Commonwealth of Massachusetts
Center for Health Information & Analysis (CHIA)
Non-Government Agency Application for Data

This application is to be used by all applicants, except Government Agencies, as defined in 957 CMR 5.02.

NOTE: *In order for your application to be processed, you must submit the required application fee. Please consult the fee schedules for APCD and Case Mix data for the appropriate fee amount. A remittance form with instructions for submitting the application fee is available on the CHIA website.*

I. GENERAL INFORMATION

APPLICANT INFORMATION	
Applicant Name:	Meredith B. Rosenthal, PhD
Title:	Professor of Health Economics and Policy
Organization:	Harvard School of Public Health
Project Title:	Will the Academic Innovations Collaborative Increase the Value of Primary Care and Improve Providers' and Trainees' Experiences?
Date of Application:	April 22, 2014
Project Objectives (240 character limit)	The aims of the study are to: 1. 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. 2. Evaluate the primary care work life, professional satisfaction, and career intentions of attending and trainee physicians at AMCs. Examine the degree to which the AIC improves healthcare quality and spending and the patient experience of care.
Project Research Questions (if applicable)	1. Did the AIC (the intervention noted above) change the levels and mix of utilization of services? 2. Did the AIC reduce total cost of care? 3. Did the AIC improve the use of evidence-based care processes?

Please indicate if you are a Researcher, Payer, Provider, Provider Organization or Other entity and whether you are seeking data pursuant to 957 CMR 5.04 (De-Identified Data), 957 CMR 5.05 (Direct Patient Identifiers for Treatment or Coordination of Care), or 957 CMR 5.06 (Discretionary Release).

☒	Researcher	☐	957 CMR 5.04 (De-identified Data)
☐	Payer	☐	957 CMR 5.05 (Direct Patient Identifiers)
☐	Provider / Provider Organization		

☐	957 CMR 5.06 (Discretionary Release)
☐ Other	

II. PROJECT SUMMARY

Briefly describe the purpose of your project and how you will use the requested CHIA data to accomplish your purpose.

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 traineeds. [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.

III. FILES REQUESTED

Please indicate the databases from which you seek data, the Level(s) and Year(s) of data sought.

ALL PAYER CLAIMS DATABASE	Level 1[1] or 2[2]	Single or Multiple Use	Year(s) Of Data Requested Current Yrs. Available 2009 - 2012
☒ Medical Claims	☐ Level 1 ☒ Level 2	Single	☒ 2009 ☒ 2010 ☒ 2011 ☒ 2012
☒ Pharmacy Claims	☐ Level 1 ☒ Level 2	Single	☒ 2009 ☒ 2010 ☒ 2011 ☒ 2012
☐ Dental Claims ☒ Member Eligibility	☐ Level 2 ☒ Level 2 ☒ Level 2	☐ ▼ Single Single	☒ 2009 ☒ 2010 ☒ 2011 ☒ 2012

[1] Level 1 Data: De-identified data containing information that does not identify an individual patient and with respect to which there is no reasonable basis to believe the data can be used to identify an individual patient. This data is de-identified using standards and methods required by HIPAA.

[2] Level 2 (and above) Data: Includes those data elements that pose a risk of re-identification of an individual patient.

