

Massachusetts Division of Health Care Finance and Policy Application for All-Payer Claims Database (APCD) Data

Applications for APCD data must meet the requirements set forth in regulation **114.5 CMR 22.00: Health Care Claims Data Release** and any Administrative Bulletins promulgated under this regulation. The regulation and bulletins are available online at <http://www.mass.gov/eohhs/gov/departments/hcf/regulations.html>. Information provided on pages 1-4 of this application will be posted on the internet for public comment.

A. APPLICANT INFORMATION	
Applicant Name:	Thomas Land
Title:	Director, Office of Statistics and Evaluation, Bureau of Community Health and Prevention (BCHAP)
Organization:	Massachusetts Department of Public Health (MDPH)
Project Title:	Evaluation of Mass in Motion and the Community Transformation Grants (CTGs)
Date of Application:	August 2012
Brief Description of Project (240 character limit)	The CTGs aim to reduce obesity and death and disability related to tobacco use and heart disease by 5% in MA communities. APCD data will enhance our evaluation of these grants by giving us a clearer picture of these conditions and greater ability to identify populations at greatest risk.

B. DATA REQUESTED

1. PUBLIC USE									
File	SINGLE USE*			REPEATED USE*			MULTIPLE USE*		
	'08	'09	'10	'08	'09	'10	'08	'09	'10
Medical Claims	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pharmacy Claims	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dental Claims	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Membership Eligibility	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provider	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Product	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. RESTRICTED USE									
File	SINGLE USE*			REPEATED USE*			MULTIPLE USE*		
	'08	'09	'10	'08	'09	'10	'08	'09	'10
Medical Claims	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pharmacy Claims	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dental Claims	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Membership Eligibility	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provider	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Product	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

* The Division reserves the right to change proposed “use level” after review of this application.

<p>Definitions:</p> <ul style="list-style-type: none"> • Single Use: Use of the data for a project or study. • Repeated Use: Use of the data as an input to develop a report or product for sale to multiple clients or customers provided that it will NOT disclose APCD data. Examples include: development of a severity index tool, development of a reference tool used to inform multiple consulting engagements where no APCD data is disclosed. • Multiple Use: Use of the data to develop a product or service that will be sold in the marketplace and will disclose APCD data. Examples include: a benchmark report produced by analyzing APCD data, a query tool to ease access to APDC data.
--

3. **Filters:** If you are requesting data elements from the Restricted Use dataset, 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 products.)

File	Data Element(s)	Range of Values Requested
Medical Claims	N/A	
Pharmacy Claims		
Dental Claims		
Membership Eligibility		
Provider		
Product		

4. **Restricted data elements:** If you are requesting Data Elements from the Restricted Use dataset, list each restricted data element you are requesting on the attached Data Element List and explain why you need access to EACH Restricted Use data element for your project. Limit your request to the minimum data elements necessary to complete the project and be specific as to how each element relates to your proposed model/analytic plan. Add rows to this table as needed.

Restricted Data Element Name	Restricted Data Element Description	Data File (Medical, Pharmacy, Dental, Eligibility, Provider, Product)	Justification (reason this data element is necessary for your project)
ME006	Insured Group or Policy Number	Eligibility	Part of monitoring and surveillance of chronic disease in communities is the need to understand the impact of family history and shared risk factors. Obtaining this information would allow for an approach to surveillance that would account for family relationships and

			shared risk factors. Element is also required to link file to appropriate Medical and Pharmacy Claims.
ME012	Individual Relationship Code	Eligibility	Part of monitoring and surveillance of chronic disease in communities is the need to understand the impact of family history and shared risk factors. Obtaining this information would allow for an approach to surveillance that would account for family relationships and shared risk factors.
ME015	Member City Name	Eligibility	Obtaining this information allows us to calculate estimates of disease burden for communities throughout the state, which allows us to determine which communities are the most vulnerable and devise community-specific approaches for prevention and treatment.
ME017	Member ZIP code (first 3 digits)	Eligibility	Obtaining this information allows us to calculate estimates of disease burden for communities throughout the state, which allows us to determine which communities are the most vulnerable and devise community-specific approaches for prevention and treatment.
MC006	Insured Group or Policy Number	Medical	Part of monitoring and surveillance of chronic disease in communities is the need to understand the impact of family history and shared risk factors. Obtaining this information would allow for an approach to surveillance that would account for family relationships and shared risk factors. Element is

