

**Commonwealth of Massachusetts  
Center for Health Information & Analysis (CHIA)  
Non-Government Application for MA APCD Limited Data Set**

*This form is required by 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 if your organization may receive CHIA data. Please be sure the documents are completed fully and accurately. You may wish to consult the Evaluation Guide that CHIA will use to review your documents. Prior to receiving CHIA Data, the organization must execute the [Data Use Agreement](#). You may wish to review that document as you complete these forms. This application should be completed by the Primary Investigator, and must be signed by a party with authority to bind the organization seeking CHIA Data for the purposes described herein.*

***NOTE: In order for your Application to be processed, you must submit the required application fee. Please consult the fee schedules for MA APCD data for the appropriate fee amount. A [remittance](#) form with instructions for submitting the application fee is available on the CHIA website.***

*All attachments must be uploaded to IRBNet with your Application. All applications documents can be found on the [CHIA website](#) in Word and/or PDF format.*

**I. GENERAL INFORMATION**

APPLICANT INFORMATION	
Applicant Name: (Primary Investigator)	Meredith B. Rosenthal, PhD
Title:	Professor of Health Economics and Policy
Organization:	Harvard T. H. Chan School of Public Health
Project Title:	Will the Academic Innovations Collaborative Increase the Value of Primary Care and Improve Providers' and Trainees' Experiences?
Mailing Address:	408 Kresge Hall, Harvard T. H. Chan School of Public Health, 677 Huntington Avenue, Boston, MA, 02155
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Original Data Applicant Submission Date:	November 15, 2016
Dates Data Application Revised:	
Project Objectives (240 character limit):	The aims of the study are to: <ol style="list-style-type: none"> <li>Describe the tactics and sequencing that participating AMCs use to implement the main elements of the Academic Innovations Collaborative (AIC) – Improve team-based care, population management, complex care, patient engagement through a funded learning collaborative.</li> </ol>

	<p>2. Evaluate the primary care work life, professional satisfaction, and career intentions of attending and trainee physicians at AMCs.</p> <p>Examine the degree to which the AIC improves healthcare quality and spending and the patient experience of care.</p>
<p>Project Research Questions (if applicable) or Business Use Case(s):</p>	<p>1. Did the AIC (the intervention noted above) change the levels and mix of utilization of services?</p> <p>2. Did the AIC reduce total cost of care?</p> <p>3. Did the AIC improve the use of evidence-based care processes?</p>

**II. PUBLIC INTERST & PROJECT SUMMARY**

1. Briefly explain why completing your project is in the public interest.

Academic medical centers (AMCs) play a critical role in delivering high-quality primary care while training future primary care physicians. Many AMCs face the additional burden of being an important part of the healthcare safety net, caring for both socially and medically complex patients. However, available evidence suggests that although the quality of care delivered by AMCs may be comparable to those of non-AMC settings, costs are 44-83% greater.

Studies find that the learning collaborative approach to quality improvement (QI) has been successful at improving care quality in a variety of care settings, but there is little data on the degree to which they may be effective at improving primary care quality and value at AMCs, or at addressing the unique needs of academic physicians (e.g., faculty engaged in graduate medical education or dividing their time between patient care and research) and their trainees. [Koenig]

The CHIA data will be used to examine the degree to which the AIC improves healthcare quality and spending and the patient experience of care. The CHIA data will be used to identify ‘case’ and ‘comparison’ practices within Massachusetts. We need the best estimate of the total amount paid to conduct this analysis because it is important for us to understand the cost implications of the AIC in order to identify opportunities for cost control by way of primary care reform. The data will also be used to measure changes within these practices. To do so, we will use an algorithm that attributes patients to practices and does not use patient-level data.

2. Has an Institutional Review Board (IRB) reviewed your project?

- Yes, a copy of the approval letter and protocol must be **attached** to this Application
- No, this project is not human subject research and does not require IRB review.

3. If your project has not been reviewed by an IRB, please **attach** a brief (1-2 page) description of your project including the methodology, objectives, and research questions.

