

Non-Government Application for Massachusetts All-Payer Claims Data [Exhibit A]

I. INSTRUCTIONS

This form is required for all Applicants, except Government Agencies as defined in [957 CMR 5.02](#), requesting protected health information. 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 apcd.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. FEE INFORMATION

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

III. ORGANIZATION & INVESTIGATOR INFORMATION

Project Title:	Evaluation of Massachusetts Medicaid ACO Program
IRBNet Number:	1197741-1
Organization Requesting Data (Recipient):	Harvard Medical School
Organization Website:	www.hms.harvard.edu
Authorized Signatory for Organization:	Joseph L Zurba
Title:	Information Security & IT Compliance Officer
E-Mail Address:	joseph_zurba@hms.harvard.edu
Address, City/Town, State, Zip Code:	25 Shattuck Street, Boston, MA 02115
Data Custodian: (individual responsible for organizing, storing, and archiving Data)	Hocine Azeni
Title:	Senior Program Analyst
E-Mail Address:	azeni@hcp.med.harvard.edu
Telephone Number:	617-432-3903
Address, City/Town, State, Zip Code:	180A Longwood Avenue, Boston, MA 02115
Primary Investigator (Applicant): (individual responsible for the research team using the Data)	Nancy Beaulieu
Title:	Research Associate
E-Mail Address:	beaulieu@hcp.med.harvard.edu
Telephone Number:	617-432-0628
Names of Co-Investigators:	Haiden Huskamp, David Grabowski, Alisa Busch, Hocine Azeni
E-Mail Addresses of Co-Investigators:	Huskamp@hcp.med.harvard.edu , grabowski@hcp.med.harvard.edu , abusch@hcp.med.harvard.edu , azeni@hcp.med.harvard.edu

IV. PROJECT INFORMATION

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

- | | | |
|---|---|--|
| <input type="checkbox"/> Epidemiological | <input type="checkbox"/> Health planning/resource allocation | <input checked="" type="checkbox"/> Cost trends |
| <input checked="" type="checkbox"/> Longitudinal Research | <input checked="" type="checkbox"/> Quality of care assessment | <input type="checkbox"/> Rate setting |
| <input type="checkbox"/> Reference tool | <input checked="" 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) | |

Other: Evaluation of MassHealth ACO program
Graduate students may participate in this research.

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.

The purpose of this project is to assess the effects of MassHealth's (Massachusetts' Medicaid program) new accountable care organization (ACO) program. Specifically, the study team will assess the impact of MassHealth's ACO program on beneficiary utilization patterns, spending, and quality of care overall and for patients with behavioral health (BH) service and long-term services and supports (LTSS) needs. The study team will use a difference-in-difference study design to estimate the effects of the MassHealth ACO program. The study team will use de-identified administrative data from MassHealth and claims and administrative data from all-payer claims databases (APCDs) in Massachusetts and one or more states to compute estimates of utilization, spending, and quality for both the treatment and comparison groups.

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. 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.*

Our research will generate a rigorous and thorough analysis of the consequences of shifting the Massachusetts Medicaid delivery system and contracting to an alternative payment model (i.e. accountable care organizations). We plan to share our results broadly with state health policy makers, the leadership at MassHealth, and interested provider and patient advocate organizations to support informed decision-making about health policy in Massachusetts.

VI. DATA REQUESTED

The Massachusetts All-Payer Claims Database is comprised of medical, pharmacy, and dental claims and information from the member eligibility, provider, and product files that are collected from health insurance payers licensed to

operate in the Commonwealth of Massachusetts. This information encompasses public and private payers as well as data from insured and self-insured plans. APCD data are refreshed and updated annually and made available to approved data users in Release Versions that contain five calendar years of data and three months of run-out. Data requests will be fulfilled using the most current Release Version. For more information about the most current APCD Release Version, including available years of data and a full list of elements in the release 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 future years of data that will become available in a subsequent release. 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. List years of data requested (only list years available in the [current Release Version](#)): 2012-2016; 2017-2018 when available

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

One-Time Request **OR** Subscription

3. Specify below the data files requested for this Project, and provide your justification for requesting each file.

Medical Claims

Describe how your research objectives require Medical Claims data:

Longitudinal medical claims data are needed to compute measures of spending, utilization, and quality at the patient level. These measures will be used to estimate the impact of ACOs on the Medicaid population.

Pharmacy Claims

Describe how your research objectives require Pharmacy Claims data:

Since pharmacy claims constitute a significant spending component and are often used to construct quality measures, these claims are needed to measure the impact of ACOs on spending, utilization, and quality.

Dental Claims

Describe how your research objectives require Dental Claims data:

Dental care is an often understudied dimension of overall health. MassHealth ACOs are not accountable for dental services and we would like to examine any spillover effects of the ACO program on utilization of dental care.

