Commonwealth of Massachusetts
Center for Health Information & Analysis (CHIA)
Non-Governmental Application for Case Mix Data

This form 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 schedule 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:	George Ogin
Title:	Sr. Director of Revenue Analysis and Regualtory Reporting
Organization:	Beth Israel Deaconess Medical Center
Project Title:	Readmissions, Coding Quality, Market and Other Patterns of Care Analysis
Mailing Address:	330 Brookline Ave, Boston, Ma 02215
Telephone Number:	617-667-5089
Email Address:	gogin@bidmc.harvard.edu
Names of Co-Investigators:	Larry Markson, MD
Email Addresses of Co-Investigators:	lmarkson@bidmc.harvard.edu
Original Data Request Submission Date:	11/25/2015
Dates Data Request Revised:	
Project Objectives (240 character limit)	Assist in analyses related to clinical and facility planning, benchmarking, quality of care, avoidable readmissions, medical coding validation, and related purposes.
Project Research Questions (if applicable)	1. What is the relationship between inpatient, ED and observation utilization? 2. Are the medical coding patterns that are inconsistent with peer group providers that warrant validation? 3. Where are our patients coming from? What areas of the state fo patietns travel for health care the most? Where should we allocate/reallocate health care resources. 4. How do Accountable Care Organizations, patient-centered medical homes, and other innovations impact practice patterns. 5. In which clinical areas is there a need to build capacity to create better access for patients. 6. Are ther patterns to where high rates of potentially avoidable admissions and readmissions exist? 7. Are our lengths of stay and use of critical care days consistent with other area providrs.

II. PROJECT SUMMARY

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

Beth Israel Deaconess Medical center would like to utilize the Care Mix Data to help us understand reasons for readmissions, medical coding patterns to aid in validation reviews, marketplace studies to determine patterns of clinical care in Massachusetts, and other health care related analyses. These analyses have two primary goals, both of which are in the Public's interest – 1. Improving the quality of care delivered to our patietns and 2. Identifying more efficient ways to utilize health care resources.

Lacking an internal data warehouse that includes both the main BIDMC campus as well as our three community hospitals (Needham, Plymouth and Milton), the CHIA data set will also allow us to track care patterns across all foru BIDMC owned and operated hospitals.

For Business planning, the CHIA case mix data will help us evaluate patient origina and market position so that we can make determinations on the quantity and location of where to allocated additional resources. For our service lines and our facilities planning it will allow us to see the service mix, intensity of services and demographic profile of patient populations.

Here are some examples fo the ways we may us the data:

- Analyzing utilization of services by geography to understand what types of services and to what locations would benefit our patient population
- Analyze ED usage and determine if and what location an urgent care center could be opened to provide timely care at a more cost effective setting
- To compare LOS, preventable admissions, readmissions, etc. to other hospitals
- Ability to look at quality and monitor it with more specificity
- Understand tertiary vs secondary mix at various hospitals so as to understand how to best get complex patients to use higher-acuity settings and lower complexity patients to use lower-cost settings
- Understand physician practice patterns and patient needs
- Evaluate patterns over time
- Analyze payer mix by service, hospitals, specialists and geography
- Analyze assocations between chronic illness conditions and other medical codes
- Evaluate areas where our resource use of inpatient, emergency and observation care is atypical

III. FILES REQUESTED

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

CASE MIX	Levels 1 – 6	Fiscal Years Requested
Inpatient Discharge	☐Level 1 – No Identifiable Data Elements ☐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 **PLEASE PROVIDE JUSTIFICATION BELOW FOR REQUESTING THE CHOSEN LEVEL:** Level 5 data is needed to examine readmissions patterns including recently discharges patients who require emergency department and observation treatment. The procedures data also allow us to differentiate readmission patterns that may be more highly assocated with a particular surgical procedure. We also use procedure data to compare medical coding patterns	1998 – 2014 Available (limited data 1989-1997) 2014 Only

