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STATE OF NEW HAMPSHIRE
DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC HEALTH SERVICES

Lori A. Shibinette
Commissioner

Patricia M. Tilley
Director

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December 28, 2021

His Excellency, Governor Christopher T. Sununu
and the Honorable Council
State House
Concord, New Hampshire 03301

REQUESTED ACTION

Authorize the Department of Health and Human Services, Division of Public Health Services, to enter into a **Sole Source** contract with Mary Hitchcock Memorial Hospital (VC#177160), Lebanon, NH in the amount of $100,000 for eight (8) evidenced based model education sessions on COVID-19 vaccinations, with the option to renew for up to one (1) additional year, effective upon Governor and Council approval through June 30, 2023. 100% Federal Funds.

Funds are available in the following account for State Fiscal Years 2022 and 2023, with the authority to adjust budget line items within the price limitation and encumbrances between state fiscal years through the Budget Office, if needed and justified.

05-95-090-902510-1956, HEALTH AND HUMAN SERVICES, DEPT OF HEALTH AND HUMAN SVS, HHS: DIVISION OF PUBLIC HEALTH, BUREAU OF INFECTIOUS DISEASE, IMMUNIZATION COVID-19

State Fiscal Year	Class / Account	Class Title	Job Number	Total Amount
2022	102-500731	Contracts for Prog Svs	90023210	$80,000
2023	102-500731	Contracts for Prog Svs	90023210	$20,000
			Total	**$100,000**

EXPLANATION

This request is **Sole Source** because the Contractor has the existing course curriculum to quickly implement a PROJECT Extension for Community Healthcare Outcomes (ECHO) on COVID-19 vaccine education and is therefore uniquely qualified to provide these services. These educational services for healthcare providers and community advocates are a required activity of Federal funding. The Contractor has relationships with qualified presenters needed to conduct the education sessions, and in order to avoid duplicating efforts to develop curriculum and identify expert panelists and audience participants, the Department is requesting to utilize the existing infrastructure that the Contractor has in place.

The purpose of this request is for the Contractor to conduct eight (8) evidenced based model education sessions, known as Project Extension for Community Healthcare Outcomes

(ECHO), to educate health care staff and community health influencers, empowering them to promote COVID-19 vaccine uptake in their communities as recommendations evolve. The goals of this project are to:

1. Empower community health influencers with knowledge and strategies to promote confidence in COVID-19 vaccines at the community level;
2. Prepare clinical staff who work in health care settings to assist in vaccine education; and
3. Make factual COVID-19 vaccine resources and best practice information widely available to community health influencers, health care providers, and the general public.

Community health advocates, influencers and health care staff will be trained through this contract. Approximately 500 individuals will be served from Governor and Executive Council approval through June 30, 2023.

The Contractor will develop, facilitate and execute educational sessions to increase COVID-19 vaccine education in rural northern New Hampshire. ECHO participants will engage in an interactive virtual community with their peers where they will share support, guidance and feedback. This type of learning model results in measurable improvements in health metrics and a valued sense of community among participants.

The Contractor will host two (2) educational series on vaccine education for health care staff and community health influencers. Four (4) sessions per series will be designed for trusted, local community health advocates in rural New Hampshire. Two (2) sessions per series will e designed for staff and clinicians who work in traditional health care settings. The health care staff educational sessions will immediately follow the community health influencers sessions with a goal of incorporating lessons learned from the community sessions into education of the health care staff participants.

The Contractor will host two (2) ECHO series during the project period for a total of eight (8) sessions for community influencers and four (4) sessions for health care staff.

The Department will monitor contracted services by ensuring the following deliverables and performance measures are met:

- The Project ECHO for COVID-19 Vaccine team is implemented within three (3) months of the contract effective date.
- Development of the Project ECHO for COVID-19 Vaccine curriculum within six (6) months of the contract effective date.
- Initiation of the Project ECHO for COVID-19 Vaccine courses within nine (9) months of the contract effective date.
- A minimum of 75% of Project ECHO for COVID-19 Vaccine participants complete post-course survey
- A minimum of 80% of Project ECHO COVID-19 Vaccine survey respondents report an increase in knowledge related to COVID-19 vaccinations.
- A minimum of 80% of Project ECHO for COVID-19 Vaccination participants report an increased confidence in their ability to COVID-19 vaccination education.

As referenced in Exhibit A of the attached contract, the parties have the option to extend the agreement for up one (1) additional year, contingent upon satisfactory delivery of services, available funding, agreement of the parties and Governor and Council approval.

Should the Governor and Council not authorize this request there will be a lack of knowledge and confidence about COVID-19 vaccines from community health influencers and clinical staff. In addition, there will be less factual COVID-19 vaccine resources and best practice information available to the general public.

