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

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.

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.

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:	Susan Chapman Moss
Title:	VP Of Business Planning and Market Development
Organization:	Partners HealthCare
Project Title:	Market Data Warehouse – Data update
IRBNet ID:	PartnersHealthCare
Mailing Address:	399 Revolution Drive STE 630 Somerville, MA 02145
Telephone Number:	857-282-0601
Email Address:	Smoss1@partners.org
Names of Co-Investigators:	Doug Marple
Email Addresses of Co-Investigators:	dmarple@partners.org
Original Data Request Submission Date:	08.04.2016
Dates Data Request Revised:	08.13.2016
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) Business Use Case(s):	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. PUBLIC INTERST & PROJECT SUMMARY

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

Our plan is to continue to use the Case Mix data to better undersand the healthcare marketplace in Massachusetts. The data will assist in planning efforts designed to deliver the highest quality care possible in the communities we serve while keeping costs affordable for our patients.

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 [*Applicants seeking 2015 data only should skip to Question 2*]

1. *FY 2004 – 2014 Data*: Please indicate the Case Mix files from which you seek data, the Level(s), the year(s) of data requested, and your justification for requesting *each* file. Please refer to the Case Mix Data Specifications for details of the file contents.

CASE MIX FILES	Levels 1 – 6	Years Available 2004 - 2014
Inpatient Discharge	☐Level 1 – 3 Digit Zip Code ☐Level 2 – Unique Physician Number (UPN) + 5 Digit Zip Code ☐Level 3 – Unique Health Information Number (UHIN) ☐Level 4 – UHIN and UPN	**Year(s) of Data Requested:**

	☐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:**	
Outpatient Observation	☐Level 1 – 3 Digit Zip Code ☐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:**	**Year(s) of Data Requested:**
Emergency Department	☐Level 1 – 3 Digit Zip Code ☐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:**	**Year(s) of Data Requested:**

2. _FY 2015 Data_: Beginning _with ficsal year 2015, Massachusetts Acute Care Hospital and Case Mix and Charge Data (collectively Case Mix Data) are released in **Limited Data Set (LDS) files**_. Please refer to the Case Mix Data Specifications for details of the file contents.

Please indicate the Case Mix files from which you seek data, the year(s) of data requested, and your justification for requesting _each_ file.

CASE MIX LIMITED DATA SET FILES	**Year(s) Of Data Requested** **Current Yrs. Available** **☒ 2015**

☒ **Inpatient Discharge**	**Please describe how your research objectives require Inpatient Discharge data:** We use the Inpatient Discharge database to understand 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**	**Please describe how your research objectives require Outpatient Observation data:** We intend to use the Observations Database to continue to understand observation utilization trends in Massachusetts along the demensions specified in the inpatient discharge section.
☒ **Emergency Department**	**Please describe how your research objectives require Emergency Department data:** We intend to use the ED Database to continue to analyze ED utilization trends in Massachusetts and to identify geographies where this type of care may be provided in less costly settings.

Sections IV-IX must be completed by all Applicants requesting 2015 data. Applications that only include requests for prior years of data can skip to Section X.

IV. GEOGRAPHIC DETAIL
Please choose *one* of the following geographic options for MA residents:

☐ 3 Digit Zip Code (Standard)	☐ 3 Digit Zip Code & City/Municipality ***	☒ 5 Digit Zip Code ***	☐ 5 Digit Zip Code & City/Municipality ***
***Please provide justification for the chosen level of geographic detail if requesting something other than 3-Digit Zip Code only. Refer to specifics in your methodology: 5-digit zip code level data will help us understand patient origin and market position. It will allow us to map services to population needs within specific geographies and help us determine where to allocate scarce healthcare resources.			

V. DEMOGRAPHIC DETAIL
Please choose *one* of the following demographic options:

☐ Not Requested (Standard)	☒ Race & Ethnicity***

Race and ethnicity detail will allow us to understand trends in healthcare utilization for specific patient populations and address disparities in care access among various populations.

VI. DATE DETAIL

Please choose *one* option from the following options for dates:

☐ Year (YYYY)(Standard)	☒ Month (YYYYMM) ***	☐ Day (YYYYMMDD)***
***Please provide justification for the chosen level of date detail if requesting Month or Day. Refer to specifics in your methodology:** Discharge data at the month level will assist us in identifying seasonal patterns in utilization within the healthcare marketplace.		

VII. PHYSICIAN IDENTIFICATION NUMBERS (UPN)

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

☐ Not Requested (Standard)	☐ Hashed ID ***	☒ Board of Registration in Medicine # (BORIM) ***
***If requested please, provide justification for requesting Hashed ID or BORIM #. Refer to specifics in your methodology:** The UPN will be used to understand trends in physician referral patterns.		