			also required to link file to appropriate Eligibility files and Pharmacy Claims.
MC011	Individual Relationship Code	Medical	Part of monitoring and surveillance of chronic disease in communities is the need to understand the impact of family history and shared risk factors. Obtaining this information would allow for an approach to surveillance that would account for family relationships and shared risk factors.
MC014	Member City Name	Medical	Obtaining this information allows us to calculate estimates of disease burden for communities throughout the state, which allows us to determine which communities are the most vulnerable and devise community-specific approaches for prevention and treatment.
MC016	Member ZIP code (first 3 digits)	Medical	Obtaining this information allows us to calculate estimates of disease burden for communities throughout the state, which allows us to determine which communities are the most vulnerable and devise community-specific approaches for prevention and treatment.
MC018	Admission Date	Medical	This information allows us to calculate elements of disease burden such as length of stay and seasonality. Asthma and cardiovascular disease, in particular, have a distinct seasonality.
MC059	Date of Service - From	Medical	Element required to anchor claims for start of care. This date element aids in defining

			outpatient claims or periods of time prior to an Admit. When used for outpatient claims it will aid with overall utilization for the Risk Model. This element will be used in tandem with Type of Bill and Place of Service codes.
MC060	Date of Service - To	Medical	Element required to terminate care and calculate date span.
MC069	Discharge Date	Medical	This information allows us to calculate elements of disease burden such as length of stay and seasonality. Asthma and cardiovascular disease, in particular, have a distinct seasonality.
PC006	Insured Group or Policy Number	Pharmacy	One way in which we assess the impact of chronic disease in communities is to look for patterns associated with family history and shared risk factors. Obtaining this information would allow for an approach to surveillance that would account for family relationships and common risk factors. Element is also required to link file to appropriate Eligibility and Medical Claims.
PC011	Individual Relationship Code	Pharmacy	One way in which we assess the impact of chronic disease in communities is to look for patterns associated with family history and shared risk factors. Obtaining this information would allow for an approach to surveillance that would account for family relationships and common risk factors.
PC014	Member City Name of Residence	Pharmacy	Obtaining this information allows us to calculate estimates of

			disease burden for communities throughout the state, which allows us to determine which communities are the most vulnerable and devise community-specific approaches for prevention and treatment.
PC016	Member ZIP code (first 3 digits)	Pharmacy	Obtaining this information allows us to calculate estimates of disease burden for communities throughout the state, which allows us to determine which communities are the most vulnerable and devise community-specific approaches for prevention and treatment.

C. PURPOSE AND INTENDED USE

1. Please describe the purpose of your project and how you will use the APCD.

The purpose of this project is to enhance our evaluation of our Mass in Motion and Community Transformation Grant (CTG) initiatives. The data in the APCD will allow us to provide more accurate and community-specific rates of chronic disease both in communities targeted by these initiatives and communities throughout the rest of the state. The term “chronic disease” encompasses heart disease, cancer, stroke, and diabetes, which are specifically targeted by these programs, as well as chronic diseases with shared risk factors for these conditions such as arthritis and asthma. The Community Transformation Grant (CTG) program at the Centers for Disease Control and Prevention (CDC) supports community-level efforts to reduce the burden of these chronic diseases, particularly in populations where the burdens of these diseases are highest. Massachusetts received two CTGs in September 2011: one focused on Middlesex County, which is a large county containing the racially and socioeconomically diverse cities of Cambridge and Lowell, and one focused on eight other counties throughout the state. In order to conduct this work, the MA DPH expanded an existing community-level initiative called Mass in Motion (MiM), which focuses on preventing overweight and obesity by promoting healthy eating and physical activity. Both MiM and CTG employ community-based efforts to decrease rates of chronic disease and associated risk factors. In addition, CTG has a clinical component that aims to increase preventive care in the primary care setting through a quality improvement (QI) initiative.

