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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

May 13, 2016

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 with Human Services Research Institute, Inc. (Vendor # 170337) of Cambridge, MA in the amount of $191,011.27, for consulting services effective upon Governor and Council approval through June 30, 2018. 68% Federal Funds, 32% Other Funds.

The funding is available in accounts Health Insurance Premium Review Cycle III and Department of Insurance Administration – Other Funds, as follows, for Fiscal Years 2016 and 2017 and are anticipated to be available in the following account in Fiscal Year 2018 contingent upon the availability and continued appropriation of funds in the future operating budget, with the authority to adjust encumbrances in each of the State fiscal years through the Budget Office if needed and justified:

Health Insurance Premium Review Cycle III

		FY2016	FY2017	FY2018
02-24-24-240010-88870000-046-500464	Consultants	$10,000.00	$70,000.00	$49,869.30

Department of Insurance Administration – Other Funds

			FY2017	FY2018
02-24-24-240010-25200000-046-500464	Consultants	$0.00	$30,000.00	$31,141.97

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 consultant's primary responsibility will be to develop and maintain the SAS code for the rates produced on the Department's medical cost transparency website, www.nhhealthcost.org, and do quality assurance testing of the New Hampshire Comprehensive Health Information System (NHCHIS) and to support the Department by providing advice and recommendations in working with the data consolidator.

The Request for Proposal was posted on the Department's website April 1, 2016 and sent to past bidders for Department contract work and companies doing work in this field. Two bids were received. The bids were evaluated by NHID staff familiar with the project goals using a scoring system included in the RFP. After reviewing the bid response, the Commissioner selected the Human Services Research Institute proposal as responsive and cost effective to the Request for Proposals (RFP).

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

Respectfully submitted,

Alexander K Feldvebel, for

Roger A. Sevigny

2016 NHCHIS PROPOSALS EVALUATIONS

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

Evaluation process: Every member reviewed and independently evaluated the bids.
On May 6, 2016 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 Specific Skills Needed (25% or points)	CONTRACTOR GENERAL EXPERIENCE & QUALIFICATIONS (25% or points)	PLAN OF WORK (25% or points)	Bid Price-BUDGET AMOUNT	COST (25% or points)	TOTAL SCORE (100% or Points)	Score without $$$	NOTES
	2016-NHCHIS QAHC_03-Amended								
	Human Services Research Institute	23.50%	24.25%	23.25%	$191,011	22.58%	93.58%	71.00%	
	AGI Services	16.00%	16.50%	10.25%	$172,550	25.00%	67.75%	42.75%	

Notice: This agreement and all of its attachments shall become public upon submission to Governor and Executive Council for approval. Any information that is private, confidential or proprietary must be clearly identified to the agency and agreed to in writing prior to signing the contract.

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 Street, Suite 14, Concord, NH 03301	
1.3 Contractor Name Human Services Research Institute		1.4 Contractor Address 2336 Massachusetts Ave, Cambridge, MA 02140	
1.5 Contractor Phone Number 617-876-0426	1.6 Account Number 02-24-24-240010-88870000-046-500464 02-24-2400010-25200000-046-500464	1.7 Completion Date June 30, 2018	1.8 Price Limitation $191,011.27
1.9 Contracting Officer for State Agency Alexander Feldvebel, Deputy Commissioner		1.10 State Agency Telephone Number 603-271-7973	
1.11 Contractor Signature		1.12 Name and Title of Contractor Signatory David Hughes, Executive Vice President	

1.13 Acknowledgement: State of Massachusetts County of Middlesex

On May 9, 2016, 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

[Seal]

ANNAMARIE W. EDWARDS
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
February 20, 2020

1.13.2 Name and Title of Notary or Justice of the Peace

Annamarie Edwards, Financial Manager

1.14 State Agency Signature Alexander K Feldvebel Date: 5/27/16	1.15 Name and Title of State Agency Signatory Alexander K. Feldvebel, Deputy Commissioner

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) *(if applicable)*

By: J Christopher Marshall AAG On: 5/31/16

1.18 Approval by the Governor and Executive Council *(if applicable)*

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, if applicable, this Agreement, and all obligations of the parties hereunder, shall become effective on the date the Governor and Executive Council approve this Agreement as indicated in block 1.18, unless no such approval is required, in which case the Agreement shall become effective on the date the Agreement is signed by the State Agency as shown in block 1.14 ("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. This may include the requirement to utilize auxiliary aids and services to ensure that persons with communication disabilities, including vision, hearing and speech, can communicate with, receive information from, and convey information to the Contractor. 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

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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.

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 notice and consent of the State. None of the Services shall be subcontracted by the Contractor without the prior written notice and 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 $1,000,000per occurrence and $2,000,000 aggregate ; and
14.1.2 special cause of loss coverage form 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.

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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 thirty (30) days prior to the expiration date of each of the insurance policies. The certificate(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 the Contracting Officer identified in block 1.9, or his or her successor, no less than thirty (30) 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 unless no such approval is required under the circumstances pursuant to State law, rule or policy.

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 5/9/16

Human Services Research Institute

2016 NHCHIS QAHC-03

Exhibit A

Scope of services

Summary of Services to be provided:

1. The Contractor shall perform quality assurance testing related to the data processing or consolidation services, vendor edits and processes, compliance with administrative rules, or any other factor that may impact the HealthCost website (www.nhhealthcost.org). The Contractor shall participate in routine conference calls with the state's data consolidation vendor and DHHS as requested by the NHID.
2. When requested to do so, the Contractor shall serve as a resource to the NHID by providing advice and recommendations for any deviations from the established carrier specific data submission threshold levels, as requested by a carrier/TPA.
3. The Contractor shall document observed issues that should be addressed or recognized by the data consolidation vendor until resolved. If the issue cannot be resolved efficiently or within available resources, the Contractor is responsible for documenting the issue for the NHID.
4. The contractor will use SAS programming code unless other programming language is mutually agreed upon by the two parties.
5. The Contractor shall revise and/or further develop SAS programming code, or the mutually agreed upon programming language, to calculate the cost estimates and quality information on the NH HealthCost website in order to improve the efficiency, accuracy, and timeliness of the rate estimates on HealthCost.
6. The Contractor shall create new SAS programming code, or a mutually agreed upon programming code, to include newly identified procedures, rates, and related information on HealthCost.
7. The Contractor shall recommend changes to the rate calculation methodology and services reported when consistency with price transparency efforts in other states is appropriate.
8. The Contractor shall give priority to rates that are reported on an unbundled basis, including both rates reported at the procedure code level as well as those that combine a technical and professional component. The Contractor shall assist the NHID with producing rates on a bundled basis, such as for services that may include several providers, only upon request by the NHID.
9. The Contractor shall maintain the code once it is revised as necessary, and shall perform general maintenance to the SAS code used to produce the HealthCost rates. Maintenance includes, but is not limited to: routine debugging, changes to the underlying CPT codes or modifiers used to identify specific procedures, dates of service used with the input data, additions or modifications to the carriers/TPAs or providers included in the output, procedures included to calculate rates, modifications or enhancements to the rate calculation methodology, and general maintenance to the provider files. Maintenance and general updates shall also include investigating specific questions that arise about the estimates associated with a particular health care provider or insurance carrier, and making changes to the underlying code to address unique or unusual circumstances.
10. The contractor shall ensure that all SAS programs, or the mutually agreed upon programs, include extensive documentation and that the code is easily understandable by an analyst with intermediate level SAS skills or the equivalent mutually agreed upon programming skill level.

11. When extracts are available on a quarterly basis, the contractor shall update the HealthCost procedure rate estimates and lab market basket report on a quarterly basis. Updates shall take place less frequently for all other measures, including the quality measures, but no less often than annually.
12. The Contractor shall utilize SAS programming or the mutually agreed upon code, so that all fields included on the consumer and employer sections of the website are produced with rates and related information, including "precision of the cost estimate" and "typical patient complexity," unless data submission issues or other factors beyond the Contractor's control exist.
13. The Contractor shall ensure the output files are checked for reasonability and accuracy prior to each transfer of data to the website developer, and address any resolvable anomalies that exist. This includes, but is not limited to: spot checking that a provider listed for a service is a provider that offers the service, analyzing cost estimates to ensure that any costs that appear unusually high or low are investigated, revising the SAS programming or other mutually agreed upon coded program to address unusual situations that may result in misleading estimates. This responsibility may include additional analyses using the claims data outside of the programs developed for HealthCost, performing internet research, or contacting a health care provider directly to understand billing or service delivery practices. The Contractor is responsible for verifying that the website developer loads the data files correctly.
14. The Contractor is prohibited from using any proprietary software programs, algorithms, black box technology, or other confidential information to produce rates on the HealthCost website.
15. The Contractor shall provide assistance to the NHID vendor identifying provider affiliations by identifying high volume health care providers and developing the format and layout of the reference tables so that the Contractor and the NHID can efficiently make use of the information provided by the vendor.
16. The Contractor cannot copyright or otherwise inhibit the NHID or any interested party from obtaining, sharing, and using the work product produced under this project.
17. The Contractor will use the following project deliverable timeline as a guide. The development tasks timeline dates anticipate receiving data and SAS code within 5 days of contract start date. Any changes to the process or date of deliverables will be mutually agreed upon by the two parties:

Deliverable	Start Date	End Date
Project Kickoff Meeting	July 1, 2016	July 8, 2016
Final Project Plan	July 1, 2016	July 15, 2016
Development Tasks R&D of Rate Estimates Methodology	July 1, 2016	March 31, 2017
Debug and identify issues in HealthCost code	July 11, 2016	Sept. 19, 2016
Research existing methodology	July 1, 2016	Sept 19, 2016
Test rates and analyze underlying data	July 11, 2016	Sept 19, 2016
Reprogram and test	Sept. 22, 2016	Nov. 30, 2016
Development Tasks for Expansion of Services	July 18, 2016	March 31, 2018
Assist with outside vendor recommendations for changes	July 18, 2016	March 31, 2018
Operational Task	July 18, 2016	June 30, 2018
Routine Conference Calls with the state's data consolidation vendor	As needed	As needed
Develop QA testing programs	July 1, 2016	Aug. 31, 2016
Perform QA testing on clean files (4-8/yr for 3 yrs)	Sept. 1, 2016	April 30, 2018
Investigate and document issues identified	Nov. 1, 2016	May 31, 2018
Run update programs and check HealthCost estimates before and after website load	Dec. 1, 2016	June 30, 2018
Project Closeout	June 30, 2018	June 30, 2018

Proposal for QA Testing of the New Hampshire Comprehensive Health Information System

Presented to the
New Hampshire Insurance Department

SUBMITTED BY THE
HUMAN SERVICES
RESEARCH INSTITUTE

April 29, 2016

David Hughes, PhD
Executive Vice President
Human Services Research Institute
2336 Massachusetts Avenue
Cambridge, MA 02140
Phone 617-876-0426 ext. 2527
dhughes@hsri.org

Table of Contents

Summary

The Human Services Research Institute is pleased to submit this proposal to the New Hampshire Insurance Department (NHID) to support the quality assurance testing of the New Hampshire Comprehensive Health Information System (NHCHIS) and to develop and maintain updated SAS code for the rates produced on the www.nhhealthcost.org website (NH HealthCost). We are well-equipped to support NHID in making high-quality data available to New Hampshire stakeholders.

Our proposed approach capitalizes on our thorough understanding of all-payer claims databases (APCD) and other systems for warehousing health data, our extensive experience using claims data for our own research purposes as a consultant to federal and state agencies, and a highly successful track record of designing and executing systems to collect, clean, and consolidate data for large-scale state and national level efforts. Our proposed team includes core members of a team that recently overhauled an APCD for the state of Maine and that developed CompareMaine, a health cost and quality transparency site. Prior to rolling out CompareMaine, the team worked to update and maintain the Maine HealthCost site, which was based on NH HealthCost. We can leverage this experience as a springboard for our work in New Hampshire.

About Us

HSRI is a nonprofit corporation founded in 1976 and headquartered in Cambridge, Massachusetts. Our researchers, data scientists, and policy analysts work with government agencies to improve public health services and systems—and to improve the quality of the data for health and human services policy reform. In our 40 years of operation, we've applied multidisciplinary expertise to project work with clients at the federal, state, county, and program levels, performing research and consulting projects for 28 federal agencies, 49 states, and over 100 counties and cities.

We offer:

- Deep understanding of models and systems across the health and human services sectors
- Experience using claims data as health researchers
- Proven expertise, experience, and capacity in developing tools for data collection and quality improvement
- Firsthand knowledge and experience working with organizations to develop and maintain state-level health data warehouses and healthcare transparency websites
- Experience working with user groups to develop common definitions of data quality for claims data and to define metrics for measurement and reporting
- A 20-year track record providing technical assistance and training on data quality
- A 40-year track record of successful project management

Experience and Expertise

Established in 1976, the Human Services Research Institute (HSRI) is a 501(c)(3) nonprofit corporation headquartered in Cambridge, Massachusetts. We are dedicated to helping people of all abilities and backgrounds live healthy, fulfilling, self-determined lives. To this end, our researchers, data scientists, and policy analysts work with government and private sector clients, and with self-advocates, to improve public health and social service systems—and to improve the data and data systems that inform these efforts.

In our 40-year history, we've performed research and consulting projects for 28 federal agencies, 49 states, over 100 counties and cities, and numerous academic institutions. A selection of these are shown on the following page, under "Client Summary." Our 55 employees—located at offices in Cambridge, Massachusetts; Bethel, Maine; and Portland, Oregon—have expertise in IT, statistics, evaluation research, TA and training, healthcare policy and healthcare reform. They also have extensive experience in the use of Medicaid, Medicare, private insurance, and other State claims and assessment databases, and they have performed numerous healthcare cost analyses.

As shown in the "Past Projects" section of this proposal, we've worked closely with a variety of federal, state, county and private entities to design, implement, and evaluate health data systems with the goal of providing high-quality data for system management and research functions. This includes working with stakeholders to improve data quality, ensuring that systems make use of best practices and relevant data standards, creating and maintaining custom warehouses that properly secure sensitive health data, and producing analytic and data products that provide value to system/program managers, researchers, evaluators, policy makers, advocacy organizations, and the public.

We pride ourselves on creating systems and websites that are responsive to the needs of all stakeholders: funders, data submitters, data users, and the general public. Based on this principle, our health data systems have been designed to ensure that organizations and states can manage their information assets; to facilitate retrieval of relevant information quickly and efficiently; to insure the reliability of data submitted; to meet the needs of multiple data users related to program oversight, cost monitoring, quality assurance and program evaluation; and to quickly provide those data back to stakeholders in a user-friendly fashion. We can apply this experience to perform the quality assurance work needed for the New Hampshire Comprehensive Health Information System (NHCHIS) and NH HealthCost.

As we'll show throughout this proposal, the team we propose for this project has worked extensively with health claims data and developed warehouse and transparency website solutions and user interfaces, and the past projects we reference have given us a thorough understanding of the challenges and opportunities of providing the quality assurance, technical assistance and technical reports needed for the NHCHIS and NH HealthCost.

HSRI Client Summary

Federal Clients

US Dept. of Education
US Dept. of Health & Human Services:
- Administration for Children and Families
- Administration on Intellectual & Developmental Disabilities
- Centers for Medicare & Medicaid Services
- Health Resources & Services Administration
- Public Health Service
- Substance Abuse and Mental Health Services Administration

Office of the Assistant Secretary for Planning and Evaluation
US Dept. of Housing and Urban Development

State Clients

District of Columbia Dept. of Behavioral Health
Alabama Division of Developmental Disabilities
California Dept. of Developmental Services
California Dept. of Health Care Services
Colorado Dept. of Human Services, Division of Child Welfare
Connecticut Dept. of Children and Families, Dept. of Public Health
Delaware Division of Developmental Disabilities Services
Illinois Council on Developmental Disabilities
Louisiana Dept. of Health and Hospitals
Maine Dept. of Health & Human Services, Maine Health Data Organization
Maine Dept. of Health & Human Services, Office of Aging & Disability Services
Minnesota Dept. of Human Services
Mississippi Dept. of Mental Health
Missouri Division of Developmental Disabilities
Montana Dept. of Health & Human Services
New Jersey Council on Developmental Disabilities
New Jersey Division of Mental Health & Substance Abuse
New Mexico, Human Services Dept., Medical Assistance Division
North Carolina Dept. of Health & Human Services
Ohio Dept. of Job & Family Services, Dept. of Mental Health
Oregon Board of Higher Education
Oregon Dept. of Human Services
Oregon Dept. of Justice
Pennsylvania Dept. of Public Welfare
Rhode Island
Virginia Dept. of Behavioral Health & Developmental Services
Wisconsin

County/City Clients

Oakland County Community Mental Health (Michigan)
Job & Family Services of Clark County (Ohio)
Summit County Children Services (Ohio)
Milwaukee County Dept. of Health & Human Services Disabilities Services Division (Wisconsin)

Academic Clients

Arizona State University
Association of University Centers on Disabilities
Boston College
Brandeis University
NORC at the University of Chicago
Temple University
University of Delaware
University of Massachusetts
University of Minnesota
University of Pittsburgh

Nonprofit Clients

Acumen
California HealthCare Foundation
Cambridge Health Alliance
Community Access Unlimited
Delmarva Foundation for Medical Care
Florida Agency for Persons with Disabilities
Florida Association for Rehabilitation Facilities
Florida Developmental Disabilities Facilities
Hogg Foundation for Mental Health
Maine Medical Center
National Alliance on Mental Illness
National Association of State Directors of Developmental Disabilities Services
National Association of State Mental Health Program Directors
National Association of States United for Aging and Disabilities
National Youth Leadership Network
Public Policy Forum
Robert Wood Johnson Foundation
RTI International
United Way

Private Sector Clients

CDM Group
Datacorp
Deloitte
Mission Analytics
New Editions Consulting
Technical Assistance Collaborative
Truven Health Analytics
Westat

Experience with Health Insurance Claims Data Collection, Validation and Quality Assurance

HSRI has over 20 years' experience collecting, validating, standardizing, enhancing, analyzing, and reporting on health claims data. The team we propose for NHID initially updated and maintained Maine's HealthCost website and recently replaced that site with a new healthcare cost and transparency site, CompareMaine (www.comparemaine.org). Maine's legacy HealthCost site was based on NH HealthCost; the team was responsible for porting it to a new database platform, identifying and implementing bug fixes, developing a new web interface, and performing a full data refresh for the site. To create CompareMaine, members of the team first performed a complete review of the methodology and code used for Maine's HealthCost and identified opportunities for improvement. This was followed by a development period where various methodology improvements were tested and refined, including the use of a diagnostic grouper for surgical procedures and refinement of the provider attribution logic. Currently, members of the team provide quality control, create (and when necessary, revise) the methodology, analyze and produce cost and quality estimates, conduct an extensive facility and payer review period, and perform updates for CompareMaine.

Members of our proposed team also built the current All Payer Claims Database (APCD) solution for the Maine Health Data Organization (MHDO). The APCD collects and houses healthcare claims and encounter data, eligibility data, hospital financial data, and other related information. We have employed a series of quality assurance steps to ensure that these data provide the most accurate and complete picture of claims in Maine.

In addition, the same team recently conducted an extensive review of best practices and the state of the field for healthcare transparency websites for the Green Mountain Care Board (GMCB) in Vermont.

Our team has firsthand experience creating healthcare transparency methodologies and can provide expertise on best practices for presenting and analyzing claims and quality data for NH HealthCost. With the team's experience working closely with insurers on data collection activities and protocols, and given its collective expertise with claims data analysis (and as providers of technical assistance and training on data quality), we can quickly begin quarterly quality assurance checks and begin reviewing and recommending potential changes to the NH HealthCost SAS code for NHID. The analysis and quality assurance system we envision will be hosted within the NORC Data Enclave, a tool built specifically for protecting and sharing sensitive datasets. The Data Enclave undergoes annual security tests conducted by third party IT security auditors.

Past Projects & References

Maine Health Data Organization Data (MHDO) Warehouse (2013-Present) $9,715,000.
Reference: Karynlee Harrington, MHDO Acting Executive Director, phone: (207) 446-0890

The HSRI team was selected to build and operate a data warehouse that would allow the MHDO to collect and house healthcare claims data, encounter and eligibility data, hospital financial data, and information related to all physical health, dental, pharmacy, behavioral health, and disability-related services provided in the state of Maine. The data is being used in part to track quality measures, explore the cost and cost-effectiveness of services, monitor adherence to best practices, and identify disparities in access to care. HSRI leads the project, performing core project management and quality assurance functions in addition to developing web platforms and user interfaces for the system. HSRI is working

closely with the NORC, which is responsible for the core engineering and maintenance of the warehouse infrastructure and the hosting of the system as a part of its secure Data Enclave.

The HSRI team built its state-of-the-art data system around the NORC Data Enclave. The system provides an ETL platform that helps reduce the burden on data submitters by providing timely data quality feedback and by automating the secure file transfer process. This system is fully configurable by MHDO via a convenient web portal, reducing the need for costly system updates to accommodate future changes (e.g., State legislative rule changes). Reporting and data download capabilities are made accessible to data submitters, MHDO staff, and other authorized users via a secure web portal, portions of which will also be accessible to the public. The system makes use of cloud technologies to provide a robust, scalable, and highly secure data platform capable of handling high volumes of data and achieving high levels of availability.

MHDO's State of Maine Data Center Enhancement to Improve Health Cost Transparency (2013-Present) $3,800,099.
Reference: Karynlee Harrington, MHDO Acting Executive Director, phone: (207) 446-0890

Because of the successful collaboration on the data warehouse project, MHDO partnered with HSRI (and NORC and web design firm Wowza) and received a grant from CMS to expand its online health data resources and improve the usability of its health data website. The CMS grant is part of the Health Insurance Rate Review Program (Cycles III and IV), which provides grants to states to support health insurance rate review and increase transparency in healthcare pricing. Building on the existing functionality of MHDO's health data websites, and taking advantage of the data warehouse infrastructure implemented by HSRI and NORC, HSRI first enhanced MHDO's existing HealthCost website by adding almost 200 additional procedures (mhdo.maine.gov/healthcost2014). HSRI then rolled out an enhanced website, CompareMaine, that further integrates cost and quality data on health services in Maine to provide more comprehensive and useful information to consumers, providers, employers, and other key stakeholders. HSRI worked with multiple stakeholders and advisory groups to ensure the utility of the new site across its range of users.

Vermont Consumer Information and Price Transparency Evaluation (2015) $34,243.
Reference: Susan Barrett, Executive Director, VT Green Mountain Care Board, phone: (802) 828-2919

HSRI evaluated potential Internet-based models for providing consumers with information about the cost and quality of healthcare services in the geographical region in which Vermonters purchase healthcare. The evaluation included a review of existing sites and platforms currently in use, including NH HealthCost; a comparison of existing sites to best practices in public reporting; a feasibility study; and a comprehensive literature review. HSRI worked with NORC and with consultants from the University of Oregon and Policy Integrity.