VIII. HASHED UNIQUE HEALTH IDENTIFICATION NUMBER (UHIN)

Please choose *one* of the following:

☐ Not Requested (Standard)	☒ UHIN Requested ***
*** If requested please, provide justification for requesting UHIN. Refer to specifics in your methodology:** We will use the UHIN to conduct readmissions analysis with the aim of increasing quality and efficiency in our service areas.	

IX. HASHED MOTHER'S SOCIAL SECURITY NUMBER

Please choose *one* of the following:

☒ Not Requested (Standard)	☐ Hashed Mother's SSN Requested ***
*** If requested please, provide justification for requesting Hashed Mother's SSN. Refer to specifics in your methodology:	

```
┌─────────────────────────────────────────────────────────────────────┐
│                                                                     │
│                                                                     │
│                                                                     │
│                                                                     │
│                                                                     │
└─────────────────────────────────────────────────────────────────────┘
```

X. 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.

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):

```
┌─────────────────────────────────────────────────────────────────────┐
│                                                                     │
│                                                                     │
│                                                                     │
│                                                                     │
│                                                                     │
│                                                                     │
└─────────────────────────────────────────────────────────────────────┘
```

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.

```
┌─────────────────────────────────────────────────────────────────────┐
│                                                                     │
│                                                                     │
│                                                                     │
│                                                                     │
│                                                                     │
│                                                                     │
└─────────────────────────────────────────────────────────────────────┘
```

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

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 fomulas will be used if they result in the display of a cell less than 11.

> The data will not be used for publications. It will only be used internally.
>
> Identifying individual patients is of no interest to Partners and we adhere to the cell suppression policy set forth by CHIA. All persons with access to the data are required to sign a user agreement form that states the user will not present data that identifies patients and that cell sizes of less than eleven will not be made available.

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.

> No, we do not.

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.)?

```



```

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

```



```

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?

```



```

XII. APPLICANT QUALIFICATIONS

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

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, and co-investigators. (These attachments will not be posted on the internet.)

First	Last		First	Last
JENNY R.	ANDREWS		SARA CHRISTINE	LONG
DONNA M.	ANTONELLI		CAESAR K.	MACHARIA
JEWEL C.	ASCANO		DOUGLAS	MARPLE
ILMYRDE	BOSQUET♦*		LISA D.	MARTINO**
LYNNE M.	BROCCO		GWEN	MCCOY
KERRI B.	CARLSON		EILEEN	MCLAUGHLIN
ROCCO	CAVALLO		FRANK J.	MELANSON
HELEN	CHAN		WENDY R.	MORRIS
DAVID	CHANG		SUSAN	MOSS ♦
KOLIKA	CHATTERJEE		LEIGH	MURRAY
RAUL I.	CUADRA		PAUL	NORDBERG
DERON R.	ESTES		DIANE G.	O'CONNOR
MICHAEL	FRENI		BRIAN	O'DEA
JAKE	GAFFEY		DAN	PETERSON
KATIE	GOULD		TAVINDER	PHULL
FREDERICK	HAIGIS		KAREN	PIATT
MICHAEL	HUMPHREY*		DAVID J.	SADOWSKY
ANTHONY	JENNINGS		AARTI	SHUKLA
JONATHAN	JOYNER		SHAMOORE T.	SIMPSON
ROBERT J.	KANAN		ANDREW J.	SMITH♦
SUSAN	KANANOVICH**		NEETHI	SRINIVASAN
CHRISTINA A.	KAVANAGH		NEIL C.	STOLZENBACH*
SARAH P.	KESSEL		LINDA	VIZY
BARBARA C.	LAMPKIN		JULIE	VOEGELIN
ELIZABETH	LANGFORD		CHRISTINE	VOGELI
MARGARET	LIAO		NORA K.	WELLS
PINCHEN	LIN		YANG	XIA
JOHN ALBERT	LLAMAS			

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

XIII. 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:	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/

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.

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. Unlike Sg2, they will do their work at Partners' offices on Partners' network.

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.

XIV. FEE INFORMATION

Please consult the fee schedules for Case Mix Data and select from the following options:

☐   Single Use
☐   Limited Multiple Use
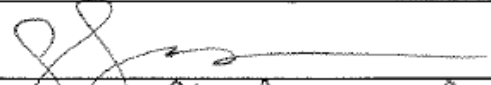☒   Multiple Use

Are you requesting a fee waiver?
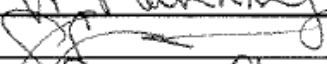☐   Yes
☒   No

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 :	*Susan Chapman Moss*
Title:	*VP Planning + Mktg*
Applicant's Signature:	
Name:	*Susan Chapman Moss*
Title:	*VP Planning + Mktg*
Original Data Request Submission Date:	8/3/16
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)