The overall long-term objectives for the CTGs include a 5% reduction in obesity, a 5% reduction in death and disability related to tobacco use, and a 5% reduction in death and disability related to heart disease. In order to understand the broader context in which these diseases are occurring as we examine the rates of these conditions in specific communities, it is important to understand the rates of these diseases in communities throughout the state—which is why we need to examine data in all MA communities vs. just the communities included in these initiatives. Data from the APCD will not only increase our ability to determine the impact of these chronic diseases upon the health care system and how the healthcare system is used by people with these chronic conditions, but will also help us to identify and assist vulnerable populations who may show different patterns of healthcare utilization for these chronic conditions. Please see attached for the public use data elements we are planning to use as part of this project.

Currently MDPH uses the Behavioral Risk Surveillance Survey (BRFSS), an annual telephone survey, for routine chronic disease surveillance. Survey based self-reports for some chronic conditions are inaccurate. Furthermore, some survey results can be misleading because the questions posed focus on lifetime health. For example, identifying a person as having a positive lifetime history of hypertension is not as valuable to our program evaluation as understanding if someone currently has hypertension or if they are being treated for the condition.

In addition, we also use the Acute Hospital Case-mix database for tracking in-patient hospitalizations and emergency department visits. However these data sources are not able to provide the full picture of chronic disease in the state. For example, knowing that individuals received preventive care for asthma alters the way in which hospitalization and ED data would be interpreted. The APCD will allow us to track basic rates of chronic disease, preventive treatment, and hospitalizations in a more cohesive, thorough way than is currently possible.

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

Chronic diseases such as asthma, arthritis, cancer, cardiovascular disease, and diabetes are responsible for the majority of disease burden and mortality in the Commonwealth. Over 57% of the deaths in Massachusetts are due to these chronic diseases. As of 2009, 40% of Massachusetts residents age 18 and older had been diagnosed with at least one of these five chronic diseases. In addition, although these chronic diseases are often examined independently, many people suffer from two or more of these chronic conditions. In Massachusetts, among adults with at least one chronic disease, 33.6% have two or more chronic diseases. The Community Transformation Grant (CTG) program at the Centers for Disease Control and Prevention (CDC) supports community-level efforts to reduce the burden of chronic diseases such as heart disease, cancer, stroke, and diabetes, particularly in populations where the burdens of these diseases are highest.

The overall long-term objectives for this grant include a 5% reduction in obesity, a 5% reduction in

death and disability related to tobacco use, and a 5% reduction in death and disability related to heart disease. Improving monitoring and surveillance of these chronic conditions, as well as other chronic diseases that share many of the same risk factors, will allow us to improve our ability to evaluate our programmatic efforts and target efforts to prevent and treat these chronic diseases.

3. **Attach** a brief (1-2 pages) description of your research methodology. (This description will not be posted on the internet.)
4. Has your project received approval from your organization's Institutional Review Board (IRB)?
 - 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

D. APPLICANT QUALIFICATIONS

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

Epidemiologists and evaluators in the Office of Statistics and Evaluation (OSE) working in the Bureau of Community Health and Prevention (BCHAP) at MDPH will be given the primary responsibility for analyzing the APCD data and reporting results. The staff has enormous experience monitoring chronic diseases. See attached resumes. The Director of the Office of Statistics and Evaluation (Thomas Land) will be supervising this effort. Dr. Land has extensive experience analyzing medical claims data and large clinical episodic data sets. See citations below.

Current data sources in use by the OSE include the Acute Hospital Case Mix databases, the Behavioral Risk Factor Surveillance System (BRFSS), the Youth Health Survey (YHS), and the Paul Coverdell Acute Stroke Registry. In addition, we have begun the process of obtaining encounter-level data from community health centers (CHCs) to assist us in our efforts to monitor rates of chronic diseases in communities across the state. This data has been used for quality improvement purposes, to evaluate programs and statewide policies, to plan the approach of the Massachusetts Coordinated Chronic Disease State Plan, and to generate disease-specific burden documents. We are also responsible for evaluating the efforts for the two Community Transformation Grants awarded to MDPH from the Centers for Disease Control and Prevention to support intensive approaches to reduce risk factors responsible for the leading causes of death and disability and to prevent and control chronic diseases in Massachusetts.