Program Evaluation for Prevention Contract (PEP-C) (2013-Present) $3,050,740.

HSRI, under subcontract from RTI International, is participating in evaluating the effectiveness of three programs funded by the federal Substance Abuse and Mental Health Services Administration (SAMHSA) Center for Substance Abuse Prevention (CSAP): The Partnerships for Success and the Strategic Prevention Framework State Incentive Grants fund states and jurisdictions to achieve quantifiable declines in state-wide substance abuse rates; and The Minority AIDS Initiative (MAI) funds community-based organization and minority-serving colleges to reduce substance abuse and HIV transmission among high-risk groups. HSRI's role on the project is to lead the MAI cross-site evaluation in data collection, processing, cleaning, and archiving, data analysis, and report production. The project involves

reviewing and running SAS code for data cleaning from a previous contractor and updating the code as needed for newly collected data.

Individual Team Member Experience

Our data analysis team members have experience, ranging from 10 to 30 years, in managing and analyzing data in several platforms and languages, including SAS, STATA, SPSS, and Microsoft SQL Server Management Studio, among others. Our approach to health data analysis involves extensive documentation of our methods. We maintain code and macro libraries that allow us to analyze data and produce output in a consistent manner. To aid understanding, we extensively annotate our work to document for ourselves, our clients, and our potential successors the purpose and sequence of the code and any modifications from previous versions.

We have direct experience:

- Writing SAS for other users
- Providing quality assurance for SAS code written by others
- Using health insurance claims data (charge, paid, and cost sharing data fields)
- Importing/exporting data files
- Working with healthcare provider data files
- Providing effective training and TA
- Analyzing and reviewing various health insurance data sources
- Working with data extensively and independently
- Working collaboratively with government agencies and other vendors
- Managing complex project and analytic tasks

HSRI has a team of highly experienced professionals who have the range of technical skills and management experience to meet or exceed New Hampshire's expectations for this project. This team has demonstrated its ability to ensure that all tasks will be accomplished effectively and efficiently given the short project timeline. Leanne Candura will serve as Project Manager; Kevin Rogers will lead the analysis team as Senior Programmer/Analyst; and Rachael Gerber, Katie Howard and Margaret Mulcahy will serve as Health Data Analysts. Staff bios are included on the following pages, and full resumes are included in Appendix A.

All members of the analysis team have more than 10 years of experience coding and writing syntax to analyze data in a variety of languages, such as SAS, SPSS, SQL, STATA, R, C#, java, javascript, HTML, and ASP. For the previously mentioned PEP-C Project, we just completed a review and debugging of legacy SAS code to meet the current analysis and methodological needs. A sample of this code is found in Appendix B. Ms. Howard currently provides the quality assurance for APCD and Hospital data in Maine, along with Mr. Rogers. Ms. Howard and Mr. Rogers have extensive experience systematically identifying and documenting data quality issues—and consulting with states, providers, and data users on these issues. Our team has a proven record of providing responsive, high-quality products and consultation for federal, state, and local entities.

Bios of Proposed Staff

Leanne Candura- Project Manager

Ms. Candura has more than ten years of experience in the field of public health research with a focus on health data. She currently serves as the project manager for the MHDO healthcare transparency website project, working to provide comprehensive and useful information on healthcare costs and quality to consumers, providers, employers, and other key stakeholders. She's also the project manager for MHDO's Data Warehouse, overseeing the development and implementation of a highly secure and robust data warehouse to collect and house Maine healthcare claims, encounter and eligibility data, hospital financial data and other related information. In these roles, Ms. Candura works with all stakeholders to develop strategies to achieve project objectives on schedule and on budget. A highly effective leader, problem solver and relationship builder, she has proven success working effectively and collaboratively with all project staff through complex projects. Previously she served as the assistant project director of the Data Analysis Coordination and Consolidation Center project for SAMHSA's Center for Substance Abuse Prevention, a 5-year, $25 million project.

Kevin Rogers – Senior Programmer/Analyst

Mr. Rogers has more than 20 years of experience in the IT field, working as a systems analyst and application developer and in data center operations. He currently serves as the product development team lead for the MHDO Data Warehouse. Kevin is also the product development lead for the State of Maine Data Center Enhancement to Improve Health Cost Transparency—a grant-funded project that resulted in the MHDO healthcare transparency website CompareMaine. Previously, Kevin was a senior member of the data analysis team for the Data Analysis Coordination and Consolidation Center project. In this role, he developed applications to automate data analysis and reporting activities, assisted in the development of an SPSS- and SAS-based data cleaning pipeline, and oversaw the team's overall quality assurance processes, including Section 508 compliance. Before joining HSRI, he worked as an independent consultant, providing business and systems analysis, application development, and database design services to clients in the healthcare, substance abuse prevention, and pharmaceutical fields. Prior to this, he worked as a senior database and application developer at the Channing Bete Company where he developed application and database code for a high-volume survey scanning and reporting operation, which included the integration of SPSS code into an automated report production and proofing pipeline. Kevin began his IT career at the Phoenix Home Life Company where he worked as a team leader and senior systems analyst, maintaining and developing SAS and Cobol programs for the Agency and Actuarial departments. Before assuming this role, he worked in various roles within the company in data processing operations and technical services.

Rachael Gerber – Health Data Analyst

Ms. Gerber focuses on community health in minority communities. Her current project focuses on a multi-site evaluation of HIV and substance abuse prevention programs funded by SAMHSA's Center for Substance Abuse Prevention. On this and other health services evaluations, she manages the data, performing quality control, analysis, dissemination, and technical assistance. Previously, she worked at New England Research Institutes (NERI) and the Center for Interdisciplinary Research on AIDS at Yale where she analyzed health data for a longitudinal study on health outcomes in a minority community. Ms. Gerber's strong data management and analytic skills allow her to conduct data-driven evaluations that blend health outcomes with solid policy recommendations and relevant technical assistance expertise.

Katie Howard – Health Data Analyst

Ms. Howard focuses on projects related to medical claims data. She is currently working on the MHDO healthcare transparency website and MHDO Data Warehouse projects. For these, she assesses claims data for quality and completeness and performs complex data analysis to answer policy questions. She also provides consultation on ways to integrate health cost and quality data on consumer-facing platforms. In addition, she has provided consultation to states on projects related to resource allocation and community support for individuals with disabilities through Medicaid Home and Community-Based Services Waiver programs. Across these projects, she has conducted numerous data quality checks and analysis and provided technical assistance to state officials and other stakeholders on the ideal approach to meeting policy goals and objectives that are tailored to each jurisdictions' needs and regulations. Her prior work at HSRI also includes evaluations of federal projects related to HIV, hepatitis, and substance abuse prevention in minority communities.

Margaret Mulcahy – Health Data Analyst

Ms. Mulcahy is a research analyst with HSRI's health data team. She is currently leading the cost analysis work on the CMS grants for the State of Maine Data Center Enhancement to Improve Health Cost Transparency awarded to the Maine Health Data Organization. Her primary responsibilities in this regard are to oversee the research of healthcare cost and quality transparency, analyze medical claims data, develop the methodology for calculating the average cost of common medical procedures, and support the development and maintenance of Maine's healthcare transparency website. Previously, Ms. Mulcahy worked on the data analysis team of the Data Analysis Coordination and Consolidation Center project for SAMHSA's Center for Substance Abuse Prevention. In this role she cleaned, analyzed, and reported on data from several federally funded substance abuse prevention programs.

Technical Approach

Our approach is based on our previous experience with similar projects, though we expect to refine and customize this approach based on feedback from NHID and its stakeholders. Our team has worked closely for several years to streamline and improve complex data and reporting systems for state and federal clients; in that time, they have developed efficient processes and procedures for performing the type of work outlined in the NHID RFP.

Project Management

HSRI has successfully managed many large and small projects. During the course of its 40-year history, HSRI has developed and refined a comprehensive management system that integrates quality assurance and quality control (QA/QC) into our management practices. Our work plans, resource allocations, roles and agreed upon strategies will remain flexible and responsive to the knowledge and experience gained within the project and from other aspects of overall project execution.

The foundation of our approach is a well-organized and efficient team structure led by an experienced and highly capable Project Manager (Leanne Candura, MPH). The analysis team who will be reviewing the methodology and code driving NH HealthCost will be led by Kevin Rogers as the Senior Programmer/Analyst. He will be supported by Health Data Analysts Margaret Mulcahy, Katie Howard and Rachael Gerber. Mr. Rogers, Ms. Mulcahy, and Ms. Howard created the methodology for CompareMaine based on Mr. Rogers and Ms. Mulcahy's review and revision of Maine's HealthCost website. Ms. Gerber has previously worked with this team on past projects and, along with Mr. Rogers, will provide the SAS coding expertise.

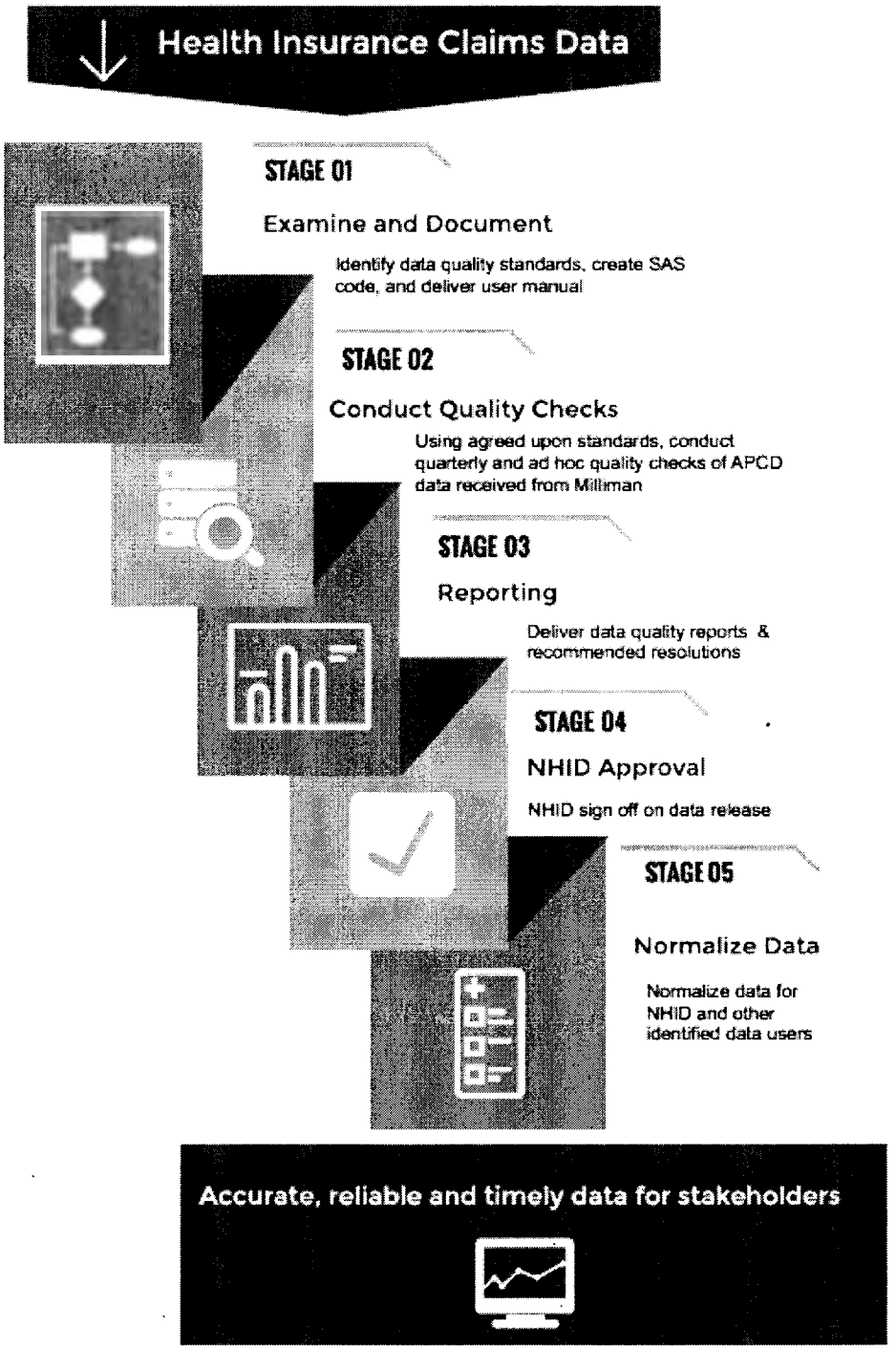
Our management systems emphasize communication within the HSRI team and with our clients. Ongoing communication provides the best opportunity for early identification, correction, and prevention of issues and project delays. Our team will develop a communication infrastructure to ensure consistent and timely communication between our team and NHID. This infrastructure will include multiple communication channels and structures, including face-to-face and teleconference meetings, and a system for monitoring project deliverables. Regular administrative reports are another tool with which to communicate progress and challenges.

An important step in ensuring quality deliverables will be successful collaboration with NHID and other stakeholders, including other vendors. We are prepared to work directly with the NHID but also to serve as a resource for the DHHS in working with the data consolidator. We also anticipate participating in routine conference calls with the state's data consolidation vendor as needed.

QA Testing and Support

HSRI leads the quality control process for the APCD data in Maine. We strive to mitigate risk by creating high-quality data for data users, reports and consumer websites. Our approach is based on eight central tenets: accuracy, completeness, integrity, validity, consistency, reliability, relevance and timeliness. We work to ensure that each of these characteristics is present when conducting quality control, recognizing that there must be a give and take between all of these as a whole.

Exhibit 1. Proposed Process for Ensuring High-Quality Data



While quality control is an important first step, true data quality goes beyond the integrity of the record or a submitted file. To maximize its value, data must be relatively complete, consistent and comparable across payers, and capable of being rolled up into meaningful semantic concepts, such as episodes of care, and have consistent metadata and documentation. Often, achieving this type of quality means

working with data submitters to address deficiencies in their data. To achieve this, data quality reports will be developed that allow such deficiencies to be detected.

We will enable data stewarding by working with NHID to develop a series of key metrics that will be regularly reported on and reviewed with NHID and other stakeholders. HSRI will advise NHID on issues related to deviations from the established carrier specific threshold levels and any other deviations from validations that are present in the data. Our team, composed of experienced researchers who greatly value the importance of data quality, is well positioned to support this work. Working with data user groups, we've previously developed a common definition of what data quality means for claims data and defined the metrics we should use to measure and report on the quality to data users and consumers. We can leverage this experience as a springboard for our work in New Hampshire.

HSRI will implement quarterly and as needed quality checks of the data as received from the NHCHIS database vendor Milliman. HSRI anticipates that a clean file would take approximately four hours to check after the quality checks are automated. HSRI will be able to complete the minimum data quality checks listed on page 2 of the RFP. Our team currently uses all of these checks to validate the Maine APCD data files.

The quality checks will be delivered to NHID in SAS with notes clearly denoting each validation. A user manual will also be created for the QA process. Appendix B contains potential data quality checks. HSRI welcomes additional checks to be added to the list of known issues and those discovered during the course of the contract. Central to the process is the ability to modify quality checks as needed with each quarterly check in order to ensure the NHCHIS datasets have the highest quality of data.

HSRI will then be able to supply NHID with the data quality reports. HSRI has the ability to create data validation reports in a variety of formats. We find that Tableau dashboards (see Exhibit 2) tend to be user friendly and have additional features that data users find desirable. In the quality report, we will list which payers (e.g., health insurance carriers and third-party administrators) passed the checks and which have data quality issues. Tableau works seamlessly with SAS databases and can be used to quickly visualize the data for internal and external NHCHIS stakeholders. Additional contextual notes will be provided with recommended steps for resolution with the payer.

Exhibit 2. Example Data Quality Report in Tableau

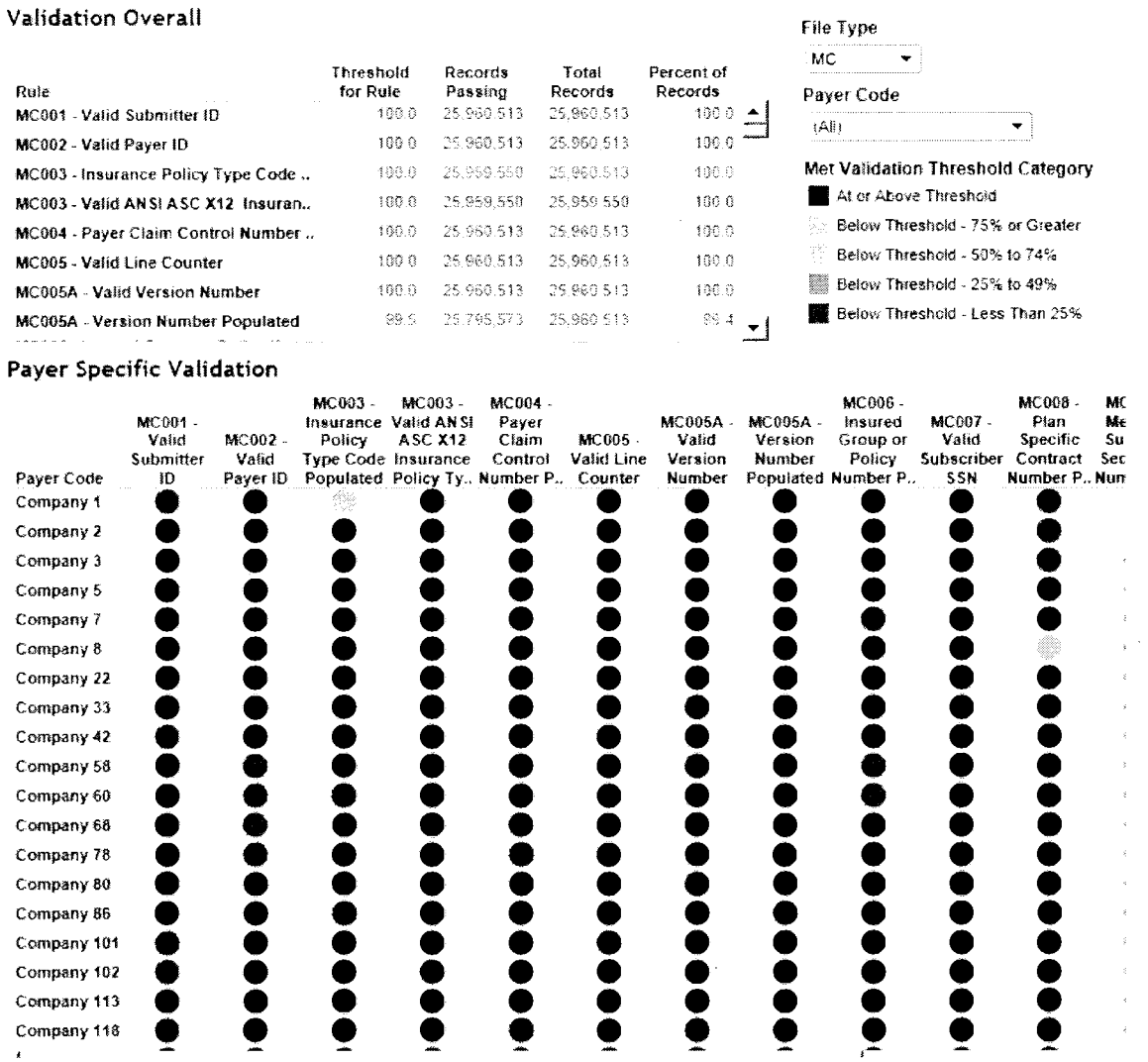


Tableau workbooks can be provided to NHID staff, data users and contractors to facilitate a high-level overview with the ability to drill down into data quality issues. The Tableau Reader allows users to access Tableau workbooks without purchase of the software and allows the user to work with the data, either through data filters or csv format downloads, for individual use. HSRI has also created these validation workbooks in other formats such as Excel if that is more desirable to data users.

After the data quality control is complete and NHID has signed off on the release of the file, HSRI will normalize the dataset in SAS for NHID and any other NHID identified party; to do so, we will identify data redundancies in the de-normalized data and store this information in child tables. The redundant data will be removed from the main data table and replaced with a key that relates to the child table. The original de-normalized data can then be reproduced by connecting the child tables using SAS indexes. As a part of this normalization process, data values will be cleaned to reduce the number of rows necessary on the child tables. This cleaning will include adjusting data values to use a consistent case, removing extraneous or padding characters, and normalizing of spellings.

HealthCost Review and Update

HSRI has proven experience in health data analysis and reporting for healthcare transparency websites aimed at consumers. We believe that vetting the data in a variety of ways gives us greater insight and produces higher-quality output. Through our quality assurance process for each update of the website, we will work with NHID to identify areas where we can revise or streamline our code to produce more accurate and efficient estimates. We will review query design, lower the system demand, and increase efficiency. We will also review file structures and data formats to ensure that the data are normalized and can be processed quickly. We are happy to accommodate changes to source data, provider files, and specific cost estimate methodology per NHID's request.