☒ Provider	☒ Level 2	Single	
☒ Product			

CASEMIX		Level 1 - 6	Fiscal Years Requested
Inpatient Discharge	☐	Level 1 – No Identifiable Data Elements	<u>1998-2012 Available</u> (limited data 1989-1997) **2009 - 2012**
	☒	Level 2 – Unique Physician Number (UPN)	
	☐	Level 3 – Unique Health Information Number (UHIN)	
	☐	Level 4 – UHIN and UPN	
	☐	Level 5 – Date(s) of Admission; Discharge; Significant Procedures	
	☐	Level 6 – Date of Birth; Medical Record Number; Billing Number	
Outpatient Observation	☐	Level 1 – No Identifiable Data Elements	<u>2002-2012 Available</u> **2009 - 2012**
	☒	Level 2 – Unique Physician Number (UPN)	
	☐	Level 3 – Unique Health Information Number (UHIN)	
	☐	Level 4 – UHIN and UPN	
	☐	Level 5 – Date(s) of Admission; Discharge; Significant Procedures	
	☐	Level 6 – Date of Birth; Medical Record Number; Billing Number	
Emergency Department	☐	Level 1 – No Identifiable Data Elements	<u>2000-2012 Available</u> **2009 - 2012**
	☒	Level 2 – Unique Physician Number (UPN)	
	☐	Level 3 – Unique Health Information Number (UHIN)	
	☐	Level 4 – UHIN and UPN; Stated Reason for Visit	
	☐	Level 5 – Date(s) of Admission; Discharge; Significant Procedures	
	☐	Level 6 – Date of Birth; Medical Record Number; Billing Number	

IV. FEE INFORMATION

Please consult the fee schedules for APCD (Administrative Bulletin 13-11) and Case Mix data (Administrative Bulletin 13-09) and select from the following options:

APCD Applicants Only
☒ Academic Researcher
☐ Others (Single Use)
☐ Others (Multiple Use)

Case Mix Applicants Only
☒ Single Use

☐ Limited Multiple Use
☐ Multiple Use

Are you requesting a fee waiver?
☐ Yes
☒ No

If yes, please submit a letter stating the basis for your request.

V. REQUESTED DATA ELEMENTS [APCD Only]

State and federal privacy laws limit the use of individually identifiable data to the minimum amount of data needed to accomplish a specific project objective. Please use the APCD Data Specification Workbook to identify which data elements you would like to request and attach this document to your application.

VI. MEDICAID DATA [APCD Only]

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 with the administration of the Medicaid program. If you are requesting Medicaid data from Level 2 or above, please describe in detail why your use of the data meets this requirement. Applications requesting 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. MassHealth may impose additional requirements on applicants for Medicaid data as necessary to ensure compliance with federal laws and regulations regarding Medicaid.

> 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.

VII. MEDICARE DATA

Please indicate here whether you are seeking Medicare Data:
☐ Yes
☒ No

Medicare data may only be disseminated to state agencies and/or entities conducting research projects that are directed and partially funded by the state if such research projects would allow for a Privacy Board or an IRB to make the findings listed at 45 CFR 164.512(i)(2)(ii) if the anticipated data recipient were to apply for the data from CMS directly. If

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you are requesting Medicare data, please explain how your research project is directed and partially funded by the state and describe in detail why your proposed project meets the criteria set forth in 45 CFR 164.512(i)(2)(ii). Applicants must describe how they will use the data and inform CHIA where the data will be housed. CHIA must be informed if the data has been physically moved, transmitted, or disclosed.

Applicants seeking Medicare data must complete a Medicare Request Form.

Applicants approved to receive Medicare data will be required to execute an Addendum to CHIA's standard data use agreement, containing terms and conditions required by CHIA's data use agreement with CMS.

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VIII. DIRECT PATIENT IDENTIFIERS[3]
State and federal privacy laws may require the consent of Data Subjects prior to the release of any Direct Patient Identifiers. If you are requesting data that includes Direct Patient Identifiers, please provide documentation of patient consent or your basis for asserting that patient consent is not required.

IX. REQUESTS PURSUANT TO 957 CMR 5.04
Payers, providers, provider organizations and researchers seeking access to Level 1 (de-identified) data are required to describe how they will use such data for the purposes of lowering total medical expenses, coordinating care, benchmarking, quality analysis or other administrative research purposes. Please provide this information below.

> Completing this study will help transform the way we provide primary care with the goal of decreasing health care costs while improving the quality of care provided.

X. FILTERS
If you are requesting APCD elements from Level 2 or above, describe any filters you are requesting to use in order to limit your request to the minimum set of records necessary to complete your project. (For example, you may only need individuals whose age is less than 21, claims for hospital services only, or only claims from small group projects.)

