

Application for Massachusetts Case Mix and Charge Data (Non-Government) [Exhibit A – Data Application]

I. INSTRUCTIONS

This form is required for all Applicants, Agencies, or Organizations, hereinafter referred to as “Organization”, except Government Agencies as defined in 957 CMR 5.02, requesting protected health information. All Organizations must also complete the Data Management Plan, and attach it to this Application. The Application and the Data Management Plan must be signed by an authorized signatory. This Application and the Data Management Plan will be used by CHIA to determine whether the request meets the criteria for data release, pursuant to 957 CMR 5.00. Please complete the Application documents fully and accurately. Prior to receiving CHIA Data, the Organization must execute CHIA’s Data Use Agreement. Organizations may wish to review that document prior to submitting this Application.

Before completing this Application, please review the data request information on CHIA’s website:

- [Data Availability](#)
- [Fee Schedule](#)
- [Data Request Process](#)

After reviewing the information on the website and this Application, please contact CHIA at casemix.data@state.ma.us if you have additional questions about how to complete this form.

The Application and all attachments must be uploaded to IRBNet. All Application documents can be found on the CHIA website.

Information submitted as part of the Application may be subject to verification during the review process or during any audit review conducted at CHIA’s discretion.

Applications will not be reviewed until the Application and all supporting documents are complete and the required application fee is received.

A Fee Remittance Form with instructions for submitting the application fee is available on the CHIA website. If you are requesting a fee waiver, a copy of the Fee Remittance Form and any supporting documentation must be uploaded to IRBNet. Please be aware that if your research is funded and under that funding you are required to release raw data to the funding source, you may not receive CHIA Data.

II. FEE INFORMATION

1. Consult the most current Fee Schedule for Case Mix and Charge Data.
2. After reviewing the Fee Schedule, if you have any questions about the application or data fees, contact casemix.data@state.ma.us.
3. If you believe that you qualify for a fee waiver, complete and submit the Fee Remittance Form and attach it and all required supporting documentation with your application. Refer to the Fee Schedule (effective Feb 1, 2017) for fee waiver criteria.
4. Applications will not be reviewed until the application fee is received.
5. Data for approved Applications will not be released until the payment for the Data is received.

III. ORGANIZATION & INVESTIGATOR INFORMATION

Project Title:	Identifying Trends in the Massachusetts Healthcare Market
IRBNet Number:	1920719
Organization Requesting Data (Recipient):	Berkshire Health Systems
Organization Website:	<u>Berkshire Health Systems - Pittsfield, Massachusetts (MA) Hospitals</u>
Authorized Signatory for Organization:	Scott St. George
Title:	Chief Financial Officer
E-Mail Address:	sstgeorge@bhs1.org
Telephone Number:	413-447-3366
Address, City/Town, State, Zip Code:	725 North St, Pittsfield, MA, 01201
Data Custodian: (individual responsible for organizing, storing, and archiving Data)	Ben Knauth
Title:	Director of Business Development and Cost Accounting
E-Mail Address:	bknauth@bhs1.org
Telephone Number:	413-395-7628
Address, City/Town, State, Zip Code:	725 North St, Pittsfield, MA 01201
Primary Investigator (Applicant): (individual responsible for the research team using the Data)	Ben Knauth
Title:	Director of Business Development and Cost Accounting
E-Mail Address:	bknauth@bhs1.org
Telephone Number:	413-395-7628
Address, City/Town, State, Zip Code:	725 North St, Pittsfield, MA 01201
Names of Co-Investigators:	Pat Brandi, Dean Bullett, Ronnie Lacey, Tina Neville, Kathy Risatti
E-Mail Addresses of Co-Investigators:	pbrandi@bhs1.org, dbullett@bhs1.org, rlacey1@bhs1.org, tneville@bhs1.org, krisatti@bhs1.org

IV. PROJECT INFORMATION

IMPORTANT NOTE: Organization represents that the statements made below as well as in any study or research protocol or project plan, or other documents submitted to CHIA in support of the Data Application are complete and accurate and represent the total use of the CHIA Data requested. Any and all CHIA Data released to the Organization under an approved application may ONLY be used for the express purposes identified in this section by the Organization, and for no other purposes. Use of CHIA Data for other purposes requires a separate Data Application to CHIA written request to CHIA, with approval being subject to CHIA’s regulatory restrictions and approval process. Unauthorized use is a material violation of your institution’s Data Use Agreement with CHIA.