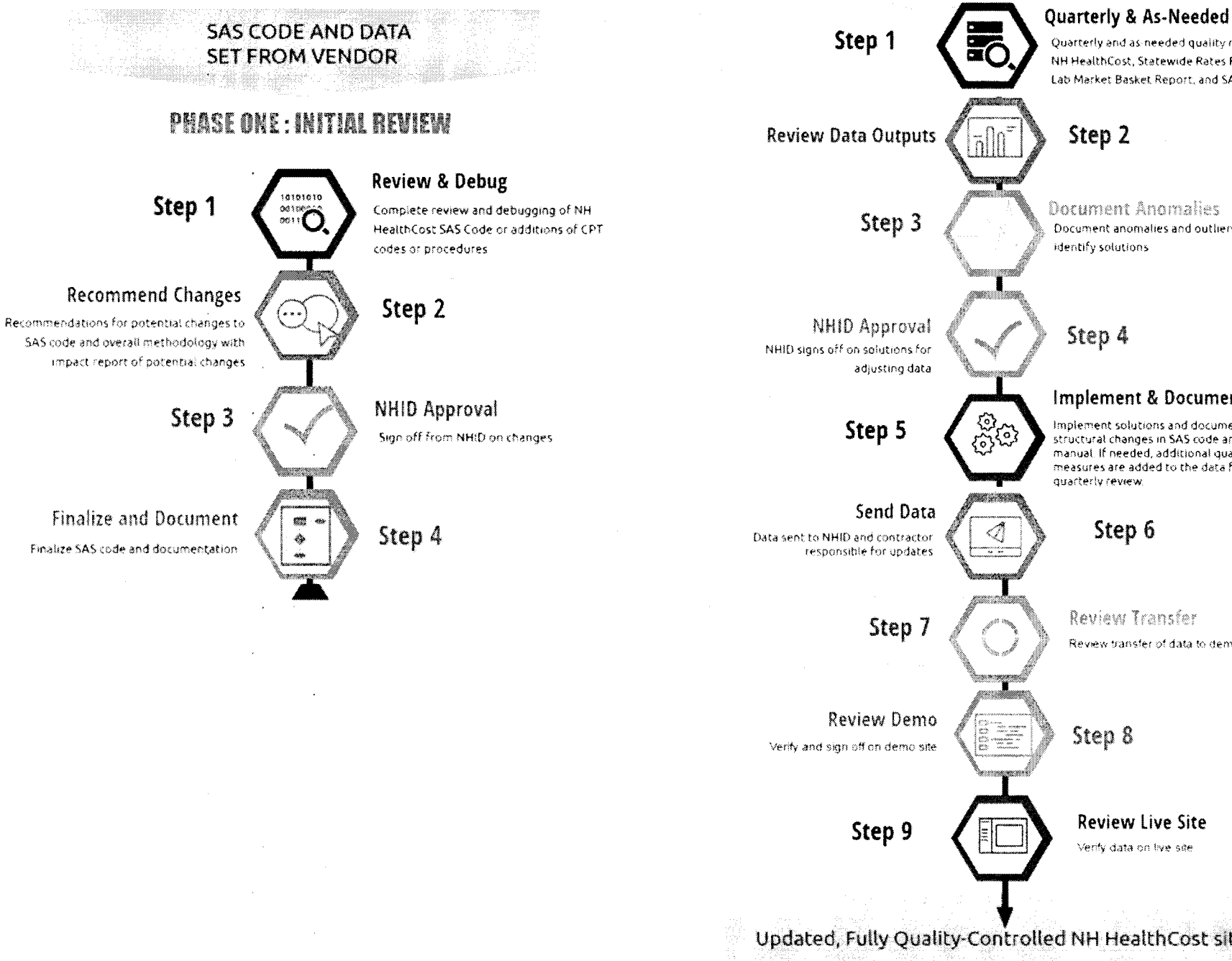
We requested and reviewed the SAS code for NH HealthCost. Given its similarities to the original Maine HealthCost code and our SAS and APCD experience, we are confident we can provide quality assurance and revisions where necessary. In addition, we have used the University of California San Diego's ICD 9 Chronic Illness and Disability Payment System (CDPS) to calculate typical patient complexity by facility on previous iterations of CompareMaine. We are familiar with the code and comfortable tailoring it to the needs of NHID. Our team will work to implement the latest code released for the CDPS to accommodate ICD 10 codes. We will review and update the cost estimates, Statewide Rates Report, and the lab market basket report on a quarterly basis and the quality measures on an annual basis, when they become available. In our efforts to promote healthcare cost and quality transparency, we are transparent ourselves. We do not use proprietary software or black box technology. Any code developed for New Hampshire will be given in full to NHID for release with full documentation.

HSRI will review the SAS code for accuracy and with an eye toward recommendations for changes to the methodology. HSRI has adopted some of the NH HealthCost methodology for use with CompareMaine and looks forward to working with NHID to refine and enhance the quality assurance of the data. When conducting quality assurance for NH HealthCost, our team will employ a series of multi-method cross checks. Such checks will include but are not limited to:

- Identification of outliers
- Changes in cost over time
- Line by line review of original code
- Calculation confidence intervals to indicate the accuracy of estimates
- Calls with providers to ensure they offer services
- An extensive and transparent data review process where providers are given the opportunity to review and troubleshoot all their data before it is posted to the website
- Calculation of statewide estimates to allow for the benchmarking of facilities
- Extensive proofing of the website to source data to ensure that the transfer was successful

If historical data are available, HSRI would also examine how past rates might have changed if recommended adjustments are made to the methodology. This will allow us and NHID to determine whether the adjustments are needed and appropriate.

Exhibit 3. Proposed Process for Reviewing and Updating NH HealthCost



The current methodology for NH HealthCost outlines some of the statistical tests and data cleaning that are performed before the costs of a procedure are calculated. We will employ tests of central tendency and variability to examine potential problematic distributions and to compare paid and charged amounts for services by provider. Typically, we have used these checks not to eliminate data points but to further examine billing trends, identify quality issues with the underlying data, and make adjustments to our overall methodology. Our approach subjects all providers and payers to the same rules for inclusion. We will examine how current cleaning methods impact the cost estimates, potential quality issues, and rules for inclusion of cost estimates.

We will work with NHID to represent the typical cost of a procedure to individuals with and without insurance, and we believe NH HealthCost has a solid approach to representing this cost for consumers. For example, we also used median to represent typical cost in CompareMaine and feel that it is less susceptible to extreme outliers that unfortunately exist in almost all claims data.

Another central tenet of the NH HealthCost methodology is eliminating cases above the 95th percentile and below the 1st percentile. HSRI will examine whether this biases results for certain providers. For the overall procedure, eliminating cases where the total charges are above the 95th percentile may bias for high-cost facilities and cause their costs to appear lower than they actually are. We will also examine how cost data are trimmed at the provider level.

When appropriate, HSRI will suggest additional methods to help eliminate cases where an insurer may not have billed for the complete services or human error may have occurred in billing. For example, some imaging providers bill globally while others use professional and technical modifiers. Some providers only provide one component of the service. We create procedure and provider level flags to ensure that our estimates include all aspects of the imaging procedure, regardless of how it is billed. If we have a provider that only bills the technical component of an MRI, we implement logic to identify and add the professional component to calculate a cost estimate for the entire procedure for the consumer.

In our work for NHID, if necessary, we will further develop the SAS code at the claim-line level, attribute it to specific procedures and attribute these costs to facilities in the NHID universe. To calculate cost estimates for MHDO we rely on several APCD cost data fields, including:

- Total charge
- Total pay
- Prepaid
- Co-pay
- Co-insurance
- Deductible
- Quantity
- Date of Service

These fields form the basis of a complex analysis that is specific to CPT codes and modifiers, billing practices, and provider attribution.

We are knowledgeable about the ways in which different types of procedures are billed and will use this expertise when proofing your SAS code. Our experience with day-of CPT cost calculations for both bundled and unbundled services will allow us to quickly review existing SAS code and make recommendations for improvements and more nuanced code.

We have developed CPT-specific cost calculation methodology for:

- Simple unbundled estimates for single procedures, such as office visits
- Complex unbundled estimates for single procedures that include technical and professional components, such as radiology and imaging
- Simple bundled estimates for CPTs frequently billed together, such as blood draws and blood labs
- Complex bundled estimates for surgical procedures that require the creation of an episode of care inclusive of pre- and post-op visits, professional and facility surgical fees, and follow-up care such as physical therapy

Potential recommendations for changes in the code or bundling methodology may include inclusion or exclusion of CPT code and modifiers, changes to cost calculations (such as unit cost estimates), and additions or changes in association for the provider list as well as provider attribution.

Our quality assurance process for NH HealthCost will involve a facility and payer review. We will flag costs for previously released procedures that changed drastically or did not appear in the last iteration of NH HealthCost. We will review the claims, available information on the estimated costs of a typical similar procedure, and may contact the facility to ensure the data are accurate. In Maine, we provide each entity that will be represented on the website with an individualized spreadsheet with their specific cost and quality information to ensure that data slated for public display are accurate. During the review period, we work extensively with providers to ensure they are comfortable with the methodology and the estimates. For new procedures or facilities added to NH HealthCost, NHID may want to send an email to each provider to verify the cost information that will be presented on the website. HSRI would create the spreadsheets needed for this endeavor and use the feedback to make potential adjustments to the data that NHID signs off on. If new providers are identified by the vendor, HSRI will analyze the claims data to ensure they are represented by the correct NPI, that they perform procedures on NH HealthCost, and that they have sufficient claim volume to be represented on the website.

Workplan

Sound project planning is essential to the success of project work. Our team is committed to working with NHID to ensure the project plan meets NHID's needs and has full approval before activity begins. Our team has proven itself in similar projects to be adept in utilizing sound project management approaches as described above to execute the project deliverables outlined below on time and within budget.

Deliverables outlined below draw on the workflows for the quality assurance and HealthCost review processes depicted in Exhibits 1 and 3. When developing products and code for a client, we view the process as iterative by first delivering the high-priority products and improving upon and addressing issues as they arise in the following iterations. Specific to the R&D of the Rate Estimates Methodology, we plan to address bugs in the code and other high-priority issues identified by NHID at the beginning of the contract, and we can discuss a deliverable date with NHID for this first adjustment of code and documentation. We will then provide recommendations and changes to the NH Healthcost and other identified reports that are seen as less urgent.

Exhibit 4. Proposed Project Workplan

Deliverable	Start Date	End Date
Project Kickoff Meeting	July 1, 2016	July 8, 2016
Final Project Plan	July 11, 2016	July 15, 2016
Development Tasks R&D of Rate Estimates Methodology	July 11, 2016	March 31, 2017
Debug and identify issues in HealthCost code	July 11, 2016	Sept. 30, 2016
Research existing methodology	July 11, 2016	Sept 30, 2016
Test rates and analyze underlying data	July 11, 2016	Jan. 13, 2017
Reprogram and test	Oct. 1, 2016	March 31, 2017
Development Tasks for Expansion of Services	July 18, 2016	March 31, 2018
Assist with outside vendor recommendations for changes	July 18, 2016	March 31, 2018
Operational Task	July 18, 2016	June 30, 2018
Routine Conference Calls with the state's data consolidation vendor	As needed	As needed
Develop QA testing programs	July 18, 2016	Aug. 31, 2016
Perform QA testing on clean files (4-8/yr for 3 yrs)	Sept. 1, 2016	April 30, 2018
Investigate and document issues identified	Nov. 1, 2016	May 31, 2018
Potentially run update programs and check HealthCost estimates before and after website load	Dec. 1, 2016	June 30, 2018
Project Closeout	June 30, 2018	June 30, 2018

Project Costs

In estimating our project costs, we adhered to the guidelines outlined by NHID in the RFP. The following tables summarize our Personnel Costs for the overall project (Exhibit 5) and then detail out the development and operational task budgets (Exhibits 6-8). Each table contains the name of the staff, their project title, the hourly rate for that individual, and an estimate of the amount of time each staff might be expected to expend on the project. The % FTE is based on the amount of hours over the two year timeline.

Exhibit 5. Budget Summary

Budget Summary: July 1, 2016 - June 30, 2018			Development Tasks R&D of Rates Estimate Methodology			Development Tasks for Expansion of Services			Operational Work			Total		
Name	**Title**	**Loaded Rate***	Hours	% FTE	Cost	Hours	% FTE	Cost	Hours	% FTE	Cost	Hours	% FTE	Cost
Leanne Candura	Project Manager	$ 107.61	72	2%	$ 7,748.21	52	1%	$ 5,595.93	122	3%	$ 13,128.92	246	7%	$ 26,473.06
Katie Howard	Health Data Analyst	$ 79.33	124	3%	$ 8,424.41	101	3%	$ 8,011.91	279	7%	$ 19,320.75	504	13%	$ 35,757.06
Margaret Mulcahy	Health Data Analyst	$ 66.49	136	4%	$ 10,519.31	140	4%	$ 9,308.53	338	9%	$ 25,656.08	614	16%	$ 45,483.92
Rachael Gerber	Health Data Analyst	$ 79.22	124	3%	$ 9,823.28	40	1%	$ 3,168.80	238	6%	$ 18,854.36	402	11%	$ 31,846.44
Kevin Rogers	Senior Programmer/Analyst	$ 128.63	120	3%	$ 15,435.24	92	2%	$ 11,833.68	188	5%	$ 24,181.87	400	11%	$ 51,450.78
TOTAL PERSONNEL			**576**		**$ 51,950.45**	**425**		**$ 37,918.85**	**1165**		**$ 101,141.97**	**2166**		**$ 191,011.27**

*Inclusive of Direct Labor, Fringe & Overhead.

Exhibit 6. Development Tasks R&D of Rate Estimates Methodology

Budget Summary: July 1, 2016 - June 30, 2018			Researching existing HealthCost code and methodology		Testing rates and analyzing underlying data		Reprogramming and testing				
Name	**Title**	**Loaded Rate**	Hours	Cost	Hours	Cost	Hours	Cost	Hours	% FTE	Cost
Leanne Candura	Project Manager	$ 107.61	24	$ 2,582.74	24	$ 2,582.74	24	$ 2,582.74	72	2%	$ 7,748.21
Katie Howard	Health Data Analyst	$ 79.33	14	$ 1,110.56	14	$ 930.85	96	$ 6,382.99	124	3%	$ 8,424.41
Margaret Mulcahy	Health Data Analyst	$ 66.49	20	$ 1,329.79	20	$ 1,584.40	96	$ 7,605.12	136	4%	$ 10,519.31
Rachael Gerber	Health Data Analyst	$ 79.22	14	$ 1,109.08	14	$ 1,109.08	96	$ 7,605.12	124	3%	$ 9,823.28
Kevin Rogers	Senior Programmer/Analyst	$ 128.63	10	$ 1,286.27	10	$ 1,286.27	100	$ 12,862.70	120	3%	$ 15,435.24
TOTAL PERSONNEL			**82**	**$ 7,418.44**	**82**	**$ 7,493.34**	**412**	**$ 37,038.67**	**576**		**$ 51,950.45**

Exhibit 7. Development Tasks for Expansion of Services

			Assisting with outside vendor recommendations for changes				
Name	**Title**	**Loaded Rate**	Hours	Cost	Hours	% FTE	Cost
Leanne Candura	Project Manager	$ 107.61	52	$ 5,595.93	52	1%	$ 5,595.93
Katie Howard	Health Data Analyst	$ 79.33	101	$ 8,011.91	101	3%	$ 8,011.91
Margaret Mulcahy	Health Data Analyst	$ 66.49	140	$ 9,308.53	140	4%	$ 9,308.53
Rachael Gerber	Health Data Analyst	$ 79.22	40	$ 3,168.80	40	1%	$ 3,168.80
Kevin Rogers	Senior Programmer/Analyst	$ 128.63	92	$ 11,833.68	92	2%	$ 11,833.68
TOTAL PERSONNEL			**425**	**$ 37,918.85**	**425**		**$ 37,918.85**

Exhibit 8. Operational Task

			Develop QA testing programs		Perform QA testing on clean files (4-8/yr for 3 yrs)		Investigate and document issues identified		Potentially run update programs and check HealthCost estimates before and after website load				
Name	**Title**	**Loaded Rate**	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	% FTE	Cost
Leanne Candura	Project Manager	$ 107.61	32	$ 3,443.65	30	$ 3,228.42	30	$ 3,228.42	30	$ 3,228.42	122	3%	$ 13,128.92
Katie Howard	Health Data Analyst	$ 79.33	30	$ 2,379.77	90	$ 5,984.06	129	$ 8,577.15	30	$ 2,379.77	279	7%	$ 19,320.75
Margaret Mulcahy	Health Data Analyst	$ 66.49	28	$ 1,861.71	100	$ 7,922.00	150	$ 11,883.00	60	$ 3,989.37	338	9%	$ 25,656.08
Rachael Gerber	Health Data Analyst	$ 79.22	28	$ 2,218.16	100	$ 7,922.00	80	$ 6,337.60	30	$ 2,376.60	238	6%	$ 18,854.36
Kevin Rogers	Senior Programmer/Analyst	$ 128.63	28	$ 3,601.55	60	$ 7,717.62	80	$ 10,290.16	20	$ 2,572.54	188	5%	$ 24,181.87
TOTAL PERSONNEL			**146**	**$ 13,504.85**	**380**	**$ 32,774.10**	**469**	**$ 40,316.32**	**170**	**$ 14,546.71**	**1165**		**$ 101,141.97**

Other Requirements

Conflict of Interest

There are no known actual or potential conflicts of interest.

Appendices

A. Resumes

Resumes for all proposed team members are included.

Human Services Research Institute

LEANNE CANDURA, M.P.H.

Senior Project Manager/Research Associate

Summary of Professional Experience

Ms. Candura has more than ten years of experience in the field of public health research with a focus on health data. She currently serves as the project manager for the Maine Health Data Organization (MHDO) healthcare transparency website project, working to provide comprehensive and useful information on health care costs and quality to consumers, providers, employers, and other key stakeholders. She's also the project manager for MHDO's Data Warehouse, overseeing the development and implementation of a highly secure and robust data warehouse to collect and house Maine health care claims, encounter and eligibility data, hospital financial data and other related information. In these roles, Ms. Candura works with all stakeholders to develop strategies to achieve project objectives on schedule and on budget. A highly effective leader, problem solver and relationship builder, she has proven success working effectively and collaboratively with all project staff through complex projects. Previously she served as the assistant project director of the Data Analysis Coordination and Consolidation Center project for SAMHSA's Center for Substance Abuse Prevention, a 5-year, $25 million project.

Education

2008	MPH	University of Massachusetts at Amherst, Northampton, MA
2001	B.A.	Stonehill College, Easton, MA (Sociology)

Professional Positions

2007-Present	Senior Project Manager/Research Associate, Human Services Research Institute
2006-2007	Research Analyst, Human Services Research Institute, Cambridge, MA
2003-2006	Research Assistant, OMNI Research and Training, Denver, CO
2001-2003	Researcher, United Way of Larimer County/Larimer County Department of Health & Human Services, Fort Collins, CO

Selected Project Experience

Maine Health Data Organization Data Warehouse Project, Project Manager/Product Owner *(2013 – Present).* Responsible for overseeing all project activities ensuring project objectives are achieved on schedule and on budget. As a part of this ten-year contract with the State of Maine, HSRI and its partners are building a highly secure and robust data warehouse to collect and house health care claims, encounter and eligibility data, hospital financial data and other related information. The role of project manager/product owner involves overseeing all project tasks and subcontractors, and responsibility for assessing and tracking the Data Quality of the all data coming and out of the Data Warehouse. Also included in this role is developing standard protocols for all processes involved in the oversight and management of the project, including developing data validation protocols.

State of Maine Data Center Enhancement to Improve Health Cost Transparency – CMS Cycle III Rate Review Grant, Project Manager (2013 – Present). Responsible for overseeing all project activities ensuring project objectives are achieved on schedule and on budget. The Maine Health Data Organization (MHDO) received a grant from the Centers for Medicare and Medicaid Services (CMS) to expand its online health data resources and improve the usability of its health data website. MHDO has contracted with HSRI and its partner NORC to perform this work. Building upon the existing functionality of its current health data websites, and taking advantage of the new data warehouse infrastructure already under development by HSRI and NORC, MHDO is

using this grant funding to further integrate its cost and quality data to provide more comprehensive and useful information to consumers, providers, employers, and other key stakeholders online.

State of Maine Data Center Enhancement to Improve Health Cost Transparency – CMS Cycle IV Rate Review Grant, Project Manager (2014– Present). Responsible for overseeing all project activities ensuring project objectives are achieved on schedule and on budget. The Maine Health Data Organization (MHDO) received a grant from the Centers for Medicare and Medicaid Services to further integrate and enhance its cost and quality data to provide more comprehensive and useful information to consumers, providers, employers, and other key stakeholders. MHDO will develop ways to improve access to and dissemination of its wealth of data to further promote cost and quality transparency. MHDO has contracted with HSRI and its partner NORC to perform this work.

Evaluation of Models for Internet Consumer Health Care Cost and Quality Information, Project Director *(2015).* Responsible for overseeing all project activities ensuring project objectives are achieved on schedule and on budget. HSRI evaluated potential models for providing consumers with information via the internet about the cost and quality of health care services available to Vermont Residents.

SAMHSA-CSAP Data Analysis Coordination and Consolidation Center (DACCC), Assistant Project Director *(2010-2012),* ***Project Manager*** *(2007-2010).* The DACCC was designed to provide a centralized, comprehensive and coordinated data and analytic resource (for process, capacity, outcome and trend data at all levels of analysis including individual, project, community, state and national) for accountability, program planning, and policy decisions for CSAP. The DACCC also supported CSAP program staff in their planning processes, implementation and oversight of sponsored programs, and in the provision of guidance to grantees and to the field. The role of assistant project director involved all aspects of DACCC activities to ensure that procedures and timelines were being developed and followed, deliverables were met and tailored to specified audience, subcontractor work was coordinated, stakeholders were being included in project work, and budgets were followed.

Human Services Research Institute, *Cambridge, MA,* ***Research Analyst*** *(2006-2007).* Responsible for conducting analysis and report writing for the Data Consolidation and Coordination Center (DCCC) for SAMHSA's Center for Substance Abuse Prevention (CSAP).

OMNI Research and Training, *Denver, CO,* ***Research Assistant III*** *(2003-2006.* Responsible for designing and managing continuing development, including data quality protocol, of innovative ASPIRE Database (Assessment of Prevention Indicators and Resources) which brings together data on hundreds of social indicators and prevention resource information from thousands of agencies which is used by policy makers, foundations, and state and local governments to help direct funding decisions and tailoring to support Colorado's SPF SIG process; helped produce Colorado's comprehensive Healthy People 2010 report; coordinated Colorado's Youth Risk Behavior Survey effort and helping inform data analysis and reporting; led over forty local communities in surveying over 30,000 Colorado middle school and high school students to determine health behaviors and creating report from data collected and training community leaders on how to use this data to understand local substance use rates and for prevention planning; conducting qualitative and quantitative analysis using multiple software analysis tools; participated in numerous literature searches and reviews; produced evaluation reports which included written and graphical data presentations; Additionally, served as Vice President of the Omni Institute – the non-profit arm of OMNI Research and Training whose mission is to provide pro-bono services to enhance and improve the research capacity of programs and communities.

United Way of Larimer County/Larimer County Department of Health & Human Services, *Fort Collins, CO.,* ***Researcher*** *(2002-2003).* Responsible for assisting in the development of a quality of life index using statistical analysis software to assess the level of community need and informing responsive grant making and resource allocation; co-authoring research article about index published in peer reviewed journal; developing specialized

reports using social indicator data tailored for varied audiences; and collecting, analyzing and organizing social indicator data from a variety of local, state and national sources for the Compass Website.

Bibliography

Publications

Bobbitt, L., Green, S., Candura, L., & Morgan, G.A. (2005). The Development of a County Level Index of Well-Being. *Social Indicators Research*, *73*(1), 19 – 42.

Technical Reports

Co-Author: Accountability Report, Volume V: FY 2006, Rockville, MD: Center for Substance Abuse Prevention, Substance Abuse and Mental Health Services Administration, 2007.

