

CHIA Non-Governmental Application for Massachusetts Case Mix Data [Exhibit A: Data Application]

I. INSTRUCTIONS

This form is required for all Applicants, except Government Agencies as defined in [957 CMR 5.02](#). All Applicants must also complete the [Data Management Plan](#), attached to this Application. The Application and the Data Management Plan must be signed by an authorized signatory of the Organization. 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](#). Applicants 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.

All attachments must be uploaded to IRBNet with your Application. All Application documents can be found on the [CHIA website](#) in Word and in PDF format or on [IRBNet](#) in Word format. If you submit a PDF document, please also include a Word version in order to facilitate edits that may be needed.

Applications will not be reviewed until the Application and all supporting documents are complete and the required application fee is submitted. A [Fee Remittance Form](#) with instructions for submitting the application fee is available on the CHIA website and IRBNet. If you are requesting a fee waiver, a copy of the Fee Remittance Form and any supporting documentation must be uploaded to IRBNet.

II. ORGANIZATION AND INVESTIGATOR INFORMATION

Project Title:	Market Data Analysis
IRBNet Number:	1037019-1
Organization Requesting Data:	Boston Children’s Hospital
Organization Website:	http://www.childrenshospital.org/
Authorized Signatory for Organization:	Donna Casey
Title:	VP Strategic Business Planning and Budget
E-Mail Address:	Donna.Casey@childrens.harvard.edu
Address, City/Town, State, Zip Code:	300 Longwood Ave. Boston, MA 02215
Primary Investigator:	Rebecca Abramson
Title:	Director Strategic Business Planning and Budget
E-Mail Address:	Rebecca.Abramson@childrens.harvard.edu
Telephone Number:	(857) 218-4967
Names of Co-Investigators:	Jensen Lim
E-Mail Addresses of Co-Investigators:	Jensen.Lim@childrens.harvard.edu

III. FEE INFORMATION

1. Consult the [Fee Schedule](#) for Case Mix and Charge Data and select one of the following options:

- Researcher
 Other
 Reseller

2. Are you requesting a fee waiver?

- Yes
 No

3. Complete and submit the [Fee Remittance Form](#). If requesting a fee waiver, submit a letter stating the basis for your request (if required). Please refer to the [Fee Schedule](#) (effective Feb 1, 2017) for fee waiver criteria.

IV. PROJECT INFORMATION

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

- | | | |
|---|---|--|
| <input type="checkbox"/> Epidemiological | <input checked="" type="checkbox"/> Health planning/resource allocation | <input type="checkbox"/> Cost trends |
| <input type="checkbox"/> Longitudinal Research | <input type="checkbox"/> Quality of care assessment | <input type="checkbox"/> Rate setting |
| <input type="checkbox"/> Reference tool | <input type="checkbox"/> Research studies | <input type="checkbox"/> Severity index tool |
| <input type="checkbox"/> Surveillance | <input type="checkbox"/> Student research | <input type="checkbox"/> Utilization review of resources |
| <input type="checkbox"/> Inclusion in a product | <input checked="" type="checkbox"/> Other (describe in box below) | |

Market analysis

2. Provide a summary of the specific purpose and objectives of your Project. This may include research questions and/or business use Projects.

To conduct market analysis and research by examining patient demographic, population and discharge trends. Market data allows us to better anticipate and meet market demands. Data will be used internally to inform decision makers throughout the organization.

Research Questions:

1. How have IP, OBs and ED volume at BCH and local area hospitals changed over time?
2. Where do we and other local area hospitals draw patients from?

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:** Applicants must provide 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 your Project is in the public interest. *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.*

BCH will utilize this data in order to anticipate and meet market demands. Information gathered from this data will inform decisions on future programs which members of the community utilize. This data will provide a better understanding of discharge patterns in the pediatric space, ultimately allowing us to provide better service in terms of quality and cost of care.

VI. DATASETS REQUESTED

1. Specify below the dataset(s) and year(s) of data requested for this Project, and your justification for requesting each dataset.