1. What will be the use of the CHIA Data requested? [Check all that apply]

- Epidemiological
- Health planning/resource allocation
- Cost trends
- Longitudinal Research
- Quality of care assessment
- Rate setting
- Reference tool
- Research studies
- Severity index tool (or other derived input)
- Surveillance
- Student research
- Utilization review of resources

- Inclusion in a product Other (describe in box below)

Click here to enter text.

2. Provide an abstract or brief summary of the specific purpose and objectives of your Project. This description should include the research questions and/or hypotheses the Project will attempt to address, or describe the intended product or report that will be derived from the requested data and how this product will be used. Include a brief summary of the pertinent literature with citations, if applicable.

Berkshire Health Systems purpose and objectives are to perform analyses in order to understand and utilize the inpatient, observation and ED data sets which will inform strategic planning, market analyses and benchmarking at an institutional and system wide level. An example of the analyses BHS will perform is: market profile, service line and service area assessments, discharge, observation and ED visit trends in order to better understand the needs of the community we serve; so we may incorporate this data into appropriate strategic planning initiatives.

3. Has an Institutional Review Board (IRB) reviewed your Project?

- Yes [If yes, a copy of the approval letter and protocol must be included with the Application package on IRBNet.]
 No, this Project is not human subject research and does not require IRB review.

4. **Research Methodology:** Applications must include either the IRB protocol or a written description of the Project methodology (typically 1-2 pages), which should state the Project objectives and/or identify relevant research questions. This document must be included with the Application package on IRBNet and must provide sufficient detail to allow CHIA to understand how the Data will be used to meet objectives or address research questions.

Berkshire Health Systems project "Identifying Trends in the Massachusetts Healthcare Market" will consist of a number of analyses the will serve to better understand the healthcare landscape as it relates to our community. The data sets will be utilized to perform analyses examining trends in utilization including volume trends by service, location, length of stay, age, DRG and diagnoses/procedures.

Some of the research questions to be answered by the case mix data include:

How has inpatient volume trended over time in comparison with other MA hospitals?

How has volume trended over time for specific services by geographic area?

What are trends in observation care and how might this be impacted by shift in care initiatives?

What are the patterns of inpatient, observation and ED utilization in the market and how do those trends vary overtime by geography, payer, and type of service?

How can trends observed in inpatient, outpatient and ED utilization be used in strategic planning efforts?

How have previous initiatives effected patient utilization?

V. PUBLIC INTEREST

1. Briefly explain why completing this Project is in the public interest. Use quantitative indicators of public health importance where possible, for example, numbers of deaths or incident cases; age-adjusted, age-specific, or crude rates; or years of potential life lost. *Uses that serve the public interest under CHIA regulations include, but are not limited to: health cost and utilization analysis to formulate public policy; studies that promote improvement in population health, health care quality or access; and health planning tied to evaluation or improvement of Massachusetts state government initiatives.*

Berkshire Health Systems is a community based not-for-profit health system. We are the sole independent hospital system in Berkshire County and provide inpatient hospital, out patient hospital, home health care, primary and specialty care, and preventive and wellness services. BHS is committed to providing high quality, cost effective care to our patients where they live. Understanding health care utilization in our market is critical to our mission so that Berkshire Health Systems will be able to identify, prioritize and invest in our community's health. Our view of the gaps in services encompass the factors that influence Berkshire Health System but also include community based, socio-economic, physical environment, and lifestyle issues that influence the creation of health as well as the incidence of illness and disease.

