



**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:	Outmigration Discharges
IRBNet Number:	
Organization Requesting Data:	Yale New Haven Health
Organization Website:	https://www.ynhh.org/
Authorized Signatory for Organization:	Carolyn Salsgiver
Title:	Vice President
E-Mail Address:	Carolyn.salsgiver@bpthosp.org
Address, City/Town, State, Zip Code:	789 Howard Ave, New Haven, CT 06519
Primary Investigator:	
Title:	Amy Richards
E-Mail Address:	Amy.richards@ynhh.org
Telephone Number:	203-688-2609
Names of Co-Investigators:	April Rowe, Diana Storilassi, Carmine Scasino, Latha Sudhakar, Elane Whitney, Zhen Zhang, Shraddha Patel

E-Mail Addresses of Co-Investigators:	April.rowe@ynhh.org, Diana.russo@ynhh.org, carmine_scasino@ynhh.org, latha.sudhakar@ynhh.org, amy.richards@ynhh.org, Elaine.whitney@ynhh.org, zhen.zhang@ynhh.org, spatel@lmhosp.org,
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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 checked="" type="checkbox"/> Utilization review of resources |
| <input type="checkbox"/> Inclusion in a product | <input type="checkbox"/> Other (describe in box below) | |

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

Data from the case mix dataset will help Yale New Haven Health provide the best care to CT patients by determining trends in outmigration.

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.*

Receiving Massachusetts Case Mix data will help Yale New Haven Health provide the best care to CT patients by determining trends in outmigration. This will help patients get access to 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: 5-digit Patient zip codes at an aggregate level will be used to track Connecticut patients receiving medical care in Massachusetts. The information will be at an aggregate level and non-identifiable. The data will be for internal use. This information will also be helpful to compare Connecticut healthcare trends to those in Massachusetts.

Outpatient Observation Data

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

Describe how your research objectives require Outpatient Observation data: 5-digit Patient zip codes at an aggregate level will be used to track Connecticut patients receiving medical care in Massachusetts. The information will be at an aggregate level and non-identifiable. The data will be for internal use. This information will also be helpful to compare Connecticut healthcare trends to those in Massachusetts.

Emergency Department Data

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

Describe how your research objectives require Emergency Department data:

5-digit Patient zip codes at an aggregate level will be used to track Connecticut patients receiving medical care in Massachusetts. The information will be at an aggregate level and non-identifiable. The data will be for internal use. This information will also be helpful to compare Connecticut healthcare trends to those in Massachusetts.

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 Patient zip codes at an aggregate level will be used to track Connecticut patients receiving medical care in Massachusetts. The information will be at an aggregate level and non-identifiable. The data will be for internal use. This information will also be helpful to compare Connecticut healthcare trends to those in Massachusetts.

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Demographic Data

Choose one of the following demographic options:

<input type="checkbox"/> Not Requested (Standard)	<input checked="" type="checkbox"/> Race & Ethnicity***
<p>** If requested, provide justification for requesting Race and Ethnicity. Refer to specifics in your methodology: Need to know patient race and ethnicity to better track outmigration.</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: Need to know discharge date to better track outmigration to a specific Fiscal year.</p>		

Practitioner Identifiers (UPN)

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

<input type="checkbox"/> Not Requested (Standard)	<input type="checkbox"/> Hashed ID ***	<input checked="" 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: Need to know where a patient has originated to better track outmigration.</p>		

Unique Health Information Number (UHIN)

Please choose one of the following:

<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:	

Hashed Mother's Social Security Number

Please choose one of the following:

<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:	

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 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.

Need to standardize and debug zip code data which will be linked to a zip code and debug file.

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.

Link by zip code to our internal zip code file and extract town, po, state, and county. If any discharges are not linked then the zip code will be linked to our debug file and extract town, po and county. If there are still other discharges not found then an attempt is made to search online for the correct town, po and county. If there still are discharges that are not mapped then they are set to Unknown.

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

All linkages will be completed at an aggregate level by zip code.

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.

All data with less than 11 will be masked with the verbiage "less than 11". This will ensure that totals will not be added or percentages.

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.

Analysis will not be published or publically available

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.)?

Not applicable

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

Not applicable

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?

Not Applicable

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.

Yale New Haven Health has previously obtained CHIA data and has worked with hospital discharge data for many years as part of its analysis and planning work. All co-investigators have taken training on confidentiality with healthcare data.

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

Please note: 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.

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:	nThrive formerly Equation Health
Company Website:	http://equationhealth.com/
Contact Person:	Kyle Kobe
Title:	Principle
E-mail Address:	kkobe@equationhealth.com
Address, City/Town, State, Zip Code	880 West Heritage Park Blvd, Suite 110, Layton, UT 84041
Telephone Number:	801-783-4100
Term of Contract:	Yearly

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

nThrive, a vendor of YNHHS, stores the data on a secure server, and grants YNHHS a license to certain applications and software that allow YNHHS to manipulate the data for its healthcare analytics and reporting

purposes. The physical CDs are stored in a locked file cabinet in the YNHHS Planning Department's office in New Haven, CT. Once the data files are received by nThrive, they are appended to YNHHS' existing data warehouse. nThrive complies with stringent policies regarding the maintenance and security of all clients' data. The warehouse is on a password-protected, user limited network secure folder and access is limited to the members of the YNHHS Planning Department.

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.

User authentication, assurance, identification, and validation are done using Active Directory. Active Directory helps with the management of users by allowing them to be grouped into organizational units. It is based around the LDAP (lightweight directory access protocol) standard allowing for easy integration with DataRiver and our other tools used to access data. This enables IT and our developers to use Active Directory's centralized policy and rules to build comprehensive access and authentication controls.

- All users are allocated to security groups with appropriate permissions as defined within Active Directory. Security groups within Active Directory are then associated with the security groups that are setup within the "cube" or client database. The web-based front end asks for the client username and password which is passed to Active Directory where the user is identified, validated, and authenticated. The security group policy associated with the user's security group filters the user's access rights after which access is granted.
- Access Control Policy. Employees and users of the application or databases that drive the application are given access on a case by case request based system. All points and occurrences of data access are logged and reviewed.
- Physical access is only granted on a case by case review, or in the company of set authorized individuals.
- Physical security is a setup with dual stop access key.
- nThrive consulting manages and hosts its own servers. These servers are physically secured in a temperature and moisture controlled environment, with 24x7 video monitoring. This monitoring includes temperature, humidity and movement (notification of any movement captured by video surveillance) alerts.
- The building at which the server room is located has 24x7 oversight by the managing company.

All communication between the servers and the web front end is done via https connections utilizing 256-bit encryption. Additionally, all transfer of data between nThrive and client systems is also done via 256-bit encryption SSL connection. This includes any data collection process."

The YNHHS Office of Information Security has performed an internal Security Design Review within the past year and has inspected the results of nThrive 3rd Party audit and penetration test results.

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.

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 its agents.

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 :	Carolyn Salsgiver

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)