Co-Author: Accountability Report, Volume IV: FY 2005, Rockville, MD: Center for Substance Abuse Prevention, Substance Abuse and Mental Health Services Administration, 2006.

Co-Author: Trends and Directions in Substance Abuse Prevention, Volume V: 2002-2005, Rockville, MD: Center for Substance Abuse Prevention, Substance Abuse and Mental Health Services Administration, 2007.

Co-Author: Trends and Directions in Substance Abuse Prevention, Volume IV: 2002-2004, Rockville, MD: Center for Substance Abuse Prevention, Substance Abuse and Mental Health Services Administration, 2006.

Co-Author: National Outcome Measures: State-Level Trends, Volume I: 2002-2005. Rockville, MD: Center for Substance Abuse Prevention, Substance Abuse and Mental Health Services Administration, 2007.

Human Services Research Institute
HSRI

KEVIN ROGERS

Senior Systems Analyst/Senior Research Specialist

Summary of Professional Experience

Kevin Rogers has more than 20 years of experience in the IT field, working as a systems analyst and application developer and in data center operations. He currently serves as the product development team lead for the Maine Health Data Organization (MHDO) Data Warehouse, creating a highly secure and robust system that collects, houses, and integrates Maine health care claims, encounter and eligibility data, hospital financial data, and related information. Kevin is also the product development lead for the State of Maine Data Center Enhancement to Improve Health Cost Transparency—a grant-funded project that builds on the existing functionality of the MHDO health data websites, and takes advantage of the new data warehouse infrastructure, to provide more comprehensive and useful information on health care costs and quality to consumers, providers, employers, and other key stakeholders. Previously, Kevin was a senior member of the data analysis team for the Data Analysis Coordination and Consolidation Center project for SAMHSA's Center for Substance Abuse Prevention. In this role, he developed applications to automate data analysis and reporting activities, assisted in the development of an SPSS- and SAS-based data cleaning pipeline, and oversaw the team's overall quality assurance processes, including Section 508 compliance. Before joining HSRI, he worked as an independent consultant, providing business and systems analysis, application development, and database design services to clients in the healthcare, substance abuse prevention, and pharmaceutical fields. Prior to this, he worked as a senior database and application developer at the Channing Bete Company where he developed application and database code for a high-volume survey scanning and reporting operation, which included the integration of SPSS code into an automated report production and proofing pipeline. Kevin began his IT career at the Phoenix Home Life Company where he worked as a team leader and senior systems analyst, maintaining and developing SAS and Cobol programs for the Agency and Actuarial departments. Before assuming this role, he worked in various roles within the company in data processing operations and technical services.

Education

1992 A.A. Regents College, State University of New York, Albany, New York (Liberal Arts)

Professional Positions

2007 – Present Senior Systems Analyst/Senior Research Associate, Human Services Research Institute, Cambridge, MA
2006 – 2011 Consultant, Data Integration Group, Madison, MS
2005 – 2011 Consultant, Rothenbach Research and Consulting, Northampton, MA
2006 – 2009 Consultant, Analytica Group, New York, NY
2001 – 2005 Prevention Science Application Developer, Channing Bete Company, South Deerfield, A
2000 – 2001 Web/News Producer, WGGB-TV, Springfield, MA
1999 – 2000 Consultant, Tobin Systems, Springfield, MA
1996 – 1999 Advisory Systems Analyst, Phoenix Home Life, Enfield, CT

1990 – 1996 Technical Coordinator, Phoenix Home Life, Enfield, CT

Project Experience

Maine Health Data Organization Data Warehouse Project, Product Development Lead/Senior Systems Analyst (2013 – Present). As a part of this ten-year contract with the State of Maine, HSRI and its partners are building a highly secure and robust data warehouse to collect and house health care claims, encounter and eligibility data, hospital financial data and other related information. Currently leading the Product Development team for the Maine Health Data Warehouse Project, which includes developing of the ETL for the APCD; creating the master provider, patient and person indices; and the data modeling of the Data Warehouse.

State of Maine Data Center Enhancement to Improve Health Cost Transparency – CMS Cycle III Rate Review Grant, Product Development Lead/Senior Systems Analyst (2013 – Present). The Maine Health Data Organization (MHDO) received a grant from the Centers for Medicare and Medicaid Services (CMS) to expand its online health data resources and improve the usability of its health data website. Responsible for the integration and modification of the legacy HealthCost system to a new database environment and the modification of SAS, SQL, and stored procedure code to fix bugs and improve performance. Developed code to implement an improved healthcare cost methodology for the CompareMaine website.

SAMHSA–CSAP Data Analysis Coordination and Consolidation Center (DACCC), Senior Research Associate/Application Developer *(2007 – 2012).* Led the analytic workgroups that created the annual *Trends and Directions in Substance Abuse Prevention* and *State Package* reports. Developed report automation code and procedures for the annual *State NOMs* and *Accountability Reports*. Created tools to assist in the automated creation of maps, graphs, scattergrams, and tables for a variety of DACCC products. Developed, maintained, and provided training for a variety of applications to support the team's analytic and reporting needs, including the development, evaluation and integration of SPSS and SAS programs. Acted as the technical liaison to CSAP's Data Information Technology Infrastructure Contract (DITIC) providing analyses of user requirements and creating detailed specifications for online data entry systems; worked to create and conduct joint trainings for end users. Worked with DITIC personnel to create specifications for revisions to the Web Analytic Tool (WAT). Led the effort to convert numerous table and graph heavy reports to 508-compliant formats, including the creation of HTML e-kits for all major deliverables.

Survey Research Group, Channing Bete Company, Prevention Science Application Developer *(2001 – 2005).* Developed application and database code for high-volume survey scanning and reporting operation, which included the direct integration of SPSS scripts into an automated report production and proofing pipeline. Worked with research team to create sampling and weighting schemes for a number of state-level youth surveys. Created automated report production tools for the Communities That Care Youth Survey. Worked with team to create a weighted national database of survey results for norming purposes. Worked with Operations Department to gather and report on a wide variety of time study data.

SmartTrack, Data Integration Group, Consultant *(2006-2011).* Took over development and maintenance of web-based online survey and reporting tool. Developed user interface and backend database code to support a variety of high-volume state survey efforts. Created custom reporting applications. Oversaw the processing and loading of scanned paper survey results to the online system.

Pennsylvania Youth Survey/ Florida Youth Substance Abuse Survey, Rothenbach Research and Consulting, Consultant *(2005 – 2011).* Developed data processing and automated reported production

software to facilitate the production of school, district and county-level reports from state-level datasets.

Bibliography

Publications

Co-Author: National Outcome Measures: State-Level Trends, Volume V: 2002-2009. Rockville, MD: Center for Substance Abuse Prevention, Substance Abuse and Mental Health Services Administration, 2011.

Co-Author: Trends and Directions in Substance Abuse Prevention, Volume VIII: 2002-2009, Rockville, MD: Center for Substance Abuse Prevention, Substance Abuse and Mental Health Services Administration, 2011.

Co-Author: Accountability Report, Volume VIII: FY 2009, Rockville, MD: Center for Substance Abuse Prevention, Substance Abuse and Mental Health Services Administration, 2010.

Co-Author: Trends and Directions in Substance Abuse Prevention, Volume VII: 2002-2008, Rockville, MD: Center for Substance Abuse Prevention, Substance Abuse and Mental Health Services Administration, 2010.

Co-Author: Accountability Report, Volume VII: FY 2008, Rockville, MD: Center for Substance Abuse Prevention, Substance Abuse and Mental Health Services Administration, 2009.

Co-Author: National Outcome Measures: State-Level Trends, Volume III: 2002-2007. Rockville, MD: Center for Substance Abuse Prevention, Substance Abuse and Mental Health Services Administration, 2009.

Co-Author: Accountability Report, Volume VI: FY 2007, Rockville, MD: Center for Substance Abuse Prevention, Substance Abuse and Mental Health Services Administration, 2008.

Co-Author: National Outcome Measures: State-Level Trends, Volume II: 2002-2006. Rockville, MD: Center for Substance Abuse Prevention, Substance Abuse and Mental Health Services Administration, 2008.

Presentations

Rogers, K. HIV Cohort 6: Data Processing and Preliminary Analysis Results, presented at the Minority HIV/AIDS Initiative Grantee Technical Assistance (TA) Meeting (Cohort 6) , Ft. Lauderdale, FL, September 2009.

Rogers, K., Isvan, N. & Bailey, D. Predicting Participant Retention in Direct Service Prevention Programs: The Case of CSAP's Methamphetamine Prevention Grant Initiative, presented at the annual meeting of the Society for Prevention Research, Washington DC, May 2009.

Rogers, K. Methamphetamine Cohort 3: Data Processing and Preliminary Analysis Results, presented at the Methamphetamine Prevention Program Cohort 3 Grantee Meeting, Austin, TX, July 2008.

Human Services Research Institute

Katie Howard, MPH

Research Associate

Summary of Professional Experience

Ms. Howard is a research associate at HSRI, focusing on projects related to medical claims data. She is currently working on the MHDO healthcare transparency website and MHDO Data Warehouse projects. For these, she provides assesses claims data for quality and completeness, and performs complex data analysis to answer policy questions. She also provides consultation on ways to integrate health cost and quality data on consumer-facing platforms. In addition, she has provided consultation to states on projects related to resource allocation and community support for individuals with disabilities through Medicaid Home and Community-Based Services Waiver programs. Across these projects, she has conducted numerous data quality checks and analysis as well as technical assistance to state officials and other stakeholders on the ideal approach to meeting policy goals and objectives that are tailored to each jurisdictions' needs and regulations. Her prior work at HSRI also includes evaluations of federal projects related to HIV, hepatitis, and substance abuse prevention in minority communities.

Education

2008	M.P.H.	University of Maryland, College Park, MD (Public and Community Health)
2004	B.A.	University of Oregon, Eugene, OR (Sociology with Honors)

Professional Positions

2008 – Present	Research Associate, Human Services Research Institute, Cambridge, MA
2006 – 2008	Graduate Assistant, University of Maryland, College Park, D
2005 – 2006	Investigator, Dolan Griggs LLP, Portland, OR
2005 – 2006	Community Health Advocate, Planned Parenthood, Portland, OR

Project Experience

Maine Health Data Organization Data Warehouse Project, Research Associate *(2014 – Present).* As a part of this ten-year contract with the State of Maine, HSRI and its partners are building a highly secure and robust data warehouse to collect and house health care claims, encounter and eligibility data, hospital financial data and other related information. The role of project manager/product owner involves overseeing all project tasks and subcontractors, and responsibility for assessing and tracking the Data Quality of the all data coming and out of the Data Warehouse. Also included in this role is developing standard protocols for all processes involved in the oversight and management of the project, including developing data validation protocols. Ms. Howard supports data quality activities and responds to ad hoc analysis requests.

State of Maine Data Center Enhancement to Improve Health Cost Transparency – CMS Cycle IV Rate Review Grant, Research Associate (2014– Present). The Maine Health Data Organization (MHDO) received a grant from the Centers for Medicare and Medicaid Services to further integrate and enhance its cost and quality data to provide more comprehensive and useful information to consumers, providers, employers, and other key stakeholders. MHDO will develop ways to improve access to and dissemination of its wealth of data to further promote cost and quality transparency. MHDO has contracted with HSRI and its partner NORC to perform this work. Ms. Howard provides consultation on ways to integrate health cost and quality data on consumer-facing

platforms, assesses claims data for quality and completeness, and performs complex data analysis to answer policy questions.

Evaluation of Models for Internet Consumer Health Care Cost and Quality Information, Research Associate *(2015).* HSRI evaluated potential models for providing consumers with information via the internet about the cost and quality of health care services available to Vermont Residents. In the role of Research Associate, Ms. Howard led the Literature Review task and report.

Resource Allocation at HSRI, Research Associate *(2012 – 2015).* This work centers on providing specialty consultation on Medicaid Home and Community Based Services Waivers. Analysis and policy consultation is provided to policy makers interested in altering how budgets are allocated for individuals with developmental disabilities. Primarily, the Supports Intensity Scale is used to provide essential information on individual needs. This work often also involves substantial effort to align Medicaid service reimbursement rates with individual allocations. HSRI has or is undertaking this work with Colorado, Oregon, Kentucky, Rhode Island, Virginia, Maryland, New Mexico, Maine, Mississippi, regional jurisdictions in Michigan and North Carolina, and the Canadian province of Alberta and Manitoba. Ms. Howard conducts environmental scans to provide information and best practice data to state officials and other stakeholders on the ideal approach to meeting policy goals and objectives that are tailored to each jurisdictions' needs and regulations

Center for Substance Abuse Prevention's National Cross Site Evaluation of HIV, Hepatitis and Substance Abuse Prevent Grant Programs, Research Analyst *(2009 – 2012).* This project added to the DACCC contract in 2009. The cross site analysis combined data from multiple HIV grant sites with different characteristics, objectives and minority target populations. The purpose of the analysis was to provide CSAP with a better of understanding of which interventions are the most effective in specific at-risk minority populations.

Center for Substance Abuse Prevention's Data Analysis Coordination and Consolidation Center, Research Analyst *(2008 – 2012).* Awarded in 2007, the DACCC was designed to support managers in SAMHSA's Center for Substance Abuse Prevention (CSAP) in their planning processes, implementation and oversight of sponsored programs, and in the provision of guidance to grantees and to the field. The DACCC promoted efficiency and effectiveness in data collection, analysis and reporting, thus resulting in increased accountability and availability of data for CSAP and the substance abuse prevention field.

Bibliography

Technical Reports

Co-Author: Consumer Information and Price Transparency Report, Montpelier, VT: Green Mountain Care Board, 2015.

Co-Author: Virginia Validation Study: Analysis of Proposed Service Packages by Residential Option and Assessment Level, Portland, OR: Human Services Research Institute, 2015.

Co-Author: Maine Validation Study Report, Portland, OR: Human Services Research Institute, 2014.

Co-Author: Review of the Supports Intensity Scale and Connecticut Level of Need Measure for Assessing the Support Needs of Individuals with Intellectual and Developmental Disabilities, Portland, OR: Human Services Research Institute, 2014.

Co-Author: Support Intensity Scale Analysis: Services and SIS Assessments for Individuals with Intellectual and Developmental Disabilities Served by Oakland County Community Mental Health Authority, Portland, OR: Human Services Research Institute, 2013.

Co-Author: Establishing an Algorithm for Individual Budget Allocations in Kentucky: Analysis of Data and Implications, Portland, OR: Human Services Research Institute, 2013

Co-Author: Pennsylvania Support Intensity Scale Results for Waiver Participants: Analysis of the Consolidated Waiver and the Person/Family Directed Supports Waiver, Portland, OR: Human Services Research Institute, 2013

Co-Author: New Hampshire ABD and DDW Systems: An Analysis of Assessment Results and Allocated Budgets for Home and Community-Based Serves Portland, OR: Human Services Research Institute, 2013

Co-Author: Maine Supporting Individual Success: Analysis of Individual Expenditures for Those Receiving the Support Intensity Scale, Portland, OR: Human Services Research Institute, 2013

Co-Author: HIV Cross-Site Evaluation Report, Rockville, MD: Center for Substance Abuse Prevention, Substance Abuse and Mental Health Services Administration, 2012

Co-Author: Accountability Report, Volume IX: FY 2010, Rockville, MD: Center for Substance Abuse Prevention, Substance Abuse and Mental Health Services Administration, 2011

Co-Author: Trends and Directions in Substance Abuse Prevention, Volume VIII: 2002-2009, Rockville, MD: Center for Substance Abuse Prevention, Substance Abuse and Mental Health Services Administration, 2011

Co-Author: Accountability Report, Volume VIII: FY 2009, Rockville, MD: Center for Substance Abuse Prevention, Substance Abuse and Mental Health Services Administration, 2010

Co-Author: Trends and Directions in Substance Abuse Prevention, Volume VII: 2002-2008, Rockville, MD: Center for Substance Abuse Prevention, Substance Abuse and Mental Health Services Administration, 2010

Co-Author: Accountability Report, Volume VII: FY 2008, Rockville, MD: Center for Substance Abuse Prevention, Substance Abuse and Mental Health Services Administration, 2009

Co-Author: Accountability Report, Volume VI: FY 2007, Rockville, MD: Center for Substance Abuse Prevention, Substance Abuse and Mental Health Services Administration, 2008

Presentations

Agosta, J., Teninty, L., Howard, K., and Hendricks, E. Working Toward a Sustainable Future for Support Systems for People with Intellectual and Other Developmental Disabilities, post conference session at 138th Annual Meeting for the American Association of Individuals with Intellectual and Developmental Disabilities, Orlando, FL, June 2014.

Howard, K. L., Gerber, R., McInerney, K., & Oliver, N. Linking Interventions to Outcomes: Designing a Multisite Data Collection Protocol, roundtable presentation at the 139th American Public Health Association Meeting & Exposition, Washington, DC, November 2011.

Gerber, R., Howard K. L., McInerney, K., Oliver, N., & Auerbach, K. Reentry Populations: Examining Group Differences in Knowledge, Attitudes, and Behaviors, oral presentation at the 139th American Public Health Association Meeting & Exposition, Washington, DC, November 2011.

Human Services Research Institute
HSRI

RACHAEL E. GERBER, M.P.H.

Research Associate

Summary of Professional Experience

Ms. Gerber focuses on community health in minority communities. Her current project focuses on a multi-site evaluation of HIV and substance abuse prevention programs funded by SAMHSA's Center for Substance Abuse Prevention. On this and other health services evaluations, she manages the data, performing quality control, analysis, dissemination, and technical assistance. Previously, she worked at New England Research Institutes (NERI) and the Center for Interdisciplinary Research on AIDS at Yale where she analyzed health data for a longitudinal study on health outcomes in a minority community. Ms. Gerber's strong data management and analytic skills allow her to conduct data driven evaluations that blend health outcomes with solid policy recommendations and relevant technical assistance expertise.

Education

2009	M.P.H.	Yale School of Public Health, New Haven, CT (Social & Behavioral Science)
2003	B.A.	Boston University, Boston, MA (History), *cum laude*

Professional Positions

2013-Present	Research Associate, Human Services Research Institute (HSRI), Cambridge, MA
2012-2013	Sr. Research Associate, New England Research Institutes, Inc. (NERI), Watertown, MA
2009-2012	Research Analyst, Human Services Research Institute (HSRI), Cambridge, MA
2007-2009	Research Assistant, Center for Interdisciplinary Research on AIDS (CIRA), New Haven, CT
2004-2006	Community Health and HIV Prevention Extension Agent, U.S. Peace Corps, Togo, W. Africa

Selected Project Experience

SAMHSA-CSAP Program Evaluation for Prevention Contract (PEP-C)/MAI Cross-Site Evaluation *(2013-Present).* The PEP-C project includes a national multi-site evaluation of CSAP's Minority AIDS Initiative. In her role on the project Rachael is responsible for managing large and complex datasets and relational databases, developing data collection protocols and tools, conducting analyses of process- and participant-level outcomes, report writing and dissemination, project management and developing validation for online data collection tools.

SAMHSA-CMHS and CSAT Evaluation of Programs Provide Services to Persons who are Homeless with Mental and/or Substance Use Disorders *(2015-Present).* HSRI received a subcontract through RTI International to evaluate four programs administered within CMHS and CSAT: the Cooperative Agreements to Benefit Homeless Individuals (CABHI), Grants for the Benefit of Homeless Individuals (GBHI), Services in Supportive Housing (SSH), and the Programs for Assistance in Transition from Homelessness (PATH). Rachael assists in the collection of data and provides data analysis.

SAMHSA-Training Materials for Aging and Disability Resource Centers (ADRC) on Mental Health Promotion and Suicide Prevention (2015-Present). SAMHSA, in collaboration with the Administration for Community Living (ACL), funded a project to enhance the capacity of ADRC staff to meet the behavioral health needs of older adults. Rachael was involved in conducting a needs assessment of ADRCs in eight funded states and in developing training materials in the areas of mental health promotion and suicide prevention.

SAMHSA-CSAP Data Analysis Coordination and Consolidation Center (DACCC) *(2009-2012).* Awarded in 2007, the DACCC was designed to support managers in SAMHSA's CSAP in their planning processes, implementation and oversight of sponsored programs, and in the provision of guidance to grantees and to the field. In her role on the project, Ms. Gerber was responsible for cleaning and analyzing data across programs including the Minority AIDS Initiative (MAI), the Strategic Prevention Framework-State Incentive Grant (SPF SIG), and the Substance Abuse Prevention and Treatment 20% Set-Aside. The MAI cross-site evaluation was added to the DACCC contract in 2009. In her central role on the project, Ms. Gerber contributed to development of the research design and evaluation instruments to capture data on grantee organizational characteristics, evidence-based interventions, program fidelity, and participant outcomes including HIV testing, attitudes and knowledge about HIV and Hepatitis-C, and behavioral outcomes related to HIV risk and substance use. She performed data cleaning and analysis of data at the grantee-, intervention-, and participant-levels, wrote reports and guidance documents, led trainings and technical assistance to grantees and Project Officers during in-person and webinar trainings, and presented research professional at conferences.

Boston Area Community Health Survey (BACH), New England Research Institutes, Inc. (NERI) *(2012-2013).* Funded by the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), BACH is a longitudinal, community-based cohort of 5,502 Boston residents ages 30-79 years. The baseline BACH was designed to explore the mechanisms conferring increased health risk on minority populations with a particular focus on urologic symptoms and conditions. Ms. Gerber was responsible for data cleaning and statistical analysis for a sub-study examining the relationship between endothelial function and urologic symptoms. She wrote abstracts and sections of manuscripts for peer-reviewed journals, and conducted and wrote systematic literature reviews.

Parenting and Relationship Transition and Risk Study (PARTNRS), Center for Interdisciplinary Research on AIDS *(2007-2009).* Facilitated research activities for an R01 National Institute of Mental Health (NIMH)-funded study of HIV/STI risk behavior and relationship dynamics among adolescent couples expecting a baby. Recruited study participants in accordance with IRB protocols; administered study interviews using ACASI software; analyzed data in SPSS, performed literature searches, and assisted in manuscript development.

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Co-Author: HIV Cross-Site Evaluation Report. (2011). Substance Abuse and Mental Health Services Administration, Center for Substance Abuse Prevention. Rockville, MD.

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Presentations

Gerber R, Vita JA, Ganz P, Wager CG, Araujo AB, Rosen RC, Kupelian V. (2013, June 20). Association of peripheral microvascular dysfunction and erectile dysfunction. Poster presented at the annual meeting of the Society for Epidemiologic Research. Boston, MA.

Gerber R, Howard K, McInerney K, Oliver NM, Auerbach K. (2011, November 2). Reentry populations: Examining group differences in knowledge, attitudes and behaviors. Presented orally at the annual meeting of the American Public Health Association. Washington, DC.

