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:	Sue Moss
Title:	VP Of Business Planning and Market Development
Organization:	Partners HealthCare
Project Title:	Market Data Warehouse – Data update
Mailing Address:	529 Main Street, Charleston, MA 02129
Telephone Number:	617-724-3235
Email Address:	Smoss1@partners.org
Names of Co-Investigators:	Doug Marple, Andrew Smith
Email Addresses of Co-Investigators:	dmarple@partners.org; asmith62@partners.org
Original Data Request Submission Date:	08/19/2015
Dates Data Request Revised:	10/15/2015
Project Objectives (240 character limit)	Partners HealthCare will continue to use Case Mix data to better understand the healthcare market and to assist in planning efforts aimed at efficient use of resources to improve population health. It will help us assess quality of care delivered through analysis of avoidable admissions and readmissions, support DON applications and help us understand the impact of population health management efforts on utilization.
Project Research Questions (if applicable)	1. How are IP, ED and Obs utilization patterns evolving due to new models of care such as Patient Centered Medical Home and Accountable Care Organizations? 2. Where are there high rates of potentially avoidable admissions, readmissions, and avoidable readmissions? 3. What is the impact of population health management? How can we evaluate how effectively utilization is distributed across different sites of care? 4. Who are our patients? Where are patients coming from? Where should we allocate scarce healthcare resources?

II. PROJECT SUMMARY

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

Partners HealthCare intends to use Case Mix Data for planning purposes and to help understand the healthcare marketplace in Massachusetts.   We will use the data to assist in our goal of delivering the best health care we can while controlling total medical expense.

The healthcare market is a rapidly evolving industry. This data will help us understand how utilization patterns are changing due to new models of care such as the Patient Centered Medical Home and Accountable Care Organizations. Partners will use this data to better understand potentially avoidable admissions, readmissions, and avoidable readmissions, with the aim of increasing quality and efficiency. Partners also plans to use this data to understand the impact of population health management and to evaluate how effectively utilization is distributed across different sites of care.

For planning, this data will help us understand patient origin and market position, and help us determine where to allocate limited healthcare resources. For service-line and facility planning, it will help us understand service mix, length of stay, and the demographics profile of patient populations. This data will also provide critical support for any "Determination of Need" applications.

The following are examples of some of the uses to which the data will be put:
- Analyzing preventable admissions and readmissions
- Analyzing utilization of ED, observation and inpatient services
- Map services to population needs
- Analyze the reasons for use of EDs and identify geographies where urgent care may be provided in less expensive settings
- Comparing beds to patient days to identify capacity issues in a market
- Implementing quality monitoring with a new level of specificity
- Identifying utilization patterns for particular clinical services (e.g., cardiac, oncology, orthopedics), for a range of years
- Analyzing tertiary versus secondary case mix at particular hospitals
- Identifying patient origin for users of a particular clinical service
- Investigating the change in patient length of stay over time

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**	1998 – 2014 Available (limited data 1989-1997) 2014 Only

	CHOSEN LEVEL: Use of level 4 data will enable Partners to analyze inpatient utilization trends along the following dimensions: geographies; hospitals; doctors; diagnoses, procedures; and acuity. It will also be used to for readmissions analysis, with the aim of increasing quality and efficiency.	
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-4 data will be used to understand observation utilization trends and physician referral patterns.	<u>2002 – 2014 Available</u> <u>2014 Only</u>
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 4 data will be used to analyze ED utilization trends, understand trends in physician referral patterns and identify geographies where urgent care may be provided in less costly settings.	<u>2000 – 2014 Available</u> <u>2014 Only</u>

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.

VI. ALL OTHER REQUESTS - PURPOSE AND INTENDED USE
1. Please explain why completing your project is in the public interest.

Partners HealthCare intends to use Case Mix Data to better understand the healthcare marketplace in Massachusetts. Our plan is to deliver the highest quality care possible in the communities we serve while keeping costs affordable for our patients.

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

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.

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

Partners HealthCare been purchasing CHIA Case Mix data for many years and each year our users have successfully leveraged the data to accomplish the research questions included in this application. Health care utilization analysis is a core skill of the users who will have access to the information. These users have the education and experience to understand what the data means and work in teams that include clinicians and administrators to apply the data to improve healthcare for the communities 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.)

