

**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:	Russell Gross
Title:	Senior Director Strategic Planning and Analysis
Organization:	Lifespan
Project Title:	Market Data Update
Mailing Address:	117 Ellenfield Street, Suite 102, Providence, RI 02905
Telephone Number:	401-444-2023
Email Address:	Rgross@lifespan.org
Names of Co-Investigators:	Jessica Gelinias, Dorothy Peckham, Timothy Stearns, Susan Thompson
Email Addresses of Co-Investigators:	jgelinas1@lifespan.org dpeckham@lifespan.org sthompson1@lifespan.org tstearns@lifespan.org
Original Data Request Submission Date:	09/30/2015
Dates Data Request Revised:	
Project Objectives (240 character limit)	Lifespan monitors the health care delivery system in Southern New England to understand how changes in population, care delivery models, payer mix, physician practice patterns, payment and access impact utilization of hospital based services across geographic communities and groups of patients. Massachusetts patients receive a host of services at Lifespan and are an integral part of the community served.
Project Research Questions (if applicable)	<ol style="list-style-type: none"> 1. Are age and disease specific use rates different in MA versus RI? 2. How is use changing in RI and MA before and after the ACA ? 3. What impact do regional shifts in use have on the need for additional hospital and community based resources including surgery suites, beds, procedure labs, urgent and emergent care, hospitals, and physician specialists. 4. How do Lifespan's patients compare to community patients, and are there groups who appear to be underserved?

II. PROJECT SUMMARY

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

In planning health services to the population in our service area, Lifespan examines the population and its demographics and assesses how hospital based utilization is changing over time to determine how best we can plan for the future. As physician and hospital practice evolves under new reimbursement approaches that include a substantial focus on quality parameters, inpatient, observation, and ED use rates are changing. They change by payer types, patient characteristics, and disease types. To effectively size our enterprise and introduce appropriate programs based on both the changing population demographics and the changing health care environment we require a window into these changing utilization patterns of the community we serve. We achieve this by purchasing data on both hospitals' service use and community health care service use. We put these together every year to portray a snapshot of the community and the directions we need to take in the future by type of care and service. Specific questions we use these data to address:

1. Based on historical trends and population projections for the future what is the expected demand for pediatric and adult med/surg admissions, and OR suites for inpatient surgery?
2. How will changes in ambulatory sensitive admissions impact the need for inpatient, emergency, and observation resources in the future?
3. How will changes in both demand, as identified in 1 and 2, and changes in LOS by type of service impact the demand for beds?
4. How have the use rates for inpatient care been impacted by the two midnight rule and have observations increased? How has this varied by community, by payer, by disease type and by age group? Do these changes materially affect the model for beds by type of service?
5. How do physicians admissions patterns vary? What is the frequency of admissions by type of physician specialty and how is this changing?

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
<p>Inpatient Discharge</p>	<p> <input type="checkbox"/> Level 1 – No Identifiable Data Elements <input checked="" type="checkbox"/> Level 2 – Unique Physician Number (UPN) <input type="checkbox"/> Level 3 – Unique Health Information Number (UHIN) <input type="checkbox"/> Level 4 – UHIN and UPN <input type="checkbox"/> Level 5 – Date(s) of Admission; Discharge; Significant Procedures <input type="checkbox"/> Level 6 – Date of Birth; Medical Record Number; Billing Number PLEASE PROVIDE JUSTIFICATION BELOW FOR REQUESTING THE CHOSEN LEVEL: Lifespan's service area includes all of RI and portions of MA that span across several counties bordering RI in Southeastern and Central MA. Level 2 is the lowest and least PHI sensitive level that affords us access to 5-digit zip codes, an element without which we cannot identify the patient population that we serve. </p>	<p> <u>1998 – 2014 Available</u> (limited data 1989-1997) 2014 </p>
<p>Outpatient Observation</p>	<p> <input type="checkbox"/> Level 1 – No Identifiable Data Elements <input checked="" type="checkbox"/> Level 2 – Unique Physician Number (UPN) <input type="checkbox"/> Level 3 – Unique Health Information Number (UHIN) <input type="checkbox"/> Level 4 – UHIN and UPN </p>	<p><u>2002 – 2014 Available</u></p>

	<input type="checkbox"/> Level 5 – Date(s) of Admission; Discharge; Significant Procedures <input type="checkbox"/> Level 6 – Date of Birth; Medical Record Number; Billing Number PLEASE PROVIDE JUSTIFICATION BELOW FOR REQUESTING THE CHOSEN LEVEL: Lifespan’s service area includes all of RI and portions of MA that span across several counties bordering RI in Southeastern and Central MA. Level 2 is the lowest and least PHI sensitive level that affords us access to 5-digit zip codes, an element without which we cannot identify the patient population that we serve.	<p style="text-align: center;"><u>2014</u></p>
<p>Emergency Department</p>	<input type="checkbox"/> Level 1 – No Identifiable Data Elements <input checked="" type="checkbox"/> Level 2 – Unique Physician Number (UPN) <input type="checkbox"/> Level 3 – Unique Health Information Number (UHIN) <input type="checkbox"/> Level 4 – UHIN and UPN <input type="checkbox"/> Level 5 – Date(s) of Admission; Discharge; Significant Procedures <input type="checkbox"/> Level 6 – Date of Birth; Medical Record Number; Billing Number PLEASE PROVIDE JUSTIFICATION BELOW FOR REQUESTING THE CHOSEN LEVEL: Lifespan’s service area includes all of RI and portions of MA that span across several counties bordering RI in Southeastern and Central MA. Level 2 is the lowest and least PHI sensitive level that affords us access to 5-digit zip codes, an element without which we cannot identify the patient population that we serve.	<p style="text-align: center;"><u>2000 – 2014 Available</u></p> <p style="text-align: center;"><u>2014</u></p>

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.