Howard K, Gerber R, McInerney K, Oliver NM. (2011, October 31). Linking interventions to outcomes: Designing a multisite data collection protocol. Presented at a round table session at the annual meeting of the American Public Health Association. Washington, DC.

Human Services Research Institute
HSRI

Margaret Mulcahy, M.A.

Research Analyst

Summary of Professional Experience

Ms. Mulcahy is a research analyst with HSRI's health data team. She is currently leading the cost analysis work on the CMS grants for the State of Maine Data Center Enhancement to Improve Health Cost Transparency awarded to the Maine Health Data Organization. Her primary responsibilities in this regard are to oversee the research of healthcare cost and quality transparency, analyze medical claims data, develop the methodology for calculating the average cost of common medical procedures, and support the development and maintenance of Maine's healthcare transparency website. Previously, Ms. Mulcahy worked on the data analysis team of the Data Analysis Coordination and Consolidation Center project for SAMHSA's Center for Substance Abuse Prevention. In this role she cleaned, analyzed, and reported on data from several federally funded substance abuse prevention programs.

Education

2013	MA	Brown University, Providence, RI (Sociology)
2007	BA	Harvard University, Cambridge, MA (Sociology)

Professional Positions

2013 – Present	Research Analyst, Human Services Research Institute, Cambridge, MA
2009 – 2011	Research Analyst, Human Services Research Institute, Cambridge, MA
2007 – 2009	Research Assistant, Goodman Research Group, Cambridge, MA
2007	Intern, EcoLogic Development Fund, Cambridge, MA
2006	Policy Intern, Fundacion Banco de Alimentos, Buenos Aires, Argentina
2005	DWI Intern, Onondaga County District Attorney's Office, Syracuse, NY
2004	Advocate Intern, Vera House, Syracuse, NY

Selected Project Experience

State of Maine Data Center Enhancement to Improve Health Cost Transparency – CMS Cycle III Rate Review Grant, Research Analyst (2013 – Present). The Maine Health Data Organization (MHDO) received a grant from the Centers for Medicare and Medicaid Services (CMS) to expand its online health data resources and improve the usability of its health data website. MHDO has contracted with HSRI and its partner NORC to perform this work. Building upon the existing functionality of its current health data websites, and taking advantage of the new data warehouse infrastructure already under development by HSRI and NORC, MHDO is using this grant funding to further integrate its cost and quality data to provide more comprehensive and useful information to consumers, providers, employers, and other key stakeholders online. Ms. Mulcahy is responsible for leading the team and overseeing the research of healthcare cost and quality transparency, and the analysis of medical claims data. She developed the methodology for calculating the average cost of common medical procedures, and supported the development and maintenance of Maine's healthcare transparency website.

State of Maine Data Center Enhancement to Improve Health Cost Transparency – CMS Cycle IV Rate Review Grant, Research Analyst (2014– Present). The Maine Health Data Organization (MHDO) received a grant from the Centers for Medicare and Medicaid Services to further integrate and enhance its cost and quality data to

provide more comprehensive and useful information to consumers, providers, employers, and other key stakeholders. MHDO will develop ways to improve access to and dissemination of its wealth of data to further promote cost and quality transparency. MHDO has contracted with HSRI and its partner NORC to perform this work. Ms. Mulcahy is responsible for leading the team and overseeing the research of healthcare cost and quality transparency, the analysis of medical claims data, development of the methodology for calculating the average cost of common medical procedures, and the support the development and maintenance of Maine's healthcare transparency website.

Evaluation of Models for Internet Consumer Health Care Cost and Quality Information, Research Analyst *(2015).* HSRI is evaluating potential models for providing consumers with information via the internet about the cost and quality of health care services available to Vermont Residents. Ms. Mulcahy is responsible for leading the review and assessment of state and private sector websites task and report.

SAMHSA-CSAP Data Analysis Coordination and Consolidation Center (DACCC), Research Analyst (2009 – 2012). The DACCC was designed to provide a centralized, comprehensive and coordinated data and analytic resource (for process, capacity, outcome and trend data at all levels of analysis including individual, project, community, state and national) for accountability, program planning, and policy decisions for CSAP. The DACCC also supported CSAP program staff in their planning processes, implementation and oversight of sponsored programs, and in the provision of guidance to grantees and to the field. The role of Research Analyst involved cleaning, analyzing, and reporting on data from several federally funded substance abuse prevention programs.

B. Selected Examples of Validations

Exhibit 9. Selected Medical Eligibility Validations

Element	Name	Validity Criteria	Reason for Issue	Threshold	Issue Type
ME001	Valid Submitter ID	A valid entry means that the Submitter ID is on the list containing all valid codes for registered entities.	Fewer than [THRESHOLD] of eligibility records have a Valid Submitter ID.	100%	Failure
ME002	Valid Payer ID	A valid entry means the Payer ID is on the Payer ID list containing all valid codes for registered entities.	Fewer than [THRESHOLD] of eligibility records have a valid Payer ID.	100%	Exemption
ME003	Valid ANSI ASC X12 Insurance Policy Type Code	When not blank, a valid entry means the Insurance Policy Type Code is on the list of ANSI ASC X12 Insurance Policy Type Codes.	Fewer than [THRESHOLD] of eligibility records have a Valid ANSI ASC X12 Insurance Policy Type Code, when populated	100%	Exemption
ME003	Insurance Policy Type Code Populated	A valid entry means that the field is not blank.	Fewer than [THRESHOLD] of eligibility records have insurance type code populated.	100%	Profile
ME004	Valid Year	A valid entry means that the Year is between 5 years prior to the current year and the current year.	Fewer than [THRESHOLD] of eligibility records have a valid year.	100%	Profile
ME005	Valid Month	A valid entry is 100% populated and not blank and is a number between 1 and 12 when Year is less than the current year or between 1 and the current month when Year is the current year.	Fewer than [THRESHOLD] of eligibility records have a valid month.	100%	Profile
ME006	Insured Group or Policy Number Populated	A valid entry means that the field is not blank.	Fewer than [THRESHOLD] of eligibility records contain insurance group or policy number populated.	99.90%	Exemption

Element	Name	Validity Criteria	Reason for Issue	Threshold	Issue Type
ME007	Valid Coverage Level Code	When not blank, a valid entry means that Coverage Level Code is on the list of ANSI ASC Benefit Coverage Level Codes.	Fewer than [THRESHOLD] of eligibility records contain a Valid Coverage level code, when populated.	100%	Exemption
ME007	Coverage Level Code Populated	A valid entry means that the field is not blank.	Fewer than [THRESHOLD] of eligibility records have Coverage Level Code populated.	100%	Profile
ME009	Plan Specific Contract Number Populated	A valid entry means that the field is not blank.	Fewer than [THRESHOLD] of eligibility records have Plan Specific Contract Number populated.	100%	Profile
ME008	Valid Subscriber SSN	A valid entry is nine digits with no dashes. Entries may not be in the list of disallowed SSNs as specified by the Social Security Administration.	Fewer than [THRESHOLD] of eligibility records contain a Valid Subscriber SSN.	33%	Profile
ME010	Member Suffix or Sequence Number Populated	For records where ME009 Plan specific Contral number is populated, a valid entry means that this field is not blank.	Fewer than [THRESHOLD] of eligibility records have a Member Suffix or Sequence Number populated, when ME009 Plan specific Contral number is populated.	99.50%	Profile
ME011	Valid Member Identification Code	A valid entry is nine digits with no dashes. Entries may not be in the list of disallowed SSNs as specified by the Social Security Administration.	Fewer than [THRESHOLD] of eligibility records have a Valid Member Identification Code.	33%	Profile
ME012	Valid ANSI ASC X12 Relationship Code	When not blank, a valid entry means that code used is a valid code on the ANSI ASC X12 Relationship Code list.	Fewer than [THRESHOLD] of eligibility records have a Valid ANSI ASC X12 Relationship Code, when populated	99.50%	Exemption

Element	Name	Validity Criteria	Reason for Issue	Threshold	Issue Type
ME012	Individual Relationship Code Populated	A valid entry means that the field is not blank.	Fewer than [THRESHOLD] of eligibility records contain Individual Relationship Code populated.	100%	Profile
ME012	Dependent 25 And Under	For members who are dependents, a valid entry means the dependent is 25 or younger.	Fewer than [THRESHOLD] of records have dependent members who are age 25 or younger.	90%	AdHoc
ME013	Valid ANSI ASC X12 Gender Code	A valid entry means that code used is a valid code on the ANSI ASC X12 Gender Code list.	Fewer than [THRESHOLD] of eligibility records have valid ANSI ASC X12 gender code.	100%	Exemption
ME013	Gender Not Unknown	A valid entry has gender coded as something other than Unknown.	Fewer than [THRESHOLD] of medical claims have gender coded as something other than Unknown.	99.60%	Profile
ME014	Spouse 20 And Over	For members who are spouses, a valid entry means the spouse is 20 or older.	Fewer than [THRESHOLD] of eligibility records specify spouse as 20 years of age or older.	99%	Profile
ME014	Valid Member DOB	A valid entry is in the following format: CCYYMMDD.	Fewer than [THRESHOLD] of eligibility records contain a valid Member DOB.	99.50%	Profile
ME015	Valid Member City Name	For records that have a valid US State in ME016, Member City Name must be in the list of US Cities if ME017 ZIP Code is not populated.	Fewer than [THRESHOLD] of eligibility records have valid Member City Name.	99.50%	Profile
ME016	Valid Member State/Province Code	When not blank, a valid entry means that the State/Province entered is on the list of US states or the list of Canadian Provinces.	Fewer than [THRESHOLD] of eligibility records have Valid Member State/Province Code, when populated.	100%	Exemption

Element	Name	Validity Criteria	Reason for Issue	Threshold	Issue Type
ME016	Member State or Province Populated	A valid entry means that the field is not blank.	Fewer than [THRESHOLD] of eligibility contain have Member State or Province populated.	100%	Profile
ME017	Valid Member ZIP Code	For records that have a valid US State in ME016, the zip code (ME017) is on the list of valid US Zip codes.	Fewer than [THRESHOLD] of eligibility records contain a valid Member Zip Code.	99.50%	Exemption
ME017	Member ZIP Code Populated	A valid entry means that the field is not blank	Fewer than [THRESHOLD] of eligibility records have Membership Zip Code Populated.	99.50%	Profile
ME018	Valid Medical Coverage	A valid entry means that the field contains a 'Y' or an 'N'.	Fewer than [THRESHOLD] of eligibility records show Valid Medical Coverage.	100%	Profile
ME019	Valid Prescription Drug Coverage	A valid entry means that the field contains a 'Y' or an 'N'.	Fewer than [THRESHOLD] of eligibility records show Valid Prescription Drug Coverage.	100%	Profile
ME020	Valid Dental Coverage	A valid entry means that the field contains a 'Y' or an 'N'.	Fewer than [THRESHOLD] of eligibility records show Valid Dental Coverage.	100%	Profile
ME028	Valid Primary Insurance Indicator	A valid entry means that the field contains a '1' or a '2'.	Fewer than [THRESHOLD] of eligibility records contain Valid Primary Insurance Indicator.	99.50%	Profile
ME029	Valid Coverage Type	A valid entry means that the field contains a valid code from the list of Coverage Types.	Fewer than [THRESHOLD] of eligibility records contain Valid Coverage Type.	100%	Profile

Element	Name	Validity Criteria	Reason for Issue	Threshold	Issue Type
ME030	Valid Market Category Code	A valid entry means that the field contains a valid code from the list of Market Category codes.	Fewer than [THRESHOLD] of eligibility records contain Valid Market Category Code.	99.50%	Profile
ME031	Valid Special Coverage	A valid entry means that this field is equal to '0'.	Fewer than [THRESHOLD] of eligibility records contain Valid Special Coverage of 0.	100%	Profile
ME032	Group Name Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of eligibility records have Group Name Populated.	100%	Profile
ME101	Subscriber Last Name Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of eligibility records have Subscriber Last Name Populated.	99.50%	Profile
ME102	Subscriber First Name Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of eligibility records have Subscriber First Name Populated.	99.50%	Profile
ME104	Member Last Name Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of eligibility records have Member Last Name Populated.	100%	Profile
ME105	Member First Name Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of eligibility records have Member First Name Populated.	100%	Profile
ME899	Record Type Is ME	A valid entry means that this field contains the code 'ME'.	Fewer than [THRESHOLD] of eligibility records list Record Type as ME.	100%	Failure

Exhibit 10. Selected Medical Claims Validations

Similar Validations Exist for Pharmacy and Dental Claims

Element	Name	Validity Criteria	Reason for Issue	Threshold	Issue Type
MC001	Valid Submitter ID	A valid entry means that the Submitter ID is on the list containing all valid codes for registered entities.	Fewer than [THRESHOLD] of medical claims have a valid Submitter ID.	100%	Failure
MC002	Valid Payer ID	A valid entry means the Payer ID is on the Payer ID list containing all valid codes for registered entities.	Fewer than [THRESHOLD] of medical claims have a valid Payer ID.	100%	Exemption
MC003	Valid ANSI ASC X12 Insurance Policy Type Code	When not blank, a valid entry means the Insurance Policy Type Code is on the list of ANSI ASC X12 Insurance Policy Type Codes.	Fewer than [THRESHOLD] of medical claims have a Valid ANSI ASC X12 Insurance Policy Type Code, when populated.	100%	Exemption
MC003	Insurance Policy Type Code Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have insurance type code populated.	100%	Profile
MC004	Payer Claim Control Number Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have Payer Control Number populated.	100%	Profile
MC005	Valid Line Counter	A valid entry means that this field is greater than zero.	Fewer than [THRESHOLD] of claims/records have a valid line counter.	100%	Profile
MC005A	Valid Version Number	A valid entry means that this field is greater than or equal to zero.	Fewer than [THRESHOLD] of medical claims have a valid Version Number.	100%	AdHoc
MC006	Insured Group or Policy Number Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims contain a Insured Group or Policy Number Populated.	99.90%	Exemption

MC007	Valid Subscriber SSN	A valid entry is nine digits with no dashes. Entries may not be in the list of disallowed SSNs as specified by the Social Security Administration.	Fewer than [THRESHOLD] of medical claims contain a valid Subscriber SSN.	33%	Profile
MC008	Plan Specific Contract Number Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims contain a Plan Specific Contract Number.	99.50%	Profile
MC009	Member Suffix or Sequence Number Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have a Member Suffix or Sequence number populated.	100%	Profile
MC010	Valid Member Identification Code	A valid entry is nine digits with no dashes. Entries may not be in the list of disallowed SSNs as specified by the Social Security Administration.	Fewer than [THRESHOLD] of medical claims have a valid Member Identification code.	75%	Profile
MC011	Dependent 25 And Under	For members who are dependents, a valid entry means the dependent is 25 or younger.	Fewer than [THRESHOLD] of records have dependent members who are age 25 or younger.	90%	AdHoc
MC011	Valid ANSI ASC X12 Relationship Code	When not blank, a valid entry means that code used is a valid code on the ANSI ASC X12 Relationship Code list.	Fewer than [THRESHOLD] of medical claims have valid ANSI ASC X12 Relationship Code, when populated.	99.50%	Exemption
MC011	Individual Relationship Code Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims contain Individual Relationship code populated.	99.50%	Profile

MC012	Valid ANSI ASC X12 Gender Code	A valid entry means that code used is a valid code on the ANSI ASC X12 Gender Code list.	Fewer than [THRESHOLD] of medical claims have valid ANSI ASC X12 gender code.	100%	Exemption
MC012	Gender Not Unknown	A valid entry has gender coded as something other than Unknown.	Fewer than [THRESHOLD] of medical claims have gender coded as something other than Unknown.	99.60%	Profile
MC013	Spouse 20 And Over	For member's who are spouses, a valid entry means the spouse is 20 or older.	Fewer than [THRESHOLD] of medical claims specify spouse as 20 years of age or older	99%	Profile
MC013	Valid Member DOB	A valid entry is in the following format: CCYYMMDD.	Fewer than [THRESHOLD] of medical claims have valid Member date of birth	99.50%	Profile
MC014	Valid Member City Name	For records that have a valid US State in MC015, Member City Name must be in the list of US Cities if MC016 ZIP Code is not populated.	Fewer than [THRESHOLD] of medical claims contain a valid Member City Name.	99.50%	Profile
MC015	Valid Member State/Province Code	When not blank, a valid entry means that the State/Province entered is on the list of US states or the list of Canadian Provinces.	Fewer than [THRESHOLD] of medical claims have valid member State/Province code, when populated.	100%	Exemption
MC015	ME Member State	When not blank, a valid entry means that the State is not blank and is equal to 'ME'.	Fewer than [THRESHOLD] of medical claims list Maine as Member's State, when populated.	55%	Profile
MC015	Member State or Province Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims contain populated Member State or Province.	100%	Profile

MC016	Valid Member ZIP Code	For records that have a valid US State in MC015, the zip code is on the list of valid US Zip Codes.	Fewer than [THRESHOLD] of medical claims contain valid Member Zip Code.	99.50%	Exemption
MC016	Member ZIP Code Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have member Zip Code populated.	99.50%	Profile
MC017	Valid Date Service Approved	A valid entry is in the following format: CCYYMMDD.	Fewer than [THRESHOLD] of medical claims contain valid date of service approved.	100%	Profile
MC018	Valid Admission Date	For inpatient claims, a valid entry is in the following format: CCYYMMDD.	Fewer than [THRESHOLD] of inpatient medical claims contain valid Admission Date	99.50%	Profile
MC019	Valid Admission Hour	For inpatient claims, a valid Admission Hour must be a military time in HH format.	Fewer than [THRESHOLD] of inpatient medical claims contain a valid Admission Hour.	50%	Profile
MC020	Valid Admission Type	For inpatient claims, a valid entry means that Admission Type is on the list of NUBC admission type codes.	Fewer than [THRESHOLD] of inpatient medical claims contain a valid Admission Type.	95%	Exemption
MC020	Admission Type Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of inpatient medical claims have Admission Type populated.	95%	Profile
MC021	Valid Point of Origin for Admission or Visit	For inpatient claims, a valid entry is on the list of Points of Origin for Admission or Visit.	Fewer than [THRESHOLD] of inpatient medical claims contain a valid Point of Origin for Admission or Visit.	100%	Exemption

MC021	Point of Origin for Admission or Visit Populated	For inpatient claims, a valid entry means the field is not blank.	Fewer than [THRESHOLD] of medical claims have Point of Origin for Admission or Visit populated.	95%	Profile
MC022	Discharge Hour Populated	For inpatient claims, a valid entry means the field is not blank.	Fewer than [THRESHOLD] of the inpatient medical claims contain a populated admission hour.	50%	Profile
MC022	Valid Discharge Hour	For inpatient claims, a valid Admission Hour must be a military time in HH format.	Fewer than [THRESHOLD] of inpatient medical claims contain a valid admission Hour.	50%	Profile
MC023	Valid Discharge Status	For inpatient claims, a valid entry means that Admission Type is on the list of NUBC discharge status codes.	Fewer than [THRESHOLD] of inpatient medical claims contain a valid Discharge Status.	100%	Exemption
MC023	Discharge Status Populated	For inpatient claims, valid entry means that this field is not blank.	Fewer than [THRESHOLD] of inpatient medical claims have Discharge Status populated.	95%	Profile
MC023	Discharge Status Is Not Died	For inpatient claims, a valid entry means that the NUBC discharge status code is equal to a discharge status code that is not dead.	Fewer than [THRESHOLD] of inpatient medical claims list Discharge Status as not Dead.	95%	AdHoc
MC023	Discharge Status Is Home	For inpatient claims, a valid entry means that the NUBC discharge status code is equal to a discharge status code that is home.	Fewer than [THRESHOLD] of inpatient medical claims list discharge Status as Home.	35%	AdHoc
MC024	Rendering Provider Number Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have Rendering Provider Number populated.	99.50%	Profile

MC025	Rendering Provider Tax ID Number Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have Rendering Provider Tax ID Number populated.	80%	Profile
MC026	Valid National Provider ID - Rendering Provider	When not blank, a valid entry means that the field is on the list of CMS National Provider Identifiers.	Fewer than [THRESHOLD] of medical claims have a valid National Provider Identifier, when populated.	100%	Exemption
MC026	National Provider ID - Rendering Provider Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have National Provider ID - Rendering Provider populated.	90%	Profile
MC027	Valid Rendering Provider Entity Type Qualifier	A valid entry means that the entity is on the list of Rendering Provider Entity Type Qualifiers.	Fewer than [THRESHOLD] of medical claims have a valid Rendering Provider Entity Type Qualifier.	99.50%	Profile
MC027	Institutional Records With Non-Person Provider Entity	For institutional claims, a valid entry means that the Provider Entity Type is equal to 2, non-person entity.	Fewer than [THRESHOLD] of institutional claims have the Provider Entity equal to non-person entity, when populated.	85%	Profile
MC028	Non-Person Entity Records Without Rendering Provider First Name, Middle Name Or Suffix	For non-person entities, a valid entry means that the Rendering Provider First Name, Middle Name and Suffix are all blank.	Fewer than [THRESHOLD] of non-person entities contain do not contain a rendering provider first name, middle name or suffix.	99.50%	Profile
MC028	Rendering Provider First Name Populated	For non-institutional claims, a valid entry means that the Rendering Provider First Name must be populated.	Fewer than [THRESHOLD] of non-institutional records contain a Rendering Provider First Name.	40%	Profile

MC030	Rendering Provider Last Name or Organization Name 2 Characters or More	When not blank, a valid entry means that the field contains at least two characters.	Fewer than [THRESHOLD] of medical claims have Rendering Provider last name or Organization name with 2 characters or more, when populated.	99.50%	AdHoc
MC030	Rendering Provider Last Name or Organization Name Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have Rendering Provider last name or Organization Name populated	99.50%	Profile
MC032	Valid Rendering Provider Specialty	A valid entry means that Rendering Provider Specialty is in a payer-supplied list of Rendering Provider Specialties.	Fewer than [THRESHOLD] of medical claims contain a valid Rendering Provider Specialty.	99.50%	Profile
MC036	Valid Institutional Bill Type	When not blank, a valid entry means that for institutional the institutional Bill Type is on the list of NUBC Bill Types Codes for institutional Claims.	Fewer than [THRESHOLD] of medical institutional claims have a valid Institutional Bill Type.	100%	Exemption
MC036	Historical Population Level	A valid level of population is in line with historical average.	Level of population is not within +/- [THRESHOLD] of rolling 12-month historical average.	-	Exemption
MC036	Institutional Bill Type Or Professional Place Of Service Populated	A valid entry means that either MC036 or MC037 is populated.	Fewer than [THRESHOLD] of medical claims have Institutional Bill Type or Professional Place of Service populated.	100%	Exemption
MC037	Valid Professional Place Of Service	When not blank, a valid entry means that the Place of Service Codes for Professional Claims is on the list of valid codes.	Fewer than [THRESHOLD] of medical claims for Professional services have Place of Service populated	100%	Exemption

