

**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:	The Competitive Effects of Physician Hospital Integration
IRBNet Number:	1121052-1
Organization Requesting Data:	Simon Business School, University of Rochester
Organization Website:	http://www.simon.rochester.edu/index.aspx
Authorized Signatory for Organization:	Ron Goettler, PhD
Title:	Senior Associate Dean of Faculty and Research
E-mail Address:	goettler@simon.rochester.edu
Address, City/Town, State, Zip Code:	Carol Simon Hall, Rochester, NY, 14627
Primary Investigator:	Gerard J. Wedig, PhD
Title:	Associate Professor
E-mail Address:	wedig@simon.rochester.edu
Telephone Number:	585-273-1647
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 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 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 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 aim of this study is to test the effects of physician-hospital affiliation on rate setting in both the physician and hospital service markets. We will test whether affiliation adds to hospital negotiating power and whether it reduces the negotiating power of insurers, physicians, neighboring hospitals.

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.*

The value of the project can be articulated in terms of public policy. We are examining the competitive effects of physician-hospital affiliations and particularly their effects on medical prices in the market place. This information may be valuable for formulating policy to regulate these affiliations.

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:

One key part (equation) in the analysis is the extent to which physicians (especially PCPs) “steer” patients towards providers (specialists or hospitals) that are affiliated with the PCP’s affiliated health system. In order to estimate the magnitude to which this occurs, we need data on patient encounters, including type of encounter, provider, referring physician and patient financial liability among other things. With measures of steering on hand, we will assess (formulate a measure of) the net Value (utility) patients receive from an Insurer’s provider network. This analysis will build on prior research on the value of health care networks, including some done by the investigator. Intuitively, more steering will reduce the value of having a wider choice of providers.

For these purposes, we require the medical claims data. We prefer to gain a time series of data as a more reliable way identify the relevant effects using time series variation.

Pharmacy Claims
 2011 2012 2013 2014 2015

Describe how your research objectives require Pharmacy Claims data:

<input type="checkbox"/> Dental Claims <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 Dental Claims data:</p>
<input checked="" type="checkbox"/> Member Eligibility <input checked="" type="checkbox"/> 2011 <input checked="" type="checkbox"/> 2012 <input checked="" type="checkbox"/> 2013 <input checked="" type="checkbox"/> 2014 <input checked="" type="checkbox"/> 2015
<p>Describe how your research objectives require Member Eligibility data:</p> <p>We require the member-eligibility file in order to identify plan selections. That is, we are using the member-eligibility file to measure of patient choice of plan. We will model these choices as being a function of the net utility provided by the network as well as plan premiums.</p>
<input checked="" type="checkbox"/> Provider <input checked="" type="checkbox"/> 2011 <input checked="" type="checkbox"/> 2012 <input checked="" type="checkbox"/> 2013 <input checked="" type="checkbox"/> 2014 <input checked="" type="checkbox"/> 2015
<p>Describe how your research objectives require Provider data:</p> <p>We require these data to obtain supplementary data on providers. We also find these measures useful for developing and testing a complete model of their behavior.</p>
<input checked="" type="checkbox"/> Product <input checked="" type="checkbox"/> 2011 <input checked="" type="checkbox"/> 2012 <input checked="" type="checkbox"/> 2013 <input checked="" type="checkbox"/> 2014 <input checked="" type="checkbox"/> 2015
<p>Describe how your research objectives require Product data:</p> <p>We require these data to obtain supplementary data on insurance plans.</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.

<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: I need 5 digit zips to accurately estimate the extent of patient steering that occurs as a result of physician affiliations. Patient choice of hospital or specialist is very strongly tied to geography and 3-digit zips will not allow me to accurately detect whether a patient has been "steered" outside of their desired geographic provider location.</p>	

Dates

Choose one option from the following options for dates.

