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THE STATE OF NEW HAMPSHIRE
INSURANCE DEPARTMENT

21 South Fruit Street Suite 14
Concord, New Hampshire 03301

Roger A. Sevigny
Commissioner

Alexander K. Feldvebel
Deputy Commissioner

April 3, 2014

Her Excellency, Governor Margaret Wood Hassan
and the Honorable Council
State House
Concord, New Hampshire 03301

REQUESTED ACTION

Authorize the New Hampshire Insurance Department (NHID) to enter into a contract in the amount of $174,281 with the Center for Health Law and Economics (CHLE) at the University of Massachusetts Medical School, Worcester, Massachusetts (Vendor #177576), for the provision of consulting services in connection with the initiative to improve and expand the information available on the Department's HealthCost website, www.nhhealthcost.org for consumers and employers related to health insurance premiums and medical care costs in New Hampshire. This agreement is to be effective upon Governor & Council approval through September 30, 2015. 100% Federal Funds.

The funding is available in account titled Health Insurance Premium Review Cycle III Grant as follows. Funding for FY16 is contingent upon the available and continued appropriations of funds.

	FY2014	FY2015	FY2016
02-24-24-240010-88870000-046-500464 Consultants	$37,061	$109,040	$28,180

EXPLANATION

The New Hampshire Insurance Department has received a federal grant to improve the health insurance premium rate review process and transparency related to health insurance premiums and medical care costs in New Hampshire. Under the grant, the Insurance Department will improve the health insurance rate review process by enhancing the quality of data collected on health insurance claims, improving the transparency of information for consumers, and enhancing the HealthCost website as a centralized location for health care price information, in order to best serve the people of New Hampshire.

The major deliverables for the Center for Health Law and Economics (CHLE) at the University of Massachusetts Medical School include:

1. Developing rates for out of state providers.
2. An expansion in the number of procedures, using both the current methodology and a revised methodology that separates the professional and institutional payments.
3. Producing average statewide and regional rates for charges and paid information for an array of services.
4. Developing rate estimates for common prescription drugs.
5. Developing rates as appropriate for Medicare and Medicaid patients using those databases.
6. Developing rates for dental services and providers.
7. Producing information on health care delivery patterns, including for appropriate services and provider volumes.
8. Testing the submission of output files transferred and loaded to the HealthCost website.

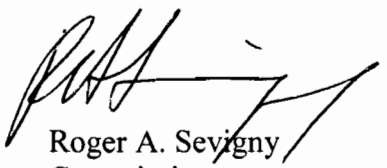
Other responsibilities of the Contractor include identifying the new procedures and providers that will be included on the website; analyzing and testing data in the New Hampshire Comprehensive Health Information System (NHCHIS); developing expertise with the current and future HealthCost methodologies and an understanding of the SAS code used to produce the rates; ensuring that all SAS programs include extensive documentation and that the code is easily understandable by an analyst with intermediate level SAS skills; utilizing SAS programming so that all fields included on the website are produced with rates and related information, and work set out in the response to the RFP

After reviewing the bid responses, the Commissioner selected the Center for Health Law and Economics (CHLE) at the University of Massachusetts Medical School's proposal as the most responsive to the Request for Proposals (RFP). The Request for Proposals was posted on the Department's website December 20, 2013 and sent to past bidders for Department contract work and companies doing work in this field. Three bids were received. Bids were evaluated by Department staff familiar with the project goals using a scoring system included in the RFP.

The department respectfully requests that the Governor and Council authorize funding for this consulting work. Your consideration of the request is appreciated.

In the event Federal Funds become no longer available, General Funds will not be requested to support this program.

Respectfully submitted,



Roger A. Sevigny
Commissioner

RFP 2013 RRG-304 PROPOSALS EVALUATIONS

Evaluation Committee members: Tyler Brannen, Alain Couture, Martha McLeod

Evaluation process: Every member reviewed and independently evaluated the bids.
On March 17, 2014 the Evaluation Committee members met, and as a group assigned points to each bid per the "Specific comparative scoring process" described in each RFP.
All members agreed with the points assigned to each category for each bid depicted in the table below.

	RFP/VENDOR	CONTRACTOR SKILL (50% or points)	CONTRACTOR EXPERIENCE & QUALIFICATIONS (20% or points)	PLAN OF WORK (10% or points)	Bid Price- BUDGET AMOUNT	COST (20% or points)	TOTAL SCORE (100% or Points)	Score without $$$	NOTES
	RFP 2013-RRG-304 HealthCost Analytics								
	UMASS	44.50%	15.50%	9.00%	$174,281	20.00%	89.00%	69.00%	
	UNH	44.00%	18.50%	9.00%	$300,000	11.62%	83.12%	71.50%	
	Cognizant	37.00%	11.00%	6.50%	$695,500	5.01%	59.51%	54.50%	

Print Form

RECEIVED BY NH INSURANCE DEPT APR 02 2014

Subject: _____ FORM NUMBER P-37 (version 1/09)

AGREEMENT

The State of New Hampshire and the Contractor hereby mutually agree as follows:

GENERAL PROVISIONS

1. IDENTIFICATION.

1.1 State Agency Name New Hampshire Insurance Department	1.2 State Agency Address 21 S. Fruit St, Suite 14, Concord, NH
1.3 Contractor Name University of Massachusetts Medical School	1.4 Contractor Address 55 Lake Avenue North, Worcester, MA 01655
1.5 Contractor Phone Number 508-856-2119 / 1.6 Account Number	1.7 Completion Date September 30, 2015 / 1.8 Price Limitation 174,281
1.9 Contracting Officer for State Agency Alexander Feldvebel, Deputy Commissioner	1.10 State Agency Telephone Number 603-271-7973
1.11 Contractor Signature Gina Marzilli Shaughnessy	1.12 Name and Title of Contractor Signatory Gina Marzilli Shaughnessy, Assistant Director, Contracts

1.13 Acknowledgement: State of MA, County of Worcester

On 3/31/14, before the undersigned officer, personally appeared the person identified in block 1.12, or satisfactorily proven to be the person whose name is signed in block 1.11, and acknowledged that s/he executed this document in the capacity indicated in block 1.12.

1.13.1 Signature of Notary Public or Justice of the Peace

Denise DeGabriele-Lindberg

[Seal]

Denise DeGabriele-Lindberg NOTARY PUBLIC COMMONWEALTH OF MASSACHUSETTS MY COMM. EXPIRES DECEMBER 11, 2020

1.13.2 Name and Title of Notary or Justice of the Peace

Denise DeGabriele-Lindberg, Administrative Assistant II

1.14 State Agency Signature Alexander K Feldvebel	1.15 Name and Title of State Agency Signatory Alexander Feldvebel, Deputy

1.16 Approval by the N.H. Department of Administration, Division of Personnel *(if applicable)*

By: Director, On:

1.17 Approval by the Attorney General (Form, Substance and Execution)

By: Asst Atty General On: 4/8/14

1.18 Approval by the Governor and Executive Council

By: On:

2. EMPLOYMENT OF CONTRACTOR/SERVICES TO BE PERFORMED. The State of New Hampshire, acting through the agency identified in block 1.1 ("State"), engages contractor identified in block 1.3 ("Contractor") to perform, and the Contractor shall perform, the work or sale of goods, or both, identified and more particularly described in the attached EXHIBIT A which is incorporated herein by reference ("Services").

3. EFFECTIVE DATE/COMPLETION OF SERVICES.
3.1 Notwithstanding any provision of this Agreement to the contrary, and subject to the approval of the Governor and Executive Council of the State of New Hampshire, this Agreement, and all obligations of the parties hereunder, shall not become effective until the date the Governor and Executive Council approve this Agreement ("Effective Date").
3.2 If the Contractor commences the Services prior to the Effective Date, all Services performed by the Contractor prior to the Effective Date shall be performed at the sole risk of the Contractor, and in the event that this Agreement does not become effective, the State shall have no liability to the Contractor, including without limitation, any obligation to pay the Contractor for any costs incurred or Services performed. Contractor must complete all Services by the Completion Date specified in block 1.7.

4. CONDITIONAL NATURE OF AGREEMENT.
Notwithstanding any provision of this Agreement to the contrary, all obligations of the State hereunder, including, without limitation, the continuance of payments hereunder, are contingent upon the availability and continued appropriation of funds, and in no event shall the State be liable for any payments hereunder in excess of such available appropriated funds. In the event of a reduction or termination of appropriated funds, the State shall have the right to withhold payment until such funds become available, if ever, and shall have the right to terminate this Agreement immediately upon giving the Contractor notice of such termination. The State shall not be required to transfer funds from any other account to the Account identified in block 1.6 in the event funds in that Account are reduced or unavailable.

5. CONTRACT PRICE/PRICE LIMITATION/ PAYMENT.
5.1 The contract price, method of payment, and terms of payment are identified and more particularly described in EXHIBIT B which is incorporated herein by reference.
5.2 The payment by the State of the contract price shall be the only and the complete reimbursement to the Contractor for all expenses, of whatever nature incurred by the Contractor in the performance hereof, and shall be the only and the complete compensation to the Contractor for the Services. The State shall have no liability to the Contractor other than the contract price.
5.3 The State reserves the right to offset from any amounts otherwise payable to the Contractor under this Agreement those liquidated amounts required or permitted by N.H. RSA 80:7 through RSA 80:7-c or any other provision of law.
5.4 Notwithstanding any provision in this Agreement to the contrary, and notwithstanding unexpected circumstances, in no event shall the total of all payments authorized, or actually made hereunder, exceed the Price Limitation set forth in block 1.8.

6. COMPLIANCE BY CONTRACTOR WITH LAWS AND REGULATIONS/ EQUAL EMPLOYMENT OPPORTUNITY.
6.1 In connection with the performance of the Services, the Contractor shall comply with all statutes, laws, regulations, and orders of federal, state, county or municipal authorities which impose any obligation or duty upon the Contractor, including, but not limited to, civil rights and equal opportunity laws. In addition, the Contractor shall comply with all applicable copyright laws.
6.2 During the term of this Agreement, the Contractor shall not discriminate against employees or applicants for employment because of race, color, religion, creed, age, sex, handicap, sexual orientation, or national origin and will take affirmative action to prevent such discrimination.
6.3 If this Agreement is funded in any part by monies of the United States, the Contractor shall comply with all the provisions of Executive Order No. 11246 ("Equal Employment Opportunity"), as supplemented by the regulations of the United States Department of Labor (41 C.F.R. Part 60), and with any rules, regulations and guidelines as the State of New Hampshire or the United States issue to implement these regulations. The Contractor further agrees to permit the State or United States access to any of the Contractor's books, records and accounts for the purpose of ascertaining compliance with all rules, regulations and orders, and the covenants, terms and conditions of this Agreement.

7. PERSONNEL.
7.1 The Contractor shall at its own expense provide all personnel necessary to perform the Services. The Contractor warrants that all personnel engaged in the Services shall be qualified to perform the Services, and shall be properly licensed and otherwise authorized to do so under all applicable laws.
7.2 Unless otherwise authorized in writing, during the term of this Agreement, and for a period of six (6) months after the Completion Date in block 1.7, the Contractor shall not hire, and shall not permit any subcontractor or other person, firm or corporation with whom it is engaged in a combined effort to perform the Services to hire, any person who is a State employee or official, who is materially involved in the procurement, administration or performance of this Agreement. This provision shall survive termination of this Agreement.
7.3 The Contracting Officer specified in block 1.9, or his or her successor, shall be the State's representative. In the event of any dispute concerning the interpretation of this Agreement, the Contracting Officer's decision shall be final for the State.

Contractor Initials _____
Date 3.31.14

8. EVENT OF DEFAULT/REMEDIES.

8.1 Any one or more of the following acts or omissions of the Contractor shall constitute an event of default hereunder ("Event of Default"):

8.1.1 failure to perform the Services satisfactorily or on schedule;

8.1.2 failure to submit any report required hereunder; and/or

8.1.3 failure to perform any other covenant, term or condition of this Agreement.

8.2 Upon the occurrence of any Event of Default, the State may take any one, or more, or all, of the following actions:

8.2.1 give the Contractor a written notice specifying the Event of Default and requiring it to be remedied within, in the absence of a greater or lesser specification of time, thirty (30) days from the date of the notice; and if the Event of Default is not timely remedied, terminate this Agreement, effective two (2) days after giving the Contractor notice of termination;

8.2.2 give the Contractor a written notice specifying the Event of Default and suspending all payments to be made under this Agreement and ordering that the portion of the contract price which would otherwise accrue to the Contractor during the period from the date of such notice until such time as the State determines that the Contractor has cured the Event of Default shall never be paid to the Contractor;

8.2.3 set off against any other obligations the State may owe to the Contractor any damages the State suffers by reason of any Event of Default; and/or

8.2.4 treat the Agreement as breached and pursue any of its remedies at law or in equity, or both.

9. DATA/ACCESS/CONFIDENTIALITY/ PRESERVATION.

9.1 As used in this Agreement, the word "data" shall mean all information and things developed or obtained during the performance of, or acquired or developed by reason of, this Agreement, including, but not limited to, all studies, reports, files, formulae, surveys, maps, charts, sound recordings, video recordings, pictorial reproductions, drawings, analyses, graphic representations, computer programs, computer printouts, notes, letters, memoranda, papers, and documents, all whether finished or unfinished.

9.2 All data and any property which has been received from the State or purchased with funds provided for that purpose under this Agreement, shall be the property of the State, and shall be returned to the State upon demand or upon termination of this Agreement for any reason.

9.3 Confidentiality of data shall be governed by N.H. RSA chapter 91-A or other existing law. Disclosure of data requires prior written approval of the State.

10. TERMINATION. In the event of an early termination of this Agreement for any reason other than the completion of the Services, the Contractor shall deliver to the Contracting Officer, not later than fifteen (15) days after the date of termination, a report ("Termination Report") describing in detail all Services performed, and the contract price earned, to and including the date of termination. The form, subject matter, content, and number of copies of the Termination Report shall be identical to those of any Final Report described in the attached EXHIBIT A.

11. CONTRACTOR'S RELATION TO THE STATE. In the performance of this Agreement the Contractor is in all respects an independent contractor, and is neither an agent nor an employee of the State. Neither the Contractor nor any of its officers, employees, agents or members shall have authority to bind the State or receive any benefits, workers' compensation or other emoluments provided by the State to its employees.