**III. DATA FILES REQUESTED**

1. Please indicate the MA APCD databases from which you seek data, the year(s) of data requested, and your justification for requesting *each* file. Please refer to the [MA APCD Release 5.0 Data Specifications](#) for details of the file contents.

<b>MA ALL-PAYER CLAIMS DATABASE FILES</b>	<b>Year(s) Of Data Requested</b> <b>Current Yrs. Available</b> <input type="checkbox"/> 2011 <input type="checkbox"/> 2012 <input checked="" type="checkbox"/> 2013 <input checked="" type="checkbox"/> 2014 <input checked="" type="checkbox"/> 2015
<input checked="" type="checkbox"/> <b>Medical Claims</b>	<p><b>Please describe how your research objectives require Medical Claims data:</b>                      Medical Claims data includes several data elements that will be important to our analysis. Generally, we will require certain items (e.g., member gender, birth month and year, and zip code) for appropriate risk adjustment; charge amount, paid amount, prepaid amount, copay amount, coinsurance amount, and deductible amount will capture costs for some claims and patient out-of-pocket costs. We will use dates of service and admission dates to conduct time series analysis, to associate use with the relevant month, and to calculate quality measures that require information on sequencing. Diagnoses will classify admissions for measures such as PQIs. Revenue codes, procedure code, procedure modifiers, and ICD procedure codes will classify services by type of utilization. Carrier Specific Unique Member ID and Carrier Specific Unique Subscriber ID will attribute claims to members, link claims to eligibility data, and track member utilization and cost over time.</p>
<input checked="" type="checkbox"/> <b>Pharmacy Claims</b>	<p><b>Please describe how your research objectives require Pharmacy Claims data:</b>                      Drug codes and name will identify drugs by Therapeutic class, generic drug indicator will examine rates of generic substitution. Quantity dispensed, days supply, charge amount, paid amount, coinsurance amount, and deductible amount will allow us to capture utilization and cost. Allowed amount will allow us to evaluate the impact of primary care transformation, and this measure will be essential for estimating total health plan spending (PMPM). There are some provider data elements (e.g., Prescribing ProviderID and Recipient PCP ID) that will be important either for identifying intervention/comparison providers or to attribute patients to primary care providers. We will also require Date Prescription written to conduct time series analysis and to associate use with the relevant month.</p>
<input type="checkbox"/> <b>Dental Claims</b>	<p><b>Please describe how your research objectives require Dental Claims data:</b></p>
<input checked="" type="checkbox"/> <b>Member Eligibility</b>	<p><b>Please describe how your research objectives require Member Eligibility data:</b>                      Insurance Type Code/Product will capture more information about the patients' insurance. Member birth month and year will calculate age, which is a predictor of utilization and cost, as well as important for quality measures that are age specific. Demographic information like Race, Hispanic Indicator, and Ethnicity are required for appropriate risk adjustment. We require product enrollment start/end dates to capture more information about the patients' insurance. Deductible information will capture patient out-of-pocket costs.</p>
<input checked="" type="checkbox"/> <b>Provider</b>	<p><b>Please describe how your research objectives require Provider data:</b>                      We require as much provider information as possible because we are analyzing differences across providers and need to identify intervention providers and potential comparison</p>

	providers.
<input checked="" type="checkbox"/> <b>Product</b>	<p><b>Please describe how your research objectives require Product data:</b></p> <p>We will be analyzing cost and utilization, and therefore want to account for population differences associated with type of product, which will require Product Line of Business Model, Insurance Plan Market, and Product Benefit Type.</p>

**IV. GEOGRAPHIC DETAIL**

Please choose one of the following geographic options for MA residents. *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.*

<input type="checkbox"/> 3 Digit Zip Code (MA) (standard)	<input checked="" type="checkbox"/> 5 Digit Zip Code (MA)***
<p><b>***Please provide justification for requesting 5 digit zip code. Refer to specifics in your methodology:</b></p> <p>We require patient demographic information, including member ZIP code for appropriate risk adjustment. More specifically, in analyzing cost and utilization we will want to account for differences across geographic markets due to socioeconomic characteristics and access to care.</p>	

