appendix B "Rec Data Source for Gaps" | CMS, MHCC | Annual | June 30th | July |
|   |
| OP-9: Mammography Follow-up Rates |
|   |
| OP-10: Abdomen CT - Use of Contrast Material |
|   |
| OP-11:Thorax CT - Use of Contrast Material |
|   |
| OP-13: Cardiac Imaging for Preoperative Risk Assessment for Non Cardiac Low Risk Surgery |
|   |
| OP-14: Simultaneous Use of Brain Computed Tomography (CT) and Sinus Computed Tomography (CT) |
| Per capita hospital expenditure growth (inpatient and outpatient) for: | Hospital Inpatient and Outpatient Discharge Abstract; Insurance Enrollment Files | HSCRC  | Annual | June 30th | March 1st  |
| ·   All-payer |
| ·   Medicare |
| ·   Medicaid/CHIP |
| ·   Private payer |
| ·   Medicare/Medicaid Enrollees (Dual Eligible) |
| Per capita health expenditure growth (inpatient and outpatient) for: | See Appendix B "Rec Data Source for Gaps" | TBD | June 30th  | TBD |
| ·   All-payer |
| ·   Medicare |
| ·   Medicaid/CHIP |
| ·   Private payer |
| ·   Medicare/Medicaid Enrollees (Dual Eligible) |

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| **Appendix B: Recommendations for Data Sources to Address Gaps Compliance Data** |
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| **Measurement** | **Recommended Data Files** | **Recommended Data Source Agency** | **Monitoring Timeline** | **Limitations & Considerations** |
| **Compliance Data** |   |   |   |   |
| All Payer Total Cost and Shifts to unregulated space | Total cost of care template | Medicaid and Commercial Payers | Annually | Considerations include: easy to submit on regular basis; clear definitions to ensure consistent reporting; build upon existing and well-documented models; and sufficiently disaggregated |
|  |  |  |  |  |
| **Monitoring Data** |   |   |   |   |
| **PATIENT EXPERIENCE OF CARE MEASURES** |
| Discharges with PCP identified | To be developed | CRISP | Annual | Measure is not exactly consistent with CMS requirement, there is a strong case to be made that this measure is a better indicator of supporting transitions in care and more consistent with meaningful use requirements.  |
| Medicaid participating physicians per Medicaid enrollee;  | HealthChoice directory of participating providers | DHMH Medicaid | Annual | Potential duplication of providers, or providers who are not actively seeing Medicaid patients or other inaccuracies |
| Medicare participating physicians per Medicare enrollee | Medicare.gov Physician Compare directory | CMS | Annual | Potential duplication in provider data and a lack of current information on whether providers are actively seeing Medicare beneficiaries or open for new patients |
| Participation of providers in patient centered medical home models | On-line directory of clinicians and sites that have received NCQA reorganization as a medical home | National Committee for Quality Assurance (NCQA) | Annual | Does not include providers participating in other medical home initiatives in Maryland (i.e., CareFirst Initiative) |
| Participation of providers in ACOs and bundled payments | To be developed | CMS | Annual | CMS has not permitted Maryland hospitals to participate in bundled payment demonstrations; however, the agreement with CMS encourages Maryland to come forward with proposals under different CMMI initiatives. |
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| **HOSPITAL COST MEASURES** |
| OP-8 : MRI Lumbar Spine for Low Back Pain | Claims (Hospital Compare);Other Payers to be developed | CMS, MHCC |   | Medicare specific measures are published at Hospital Compare website. All-payer Measure needs to be developed using all-payer claims data base. |
|   |   |
| OP-9: Mammography Follow-up Rates |   |
|   |   |
| OP-10: Abdomen CT - Use of Contrast Material |   |
|   |   |
| OP-11:Thorax CT - Use of Contrast Material |   |
|   |   |
| OP-13: Cardiac Imaging for Preoperative Risk Assessment for Non Cardiac Low Risk Surgery |   |
|   |   |
| OP-14: Simultaneous Use of Brain Computed Tomography (CT) and Sinus Computed Tomography (CT) |   |
|  |  |  |  |  |
| Per capita health expenditure growth (inpatient and outpatient) for: | Total cost of care template for All-Payer, Medicaid & Private Payers; Medicare Data for Medicare and Dual eligible | Medicaid, Commercial Payers and Medicare |  Annual | Considerations: See Total Cost of Care template above |
| ·   All-payer |   |   |   |
| ·   Medicare |   |   |   |
| ·   Medicaid/CHIP |   |   |   |
| ·   Private payer |   |   |   |
| ·   Medicare/Medicaid Enrollees (Dual Eligible) |   |   |   |

1. The Data and Infrastructure Workgroup was charged with making recommendations on: 1. data requirements, 2. Care Coordination Data and Infrastructure, 3. Technical and Staff Infrastructure, and 4. data sharing strategy [↑](#footnote-ref-1)