Area served: Statewide

Source of Funds: CFDA # 93.268, FAIN # NH23IP922595

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

Respectfully submitted,

DocuSigned by:
Lori A. Weaver
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Lori A. Shibinette
Commissioner

Subject: Project ECHO for COVID-19 Vaccination (SS-2022-DPHS-05-PROJE-01)

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 Department of Health and Human Services		1.2 State Agency Address 129 Pleasant Street Concord, NH 03301-3857	
1.3 Contractor Name Mary Hitchcock Memorial Hospital for itself and on behalf of Dartmouth-Hitchcock Clinic (collectively doing business as "Dartmouth-Hitchcock")		1.4 Contractor Address One Medical Center Drive Lebanon, NH 03756	
1.5 Contractor Phone Number (603) 653-9500	1.6 Account Number 05-95-090-902510-1956	1.7 Completion Date June 30, 2023	1.8 Price Limitation $100,000
1.9 Contracting Officer for State Agency Nathan D. White, Director		1.10 State Agency Telephone Number (603) 271-9631	
1.11 Contractor Signature Barbara Moskalenko Date: 9/24/2021		1.12 Name and Title of Contractor Signatory Barbara Moskalenko Director Research Operations	
1.13 State Agency Signature DocuSigned by: Patricia M. Tilley B46FB34F5BFD4CB... Date: 9/27/2021		1.14 Name and Title of State Agency Signatory Patricia M. Tilley Director	
1.15 Approval by the N.H. Department of Administration, Division of Personnel *(if applicable)* By: Director, On:			
1.16 Approval by the Attorney General (Form, Substance and Execution) *(if applicable)* By: DocuSigned by: J. Christopher Marshall D58D468E80D4401... On: 9/27/2021			
1.17 Approval by the Governor and Executive Council *(if applicable)* G&C Item number: G&C Meeting Date:			

Contractor Initials BM

Date 9/24/2021

2. 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 B 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 1.17, 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 1.13 ("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 affected by any state or federal legislative or executive action that reduces, eliminates or otherwise modifies the appropriation or availability of funding for this Agreement and the Scope for Services provided in EXHIBIT B, in whole or in part. 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 reduce or terminate the Services under this Agreement immediately upon giving the Contractor notice of such reduction or termination. The State shall not be required to transfer funds from any other account or source 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 C 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 applicable 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 employment opportunity laws. In addition, if this Agreement is funded in any part by monies of the United States, the Contractor shall comply with all federal executive orders, rules, regulations and statutes, and with any rules, regulations and guidelines as the State or the United States issue to implement these regulations. The Contractor shall also comply with all applicable intellectual property 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. The Contractor agrees to permit the State or United States access to any of the Contractor's books, records and accounts for the purpose of ascertaining compliance with all rules, regulations and orders, and the covenants, terms and conditions of this Agreement.

7. PERSONNEL.

7.1 The Contractor shall at its own expense provide all personnel necessary to perform the Services. The Contractor warrants that all personnel engaged in the Services shall be qualified to perform the Services, and shall be properly licensed and otherwise authorized to do so under all applicable laws.

7.2 Unless otherwise authorized in writing, during the term of this Agreement, and for a period of six (6) months after the Completion Date in block 1.7, the Contractor shall not hire, and shall not permit any subcontractor or other person, firm or corporation with whom it is engaged in a combined effort to perform the Services to hire, any person who is a State employee or official, who is materially involved in the procurement, administration or performance of this Agreement. This provision shall survive termination of this Agreement.

7.3 The Contracting Officer specified in block 1.9, or his or her successor, shall be the State's representative. In the event of any dispute concerning the interpretation of this Agreement, the Contracting Officer's decision shall be final for the State.

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Contractor Initials

Date 9/24/2021

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 cured, 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 give the Contractor a written notice specifying the Event of Default and 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 give the Contractor a written notice specifying the Event of Default, treat the Agreement as breached, terminate the Agreement and pursue any of its remedies at law or in equity, or both.

8.3. 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.

9. TERMINATION.

9.1 Notwithstanding paragraph 8, the State may, at its sole discretion, terminate the Agreement for any reason, in whole or in part, by thirty (30) days written notice to the Contractor that the State is exercising its option to terminate the Agreement.

9.2 In the event of an early termination of this Agreement for any reason other than the completion of the Services, the Contractor shall, at the State's discretion, 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 B. In addition, at the State's discretion, the Contractor shall, within 15 days of notice of early termination, develop and submit to the State a Transition Plan for services under the Agreement.

10. DATA/ACCESS/CONFIDENTIALITY/ PRESERVATION.

10.1 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.

10.2 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.

10.3 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.

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.

