Access to the Limited Data Sets

Medicare data is a critical component of hospitals' planning and implementation efforts currently underway to support the All-Payer Model. There are two types of data needs: first, sufficiently detailed data to support performance monitoring, policy, and planning; and second, patient-level identifiable data to support implementation of care coordination initiatives. The following options with the accompanying Data Use Agreement (DUA) and Attachment A were created to allow hospitals to gain access to Limited Data Sets to meet the first need.

HSCRC has worked closely with CMMI staff to establish a process for Maryland hospitals and other providers to access non-identifiable, claims-level, Medicare data through Limited Data Sets. The Limited Data Sets will include:

- All Medicare Part A and B claims;
- 100% of the claims for all Maryland beneficiaries;
- Demographic and coverage information for all Maryland beneficiaries
- Substance abuse data, accounting for about 5% of total spending, which will be suppressed consistent with federal requirements; and
- Data will be provided for Calendar Year 2012 through 2015.

Of note, Provider IDs will also be available in these data sets. However, patient identifiers, such as names and addresses, will be removed. There will be common patient IDs to link all the data sets.

All hospitals must execute a DUA either through Option 1 or Option 2, as described below. The DUA will allow hospitals to utilize CRISP reports without cell size suppression and/or receive the Limited Data Sets directly from CMS.

The DUA must be signed and sent to Laura Mandel at laura.mandel@crisphealth.org. She will submit batches of competed documents to CMMI on a rolling basis in order to help fast-track Maryland hospital requests. We expect to send the first batch of request in two weeks.

Option 1:

Completing the DUA: For Hospitals Only Receiving Reports from CRISP

Hospitals that only want access to CRISP reports without cell size suppression must execute a DUA as a User with CRISP serving as the Custodian. CRISP will complete all necessary DUA fields and Attachment A. Hospitals must simply complete Section 14 for the hospital executive authorized to execute the agreement. These hospitals will not receive the raw data files, but will be able to view detailed CRISP reports based on these data sets.

For reference, the DUA will be completed by CRISP using the information described in Option 2. The Custodian will be Brandon Neiswender, CRISP's Privacy and Security Officer. His information is as follows:

Name of Custodian: Brandon Neiswender, Privacy and Security Officer
Company: Chesapeake Regional Information System for our Patients
Street Address: 7160 Columbia Gateway Drive, Suite 230
City: Columbia

State: MD
Zip Code: 21046
Office Telephone: 443-285-0162
E-Mail Address: brandon.neiswender@crisphealth.org

The CRISP information being submitted as Attachment A is also included here for reference. After hospitals submit the DUA with only the User information filled out and signed, CRISP will ensure the documents are complete and executed prior to sending to CMS. A completed copy will be sent back to these hospitals.

CRISP Attachment A

1. **Introduction**
   - **Title:** Maryland All-Payer Model
   - **Purpose:**
     The Maryland All-Payer Model waiver requires Maryland's hospitals to:

     - Limit annual all-payer total hospital per capita revenue growth for Maryland residents to 3.58%.
     - Save Medicare a cumulative $330 million over five years by holding the growth in Medicare per beneficiary total hospital expenditures for Maryland resident FFS beneficiaries below the rate of growth in Medicare per beneficiary total hospital expenditures for national Medicare FFS beneficiaries.
     - Limit the annual growth rate in the Medicare per beneficiary total cost of care for Maryland residents, regardless of the state in which such residents receive services, to no more than the national Medicare per beneficiary total cost of care growth rate.
     - Hold the annual percentage of Medicare hospital revenue attributable to non-resident Medicare beneficiaries to less than 1.5% above the level in CY 2013.
     - Reduce potentially preventable hospital acquired conditions by 30 percent.
     - Reduce aggregate Medicare 30-day unadjusted all-cause, all-site, hospital readmissions rate for Medicare FFS beneficiaries to equal or less than the national readmission rate.

     The Maryland Medicare Limited Data Sets will permit CRISP to evaluate the progress of the Maryland All-Payer Model. It will allow CRISP to create reports that support hospital efforts to identify opportunities for improvement of measures described above. These data will be used to monitor trends in Medicare total cost of care and produce benchmarks and comparisons for cost, performance and quality metrics by hospital and statewide.

