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:	
Organization Requesting Data:	Trinity Health Of New England
Organization Website:	**Trinityhealthofne.org**
Authorized Signatory for Organization:	**Claudio Capone**
Title:	Regional Vice President of Strategic Planning
E-Mail Address:	Claudio.capone@trinityhealthofne.org
Address, City/Town, State, Zip Code:	1000 Asylum Avenue, 2109A Hartford, CT 06105
Primary Investigator:	Kathleen Rush
Title:	Senior Strategic Planner
E-Mail Address:	Kathleen.rush@trinityhealthofne.org
Telephone Number:	203-525-2549
Names of Co-Investigators:	Claudio Capone
E-Mail Addresses of Co-Investigators:	Claudio.capone@trinityhealthofne.org

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]

☐ Epidemiological   ☒ Health planning/resource allocation   ☐ Cost trends
☐ Longitudinal Research   ☐ Quality of care assessment   ☐ Rate setting
☐ Reference tool   ☐ Research studies   ☐ Severity index tool
☐ Surveillance   ☐ Student research   ☐ Utilization review of resources
☐ Inclusion in a product   ☒ 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 analsysis and research by examining patient demographic, population and discharge trends. Market data allows us to better anticipate and meet market and consumer demands. Data will be used internally to inform executive level decision makers throughout the organization.
 	
Research Questions:
   1. How have inpatient volume shifted towards outpatient volume? What is the trend of outpatient growth over time?
   2. What cities/towns are the majority of our patients coming from?

3. Has an Institutional Review Board (IRB) reviewed your Project?
☐ Yes [*If yes, a copy of the approval letter and protocol <u>must</u> 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.*

TH Of NE will utilize this data to make high level decision to meet market demands. Information gathered from this data will allow decisions to be made, which are focused on determining the most appropriate healthcare programs to place in the community.   Improved allocation of resources to address unmet health needs in the community.

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:
The research focuses on market share analysis which is measured by the volume and acuity of hospital inpatient discharges. Reports will be put aggregated by facility, service line and service area level. This will allow the strategic planning department to gain a better understanding of where patients that are seeking a particular service of 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 data gives us the ability to compare the trend and shift of inpatient care to outpatient. By obtaining outpatient observation data, TH Of NE can gain a clearer and broader understanding of the market.

☒ **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 deparment data will provide a better understanding of trends in the market and where the patient population is coming from to better serve those markets.

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.

☐ 3-Digit Zip Code (Standard)	☐ 3-Digit Zip Code & City/Town ***	☐ 5-Digit Zip Code ***	☒ 5-Digit Zip Code & City/Town ***
***If requested, provide justification for requesting 5-Digit Zip Code or City/Town. Refer to specifics in your methodology:			

5 digit zip code & city/town is essential to completing out analysis. This allows us to determine our major service areas. Without the full zip code we would not be able to identify geographic patterns and trends. Zip code data analysis also gives us the opportunity to create visual maps of where our patients are originating from. This will also allow us to understand precise market areas for understanding market share, in migration and out migration.

Demographic Data

Choose *one* of the following demographic options:

☒ Not Requested (Standard)	☐ Race & Ethnicity***
** If requested, provide justification for requesting Race and Ethnicity. Refer to specifics in your methodology:**	

Dates

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

☐ Year (YYYY)(Standard)	☒ Month (YYYYMM) ***	☐ Day (YYYYMMDD)***
***If requested, provide justification for requesting Month or Day. Refer to specifics in your methodology:** The ability to break the data down by month and year will allow us to group our quarters and fiscal years. The month breakdown also allows us to view month over month and seasonal trends.		

Practioner Identifiers (UPN)

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

☒ Not Requested (Standard)	☐ Hashed ID ***	☐ Board of Registration in Medicine Number(BORIM) ***
***If requested, provide justification for requesting Hashed ID or BORIM Number. Refer to specifics in your methodology:**		

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 codes & town/cities. This will allow us to create visual representation of where our patients are coming from.

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. The zip code list and number of patients per zip code is fed into the mapping software and the output shows where the majority of patients are coming from in a colored map.   No specific patient information is put into the software.

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

Patient idenfication will not be linked into the mapping software, only number of patients per zip code. However, TH Of NE prevents indentification of individual patients by using numbers to identify patient volume.

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.

Data will not be published outside of Trinity Health.

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.

Data or analyses using CHIA supplied data will be made for internal use only.

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.

<div style="border: 1px solid black; min-height: 120px;"></div>

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?

<div style="border: 1px solid black; min-height: 120px;"></div>

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.

Individuals working with this data have been performing market analysis and using data at this level for atleast 5+ years. The strategic planning department has the necessary skills and experience in data analytics and have been trained in handling PHI information. Most having a bachelor's degfree of higher with a focus on health services, finance, or business planning.