12. ASSIGNMENT/DELEGATION/SUBCONTRACTS. The Contractor shall not assign, or otherwise transfer any interest in this Agreement without the prior written consent of the N.H. Department of Administrative Services. None of the Services shall be subcontracted by the Contractor without the prior written consent of the State.

13. INDEMNIFICATION. The Contractor shall defend, indemnify and hold harmless the State, its officers and employees, from and against any and all losses suffered by the State, its officers and employees, and any and all claims, liabilities or penalties asserted against the State, its officers and employees, by or on behalf of any person, on account of, based or resulting from, arising out of (or which may be claimed to arise out of) the acts or omissions of the Contractor. Notwithstanding the foregoing, nothing herein contained shall be deemed to constitute a waiver of the sovereign immunity of the State, which immunity is hereby reserved to the State. This covenant in paragraph 13 shall survive the termination of this Agreement.

14. INSURANCE.

14.1 The Contractor shall, at its sole expense, obtain and maintain in force, and shall require any subcontractor or assignee to obtain and maintain in force, the following insurance:

14.1.1 comprehensive general liability insurance against all claims of bodily injury, death or property damage, in amounts of not less than $250,000 per claim and $2,000,000 per occurrence; and

14.1.2 fire and extended coverage insurance covering all property subject to subparagraph 9.2 herein, in an amount not less than 80% of the whole replacement value of the property.

14.2 The policies described in subparagraph 14.1 herein shall be on policy forms and endorsements approved for use in the State of New Hampshire by the N.H. Department of Insurance, and issued by insurers licensed in the State of New Hampshire.

14.3 The Contractor shall furnish to the Contracting Officer identified in block 1.9, or his or her successor, a certificate(s) of insurance for all insurance required under this Agreement. Contractor shall also furnish to the Contracting Officer identified in block 1.9, or his or her successor, certificate(s) of insurance for all renewal(s) of insurance required under this Agreement no later than fifteen (15) days prior to the expiration date of each of the insurance policies. The certificate(s) of insurance and any renewals thereof shall be

Contractor Initials _____

Date 3.31.19

attached and are incorporated herein by reference. Each certificate(s) of insurance shall contain a clause requiring the insurer to endeavor to provide the Contracting Officer identified in block 1.9, or his or her successor, no less than ten (10) days prior written notice of cancellation or modification of the policy.

15. WORKERS' COMPENSATION.
15.1 By signing this agreement, the Contractor agrees, certifies and warrants that the Contractor is in compliance with or exempt from, the requirements of N.H. RSA chapter 281-A *("Workers' Compensation").*
15.2 To the extent the Contractor is subject to the requirements of N.H. RSA chapter 281-A, Contractor shall maintain, and require any subcontractor or assignee to secure and maintain, payment of Workers' Compensation in connection with activities which the person proposes to undertake pursuant to this Agreement. Contractor shall furnish the Contracting Officer identified in block 1.9, or his or her successor, proof of Workers' Compensation in the manner described in N.H. RSA chapter 281-A and any applicable renewal(s) thereof, which shall be attached and are incorporated herein by reference. The State shall not be responsible for payment of any Workers' Compensation premiums or for any other claim or benefit for Contractor, or any subcontractor or employee of Contractor, which might arise under applicable State of New Hampshire Workers' Compensation laws in connection with the performance of the Services under this Agreement.

16. WAIVER OF BREACH. No failure by the State to enforce any provisions hereof after any Event of Default shall be deemed a waiver of its rights with regard to that Event of Default, or any subsequent Event of Default. No express failure to enforce any Event of Default shall be deemed a waiver of the right of the State to enforce each and all of the provisions hereof upon any further or other Event of Default on the part of the Contractor.

17. NOTICE. Any notice by a party hereto to the other party shall be deemed to have been duly delivered or given at the time of mailing by certified mail, postage prepaid, in a United States Post Office addressed to the parties at the addresses given in blocks 1.2 and 1.4, herein.

18. AMENDMENT. This Agreement may be amended, waived or discharged only by an instrument in writing signed by the parties hereto and only after approval of such amendment, waiver or discharge by the Governor and Executive Council of the State of New Hampshire.

19. CONSTRUCTION OF AGREEMENT AND TERMS. This Agreement shall be construed in accordance with the laws of the State of New Hampshire, and is binding upon and inures to the benefit of the parties and their respective successors and assigns. The wording used in this Agreement is the wording chosen by the parties to express their mutual intent, and no rule of construction shall be applied against or in favor of any party.

20. THIRD PARTIES. The parties hereto do not intend to benefit any third parties and this Agreement shall not be construed to confer any such benefit.

21. HEADINGS. The headings throughout the Agreement are for reference purposes only, and the words contained therein shall in no way be held to explain, modify, amplify or aid in the interpretation, construction or meaning of the provisions of this Agreement.

22. SPECIAL PROVISIONS. Additional provisions set forth in the attached EXHIBIT C are incorporated herein by reference.

23. SEVERABILITY. In the event any of the provisions of this Agreement are held by a court of competent jurisdiction to be contrary to any state or federal law, the remaining provisions of this Agreement will remain in full force and effect.

24. ENTIRE AGREEMENT. This Agreement, which may be executed in a number of counterparts, each of which shall be deemed an original, constitutes the entire Agreement and understanding between the parties, and supersedes all prior Agreements and understandings relating hereto.

Contractor Initials _____
Date 3-31-14

Agreement with the University of Massachusetts Medical School (UMMS) on behalf of its Center for Health Law and Economics

2013-RRG-304 HealthCost Analytics

Exhibit A
Scope of Services

The Contractor will work collaboratively with the NHID (and/or a vendor of the NHID) on this initiative.

The specific tasks the Contractor shall be responsible for include:

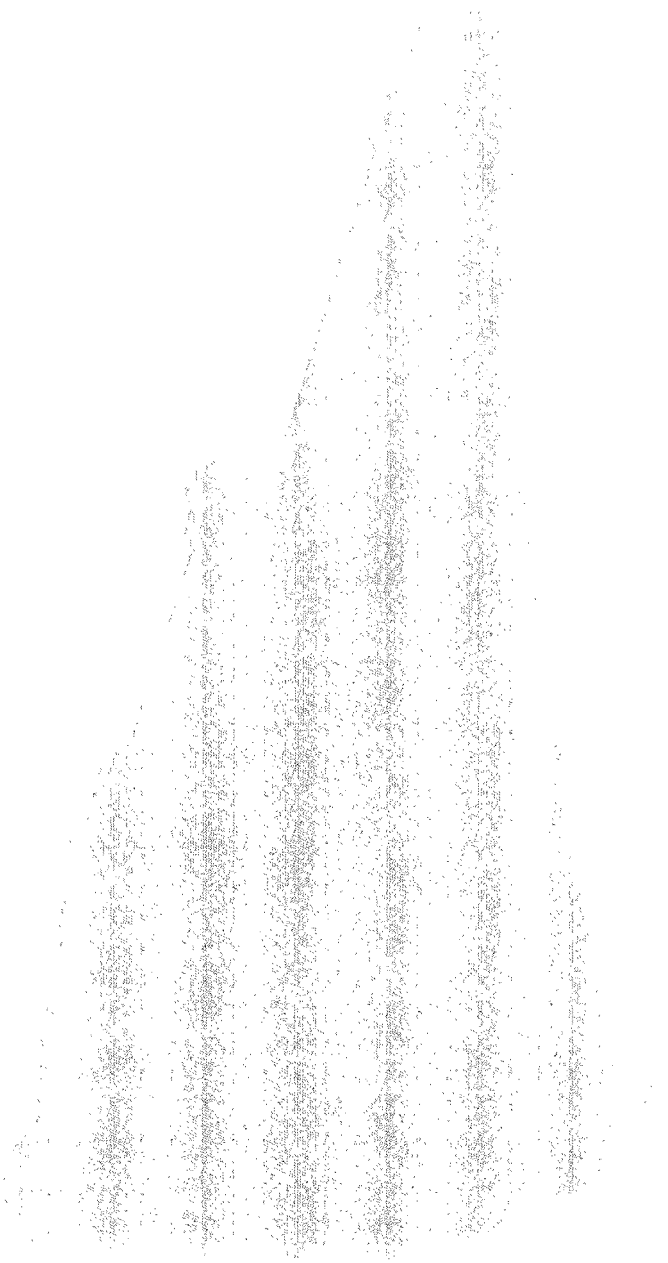
1. Developing rates for out of state providers.
2. An expansion in the number of procedures, using both the current methodology and a revised methodology that separates the professional and institutional payments.
3. Producing average statewide and regional rates for charges and paid information for an array of services.
4. Developing rate estimates for common prescription drugs.
5. Developing rates as appropriate for Medicare and Medicaid patients using those databases.
6. Developing rates for dental services and providers.
7. Producing information on health care delivery patterns, including for appropriate services and provider volumes.
8. Testing the submission of output files transferred and loaded to the HealthCost website.

Included in the responsibilities of the Contractor are the following:

- Identify the new procedures and providers that will be included on the website.
- Analyze and test data in the New Hampshire Comprehensive Health Information System (NHCHIS) as provided by the State's current vendor for the purposes of reporting cost estimates on the HealthCost website accurately.
- Develop expertise with the current and future HealthCost methodologies.
- Develop an understanding of the SAS code used to produce the rates.
- Ensure that all SAS programs include extensive documentation and that the code is easily understandable by an analyst with intermediate level SAS skills.
- Utilize SAS programming so that all fields included on the website are produced with rates and related information, potentially including "precision of the cost estimate" and "typical patient complexity."
- Work set out in the response to the RFP

New Hampshire
Insurance Department

Request for Proposals
2013-RRG-304 HealthCost Analytics



Date: January 30, 2014

Submitted by

University of Massachusetts Medical School
UMASS

333 South Street
Shrewsbury, MA 01545
commed.umassmed.edu

Table of Contents

Introduction

The University of Massachusetts Medical School's (UMass) Center for Health Law and Economics (CHLE) is pleased to present this proposal to the New Hampshire Insurance Department (NHID) in response to Request for Proposal (RFP) 2013-RRG-304. Our previous successful experience working with the NHID on other projects and our experience related to this RFP make us an ideal partner. Our team has extensive experience writing SAS code, developing rates and rate methodologies, and producing information on health care delivery patterns. By engaging UMass for this RFP, you will be working with an organization that has NHID-specific knowledge and the institutional expertise to perform all of the tasks specified in your RFP, on time and on budget.

Skills and General Qualifications

CHLE helps health policy leaders transform ideas into reality. We craft inventive and sustainable solutions to systemic challenges. We are committed to creating a health care system that works for everyone.

Interdisciplinary Approach – We integrate our expertise in health law, policy and economics to provide clients robust solutions, recommendations and program development services needed for a complex healthcare environment.

Policy Analytics and Architecture – We deliver the full range of analytics needed to develop and implement strong policies and programs. Our team excels in analyzing data and interpreting results; creating payment, cost and financing models; and building legal and public engagement strategies.

Public Policy – Seasoned in public policy design and reform, our team can partner with state agency leaders and project teams to build new programs in the public sector.

Transformation Facilitation – We distill complex concepts and competing parameters into understandable choices. We bring decision makers together with consumers and stakeholders to make policy that works.

UMass has assembled a team of experts to meet the requirements of this request. We have extensive experience in health care payment methods, in SAS analysis and coding, and in using the New Hampshire Comprehensive Health Care Information System (NHCHIS) data and other all-payer claims datasets. The team for this project will be comprised of the following staff:

- **Michael Grenier, M.P.A., Senior Associate.** Mr. Grenier will serve as the overall project manager for this engagement. Mr. Grenier brings over 19 years of experience in the areas of health care financing, policy development and analysis, and project management. He previously worked on two engagements for the NHID: an analysis of price variation in New Hampshire hospitals (2012) and an analysis of the New Hampshire health insurance market (2013). Mr. Grenier has used SAS

for over 18 years to complete analyses of health cost and claims data, including data analysis of NHCHIS data, Massachusetts hospital discharge data, and the Vermont all-payer claims dataset. Prior to joining UMass in 2012, Mr. Grenier was a pricing policy manager at the Massachusetts Division of Health Care Finance and Policy, where he managed the development of payment policies and rates for the Massachusetts Medicaid and Health Safety Net (charity care) programs for a wide array of health care services, including hospitals, nursing facilities, and community-based providers.

- **Tami Ohler, Ph.D., Health Policy Analyst.** Dr. Ohler will be primarily responsible for the SAS coding and rate development. Dr. Ohler joined UMass in October 2013 after completing her Ph.D. in Economics from the University of Massachusetts Amherst. Dr. Ohler has over 14 years of experience in SAS coding. As part of her graduate program, Dr. Ohler completed three Ph.D.-level econometrics courses, which involved extensive SAS programming. She learned a variety of ways to model relationships between variables in both cross-sectional and panel data, using single equation and multi-equation approaches. She previously was a research assistant at the Congressional Budget Office, where she completed the first two Base SAS courses at the SAS Institute in Rockville, MD. She then used both mainframe and PC SAS to interface with a micro-simulation model of the Federal Pell Grant Program. Dr. Ohler has also taught both introductory economics and public finance at the college level.

- **Rebecca Kushner, M.P.A., Senior Research Policy Analyst.** Ms. Kushner will be responsible for quality assurance, data testing, and project documentation. Ms. Kushner has over nine years of public policy experience analyzing data, writing synopses, and explaining technical information to lay audiences. At UMass, her work involves analyzing patient-level claims data and health care provider data files, importing and cleaning up large datasets, and exporting the results for projects in Massachusetts, New Hampshire and Vermont. A member of UMass's analytics team, Ms. Kushner creates complex SAS code files to clean data and perform calculations on topics, such as price variations, payer and member cost-sharing, and provider charge levels. From 2008 to 2013, she was a budget analyst for the Massachusetts Department of Transitional Assistance (DTA), where she created fiscal impact analyses for changes to state and federal public assistance regulations. During her time at DTA, Ms. Kushner created two databases for which she trained staff and developed user manuals.

- **Katharine London, M.S., Principal Associate.** Ms. London will serve as a technical and policy advisor on this project. Ms. London has over 20 years of experience directing complex projects for government agencies, analyzing health care data, developing payment methodologies, collecting and compiling complex data, and presenting results in consumer-friendly formats. Prior to joining UMass, she served as executive director of the Massachusetts Health Care Quality and Cost Council, director of health policy at the Massachusetts Attorney General's Office, and director of special policy initiatives at the Massachusetts Division of Health Care Finance and Policy. She has supported six large public-private endeavors, including identifying policy options and data sources, directing complex data analysis, communicating results, and making evidence-based policy recommendations.