Hospital Inpatient Discharge Data

2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015

Describe how your research objectives require Inpatient Discharge data:

Our research focuses on market share analysis which is measured by the volume and acuity (CMI) of hospital inpatient discharges. We examine volume from our service areas but never report out on an individual case basis. Reports are aggregated at the facility, service line or service area level. We want to gain a better understanding of where pediatric patients seeking inpatient care are coming from.

Outpatient Observation Data

2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015

Describe how your research objectives require Outpatient Observation data:

Outpatient observation data allows us to gain a broader perspective on the market when compared to inpatient only. In addition, inpatient volume has been declining due to a shift in inpatient care to an observation setting. By obtaining observation data, we can gain a clearer and broader understanding of the market. Similar to inpatient data, all reporting will be aggregated and not reported on an individual case basis.

Emergency Department Data

2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015

Describe how your research objectives require Emergency Department data:

Emergency department data will also provide a broader understanding of pediatric patients. By applying for this data, we will learn where pediatric ED patients are seeking care as well as where geographically they are originating from.

2. Case Mix and Charge Data are updated each fiscal year. As certain Project objectives may require future years of data not yet available, CHIA will consider requests for additional fiscal years of the same data (i.e., same elements and files) without the need to submit a new application. Please note that approved requests will be subject to the Data Use Agreement and fees for additional data. Please indicate below whether this is a one-time request, or if the described Project will require future years of Data and if so, which years.

One-Time **OR** 2016 2017 2018 2019 2020

VII. DATA ELEMENTS 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 and Charge Data are grouped into six “Levels” or Limited Data Sets (LDS) for release, depending on the fiscal year. Data for FY 2004 – 2014 are organized into Levels. Level 6 Data will be released to Government Applicants only. *CHIA staff will use the information provided in this section to determine the appropriate Level of Data justified for release.*

Data for FY 2015 and later are organized into LDS’s. All applicants receive the “Core” LDS, but may also request additional elements listed below for inclusion in their analyses. Requests for additional elements 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 additional elements), please refer to [release layouts, data dictionaries](#) and similar documentation included on CHIA’s website.

1. Specify below which elements 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 Data

The geographic sub-divisions listed below are available for CT, MA, ME, NH, RI, VT, and NY residents only for FY 2015 and after. Fiscal years 2004 – 2014 will contain the geographic sub-divisions listed below for all states. Choose one of the following geographic 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 ***
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*****If requested, provide justification for requesting 5-Digit Zip Code or City/Town. Refer to specifics in your methodology:**

5 digit zip code is instrumental in our analyses since we use it to determine our service areas. Without the full zip code we would not be able to identify geographic patterns and trends. Since we report aggregated data (not at the patient level), inclusion of zip code will not compromise patient anonymity. We also use zip code data in order to create visual maps of where patients are originating from.

Demographic Data

Choose one of the following demographic options:

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

Dates

Choose one option from the following options for dates of admissions, discharges, and significant procedures:

<input type="checkbox"/> Year (YYYY)(Standard)	<input checked="" type="checkbox"/> Month (YYYYMM) ***	<input type="checkbox"/> Day (YYYYMMDD)***
<p>***If requested, provide justification for requesting Month or Day. Refer to specifics in your methodology: We use the year/month combo to group data into quarters and fiscal years. The addition of month data will also allow us to examine any seasonality trends in the data.</p>		

Practitioner Identifiers (UPN)

Please choose one of the following options for Practitioner Identifier(s):

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

Unique Health Information Number (UHIN)

Please choose one of the following: Not Requested (Standard) UHIN Requested ******** If requested, provide justification for requesting UHIN. Refer to specifics in your methodology:**

Hashed Mother's Social Security Number

Please choose one of the following: Not Requested (Standard) Hashed Mother's SSN Requested ******** If requested, provide justification for requesting Hashed Mother's SSN. Refer to specifics in your methodology:****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): mapping software to create patient origin and hospital service area maps

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

The CHIA data will be linked to a mapping program using the 5 digit zip code. This program is an analytics tool which allows us to create a visual representation of hospital service areas and patient origin maps. The final output from the software is a colored map with our desired zip codes highlighted. No other patient information is shown on the maps or fed into the mapping software.

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.

The only link that is made between CHIA data and the mapping software is via zip code. We simply feed in a list of zip codes into the mapping software and get a colored map as the output. No other CHIA information or patient information gets inputted into the software besides zip code.