2. **Project Issues and Methods**
   The key issues to be studied are trends in total cost of care statewide and by hospital to determine where opportunities exist to reduce cost. Specific to total cost of care, trends by care setting will also be analyzed. Performance trends for quality metrics such as potentially preventable hospital acquired conditions and 30-day unadjusted all-cause, all-site, hospital readmissions will also be analyzed for both the state and by hospital to understand areas of opportunities to improve care and reduce Medicare spending. Understanding trends among high utilizers and vulnerable populations, such as dual eligibles, will also be key to understand cost and utilization trends and associated drivers. As part of these analyses, examining where there may be significant variation (opportunity) to drive down costs will help inform how to improve care and where the State may want to go next with the second phase of the waiver.

CRISP will use the data to monitor trends in total cost of care and produce benchmarks and comparisons for cost, performance, and quality metrics. The data will be used to determine the Maryland Medicare per Beneficiary total payments, and analyze trends in utilization and cost of care by condition type and different patient cohorts. We anticipate most analyses will involve simple descriptive statistics, while other analyses may call for more sophisticated techniques.

Reports generated from such analyses would typically be shared internally and disseminated to key hospital decision makers. We expect to conduct data analyses targeting specific issues of interest related to the key metrics hospitals are accountable for under the waiver agreement. Hospitals agree to CMS' DUA policy stipulation that no cell (e.g. admittances, discharges, patients, services) 10 or less may be displayed. Also, no use of percentages or other mathematical formulas may be used if they result in the display of a cell 10 or less.

None of the methodology or tools used in this study contain proprietary information.

3. Data Management Safeguards

CRISP places significant effort on ensuring the security of its infrastructure in which service applications and databases are housed. The entire infrastructure sits behind a firewall, with all systems protected by TDE AES256-level encryption, which requires two factor authentication for access. Once inside the firewall, individual domains housing protected health information require an additional level of security before access is granted. Daily vulnerability scans and annual penetration tests of the virtual environment are conducted to ensure that any known weaknesses or threats are mitigated immediately. New service applications are also subject to a full penetration test prior to a go-live date. Physically, the CRISP datacenters themselves are SOC 2 Type II compliant and provide CRISP with proof of evidence on an annual basis. The datacenter hosting CRISP's Master Patient Index serves Fortune 500 companies and enforces rigid biometric controls for physical access to CRISP data cages.

CRISP has engineered a strict approval policy around change management and access authorization, which undergoes in-depth reviews by an internal Change Control Board. Members of this board also contribute to the ongoing development, review and remediation of a CRISP risk register, which comprises internal and external evaluations of the company, and classifies risks to CRISP's services, controls, and business processes. Comprehensive risk assessments are completed to augment the details of items in the register deemed necessary for further investigation.

CRISP undergoes an annual security audit required by the Maryland Healthcare Commission (MHCC), our regulatory body, which emphasizes adherence to both HIPAA/HITECH and COMAR regulations. This year's MHCC audit employed additional social engineering exercises, which attempted to exploit access to protected systems; in following internal policy, CRISP successfully rejected and reported all suspicious attempts. CRISP also contracts with Coalfire, a globally recognized cybersecurity firm, to perform annual HIPAA control assessments. The results of these audit reports provide CRISP the opportunity for recurrent improvement upon its privacy and security controls as gaps are identified and remediated.

CRISP has established company goals of achieving several industry-standard security certifications. The EHNAC certification process is currently underway and CRISP has further engaged Coalfire to assist in the upcoming MyCSF assessment towards HITRUST certification. Splunk has been acquired as CRISP's security information and event management (SIEM) tool, with monitoring, analysis, and alerts managed by NuHarbor – a risk advisory firm with substantial experience working with state government bodies.

4. Key personnel

CRISP Staff:
- Brandon Neiswender, Privacy and Security Officer

Audacious Inquiry (Subcontractor):
- Alice Wang, Technical Consultant, CRISP Reporting Services
- Eric White, Technical Architect, CRISP Reporting Services
- Raina Sharma, Developer, CRISP Reporting Services

Burton Policy (Subcontractor):
- Yelena McElwain, Developer

LD Consulting (Subcontractor):
- Eric Lindemann, Data Analyst

5. Dissemination / Implementation

Reports generated from such analyses would typically be shared internally and with any other Users or Secondary Users, approved by CMS under the Project, through the CRISP Reporting Services Portal. The CRISP Reporting Services Portal is a secure, web-based access point where authorized users access reports containing aggregated and detail level data. We expect to conduct analyses targeting specific issues of interest related to the key metrics hospitals are accountable for under the waiver agreement. We will produce reports to inform Maryland hospitals' performance under the waiver and conduct benchmark analyses to inform strategies for improvement. CRISP agrees to the CMS DUA policy stipulation that no cell (e.g. admittances, discharges, patients, services) 10 or less may be displayed to individuals not covered under this DUA. Also, no use of percentages or other mathematical formulas may be used if they result in the display of a cell 10 or less.