- **Jean C. Sullivan, J.D., Associate Vice Chancellor, Commonwealth Medicine and Director, Center**

for Health Law and Economics. Ms. Sullivan will provide executive leadership and direction for the project and will be available as a consultant as needed. Ms. Sullivan has more than 25 years of health law, policy, and executive experience in public sector programming, financing, and administration. Her award-winning contributions to each of Massachusetts' health care reform initiatives over the last two decades have made her one of the leading experts in Medicaid demonstration projects and program reform. She has extensive experience managing relations with federal oversight agencies, and designing new legal and financing models for coverage and health access. In the last three years, Ms. Sullivan led major efforts in the state of New Hampshire Department of Health and Human Services, including analytic and programmatic research of the Disproportionate Share Hospital (DSH) program and related Medicaid Enhancement Tax (MET) in New Hampshire.

a) Experience and expertise with:

i. writing code in SAS for other users,
ii. using health insurance claims data, including charge, paid and cost sharing data fields,
iii. importing and exporting data files, and
iv. working with health care provider data files.

The UMass team has worked with numerous health insurance claims data sets, most notably NHCHIS data. Members of the UMass team have also worked with the Vermont all-payer claims database and Massachusetts Medicaid claims data. Some relevant examples of our work include:

- In 2013, the UMass team completed an analysis of the New Hampshire health insurance market. To complete this analysis, the team used the NHCHIS data to compile statistics, such as payer market share, amount of patient cost-sharing, and hospital charge levels. This work was completed using SAS, and also involved and exporting selected data files between SAS and Excel as needed.

- In 2013, the UMass team was hired by the Vermont Agency on Administration to develop a financing plan for Vermont's single-payer health care system initiative. UMass partnered with Wakely Consulting, who completed the actuarial components of the project. The UMass team created extracts from the Vermont Healthcare Claims Uniform Reporting and Evaluation System (VHCURES) data for the Wakely consultants. These extracts were created exclusively in SAS and required strong collaboration and communication between the UMass and Wakely teams.

- Since late 2013, UMass has been collaborating with staff from the University of Vermont on a project sponsored by the Vermont Green Mountain Care Board. This project is an analysis of price variation among health care payers in Vermont. The team uses SAS to manage and complete analysis of VHCURES. We have been primarily tasked with reviewing professional claims files to explain possible reasons for variation in prices among payers. The analysis requires extensive use of the medical claims file, as well as provider detail files in order to create variables to assess the influence of provider location and specialty on prices. UMass designed multivariate regression models to quantify the relative importance of payer and provider characteristics in price variation.

- In 2012, for its report, "Analysis of Price Variations in New Hampshire Hospitals," UMass researched and analyzed determinants of price variations among New Hampshire hospitals. UMass used NHCHIS claims data for calendar year 2009, the New Hampshire Hospital Discharge Dataset (HDD), uninsured charge data from the Medicaid Enhancement Tax (MET) forms, and CMS-2552 cost report data from hospital fiscal year 2009. The analysis examined the relationship of price to various factors, including hospital location, designation as a Critical Access Hospital (CAH), total margin, hospital size, and occupancy rate.

For each of these projects, UMass maintained detailed documentation. To ensure project continuity, we thoroughly documented SAS code to enable other team members and external analysts to replicate the procedures. This documentation included project overviews, detailed notes embedded in SAS code to explain each step, and summaries of the results obtained at each step. When producing reports for clients, UMass staff included formal documentation as technical appendices.

b) Proven ability to train and provide technical assistance and communicate effectively.

UMass is highly qualified to train and provide technical assistance for this engagement. We routinely work with public sector clients to provide analysis, recommendation, and technical assistance on a wide array of topics. Our expertise lies in translating complex technical, financial and legal issues for our clients, providing technical expertise in assisting them with programmatic decision-making. Each client we work with has different needs and varied backgrounds in working with the claims, legal/regulatory, and financial details of the project in question. Therefore, we pride ourselves on bridging any information gaps and meeting our clients' expectations based on their level of understanding. We provide our clients with reports, white papers, detailed spreadsheets, SAS code, charts/graphs, and other communications materials.

UMass is well positioned to provide the NHID with the necessary training and technical assistance it requires. Both Dr. Ohler and Mr. Grenier bring prior experience in training and technical assistance to this engagement. Dr. Ohler previously taught economics classes at the college level. For these classes, she prepared explanatory materials and delivered interactive lessons to her students. Ms. Kushner, while at her former position as budget analyst for the Massachusetts DTA, was responsible for creating databases used by other units within the agency. As part of this process, she developed user manuals and trained staff on use of these databases. In addition, Mr. Grenier has experience training employees on the use of cost and health care claims databases.

c) Familiarity with various health insurance data sources.

In addition to its experience with all-payer databases, UMass has experience with other insurance and provider data. Both Ms. Kushner and Mr. Grenier have completed analyses using the Massachusetts Medicaid data to inform rate-setting policies for hospital payments. Mr. Grenier has conducted extensive analyses using the Massachusetts inpatient hospital discharge dataset and Massachusetts Health Safety Net data.

Members of our team have used other data sources, including:

- The Medical Expenditure Panel Survey
- Centers for Medicare and Medicaid public use files for hospital payments, physician payments, and cost report databases
- US Census data, including American Community Survey data

The team is expert in conducting literature reviews and analysis, and frequently references reputable state and national data sources, such as Health Affairs, the Commonwealth Fund, and the Kaiser Family Foundation and Robert Wood Johnson Foundation.

d) Ability to work with data extensively and independently.

UMass has a significant amount of experience in working extensively and independently with data. As noted previously, we have worked with all-payer claims databases, Medicaid claims files, and other data sources. We are expert in working with clients to develop specific data questions whose answers will inform policy-making. We then identify appropriate data sources and conduct independent analyses to answer these questions for the client. Further, UMass's reports and issue briefs frequently require organizing large volumes of data and concisely communicating key points to the public. Examples of our publications are at http://www.umassmed.edu/chle/about/publications.aspx.

Knowledge of commercial health insurance in general, health care provider reimbursement, and health insurance benefits.

UMass brings substantial expertise in health care reimbursement methods, commercial health insurance, and health insurance benefits. Mr. Grenier has over 19 years of experience in the areas of health care payment methods. Prior to joining UMass, he was responsible for managing the development of payment rates and methods for the Massachusetts Medicaid program. In addition, he oversaw the implementation of Medicare-based hospital payment methods for the Massachusetts charity care program, known as the Health Safety Net and is very familiar with Medicare payment models. Katharine London has also facilitated a number of large public-private groups (variously called Commissions, Task Forces, Boards, Councils and Advisory Committees), all of which focused on improving access to health care benefits, improving health care quality, and containing health care costs. As director of health policy for the Massachusetts Attorney General's Office, Ms. London advised the Massachusetts Attorney General and Assistant Attorneys General on health policy matters, payment methods, rates, purchasing strategies, and other health care matters.

UMass's proposed team is well-versed in the New Hampshire market. As part of the insurance market analysis completed in 2013, we completed research on New Hampshire's current health insurance payment system, including factors that affect premium rates and health care costs. The UMass team designed and analyzed a survey regarding three carriers' payment methods and plan design.

Include samples of SAS code developed for similar projects.

Please see appendix A for sample SAS code from recent provider price variation work the team has done using the Vermont all-payer claims data.

Plan of Work. Include a description of the anticipated products, timeline, and process for working with the NHID (and/or a vendor of the NHID).

Project Management

We anticipate an initial kick-off meeting with the NHID in Concord within a week of the start date to discuss the project plan, available datasets, the process for obtaining data, and other concerns of NHID staff and their vendors. Throughout the project, Mr. Grenier will hold regular check-in calls with NHID staff to provide updates on progress, share preliminary results, and obtain direction from NHID staff.

Project Plan

The project plan includes the following components:

1. Review of existing HealthCost methods.

UMass will begin by reviewing and studying in detail the methods currently used on the HealthCost website. The team will also obtain and review the code for the chronic illness and disability payment system (CDPS), used to estimate patient complexity. This analysis and review will enable the team to identify key questions for the NHID staff and their vendors, and allow us to develop a comprehensive analytic plan.

2. Develop an Analytic Plan

UMass will develop an analytic plan that identifies the required data elements and the algorithms that will be applied. UMass expects to work closely with NHID staff to ensure that the project meets the NHID's, policy goals and budget limitations. The analytic plan will be updated throughout the project as issues arise, and it will serve as a tracking document for the team's progress.

3. Testing and analysis of NHCHIS data

Upon receipt of the NHCHIS data, UMass will complete testing and initial analysis of the data. The

testing will examine the completeness of the data, as well as unusual anomalies in the data. Some examples of testing items include:

- Initial validation of data received from the NHID or their vendor, such as verification of record counts and sums of key fields
- Frequency counts of key fields to ensure that data contains valid values that are consistent with data specifications
- Frequency counts over time (e.g. by quarter) to ensure that there are no unusual trends that might indicate missing data or other issues
- Identification of outlier values, determined by running SAS procedures, such as *proc univariate*
- Comprehensive statistical analyses of data, include descriptive statistics, graphical distributions, and analysis of skewness and kurtosis

The analytic plan will include a description of all the planned tests of the data. Results from the testing and analysis will be saved to maintain project documentation and continuity.

4. Coding to identify new procedures, develop rates and incorporate new data

Following the comprehensive testing and analysis, UMass will write SAS code and complete the rate development analysis. Per the requirements outlined in the RFP, these steps will include:

- Developing rates for an expanded list of procedures, using current and revised methods to separate professional and institutional claims
- Developing rates for out-of-state providers
- Producing average statewide and regional rates for charges and paid information for an array of services
- Developing rate estimates for common prescription drugs, dental services, and providers
- Developing rates as appropriate for Medicare and Medicaid patients using those databases
- Producing information on health care delivery patterns, including for appropriate services and provider volumes

It is important to note that these steps will be very iterative. As the analyses are completed, the UMass

team will review its findings with the NHID staff, make recommendations where appropriate, and then modify the coding and/or data to address any identified issues. We would then complete additional testing and rerun the analyses.

5. Quality assurance testing, documentation, and delivery of final product

Upon completion of the preliminary analyses, the team will complete final checks on the data and code to confirm accuracy. We will compile written documentation on the work completed and review the SAS code and annotations to ensure that the code is easily understandable by analysts with intermediate level SAS skills. We will also share preliminary drafts with the NHID staff to obtain feedback on the documentation clarity and scope.

Prior to submitting the final files, the team will complete testing on the output files to be transferred and uploaded to the HealthCost website.

Timeline

The timeframe and tasks outlined below are a general framework and plan to complete the assigned tasks. The UMass team will modify this plan based on feedback from the NHID staff. Additionally, the team will schedule regular check-in calls with the NHID staff to provide updates on work progress and review preliminary work products.

	Timeframe	Task & Deliverable
1	**Feb – Mar 2014**	**Kickoff meeting**
		Kickoff meeting
2	**Mar-Apr 2014**	**Review of existing HealthCost methods.**
		Review documentation re: current HealthCost methods
		Review SAS code
		Review materials and SAS code for CDPS
		Develop questions & meet with NHID staff for clarifications
3	**Apr 2014**	**Develop an Analytic Plan**
		Draft initial plan, reflecting kickoff meeting and method reviews
		Present to NHID staff, receive feedback
		Make modifications to plan, submit to NHID
4	**May 2014-June 2014**	**Test and analyze NHCHIS data**
		Receive NHCIS data, upload to secure location, establish permissions
		Complete initial validation checks
		Develop list of key variables

		Perform analysis frequency counts, outlier analyses
		Perform other analyses
		Prepare summary of findings, recommendations for data exclusions and other corrections
5	**June 2014 – Sept 2015**	**Coding to identify new procedures, develop rates and incorporate new data – assumes multiple iterations, by quarter**
		Calculate rates for existing and new procedures
		Develop out-of-state provider identification algorithms
		Calculate rates for out-of-state providers
		Produce statewide and regional rates of charges and allowed amounts
		Develop rate estimates for prescription drugs
		Develop rate estimates for dental services
		Develop rate estimates for Medicare and Medicaid services
		Perform analysis of health care delivery patterns
		NOTE: Provide results to the NHID as needed as each set of rate calculations and analyses are completed, to receive feedback and make changes
6	**June 2014 – Sept 2015 (concurrent with Step 5)**	**Quality assurance testing, documentation, and delivery of final product**
		Develop testing algorithms and programs, including comparisons to rates from prior periods
		Complete SAS code review and annotations of SAS code
		Develop document summarizing data issues, changes made to the data, and summary of methods used
		Testing of output files
		Deliver final files, SAS code, and documentation to NHID

Conflict of Interest

UMass does not have any actual or potential conflicts of interest.

However, to be conservative about any perceived conflicts, UMass discloses that one of the UMass executives, Joyce A. Murphy, Executive Vice Chancellor, Commonwealth Medicine, is a member of the board of directors of Harvard Pilgrim Health Care. Ms. Murphy would not be involved in the delivery of contracted services, and we do not believe her position on the Board presents a conflict.

References

1. **Kathleen A. Dunn,** Director, Office of Medicaid Business and Policy, New Hampshire Department of Health and Human Services. Several members of the UMass CHLE team have worked closely with Ms. Dunn, analyzing hospital data and developing Disproportionate Share Hospital payment policy. Ms. Dunn can be reached by phone at 603-271-5258 and by email at kdunn@dhhs.state.nh.us.

2. **Michael Costa,** Deputy Director of Health Care Reform for Finance, Vermont Agency of Administration. UMass CHLE is currently under contract with the State of Vermont to provide expert consultation on the development of a financing plan for the implementation of Green Mountain Care, the state's proposed single payer plan. This work includes building consensus among stakeholders and communicating the plan to the public. Mr. Costa can be reached by phone at 802-828-3322 and by email at Michael.Costa@state.vt.us.