VI. DATASETS REQUESTED

The Massachusetts Case Mix ("Case Mix") are comprised of Hospital Inpatient Discharge, Emergency Department and Outpatient Hospital Observation Stay Data collected from Massachusetts' acute care hospitals, and satellite emergency facilities. Case Mix Data are updated each fiscal year (October 1 – September 30) and made available to approved data users. For more information about Case Mix Data, including a full list of available elements in the datasets please refer to release layouts, data dictionaries and similar documentation included on [CHIA's website](#).

Data requests are typically fulfilled on a one time basis, however; certain Projects may require years of data not yet available. Applicants who anticipate a need for future years of data may request to be considered for a subscription. Approved subscriptions will receive, upon request, the same data files and data elements included in the initial release annually or as available. Please note that approved subscription request will be subject to the Data Use Agreement, will require payment of fees for additional Data, and subject to the limitation that the Data can be used only in support of the approved Project.

1. Please indicate below whether this is a one-time request, or if the described Project will require a subscription.

One-Time Request **OR** Subscription

2. Specify below the dataset(s) and year(s) of data requested for this Project, and your justification for requesting *each* dataset. Data prior to 2004 is not available.

Hospital Inpatient Discharge Data

2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020

Describe how your research objectives require Inpatient Discharge data:

Multiple years of data will allow Berkshire Health System to identify health care trends and identifying areas of service line needs in order to better service Berkshire County.

Outpatient Hospital Observation Stay Data

<input type="checkbox"/> 2004 <input type="checkbox"/> 2005 <input type="checkbox"/> 2006 <input type="checkbox"/> 2007 <input type="checkbox"/> 2008 <input type="checkbox"/> 2009 <input type="checkbox"/> 2010 <input type="checkbox"/> 2011 <input type="checkbox"/> 2012 <input type="checkbox"/> 2013 <input type="checkbox"/> 2014 <input type="checkbox"/> 2015 <input type="checkbox"/> 2016 <input checked="" type="checkbox"/> 2017 <input checked="" type="checkbox"/> 2018 <input checked="" type="checkbox"/> 2019 <input checked="" type="checkbox"/> 2020
<p>Describe how your research objectives require Outpatient Hospital Observation Stay data: In conjunction with the Hospital Inpatient Discharge Data, the Observation Stay Data will give Berkshire Health Systems insight into the shift in the continuum of care. Without hospital outpatient data we will not have a complete picture of patient utilization.</p>
<p><input checked="" type="checkbox"/> Emergency Department Data</p> <input type="checkbox"/> 2004 <input type="checkbox"/> 2005 <input type="checkbox"/> 2006 <input type="checkbox"/> 2007 <input type="checkbox"/> 2008 <input type="checkbox"/> 2009 <input type="checkbox"/> 2010 <input type="checkbox"/> 2011 <input type="checkbox"/> 2012 <input type="checkbox"/> 2013 <input type="checkbox"/> 2014 <input type="checkbox"/> 2015 <input type="checkbox"/> 2016 <input checked="" type="checkbox"/> 2017 <input checked="" type="checkbox"/> 2018 <input checked="" type="checkbox"/> 2019 <input checked="" type="checkbox"/> 2020
<p>Describe how your research objectives require Emergency Department data: Understanding Emergency Department Trends will allow Berkshire Health Systems to develop strategies around appropriate levels of urgent and emergent care. Without ED data we will not have a complete picture of patient utilization.</p>

VII. DATA ENHANCEMENTS REQUESTED

State and federal privacy laws limit the release and use of Data to the minimum amount of data needed to accomplish a specific Project objective.

Case Mix Data are released in Limited Data Sets (LDS). All applicants receive the “Core” LDS, but may also request the data enhancements listed below for inclusion in their analyses. Requests for enhancements will be reviewed by CHIA to determine whether each represents the minimum data necessary to complete the specific Project objective.

For a full list of elements in the release (i.e., the “Core” elements and enhancements), please refer to release layouts, data dictionaries and similar documentation included on CHIA’s website.

Please note that CHIA Case Mix Data contain reports produced using proprietary computer software created, owned, and licensed by the 3M Company. All Copyrights in and to the 3M APR™ Software, and to the 3M APR™ DRG classification system(s) (including the selection, coordination and arrangement of all codes) are owned by 3M. All rights reserved.

