

**Non-Government Application for Massachusetts All-Payer Claims 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 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. ORGANIZATION AND INVESTIGATOR INFORMATION

Project Title:	Out of Pocket Cost Comparison
IRBNet Number:	1038123
Organization Requesting Data:	Patient Price, Inc
Organization Website:	www.patientprice.com
Authorized Signatory for Organization:	Cloud Cray
Title:	Founder and Chief Executive Officer
E-mail Address:	cloud@patientprice.com
Address, City/Town, State, Zip Code:	49 Gardner St #7, Allston, MA 02134
Primary Investigator:	Cloud Cray
Title:	Founder and Chief Executive Officer
E-mail Address:	cloud@patientprice.com
Telephone Number:	(616) 304-0146
Names of Co-Investigators:	
E-mail Addresses of Co-Investigators:	

III. FEE INFORMATION

1. Consult the [Fee Schedule](#) for All-Payer Claims Database 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 checked="" type="checkbox"/> Cost trends |
| <input type="checkbox"/> Longitudinal Research | <input type="checkbox"/> Quality of care assessment | <input type="checkbox"/> Rate setting |
| <input checked="" 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 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.

The APCD data will be used to derive a reference tool for providers' contracted rates between networks. Ultimately, this reference tool will be a component of a larger project - a cost comparison tool for patients to compare their out-of-pocket costs across different providers, sensitive to their specific insurance plan. However, the scope of the comparison tool is much larger than this project - the APCD data will be used specifically to generate the original reference tool.

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.*

This project ties directly to Massachusetts' efforts concerning pricing transparency and cost reduction. There is no comprehensive cost lookup tool offered to the residents of Massachusetts. Although I understand CHIA is currently working on building a tool (modeled after the CompareMaine and New Hampshire HealthCost tools), I understand that such a tool would not offer out-of-pocket estimates based on a user's current insurance plan. This lookup tool - which requires the contracted rate reference tool described above - will provide transparent out-of-pocket cost estimations, with the ultimate goal of providing the ideal consumer experience for making healthcare decisions.

VI. DATASETS REQUESTED

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

Medical Claims

2011 2012 2013 2014 2015

Describe how your research objectives require Medical Claims data:

The reference tool requires medical claim data in order to derive the charge amount, allowed amount, and payment type/reason code (insurance payment, deductible, coinsurance, etc) for all medical diagnoses and procedures.

Pharmacy Claims

2011 2012 2013 2014 2015

Describe how your research objectives require Pharmacy Claims data:

Dental Claims

2011 2012 2013 2014 2015

Describe how your research objectives require Dental Claims data:

<input checked="" type="checkbox"/> Member Eligibility
<input type="checkbox"/> 2011 <input type="checkbox"/> 2012 <input type="checkbox"/> 2013 <input type="checkbox"/> 2014 <input checked="" type="checkbox"/> 2015
<p>Describe how your research objectives require Member Eligibility data:</p> <p>The project must examine how payers determine patient responsibility in the context of that patient's insurance policy. The Member Eligibility file includes fields that are essential to segmenting patients by coverage status and determining how providers reconcile sets of procedures with coverage type codes.</p> <ul style="list-style-type: none"> - Determine how individual payers map CPT/HCPCS codes to ME029, 030, 031 - Determine how current deductible (ME049 and 050) affect patient vs payer responsibility - Determine when ME018, 028, 035, 051, 052, 053, 063, 073, 081, 122, 126, 127, 131 affect reimbursement
<input type="checkbox"/> Provider
<input type="checkbox"/> 2011 <input type="checkbox"/> 2012 <input type="checkbox"/> 2013 <input type="checkbox"/> 2014 <input type="checkbox"/> 2015
<p>Describe how your research objectives require Provider data:</p> <p style="text-align: center;">I am of the impression the Service Provider (aka Rendering Provider) and Billing Provider NPI numbers can be included in the Medical Claims dataset. If this is inaccurate, I will also require the Provider file</p>
<input checked="" type="checkbox"/> Product
<input type="checkbox"/> 2011 <input type="checkbox"/> 2012 <input type="checkbox"/> 2013 <input type="checkbox"/> 2014 <input checked="" type="checkbox"/> 2015
<p>Describe how your research objectives require Product data:</p> <p>The product file will be used to categorize allowables, etc by insurance plan. This is a key data point in deriving plan-specific cost data.</p>

2. All-Payer Claims Database data are refreshed and updated periodically and made available in Release Versions that contain the most recent five calendar years of data. As certain Project objectives may require future years of data not yet available, CHIA will consider requests for additional Release Versions 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 applicable terms in 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 Release Versions of data and if so, which Versions

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.

All-Payer Claims Database data is released in Limited Data Sets (LDS). 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, provide your justification for requesting each element.