<input checked="" type="checkbox"/> Member Eligibility
Describe how your research objectives require Member Eligibility data: Member eligibility data will be crucial in identifying participation in the Medicaid program, tracking Medicaid patients as they move in and out of Medicaid, and in identifying comparison groups. Demographic and residential location data will be important in controlling for patient characteristics and access to providers.
<input checked="" type="checkbox"/> Provider
Describe how your research objectives require Provider data: We will use data on providers to study changes in the delivery system associated with the implementation of MassHealth ACOs, spillover effects of the ACO program at the provider level, and changes in provider behavior and performance. Having a unique provider data (i.e. NPI) that is constant across insurer networks will allow us to derive more precise estimates of cost and quality (by aggregating over a larger number of patients) and will facilitate the estimation of spillover effects (from the ACO program onto care provided to patients not in the Medicaid program).
<input checked="" type="checkbox"/> Product
Describe how your research objectives require Product data: The product data are essential to constructing our comparison groups, incorporating deductibles into expenditure calculations, and tracking individuals across plans.

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.

All-Payer Claims Database data is 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 additional elements), please refer to [release layouts](#), [data dictionaries](#) and similar documentation included on CHIA’s website.

1. Specify below which enhancements you are requesting in addition to the “Core” LDS, provide your justification for requesting each enhancement.

Geographic Subdivisions

The geographic subdivisions listed below are available for Massachusetts residents and providers only. Select one of the following options.

<input type="checkbox"/> 3-Digit Zip Code (standard)	<input checked="" type="checkbox"/> 5-Digit Zip Code***
<p>***If requested, provide justification for requesting 5-Digit Zip Code. Refer to specifics in your methodology:</p> <p>We need 5-digit zip code to impute socio-demographic characteristics (using census data), to assign beneficiaries to health care markets, and to measure distances traveled to access care.</p>	

Date Resolution

Select one option from the following options.

<input type="checkbox"/> Year (YYYY) (Standard)	<input type="checkbox"/> Month (YYYYMM) ***	<input checked="" type="checkbox"/> Day (YYYYMMDD) *** [for selected data elements only]
<p>*** If requested, provide justification for requesting Month or Day. Refer to specifics in your methodology:</p> <p>Month and year of birth will be necessary to compute certain quality measures (e.g. adolescent well care) and to compute age for risk adjustment. Month and day on claims will be required to link claims for a single episode (e.g. patients seen in a doctors office and an emergency department on the same day), to analyze the sequence of providers seen by patients, and to analyze patterns in health care service delivery.</p>		

National Provider Identifier (NPI)

Select one of the following options.

<input type="checkbox"/> Encrypted National Provider Identifier(s) (standard)	<input checked="" type="checkbox"/> Decrypted National Provider Identifier(s)***
<p>*** If requested, provide justification for requesting decrypted National Provider Identifier(s). Refer to specifics in your methodology:</p> <p>We need decrypted National Provider Identifiers in order to link to external data sources with information on provider characteristics (e.g. physician specialty, license (e.g. nurse practitioner, MD, MSW), years in practice).</p>	

VIII. MEDICAID (MASSHEALTH) DATA

1. Please indicate whether you are seeking Medicaid Data:

- Yes
 No

2. Federal law (42 USC 1396a(a)7) restricts the use of individually identifiable data of Medicaid recipients to uses that are ***directly connected to the administration of the Medicaid program***. If you are requesting MassHealth Data, please describe, in the space below, why your use of the Data meets this requirement. *Your description should focus on how the results of your project could be used by the Executive Office of Health and Human Services in connection with the administering the MassHealth program.* Requests for MassHealth Data will be forwarded to MassHealth for a determination as to whether the proposed use of the Data is directly connected to the administration of the MassHealth program. CHIA cannot release MassHealth Data without approval from MassHealth. This may introduce significant delays in the receipt of MassHealth Data.

Medicaid data are essential for the evaluation of the MassHealth ACO program.

IX. 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.

Providers and facilities will be linked to the NPPES (NPI), doximity data (NPI, name and address), Uniform Data Set (FQHCs), and provider and facility data files stored at the National Bureau of Economic Research (NPI, Medicaid /Medicare IDs, names and addresses). The purpose of linking these files is to obtain characteristics of providers (both individual and institutional) that may influence care quality and cost, and to investigate whether these characteristics are associated with better or worse performance under ACO contracts. In addition, physician specialty will allow us to identify and separately analyze care delivered by specialty providers (e.g. behavioral health and addiction medicine). We will link patient zip codes to census data to obtain aggregated socio-economic characteristics of individuals living in the zip code.

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.