3. **David Garbarino,** Director of Purchasing Strategy, Office of Medicaid, Massachusetts Executive Office of Health and Human Services. UMass CHLE is currently under contract with the Massachusetts Office of Medicaid to project manage and provide technical assistance on Medicaid's transition to diagnostic-related group (DRG) payments for inpatient services and Enhanced Ambulatory Payment Groups for outpatient services. Mr. Garbarino can be reached by phone at 617-573-1623 and by email at david.garbarino@state.ma.us.

Cost Bid

UMass will bill hourly for staff time at the following rates up to the maximum obligation. The estimated number of hours to be provided by each staff person is listed below by fiscal year.

Staff	Position	Hourly Rate	FY14 Hours	FY15 Hours	FY16 Hours	Total Hours	Total Cost
Grenier, Michael	Senior Associate	$140	65	191	49	305	$42,700
London, Katharine	Principal Associate	$180	22	66	17	105	$18,900
Kushner, Rebecca	Sr. Research Policy Analyst	$110	85	250	66	401	$44,110
Ohler, Tami	Health Policy Analyst	$90	132	388	100	620	$55,818
Sullivan, Jean	Assoc VC CWM-Dir CHLE	$250	11	32	8	51	$12,753
TOTAL MAXIMUM OBLIGATION							**$174,281**

* Rates include $299 for travel: 4 trips, at 130 miles round trip, @ $0.56/mile and $2 per trip tolls.

Exceptions to Terms and Conditions

State of New Hampshire Proposal

Response to Subsection (D) of RFP # 2013-RRG-304

EXHIBIT A – Exceptions to Terms and Conditions of P-37 (version dated 1/09), and

Standard Exhibit C (version dated 11/07/13)

1) **Indemnification:**

New Hampshire has agreed to modifications to certain terms in New Hampshire's standard contract forms in the past to accommodate the University's legal status. As a public entity, the University of Massachusetts Medical School cannot indemnify New Hampshire, as it is prohibited from pledging the credit of the Commonwealth without a two-thirds vote of the Massachusetts Legislature, per Article 62 of the Massachusetts Constitution, as amended. The Massachusetts courts have construed statutory authorizations for public entities to enter into contracts as not authorizing indemnity clauses. *Lovering v. Beaudette*, 30 Mass.App.Ct. 665, 669 (1991); *Raisman v. Cunningham*, Inc., Civil Action No. 93-5070-G (Super. Ct. 1995).

The provision of the contract P-37 that is implicated by this restriction is: Subparagraph 13, Indemnification.

New Hampshire has revised P-37 in previous contracts by executing the addendum as written below, and we respectfully request that New Hampshire include this addendum in any contract with the University that may result from this RFP:

- Form P-37 Addendum:
  Subparagraph 13/Indemnification of Form P-37 is hereby deleting in its entirety and replaced with the following:
  "Contractor shall comply with any and all requirements of this Agreement; in the event that the Contractor fails to comply with any such requirements, including, but not limited, to disclosure of any PHI in violation of this Agreement, the Covered Entity may pursue all available remedies, at law and in equity, including without limitation any damages or losses it suffers from Contractor's breach of this Agreement. The respective rights and obligations of Contractor under this Agreement shall survive termination of this Agreement."

2) **Subparagraph 14. INSURANCE:**

- Subparagraph 14.1.2 of Form P-37 states "fire and extended coverage insurance covering all property subject to subparagraph 9.2 herein, in an amount not less than 80% of the whole replacement value of the property."

  Insurance coverage for fire damage is generally covered under a policy that covers property. The University is prohibited by state law from obtaining such coverage and it is self-insured against these risks.

  We believe that the proposed addendum in #1 above to Form P-37 addresses this issue, and respectfully request that Subparagraph 14.1.2 be struck from Form P-37. Please note that New Hampshire has revised P-37 in previous contracts by executing the addendum as written above,

- Subparagraph 14.1.3 of Form P-37 states "Contractor shall also furnish to the Contracting Officer identified in block 1.9, or his or her successor, certificate(s) of insurance for all renewal(s) of insurance required under this Agreement no later than fifteen (15) days prior to the expiration date of each of the insurance policies. ...Each certificate(s) of insurance shall contain a clause requiring the insurer to endeavor to provide the Contracting Officer identified in block 1.9, or his or her successor, no less than ten (10) days prior written notice of cancellation or modification of the policy."

  Insurance certificates on Acord Form 25 no longer provide a cancellation clause. New Hampshire has revised P-37 in previous contracts by executing the addendum as written below, and we respectfully request that New Hampshire include the following addendum in any contract with the University that may result from this RFP (the revised language appears in **bolded** text):

  - Subparagraph 14.3 of Form P-37 is hereby amended to read:
    "The Contractor shall furnish to the Contracting Officer identified in block 1.9, or his or her successor, a certificate(s) of insurance for all insurance required under this Agreement. Contractor shall also furnish to the Contracting Officer identified in block 1.9, or his or her successor, certificate(s) of insurance for all renewal(s) of insurance required under this Agreement ***as soon as reasonable after policy renews****. The certificates(s) of insurance and any renewals thereof shall be attached and are incorporated herein by reference. Each certificate(s) of insurance shall contain a clause requiring the insurer to provide notice* ***in accordance with the policy provisions. The Contractor shall endeavor to provide*** *the Contracting Officer identified in block 1.9, or his or her successor, no less than ten (10) days prior written notice of cancellation or modification of the policy."*

3) **Standard Exhibit C (version dated 11/07/13):**
New Hampshire has revised Standard Exhibit C in previous contracts by executing the addendum as written below, and we respectfully request that New Hampshire include this addendum in any contract with the University that may result from this RFP:

- Standard Exhibit C Addendum:

  Standard Exhibit C is hereby amended by inserting the following prior to the introductory paragraph:
  "The parties acknowledge that the Contractor will not be providing services to Medicaid eligible individuals or to applicants for Medicaid pursuant to this Agreement. Therefore, the parties agree that the provisions in Standard Exhibit C, Special Provisions, related to such services, including but not limited to the introductory paragraphs and subparagraphs 3, 4, 6, 7, 8.2 and 8.3, are not applicable to this Agreement."

This section was not included in contract Exhibit C

Resumes

Michael Grenier, M.P.A.

Professional Experience

University of Massachusetts Medical School **March 2012- Present**
Center for Health Law and Economics **Charlestown, MA**
Senior Associate

Senior team member of a university-based center providing consulting services in health financing and public policy analysis to government and not-for-profit clients. Projects include:

Massachusetts Executive Office of Health and Human Services **January 2013 - Present**

- Provide project management and analytic support to implement a Diagnosis-Related Group (DRG) payment model for acute hospitals participating in the Massachusetts Medicaid program.

New Hampshire Office of Health and Human Services **January 2013 – Present**

- Develop financial models on behalf of New Hampshire to compensate New Hampshire hospitals that provide high volumes of uncompensated care. Provide technical assistance to state officials on federal policy requirements for disproportionate share programs and health care related taxes.

Massachusetts Center for Health Information and Analysis **April 2012- Present**

- Developed methods and completed preliminary calculations to ensure that all Massachusetts facilities receiving Safety Net Care Pool payments are within limitation requirements required under the federal Section 1115 MassHealth waiver. Provide technical assistance regarding implementation of reporting protocol. Completed calculation of the federal Medicaid upper payment limitation for Massachusetts hospitals for fiscal year 2012.

New Hampshire Insurance Department, Insurance Market Analysis **January 2013 – June 2013**

- Led project to review of New Hampshire's health insurance payment system, including factors that affect premium rates and health care costs. Project included analysis of claims data from New Hampshire Comprehensive Health Care Information System and interviews with market stakeholders.

Vermont Agency for Administration **July 2012 – January 2013**

- Member of team that developed a financing plan for the State of Vermont for health reform, effective 2017. Created models to estimate administrative costs and savings under health reform and projections of federal revenues in 2017.

New Hampshire Insurance Department, Analysis of Hospital Price Variations **March 2012 - April 2012**

- Drafted report and completed analysis to evaluate the variation in commercial carrier prices paid to New Hampshire hospitals. Analyzed the variance in prices attributable to hospital public payer mix.

Commonwealth of Massachusetts **2001- 2012**
Division of Health Care Finance and Policy **Boston, MA**
Pricing Policy Manager

- Managed data analysis and rate development for the MassHealth program and other public payers for a wide range of health care services, including nursing facilities, hospitals, and other community-based providers.
- Provided analytical support for various health policy initiatives, including the Special Commission on the Health Care Payment System (2009) and the Special Commission on Provider Price Reform (2011). These Commissions examined alternative payment methods, factors that contribute to rising health care costs, and price variation among Massachusetts hospitals.
- Managed staff of ten, including two associate managers, five health policy analysts, and three auditors.
- Determined rates and developed payment policies for the Health Safety Net program. Oversaw the implementation of Medicare-based payment methods for hospital services paid by the Health Safety Net.

- Supervised the development of data collection policies for total medical expense and relative price data submitted by health insurers. Frequently met with insurers and other stakeholders to discuss technical issues relating to data collection and methods.
- Led projects and supervised staff in the analyses of large claims databases to assess, report, and presented on health care costs and utilization.
- Represented agency at meetings and made presentations to health care industry representatives and provider associations.
- Supervised policy analysts in the drafting of regulatory policies and collaborated with legal staff to ensure accuracy.
- Managed the collection of $220 million in annual nursing facility provider taxes.

Senior Health Policy Analyst **1997 - 2001**

- Calculated payment rates for the MassHealth program for nursing facility, home health, temporary nursing, and dental service programs.
- Completed reviews of proposed legislation, including calculations of fiscal impacts, drafting summaries of costs and benefits, and making recommendations to senior staff.
- Drafted amendments to state regulations and presented staff testimony at public hearings.
- Analyzed hospital, nursing facility, and home health cost data derived from Massachusetts and Medicare cost reports.
- Completed analyses, conducted research, and drafted sections of the Division's report on the Balanced Budget Act of 1997.
- Authored article for Division's Healthpoint series, titled "Emerging Trends in Long-Term Care".
- Analyzed financial, cost, and other statistical data and presented findings in written and oral presentations.

Health Policy Analyst **1995-1997**

- Analyzed cost, statistical, and other financial data to support the development of MassHealth rates for acute, chronic, and rehabilitation hospitals.
- Researched health policies of other states, including programs for the uninsured and payment policies for acute hospital services.
- Reviewed and summarized proposed legislation to assess impact on agency and providers.
- Completed research, analyzed data and drafted text for the Report of the Special Commission on Uncompensated Care

Education

University of Massachusetts **Amherst, MA**
Master Degree in Public Administration **1995**

University of Massachusetts **Lowell, MA**
Bachelor of Arts degree in Political Science **1993**

Software Skills

- Microsoft© Excel, Word, Access, PowerPoint, Project
- SAS

Other

- Received Pride in Performance Awards in 1997, 2005, 2007 and 2008.

Tami Ohler, Ph.D.

Professional Experience

University of Massachusetts Medical School — **October 2013 - Present**
Center for Health Law and Economics — **Charlestown, MA**
Policy Analyst

- Provide expertise to inform the development of models used to explain variations in prices that commercial health insurers pay providers.
- Develop SAS programs used for data management and analysis.
- Analyze Behavioral Risk Factor data (from the Centers for Disease Control) to determine the burden of employers of their employees' unpaid care work.

Wheaton College — **September 2011- May 2012**
Visiting Instructor — **Norton, MA**

- Instructor of Introduction to Microeconomics. Developed and delivered interactive lessons. Key topics included adjusting budget data for inflation; modeling concepts such as positive/negative externalities and solving for optimal values of production; deriving the supply and demand curves; price and income elasticity calculations.
- Instructor of Public Finance. Developed and delivered interactive lessons. Key topics included: empirical models of factors that determine whether towns override property tax caps; carbon tax versus "cap and trade."

ITT Tech — **September- December 2010**
Visiting Instructor — **Norton, MA**

- Instructor of Introduction to Microeconomics. Developed and delivered interactive lessons. Key topics included: comparative advantage; industrial organization (monopoly/oligopoly/perfect competition); basic game theory.

Massachusetts Budget and Policy Center — **January 2007- June 2009**
Policy Analyst — **Boston, MA**

- Data management, including creating pivot tables and merging Excel files.
- Data analysis, including reconciling data/producing consistent comparisons of line item funding over time.
- Presented information about the state budget process and budget trends to state advocacy groups.
- Co-wrote and presented results from a study of welfare reform at the Massachusetts State House; key finding was that only a fraction of the savings associated with restricted cash transfers were used to fund subsidized child care.
- Supervised interns.

University of Massachusetts **September 2004- May 2005**
Department of Economics **Amherst, MA**
Teaching Assistant

- Taught an honors-level section of Intermediate Macroeconomics. Key topics included: the Investment-Savings, Liquidity-Money (IS-LM) model; tools of monetary and fiscal policy.
- Taught a section of Writing in Economics. Key topic included: normative vs. positive economic analysis.

University of Massachusetts **September 2001- May 2004**
Department of Economics **Amherst, MA**
Research Assistant

- Used parametric and non-parametric methods to analyze income, expenditure and labor-force attachment data from household surveys, including the Consumer Expenditure Survey and the Current Population Survey, using SAS and LIMDEP.
- Co-authored papers and presented research findings at academic conferences.

Congressional Budget Office **June 1999 - July 2001**
Research Assistant **Washington, D.C.**

- Used mainframe and PC SAS in order to prepare cost estimates of proposed legislation pertaining to the Pell Grant program and the Pension Benefit Guaranty Corporation.

Education

University of Massachusetts **Amherst, MA**
Ph.D. in Economics **2013**

University of California **Davis, CA**
B.A. in Economics; minors in Spanish and Sociology **1997**

Software Skills

- Microsoft© Excel, Word, Access, PowerPoint
- SAS

Rebecca Kushner, M.A., M.P.A.

Professional Experience

University of Massachusetts Medical School **Apr. 2013 - Present**
Center for Health Law and Economics
Senior Research Policy Analyst

- Provide complex data analyses on insurance price variation, premiums, member out-of-pocket expenses, payers, products, CPT codes, and other variables using states' All Payer Claims Databases (APCDs) as well as other regional and national sources, such as CMS's HCRIS data, AHRQ's MEPS and HCUP databases, Rural Assistance Center (RAC) information, and *Health Affairs* journal articles.
- Model costs and provide analyses on health care topics, such as the uninsured, Massachusetts Medicaid hospital payment options, pediatric asthma patients, and long-term support services, for various New England states.
- Develop extensive code in SAS to import, clean, analyze and export data.
- Conducted research and drafted data sections for 2013 New Hampshire Insurance Department report, "New Hampshire's Health Insurance Market and Provider Payment System: An Analysis of Stakeholder Views."