MC038	Valid ANSI ASC X12 Claims Status	When not blank, a valid entry means that the ANSI ASC X12 claim status is on the list of valid codes.	Fewer than [THRESHOLD] of medical claims have a valid ANSI ASC X12 claim status, when populated.	100%	Exemption
MC038	Claim Status Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have claim status populated.	100%	Profile
MC039	Valid Admitting Diagnosis	For inpatient claims, a valid entry means that the admitting diagnosis is on the list of ICD-9 diagnosis Codes.	Fewer than [THRESHOLD] of inpatient medical claims have a valid admitting diagnosis	90%	Profile
MC040	Valid E-Code	For records where MC040 is not blank, a valid entry means that the E-Code is on the list of ICD-9 diagnosis Codes.	Fewer than [THRESHOLD] of medical claims with E-Codes have a valid E-Code, when populated.	99.50%	AdHoc
MC041	Valid Principal Diagnosis	For records where MC041 is not blank, a valid entry means that the Principal Diagnosis is on the list of ICD-9 diagnosis codes.	Fewer than [THRESHOLD] of medical claims have a valid Principal Diagnosis, when populated.	100%	Exemption
MC041	Principal Diagnosis Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have a Principal Diagnosis populated.	99.50%	Profile
MC042	Valid Other Diagnosis 1	When not blank, a valid entry means that the Other Diagnosis is on the list of ICD-9 diagnosis codes.	Fewer than [THRESHOLD] of medical claims have a valid Other Diagnosis 1, when populated.	99.50%	Profile
MC054	Valid Revenue Code	When not blank, a valid entry means that the Revenue code is on the list of NUBC revenue codes.	Fewer than [THRESHOLD] of medical claims contain a valid Revenue Code.	100%	Exemption

MC055	Valid Procedure Code	When not blank, a valid procedure code comes from the lists: Dental Procedures and Nomenclature (CDT), Current Procedure Terminology (CPT), Health Care Common Procedural Coding System (HCPCS), or Health Insurance Prospective Payment System (HIPPS) codes.	Fewer than [THRESHOLD] of medical claims contain a valid Procedure Code.	99.50%	AdHoc
MC058	Valid ICD-9-CM Procedure Code	When not blank, a valid entry means that the ICD 9-CM procedure code is on the list of valid codes.	Fewer than [THRESHOLD] of medical claims contain a valid ICD-9 procedure Code, when populated.	99.50%	AdHoc
MC059	Valid First Date Of Service	A valid entry is in the following format: CCYYMMDD.	Fewer than [THRESHOLD] of medical claims contain a valid First Date of Service.	100%	Profile
MC059	First Date Of Service Before Last Date Of Service	For records where MC059 and MC060 are not blank, a valid entry is when the first date of service (MC059) is less than or equal to the last date of service (MC060).	Fewer than [THRESHOLD] of medical claims have first date of service that is not after last date of service.	100%	AdHoc
MC059	First Date of Service Within Admission/Discharge Dates	For inpatient claims and records where MC018, MC059 and MC060 are not blank, a valid entry is when the first date of service is greater than or equal to the admission date and the admission date is greater than or equal to the discharge date.	Fewer than [THRESHOLD] of medical claims contain First Date of Service within Admission/Discharge Dates.	100%	AdHoc

MC060	Valid Last Date Of Service	A valid entry is in the following format: CCYYMMDD.	Fewer than [THRESHOLD] of medical claims contain valid Last Date of Service.	100%	Profile
MC060	Last Date of Service Within Admission/Discharge Dates	For inpatient claims and records where MC018, MC059 and MC060 are not blank, a valid entry is when the last date of service is greater than or equal to the admission date and the last date of service is less than or equal to the discharge date.	Fewer than [THRESHOLD] of medical claims with Last Date of Service Within Admission/Discharge Dates.	100%	Exemption
MC061	Valid Quantity	A valid entry means that MC061 (Valid Quantity) is greater than zero.	Fewer than [THRESHOLD] of medical claims contain a Valid Quantity.	99.50%	Profile
MC062	Valid Charge Amount	A valid Charge Amount must be a valid dollar value represented without the decimal point.	Fewer than [THRESHOLD] of medical claims contain a valid charge amount.	100%	Profile
MC063	Records with Non-Negative Paid Amount	A valid entry means that the paid amount is not negative.	More than [THRESHOLD] of medical claims contain a Negative paid Amount.	95%	Profile
MC063	Valid Paid Amount	A valid Paid Amount must be a valid dollar value represented without the decimal point.	Fewer than [THRESHOLD] of medical claims contain a valid Paid Amount.	100%	Profile
MC065	Valid Co-Pay Amount	A valid Co-Pay Amount must be a valid dollar value represented without the decimal point.	Fewer than [THRESHOLD] of medical claims contain a valid Co-Pay Amount.	99.50%	Profile

MC066	Valid Coinsurance Amount	A valid Coinsurance Amount must be a valid dollar value represented without the decimal point.	Fewer than [THRESHOLD] of medical claims contain a valid Coinsurance Amount.	99.50%	Profile
MC067	Valid Deductible Amount	A valid Deductible Amount must be a valid dollar value represented without the decimal point.	Fewer than [THRESHOLD] of medical claims contain a valid Deductible Amount.	100%	Profile
MC068	Patient Account/Control Number Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have Patient Account/Control Number populated	99.50%	Profile
MC069	Valid Discharge Date	For inpatient records, a valid entry means that this field is not blank.	Fewer than [THRESHOLD] of inpatient medical claims contain a valid Discharge Date.	90%	Profile
MC075	Valid Drug Code	When not blank, a valid entry means that the Drug code is on the NDC Drug Code List.	fewer than [THRESHOLD] of medical claims contain a valid Drug Code, when populated.	99.50%	Profile
MC076	Billing Provider Number Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have a Billing Provider Number populated.	99.50%	Profile
MC077	Valid National Provider ID - Billing Provider	When not blank, a valid entry means that the National Provider ID is on the list of valid codes.	Fewer than [THRESHOLD] of medical claims have a valid National Provider ID, when populated.	99.50%	Profile
MC078	Billing Provider Last Name or Organization Name Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have Billing Provider last name or Organization Name populated.	99.50%	Profile

MC079	Billing Provider Tax ID Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have Billing Provider Tax ID Number populated.	99.50%	Profile
MC080	Billing Provider Address Line 1 Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have Billing Provider Address Line 1 populated.	99.50%	Profile
MC082	Valid Billing Provider City Name	For records that have a valid US State in MC083, Billing Provider City Name must be in the list of US Cities if MC084 ZIP Code is not populated.	Fewer than [THRESHOLD] of medical claims contain a valid Billing Provider City Name.	99.50%	Profile
MC083	Valid Billing Provider State or Province	When not blank, a valid entry means that the State/Province entered is on the list of US states or the list of Canadian Provinces.	Fewer than [THRESHOLD] of medical claims have valid Billing Provider State/Province code, when populated.	100%	Exemption
MC083	Billing Provider State Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have Billing Provider State populated.	99.50%	Profile
MC083	ME Billing Provider State	For records where MC083 is not blank, a valid entry means that the State is equal to 'ME'.	Fewer than [THRESHOLD] of medical claims list Maine as billing provider's State, when populated.	55%	Profile
MC084	Valid Billing Provider ZIP Code	For records that have a valid US State in MC083, a valid entry means that Billing Provider ZIP Code is on the list of US ZIP codes.	Fewer than [THRESHOLD] of medical claims have valid Billing Provider ZIP Code.	99.50%	Exemption
MC084	ME Billing Provider ZIP Code	A valid entry means that the ZIP Code is not blank and is on the list of ZIP Codes for Maine.	Fewer than [THRESHOLD] of medical claims have a Maine Billing Provider ZIP Code.	55%	Profile

MC084	Billing Provider ZIP Code Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have Billing Provider ZIP Code populated.	99.50%	Profile
MC085	Service Facility Location Name Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have Service Facility Location Name populated.	99.50%	Profile
MC086	Valid National Provider ID - Service Facility	When not blank, a valid entry means that the National Provider ID is on the list of valid codes.	Fewer than [THRESHOLD] of medical claims have a valid National Provider ID, when populated.	99.50%	Exemption
MC087	Service Facility Location Address Line 1 Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have Service Facility Location Address Line 1 populated.	99.50%	Profile
MC089	Valid Service Facility Location City Name	For records that have a valid US State in MC090, Service Facility Location City Name must be in the list of US Cities if MC091 ZIP Code is not populated.	Fewer than [THRESHOLD] of medical claims contain a valid Service Facility Location City Name.	99.50%	Profile
MC090	Valid Service Facility Location State or Province	When not blank, a valid entry means that the State/Province entered is on the list of US states or the list of Canadian Provinces.	Fewer than [THRESHOLD] of medical claims have valid Service Facility Location State/Province code, when populated.	100%	Exemption
MC090	Service Facility Location State Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have Service Facility Location State populated.	99.50%	Profile

MC090	ME Service Facility Location State	For records where MC090 is not blank, a valid entry means that the State is equal to 'ME'.	Fewer than [THRESHOLD] of medical claims list Maine as service facility location's State, when populated.	55%	Profile
MC091	Valid Service Facility Location ZIP Code	For records that have a valid US State in MC090, a valid entry means that Service Facility Location Address ZIP Code is on the list of US ZIP codes.	Fewer than [THRESHOLD] of medical claims have valid Service Facility Location ZIP Code.	99.50%	Exemption
MC091	ME Service Facility Location ZIP Code	A valid entry means that the ZIP Code is not blank and is on the list of ZIP Codes for Maine.	Fewer than [THRESHOLD] of medical claims have a Maine Service Facility Location ZIP Code.	55%	Profile
MC091	Service Facility Location ZIP Code Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have Service Facility Location ZIP Code populated.	99.50%	Profile
MC092	Service Facility Number Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have Service Facility Number populated.	99.50%	Profile
MC101	Subscriber Last Name Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have Subscriber Last Name populated.	100%	Profile
MC102	Subscriber First Name Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have Subscriber First Name populated.	100%	Profile
MC104	Member Last Name Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have Member Last Name populated.	100%	Profile

MC105	Member First Name Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have Member First name populated.	100%	Profile
MC107	Attending Provider Number Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have Attending Provider Number populated.	99.50%	Profile
MC108	National Provider ID - Attending Provider Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have National Provider ID - Attending Provider populated.	99.50%	Profile
MC108	Valid National Provider ID - Attending Provider	A valid entry means that the field is on the list of CMS National Provider Identifiers.	Fewer than [THRESHOLD] of medical claims have a valid National Provider ID.	99.50%	Exemption
MC109	Attending Provider First Name Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have Attending Provider First Name populated.	99.50%	Profile
MC110	Attending Provider Middle Name Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have Attending Provider Middle Name populated.	10%	Profile
MC111	Attending Provider Last Name Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have Attending Provider Last Name populated.	99.50%	Profile
MC113	Attending Provider Specialty Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have Attending Provider Specialty populated.	99.50%	Profile

MC113	Valid Attending Provider Specialty	A valid entry means that Attending Provider Specialty is in a payer-supplied list of provider specialties.	Fewer than [THRESHOLD] of medical claims have a valid Attending Provider Specialty.	99.50%	Exemption
MC114	Operating Provider Number Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have Operating Provider Number populated.	99.50%	Profile
MC115	National Provider ID - Operating Provider Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have National Provider ID - Operating Provider populated.	99.50%	Profile
MC115	Valid National Provider ID - Operating Provider	A valid entry means that the field is on the list of CMS National Provider Identifiers.	Fewer than [THRESHOLD] of medical claims have a valid National Provider ID.	99.50%	Exemption
MC116	Operating Provider First Name Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have Operating Provider First Name populated.	99.50%	Profile
MC117	Operating Provider Middle Name Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have Operating Provider Middle Name populated.	10%	Profile
MC118	Operating Provider Last Name Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have Operating Provider Last Name populated.	99.50%	Profile
MC120	Referring Provider Number Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have Referring Provider Number populated.	99.50%	Profile

MC121	National Provider ID - Referring Provider Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have National Provider ID - Referring Provider populated.	99.50%	Profile
MC121	Valid National Provider ID - Referring Provider	A valid entry means that the field is on the list of CMS National Provider Identifiers.	Fewer than [THRESHOLD] of medical claims have a valid National Provider ID.	99.50%	Exemption
MC122	Referring Provider First Name Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have Referring Provider First Name populated.	99.50%	Profile
MC123	Referring Provider Middle Name Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have Referring Provider Middle Name populated.	10%	Profile
MC124	Referring Provider Last Name Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have Referring Provider Last Name populated.	99.50%	Profile
MC200	Valid Principal Diagnosis	When not blank, a valid entry means that the Principal Diagnosis is on the list of ICD-10-CM diagnosis codes.	Fewer than [THRESHOLD] of medical claims have a valid Principal Diagnosis when not blank.	99.50%	Exemption
MC200	Principal Diagnosis Populated	A valid entry means that this field is not blank.	Fewer than [THRESHOLD] of medical claims have Principal Diagnosis populated.	99.50%	Exemption

MC201	Valid Present On Admission Indicator	A valid entry means that the Present On Admission Indicator is on the list of ICD-10 POA codes when Pricipal Diagnosis is not on the POA exempt list.	Fewer than [THRESHOLD] of inpatient medical claims have a valid Present On Admission Indicator when Principal Diagnosis is not blank and is not on the POA exempt list.	99.50%	Exemption
MC202	Valid Admitting Diagnosis	For inpatient claims, a valid entry means that the admitting diagnosis is on the list of ICD-10-CM diagnosis codes.	Fewer than [THRESHOLD] of inpatient medical claims have a valid Admitting Diagnosis.	99.50%	Profile
MC203	Valid Reason for Visit Diagnosis - 1	When not blank, a valid entry means that the Reason for Visit Diagnosis is on the list of ICD-10-CM Reason for Visit codes.	Fewer than [THRESHOLD] of medical claims have valid Reason for Visit Diagnosis when not blank.	99.50%	Exemption
MC204	Valid Reason for Visit Diagnosis - 2	When not blank, a valid entry means that the Reason for Visit Diagnosis is on the list of ICD-10-CM Reason for Visit codes.	Fewer than [THRESHOLD] of medical claims have valid Reason for Visit Diagnosis.	99.50%	Exemption
MC205	Valid Reason for Visit Diagnosis - 3	When not blank, a valid entry means that the Reason for Visit Diagnosis is on the list of ICD-10-CM Reason for Visit codes.	Fewer than [THRESHOLD] of medical claims have valid Reason for Visit Diagnosis.	99.50%	Exemption
MC206	Valid External Cause of Injury - 1	When not blank, a valid entry means that the External Cause of Injury is on the list of ICD-10-CM External Cause of Injury codes.	Fewer than [THRESHOLD] of medical claims have valid External Cause of Injury.	99.50%	Profile

MC207	Valid Present On Admission Indicator - 1	For inpatient claims, when the corresponding External Cause of Injury is not blank, a valid entry means that the Present On Admission Indicator is on the list of non-exempt ICD-10 POA codes.	Fewer than [THRESHOLD] of inpatient medical claims have a valid Present On Admission Indicator when External Cause of Injury is not blank and is not on the POA exempt list.	99.50%	Profile
MC208	Valid External Cause of Injury - 2	When not blank, a valid entry means that the External Cause of Injury is on the list of ICD-10-CM External Cause of Injury codes.	Fewer than [THRESHOLD] of medical claims have valid External Cause of Injury.	99.50%	Profile
MC209	Valid Present On Admission Indicator - 2	For inpatient claims, when the corresponding External Cause of Injury is not blank, a valid entry means that the Present On Admission Indicator is on the list of non-exempt ICD-10 POA codes.	Fewer than [THRESHOLD] of inpatient medical claims have a valid Present On Admission Indicator when External Cause of Injury is not blank and is not on the POA exempt list.	99.50%	Profile
MC254	Valid Other Diagnosis - 1	When not blank, a valid entry means that the Other Diagnosis is on the list of ICD-10 diagnosis codes.	Fewer than [THRESHOLD] of medical claims have valid Other Diagnosis.	99.50%	Profile
MC255	Valid Present On Admission Indicator - 1	For inpatient claims, when the corresponding Other Diagnosis is not blank, a valid entry means that the Present On Admission Indicator is on the list of non-exempt ICD-10 POA codes.	Fewer than [THRESHOLD] of inpatient medical claims have a valid Present On Admission Indicator when corresponding Other Diagnosis is not blank and is not on the POA exempt list.	99.50%	Profile

MC302	Valid Principal Procedure Code	When not blank, for inpatient claims, a valid entry means that the ICD 10-PCS procedure code is on the list of valid codes.	Fewer than [THRESHOLD] of medical claims have valid a Principal Procedure Code for inpatient claims when not blank.	99.50%	Exemption
MC303	Valid Other Procedure Code - 1	When not blank, a valid entry means that the ICD 10-PCS procedure code is on the list of valid codes.	Fewer than [THRESHOLD] of medical claims have valid a Other Procedure Code, when populated.	99.50%	Profile
MC304	Valid Other Procedure Code - 2	When not blank, a valid entry means that the ICD 10-PCS procedure code is on the list of valid codes.	Fewer than [THRESHOLD] of medical claims have valid a Other Procedure Code, when populated.	99.50%	Profile
MC899	Record Type Is MC	A valid entry means that this field must contain the code 'MC'.	Fewer than [THRESHOLD] of medical claims list Record Type as MC.	100%	Failure