We will first attempt to link providers and facilities using government IDs (deterministic). In cases where this linkage fails, we will use fuzzy matching techniques to match on names and addresses (probabilistic). We will map zip codes directly to Census data (deterministic).

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.

NPI: specialty, years in practice, medical school, affiliation with academic medical center, practice address, practice characteristics (size, specialty composition, owner, hospital outpatient dept. status, # of practice sites, health system). Hospitals and other facilities: beds by type, services available, satellite facilities, health system membership, provision of specific services by staff or contract, staffing, finances, tax status, address of main campus and all satellite facilities, GME and DSH payments. Zip code: % residents with incomes below federal poverty level, racial composition, urban/suburban/rural classification, education attainment, insurance coverage, age distribution, employment status.

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

Identification of individual patients may occur at two junctures. First, in the context of the analyses, in very sparsely populated zip codes, it may be possible to use the linked data in combination with additional data available on the web to identify individual patients. Investigators have been trained and certified in human subjects research and ethics and understand this is a violation of patient privacy. The second juncture is at the presentation and publication of research results. All research results will be aggregated to a level that would make it impossible to identify individual patients.

X. 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.

We anticipate publishing the results of our analyses in peer reviewed journals and working paper series. We will submit to clinical, health policy, and economics outlets such as the New England Journal of Medicine, Journal of the

American Medical Association, Health Affairs, Annals of Internal Medicine, Healthcare, JAMA Internal Medicine, and the Journal of Health Economics. We will also disseminate our findings with policy leaders, payers, provider networks, and academic leaders within Massachusetts and at professional meetings such as AcademyHealth and the Society of General Internal Medicine. All tables and figures will be reviewed by investigators and research compliance officers in our department to ensure that no results with a cell size less than 11 are divulged.

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.

We have no plans to publish or otherwise disclose CHIA data directly. We will also disseminate our findings with policy leaders, payers, provider networks, and academic leaders within Massachusetts and at professional meetings such as AcademyHealth and the Society of General Internal Medicine.

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?

The lowest geographical level of data analysis we expect to present is the county. There is sufficient large populations in Massachusetts counties that it will not be possible to identify individuals from the results.

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?

N/A

9. If you have answered “yes” to questions 5, 6, 7 or 8, please describe the types of products, software, services, or tools.

N/A

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?

N/A

XII. APPLICANT QUALIFICATIONS

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

Investigators Beaulieu, Busch, Grabowski, and Huskamp, and Azeni each have years of experience working with claims data.

Dr. Beaulieu has worked with Massachusetts APCD data to study high cost patients and with Medicare and Commercial claims data to investigate the organization and performance of health systems.

Dr. Huskamp has twenty five years of experience analyzing claims and other administrative data, including Medicaid, Medicare, and commercial insurance data, to study health care utilization and spending, particularly in the areas of mental health and substance use disorder treatment, prescription drug use, and long-term care and end-of-life care.

Dr. Grabowski has worked extensively with Medicare and Medicaid claims and other administrative data (e.g., the Minimum Data Set) to study long-term care and post-acute care utilization and outcomes for older adults. He recently led a project related to dually eligible beneficiaries using the APCD in Oregon.

Dr. Busch has nearly 20 years experience in using commercial, Medicaid and Medicare claims/administrative data to examine behavioral health care quality, utilization, and costs.

Hocine Azeni has been using claims data and other type of data, both private and public, for 20 years. He is familiar with data structures from private data sources like Aetna, Cigna and Blue cross blue shield, as well as public like Medicare, Medicaid and Department of Mental Health. He is experienced in analyzing cost, use and drug 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.)

XIII. 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 have access to the CHIA Data. [*Add agents or contractors as needed.*]

AGENT/CONTRACTOR #1

INFORMATION	
Company Name:	
Company Website	
Contact Person:	
Title:	
E-mail Address:	
Address, City/Town, State, 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.

AGENT/CONTRACTOR #2 INFORMATION	
Company Name:	
Company Website:	
Contact Person:	
Title:	
E-mail Address:	
Address, City/Town, State, 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.

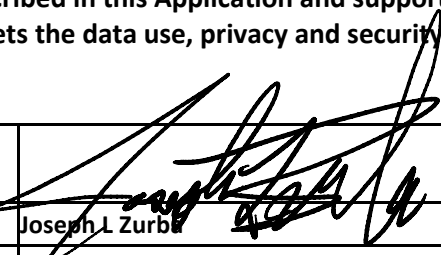
[INSERT A NEW SECTION FOR ADDITIONAL AGENTS/CONTRACTORS AS NEEDED]

IVX. 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)	
Printed Name:	Joseph L. Zurbl
Title:	Information Security & IT Compliance Officer

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.

[INSERT IRB approval letter and protocol, or research methodology]