1. Specify below which enhancements you are requesting in addition to the “Core” LDS. CHIA will use this information to determine what Level of data is needed for pre-FY 2015 data requests.

Geographic Subdivisions

State, five-digit zip code, and 3-digit code are available for patients residing in CT, MA, ME, NH, RI, VT, and NY. City or Town of residence is available for residents of MA only. States outside of this region will be coded as XX (“Other”).

Select one of the following options:

<input type="checkbox"/> 3-Digit Zip Code (Standard)	<input type="checkbox"/> 3-Digit Zip Code & City/Town ***	<input type="checkbox"/> 5-Digit Zip Code ***	<input checked="" type="checkbox"/> 5-Digit Zip Code & City/Town ***
<p>***If requested, provide justification for requesting 5-Digit Zip Code or City/Town. Refer to specifics in your methodology: The geographic size of Berkshire County creates a need to focus health services in specific regions of the county. Five digit zip code and City/Town data allows Berkshire Health Systems to better analyze each region of the county’s specific needs, in order to create appropriate access to health care services. At a three digit zip code level it limits the information to only looking at the county as a whole.</p>			

Demographic Data

Select one of the following options:

<input checked="" type="checkbox"/> Not Requested (Standard)	<input type="checkbox"/> Race & Ethnicity***
** If requested, provide justification for requesting Race and Ethnicity. Refer to specifics in your methodology: Click here to enter text.	

Date Resolution

Select one of the following options for dates of admissions, discharges, and significant procedures.

<input type="checkbox"/> Year (YYYY)(Standard)	<input type="checkbox"/> Month (YYYYMM) ***	<input checked="" type="checkbox"/> Day (YYYYMMDD)***
***If requested, provide justification for requesting Month or Day. Refer to specifics in your methodology: Dates of service are required to analyze utilization trends including physician referral patterns to identify seasonal or weekend/holiday trends and how we can most effectively manage resources. Due to the sudden changes in the health care setting due to COVID-19, having data at the month level will help analyze how COVID-19 has impacted our community.		

Practitioner Identifiers (UPN)

Select one of the following options.

<input checked="" type="checkbox"/> Not Requested (Standard)	<input type="checkbox"/> Hashed ID ***	<input type="checkbox"/> Board of Registration in Medicine Number(BORIM) ***
***If requested, provide justification for requesting Hashed ID or BORIM Number. Refer to specifics in your methodology: Click here to enter text.		

Unique Health Information Number (UHIN)

Select one of the following options.

<input checked="" type="checkbox"/> Not Requested (Standard)	<input type="checkbox"/> UHIN Requested ***
*** If requested, provide justification for requesting UHIN. Refer to specifics in your methodology: Click here to enter text.	

Hashed Mother's Social Security Number

Select one of the following options:

<input checked="" type="checkbox"/> Not Requested (Standard)	<input type="checkbox"/> Hashed Mother's SSN Requested ***
*** If requested, provide justification for requesting Hashed Mother's SSN. Refer to specifics in your methodology: Click here to enter text.	

VIII. DATA LINKAGE

Data linkage involves combining CHIA Data with other data to create a more extensive database for analysis. Data linkage is typically used to link multiple events or characteristics within one database that refer to a single person within CHIA Data.

1. Do you intend to link or merge CHIA Data to other data?

- Yes
- No linkage or merger with any other data will occur

2. If yes, please indicate below the types of data to which CHIA Data will be linked. [Check all that apply]

- Individual Patient Level Data (e.g. disease registries, death data)
- Individual Provider Level Data (e.g., American Medical Association Physician Masterfile)
- Individual Facility Level Data (e.g., American Hospital Association data)
- Aggregate Data (e.g., Census data)
- Other (please describe):

3. If yes, describe the dataset(s) to which the CHIA Data will be linked, indicate which CHIA Data elements will be linked and the purpose for each linkage.

Click here to enter text.

4. If yes, for each proposed linkage above, please describe your method or selected algorithm (e.g., deterministic or probabilistic) for linking each dataset. If you intend to develop a unique algorithm, please describe how it will link each dataset.