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

We will continue to abide by all patient anonymity requirements set forth in the CHIA DUA.

IX. PUBLICATION / DISSEMINATION / RE-RELEASE

1. Describe your plans to publish or otherwise disclose CHIA Data, or any data derived or extracted from CHIA Data, in any paper, report, website, statistical tabulation, seminar, conference, or other setting. 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.

We have no plans to publish CHIA data or make it available to the public. Our analyses will show summarized data according to small cell suppression guidelines (not at the patient level) and be shared internally to help make informed decisions. On occasion, summary analyses using CHIA data will be shared with consultants, bond rating agencies and state agencies. In these cases, data will still be summarized at a high level in order to comply with the small cell suppression policy.

2. Do you anticipate that the results of your analysis will be published and/or made publically available? If yes, describe how an interested party will obtain your analysis and, if applicable, the amount of the fee, that the third party must pay.

No data or analyses using CHIA supplied data will be made publically available or shared on a public forum.

3. Will you use CHIA Data for consulting purposes?

Yes

No

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

Yes

No

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

Yes

No

6. Will you be reselling CHIA Data in any format?

Yes

No

If yes, in what format will you be reselling CHIA Data (e.g., as a standalone product, incorporated with a software product, by a subscription, etc.)?

7. If you have answered "yes" to questions 4, 5 or 6, please describe the types of products, services or studies.

8. If you have answered "yes" to questions 4, 5, or 6, what is the fee you will charge for such products, services or studies?

X. INVESTIGATOR 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.

BCH has been accustomed to using and analyzing this level of market data for years. The team who will be working with the data are employed by the hospital in order to conduct internal data analysis to support hospital initiatives. They have the necessary skills and experience in finance, hospital finance and data analytics. In addition, all hospital employees are trained in the protection of protected health information (PHI).

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 Agency assumes all responsibility for the use, security and maintenance of the CHIA Data by its agents, including but not limited to contractors. The Agency 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 work with the CHIA Data. *[Add agents or contractors as needed.]*

AGENT/CONTRACTOR #1 INFORMATION	
Company Name:	Truven Health Analytics, an IBM Company
Company Website:	http://www.truvenhealth.com/
Contact Person:	Mike Adzima / Carrie Mueller
Title:	Senior Director of Application Operation / Director of Product Content
E-mail Address:	Michael.Adzima@truvenhealth.com / Carrie.Mueller@truvenhealth.com
Address, City/Town, State, Zip Code	100 Phoenix Drive Ann Arbor, MI 48108
Telephone Number:	(734) 913-3573 / (734) 913-3279
Term of Contract:	11/30/2019 with ability to extend

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

Truven provides BCH a user interface which allows us to login and access the data. Data is securely stored on Truven's servers only. Access is limited and all user activity is logged.

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.

Please see data management plan for specific monitoring regulations and safekeeping techniques in place.

3. Will the agent or contractor have access to or 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:	
Company Website:	
Contact Person:	
Title:	
E-mail Address:	
Address, City/Town, Zip Code	
Telephone Number:	
Term of Contract:	

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

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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.

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3. Will the agent or contractor have access to or 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.

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.

Applicants 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) that the requested Data is the minimum necessary to accomplish the purposes described herein; (3) 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 (4) to my authority to bind the Organization.

Signature: (Authorized Signatory for Organization)	<i>Donna M Casey</i>
Printed Name :	<i>Donna M Casey 4-18-17</i>

Attachments

A completed Application must have the following documents attached to the Application:

- 1. IRB approval letter and protocol (if applicable)
- 2. Research Methodology (if protocol is not attached)
- 3. CVs of Investigators
- 4. 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)

Applications will not be reviewed until they are complete, including all attachments.

TRACKING TABLE (to be completed by CHIA staff only)	
Complete Application Received	
Application Fee Received	
Data Privacy Committee Review	
Data Release Committee Review	
Linkages Approved (as described)	
Approved for additional years of data	
Executive Director Approval	
Data Fee Received	
Date of First Audit	
IT Extract #	

Attachment #1 – IRB Approval Letter & Protocol or Research Methodology

Attachment #2 – Data Management Plan(s)