6. **Proprietary Information**

There are no methodologies or tools used by CRISP that contain proprietary information; this is not applicable to CRISP's project.

Option 2:

Completing the DUA: For Hospitals Receiving Raw Data from CMS

Hospitals should complete the form using the information pre-populated in the enclosed DUA. These hospitals will gain access to the raw LDS data files directly from CMS. CRISP must be included as a second Custodian of the data. By doing so, hospitals will gain access to the detail reports being generated by CRISP. A summary of the information required in the DUA is below.

Introduction:	Type your hospital name into the space provided
Section 1:	Type your hospital name
Section 3:	Name of the Study/Project is Maryland All-Payer Model; CMS Contract No. should remain blank
Section 4:	Included as additional document; files covered under this agreement are: Denominator File (MD Only) – 2012-2015 Inpatient LDS (MD Only) – 2012-2015 Outpatient LDS (MD Only) – 2012-2015 Carrier LDS (MD Only) – 2012-2015 Durable Medical Equipment LDS (MD Only) – 2012-2015 Skilled Nursing Facility LDS (MD Only) – 2012-2015 Home Health Agency LDS (MD Only) – 2012-2015

	Hospice LDS (MD Only) – 2012-2015
Section 6:	Files may be retained for 1 year
Section 14:	Complete all boxes for the hospital representative authorized to execute the DUA on behalf of the organization; sign form in space provided
Section 15:	Complete all boxes for the hospital representative responsible for compliance and security related to the CMS data and sign form in space provided; also be aware that the additional attachment with the CRISP Custodian will be executed and submitted with this DUA
Section 16 & 17:	Do not complete
Attachment A:	See following section with draft language

Attachment A is required along with the DUA, and applies to the Custodian of the data who will presumably conduct analytics. The following language is a sample that hospitals may use to help complete the form. Hospitals should customize the responses to the extent required to provide complete, accurate statements.

Sample Attachment A for Hospitals Requesting CMS Data as Custodians

1. **Introduction**
   - **Title:** Maryland All-Payer Model
   - **Purpose:**

     The Maryland All-Payer Model waiver requires Maryland's hospitals to:

     - Limit annual all-payer total hospital per capita revenue growth for Maryland residents to 3.58%.
     - Save Medicare a cumulative $330 million over five years by holding the growth in Medicare per beneficiary total hospital expenditures for Maryland resident FFS beneficiaries below the rate of growth in Medicare per beneficiary total hospital expenditures for national Medicare FFS beneficiaries.
     - Limit the annual growth rate in the Medicare per beneficiary total cost of care for Maryland residents, regardless of the state in which such residents receive services, to no more than the national Medicare per beneficiary total cost of care growth rate.
     - Hold the annual percentage of Medicare hospital revenue attributable to non-resident Medicare beneficiaries to less than 1.5% above the level in CY 2013.
     - Reduce potentially preventable hospital acquired conditions by 30 percent.
     - Reduce aggregate Medicare 30-day unadjusted all-cause, all-site, hospital readmissions rate for Medicare FFS beneficiaries to equal or less than the national readmission rate.

     The Maryland Medicare Limited Data Sets (LDS) will permit hospitals to identify opportunities for improvement of measures described above. These data will be used to monitor trends in Medicare total cost of care and produce benchmarks and comparisons for cost, performance and quality metrics by hospital and statewide. Additionally, these data will be used for development of innovative payment, quality, care coordination, and population health models for Medicare beneficiaries.

2. **Project Issues and Methods**

   The key issues to be studied are trends in total cost of care statewide and by hospital to determine where opportunities exist to reduce cost. Specific to total cost of care, trends by care setting will also be analyzed. Performance trends for quality metrics such as potentially preventable hospital acquired conditions and 30-day unadjusted all-cause, all-site, hospital readmissions will also be

analyzed for both the state and by hospital to understand areas of opportunities to improve care and reduce Medicare spending. Understanding trends among high utilizers and vulnerable populations, such as dual eligibles, will also be key to understand cost and utilization trends and associated drivers. As part of these analyses, examining where there may be significant variation (opportunity) to drive down costs will help inform how to improve care and where the State may want to go next with the second phase of the waiver.