C. Sample SAS Code

Below is a sample of the SAS code for the Program Evaluation for Prevention Contract (PEP-C). This code was written by a third party and reviewed, debugged, and updated by HSRI.

```
**********************************;
***  S02C_HIV-revised.sas       ***;
**********************************;

* Documentation of cleaning rule decisions and logic in
memHIV_NOMS_Adult_Cleaning_20140820.docx ;
* The rules must be applied in numeric sequence because prior cleaning
can impact whether a follow up rule needs to be applied.
  The variable RULE is for quality control review to see which edits
are being applied;


/* ********************************* MACROS (begin)
********************************** */

%macro MILSERV(RP);

    * RULE 1: Recode earlier version of question;
    if MILSERVE_&RP. NE . and MILSERVENO_&RP. = . then
        do;
            RULE_&RP. = "1";
            * Initialize new variables to missing;
            MILSERVENO_&RP.     = 98;
            MILSERVEARM_&RP.    = 98;
            MILSERVERES_&RP.    = 98;
            MILSERVENG_&RP.     = 98;
            if MILSERVE_&RP. = 0 then MILSERVENO_&RP.   = 1;
            if MILSERVE_&RP. = 1 then MILSERVEARM_&RP.  = 1;
            if MILSERVE_&RP. = 2 then MILSERVERES_&RP.  = 1;
            if MILSERVE_&RP. = 3 then MILSERVENG_&RP.   = 1;
            if MILSERVE_&RP. in (88,99) then
                do;
                    MILSERVENO_&RP.     = MILSERVE_&RP.;
                    MILSERVEARM_&RP.    = MILSERVE_&RP.;
                    MILSERVERES_&RP.    = MILSERVE_&RP.;
                    MILSERVENG_&RP.     = MILSERVE_&RP.;
                end;
        end;

    * RULE 2: Recode earlier version of question ;
    if MILSERVE_&RP. = 0 and MILSERVENO_&RP. = 0 then
        do;
            MILSERVENO_&RP. = 1;
            RULE_&RP. = catx(", ",RULE_&RP.,"2");
        end;
```

```
    * RULE 3: Use DEPLOYEDSERVENO to determine never served;
    if MILSERVE_&RP. = . and MILSERVENO_&RP. = 0 and
DEPLOYEDSERVENO_&RP. = 1 then
        do;
            MILSERVENO_&RP. = 1;
            RULE_&RP.  = catx(", ",RULE_&RP.,"3");
        end;

%mend MILSERV;

%macro DEPLOYED(RP);
    * Rule 4;
    if DEPLOYED_&RP. NE . and DEPLOYEDNO_&RP. = . then
        do;
            * Initialize new variables to missing;
            DEPLOYEDNO_&RP.    = 98;
            DEPLOYEDASIA_&RP.  = 98;
            DEPLOYEDIRAQ_&RP.  = 98;
            DEPLOYEDKOR_&RP.   = 98;
            DEPLOYEDOTH_&RP.   = 98;
            DEPLOYEDWWII_&RP.  = 98;
            DEPLOYEDPERS_&RP.  = 98;

            if DEPLOYED_&RP. = 0 then DEPLOYEDNO_&RP.   = 1;
            if DEPLOYED_&RP. = 1 then DEPLOYEDIRAQ_&RP. = 1;
            if DEPLOYED_&RP. = 2 then DEPLOYEDPERS_&RP. = 1;
            if DEPLOYED_&RP. = 3 then DEPLOYEDASIA_&RP. = 1;
            if DEPLOYED_&RP. = 4 then DEPLOYEDKOR_&RP.  = 1;
            if DEPLOYED_&RP. = 5 then DEPLOYEDWWII_&RP. = 1;
            if DEPLOYED_&RP. = 6 then DEPLOYEDOTH_&RP.  = 1;

            if DEPLOYED_&RP. in (88,99) then
                do;
                    DEPLOYEDNO_&RP.    = DEPLOYED_&RP.;
                    DEPLOYEDASIA_&RP.  = DEPLOYED_&RP.;
                    DEPLOYEDIRAQ_&RP.  = DEPLOYED_&RP.;
                    DEPLOYEDKOR_&RP.   = DEPLOYED_&RP.;
                    DEPLOYEDOTH_&RP.   = DEPLOYED_&RP.;
                    DEPLOYEDWWII_&RP.  = DEPLOYED_&RP.;
                    DEPLOYEDPERS_&RP.  = DEPLOYED_&RP.;
                end;
        end;
%mend DEPLOYED;

%macro Rule5A(RP);
    If EVSVNO_&RP.=0 and EVSVARM_&RP. in (98,88) and EVSVRES_&RP. in
(98,88) and EVSVNG_&RP. in (98,88) then
        do;
            EVSVNO_&RP.=1;
            RULE_&RP. =  catx(", ",RULE_&RP.,"5A");
        end;
%mend Rule5A;
```

```
%macro Rule5B(RP);
    If EVSVNO_&RP.=1 and (EVSVARM_&RP.=88 or EVSVRES_&RP.=88 or
EVSVNG_&RP.=88) then
        do;
            If EVSVARM_&RP. = 88 then EVSVARM_&RP. =98;
            If EVSVRES_&RP. = 88 then EVSVRES_&RP. =98;
            If EVSVNG_&RP.  = 88 then EVSVNG_&RP.  =98;
            RULE_&RP. =  catx(", ",RULE_&RP.,"5B");
        end;
%mend Rule5B;

%macro Rule6(RP);

    if EVSVNO_&RP.=0 or EVSVARM_&RP.=0 or EVSVRES_&RP.=0 or
EVSVNG_&RP.=0 then RULE_&RP. = catx(", ",RULE_&RP.,"6");

    If EVSVNO_&RP.  =0 then EVSVNO_&RP. =98;
    If EVSVARM_&RP. =0 then EVSVARM_&RP.=98;
    If EVSVRES_&RP. =0 then EVSVRES_&RP.=98;
    If EVSVNG_&RP.  =0 then EVSVNG_&RP. =98;

%mend Rule6;

%macro Rule7(RP);

    if EVSVNO_&RP.=99 or EVSVARM_&RP.=99 or EVSVRES_&RP.=99 or
EVSVNG_&RP.=99 then RULE_&RP. = catx(", ",RULE_&RP.,"7");

    If EVSVNO_&RP.  =99 then    EVSVNO_&RP. =98;
    If EVSVARM_&RP. =99 then    EVSVARM_&RP.=98;
    If EVSVRES_&RP. =99 then    EVSVRES_&RP.=98;
    If EVSVNG_&RP.  =99 then    EVSVNG_&RP. =98;

%mend Rule7;

%macro Rule8(RP);
    If EVSVNO_&RP.=1 and (EVSVARM_&RP.=1 or EVSVRES_&RP.=1 or
EVSVNG_&RP.=1) then
        do;
            EVSVNO_&RP.=98;
            RULE_&RP. = catx(", ",RULE_&RP.,"8");
        end;
%mend Rule8;

%macro Rule9(RP);
    If ACTARM_&RP.=88 and EVSVNO_&RP. NE 88 then
        do;
            if EVSVNO_&RP.=1 then ACTARM_&RP.=99;
            if EVSVNO_&RP.=98 then ACTARM_&RP.=98;
            RULE_&RP. = catx(", ",RULE_&RP.,"9");
        end;
```

```
%mend Rule9;

%macro Rule10(RP);
    If ACTARM_&RP.=4 then
        do;
            ACTARM_&RP.=98;
            RULE_&RP. = catx(", ",RULE_&RP.,"10");
        end;
%mend Rule10;

%macro Rule11(RP);
    If EVSVNO_&RP.=88 and EVSVARM_&RP.=88 and EVSVRES_&RP.=88 and
EVSVNG_&RP.=88 and ACTARM_&RP. NE 88 then
        do;
            ACTARM_&RP.=88;
            RULE_&RP. =  catx(", ",RULE_&RP.,"11");
        end;
%mend Rule11;

%macro Rule12(RP);
    If EVSVARM_&RP.=1 or EVSVRES_&RP.=1 or EVSVNG_&RP.=1 then
        do;
            if DEPNEV_&RP. = 99 or DEPASIA_&RP. = 99 or DEPIRAQ_&RP. =
99 or DEPKOR_&RP. = 98
            or DEPOTH_&RP. = 99 or DEPWWII_&RP. = 99 or DEPPERS_&RP. =
99 then
                    RULE_&RP. = catx(", ",RULE_&RP.,"12");

            if DEPNEV_&RP.   = 99 then DEPNEV_&RP.   = 98;
            if DEPASIA_&RP.  = 99 then DEPASIA_&RP.  = 98;
            if DEPIRAQ_&RP.  = 99 then DEPIRAQ_&RP.  = 98;
            if DEPKOR_&RP.   = 99 then DEPKOR_&RP.   = 98;
            if DEPOTH_&RP.   = 99 then DEPOTH_&RP.   = 98;
            if DEPWWII_&RP.  = 99 then DEPWWII_&RP.  = 98;
            if DEPPERS_&RP.  = 99 then DEPPERS_&RP.  = 98;

        end;
%mend Rule12;

%macro Rule13B(RP);

    if EVSVNO_&RP. = 1 and NOT(EVSVARM_&RP.=1 or EVSVRES_&RP.=1 or
EVSVNG_&RP.=1)
    and (DEPNEV_&RP. =1 and DEPASIA_&RP. =98 and DEPIRAQ_&RP. =98 and
DEPKOR_&RP. =98
    and DEPOTH_&RP. =98 and DEPWWII_&RP. =98 and  DEPPERS_&RP. =98)
then

        do;
            DEPNEV_&RP.   = 99;
            DEPASIA_&RP.  = 99;
            DEPIRAQ_&RP.  = 99;
```

```
            DEPKOR_&RP.    = 99;
            DEPOTH_&RP.    = 99;
            DEPWWII_&RP.   = 99;
            DEPPERS_&RP.   = 99;
            RULE_&RP. = catx(", ",RULE_&RP.,"13B");
        end;

%mend Rule13B;

%macro Rule14(RP);

        if DEPNEV_&RP. = 0 or DEPASIA_&RP. = 0 or DEPIRAQ_&RP. = 0 or
DEPKOR_&RP. = 0
        or DEPOTH_&RP. = 0 or DEPWWII_&RP. = 0 or DEPPERS_&RP. = 0
then
                RULE_&RP. = catx(", ",RULE_&RP.,"14");

        if DEPNEV_&RP.    = 0 then DEPNEV_&RP.    = 98;
        if DEPASIA_&RP.   = 0 then DEPASIA_&RP.   = 98;
        if DEPIRAQ_&RP.   = 0 then DEPIRAQ_&RP.   = 98;
        if DEPKOR_&RP.    = 0 then DEPKOR_&RP.    = 98;
        if DEPOTH_&RP.    = 0 then DEPOTH_&RP.    = 98;
        if DEPWWII_&RP.   = 0 then DEPWWII_&RP.   = 98;
        if DEPPERS_&RP.   = 0 then DEPPERS_&RP.   = 98;


%mend Rule14;

%macro Rule15(RP);

    if EVSVNO_&RP. NE 88 and (DEPNEV_&RP. =88 or DEPASIA_&RP. =88 or
DEPIRAQ_&RP. =88 or DEPKOR_&RP. =88
    or DEPOTH_&RP. =88 or DEPWWII_&RP. =88 or DEPPERS_&RP. =88) then
        do;
            if DEPNEV_&RP.    = 88 then DEPNEV_&RP.    = 98;
            if DEPASIA_&RP.   = 88 then DEPASIA_&RP.   = 98;
            if DEPIRAQ_&RP.   = 88 then DEPIRAQ_&RP.   = 98;
            if DEPKOR_&RP.    = 88 then DEPKOR_&RP.    = 98;
            if DEPOTH_&RP.    = 88 then DEPOTH_&RP.    = 98;
            if DEPWWII_&RP.   = 88 then DEPWWII_&RP.   = 98;
            if DEPPERS_&RP.   = 88 then DEPPERS_&RP.   = 98;
            RULE_&RP. = catx(", ",RULE_&RP.,"15");
        end;

%mend Rule15;

%macro Rule16(RP);

    if MILACT_&RP. in (.,99) and (SVMEM1REL_&RP. NE . or EVSVNO_&RP.
NE .) then
        do;
            MILACT_&RP. = 98;
```

```
            RULE_&RP. = catx(", ",RULE_&RP.,"16");
        end;

%mend Rule16;

%macro Rule17(RP);

    if MILACT_&RP. NE . and (SVMEM1REL_&RP. = . or SVMEM2REL_&RP. = .
or SVMEM3REL_&RP. = . or SVMEM4REL_&RP. = .
    or SVMEM5REL_&RP. = . or SVMEM6REL_&RP. = .) then
        do;
            if SVMEM1REL_&RP. = . then SVMEM1REL_&RP. = 98;
            if SVMEM2REL_&RP. = . then SVMEM2REL_&RP. = 98;
            if SVMEM3REL_&RP. = . then SVMEM3REL_&RP. = 98;
            if SVMEM4REL_&RP. = . then SVMEM4REL_&RP. = 98;
            if SVMEM5REL_&RP. = . then SVMEM5REL_&RP. = 98;
            if SVMEM6REL_&RP. = . then SVMEM6REL_&RP. = 98;
            RULE_&RP. = catx(", ",RULE_&RP.,"17");
        end;

%mend Rule17;

%macro Rule18(RP);

    if EVSVNO_&RP. notin(.,88) and (MILACT_&RP. = 88 or SVMEM1REL_&RP.
= 88 or SVMEM2REL_&RP. = 88 or SVMEM3REL_&RP. = 88
    or SVMEM4REL_&RP. = 88 or SVMEM5REL_&RP. = 88 or SVMEM6REL_&RP. =
88) then
        do;
            if MILACT_&RP. = 88 then MILACT_&RP. = 98;
            if SVMEM1REL_&RP. = 88 then SVMEM1REL_&RP. = 98;
            if SVMEM2REL_&RP. = 88 then SVMEM2REL_&RP. = 98;
            if SVMEM3REL_&RP. = 88 then SVMEM3REL_&RP. = 98;
            if SVMEM4REL_&RP. = 88 then SVMEM4REL_&RP. = 98;
            if SVMEM5REL_&RP. = 88 then SVMEM5REL_&RP. = 98;
            if SVMEM6REL_&RP. = 88 then SVMEM6REL_&RP. = 98;
            RULE_&RP. = catx(", ",RULE_&RP.,"18");
        end;

%mend Rule18;

%macro Rule19(RP);

    if MILACT_&RP. in (0,98) and EVSVNO_&RP. = 88 then
        do;
            MILACT_&RP. = 88;
            RULE_&RP. = catx(", ",RULE_&RP.,"19");
        end;

%mend Rule19;

%macro Rule20(RP);
```

```
    if MILACT_&RP. = 88 and (SVMEM1REL_&RP. > 88 or SVMEM2REL_&RP. >
88 or SVMEM3REL_&RP. > 88
    or SVMEM4REL_&RP. > 88 or SVMEM5REL_&RP. > 88 or SVMEM6REL_&RP. >
88) then
        do;
            if SVMEM1REL_&RP. > 88 then SVMEM1REL_&RP. = 88;
            if SVMEM2REL_&RP. > 88 then SVMEM2REL_&RP. = 88;
            if SVMEM3REL_&RP. > 88 then SVMEM3REL_&RP. = 88;
            if SVMEM4REL_&RP. > 88 then SVMEM4REL_&RP. = 88;
            if SVMEM5REL_&RP. > 88 then SVMEM5REL_&RP. = 88;
            if SVMEM6REL_&RP. > 88 then SVMEM6REL_&RP. = 88;
            RULE_&RP. = catx(", ",RULE_&RP.,"20");
        end;

%mend Rule20;

%macro Rule21(RP);

    if MILACT_&RP. = 0 and (SVMEM1REL_&RP. in (1,2,3,4,5) or
SVMEM2REL_&RP. in (1,2,3,4,5) or SVMEM3REL_&RP. in (1,2,3,4,5)
    or SVMEM4REL_&RP. in (1,2,3,4,5) or SVMEM5REL_&RP. in (1,2,3,4,5)
or SVMEM6REL_&RP. in (1,2,3,4,5)) then
        do;
            MILACT_&RP. = 98;
            RULE_&RP. = catx(", ",RULE_&RP.,"21");
        end;

%mend Rule21;

%macro Rule22(RP);

    if MILACT_&RP. = 0 then
        do;
            SVMEM1REL_&RP. = 99;
            SVMEM2REL_&RP. = 99;
            SVMEM3REL_&RP. = 99;
            SVMEM4REL_&RP. = 99;
            SVMEM5REL_&RP. = 99;
            SVMEM6REL_&RP. = 99;
            RULE_&RP. = catx(", ",RULE_&RP.,"22");
        end;

%mend Rule22;

%macro Rule23(RP);

    if MILACT_&RP. notin (.,0) and (MILACT_&RP. = 99 or SVMEM1REL_&RP.
= 99 or SVMEM2REL_&RP. = 99 or SVMEM3REL_&RP. = 99
    or SVMEM4REL_&RP. = 99 or SVMEM5REL_&RP. = 99 or SVMEM6REL_&RP. =
99) then
        do;
```

```
            if SVMEM1REL_&RP. = 99 then SVMEM1REL_&RP. = 98;
            if SVMEM2REL_&RP. = 99 then SVMEM2REL_&RP. = 98;
            if SVMEM3REL_&RP. = 99 then SVMEM3REL_&RP. = 98;
            if SVMEM4REL_&RP. = 99 then SVMEM4REL_&RP. = 98;
            if SVMEM5REL_&RP. = 99 then SVMEM5REL_&RP. = 98;
            if SVMEM6REL_&RP. = 99 then SVMEM6REL_&RP. = 98;
            RULE_&RP. = catx(", ",RULE_&RP.,"23");
        end;

%mend Rule23;

%macro RenameNOMS_A(RP);
    DEPLOYEDASIA_&RP. = DEPASIA_&RP.
    DEPLOYEDIRAQ_&RP. = DEPIRAQ_&RP.
    DEPLOYEDKOR_&RP. = DEPKOR_&RP.
    DEPLOYEDNO_&RP. = DEPNEV_&RP.
    DEPLOYEDOTH_&RP. = DEPOTH_&RP.
    DEPLOYEDWWII_&RP. = DEPWWII_&RP.
    DEPLOYEDPERS_&RP. = DEPPERS_&RP.

    MILSERVENO_&RP. = EVSVNO_&RP.
    MILSERVEARM_&RP. = EVSVARM_&RP.
    MILSERVERES_&RP. = EVSVRES_&RP.
    MILSERVENG_&RP. = EVSVNG_&RP.

    OTHACTIVE_&RP. = MILACT_&RP.
    SERVREL1_&RP. = SVMEM1REL_&RP.
    SERVREL1_&RP. = SVMEM1REL_&RP.
    SERVREL2_&RP. = SVMEM2REL_&RP.
    SERVREL3_&RP. = SVMEM3REL_&RP.
    SERVREL4_&RP. = SVMEM4REL_&RP.
    SERVREL5_&RP. = SVMEM5REL_&RP.
    SERVREL6_&RP. = SVMEM6REL_&RP.
    ACTIVE_&RP. = ACTARM_&RP.
    SERVREL1OS_&RP. = SVMEM1ROTSP_&RP.
    SERVREL2OS_&RP. = SVMEM2ROTSP_&RP.
    SERVREL3OS_&RP. = SVMEM3ROTSP_&RP.
    SERVREL4OS_&RP. = SVMEM4ROTSP_&RP.
    SERVREL5OS_&RP. = SVMEM5ROTSP_&RP.
    SERVREL6OS_&RP. = SVMEM6ROTSP_&RP.

%mend RenameNOMS_A;

%macro RenameNOMS_Y(RP);
    OTHACTIVE_&RP. = MILACT_&RP.
    SERVREL1_&RP. = SVMEM1REL_&RP.
    SERVREL2_&RP. = SVMEM2REL_&RP.
    SERVREL3_&RP. = SVMEM3REL_&RP.
    SERVREL4_&RP. = SVMEM4REL_&RP.
    SERVREL5_&RP. = SVMEM5REL_&RP.
    SERVREL6_&RP. = SVMEM6REL_&RP.
    SERVREL1OS_&RP. = SVMEM1ROTSP_&RP.
```

```
    SERVREL2OS_&RP. = SVMEM2ROTSP_&RP.
    SERVREL3OS_&RP. = SVMEM3ROTSP_&RP.
    SERVREL4OS_&RP. = SVMEM4ROTSP_&RP.
    SERVREL5OS_&RP. = SVMEM5ROTSP_&RP.
    SERVREL6OS_&RP. = SVMEM6ROTSP_&RP.
%mend RenameNOMS_Y;

/* ********************************* MACROS (end)
********************************* */

* Rename variables to the naming convention used in SPFSIG PLI;

data AdultNoms (DROP = MILSERVE_1 MILSERVE_2 MILSERVE_3
DEPLOYEDSERVENO_1 DEPLOYEDSERVENO_2 DEPLOYEDSERVENO_3 DEPLOYED_1
DEPLOYED_2 DEPLOYED_3
    Rename=(
    %RenameNOMS_A(1)
    %RenameNOMS_A(2)
    %RenameNOMS_A(3)
    ));
    set PERM.adultmerge;
    length RULE_1 RULE_2 RULE_3 $255.;

    * Clean earlier NOMS questions that weren't check all in data
entry form;
    %MILSERV(1);
    %MILSERV(2);
    %MILSERV(3);

    * Clean earlier NOMS questions that weren't check all in data
entry form;
    %DEPLOYED(1);
    %DEPLOYED(2);
    %DEPLOYED(3);

run;

* Clean NOMS;
data cleanA1;
    set AdultNoms ;

    /* *** Apply cleaning rules to question 16 (Ever serve) *** */

    * If never is 0 and everything else 98 make never 1;
    %Rule5A(1);
    %Rule5A(2);
    %Rule5A(3);

    * Inappropriate use of 88;
    %Rule5B(1);
    %Rule5B(2);
    %Rule5B(3);
```

```
    * Change values of 0 to 98;
    %Rule6(1);
    %Rule6(2);
    %Rule6(3);

    * Change values of 99 to 98 since this question is asking about
service;
    %Rule7(1);
    %Rule7(2);
    %Rule7(3);

    * Uncheck never if any service checked;
    %Rule8(1);
    %Rule8(2);
    %Rule8(3);

    /* *** Apply cleaning rules to question 16A (Active duty) *** */
    * RULE: If EVSVNO=1 (never served) and ACTARM = 1, 2, or 3
(active), leave as is even though it is contradictory;

    %Rule9(1);
    %Rule9(2);
    %Rule9(3);

    %Rule10(1);
    %Rule10(2);
    %Rule10(3);

    %Rule11(1);
    %Rule11(2);
    %Rule11(3);

    /* *** Apply to question 16B (Ever deployed) *** */

    * Change 99 to 98 for those who served;
    %Rule12(1);
    %Rule12(2);
    %Rule12(3);

    * RULE 13A: For those who did not serve, do not edit deployment;

    * Change 98 to 99 when applicable;
    %Rule13B(1);
    %Rule13B(2);
    %Rule13B(3);

    * Change 0 to 98;
    %Rule14(1);
    %Rule14(2);
    %Rule14(3);
```

```
    * Inappropriate use of 88;
    %Rule15(1);
    %Rule15(2);
    %Rule15(3);

    /* *** Apply to question 17 (Any family in military) *** */

    * Missing value though other NOMS answered;
    %Rule16(1);
    %Rule16(2);
    %Rule16(3);

    /* *** Apply to question 18 (Who in family in military) *** */

    * Missing value on Q18 though Q17 is not missing;
    %Rule17(1);
    %Rule17(2);
    %Rule17(3);

    * Inappropriate use of 88;
    %Rule18(1);
    %Rule18(2);
    %Rule18(3);

    * Missing 88 ;
    %Rule19(1);
    %Rule19(2);
    %Rule19(3);

    * Inappropriate use of 88;
    %Rule20(1);
    %Rule20(2);
    %Rule20(3);

    * Update MILACT ;
    %Rule21(1);
    %Rule21(2);
    %Rule21(3);

    * Use 99 for no family served ;
    %Rule22(1);
    %Rule22(2);
    %Rule22(3);

    * Inappropriate use of 99 ;
    %Rule23(1);
    %Rule23(2);
    %Rule23(3);

run;

/*
```

```
* Export;
data PERM.adultmergeNOMS (DROP=rule_1 rule_2 rule_3);
    set CleanA1 ;

run;

/* YOUTH */

* Rename variables to the naming convention used in SPFSIG PLI;
data YouthNoms (Rename=(
    %RenameNOMS_Y(1)
    %RenameNOMS_Y(2)
    %RenameNOMS_Y(3)
    ));
    set PERM.youthmerge;

run;

* Clean and export;
data PERM.youthmergeNOMS (DROP=rule_1 rule_2 rule_3);
    set YouthNoms ;

    /* *** Apply to question 17 (Who in family in military) *** */

    * Missing value on Q17 though Q16 is not missing;
    %Rule17(1);
    %Rule17(2);
    %Rule17(3);

    * Inappropriate use of 88;
    %Rule18(1);
    %Rule18(2);
    %Rule18(3);

    * Missing 88 ;
    %Rule19(1);
    %Rule19(2);
    %Rule19(3);

    * Inappropriate use of 88;
    %Rule20(1);
    %Rule20(2);
    %Rule20(3);

    * Update MILACT ;
    %Rule21(1);
    %Rule21(2);
    %Rule21(3);
```

```
    * Use 99 for no family served ;
    %Rule22(1);
    %Rule22(2);
    %Rule22(3);

    * Inappropriate use of 99 ;
    %Rule23(1);
    %Rule23(2);
    %Rule23(3);

run;
```

STATE OF NEW HAMPSHIRE
2016 NHCHIS QAHC-03-Amended
REQUEST FOR PROPOSALS

INTRODUCTION

The New Hampshire Insurance Department (NHID) is requesting proposals for a Contractor to perform consulting services for the NHID.

The NHID seeks support with quality assurance (QA) testing of the New Hampshire Comprehensive Health Information System (NHCHIS), and developing and maintaining updated SAS code for the rates produced on the www.nhhealthcost.org website.

CONTRACT PERIOD

The Contractor will provide services between the date of Governor and Council approval of the contract through until June 30, 2018, subject to legislative approval of the next biennial budget.

GENERAL INFORMATION/INSTRUCTIONS

Electronic proposals will be received until 4 pm local time, on April 29, 2016, at the New Hampshire Insurance Department, 21 South Fruit Street, Suite 14, Concord, New Hampshire, 03301. Emails should be sent to alain.couture@ins.nh.gov and include in the subject line: RFP for HealthCost and QA Services.

Proposals should be prepared simply and economically, providing a straightforward, concise description of bidder capabilities to satisfy the requirements of the RFP. Emphasis should be on completeness and clarity of content.

QA Testing and Support

The NHID promulgates data collection rules, specified in the NHID administrative rules: Ins 4000 UNIFORM REPORTING SYSTEM FOR HEALTH CARE CLAIMS DATA SETS http://www.nh.gov/insurance/legal/documents/ins4000adopted.pdf requiring health insurance carriers and third party administrators (TPAs) to submit medical, dental, and prescription claims data, and enrollment files to the state periodically. The data are collected in order to create the NHCHIS (http://www.gencourt.state.nh.us/rsa/html/XXXVII/420-G/420-G-11-a.htm). The data include information on fewer than 600,000 currently insured members at any point in time. For additional information on the NHCHIS, please view the website: http://nhchis.org.