Click here to enter text.

5. If yes, attach or provide below a complete listing of the variables from all sources to be included in the final linked analytic file.

Click here to enter text.

6. If yes, please identify the specific steps you will take to prevent the identification of individual patients in the linked dataset.

Click here to enter text.

IX. PUBLICATION / DISSEMINATION / RE-RELEASE

1. Do you anticipate that the results of your analysis will be published or made publically available? If so, how do you intend to disseminate the results of the study (e.g.; publication in professional journal, poster presentation, newsletter, web page, seminar, conference, statistical tabulation)? Any and all publication of CHIA Data must comply with CHIA's cell size suppression policy, as set forth in the Data Use Agreement. Please explain how you will ensure that any publications *will not disclose a cell less than 11*, and percentages or other mathematical formulas that result in the display of a cell less than 11.

The results of our analysis are expected to be for internal use only, for the purposes of strategic planning, market analyses and benchmarking in order to enable BHS to meet its mission of providing high quality, timely care to our community.

2. Describe your plans to use or otherwise disclose CHIA Data, or any Data derived or extracted from such Data, in any paper, report, website, statistical tabulation, seminar, or other setting that is not disseminated to the public.

Primarily the plan to use CHIA Data would be to trend patient utilization of services over time. Only aggregated, de-identified and cell suppressed data will be used in any internal discussions.

3. What will be the lowest geographical level of analysis of data you expect to present for publication or presentation (e.g., state level, city/town level, zip code level, etc.)? Will maps be presented? If so, what methods will be used to ensure that individuals cannot be identified?

If granted access to the five digit zip code and city/town data, that would be the lowest level expects. Mapping of data may be possible and to ensure that individuals cannot be identified, any volumes less than 11 will be suppressed.

4. Will you be using CHIA Data for consulting purposes?

- Yes
 No

5. Will you be selling standard report products using CHIA Data?

- Yes
 No

6. Will you be selling a software product using CHIA Data?

- Yes
 No

7. Will you be using CHIA Data as in input to develop a product (i.e., severity index tool, risk adjustment tool, reference tool, etc.)

- Yes
 No

8. Will you be reselling CHIA Data in any format not noted above?

Yes

No

If yes, in what format will you be reselling CHIA Data?

Click here to enter text.

9. If you have answered “yes” to questions 5, 6, 7 or 8, please provide the name and a description of the products, software, services, or tools.

Click here to enter text.

10. If you have answered “yes” to questions 5, 6, 7 or 8, what is the fee you will charge for such products, software, services or tools?

Click here to enter text.

X. APPLICANT QUALIFICATIONS

1. Describe your previous experience using hospital data. This question should be answered by the primary investigator and any co-investigators who will be using the Data.

I and my team have used claims data on an ongoing basis including data from MHDC in various analyses including, but not limited to, risk stratification, strategic market analysis, market trending, medical expense, avoidable admissions, continuum of care.

2. **Resumes/CVs:** When submitting your Application package on IRBNet, include résumés or curricula vitae of the principal investigator and co-investigators. (These attachments will not be posted on the internet.)

XI. USE OF AGENTS AND/OR CONTRACTORS

By signing this Application, the Organization assumes all responsibility for the use, security and maintenance of the CHIA Data by its agents, including but not limited to contractors. The Organization must have a written agreement with the agent of contractor limiting the use of CHIA Data to the use approved under this Application as well as the privacy and security standards set forth in the Data Use Agreement. CHIA Data may not be shared with any third party without prior written consent from CHIA, or an amendment to this Application. CHIA may audit any entity with access to CHIA Data.

Provide the following information for **all** agents and contractors who will have access to the CHIA Data. [*Add agents or contractors as needed.*]

AGENT/CONTRACTOR #1 INFORMATION	
Company Name:	Sg2, LLC
Company Website	https://www.sg2.com/
Contact Person:	Aj Fadel
Title:	Associate Vice President, Data Operations
E-mail Address:	ajfadel@sg2.com
Address, City/Town, State, Zip Code:	5250 Old Orchard Rd, Skokie IL, 60077
Telephone Number:	847-779-5759
Term of Contract:	1/1/22 -12/31/24

1. Describe the tasks and products assigned to the agent or contractor for this Project and their qualifications for completing the tasks.