	with peer groups to identify anomalies what serve to focus our clinical documentation improvement efforts. Procedure data is also needed to do comparative analyses of AHRQ developed quality indicators across BIDMC_owned hospitals and our peer group.	
Outpatient Observation	☐Level 1 – No Identifiable Data Elements ☐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 **PLEASE PROVIDE JUSTIFICATION BELOW FOR REQUESTING THE CHOSEN LEVEL:** Level 5 data is needed to examine readmissions patterns including recently discharges patients who require emergency department and observation treatment. The procedures data also allow us to differentiate readmission patterns that may be more highly assocated with a particular surgical procedure. We also use procedure data to compare medical coding patterns with peer groups to identify anomalies what serve to focus our clinical documentation improvement efforts. Procedure data is also needed to do comparative analyses of AHRQ developed quality indicators across BIDMC_owned hospitals and our peer group.	2002 – 2014 Available 2014 Only
Emergency Department	☐Level 1 – No Identifiable Data Elements ☐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 **PLEASE PROVIDE JUSTIFICATION BELOW FOR REQUESTING THE CHOSEN LEVEL:** Level 5 data is needed to examine readmissions patterns including recently discharges patients who require emergency department and observation treatment. The procedures data also allow us to differentiate readmission patterns that may be more highly assocated with a particular surgical procedure. We also use procedure data to compare medical coding patterns with peer groups to identify anomalies what serve to focus our clinical documentation improvement efforts. Procedure data is also needed to do comparative analyses of AHRQ developed quality indicators across BIDMC_owned hospitals and our peer group.	2000 – 2014 Available 2014 Only

IV. FEE INFORMATION

Please consult the fee schedules for Case Mix data, available at http://chiamass.gov/regulations/#957_5, and select from the following options:

☐ 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. 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.

V. REQUESTS PURSUANT TO 957 CMR 5.04 (Researchers, Payers, Providers, and Provider Organizations)
Please complete only if you are requesting Level 1 (de-identified) Case Mix.
Please describe how you will use such data for the purposes of lowering total medical expenses, coordinating care, benchmarking, quality analysis or other administrative research purposes.

Not applicable

VI. ALL OTHER REQUESTS - PURPOSE AND INTENDED USE

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

Beth Israel Deaconess Medical Center would use the Case Mix Data to better understand patterns of care within Massachasuttes and among the four hospitals BIDMC owns and operates. As an institution and a network we are committed to delivering the highest value of health care in the market place across the network. Having access to LOS, readmission, clinical service use, and medical coses provides opportunity for comparative analysis that will improve the quality of care delivered, accuracy of clinical documentation and coding, and efficiency with which our healt care resources are deployed.

2. **Attach** a brief (1-2 pages) description of your research methodology. (This description will not be posted on the internet.)
   There is no one study that is intended, but rather a variety of analyses that serve to make our medical center more efficient and effective. The data will be used in routine and adhoc ways. Routine use includes examing trends in utilization such as inpatient discharges, observation satys and ED visits by services, geographical location, payor, age, gender and the like. Adhoc analyses include studying readmission patterns, incidence of preventable condtions, length of stay and service consumption trends by DRG, diagnosis and/or procedure, profiling the use of medical coding patterns to identify areas where further validation may be needed, comparing resource use with peer groups to discover opportunities for improving program efficiency, and other like analysis.

3. Has your project received approval from your organization's Institutional Review Board (IRB)? Please note that CHIA will not review your application until IRB documentation has been received (if applicable).
   - ☐ 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.

4.

VII. APPLICANT QUALIFICATIONS

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

Healthcare data analytics and utilization analysis is a core skill set of the individuals who will be utilize this data. Individuals from Decision Support, Health Information Management and Strategic Planning and Business Development have the education and experience to process the data and work with clinicians and administration to use the analysis to help drive better patient care into the communities that we serve.

2. Attach résumés or curricula 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.)

In granting access to the data, BIDMC will apply the "least privilege" policy that we apply to our other, internal sensitive data bases. Under this policy, we limit access to only those data fields necessary to perform one's role and responsibilities. Our intent is to create separate SQL "views" of the Casemix data set that will limit what an individual can access to only what is needed for their analysis. For example, staff provided the level 2 or below would not see admite date, discharge date or significant procedure data. The categories and names of individuals who will be granted access to specific views are as follows:

a) Strategic Planning and Business Development Analysts – Level 3

Analysis would focus on marketplace studies to identify areas of need and more optimally deploy BIDMC clinical resources. This category includes –