First	Last		First	Last
JENNY	ANDREWS		DOUGLAS	MARPLE ♦
DONNA	ANTONELLI		GWEN	MCCOY
BRIGID	BISSANTI		EILEEN	MCLAUGHLIN
ILMYRDE	BOSQUET ♦*		SEAN	MCWALTERS
TAYLAN	BOZKURT		FRANK	MELANSON
LYNNE	BROCCO		SUSAN	MOSS ♦
KERRI	CARLSON		LEIGH	MURRAY
HELEN	CHAN		GEORGE	NISOTEL
DAVID	CHANG		PAUL	NORDBERG
RAUL	CUADRA		DIANE	O'CONNOR
REBECCA	DESMIDT		BRIAN	O'DEA
DERON	ESTES		DAN	PETERSON
MICHAEL	FRENI		TAVINDER	PHULL
JAKE	GAFFEY		MICHAEL	PIERCE
KATIE	GOULD		DAVID	SADOWSKY
LISA	GUZMAN		AARTI	SHUKLA
FREDERICK	HAIGIS		ANDREW	SMITH ♦
MICHAEL	HUMPHREY*		NEETHI	SRINIVASAN
ANTHONY	JENNINGS		NEIL	STOLZENBACH*
JONATHAN	JOYNER		ALLAN	STYLOS
CHRISTINA	KAVANAGH		KERRIE	URBAN
BRIAN	KEEFE		LINDA	VIZY
SARAH	KESSEL		JULIE	VOEGELIN
BARBARA	LAMPKIN		CHRISTINE	VOGELI
ELIZABETH	LANGFORD		NORA	WELLS
PIN	LIN		YANG	XIA
JOHN	LLAMAS			
SARA	LONG			
DENISE	MAGUIRE			

Highlighted cells = new users since last application
♦ *Denotes users with access to UHIN field*
* *Denotes data processers*

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

Note: Partners will include lookup tables that define DRG-based service lines and market areas for aggregated CHIA data.

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]

    ☐   <u>Individual Patient Level Data</u>

    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:

    ☐   <u>Individual Provider Level Data</u>

    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:

    ☐   <u>Individual Facility Level Data</u>

    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:

    ☐   <u>Aggregate Data</u>

    What is the purpose of the linkage:

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

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.

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.

The data will not be used for publications. It will only be used internally.

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.

No, it will not be publicly available.

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:	Sg2
Contact Person:	Mike Humphrey
Title:	Regional VP
Address:	5250 Old Orchard Road Skokie, IL 60077
Telephone Number:	(847)779-5300
E-mail Address:	MHumphrey@sg2.com
Organization Website:	http://www.sg2.com/

Company Name:	Parallax Consulting
Contact Person:	Neil Stolzenbach
Title:	Partner
Address:	325 Wood Road, Suite 107, Braintree MA, 02184
Telephone Number:	(781)535-6004 ext. 228
E-mail Address:	ncs@parallax-consulting.com
Organization Website:	http://www.parallax-consulting.com/

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.

Sg2 is responsible for service line tagging, and for using the data to develop a custom utilization forecast for Massachusetts and Partners HealthCare. Parallax Consulting is responsible for extracting, transforming and loading data into the encrypted data warehouse on which case mix data is stored.

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

Sg2, a firm with analytics-based health care expertise, helps hospitals and health systems integrate, prioritize and drive growth and performance across the continuum of care. Over 1,200 organizations around the world rely on Sg2's analytics, intelligence, consulting and educational services.

Parallax Consulting builds custom applications to meet a wide range of business and technology requirements for their clients.

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

Parallax Consulting and Sg2 follow Partners Healthcare's standards for maintaining data behind a secure firewall. Only legitimate employees of each firm, who have a log-on ID are eligible to access their information systems. Data is backed up on a routine basis, and subject to their security procedures.

All users coming into contact with the data have been trained in HIPAA compliance, and are subject to policies and procedures with regard to the protection of patient data, both internal and as may be furnished by MA CHIA. Further, any persons accessing the data are made aware of the provisions of the data use agreement required by MA CHIA.

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:	Susan Chapman Moss
Original Application Submission Date:	8/19/2015
Dates Application Revised:	10/15/2015