The data will be used to monitor trends in total cost of care and produce benchmarks and comparisons for cost, performance, and quality metrics. The data will be used to determine the Maryland Medicare per beneficiary total payments, and analyze trends in utilization and cost of care by condition type and different patient cohorts. Most analyses will involve simple descriptive statistics, while other analyses may call for more sophisticated techniques.

Reports generated from such analyses would typically be shared internally and disseminated to key hospital decision makers. Data analyses will be conducted targeting specific issues of interest related to the key metrics hospitals are accountable for under the waiver agreement. Users agree to CMS' DUA policy stipulation that no cell (e.g. admittances, discharges, patients, services) 10 or less may be displayed. Also, no use of percentages or other mathematical formulas may be used if they result in the display of a cell 10 or less.

There are no methodologies or tools used within this study that contain proprietary information.

3. Data Management Safeguards

All Protected Health Information will be safeguarded pursuant to the HIPAA law, including the HITECH Act, HIPAA Privacy and Security Rules, and applicable state law and regulations. Any use or disclosure will be the minimum necessary, consistent with 45 C.F.R. § 164.502(b).

[Describe the procedures that will be used to protect the privacy and identity of an individual at your institution. Also include the following language which describes CRISP's data management safeguards as the second Custodian.]

Second Custodian Data Management Safeguards

CRISP places significant effort on ensuring the security of its infrastructure in which service applications and databases are housed. The entire infrastructure sits behind a firewall, with all systems protected by TDE AES256-level encryption, which requires two factor authentication for access. Once inside the firewall, individual domains housing protected health information require an additional level of security before access is granted. Daily vulnerability scans and annual penetration tests of the virtual environment are conducted to ensure that any known weaknesses or threats are mitigated immediately. New service applications are also subject to a full penetration test prior to go-live date. Physically, the CRISP datacenters themselves are SOC 2 Type II compliant and provide CRISP with proof of evidence on an annual basis. The datacenter hosting CRISP's Master Patient Index serves Fortune 500 companies and enforces rigid biometric controls for physical access to CRISP data cages.

A strict approval policy around change management and access authorization has been engineered by CRISP, which relies on in-depth reviews by an internal Change Control Board. Members of this board also contribute to the ongoing development, review and remediation of a CRISP risk register which comprises internal and external evaluations of the company, and classifies risks to CRISP's services, controls, and business processes. Comprehensive risk assessments are completed to augment the details of items in the register deemed necessary for further investigation.

CRISP undergoes an annual security audit required by the Maryland Healthcare Commission (MHCC), our regulatory body, which emphasizes adherence to both HIPAA/HITECH and COMAR regulations. This year's MHCC audit employed additional social engineering exercises, which attempted to exploit access to protected systems; in following internal policy, CRISP successfully rejected and reported all suspicious attempts. CRISP also contracts with Coalfire, a globally recognized cybersecurity firm, to perform annual HIPAA control assessments. The results of these audit reports provide CRISP the opportunity for recurrent improvement upon its privacy and security controls as gaps are identified and remediated.

CRISP has established company goals of achieving several industry-standard security certifications. The EHNAC certification process is currently underway and CRISP has further engaged Coalfire to assist in the upcoming MyCSF assessment towards HITRUST certification. Splunk has been acquired as CRISP's security information and event management (SIEM) tool, with monitoring, analysis, and alerts managed by NuHarbor – a risk advisory firm with substantial experience working with state government bodies.

4. Key personnel

[List the staff that will have access to the limited data set files(s) and their role in the project. Complete this section based on your project plans.]

5. Dissemination / Implementation

Reports generated from any analyses would be shared internally. Data analyses will be conducted targeting specific issues of interest related to the key metrics hospitals are accountable for under the waiver agreement. Reports will be produced to inform performance under the waiver and conduct benchmark analyses to inform strategies to improve. Users agree to the CMS DUA policy stipulation that no cell (e.g. admittances, discharges, patients, services) 10 or less may be displayed. Also, no use of percentages or other mathematical formulas may be used if they result in the display of a cell 10 or less.

6. Proprietary Information

There are no methodologies or tools used within the scope of this Application that contain proprietary information.