Lifespan is the largest provider of health services in Southeastern Mass and RI and has the only Academic Medical Center with a Level One Trauma Center outside Boston/Worcester. We provides access to the complete array of both pediatric medical and surgical and psychiatric services as well as the full compliment of adult medical and surgical services. Both RI and MA patients rely on our services and in planning for the future, we rely on comprehensive and accurate data for understanding the supply and demand for services. Access to timely accurate data allows quantitative and qualitative analyses that support the evaluation of existing and new services, the correct sizing of services, and understanding issues of access and quality. To be responsive to the community's health care needs in an economically sound fashion, Lifespan uses data and analytic tools. The public is served best if we plan and operate based on a sound and accurate view of the environment within which we reside. The Massachusetts data we are requesting has been in use by us for the last 18 years as a core part of that understanding and has allowed us to ensure that we can provide needed services as the population grows and changes.

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

See Attachment A

2. 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.

3.

VII. APPLICANT QUALIFICATIONS

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

Lifespan uses these data to monitor its performance relative to the supply and demand for services in the community it serves, and to identify how it can adapt in the changing health care environment. The evaluation of health care use is a core analytic activity of our planning function. This is not research in the classic sense but rather ongoing analysis of this dataset in concert with census data, other purchased data sets, and internal data of our system. The Senior Director for Strategic Planning and Analysis, who leads this effort for the corporation, and whose CV is attached, has been engaged in providing healthcare strategic planning and analysis and advice to the corporation's leaders for 17 years. In addition, our Senior Healthcare Planner has an MS in Community Health and 16 years of experience in healthcare analysis and health services research and has an extensive background in performing and leading complex quantitative studies. In addition, She has been mentoring Brown University graduate students from the MPH program for 11 years. She works with 3 analysts in her office who have extensive experience analyzing a range of data sets including the Massachusetts data as well as data from RI, claims data, survey data, clinical data, and census data.

LIFESPAN STAFF:

Principle Investigator:

Russell Gross
Senior Director

Analysts:

Jessica Gelinas, MS
Sr. Healthcare Planner

Dorothy Peckham
Sr. Healthcare Analyst

Susan Thompson
Information Analyst

Timothy Stearns, MS
Strategic Planning Analyst

Database Administrators:

Douglas Browning
DBA

Manuel A Moitoso
DBA

Ernest L Rheume
DBA

Joseph A. Braga
DBA

SG2 STAFF:

Ashraf (AJ) Fadel
Associate Vice President, Data Operations

Stephanie Ting
Senior Analytics Associate

Scott Friedlander
Analytics Associate

John Fallon
Analytics Associate

Vicki Greenberg
Analytics Associate

Alexandra Gross
Analytics Associate

Ken Moorhead
Analytics Associate

Mark Tan
Analytics Associate

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.)

See Attachment B

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:

N/A

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:

N/A

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:

N/A

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:

Aggregate level census data is used with aggregate casemix data to determine population use rates of inpatient,

observation, and emergency healthcare services.

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

Population estimates from the US Census

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.

Linkage would be deterministic to identify utilization rates for inpatient, observation and emergency patient populations.

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

Data is only linked in aggregate to calculate utilization rates, therefore individual patients would not be able to be identified.

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 is for internal planning purposes only and will not be published or otherwise disseminated.

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

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.

N/A

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:	Garrett Jones
Title:	Vice President, Client Relations
Address:	5250 Old Orchard Road, Skokie, IL 60077
Telephone Number:	847-779-5625
E-mail Address:	gjones@sg2.com
Organization Website:	www.sg2.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 will use a portion of the FY14 inpatient casemix data to create a custom 10-year forecasting model for Lifespan at the hospital, service line, and service area level. Our DUA with SG2 prohibits them from using the data for any other purpose. See Attachment C.

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

Sg2’s 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.

Every year, they invest over 15,000 hours of expert research developing an actionable and accurate forecast, host domestic and international clients in a broad variety of live and Web-based events, and produce hundreds of pages of thought leadership on subjects of critical importance to value-driven growth and performance for today and tomorrow.

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

All users coming into contact with the data have been trained in HIPPA compliance and are subject not only to SG2's policies and procedures with regard to data, but our own through the exchange of DUA's between Lifespan and SG2. Furthermore, Lifespan will furnish our completed MA CHIA DUA to SG2 (Attachment C of the approved application) to ensure compliance with the provisions of the agreement we have with MA CHIA in addition to our own.

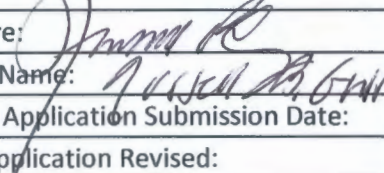
XIII. ASSURANCES

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: <i>Russell Gross</i>	Russell Gross
Original Application Submission Date:	09/30/2015
Dates Application Revised:	