The Contractor shall be available to perform QA testing of the data consolidated and sent to the NHID by the state's vendor, currently Milliman. The Contractor shall have direct responsibility to the NHID, but also serve as a resource for the DHHS in working with the data consolidator. The Contractor shall participate in routine conference calls with the state's data consolidation vendor as needed.

The Contractor shall be available to perform QA testing related to the data processing or consolidation services, vendor edits and processes, compliance with administrative rules, or any other factor that may impact the HealthCost website or various data analyses performed by the NHID. A listing of publicly available analyses by the NHID is here: http://www.nh.gov/insurance/reports/index.htm.

The data consolidator utilizes various minimums and maximums, as well as other data receiving testing mechanisms in order to eliminate major data integrity issues at the point of data submission between the carrier/TPA and the data consolidator. When requested to do so, the Contractor shall serve as a resource to the NHID by providing advice and recommendations for any deviations from the established carrier specific threshold levels, as requested by a carrier/TPA. The Contractor shall not be responsible for managing the relationship between the NHID and the carrier/TPA, but is expected to support the NHID by providing expertise and recommendations for obtaining carrier/TPA data reporting compliance with claims submission rules and effective data submission practices.

Normally, data extracts are produced for the NHID/DHHS on a quarterly basis in text format, and the QA process needs to take place with each extract. The Contractor should anticipate that at least one QA session will take place quarterly, and potentially two per quarter when data issues are identified and the extract needs to be recreated by the data consolidation vendor.

At a minimum, the Contractor shall test the data to confirm that fields are populated when appropriate and that the values are reasonable. Specifically:

- Carrier identifier, insurance product (e.g. HMO, PPO, etc.), policy type (e.g. fully insured vs. self-funded), and market information (e.g. exchange products, small group, non-group, large group);
- Distribution of professional and institutional claims;
- Provider charges, plan paid, copayment, coinsurance, deductible, and calculated allowed amounts (e.g. values are positive, allowed amounts are less than charges);
- Diagnosis and procedure fields;
- Dates of service and paid dates;
- Claims adjusted, denied, marked as primary, or otherwise flagged with specific indicators;
- Health care provider fields (billing and servicing) include useable NPI or other indicator;
- Member identifiers match among different data files (claims and membership files, and Rx and Medical as necessary);
- Check for duplicate records;
- Missing date ranges;
- Member demographics (DOB, Gender, zip code); and
- That the number of records, members, fields, and date ranges within the data received by the NHID are equal to what is indicated by the data consolidator.

The Contractor should be prepared to document issues that should be addressed or recognized by the data consolidation vendor until resolved, including providing examples of the finding. If the data consolidation vendor, DHHS, the Contractor, and the NHID agree the issue cannot be resolved efficiently or within available resources, including a resubmission by the carrier/TPA, the Contractor is responsible for documenting the issue in central location so that users of the data both at the NHID and elsewhere are aware of the anomaly.

Once the QA programs are written, unless new anomalies are detected, the maximum amount of time the Contractor should need for QA testing of a clean file is four hours per quarterly extract received from the data consolidator. QA testing and transfer of the analytical file to the NHID must be complete within one week of the Contractor receiving the data file from the data consolidator, unless the Contractor receives approval from the NHID for an extended period of time.

The Contractor shall assist as needed and requested by the NHID, with modifying the data as necessary from the data consolidation vendor and creating normalized SAS datasets for use by the NHID or another contractor of the NHID.

The proposal shall include all of the requirements in this RFP for testing of the data extracted and provided by the data consolidation vendor to the NHID and the development of the analytical SAS data sets.

HealthCost

The NHID is the owner of the NH HealthCost website (www.nhhealthcost.org) and the Contractor will be responsible assisting the NHID with revising and/or developing the SAS programming code used to calculate the cost estimates and quality information on the website. The NHID does not use any proprietary software programs, algorithms, black box technology, or other confidential information to produce the rates on the HealthCost website, and the Contractor cannot rely on any such technology or product when further developing the methodology and supporting programs. Any code or product produced by the Contractor in support of this project agreement is the property of the NHID and any reference by the vendor to the work performed on the HealthCost project shall describe HealthCost as a State initiative, specifically as a transparency initiative developed by the NHID, and that any work performed by the vendor is as an independent contractor of the State. The SAS code developed for producing rates on HealthCost is available to anyone, and the Contractor cannot copyright or otherwise inhibit the NHID or any interested party from obtaining, sharing, and using the work product produced under this project. The current SAS code can be obtained by sending a request to alain.couture@ins.nh.gov.

Proposals should include resources to test the algorithms for accuracy and to work with the NHID to make any changes so that rates can be produced as efficiently, accurately, and timely as possible. These changes may include adjustments to the rate calculation methodology, changing "bundled" services to the unbundled approach, or general revisions to the methods of developing rate estimates. The Contractor's primary focus will be on services reported with rates provided on an unbundled basis. Please note that the "unbundled" methodology may include the

combination of a professional and technical component.

Proposals that include potential changes to the existing methodology for providing rate estimates will be considered.

Periodic updates shall take place on a quarterly basis for cost estimates, and less frequently for all other measures. Currently, all non-cost measures are updated annually.

The SAS programs used to create cost estimates and provider quality information are used to create output files that will be loaded to the HealthCost website by the website vendor, currently the University of New Hampshire Web and Mobile Development team (WMD). The Contractor is responsible for ensuring the output files are checked for reasonability and accuracy prior to each transfer of data to the website developer. This includes, but is not limited to:

- spot checking that a provider listed for a service is a provider that offers the service
- analyzing cost estimates to ensure that any costs that appear unusually high or low are investigated
- assisting with revisions to the programming to address unusual situations that may result in misleading estimates.

To ensure rate estimates are valid, the Contractor may need to perform additional analyses using the claims data outside of the programs developed for HealthCost, perform internet research, or contact a health care provider directly to understand billing or service delivery practices. The Contractor is also responsible for verifying that the website developer loads the data files correctly.

After the initial reprogramming as needed, the Contractor shall be available to assist with general maintenance to the SAS code used to produce the HealthCost rates, including routine debugging and changes, or investigating specific questions that may arise about the estimates associated with a particular health care provider or insurance carrier. Maintenance may include, among other things, changes to the underlying CPT codes or modifiers used to identify specific procedures, dates of service used with the input data, additions or modifications to the carriers/TPAs or providers included in the output, procedures included to calculate rates, modifications or enhancements to the rate calculation methodology, and general maintenance to the provider files. The NHID has hired a vendor that is responsible for assisting the NHID with identifying provider associations, and the Contractor may be expected to work with this vendor to incorporate the recommended associations into the HealthCost programming and utilize accurate provider affiliations on the website. The Contractor shall provide assistance to the vendor identifying provider affiliations by providing guidance on the format and layout of the reference tables so that the Contractor and the NHID can efficiently make use of the information provided by the vendor. This may include using the NHCHIS to identifying high volume providers based on specific services that either exist, or are anticipated to be included in the HealthCost output. The contract with the vendor performing the provider affiliation work can be obtained by sending a request to alain.couture@ins.nh.gov.

In addition to the responsibilities identified above, proposals are expected to include the

following potential Contractor responsibilities, depending on support requested by the NHID:

- Developing expertise with the HealthCost rate estimate methodologies.
- Testing of a sample of the current HealthCost estimates for reasonability and accuracy.
- Rewriting as needed and as requested by the NHID, current SAS code in order to improve the accuracy, efficiency and timeliness of the rates and other information, including accommodating changes to:
    - the source databases,
    - the health care provider files, and
    - the logic for showing radiology cost estimates as "unbundled" with the facility and professional payment rates combined into one overall cost estimate.
- Updating the cost estimates on HealthCost on a quarterly basis.
- Updating the Statewide Rates Report and the lab market basket report included on HealthCost, on a quarterly basis.
- Updating the Quality Measures included on HealthCost on an annual basis.
- 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 consumer and employer sections of the website are produced with rates and related information, including "precision of the cost estimate" and "typical patient complexity." The "typical patient complexity" field is based on the chronic illness and disability payment system (CDPS), a diagnostic classification system that runs in SAS. The current version of the software used with HealthCost is based on ICD-9, and will need updating with a current version of the CDPS that is based on ICD-10 codes.
- Researching anomalies in the data as appropriate when calculations produce results that are not expected, whether identified by the Contractor, the NHID, a provider, an insurance carrier, or another interested party.

While the majority of the work that may be performed by the Contractor is for the rate estimates designed for consumers (currently about 148 services/items), the responsibilities listed above may also apply to the "statewide rates" information available on the website. This section is designed for health care providers and insurance carriers, and the methodology differs from the rate estimates produced for consumers.

The NHID will be seeking an additional vendor to perform research and development to expand the number and nature of the procedures available with rate estimates on HealthCost, including using various methodologies to show general health care utilization patterns. This research and development vendor will be responsible for recommending new procedures, and developing the specifications for including the new procedures to be added to NHHealthCost.org.

If determined by the NHID to be necessary, the Contractor selected under this RFP for QA and HealthCost support will be responsible for creating the new SAS programming to include the newly identified procedures, rates, and related information on HealthCost and maintaining the code once it is completed. Proposals should include resources budgeted separately for these tasks, as described below.

In some cases, the Contractor will be responsible for working directly with the vendor under contract with the NHID to maintain the website, currently WMD at the University of New Hampshire.

The proposal shall identify a specific person or persons assigned to the responsibilities outlined in the proposal, and any changes to the assignment of responsibilities to this person(s) during the course of the contract shall be approved first by the NHID.

Project Costs

The NHID has established maximum project costs, including budgets for specified tasks included under the contract. The budgeted amounts are intended to provide guidance to potential bidders, and successful proposals cannot exceed the amounts allocated for:

- the entire project
- operational tasks
- development work to modify programming or rewrite existing code
- development work to add new procedures and providers to the output
- the percent split between the analyst/programmer and project management.

Additionally, the development work is funded by a federal grant to the NHID and the Contractor must provide invoices that separately identify development work and operational costs.

Within the provided limitations, bidders are free to develop a budget that allocates the number of hours associated with staff, identified by name and title, and the distribution of the projected number of hours associated with the tasks.

Proposals will be evaluated based on the experience, skills, and expertise of staff, as well as the per hour rate for the hours budgeted to complete those tasks. During the course of the project, the Contractor and the NHID will work closely to determine the actual Contractor resources that will be necessary to complete the work, and the Contractor should not assume the entire budget will be expended. While proposals must include an estimate of the total number of hours, the NHID recognizes the actual number of hours needed is impossible to estimate, and in reviewing proposals, emphasis will be on the hourly rate and the expected ability of the staff to complete tasks efficiently. The not-to-exceed amounts are intended to protect both the NHID and the Contractor from over exposure.

Development Work

Development tasks include SAS programming changes to the HealthCost rate estimate algorithms for efficiency, accuracy, and timeliness of the rates, and new SAS code necessary to incorporate new services and rates. The NHID estimates that the distribution of resources needed to satisfy the requirements for these tasks are included in the table below. Bidders are welcome to submit a proposal that differs from these distributions, but must include a breakdown of the tasks, estimated total hours, and per hour rate.

Development Tasks R&D of Rate Estimates Methodology	Percent of Resources
Researching existing HealthCost code and methodology	14%
Testing rates and analyzing underlying data	14%
Reprogramming and testing	72%

Project management = 15% or $7,800
Programmer/analyst = 85% or $44,200
Total budget not to exceed = $52,000

Development Tasks for Expansion of Services	Percent of Resources
Assisting with outside vendor recommendations for changes	100%

Project management = 15% or $5,700
Programmer/analyst = 85% or $32,300
Total budget not to exceed = $38,000

Operational Work

Tasks include quality assurance testing and routine maintenance and updates to the SAS code in support of HealthCost. The NHID expects that the distribution of resources needed to satisfy the requirements under this section are included in the table below. Bidders are welcome to submit a proposal that differs from these distributions, but must include a breakdown of the tasks, estimated hours, and per hour rate.

Operational Task	Percent of Resources
Develop QA testing programs	14%
Perform QA testing on clean files (4-8/yr for 3 yrs)	32%
Investigate and document issues identified	40%
Potentially run update programs and check HealthCost estimates before and after website load	14%

Project management = 15% or $13,200
Programmer/analyst = 85% or $88,000
Total budget not to exceed = $101,200

Evaluation of the submitted proposals will be accomplished as follows:

(A) General. An evaluation team will judge the merit of proposals according to the general criteria defined herein.

Officials responsible for the selection of a Contractor shall insure that the selection process accords equal opportunity and appropriate consideration to all who are capable of meeting the specifications.

Failure of the applicant to provide in its proposal all information requested in the Request for Proposal may result in disqualification of the proposal.

(B) Specific. A comparative scoring process will measure the degree to which each proposal meets the following criteria:

(1) Specific skills of the individual needed to perform the tasks outlined in the RFP and the proposal. The proposal must include a listing of references for recent engagements by the vendor that reflect the skills appropriate for work on this project, including telephone numbers and specific persons to contact.

i. Experience and expertise with
   1. writing code in SAS for other users,
   2. using health insurance claims data, including charge, paid and cost sharing data fields,
   3. importing and exporting data files, and
   4. working with health care provider data files.

ii. Proven ability to train and provide technical assistance and communicate effectively.

iii. Familiarity with various health insurance data sources.

iv. Ability to work with data extensively and independently.

v. Demonstrated ability to work collaboratively with government agencies and other vendors.

25 percent

(2) General qualifications and related experience of the individual identified in the proposal. Knowledge of health care administrative data, health insurance carrier/TPA claims processing systems, data consolidation services and health insurance generally, demonstrated through experience. Good communication skills and demonstrated ability to work in collaboration with other vendors, both industry and regulatory personnel in New Hampshire. Industry experience is preferred. The proposal must include a summary of experience, including a current resume for each individual expected to perform work under the proposal, and samples of SAS code.

25 percent

(3) Timeframe and deliverables. The proposal must include a Work Plan and specify a timeframe in which the Contractor commits to project deliverables as they are developed. The proposal should be specific about the steps that will be taken by the Contractor. The Contractor is welcome to identify periods of time that they will have reduced resources available, or other considerations that will allow resource planning during the term of the contract.

25 percent

(4) Derivation of cost for the staff time. The proposal should include the hourly rate for individuals, and an estimate of the amount of time each person(s) might be expected to expend on the project. The proposal must include each development and operational budget section identified in this RFP, and the specific staff, hours associated with those budgets. Proposals shall be evaluated with substantial emphasis on the per hour rate, project timeline estimates, and the hours associated with staff expertise. The response required pursuant to this part shall be sufficiently detailed to create a general expectation of ability for the contractor to complete the tasks within the not to exceed amounts provided, and total project cost of $191,200.

25 percent

(C) Conflict of Interest. The applicant shall disclose any actual or potential conflicts of interest.

(D) Other Information. The New Hampshire Insurance Department will accept written questions related to this RFP from prospective bidders with the deadline being April 11, 2016. Questions should be directed to Al Couture via email: alain.couture@ins.nh.gov . A consolidated written response to all questions will be posted on the New Hampshire Insurance Department's website www.nh.gov/insurance, by April 15, 2016.

The successful bidder or bidders will be required to execute a state of New Hampshire Contract. A form P-37 contains the general conditions as required by state of New Hampshire purchasing policies and the Department of Administrative Services. Although this standard contract can be modified slightly by mutual agreement between the successful bidder and the New Hampshire Insurance Department, all bidders are expected to accept the terms as presented in this RFP. If the bidder requires any changes to the P-37, those changes need to be identified in the proposal.

The selection of the winning proposal is anticipated by May 6, 2016, and the NHID will seek to obtain all state approvals in early June. Please be aware that the winning bidder will need to provide all signed paperwork to the NHID by May 13, 2016 in order for deadlines to be met.

Proposals received after the above date and time will not be considered. The state reserves the right to reject any or all proposals.

Bidders should be aware that New Hampshire's transparency law, RSA 9-F, requires that state contracts entered into as a result of requests for proposal such as this be accessible to the public online. Caution should be used when submitting a response that trade secrets, social security numbers, home addresses and other personal information are not included.

Human Services Research Institute

2016 NHCHIS QAHC-03

Exhibit B

Contract Price, Price Limitations and Payment

Human Services Research Institute (HSRI) has estimated the total cost for this effort and the not-to-exceed limit of $191,011.27. Hours are billed only for time worked, and to the extent hours worked are lower, the costs will be proportionately lower.

HSRI will submit separate invoices for grant and non-grant related tasks as indicated in the table below. Grant related work will be completed by September 30, 2017. Non-grant related work will be completed by June 30, 2018. HSRI will submit invoices to the New Hampshire Insurance Department during the first week of each month. Invoices will contain the total number of hours and corresponding labor charges for each member for the preceding calendar month. Invoices will be submitted electronically.

Activities	Cost
Grant funded through September 30, 2017	
Development Tasks-R&D of Rate Methodology/Expansion of Services	$129,869.30
Department funded through June 30, 2018	
Operational Tasks	$ 61,141.97
Total	$191,011.27

Human Services Research Institute

2016 NHCHIS QAHC-03

Exhibit C

New Hampshire Insurance Department
Contractor Confidentiality Agreement

As a contractor for the New Hampshire Insurance Department (Department) you may be provided with information and/or documents that are expressly or impliedly confidential. All contractors are required to maintain such information and documents in strict confidence at all times. Disclosure, either written or verbal, of any confidential information and documents to any entity or person, who is not in a confidential relationship to the particular information or documents will result in termination of your firm's services

The undersigned acknowledges she or he understands the foregoing and agrees to maintain all confidential information in strict confidence at all times. The undersigned further acknowledges that if she or he is unsure of whether or not particular information or documents are confidential, it is the undersigned's responsibility to consult with the appropriate Department personnel prior to any disclosure of any information or document.

David Hughes
Printed Name of Contractor

5/9/2016
Date

Contractor Signature

State of New Hampshire
Department of State

CERTIFICATE

I, William M. Gardner, Secretary of State of the State of New Hampshire, do hereby certify that Human Services Research Institute, a(n) District of Columbia nonprofit corporation, registered to do business in New Hampshire on February 4, 2016. I further certify that it is in good standing as far as this office is concerned, having paid the fees required by law.

In TESTIMONY WHEREOF, I hereto set my hand and cause to be affixed the Seal of the State of New Hampshire, this 16th day of May, A.D. 2016

William M. Gardner
Secretary of State

CERTIFICATE OF VOTE
(Corporation without Seal)

I, Susan Havercamp, do hereby certify that:
(Name of Clerk of the Corporation; cannot be contract signatory)

1. I am a duly elected Clerk of Human Services Research Institute.
(Corporation's Name)

2. The following are true copies of two resolutions duly adopted at a meeting of the Board of Directors of the Corporation duly held on 10/06/2015:
(Date)

RESOLVED: That all executive staff of this Corporation are hereby authorized and empowered to make, enter into, sign, seal, and deliver on behalf of this corporation for all contracts for services and/or products, including the State of New Hampshire, acting through the New Hampshire Department of Insurance, for the provision of Health Data Quality services.

RESOLVED: That the Executive Vice President
(Title of Contract Signatory)

is hereby authorized on behalf of this Corporation to enter into the said contract with the State and to execute any and all documents, agreements and other instruments, and any amendments, revisions, or modifications thereto, as he/she may deem necessary, desirable or appropriate.

3. The forgoing resolutions have not been amended or revoked, and remain in full force and effect as of the 9th day of May, 2016.
(Date Contract Signed)

4. David Hughes is the duly elected Executive Vice President
(Name of Contract Signatory) (Title of Contract Signatory)

of the Corporation.

Susan Havercamp
(Signature of Clerk of the Corporation)

By Susan M Havercamp
(Printed Name of Clerk of the Corporation)

STATE OF MASSACHUSETTS
County of MIDDLESEX

The forgoing instrument was acknowledged before me this 12 day of May, 2016.

(Notary Seal)

Tamara J. Hager
Notary Public, State of Ohio
My Commission Expires 04-22-2017

Tamara J Hager
(Notary Public)

Commission Expires: 4-22-17

Client#: 239439 HUMANSERVI

ACORD™ CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 5/09/2016

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).

PRODUCER
Marsh & McLennan Agency LLC
100 Front Street, Suite 800
Worcester, MA 01608
888 850-9400

CONTACT NAME: Thomas O'Neill
PHONE (A/C, No, Ext): 888 850-9400 FAX (A/C, No): 866-795-8016
E-MAIL ADDRESS: thomas.oneill@marshmma.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Philadelphia Indemnity Co.	18058
INSURER B : Travelers Insurance Company	25682
INSURER C :	
INSURER D :	
INSURER E :	
INSURER F :	

INSURED
Human Services Research Institute
2336 Massachusetts Avenue
Cambridge, MA 02140

COVERAGES **CERTIFICATE NUMBER:** **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.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY			PHPK1381883	09/30/2015	09/30/2016	EACH OCCURRENCE	$2,000,000
	CLAIMS-MADE X OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$100,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						MED EXP (Any one person)	$5,000
	POLICY PRO-JECT LOC						PERSONAL & ADV INJURY	$2,000,000
	OTHER:						GENERAL AGGREGATE	$4,000,000
							PRODUCTS - COMP/OP AGG	$4,000,000
								$
A	AUTOMOBILE LIABILITY			PHPK1381883	09/30/2015	09/30/2016	COMBINED SINGLE LIMIT (Ea accident)	$1,000,000
	ANY AUTO						BODILY INJURY (Per person)	$
	ALL OWNED AUTOS / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	X HIRED AUTOS / X NON-OWNED AUTOS						PROPERTY DAMAGE (Per accident)	$
								$
A	X UMBRELLA LIAB X OCCUR			PHUB511896	09/30/2015	09/30/2016	EACH OCCURRENCE	$2,000,000
	EXCESS LIAB CLAIMS-MADE						AGGREGATE	$2,000,000
	DED X RETENTION $10000							$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY			UB4507T454	11/19/2015	11/19/2016	PER STATUTE / OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N: N	N / A					E.L. EACH ACCIDENT	$1,000,000
	(Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$1,000,000
							E.L. DISEASE - POLICY LIMIT	$1,000,000
A	Professional			PHSD1088947	10/21/2015	9/30/2016	1,000,000	

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

CERTIFICATE HOLDER
New Hampshire Insurance Department
21 S. Fruit Street, Suite 14
Concord, NH 03301

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
Jerry Alderman

BWTXO

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.

The NH Insurance Dept.	Human Services Research Institute
The State	Name of the Contractor
Alexander K Feldvebel	
Signature of Authorized Representative	Signature of Authorized Representative
Alexander K Feldvebel	David Hughes
Name of Authorized Representative	Name of Authorized Representative
Deputy Commissioner	Executive Vice President
Title of Authorized Representative	Title of Authorized Representative
5/27/16	5/9/2016
Date	Date