- Sherman Zemler WU
- Katie Kobus Wilson

b) Decision Support Specialist – Level 5

Analysis would include readmission patterns, risk of mortality reviews, health care quality measures such as hospital acquired conditions and patient safety indicators, emergency room usage, and patterns of care across the BIDMC owned medical centers. This category includes—

- Hanako Yamanaka

c) Business Intelligence Group – Level 5

Analysis would focus on marketplace studies to identify areas of need and more optimally deploy BIDMC clinical resources. Analysis would include readmission patterns, risk of mortality reviews, health care quality measures such as hospital acquired conditions and patient safety indicators, emergency room usage, and patterns of care across the BIDMC owned medical centers. This category includes—

Ayad Shammout
Gail Piatkowski

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, will the CHIA Data be linked or merged to other individual patient level data (e.g. disease registries, death data), individual provider level data (e.g., American Medical Association Physician Masterfile) , facility level (e.g., American Hospital Association data) or with aggregate data (e.g., Census data)? [check all that apply]
   - ☐ Individual Patient Level Data

   What is the purpose of the linkage:

What databases are involved, who owns the data and which specific data elements will be used for linkage:

☐ Individual Provider Level Data

What is the purpose of the linkage:

What databases are involved, who owns the data and which specific data elements will be used for linkage:

☐ Individual Facility Level Data

What is the purpose of the linkage:

What databases are involved, who owns the data and which specific data elements will be used for linkage:

☒ Aggregate Data

What is the purpose of the linkage:

CHIA data will be compared with prior year, CHIA data and MHDC data to discern patterns and trends. Similar comparisons to prior year and MHDC data will be done by diagnostic code, DRG and zipcode.

What databases are involved, who owns the data and which specific data elements will be used for linkage:

Aggreage data will be uses, in combination with ….

- Prior year, Casemix data obtained from MHDC and
- Internal, current year BIDMC Casemix data

This will be done at the aggregate level, not the patient or provider level. NO attempt to "re-identify" patietns or physicians will be done. Examples of how we would integrate the CHIA data include…

a. Aggregate FY14 CHIA data will be compared to the prior year, CHIA data and MHDC data to discern patterns

and trends. For example, total discharges, emergency room, and observation encounter volume will be compared by hospital and/or payer. Similar comparisons to prior year CHIA and MHDC data will be done by diagnosis code, and DRG, zipcode.

3. 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 that algorithm will link each dataset.

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

No disclosure or publication of data will occur that exposes individual identifiable data. Data disclosures and publications will abide strictly by the reguirements of 957 CMR 5.02.

5. If yes, and the data mentioned above is not in the public domain, please attach a letter of agreement or other appropriate documentation on restrictions of use from the data owner corroborating that they agree to have you initiate linkage of their data with CHIA data and include the data owner's website.

IX. 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 currently do not plan to use the data for publications. It is an internal data source to assist us in making operational and strategic decisions.

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.

Not applicable

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. Will you be reselling the data?

☐ Yes
☒ No

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

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

X. 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:	None
Contact Person:	
Title:	
Address:	
Telephone Number:	
E-mail Address:	
Organization Website:	

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

☐ Yes
☒ No

If yes, please provide information about the agent/contractor's data management practices, policies and procedures in your Data Management Plan.

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

Not Applicable

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

Not Applicable

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

Not Applicable

XIII. ASSURANCES

Applicants requesting and receiving data from CHIA pursuant to 957 CMR 5.00 ("Data Recipients") will be provided with data following the execution of a data use agreement that requires the Data Recipient to adhere to processes and procedures aimed at preventing unauthorized access, disclosure or use of data.

Data Recipients are further subject to the requirements and restrictions contained in applicable state and federal laws protecting privacy and data security, and will be required to adopt and implement policies and practices to protect CHIA data in a manner consistent with the requirements of the federal Health Insurance Portability and Accountability Act of 1996 (HIPAA).

Data Recipients must promptly notify CHIA of any unauthorized use or disclosure of CHIA data.

By my signature below, I attest to: (1) the accuracy of the information provided herein; (2) my organization's ability to meet CHIA's minimum data security requirements; and (3) my authority to bind the organization seeking CHIA data for the purposes described herein.

Signature:	
Printed Name:	George Ogin
Original Application Submission Date:	11/25/2015
Dates Application Revised:	