Massachusetts Department of Transitional Assistance (DTA), Boston, MA Jan. 2008 - Apr. 2013
TAFDC/TANF Welfare Budget Analyst

- Analyzed impact of regulatory changes on both welfare caseload level and annual budget; created ad hoc database queries on populations affected by proposed regulation change and collaborated with program, policy, and field operations staff to ensure accurate modeling of the proposed regulation.
- Created database of client enrollment and expenditure data for CIES vocational training program in order to provide analytical reports on issues such as vendor outcome measurement. Received 2011 Commissioner's Citation Award for High Performance for creation of this database. Developed user guide and trained program staff on use of database.
- Led a work group that created a client survey focused on work-required TAFDC recipients, to identify barriers to employment and economic self-sufficiency, as well as unmet client needs and DTA customer service issues; wrote preliminary report analyzing data results.
- Collaborated with vocational training senior managers regarding awarding of vendor contracts; became point-person for senior and programmatic staff at DTA, as well as personnel at parent agency, during two re-procurements.

Joseph M. Smith Community Health Center, Inc., Boston, MA **Feb. 2006 – Dec. 2007**
Grants Manager

- Managed grants for organization with $10M budget and three sites, tracking budgets and achievement of goals. Created performance measurement system for outreach and insurance counseling staff that also showed changes in client need for services.
- Wrote $50,000+ proposals for clinical programs for public and private sector grants, including two federal grants funded at $1.5M. Used local, state, and national data on health outcomes in grant proposals.

- Created database to track grants, with assistance of pro bono expert I secured, thereby improving ability of Development Department to provide managers with timely information related to grants.

Various Non-Profit Organizations, Boston, MA **Jun. 2004 – Dec. 2007**
Consultant

- Provided research, writing, and analytical services on education, the environment, health care, and other topics.

Education

Kennedy School of Government **June 2004**
Master in Public Administration

Simmons College **May 1996**
M.A. and Teaching Certificate in English as a Second Language

University of Maryland **June 1992**
B.A. and Teaching Certificate in High School English

Civic Engagement and Advocacy

Goddard House Family Council **Aug. 2011 – Aug. 2012**
Founder and President

- Founded independent family council at grandmother's nursing home, to create unified voice for families to advocate for residents at facility. Wrote by-laws and held election to ensure orderly proceedings. Worked with Goddard House management on care issues, until facility's closing in summer 2012.
- Oversaw committee work, including creation of 22-page orientation manual for new families written and edited by multiple council members; dissemination of cards to residents on their birthdays and family members when a resident died; and solicitation of corporate donation of a van for use on field trips.
- Interfaced with local and national organizations that advocate for improved care for nursing home residents.

Care Packages for Soldiers **May 2008 – Nov. 2009**
Founder

- Founded program to create care packages for soldiers in Iraq and Afghanistan containing toiletries, food, candy, magazines, and gifts for Iraqi/Afghani children; raised enough funds (over $1,600) and item donations to assemble over 180 care packages in a year and a half.

Katharine London, M.S.
University of Massachusetts Medical School
Center for Health Law and Economics
Principal Associate

Education

Harvard School of Public Health, Boston, MA **1990**

Master of Science degree in Health Policy and Management

- Concurrent coursework at Harvard's Kennedy School of Government and MIT's Sloan School of Management

Harvard and Radcliffe Colleges, Cambridge, MA **1986**

Bachelor of Arts degree in Applied Mathematics with Biology

Academic Appointments and Professional Experience

University of Massachusetts Medical School, Charlestown, MA **2009–Present**

Center for Health Law and Economics

Principal Associate

- Member of senior leadership team of a university-based center providing consulting services in health economics and public policy analysis to government and not-for-profit clients. Projects include:

Vermont Agency of Administration **July 2012 – January 2013**

- Developed a Health Care Financing Plan for the State of Vermont in 2017, including models of health reforms, estimates of baseline costs, costs and savings due to health reforms, and federal revenues to finance health reforms.

New Hampshire Insurance Department, Analysis of Hospital Price Variations **July 2011- April 2012**

- Evaluated the variation in prices paid by commercial health insurance carriers to New Hampshire health care providers. Analyzed the variance attributable to the relative proportion of Medicare, Medicaid, and uninsured patients, to the sickness and complexity of patient populations, and to other factors using New Hampshire's All Payer Claims Dataset.

Massachusetts Pediatric Asthma Bundled Payment Pilot **February 2011 - Present**

- Lead an effort to design, implement, and evaluate a bundled payment system for high-risk pediatric asthma patients enrolled in the Massachusetts Medicaid program, designed to ensure a financial return on investment through the reduction of costs related to hospital and emergency department visits and admissions.

Connecticut SustiNet Health Partnership **May 2010 – January 2011**

- Provided project management, facilitation, analytic support, and report writing to help this public-private Board of Directors and 8 advisory committees (comprised of 160 individuals) develop a public option health plan proposal using the medical home model and alternative payment methods.

Massachusetts Long-Term Care Financing Advisory Committee **July 2009 – November 2010**

- Provided project management, facilitation, analytic support, and report writing to help this advisory committee develop short-term and long-term recommendations for improving options for financing the costs of long-term services and supports.

Reforming Reform **September 2009 – June 2010**

- Analyzed the effects in Massachusetts of the Patient Protection and Affordable Care Act's provisions regarding disproportionate share hospital financing and the excise tax on high cost health insurance plans.

Massachusetts Health Care Quality and Cost Council, Boston, MA **2007–2008**

Executive Director

- Directed staff, policy development, and operations for this 16-member public-private Council
- Established statewide goals to improve health care quality, contain health care costs, and reduce racial and ethnic disparities in health care in Massachusetts. Drafted the Council's annual report listing specific tasks for each health care sector in order to meet statewide goals.
- Collected data from 22 commercial health insurers and built a dataset containing all health care claims data for all Massachusetts residents covered by a fully insured Massachusetts-based health plan. The dataset incorporated payments made under a wide range of payment methodologies and served as the foundation for the Massachusetts All-Payer Claims Dataset.
- Designed and launched a consumer-friendly health care quality and cost information website, www.mass.gov/myhealthcareoptions, the first in the nation to display hospital-specific quality and cost information simultaneously.
- Guided the Council and its committees to establish strategic direction; developed and implemented the Council's communications strategy.
- Served as a liaison between the Council, its 30-member advisory committee, and other key constituencies.
- Directed the Council's administrative functions: managed the Council's $1.9 million budget; drafted and promulgated three complex regulations; and procured and managed eight vendor contracts.

Massachusetts Office of the Attorney General, Boston, MA **2003–2007**

Director of Health Policy

- Advised the Massachusetts attorney general and assistant attorneys general on health policy matters, payment methods, rates, purchasing strategies, and other health care components of legal cases.
- Implemented the attorney general's health care priorities in coordination with the Office's Divisions of Public Charities, Insurance, and Consumer Protection and Anti-Trust.
- Identified financially distressed hospitals and health plans and ensured they developed viable turnaround plans.
- Analyzed the effects of potential mergers and acquisitions on the health care market.
- Distributed legal settlement funds to health care charities.
- Received the attorney general's Award for Excellence, 2006.

Massachusetts Division of Health Care Finance and Policy, Boston, MA

Director, Office of Special Policy Initiatives	*2001–2003*
Policy Development Manager	*1996–2001*

- Advised the agency commissioner and the secretary of Health and Human Services on health policy issues. Directed complex, high-profile projects that crossed department and agency lines.
- Massachusetts Health Care Task Force (2000-2002): Directed staff support and analysis of private and public payment rates and methods, provider cost, utilization and financial status trends in the hospital, nursing home, pharmacy, and other sectors. Task Force members included the governor, attorney general, legislative leaders, other high level government officials, CEOs of major hospitals and health plans, and leaders of professional organizations and advocacy groups.
- Special Commissions on Uncompensated Care (1997 and 2002): Directed staff support and analysis for two Commissions composed of representatives from government, health care providers, payers, business and consumers and charged with revising the Commonwealth's policies and procedures for financing uncompensated care.
- Developed policy for the Massachusetts Uncompensated Care Pool, a $345 million fund that paid for health care services for low income uninsured and under-insured individuals.
- Implemented a $100 million surcharge on payments to hospitals and an electronic system to collect patient-level Uncompensated Care eligibility and claims data for the 350,000 patients served by the Pool.

Massachusetts Rate Setting Commission, Boston, MA

Assistant Manager	*1993–1996*
Senior Policy Analyst	*1992–1993*
Policy Analyst	*1990–1991*

- Calculated maximum allowable private sector charges under Massachusetts' All-Payer Rate Setting system.
- Developed pricing methods and calculated payment rates for Massachusetts Medicaid, workers' compensation, Uncompensated Care Pool, and Medicaid disproportionate share.
- Developed and analyzed policy options, drafted regulations, summarized and critiqued testimony presented at public hearings, and recommended final regulations to commissioners.
- Evaluated the effects of proposed legislation on hospital costs, utilization, access, rates of payment, financial status, and market structure.

Selected Publications

- State of Vermont Health Care Financing Plan Beginning Calendar Year 2017, prepared for the Vermont Agency of Administration, January 2013. (project lead, lead author, and editor)
- Analysis of Price Variations in New Hampshire Hospitals, prepared for the New Hampshire Insurance Department, April 2012. (project lead, lead author, and editor)

- Report to the Connecticut General Assembly from the SustiNet Health Partnership Board of Directors, January 2011. (co-author and analyst)
- Securing the Future: Report of the Massachusetts Long-Term Care Financing Advisory Committee, November, 2010. (co-author and analyst)
- My Health Care Options website, www.mass.gov/myhealthcareoptions, launched December 2008. (staff director, co-author, and editor)
- Massachusetts Health Care Quality and Cost Council's [first] Annual Report, April 2008. (staff director, primary author, lead analyst, and editor)
- Attorney General Tom Reilly's 10 Practical Tips for Non-Profit Hospital Boards, October, 2004. (co-author)
- Report of the Special Commission on Uncompensated Care, December 27, 2002. (staff director, co-author, lead analyst, and editor)
- Cai, J., A. Lischko, and K. London, "Do Medicaid Patients Use More Inpatient Resources?" presented to the Academy Health Annual Research Meeting, June 25, 2002.
- Massachusetts Health Care Task Force. (analytic staff director)
    - Final Report, 2002
    - 11 Interim Reports, June 2000 – November 2001
- Uncompensated Care Pool, FY 1999 [first] Annual Report, Massachusetts Division of Health Care Finance and Policy, March, 2000. (project manager, lead analyst, and editor)
- Weissman, J.S., P. Dryfoos, and K. London, "Income Levels of Bad-Debt and Free-Care Patients in Massachusetts Hospitals", Health Affairs, July/August 1999, 18:4 pp. 156-166.
- The Impact of Medicare Provisions in the Balanced Budget Act of 1997 on Massachusetts Health Care Providers, Consumers and Medicaid: A Report to the Senate Committee on Ways and Means, House Committee on Ways and Means and Joint Committee on Health Care, Massachusetts Division of Health Care Finance and Policy, May 1998. (project manager and lead analyst)

Appendix A: Sample SAS Code

The CHLE team created SAS code for a project for the Vermont Green Mountain Care Board to analyze the variation of commercial prices among Vermont providers. This SAS code completes the following tasks:

- Reads data from the state's all-payer claims data (VHCURES);
- Filters the data to retain only records required for analysis;
- Creates new variables needed for analysis (e.g. allowed amount);
- Merges the main dataset with other files that identify provider specialty and location;
- Assigns "dummy" variables to create categorical variables;
- Performs multivariate regressions.

```
/*Objective: Analyze price variation among commercial payers for professional
services in Vermont.  */
/*Description:  Program will create a subset of data from the VHCURES data,
filtered by date, CPT code, site of service, and use flags.*/
/*Analysis is completed to determine the amount of variation present among
the commercial payers.  */
/*Multivariate analysis is completed to analyze factors that influence
variation.*/
/*Inputs:  VHCURES data, reference tables from Excel*/


libname vtdata '[Redacted]';

/*Apply filters to data to create subset file*/

 * Save data after 1/1/2012 only;
   data vtdata.med_detail2012;
         set vtdata.med_detail;
         if FIRST_SVC_DATE > 20120101;
         run;

      * Check counts, sums for documentation;
            proc means data=vtdata.med_detail2012 sum;
            var paid;
            output out=work.sums sum=;run;

 * STEP 1: Filter for site location types - keep office, OP hospital, clinic
codes.  See ref_service_site table for codes detail;

      data step1; *7,330,436 obs;
      set vtdata.med_detail2012; *13,390,993;

      if svc_site_type not in(11,22,21,23,20,72,49,71,50,17) then delete;
      run;

      * Check counts, sums for documentation;
            proc means data=step1 sum;
```

```
            var paid;
            output out=work.sums sum=;run;

* STEP 2: Identify quarters, where Q1=Q12012...Q5=Q12013 - anything >Q2 2013
deleted as likely incomplete data;
      data step2;
      set step1;

      month=substr(first_svc_date,9,2);
      year=substr(first_svc_date,7,2);
      if month in('01', '02','03') and year='12' then quarter='1Q';
      else if month in('04','05','06') and year='12' then quarter='2Q';
      else if month in ('07','08','09') and year='12' then quarter='3Q';
      else if month in('10','11','12') and year='12' then quarter='4Q';
      else if month in('01','02','03') and year='13' then quarter='5Q';
      else if month in('04','05','06') and year='13' then delete;

      run;

      * Check counts, sums for documentation;
            proc means data=step2 sum;
            var paid;
            output out=work.sums sum=;run;

* STEP 3: Filter by useflag - keep only "okay to use" claims, exclude
duplicates, secondary - see ref_useflag table for codes detail;
      data step3;
      set step2;
      if useflag ne 0 then delete;
      run;

      * Check counts, sums for documentation;
            proc means data=step3 sum;
            var paid;
            output out=work.sums sum=;run;

* STEP 4: Delete claims reversals - see ref_claim_status table for codes
detail;
      data step4;
      set step3;
      if claim_status in(22) then delete;
      run;

      * Check counts, sums for documentation;
            proc means data=step4 sum;
            var paid;
            output out=work.sums sum=;run;

* STEP 5: Filter by payer - keep BCBS, MVP, CIGNA, VHP codes - list ok'd by
SK email 12/12/13  - see ref_payer for codes detail;
      data step5;
      set step4;

      if payerid not in
      (1079,1174,4109,4107,4108,1163,1246,1290,1287,1242) then delete;
      run;
```

```
      * Check counts, sums for documentation;
            proc means data=step5 sum;
            var paid;
            output out=work.sums sum=;run;

* STEP 6: Identify groups that are Catamount products, which are BCBS
administered but have lower rates - see list of groups from SK 11/18/2013;
      data step6;
      set step5;

      if payerid in(1079) and ins_group in
      ('81501', '81502', '81503', '81504', '81505', '81506', '81507',
      '81508', '81509', '95001', '95002', '95003', '95004', '95005', '95006',
      '95007', '95008', '95009', '95010', '95011', '95012')
      then catamount1=1; else catamount1=0;

      cat1163=substr(ins_group,1,6);
      if payerid in(1163) and cat1163 in
      ('249668','249865','249866','249867','249868',
      '249869','249870','249871','249872','249873','249874','249875')
      then  catamount2 = 1; else catamount2=0;

      catamounttotal=catamount1+catamount2;

      * Creating product2, where Catamount is a new product;
      if product in('EP') and catamounttotal =0 then product2=1;
      else if product in('HM') and catamounttotal =0 then product2=2;
      else if product in('HN') and catamounttotal=0 then product2=3;
      else if product in('IN') and catamounttotal=0 then product2=4;
      else if product in('PR') and catamounttotal =0 then product2=5;
      else if product in('PS') and catamounttotal=0 then product2=6;
      else if product in('SP') and catamounttotal=0 then product2=7;
      else if catamounttotal gt 0 then product2=8;
      else product2=9;
      if product2=9 then delete; run;

      * Check counts, sums for documentation;
            proc means data=step6 sum;
            var paid;
            output out=work.sums sum=;run;

* STEP 7:  Delete claims that are paid less than zero (error claims);
      data step7;
      set step6;
      if paid lt 0 then delete;run;

      *Check counts, sums for documentation;
            proc means data=step7 sum;
            var paid;
            output out=work.sums sum=;run;

* STEP 8: Select top 5 CPT codes by volume for ranges of CPT codes: E&M,
Medicine, Radiology, Surgery
See "[path redacted]\topCPTs by dept v2.xls."
```

```
Note: For surgery, we do NOT include "routine venipuncture" (cpt 36415) or
"capillary blood draw" (cpt 36416), the two most common CPTs. These are often
zero paid or bundled in with other procedures;

      data step8;
      set step7;

      *defining the four areas;
      if cpt in(99213,99214,99212,99396,99203) then area=1; *em;
      else if cpt in(97110,90806,97140,98941,90471) then area=2; *medicine;
      else if cpt in(77052,71020,77057,71010,73630) then area=3; *radiology;
      else if cpt in(20610,17000,45378,11100,17110) then area=4; *surgery;
      else area=5;

      if area =5 then delete;run;

      * Check counts, sums for documentation;
            proc means data=step8
            sum;
            var paid;
            output out=work.sums sum=;run;

* STEP 9: Identified some claims with negative co-insurance, delete claims;
      data step9;
      set step8;

      if coinsurance lt 0 then delete;run;

* STEP 10: Create Allowed Amount field - delete negatives;
      data step10;
      set step9;
      allowed_amt=sum(paid,prepaid,copay,deductible,coinsurance);
      if allowed_amt le 0 then delete;
      run;

      * Check counts, sums for documentation;
      proc means data=step10 sum;
      var paid;
      output out=work.sums sum=;run;

* STEP 11: Prices may be inflated if allowed amount is (Qty * Price) - for
comparison purposes, keep only quantity=1;
      data step11;
      set step10;
      if qty ne 1 then delete;
      run;

      * Check counts, sums for documentation;
            proc means data=step11 sum;
            var paid;
            output out=work.sums sum=;run;


* STEP 12:  Merge in the dataset that contains specialty and location
variables.
```

```
*  See code file  "[path redacted]\VT_ref_tables_for_merge.sas" for importing
and merging of location and specialty category rankings for each provider*
Provider specialty--distinguishes primary care physicians from specialists
      *The following titles were considered primary care:
            *Adolescent Medicine, Nurse Practitioner (generalist), family
            health/medicine, general practice,
            internal medicine, medical clinic/doctor/group, pediatrics,
            osteopathic manipulative medicine,
            other medical care, physician assistant, urgent care, PCP
                  *All others were considered specialties
                  *See "[path redacted]\provider_zip_location_to_import.txt."

 *  Rural/urban locations were imported from file "[path
redacted]/provider_specialties_to_import.xls."
  *ZIP codes were assigend one of the following categories:
      *--GCRSA--Governor Certified Rural Shortage Areas (based on GCRSA map)
      *--MSAs -- per Census, Vermont has 1 Metropolitan Service Area (MSA):
      Burlington and several Micro-SAs:  Barre, Bennington
      *--other rural--all remaining towns are "other rural"
      *--out of state ZIPs--these are labeled "out of state";


proc sort data=step11;
  by svc_prvidn;
run;

proc sort data=vtdata.provider_ref_zip_specialty;
  by svc_prvidn;
run;

data step12;
  merge step11 (in=a) vtdata.provider_ref_zip_specialty (in=b);
  by svc_prvidn;
  if a;
run;


* STEP 13: Some claims had no location, coded as 10 or missing - delete;
      data step13;
      set step12;
      if location_number in(10) then delete;
      if location_number in(.) then delete;
      run;

      * Check counts, sums for documentation;
            Proc freq data=step13;
            tables location_number;run;
      *sum overall;
            proc means data=step13 sum;
            var paid;
            output out=work.sums sum=;run;
      *sum by area;
            proc sort data=step13; by area;run;
            proc means data=step13 sum;
            var paid;
            by area;
```

```
            output out=work.sums sum=;run;

* STEP 14: Create dummy variables for location and specialty type;
      data step14;
      set step13;

      * In Chittenden County = 1, no=0;
      if prv_zipcode
      in(05487,05401,05402,05405,05406,05408,05445,05439,05446,05449,05451,05
      452,05453,05461,05462,05465,05466,05468,05477,05482,05403,05407,05487,0
      5489,05490,05494,05495,05404) then Chittdummy=1; else Chittdummy=0;

* Specialty Rank coding = 0=specialist, 1=primary/family medicine, 9=unknown
      *See STEP 12 above for description of which job titles were considered
      primary care and which were specialty care;


      if specialty_rank in(0) then specialtynonprimary=1; else
specialtynonprimary=0;
      if specialty_rank in(1) then specialtyprimary=1; else
specialtyprimary=0;
      if specialty_rank in(9) then specialtymissing=1; else
specialtymissing=0;
      run;

      * Check counts, sums for documentation;
            proc freq data=step14;
            tables location_number chittdummy specialtynonprimary
specialtyprimary specialtymissing;run;

            proc sort data=step14; by payerid;run;
            proc freq data=step14;
            tables product;
            by payerid;
            where area in(1);run;

* STEP 15: Create variable for regressions - location and service site;

data step15;
set step14;

* Migrating TVHP from a payer to a product in two steps: 1. group tvhp with
BCBS and 2. create product3 where tvhp is its own product ;
payerid2=payerid;
if payerid in(1242) then payerid2 =1079;
product3=product2;
if payerid in(1242) then product3=10;

* Locations
    *See STEP 12 above for description of creation of location designations
by ZIP code;

If location_number in (1) then Burlington=1; else Burlington=0;
if location_number in(2,3,4,5,6) then micromsa =1; else micromsa=0;
if location_number in(7) then rural_shortage=1; else rural_shortage=0;
if location_number in(8) then other_rural=1; else other_rural=0;
```

```
if location_number in(9) then out_of_state=1; else out_of_state=0;

* Service site locations;
if svc_site_type in(11) then office=1; else office=0;
if svc_site_type in(22,21,23) then hospital=1; else hospital=0;
if svc_site_type in(20,72,49,71,50,17) then clinic=1; else clinic=0;

run;

      * Check counts, sums for documentation;
           proc freq data=step15;
           tables office hospital clinic;run;
           proc freq data=step15;
           tables payerid2 product3;run;

* STEP 16: Create permanent dataset for each E&M service area where the
outliers (i.e. bottom 5% and the top 95% of allowed amount) are removed ;

* E&M;
      data vtdata.emonly_no595;
      set step15;
      if allowed_amt ge 167 then delete;
      if allowed_amt le 51 then delete;
      where area in(1); run;

      proc means data=vtdata.emonly_no595 sum;
      var paid;
      output out=work.sums sum=;run;

* STEP 17:  Create a size value for provider based on each provider's share
of patient volume for each payer
      *Thus a provider who contracts with multiple payers will have a
different size values for each payer;

*getting volume for each provider as count of records for that provider;

proc sql;
create table all_size as
  select payerid, BILLING_PRVIDN,
  count(memberidn) as volume
  from vtdata.emonly_no595
  group by payerid, billing_prvidn;
run; quit;

*sort by payer so can get total for each payer;
proc sort data= all_size;
  by payerid descending volume ;
run;

*total volume for each payer goes into new table;
data all_sum (drop=billing_prvidn volume);
  set all_size;
  by payerid;

  if first.payerid then payer_total=0;
  payer_total+volume;
```

```
  if last.payerid=1 then output ;
run;

*sort the payer total volume data by payer so can merge;
proc sort data=all_sum ;
  by payerid;
run;

*sort the provider volume data by payer so can merge;
proc sort data= all_size;
  by payerid;
run;

*merge data on provider volume and payer total volume, so can calculate
provider's % of volume;
data all_size_final ;
  merge all_size all_sum;
  by payerid;
run;

*add new variable--provider's % of payer's total volume;
data all_size_final2;
  set all_size_final ;
provider_size=round(volume / payer_total,.001);
run;


*sort billing data by payer so can merge;
proc sort data=vtdata.emonly_no595;
   by payerid billing_prvidn;
run;

*sort size data by payer so can merge;
proc sort data=all_size_final2;
  by payerid billing_prvidn;
run;


*merge size data into billing data;
data merged_emonlyno595_providervol;
merge vtdata.emonly_no595 (in=a) all_size_final2;
by payerid billing_prvidn;
if a; run;

*this univariate produces a "spread" of provider_size that we use to
determine how to define big, medium and large;
      proc univariate data= merged_emonlyno595_providervol;
      var provider_size;
      run;

/*defining: volume groupings, a new product (product3)-- where the vermont
health plan (VHP) is a product, not a payer,
service site groupings and region groupings*/

data merged_emonlyno595_providervol2;
set merged_emonlyno595_providervol;
```

```
if month in('01', '02','03') and year='12' then q1dummy=1; else q1dummy=0;
if month in('04','05','06') and year='12' then q2dummy=1; else q2dummy=0;
if month in ('07','08','09') and year='12' then q3dummy=1; else q3dummy=0;
if month in('10','11','12') and year='12' then q4dummy=1; else q4dummy=0;
if month in('01','02','03') and year='13' then q5dummy=1; else q5dummy=0;

* Use results from proc univariate step above;
if provider_size < 0.03 then volumegroup1=1; else volumegroup1=0;
if 0.13 >provider_size ge 0.03 then volumegroup2=1; else volumegroup2=0;
if provider_size ge 0.13 then volumegroup3=1; else volumegroup3=0;

*payers;
if payerid2 in(1079) then BCBSVT=1; else BCBSVT=0;
if payerid2 in(1174) then Cigna=1; else Cigna=0;
if payerid2 in(4109) then CignaEastClaims=1; else CignaEastClaims=0;
if payerid2 in(1163) then MVPHIC=1; else MVPHIC=0;
if payerid2 in(1246) then MVPHP=1; else MVPHP=0;
if payerid2 in(1287) then MVPSelect=1; else MVPSelect=0;

*product3;
if product3 in(1) then excl_provider_dummy=1; else excl_provider_dummy=0;
if product3 in(2) then hmo_dummy=1; else hmo_dummy=0;
if product3 in(4) then indemnity_dummy=1; else indemnity_dummy=0;
if product3 in(5) then ppo_dummy=1; else ppo_dummy=0;
if product3 in(6) then pos_dummy=1; else pos_dummy=0;
if product3 in(8) then cat_dummy=1; else cat_dummy=0;
if product3 in(10) then vhp_dummy=1; else vhp_dummy=0;

*grouping the svc_sites;
if svc_site_type in(11) then office=1; else office=0;
if svc_site_type in(22,21,23) then hospital=1; else hospital=0;
if svc_site_type in(20,72,49,71,50,17) then clinic=1; else clinic=0;

*region variables;
If location_number in (1) then Burlington=1; else Burlington=0;
if location_number in(2,3,4,5,6) then micromsa =1; else micromsa=0;
if location_number in(7) then rural_shortage=1; else rural_shortage=0;
if location_number in(8) then other_rural=1; else other_rural=0;
if location_number in(9) then out_of_state=1; else out_of_state=0;
run;

*confirming that the new "product3" variable looks correct;
proc freq data=merged_emonlyno595_providervol2;
tables product3;run;


*model with both Chittenden dummy and the other region variables;
proc sort data=merged_emonlyno595_providervol2; by cpt;run;
ods pdf file='v:/oct2013update/emno595model';
proc reg data=merged_emonlyno595_providervol2;
model allowed_amt= excl_provider_dummy hmo_dummy indemnity_dummy ppo_dummy
pos_dummy vhp_dummy
Cigna CignaEastClaims MVPHIC MVPHP MVPSelect office clinic q1dummy q2dummy
q3dummy q4dummy
volumegroup2 volumegroup3 specialtynonprimary specialtymissing Chittdummy
 micromsa rural_shortage other_rural out_of_state/vif;
```

```
 by cpt;
 run;
 ods pdf close;

*choosing between chittdummy and region variables;
ods pdf file='v:/oct2013update/emno595model.chitt.v.region';
proc reg data=merged_emonlyno595_providervol2;
model allowed_amt= excl_provider_dummy hmo_dummy indemnity_dummy ppo_dummy
pos_dummy vhp_dummy
Cigna CignaEastClaims MVPHIC MVPHP MVPSelect office clinic q1dummy q2dummy
q3dummy q4dummy
volumegroup2 volumegroup3 specialtynonprimary specialtymissing
Chittdummy/vif;
 by cpt;
 run;

proc reg data=merged_emonlyno595_providervol2;
model allowed_amt= excl_provider_dummy hmo_dummy indemnity_dummy ppo_dummy
pos_dummy vhp_dummy
Cigna CignaEastClaims MVPHIC MVPHP MVPSelect office clinic q1dummy q2dummy
q3dummy q4dummy
volumegroup2 volumegroup3 specialtynonprimary specialtymissing
 micromsa rural_shortage other_rural out_of_state/vif;
 by cpt;
 run;
 ods pdf close;
```

Agreement with the University of Massachusetts Medical School (UMMS) on behalf of its Center for Health Law and Economics

2013-RRG-304 HealthCost Analytics

Exhibit B
Form of Payment

The services will be billed at the rates set forth in the cost bid included in the attached proposal to the New Hampshire Insurance Department in response to RFP 2013 RRG-304 HealthCost Analytics dated January 30, 2014.