Sg2 has been a recognized leader in providing hospitals with market intelligence and operational and clinical support services since 2001. The Sg2 tools with hospital discharge data provide analytics related to growth and clinical performance across the continuum of care. Over 1,400 hospitals around the world rely on Sg2’s analytics, intelligence, consulting and educational services. Sg2’s system and data users have been trained in HIPPA compliance and are subject to policies and procedures that protect the safe management of PHI when necessary.

2. Describe the Organization’s oversight and monitoring of the activities and actions of the agent or contractor for this Project, including how the Organization will ensure the security of the CHIA Data to which the agent or contractor has access.

The CHIA data will only be provided through access to the Sg2 Software applications under a subscription license. After ensuring the data is stripped of identifiable elements like name, address, SSN, the processed and standardized dataset is then incorporated into the Sg2 software of products. Additional information can be found in the Data Management plan that accompanies this application.

3. Will the agent or contractor have access to and store the CHIA Data at a location other than the Organization’s location, off-site server and/or database?

- Yes
- No

4. If yes, a separate Data Management Plan **must** be completed by the agent or contractor.

AGENT/CONTRACTOR #2 INFORMATION	
Company Name:	Click here to enter text.
Company Website	Click here to enter text.
Contact Person:	Click here to enter text.
Title:	Click here to enter text.
E-mail Address:	Click here to enter text.
Address, City/Town, State, Zip Code:	Click here to enter text.
Telephone Number:	Click here to enter text.
Term of Contract:	Click here to enter text.

1. Describe the tasks and products assigned to the agent or contractor for this Project and their qualifications for completing the tasks.

Click here to enter text.

2. Describe the Organization’s oversight and monitoring of the activities and actions of the agent or contractor for this Project, including how the Organization will ensure the security of the CHIA Data to which the agent or contractor has access.

Click here to enter text.

3. Will the agent or contractor have access to and store the CHIA Data at a location other than the Organization’s location, off-site server and/or database?

- Yes
- No

4. If yes, a separate Data Management Plan **must** be completed by the agent or contractor.


[INSERT A NEW SECTION FOR ADDITIONAL AGENTS/CONTRACTORS AS NEEDED]

XII. ATTESTATION

By submitting this Application, the Organization attests that it is aware of its data use, privacy and security obligations imposed by state and federal law *and* confirms that it is compliant with such use, privacy and security standards. The Organization further agrees and understands that it is solely responsible for any breaches or unauthorized access, disclosure or use of CHIA Data, including, but not limited to, any breach or unauthorized access, disclosure or use by any third party to which it grants access.

Organizations approved to receive CHIA Data will be provided with Data following the payment of applicable fees and upon the execution of a Data Use Agreement requiring the Organization to adhere to processes and procedures designed to prevent unauthorized access, disclosure or use of data.

By my signature below, I attest: (1) to the accuracy of the information provided herein; (2) this research is not funded by a source requiring the release of raw data to that source; (3) that the requested Data is the minimum necessary to accomplish the purposes described herein; (4) that the Organization will meet the data privacy and security requirements described in this Application and supporting documents, and will ensure that any third party with access to the Data meets the data use, privacy and security requirements; and (5) to my authority to bind the Organization.

Signature: (Authorized Signatory for Organization)	
Printed Name:	Scott St. George
Title:	CFO
Date:	6/1/22



center
for health
information
and analysis

Attachments:

A completed Application must have the following documents attached to the Application or uploaded separately to IRBNet:

- 1. IRB approval letter and protocol (if applicable), or research methodology (if protocol is not attached)
- 2. Data Management Plan (including one for each agent or contractor that will have access to or store the CHIA Data at a location other than the Organization's location, off-site server and/or database);
- 3. CVs of Investigators (upload to IRBNet)

APPLICATIONS WILL NOT BE REVIEWED UNTIL THEY ARE COMPLETE, INCLUDING ALL ATTACHMENTS.