**V. DATE DETAIL**

Please choose one option from the following options for dates:

<input type="checkbox"/> Year (YYYY) (Standard)	<input type="checkbox"/> Month (YYYYMM) ***	<input checked="" type="checkbox"/> Day (YYYYMMDD) *** [for selected data elements only]
<p><b>*** If requested, please provide justification for requesting Month or Day. Refer to specifics in your methodology:</b></p> <p>We require dates of services when available because we will conduct time series analysis and need to associate use with the relevant month and date. Some quality measures require information on sequencing and timing- such as overuse measures that recommend no imaging within six weeks of first diagnosis of back pain.</p>		

**VI. NATIONAL PROVIDER IDENTIFIER (NPI)**

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

<input type="checkbox"/> Encrypted National Provider Identifier(s) (standard)	<input checked="" type="checkbox"/> Unencrypted National Provider Identifier(s)***
<p><b>*** If requested please, provide justification for requesting unencrypted National Provider Identifier(s). Refer to specifics in your methodology:</b></p> <p>We need as much provider information as possible because we are analyzing differences across providers and need to identify intervention providers and potential comparison providers.</p> <p>We propose linking APCD data elements to the Massachusetts Health Quality Partnership Provider file, which will be an important part of the analysis to identify comparison practices (i.e., practices that are similar to those in the intervention but untouched by the intervention) in the APCD. One such important identifier is the unique National Provider Identifier so we can appropriately attribute providers to practices.</p>	

**VII. MEDICAID DATA**

Please indicate here whether you are seeking Medicaid Data:

- Yes
- No

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 from Level 2 or above, 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.

Primary care is of particular importance to patient populations with significant health challenges and low health literacy, many of whom are covered by the MassHealth program. Moreover, MassHealth has invested in patient-centered medical home initiatives similar to the one that we are evaluating in this study and community health centers that serve disproportionate numbers of MassHealth patients are participants in the AIC. Our findings will inform MassHealth policy makers about the quality and cost benefits of improved primary care.

### VIII. DATA LINKAGE AND FURTHER DATA ABSTRACTION

*Note: Data linkage involves combining CHIA Data with other databases to create one extensive database for analysis. Data linkage is typically used to link multiple events or characteristics that refer to a single person in CHIA Data within one database.*

1. Do you intend to link or merge CHIA Data to other datasets?

- Yes
- No linkage or merger with any other database will occur

2. If yes, please indicate below the types of database to which CHIA Data 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 level (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, which CHIA data elements will be linked; and the purpose for the linkage(s):

We propose to link the APCD data elements to the Massachusetts Health Quality Partnership Provider File, which maps individual physician identifiers to practices and networks. The linkage to this dataset is necessary in order for the study to identify comparison practices (i.e., practices that are similar to those in the intervention but untouched by the intervention) in the APCD. The database is the Provider File provided by Massachusetts Health Quality Partnership. We will link based on service provider organization name.

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 use deterministic linkage and link that organization names directly from the APCD to the Provider database.

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

We will store and handle the linked file with the same level of information security as the original CHIA file.

**XI. PUBLICATION / DISSEMINATION / RE-RELEASE**

1. Describe your plans to publish or otherwise disclose CHIA Data, or any data derived or extracted from such CHIA Data, in any paper, report, website, statistical tabulation, seminar, conference, or other setting. 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 display a cell less than 11, and no percentages or other mathematical formulas will be used if they result in the display of a cell less than 11.

We intend to publish aggregate findings from our analyses. We will not disclose any patient-level data. Practice level analyses will be shared privately with the individual primary care practices participating in the AIC so they can benchmark themselves with other practices. All data we share with individual primary care practices will be in the aggregate form and will be deidentified. Tentative paper titles are:  
  
Did the AIC improve the quality and value of adult primary care?  
  
Did the AIC improve the quality and value of pediatric care?