The cost will not exceed a total contract price of $174,281. The services shall be billed at least monthly and the invoice for the service shall identify the person or persons providing the service. Payment shall be made within 30 days of the date the service is invoiced. Payments will be made in the name of the University of Massachusetts and will be sent to: Office of the Bursar, University of Massachusetts, 55 Lake Avenue North, Worcester, MA 01655.

Agreement with the University of Massachusetts Medical School (UMMS) on behalf of its Center for Health Law and Economics

2013-RRG-304 HealthCost Analytics

Exhibit C

Special Provisions – Modifications, Additions, and/or Deletions to Form P-37 and Standard Exhibit I

Subparagraph 13/Indemnification of Form P-37 is hereby deleted in its entirety and replaced with the following:

"INDEMNIFICATION: Contractor shall comply with any and all requirements of this Agreement; in the event that the Contractor fails to comply with any such requirements, including, but not limited to, disclosure of any PHI in violation of this Agreement, the Covered Entity may pursue all available remedies, at law and in equity, including without limitation any damage or losses it suffers from Contractor's breach of this Agreement. The respective rights and obligations of Contractor under this Agreement shall survive termination of this Agreement."

Subparagraph 14.1.2 of Form P-37 is deleted in its entirety.

Subparagraph 14.3 of Form P-37 is hereby amended to read:

"The Contractor shall furnish to the Contracting Officer identified in block 1.9, or his or her successor, a certificate(s) of insurance for all insurance required under this Agreement. Contractor shall also furnish to the Contracting Officer identified in block 1.9, or his or her successor, certificate(s) of insurance for all renewal(s) of insurance required under this Agreement as soon as reasonable after policy renews. The certificate(s) of insurance and any renewals thereof shall be attached and are incorporated herein by reference. Each certicate(s) of insurance shall contain a clause requiring the insurer to provide notice in accordance with the policy provisions. The Contractor shall endeavor to provide the Contracting Officer identified inblock 1.9, or his or her successor, no less than ten (10) days prior written notice of cancellation or modification of the policy."

Note: Certificate of liability insurance attached

Note: Self-insured workers' compensation insurance letter attached

Section (6) f/Survival in the Standard Exhibit I executed in connection with the Agreement is hereby amended to read:

"Survival. Provisions in this Exhibit I regarding the use and disclosure of PHI, return or destruction of PHI, extensions of the protections of the Agreement in section 3 k., the defense and indemnification provisions of section 3 d. and standard contract provision #13, as amended, shall survive the termination of the Agreement."

University of Massachusetts
UMASS Medical School

Commonwealth Medicine
University of Massachusetts Medical School
333 South Street
Shrewsbury, MA 01545-2732 USA
508.856.6222 (office) 508.856.6100 (fax)

Alternative Documentation Provided in lieu of Certificate of Good Standing

A Certificate of Good Standing from the State of New Hampshire is not applicable to the University of Massachusetts. The University of Massachusetts is a public university created by the legislature of the Commonwealth of Massachusetts under statute M.G.L. ch. 75.

TAX STATUS OF THE UNIVERSITY OF MASSACHUSETTS

TAX-EXEMPT STATUS: The University of Massachusetts is tax-exempt under section 115 of the Internal Revenue Code and/or under the doctrine of intergovernmental tax immunity. Section 115 provides tax-exemption for "income derived from the exercise of any essential governmental function." In Revenue Ruling 75-436, the Internal Revenue Service recognized that citizen education was an essential governmental function.

CONTRIBUTIONS TO THE UNIVERSITY: For income tax purposes, section 170 provides that donations made for exclusively public purposes, to or for the use of a state or political subdivision, are deductible against the taxable income of individuals, corporations, and other taxpayers, subject to various limitations. For estate tax purposes, section 2055(a) provides that bequests, legacies, devises, or transfers made by an estate for exclusively public purposes, to or for the use of any state or political subdivision, are deductible from the value of the gross estate subject to various limitations. For gift tax purposes, section 2522(a) provides that transfers made for exclusively public purposes, to or for the use of any state or political subdivision, are deductible in computing taxable gifts subject to various limitations. The Internal Revenue Service has ruled (Private Letter Rulings 8336068, 8935012, and 9017014) that contributions to state universities qualify as being made for "exclusively public purposes" and "to or for the use of" a state. Although private letter rulings cannot be relied upon as legal precedent, they give a good indication of how the IRS would rule on a similar fact pattern. If donors prefer to contribute to a tax-exempt organization with an IRS determination letter and with section 501(c)(3) tax-exempt status, they should contribute to the University of Massachusetts Foundation, Inc.

Federal Tax Identification Numbers:

UNIVERSITY OF MASSACHUSETTS: 043167352

COMMONWEALTH OF MASSACHUSETTS: 04-6002284
(The Commonwealth of Massachusetts F.E.I.N. is used for payroll tax purposes.)

DEPARTMENT OF THE TREASURY
INTERNAL REVENUE SERVICE
PHILADELPHIA, PA 19255

CERTIFICATION
PROGRAM

Date: April 7, 2014

)882

Taxpayer: UNIVERSITY OF MASSACHUSETTS
TIN: 04-3167352
Tax Year: 2014

I certify that the above-named entity is a State, or political subdivision of a State, or an agency, instrumentality, or public educational organization of a State or political subdivision, which is exempt from U.S. tax under the Internal Revenue Code, and is a resident of the United States of America for purposes of U.S. taxation.

Nancy J. Aiello
Field Director, Accounts Management

Form 6166 (Rev. 6-2008)
Catalog Number 43134V

EXTRACT FROM THE RECORDS OF
UNIVERSITY OF MASSACHUSETTS

Granting Authority to Execute Contracts and All Other Instruments

I, Zunilka Barrett, Secretary of the Board of Trustees of the University of Massachusetts, do hereby certify that the following is a true and complete copy of a vote duly adopted by the Board of Trustees of the University of Massachusetts at a meeting duly called and held on the fifth day of February, nineteen hundred and ninety-seven at the University of Massachusetts, Chancellor's Conference Room, Boston, Massachusetts:

"Further, to affirm that, except as to matters governed by the University of Massachusetts Intellectual Property Policy (Doc. T96-040), the Treasurer of the University of Massachusetts or his designee shall be the sole contracting officer of the University with the Authority to execute all contract, grants, restricted gifts (excluding endowments), and amendments thereto for sponsored programs in instruction, research, or public service, unless and until otherwise voted by the Board of Trustees."

I further certify that the Senior Vice President for Administration & Finance and Treasurer of the University, Christine M. Wilda, has retained the right to remain the sole contracting officer of the University of Massachusetts, but in her absence, she has designated Philip J. Marquis, Assistant Vice President for Central Administrative Services and Associate Treasurer.

I further certify that effective January 1, 2014, the following is a list of designated individuals authorized in accordance with the afore referenced votes to review and execute all grants and contracts for sponsored programs in instruction, research and public service that are applicable to and received on behalf of the University of Massachusetts for their respective campuses.

Amherst Campus
Kumble R. Subbaswamy, Chancellor, Amherst Campus, Amherst, Massachusetts,
John Dubach, Deputy Chancellor, Amherst Campus, Amherst, Massachusetts,
Michael Malone, Vice Chancellor, Amherst Campus, Amherst, Massachusetts,
Carol P. Sprague, Director of the Office of Grants and Contracts Administration, Amherst Campus, Amherst, Massachusetts,
Jennifer A. Donais, Director of Research Compliance, Amherst Campus, Amherst, Massachusetts,
Theresa W. Girardi, Assistant Director, Amherst Campus, Amherst, Massachusetts,
Nancy E. Stewart, Assistant Director, Amherst Campus, Amherst, Massachusetts,
James B. Ayres, Assistant Director, Amherst Campus, Amherst, Massachusetts,
Laura J. Howard, Associate Director, Division of Continuing Education, Amherst Campus, Amherst, Massachusetts

Boston Campus
J. Keith Motley, Chancellor, Boston Campus, Boston, Massachusetts,
Ellen M. O'Connor, Vice Chancellor for Administration & Finance, Boston Campus, Boston, Massachusetts,
Winston Langley, Provost & Vice Chancellor for Academic Affairs, Boston Campus, Boston, Massachusetts,

Zong-Guo Xia, Vice Provost for Research and Strategic Initiatives, Boston Campus, Boston, Massachusetts,
Matthew L. Meyer, Associate Vice Provost for Research and Director of the Office of Research & Sponsored Programs, Boston Campus, Boston, Massachusetts,
Paul M. Mullane, Deputy Director of the Office of Research and Sponsored Programs, Boston Campus, Boston, Massachusetts

Dartmouth Campus
Divina Grossman, Chancellor, Dartmouth Campus, Dartmouth, Massachusetts,
Mohammad A. Karim, Provost & Executive Vice Chancellor for Academic and Student Affairs & Chief Operating Officer, Dartmouth Campus, Dartmouth, Massachusetts,
Mark A. Preble, Interim Vice Chancellor for Administration and Finance & Chief Financial Officer, Dartmouth Campus, Dartmouth, Massachusetts,
Marilyn Scudellari-Presto, Associate Vice Chancellor for Financial Services, Administration & Finance, Dartmouth Campus, Dartmouth, Massachusetts,
Louis Goodman, Interim Vice Chancellor for Research & Economic Development, Dartmouth Campus, Dartmouth, Massachusetts,
Michelle M. Plaud, Manager of Pre and Post Award Administration, Dartmouth Campus, Dartmouth, Massachusetts,

Lowell Campus
Martin T. Meehan, Chancellor, Lowell Campus, Lowell, Massachusetts,
Joanne Yestramski, Vice Chancellor for Administration, Finance, Facilities & Technology, Lowell Campus, Lowell, Massachusetts,
Jacqueline F. Moloney, Executive Vice Chancellor, Lowell Campus, Lowell, Massachusetts,
Ahmed Abdelal, Provost, Lowell Campus, Lowell, Massachusetts,
Steven O'Riordan, Associate Vice Chancellor for Financial Services, Lowell Campus, Lowell, Massachusetts,
Linda Concino, Proposal Development Manager, Lowell Campus, Lowell, Massachusetts,
Julie Chen, Interim Vice Provost for Research, Lowell Campus, Lowell, Massachusetts,

President's Office
Tom Chmura, Vice President for Economic Development, President's Office, Boston, Massachusetts,
Lynn Griesemer, Associate Vice President for Economic Development and Executive Director for the Donahue Institute, President's Office, Boston, Massachusetts,
Eric Heller, Deputy Director for the Donahue Institute, President's Office, Boston, Massachusetts,

Worcester
Michael F. Collins, MD, Chancellor, University of Massachusetts Medical School, Worcester, Massachusetts,
Robert Jenal, Executive Vice Chancellor for Administration & Finance, University of Massachusetts Medical School, Worcester, Massachusetts,
Joyce A. Murphy, Executive Vice Chancellor for Commonwealth Medicine, University of Massachusetts Medical School, Worcester, Massachusetts,
Nancy E. Vasil, Associate Vice Chancellor for Administration & Finance, University of Massachusetts Medical School, Worcester, Massachusetts,
Margaret L. Johnson, Director, Office of Clinical Research, University of Massachusetts Medical School, Worcester, Massachusetts,

Gina Shaughnessy, Assistant Director of Contracts, University of Massachusetts Medical School, Worcester, Massachusetts,
Janice Lagace, Assistant Director Grants, University of Massachusetts Medical School, Worcester, Massachusetts,
Diego R. Vazquez, Assistant Vice Provost for Research Funding Services, University of Massachusetts Medical School, Worcester, Massachusetts

I further certify that Christine M. Wilda, Philip J. Marquis, Kumble R. Subbaswamy, John Dubach, Michael Malone, Carol P. Sprague, Jennifer A. Donais, Theresa W. Girardi, Nancy E. Stewart, James B. Ayres, Laura J. Howard, J. Keith Motley, Ellen M. O'Connor, Winston Langley, Zong-Guo Xia, Matthew L. Meyer, Paul M. Mullane, Divina Grossman, Mohammad A. Karim, Mark A. Preble, Marilyn Scudellari-Presto, Louis Goodman, Michelle M. Plaud, Martin T. Meehan, Joanne Yestramski, Jacqueline F. Moloney, Ahmed Abdelal, Steven O'Riordan, Linda Concino, Julie Chen, Tom Chmura, Lynn Griesemer, Eric Heller, Michael F. Collins, MD, Robert Jenal, Joyce A. Murphy, Nancy E. Vasil, Margaret L. Johnson, Gina Shaughnessy, Janice Lagace and Diego R. Vazquez are members of the University Administration with its principal office located at 333 South Street, Shrewsbury, County of Worcester, in the Commonwealth of Massachusetts

Date: 3-25-14

Zunilka Barrett, Secretary to the
Board of Trustees

CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY) 03/26/2014

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

Holder Identifier :

PRODUCER	CONTACT NAME:	
Aon Risk Services Northeast, Inc. Providence RI Office 100 Westminster Street, 10th Floor Providence RI 02903-2393 USA	PHONE (A/C. No. Ext): (866) 283-7122	FAX (A/C. No.): (800) 363-0105
	E-MAIL ADDRESS:	

INSURED	INSURER(S) AFFORDING COVERAGE	NAIC #
University of Massachusetts Office of the Treasurer 333 South Street, Suite 450 Shrewsbury MA 01545 USA	INSURER A: Lexington Insurance Company	19437
	INSURER B:	
	INSURER C:	
	INSURER D:	
	INSURER E:	
	INSURER F:	

COVERAGES **CERTIFICATE NUMBER:** 570053225890 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS. **Limits shown are as requested**

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY			004055483	05/01/2013	05/01/2014	EACH OCCURRENCE	$2,000,000
	CLAIMS-MADE [X] OCCUR			SIR applies per policy terms & conditions			DAMAGE TO RENTED PREMISES (Ea occurrence)	$1,000,000
							MED EXP (Any one person)	
							PERSONAL & ADV INJURY	$1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$4,000,000
	X POLICY [ ] PRO-JECT [ ] LOC						PRODUCTS - COMP/OP AGG	$4,000,000
	OTHER:						SIR	$100,000
	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	
	ANY AUTO						BODILY INJURY (Per person)	
	ALL OWNED AUTOS / SCHEDULED AUTOS						BODILY INJURY (Per accident)	
	HIRED AUTOS / NON-OWNED AUTOS						PROPERTY DAMAGE (Per accident)	
	UMBRELLA LIAB OCCUR						EACH OCCURRENCE	
	EXCESS LIAB CLAIMS-MADE						AGGREGATE	
	DED RETENTION							
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y / N						PER STATUTE / OTH-ER	
	ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER EXCLUDED? [ ] N / A (Mandatory in NH)						E.L. EACH ACCIDENT	
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE-EA EMPLOYEE	
							E.L. DISEASE-POLICY LIMIT	

Certificate No : 570053225890

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

RE: Commonwealth Medicine Contract with New Hampshire for Healthcost Analytics Services, RFP No. 2013-RRG-304. Ongoing Event Starting March 26, 2014.