- a. **Land T**, Rigotti N, Levy D, Paskowsky M, Warner D, Kwass J, Wetherell L and Keithly L. Medicaid coverage for tobacco dependence treatments in Massachusetts and associated decreases in hospitalizations for cardiovascular disease, PLoS Medicine, (December 2010). doi:10.1371/journal.pmed.1000375

- b. **Land T**, Landau A, Manning S, Purtill J, Pickett K, Wakschlag L, and Dukic V. (2012) Who Underreports Smoking on Birth Records: A Monte Carlo Predictive Model with Validation. PLoS ONE (2012) 7(4): e34853. doi:10.1371/journal.pone.0034853
- c. **Land T**, Rigotti N, Levy D, Schilling T, Warner D, and Li W. The effect of systematic clinical interventions with cigarette smokers on quit status and the rates of smoking-related primary care office visits. PLoS ONE (July 2012) 7(7).
Doi:10.1371/journal.pone.0041649.

Li W, **Land T**, Zhang Z, Keithly L, Kelsey J. Small-area estimation and prioritizing communities for tobacco control efforts in Massachusetts. Am J Public Health (2009), 99(3):470-9. (PMC2642525)

2. Describe the software you plan to use to analyze the data and the experience that the applicant’s team members have in using that software.

Data will be analyzed using SAS version 9.3 (SAS Institute Inc., Cary, NC). Epidemiologists and evaluators in the Office of Statistics and Evaluation (OSE) working in the Bureau of Community Health and Prevention (BCHAP) at MDPH routinely use SAS to analyze data from hospitalizations, emergency department visits, the BRFSS, and programmatic data.

3. 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.)

E. DATA LINKAGE AND FURTHER DATA ABSTRACTION

1. Does your project require linking the APCD to another dataset?
YES NO
2. If yes, will the APCD 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.

N/A

4. If yes, specify the specific steps you will take to prevent the identification of individual patients in the linked dataset.

N/A

F. RE-RELEASE OF DATA

Applicants must obtain prior approval from the Division to publish reports that use APCD files. Applicants must provide the Division with a copy of any report at least 30 days prior to release to outside parties, including peer review and prepublication analysis by anyone other than the individuals named in this Application. The Division will review the report to ensure that the publication will not permit identification of an individual patient or permit identification of a specific payment by individual payer. The Division may prohibit release of reports that may permit identification of individual patients or specific payment by individual payer.

1. Describe your plans to publish or otherwise disclose any APCD data elements, or any data derived or extracted from such data, in any paper, report, website, statistical tabulation, or similar document.

The OSE often publishes briefs, burden documents, and reports focused on the prevalence of chronic diseases and accompanying risk factors. These reports discuss trends over time, high-risk populations, health disparities, and health of residents in communities across the state. APCD data would be included in these reports when appropriate to give a richer, more nuanced picture of the prevalence of chronic diseases in Massachusetts.

In addition, the OSE may publish findings in relevant academic journals that may be of use or interest to other public health professionals. APCD data would be included in these articles when appropriate to give a richer, more nuanced picture of the prevalence of chronic disease and health care utilization among those with chronic disease in Massachusetts.

For any publication authored by OSE staff, data will only be reported on an aggregate level. In addition, data will only be reported stratified by race/ethnicity, socioeconomic status, gender, or community when numbers are sufficiently large to preclude identification (generally meaning more than 10 cases). When cell values are suppressed, complementary cells will be suppressed to prevent calculation of the missing values.

2. Will the results of your analysis be publicly available to any interested party? Will you charge a fee for the reports or analysis? Please describe how an interested party will obtain your analysis and, if applicable, the amount of the fee.

Reports will be available to the public on the Massachusetts Department of Public Health's website for no fee.

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 (i) describe the types of products, services or studies; (ii) estimate the number and types of clients for which the data will be used and (iii) describe any rerelease of data by your clients.

N/A

G. USE OF AGENTS OR CONTRACTORS

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

Company Name:	N/A
Contact Person:	
Title:	
Address:	
Telephone Number:	
Fax Number:	
E-mail Address:	
Organization Website:	

1. 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 NO

2. Describe the tasks and products assigned to this agent or contractor for this project.

N/A

3. Describe the qualifications of this agent or contractor to perform such tasks or deliver such products.

N/A

4. Describe your oversight and monitoring of the activity and actions of this agent or subcontractor.

N/A