

## 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](mailto: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](mailto: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**

<b>Project Title:</b>	Healthcare Operations Service Design in Mitigating Socioeconomic Disparities in Access to Cancer Treatment
IRBNet Number:	1862652-1
<b>Organization Requesting Data (Recipient):</b>	Trustees of Boston University
Organization Website:	https://www.bu.edu/trustees/
<b>Authorized Signatory for Organization:</b>	William P. Segarra
Title:	Director, Industry Contracts
E-Mail Address:	industry@bu.edu
Telephone Number:	617-353-6151
Address, City/Town, State, Zip Code:	25 Buick Street, Suite 200, Boston, MA 02215
<b>Data Custodian: (individual responsible for organizing, storing, and archiving Data)</b>	Ankita Shirahatti
Title:	Doctoral Student
E-Mail Address:	ashiraha@bu.edu
Telephone Number:	404-723-5861
Address, City/Town, State, Zip Code:	595 Commonwealth Avenue #618, Boston, MA 02215
<b>Primary Investigator (Applicant): (individual responsible for the research team using the Data)</b>	Anita Carson
Title:	Professor of Operations Management
E-Mail Address:	altucker@bu.edu
Telephone Number:	617-353-5003
Address, City/Town, State, Zip Code:	595 Commonwealth Avenue, Boston, MA 02215
<b>Names of Co-Investigators:</b>	Ankita Shirahatti
E-Mail Addresses of Co-Investigators:	ashiraha@bu.edu

**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
- Longitudinal Research
- Reference tool
- Surveillance
- Inclusion in a product
- Health planning/resource allocation
- Quality of care assessment
- Research studies
- Student research
- Other (describe in box below)
- Cost trends
- Rate setting
- Severity index tool (or other derived input)
- Utilization review of resources

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.

See Case\_Mix\_Application\_Questions.pdf, page 1.

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.

## 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.*

See Case\_Mix\_Application\_Questions.pdf, page 5..

## 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.

<input type="checkbox"/> <b>Hospital Inpatient Discharge Data</b> <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 type="checkbox"/> 2018 <input type="checkbox"/> 2019 <input type="checkbox"/> 2020
<b>Describe how your research objectives require Inpatient Discharge data:</b> Click here to enter text.
<input type="checkbox"/> <b>Outpatient Hospital Observation Stay Data</b> <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 checked="" type="checkbox"/> 2016 <input checked="" type="checkbox"/> 2017 <input checked="" type="checkbox"/> 2018 <input checked="" type="checkbox"/> 2019 <input checked="" type="checkbox"/> 2020
<b>Describe how your research objectives require Outpatient Hospital Observation Stay data:</b> Outpatient Hospital Observation Stay Data includes hospital visits for outpatient cancer treatment, the setting we are interested in
<input type="checkbox"/> <b>Emergency Department Data</b> <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 checked="" type="checkbox"/> 2016 <input checked="" type="checkbox"/> 2017 <input checked="" type="checkbox"/> 2018 <input checked="" type="checkbox"/> 2019 <input checked="" type="checkbox"/> 2020
<b>Describe how your research objectives require Emergency Department data:</b> We are interested in ED usage by cancer patients that did not end in an inpatient or outpatient observation stay

**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><b>***If requested, provide justification for requesting 5-Digit Zip Code or City/Town. Refer to specifics in your methodology:</b> This study entails understanding why patients choose certain providers for their care. A major component of that decision is proximity to a provider. Because 5-digit zip codes do not map perfectly to cities/towns in MA, having both variables will enable me to control for location/proximity in my analysis.</p>			

#### Demographic Data

Select one of the following options:

<input type="checkbox"/> Not Requested (Standard)	<input checked="" type="checkbox"/> Race & Ethnicity***
<p><b>** If requested, provide justification for requesting Race and Ethnicity. Refer to specifics in your methodology:</b> Race is a major factor at play when studying socioeconomic barriers to cancer treatment. For example, studies have shown that recruiting underrepresented minorities in novel Phase 1 clinical trials is a major challenge among physicians. To analyze barriers to treatment among economically disadvantaged patients, race will be a required variable to control for in this project's empirical analysis.</p>	

#### 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)***
<p><b>***If requested, provide justification for requesting Month or Day. Refer to specifics in your methodology:</b> Healthcare operations, such as admission to cancer treatment or inpatient cancer treatment, exhibit seasonal trends at the monthly level. Additionally, studying occupancy levels and capacity levels as a result of the operational policies of interest requires that I know the day of a particular discharge.</p>		

#### Practitioner Identifiers (UPN)

Select one of the following options.

<input type="checkbox"/> Not Requested (Standard)	<input type="checkbox"/> Hashed ID ***	<input checked="" type="checkbox"/> Board of Registration in Medicine Number(BORIM) ***
<p><b>***If requested, provide justification for requesting Hashed ID or BORIM Number. Refer to specifics in your methodology:</b> BORIM numbers are requested because we want to identify attributes of the physician a patient is seen by. Such attributes include years of experience, primary specialty, home institution, etc. These attributes are necessary to control for when looking at patient outcomes.</p>		

#### Unique Health Information Number (UHIN)

Select one of the following options.

<input type="checkbox"/> Not Requested (Standard)	<input checked="" type="checkbox"/> UHIN Requested ***
<p><b>*** If requested, provide justification for requesting UHIN. Refer to specifics in your methodology:</b> UHIN is requested because our study of outcomes and continuity of care requires tracking a patient's inpatient treatment across healthcare facilities.</p>	

#### Hashed Mother's Social Security Number

Select one of the following options:

Not Requested (Standard) 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.

Not applicable

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.

Not applicable

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.

Not applicable

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.

I hope to publish the results as part of a doctoral dissertation and in an academic journal. I will ensure that publications will not disclose a cell less than 11 because I will only be analyzing patients in groups of larger than 1,000 for this study. Any cell less than 11 that may inadvertently result from this analysis will be omitted from any published material.

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.

Results of analysis using CHIA data may be published as part of a doctoral dissertation or in an academic journal. Results of analysis using CHIA data may be presented at a professional conference. Data itself will never be disclosed or disseminated to the public.

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?

Lowest geographical level of analysis is zip code level. I do not anticipate that maps will be presented in this project.

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?

Not applicable

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.

Not applicable

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?

Not applicable

## 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 have experience analyzing Inpatient Admissions data collected by IBM MarketScan and Inpatient Admissions Data collected by the California Department of Health Care Access and Information. Anita Carson is tenured professor with over 20 years of analyzing hospital-level inpatient data, emergency room data, and operational data at healthcare facilities.

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.*]



<b>AGENT/CONTRACTOR #1 INFORMATION</b>	
<b>Company Name:</b>	N/A
Company Website	N/A
<b>Contact Person:</b>	N/A
Title:	N/A
E-mail Address:	N/A
Address, City/Town, State, Zip Code:	N/A
Telephone Number:	N/A
Term of Contract:	N/A

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

Not applicable

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.

Not applicable

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.

<b>AGENT/CONTRACTOR #2 INFORMATION</b>	
<b>Company Name:</b>	N/A
Company Website	N/A
<b>Contact Person:</b>	N/A
Title:	N/A
E-mail Address:	N/A
Address, City/Town, State, Zip Code:	N/A
Telephone Number:	N/A
Term of Contract:	N/A

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

Not applicable

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.

Not applicable

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)	<i>William P. Segarra, MA, JD, MPH</i>
<b>Printed Name:</b>	William P. Segarra, MA, JD, MPH
Title:	Director, Industry Contracts.
Date:	March 8, 2022.

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.**