CERTIFICATE HOLDER

New Hampshire Insurance Department
Attn: Alexander Feldvebel
21 South Fruit Street, Suite 14
Concord NH 03301 USA

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Aon Risk Services Northeast, Inc.

University of Massachusetts
UMASS Amherst • Boston • Dartmouth • Lowell • Worcester • UMassOnline

Treasurer's Office

To Whom It May Concern:

The University of Massachusetts, as an entity of the Commonwealth of Massachusetts, is self-insured for Worker's Compensation in accordance with Chapter 152 of the Massachusetts General Laws.

If you have any questions or concerns, please contact me at (774) 455-7590.

Sincerely,

Andrew W. Russell
Director of Risk Management
And Insurance

333 South Street | Suite 450 | Shrewsbury, MA 01545 | P: (774) 455-7575 | F: (774) 455-7592 | www.massachusetts.edu/treasurer

STANDARD EXHIBIT I

The Contractor identified as in Section 1.3 of the General Provisions of the Agreement agrees to comply with the Health Insurance Portability and Accountability Act, Public Law 104-191 and with the Standards for Privacy and Security of Individually Identifiable Health Information, 45 CFR Parts 160 and 164 and those parts of the HITECH Act applicable to business associates. As defined herein, "Business Associate" shall mean the Contractor and subcontractors and agents of the Contractor that receive, use or have access to protected health information under this Agreement and "Covered Entity" shall mean the New Hampshire Insurance Department.

BUSINESS ASSOCIATE AGREEMENT

(1) Definitions.

a. "Breach" shall have the same meaning as the term "Breach" in Title XXX, Subtitle D. Sec. 13400.

b. "Business Associate" has the meaning given such term in section 160.103 of Title 45, Code of Federal Regulations.

c. "Covered Entity" has the meaning given such term in section 160.103 of Title 45, Code of Federal Regulations.

d. "Designated Record Set" shall have the same meaning as the term "designated record set" in 45 CFR Section 164.501.

e. "Data Aggregation" shall have the same meaning as the term "data aggregation" in 45 CFR Section 164.501.

f. "Health Care Operations" shall have the same meaning as the term "health care operations" in 45 CFR Section 164.501.

g. "HITECH Act" means the Health Information Technology for Economic and Clinical Health Act, TitleXIII, Subtitle D, Part 1 & 2 of the American Recovery and Reinvestment Act of 2009.

h. "HIPAA" means the Health Insurance Portability and Accountability Act of 1996, Public Law 104-191 and the Standards for Privacy and Security of Individually Identifiable Health Information, 45 CFR Parts 160, 162 and 164.

i. "Individual" shall have the same meaning as the term "individual" in 45 CFR Section 164.501 and shall include a person who qualifies as a personal representative in accordance with 45 CFR Section 164.501(g).

j. "Privacy Rule" shall mean the Standards for Privacy of Individually Identifiable Health Information at 45 CFR Parts 160 and 164, promulgated under HIPAA by the United States Department of Health and Human Services.

k. "Protected Health Information" shall have the same meaning as the term "protected health information" in 45 CFR Section 164.501, limited to the information created or received by Business Associate from or on behalf of Covered Entity.

l. "Required by Law" shall have the same meaning as the term "required by law" in 45 CFR Section 164.501.

m. "Secretary" shall mean the Secretary of the Department of Health and Human Services or his/her designee.

n. "Security Rule" shall mean the Security Standards for the Protection of Electronic Protected Health Information at 45 CFR Part 164, Subpart C, and amendments thereto.

o. "Unsecured Protected Health Information" means protected health information that is not secured by a technology standard that renders protected health information unusable, unreadable, or indecipherable to unauthorized individuals and is developed or endorsed by a standards developing organization that is accredited by the American National Standards Institute.

p. Other Definitions - All terms not otherwise defined herein shall have the meaning established under 45 C.F.R. Parts 160, 162 and 164, as amended from time to time, and the HITECH Act.

(2) Use and Disclosure of Protected Health Information.

a. Business Associate shall not use, disclose, maintain or transmit Protected Health Information (PHI) except as reasonably necessary to provide the services outlined under Exhibit A of the Agreement. Further, the Business Associate shall not, and shall ensure that its directors, officers, employees and agents, do not use, disclose, maintain or transmit PHI in any manner that would constitute a violation of the Privacy and Security Rule.

b. Business Associate may use or disclose PHI:
   I. For the proper management and administration of the Business Associate;
   II. As required by law, pursuant to the terms set forth in paragraph d. below; or
   III. For data aggregation purposes for the health care operations of Covered Entity.

c. To the extent Business Associate is permitted under the Agreement to disclose PHI to a third party, Business Associate must obtain, prior to making any such disclosure, (i) reasonable assurances from the third party that such PHI will be held confidentially and used or further disclosed only as required by law or for the purpose for which it was disclosed to the third party; and (ii) an agreement from such third party to notify Business Associate, in accordance with the HITECH Act, Subtitle D, Part 1, Sec. 13402 of any breaches of the confidentiality of the PHI, to the extent it has obtained knowledge of such breach.

d. The Business Associate shall not, unless such disclosure is reasonably necessary to provide services under Exhibit A of the Agreement, disclose any PHI in response to a request for disclosure on the basis that it is required by law, without first notifying Covered Entity so that Covered Entity has an opportunity to object to the disclosure and to seek appropriate relief. If Covered Entity objects to such disclosure, the Business Associate shall refrain from disclosing the PHI until Covered Entity has exhausted all remedies.

e. If the Covered Entity notifies the Business Associate that Covered Entity has agreed to be bound by additional restrictions over and above those uses or disclosures or security safeguards of PHI pursuant to the Privacy and Security Rule, the Business Associate shall be bound by such additional restrictions and shall not disclose PHI in violation of such additional restrictions and shall abide by any additional security safeguards.

(3) Obligations and Activities of Business Associate.

a. Business Associate shall report to the designated Privacy Officer of Covered Entity, in writing, any use or disclosure of PHI in violation of the Agreement, including any security incident involving Covered Entity data, in accordance with the HITECH Act, Subtitle D, Part 1, Sec. 13402.

b. The Business Associate shall comply with all sections of the Privacy and Security Rule as set forth in, the HITECH Act, Subtitle D, Part 1, Sec. 13401 and Sec.13404.

c. Business Associate shall make available all of its internal policies and procedures, books and records relating to the use and disclosure of PHI received from, or created or received by the Business Associate on behalf of Covered Entity to the Secretary for purposes of determining Covered Entity's compliance with HIPAA and the Privacy and Security Rule.

d. Business Associate shall require all of its business associates that receive, use or have access to PHI under the Agreement, to agree in writing to adhere to the same restrictions and conditions on the use and disclosure of PHI contained herein, including the duty to return or destroy the PHI as provided under Section (3)b and (3)k herein. The Covered Entity shall be considered a direct third party beneficiary of the Contractor's business associate agreements with Contractor's intended business associates, who will be receiving PHI pursuant to this Agreement, with rights of enforcement and indemnification from such business associates who shall be governed by standard provision #13 of this Agreement for the purpose of use and disclosure of protected health information.

e. Within five (5) business days of receipt of a written request from Covered Entity, Business Associate shall make available during normal business hours at its offices all records, books, agreements, policies and procedures relating to the use and disclosure of PHI to the Covered Entity, for purposes of enabling Covered Entity to determine Business Associate's compliance with the terms of the Agreement.

f. Within ten (10) business days of receiving a written request from Covered Entity, Business Associate shall provide access to PHI in a Designated Record Set to the Covered Entity, or as directed by Covered Entity, to an individual in order to meet the requirements under 45 CFR Section 164.524.

g. Within ten (10) business days of receiving a written request from Covered Entity for an amendment of PHI or a record about an individual contained in a Designated Record Set, the Business Associate shall make such PHI available to Covered Entity for amendment and incorporate any such amendment to enable Covered Entity to fulfill its obligations under 45 CFR Section 164.526.

h. Business Associate shall document such disclosures of PHI and information related to such disclosures as would be required for Covered Entity to respond to a request by an individual for an accounting of disclosures of PHI in accordance with 45 CFR Section 164.528.

i. Within ten (10) business days of receiving a written request from Covered Entity for a request for an accounting of disclosures of PHI, Business Associate shall make available to Covered Entity such information as Covered Entity may require to fulfill its obligations to provide an accounting of disclosures with respect to PHI in accordance with 45 CFR Section 164.528.

j. In the event any individual requests access to, amendment of, or accounting of PHI directly from the Business Associate, the Business Associate shall within two (2) business days forward such request to Covered Entity. Covered Entity shall have the responsibility of responding to forwarded requests. However, if forwarding the individual's request to Covered Entity would cause Covered Entity or the Business Associate to violate HIPAA and the Privacy and Security Rule, the Business Associate shall instead respond to the individual's request as required by such law and notify Covered Entity of such response as soon as practicable.

k. Within ten (10) business days of termination of the Agreement, for any reason, the Business Associate shall return or destroy, as specified by Covered Entity, all PHI received from, or created or received by the Business Associate in connection with the Agreement, and shall not retain any copies or back-up tapes of such PHI. If return or destruction is not feasible, or the disposition of the PHI has been otherwise agreed to in the Agreement, Business Associate shall continue to extend the protections of the Agreement, to such PHI and limit further uses and disclosures of such PHI to those purposes that make the return or destruction infeasible, for so long as Business Associate maintains such PHI. If Covered Entity, in its sole discretion, requires that the Business Associate destroy any or all PHI, the Business Associate shall certify to Covered Entity that the PHI has been destroyed.

(4) Obligations of Covered Entity

a. Covered Entity shall notify Business Associate of any changes or limitation(s) in its Notice of Privacy Practices provided to individuals in accordance with 45 CFR Section 164.520, to the extent that such change or limitation may affect Business Associate's use or disclosure of PHI.

b. Covered Entity shall promptly notify Business Associate of any changes in, or revocation of permission provided to Covered Entity by individuals whose PHI may be used or disclosed by Business Associate under this Agreement, pursuant to 45 CFR Section 164.506 or 45 CFR Section 164.508.

c. Covered entity shall promptly notify Business Associate of any restrictions on the use or disclosure of PHI that Covered Entity has agreed to in accordance with 45 CFR 164.522, to the extent that such restriction may affect Business Associate's use or disclosure of PHI.

(5) Termination for Cause

In addition to standard provision #10 of this Agreement the Covered Entity may immediately terminate the Agreement upon Covered Entity's knowledge of a breach by Business Associate of the Business Associate Agreement set forth herein as Exhibit I. The Covered Entity may either immediately terminate the Agreement or provide an opportunity for Business Associate to cure the alleged breach within a timeframe specified by Covered Entity. If Covered Entity determines that neither termination nor cure is feasible, Covered Entity shall report the violation to the Secretary.

(6) Miscellaneous

a. Definitions and Regulatory References. All terms used, but not otherwise defined herein, shall have the same meaning as those terms in the Privacy and Security Rule, and the HITECH Act as amended from time to time. A reference in the Agreement, as amended to include this Exhibit I, to a Section in the Privacy and Security Rule means the Section as in effect or as amended.

b. Amendment. Covered Entity and Business Associate agree to take such action as is necessary to amend the Agreement, from time to time as is necessary for Covered Entity to comply with the

changes in the requirements of HIPAA, the Privacy and Security Rule, and applicable federal and state law.

c. Data Ownership. The Business Associate acknowledges that it has no ownership rights with respect to the PHI provided by or created on behalf of Covered Entity.

d. Interpretation. The parties agree that any ambiguity in the Agreement shall be resolved to permit Covered Entity to comply with HIPAA, the Privacy and Security Rule and the HITECH Act.

e. Segregation. If any term or condition of this Exhibit I or the application thereof to any person(s) or circumstance is held invalid, such invalidity shall not affect other terms or conditions which can be given effect without the invalid term or condition; to this end the terms and conditions of this Exhibit I are declared severable.

f. Survival. Provisions in this Exhibit I regarding the use and disclosure of PHI, return or destruction of PHI, extensions of the protections of the Agreement in section 3 k, the defense and indemnification provisions of section 3 d and standard contract provision #13, shall survive the termination of the Agreement.

IN WITNESS WHEREOF, the parties hereto have duly executed this Exhibit I.

NH Insurance Department	University of Massachusetts Medical School
The State	Name of the Contractor
Alexander K Feldvebel	
Signature of Authorized Representative	Signature of Authorized Representative
Alexander K. Feldvebel	Gina Marzilli Shaughnessy
Name of Authorized Representative	Name of Authorized Representative
Deputy Commissioner	Assistant Director, Contracts
Title of Authorized Representative	Title of Authorized Representative
4/4/14	March 31, 2014
Date	Date