<input checked="" type="checkbox"/> Year (YYYY) (Standard)	<input type="checkbox"/> Month (YYYYMM) ***	<input 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>		

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)***
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***** If requested, provide justification for requesting decrypted National Provider Identifier(s). Refer to specifics in your methodology: I will need the decrypted NPI to merge with two other data sets that also use NPI as an identifier. This is important for my measures of physician affiliation.**

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.

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.

1. AHA data sets to obtain complete characteristics of hospital providers. This is necessary to complete the set of controls needed in all three equations.
2. SKA files to identify physician affiliations with health care systems.

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.

1. AHA file – data will be linked using the NPI (10-digit)
2. SKA file – data will be linked using the NPI (10-digit)

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

I am not linking to any data set that has information on individual patients.

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.

I will use the data for research purposes only culminating with a goal of publication in a scientific journal.

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.

As noted above, I will seek to publish my scientific findings. Initially, my working papers will be available on the Social Science Research Network (SSRN) or by request from me personally. No charge to requesters.

3. Will you use CHIA Data for consulting purposes?

Yes

No

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

Yes

No

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

Yes

No

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

Yes

No

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

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

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

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.

I have been doing health economics research for my entire academic career. I have worked with claims data in several of my projects. One example is my paper on HMO enrollments published in *Economic Inquiry* (see my CV, attached).

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 amendmtn 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.

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)		9-22-17
Printed Name:	Dean Ron Goettler	

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	
Date Privacy Committee Review	
Date Release Committee Review	
Outages Approved (as described)	
Approved for additional Release versions	
Executive Director Approval	
Date Fee Received	
Date of First Audit	
Partner Number	

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

The aim is to assess the competitive effects of physician-hospital affiliation on medical prices. Physician affiliation is an important (and growing) trend and may be essential to operational efficiency of integrated health systems, especially under population health management. However, it also affects competition as physician attachment to one health care organization may give that organization market power that it did not possess in the absence of affiliation. For example, a hospital may gain market power if insurer must have a contractual relationship with the hospital in order for its insured enrollees to also gain access to its affiliated physicians.

One part of our methodology is theoretical. We will develop a theoretical model and then estimate it empirically using the CHIA data as well as other data. I briefly discuss the model here. The model views price determination between insurers and providers as the outcome of either a negotiation process or a bargaining model. Hospitals and health system prices are negotiated. For these purposes we will estimate version of Nash in Nash equilibria in which we assess the incremental utility of each provider to the network of providers. A key aspect of the theory is that the utility of a network of providers is affected by steering. For example, if a physician affiliated with a health care system steers her patients only to specialists and hospitals in her system, this will reduce the utility of the insurer having contracts with

hospitals outside of the system. We will develop theoretical measures of the effects of steering and affiliation on the utility of a health care network.

Empirically, we require the following data bases:

- 1) Data on admissions and specialty visits – this is to assess steering. We also require data on fees (“Claims Data”);
- 2) Data on insurance plan choices and their premiums (“Member eligibility file”);
- 3) Data on negotiated fees between insurers and providers;
- 4) Data on physician-insurer affiliations;
- 5) Data on physician affiliations with hospitals (already in possession of this).
- 6) Data on hospital/physician characteristics (AHA file – already in possession of this)

The analysis will proceed (omitting technical details) as follows. First, we will estimate provider choice equations (e.g., hospital choice) in the usual methodology (i.e., discrete choice model) but add in the role of steering by checking on the effect of physician affiliation. Next, we will create an analytic expression for the utility of a network, given steering. We note that the utility may vary by person. We will then estimate demand for insurance equations. This will identify the disutility of steering as well as its anticompetitive effects and give us the incremental utility of a hospital or physician to a network, conditional on steering. Next, we will estimate fee equations as part of a bargaining model, using the provider utility estimates. Finally, we will do counterfactual analysis under various regimes of affiliation and steering.

Attachment #2 – Data Management Plan(s)

Attached separately.