2. Do you anticipate that the results of your analysis will be published and/or publically available to any interested party? Please describe how an interested party will obtain your analysis and, if applicable, the amount of the fee, that the third party must pay.

Our results will be published in the peer-reviewed literature. Abstracts of these papers will be publicly available and complete manuscripts will be available based on the journals usual policies (through individual and institutional subscription; some are made free on-line after a period of time). Reprints will be available for free from the authors upon request.

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, with a subscription, etc.)?

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

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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?

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**X. APPLICANT QUALIFICATIONS**

1. Describe your qualifications (and the qualifications of your co-investigators) to perform the research described.

<p>The proposed project will evaluate the effects of a quality improvement collaborative (the “Academic Innovations Collaborative” or AIC) that is intended to transform primary care training and delivery in 17 sites affiliated with Harvard Medical School. As Principal Investigator on the evaluation of the AIC, I bring to this project my experience conducting related research on the design and impact of health policy reforms that seek to alter patient and provider behavior, including pay for performance and patient-centered medical home pilot initiatives. My expertise as a health economist/health services researcher and my experience studying emerging policy strategies to improve quality and contain cost will enable me to ensure the success of this important study.</p>
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2. **Attach** résumés or curricula vitae of the Applicant/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.**

Third-Party Vendors. Provide the following information for all agents and contractors who will work with the CHIA Data.

Company Name:	
Contact Person:	
Title:	
Address:	
Telephone Number:	

E-mail Address:	
Organization Website:	

1. Will the agent have access to the CHIA Data at a location other than your location, your off-site server and/or your database?

- Yes, a separate Data Management Plan **must** be completed by each agent who will store CHIA Data
- No

2. Describe the tasks and products assigned to this agent for this project; their qualifications for completing the tasks; and the Organization’s oversight of the agent, including how the Organization will ensure the security of the CHIA Data to which the agent has access.

**XII. FEE INFORMATION**

Please consult the [fee schedules](#) for MA APCD Data and select from the following options:

- Researcher
- Others (Single Use)
- Others (Multiple Use)

Are you requesting a fee waiver?

- Yes
- No



If yes, please refer to the [Application Fee Remittance Form](#) and submit a letter stating the basis for your request (if required). Please refer to the [fee schedule](#) for qualifications for receiving a fee waiver. If you are requesting a waiver based on the financial hardship provision, please provide documentation of your financial situation. Please note that non-profit status alone isn’t sufficient to qualify for a fee waiver.

By submitting this Application, the Data Applicant attests that it is aware of its data use, privacy and security obligations imposed by state and federal law *and* is compliant with such use, privacy and security standards. The Data Applicant further agrees and understands that it is solely responsible for any breaches or unauthorized access, disclosure or use of any CHIA Data provided in connection with an approved Application, including, but not limited to, any breach or unauthorized access, disclosure or use by its agents.

Applicants requesting data from CHIA will be provided with data following the execution of a Data Use Agreement that requires the Data Applicant to adhere to processes and procedures aimed at preventing unauthorized access, disclosure or use of data.

**By my signature below, I attest to: (1) the accuracy of the information provided herein; (2) that the requested data is the minimum necessary to accomplish the purposes described herein; (3) the Data Applicant will meet the data privacy and security requirements describe 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) my authority to bind the organization seeking CHIA Data for the purposes described herein.**



Signature: (Authorized Agent)	
Printed Name :	Meredith B. Rosenthal
Title:	Professor of Health Economics and Policy and Associate Dean of Diversity
Signature: (Applicant/Primary Investigator)	
Name:	Meredith B. Rosenthal
Title:	Professor of Health Economics and Policy and Associate Dean of Diversity
Original Data Request Submission Date:	November 16, 2016
Dates Data Request Revised:	

Attachments. Please indicate below which documents have been attached to the Application and uploaded to IRBNet:

- 1. IRB approval letter or summary of project (if applicable)
- 2. Resumes of Applicant and co-investigators
- 3. Data Management Plan (for each institution that will store CHIA Data)