<div style="border:1px solid #000; height:440px;"></div>

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 Agecny 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 amendemtn 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:	Michelle Ginsburg Duhl
Title:	Sr. Client Services Manager
E-mail Address:	mgduhl@us.ibm.com
Address, City/Town, State, Zip Code	
Telephone Number:	918-499-5262
Term of Contract:	3 years

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

Truven provides Trinity Health Of NE a user interface which allows us to login and access the data. Data is securely stroed on Truven's services only. Access is limited and all user acitivy is logged.

3. 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.

See attached data management plan.

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:	DOES NOT APPLY
Company Website:	DOES NOT APPLY
Contact Person:	DOES NOT APPLY
Title:	DOES NOT APPLY
E-mail Address:	DOES NOT APPLY
Address, City/Town, Zip Code	DOES NOT APPLY
Telephone Number:	DOES NOT APPLY
Term of Contract:	DOES NOT APPLY

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

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.

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 whicih 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)	
Printed Name :	Claudio Capone

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

Trinity Health Of New England (TH Of NE) CHIA Data Research Methodology

Market Data Analysis

Retrospective, objective, quantitative, secondary longitudinal analysis of the CHIA datasets with a descriptive objective to identify utilization patterns and trends to support health system planning for population health. As well as using the data to create a correlational evaluation of variables and statistical forecasting.

To conduct market analysis and research by examining patient demographic, population and discharge trends. Market data allows TH Of NE to better anticipate and meet market and consumer demands. TH Of NE's Strategic Planning and Business Development department will utilize this data to put together presentations for the executive leadership team to make high level decisions in order to meet market demands. Information gathered from this data will allow decisions to be made, which are focused on determining the most appropriate healthcare programs to place in the community.

Research Questions

1. How has inpatient volume shifted towards outpatient volume? What is the trend of outpatient growth over time?
2. Where are the majority of TH Of NE patients coming from?
3. What specific towns should TH Of NE focus on to better serve the needs of the community?
4. What disease categories are most prevalent in TH Of NE's surrounding towns? How can we create programs focusing on preventative medicine?
5. How has ED Volume changed over time? Is there an increase in observation patients? Decrease in inpatient admissions?
6. What specific community programs can TH Of NE focus on to improve population health?

Attachment #2 – Data Management Plan(s)

See data plan below.

Truven Health Analytics, a vendor of Trinity Health Of New England, stores the data on a secure citrix server and grants TH Of NE a licenses to certain applications and software that allow us to manipulate the data for its healthcare analytics and reporting purposes. Truven complies with stringent policies regarding the maintenance and security of all clients' data. The software is on password-protected, user limited network secure folder and access is limited to the members of the Trinity Health Of New England strategic planning department.

More information on Truven Health Analytivs Charter for Data Security is listed below:

Truven Health Analytics is an independent and objective source of data and analytics. Data security is one of the four Values of our business: protect the confidentiality, integrity, and availability of the information in our care. We maintain and use confidential information and other sensitive data to serve our many and varied clients in the healthcare market. As a steward of this data, we are responsible and accountable for its security. The three core aspects of security – confidentiality, integrity, and availability – are all critical in order for us to fulfill our mission.
Confidentiality: Our clients can provide sensitive information to us with confidence that we will use and disclose it only for permitted purposes.
 Integrity: Our clients can trust that the analyses we provide them are based on accurate data that has been protected from damage or tampering.
Availability: Our clients can be confident that we will guard against disruption to their access to the information we provide
Principles Truven Health Analytics shall strive to:
I.	Protect the confidentiality, integrity, and availability of the information in our care.
II.	 Make decisions about security according to current industry standards and best practices.
III.	Consider security requirements in all aspects of our operations and the work we perform.
IV.	Regularly evaluate our security practices against our requirements, including independent outside experts where practical.
V.	 Provide access to confidential information only to those with a need to know, and only as needed to perform their work.
VI.	Maintain security policies, and train our workforce members regularly.
VII.	 Act quickly and diligently to correct any security issues that may arise, and implement corrective measures to protect against recurrence.
VIII.	Comply with all applicable laws and regulations of the jurisdictions in which we do business.

Responsibility: As described in our corporate Privacy and Security policies, our Corporate Security Officer, with the guidance of our Data Security Governance Committee, assumes primary responsibility for carrying out this Charter and protecting the security of information held by our business. All Truven Health Analytics employees and contractors are required to follow the principles in this Charter and our security policies, promptly report any security issues they find, and treat security as a core value as they perform their jobs.

All communication between the servers and the web front end is done via citrix server connection.