Geographic Data

The geographic sub-divisions listed below are available for Massachusetts residents and providers only. Choose one of the following geographic options. *[For releases with 5 digit zip code, CHIA will apply a substance abuse filter which will remove all claims that include a substance abuse diagnosis or treatment.]*

<input type="checkbox"/> 3-Digit Zip Code (standard)	<input type="checkbox"/> 5-Digit Zip Code***
***If requested, provide justification for requesting 5-Digit Zip Code. Refer to specifics in your methodology:	

Dates

Choose one option from the following options for dates. *[For releases with YYYYMM or YYYYMMDD, CHIA will apply a substance abuse filter which will remove all claims that include a substance abuse diagnosis or treatment.]*

<input type="checkbox"/> Year (YYYY) (Standard)	<input checked="" type="checkbox"/> Month (YYYYMM) ***	<input type="checkbox"/> Day (YYYYMMDD) *** [for selected data elements only]
*** If requested, provide justification for requesting Month or Day. Refer to specifics in your methodology: Contracted rates may be negotiated over time. Specifically, the dates of admission and date of discharge are the only points required at the "month" level. This data will be used to adjust/account for payer-provider relationships that have frequent changes in contracted rates. This will also be used to derive which contractual changes were driven from the payer side (rates change for multiple providers) or from the provider side (same provider, multiple payers)		

National Provider Identifier (NPI)

Choose one of the following options for National Provider Identifier(s):

<input type="checkbox"/> Encrypted National Provider Identifier(s) (standard)	<input checked="" type="checkbox"/> Decrypted National Provider Identifier(s)***
*** If requested, provide justification for requesting decrypted National Provider Identifier(s). Refer to specifics in your methodology: The Rendering and Billing NPI numbers must be de-identified to tie back contractual rates (allowables) to specific providers. The allowable amount is one of the most important factors in calculating a patient's out-of-pocket expense, and is key to consumers comparing expenses across providers.	

VIII. MEDICAID 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 Medicaid Data, please describe, in the space below, why your use of the Data meets this requirement. Requests for Medicaid 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 Medicaid program. CHIA cannot release Medicaid Data without approval from MassHealth. This may introduce significant delays in the receipt of Medicaid Data.

Patients with income too high to receive MassHealth Standard are required to pay a one-time deductible (a function of their household income). These patients are responsible for the cost of medical care prior to MassHealth coverage, and thus need access to out-of-pocket cost estimates sensitive to their deductible remaining. This project will enable patients to seek lower-cost care and reduce the likelihood of meeting their deductible, reducing MassHealth spending. This will also allow patients to navigate what services are covered and which are not, reducing denials and the cost of managing denial appeals.

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.

NPI Registry Data - Includes additional metadata of providers, including Taxonomy codes by NPI . This allows for combining on geography rather than billing NPI in the case where multiple providers are affiliated with the same organization, but do not share a billing NPI.

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.

Deterministic - NPI is a unique identifier for providers

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

N/A

X. 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 in the display of a cell less than 11.

There is no plan to publish or re-sell CHIA's data. The resulting reference tool will be used internally as a component in the patient-facing cost-comparison tool.

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; N/A

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.)?

N/A

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

N/A

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?

N/A

XI. 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.

Cloud Cray, Founder and CEO; Primary Investigator

- Former Director of Analytics for MedData (billing division for Mednax) - 5+ years
- Former VP of Product for Eligible (web-based clearinghouse) - 2 years

Projects at MedData included:

- Deriving patient responsibility on per-patient basis for all patients (dataset > 6 million unique visits) given medical claims and payment posting details from those cases
- Various ETL projects, largely involving normalizing claim data from various EMH/EHR/Practice Mgmt systems
- Cross-provider and cross-specialty cost comparison of patient balances
- Various managerial accounting studies tying billing efforts to payments and account resolution
- Derived MedData's Propensity to Pay algorithm based on historical claim data
- Developed all major reporting platforms for Patient Pay (dashboards, customer reports, etc)

Projects at Eligible included:

- Design of "Cost Estimate" API (real-time patient out-of-pocket estimates) for use in time-of-service billing
- Design of test methodology and accuracy monitoring of Cost Estimate API
- Derivation of fee schedule and subsequent contract management system using historical claim data from various specialties
- Design of Eligible's JSON abstractions for X12 835 files (and other X12 transactions)
- Designed and developed 277/278 polling products - "push notifications" for claim updates
- Wrote the majority of the Eligible technical documentation for customers

Contributor on TigerShark, the open-source library for parsing X12

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.)

XII. 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:	Komodo Technologies
Company Website	N/A
Contact Person:	Lu Wang
Title:	Owner
E-mail Address:	lu.wang@patientprice.com
Address, City/Town, State, Zip Code:	317 Main Street, #2, Medford, MA 02155
Telephone Number:	(480) 246-5410
Term of Contract:	Until project completion

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

This contractor will assist in building the data models and abstractions required to produce the lookup tool. The contractor has worked in various data science roles as a manager and an engineer. She is highly skilled in processing unstructured or highly-dimensional data, and will be able to provide insight into best practices for working with such a large dataset.

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.

All login activity will be logged, and the contractor will only be able to access the CHIA data via VPN connection from a secure laptop provided by Patient Price. All code produced by the contractor will be stored in a private repository within Patient Price's network. The contractor will not have access to the original flat-files from CHIA, only a database containing the data - all queries run by the contractor on that database will be logged.

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.

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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.

--

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.

XIII. 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:	Cloud Cray

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 Release Versions	
Executive Director Approval	
Data Fee Received	
Date of First Audit	
Extract Number:	

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

Attachment #2 – Data Management Plan(s)