APCD FILE	DATA ELEMENT(S) FOR WHICH FILTERS ARE REQUESTED	RANGE OF VALUES REQUESTED
Medical Claims		
Pharmacy Claims		
Dental Claims		
Membership Eligibility		
Provider		
Product		

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[3] Direct Patient Identifiers. Personal information, such as name, social security number, and date of birth, that uniquely identifies an individual or that can be combined with other readily available information to uniquely identify an individual.

XI. PURPOSE AND INTENDED USE

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

> The study's intentions are to help efforts towards the improvement of health care quality and mitigate health care cost growth. Completing this study will also help transform the way primary care is provided, specifically addressing the complex issues faced by academic health centers and community practices. The end goal is to make improvements in both trainee experiences and patient outcomes in the academic primary care system.

2. **Attach a** brief (1-2 pages) description of your research methodology. (This description will not be posted on the internet.)

We propose to use an interrupted time-series approach with a matched comparison group to evaluate the impact of the Academic Innovations Collaborative AIC after two years with a two-year pre-intervention period. The primary data source for our analysis is the Massachusetts All-Payer Claims Database. These data will permit us to examine specific categories of utilization, cost and quality that may be affected by the activities of the AIC. We have specifically requested data on allowed, paid, and charged amounts to allow us to estimate the impact of total cost of care as an outcome of primary care reform. This measure will be essential for framing the policy and business case for replicating similar interventions.

The AIC is a practice-level intervention; thus the research design will incorporate a matched comparison group at the practice level. Because the majority of patients do not have an identified primary care provider, we will begin by assigning each patient with at least one primary care visit in a given year to the practice that provided the plurality of primary care visits to that patient. The contemporaneous comparison group for the APCD analysis will be selected through exact and propensity score matching based on data from the first pre-intervention year. In the propensity score model we include characteristics such as teaching status of the practice, patient demographics and indicators of case mix. All analyses will adjust for residual confounding after matching using generalized estimating equations models with functional form and distributional assumptions appropriate to each dependent variable.

Please see attached Methodology document for more information.

3. Has your project received approval from your organization's Institutional Review Board (IRB)?

    X Yes, and a copy of the approval letter is attached to this application.

    ☐ No, the IRB will review the project on _____.

    ☐ No, this project is not subject to IRB review.

    ☐ No, my organization does not have an IRB.

XII. APPLICANT QUALIFICATIONS

1. Describe your qualifications to perform the research described or accomplish the intended use of CHIA data.

> 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.

2. Attach résumés or curriculum vitae of the applicant/principal investigator, key contributors, and of all individuals who will have access to the data. (These attachments will not be posted on the internet.)

XIII. DATA LINKAGE AND FURTHER DATA ABSTRACTION

1. Does your project require linking the CHIA Data to another dataset?
   ☒ Yes
   ☐ No

2. If yes, will the CHIA Data be linked to other patient level data or with aggregate data (e.g. Census data)?
   ☒ Patient Level Data
   ☐ Aggregate Data

3. If yes, please identify all linkages proposed and explain the reasons(s) that the linkage is necessary to accomplish the purpose of the project.

   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.

4. 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.

XIV. PUBLICATION / DISSEMINATION / RE-RELEASE

1. Describe your plans to publish or otherwise disclose CHIA Data, or any data derived or extracted from such data, in any paper, report, website, statistical tabulation, seminar, conference, or other setting.

   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. Will the results of your analysis be publicly available to any interested party? Please describe how an interested party will obtain your analysis and, if applicable, the amount of the fee.

> 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 the data for consulting purposes?
   - ☐ Yes
   - ☒ No

4. Will you be selling standard report products using the data?
   - ☐ Yes
   - ☒ No

5. Will you be selling a software product using the data?
   - ☐ Yes
   - ☒ No

6. If you have answered "yes" to questions 3, 4 or 5, please describe the types of products, services or studies.

XV. USE OF AGENTS AND/OR 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:	

7. Will the agent/contractor have access to the data at a location other than your location or in an off-site server and/or database?

   - ☐ Yes