12.1 The Contractor shall not assign, or otherwise transfer any interest in this Agreement without the prior written notice, which shall be provided to the State at least fifteen (15) days prior to the assignment, and a written consent of the State. For purposes of this paragraph, a Change of Control shall constitute assignment. "Change of Control" means (a) merger, consolidation, or a transaction or series of related transactions in which a third party, together with its affiliates, becomes the direct or indirect owner of fifty percent (50%) or more of the voting shares or similar equity interests, or combined voting power of the Contractor, or (b) the sale of all or substantially all of the assets of the Contractor.

12.2 None of the Services shall be subcontracted by the Contractor without prior written notice and consent of the State. The State is entitled to copies of all subcontracts and assignment agreements and shall not be bound by any provisions contained in a subcontract or an assignment agreement to which it is not a party.

13. INDEMNIFICATION. Unless otherwise exempted by law, the Contractor shall indemnify and hold harmless the State, its officers and employees, from and against any and all claims, liabilities and costs for any personal injury or property damages, patent or copyright infringement, or other claims asserted against the State, its officers or employees, which arise out of (or which may be claimed to arise out of) the acts or omission of the

Contractor Initials BM

Date 9/24/2021

Contractor, or subcontractors, including but not limited to the negligence, reckless or intentional conduct. The State shall not be liable for any costs incurred by the Contractor arising under this paragraph 13. 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 continuously maintain in force, and shall require any subcontractor or assignee to obtain and maintain in force, the following insurance:

14.1.1 commercial general liability insurance against all claims of bodily injury, death or property damage, in amounts of not less than $1,000,000 per occurrence and $2,000,000 aggregate or excess; and

14.1.2 special cause of loss coverage form covering all property subject to subparagraph 10.2 herein, in an amount not less than 80% of the whole replacement value of the property.

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

14.3 The Contractor shall furnish to the Contracting Officer identified in block 1.9, or his or her successor, a certificate(s) of insurance for all insurance required under this Agreement. Contractor shall also furnish to the Contracting Officer identified in block 1.9, or his or her successor, certificate(s) of insurance for all renewal(s) of insurance required under this Agreement no later than ten (10) days prior to the expiration date of each insurance policy. The certificate(s) of insurance and any renewals thereof shall be attached and are incorporated herein by reference.

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. The 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. 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.

17. 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.

18. CHOICE OF LAW AND FORUM. This Agreement shall be governed, interpreted and 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. Any actions arising out of this Agreement shall be brought and maintained in New Hampshire Superior Court which shall have exclusive jurisdiction thereof.

19. CONFLICTING TERMS. In the event of a conflict between the terms of this P-37 form (as modified in EXHIBIT A) and/or attachments and amendment thereof, the terms of the P-37 (as modified in EXHIBIT A) shall control.

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 or modifying provisions set forth in the attached EXHIBIT A 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 with respect to the subject matter hereof.

Contractor Initials BM
Date ~~9/24/2021~~

New Hampshire Department of Health and Human Services
Project ECHO for COVID-19 Vaccination

EXHIBIT A

Revisions to Standard Agreement Provisions

1. Revisions to Form P-37, General Provisions

1.1. Paragraph 3, Effective Date/Completion of Services, is amended by adding subparagraph 3.3 as follows:

3.3. The parties may extend the Agreement for up to one (1) additional year from the Completion Date, contingent upon satisfactory delivery of services, available funding, agreement of the parties, and approval of theGovernor and Executive Council.

1.1. Paragraph 7, Personnel, is amended by modifying subparagraph 7.1 to read:

7.1. The Contractor shall at its own expense provide all personnel necessary to perform the Services. The Contractor certifies 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.

1.2. Paragraph 7, Personnel, is amended by modifying subparagraph 7.2 to read:

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's employees involved in this project, shall not hire, andshall 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 employeeor official, who is materially involved in the procurement, administration or performance of this Agreement. This provision shall survive termination of this Agreement.

1.3. Paragraph 9, Termination, is amended by modifying subparagraph 9.2 to read:

9.2 In the event of an early termination of this Agreement for any reason other than the completion of the Services, the Contractor shall, at the State's discretion, deliver to the Contracting Officer, not later than thirty (30) days after the dateof 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 B. In addition, at the State's discretion, the Contractorshall, within thirty (30) days of notice of early termination, develop and submit to the State a Transition Plan for services under the Agreement.

1.4. Paragraph 10, Data/Access/Confidentiality/Preservation, is amended by modifying subparagraph 10.3 to read:

10.3 Confidentiality of data shall, to the extent applicable, be governed by N.H. RSA chapter 91-A or other existing law. Disclosure of data provided by the State requires prior written approval of the State.

1.5. Paragraph 12, Assignment/Delegation/Subcontracts, is amended by adding subparagraph 12.3 as follows:

12.3. Subcontractors are subject to the same contractual conditions as the Contractor and the Contractor is responsible to ensure subcontractor compliance with those conditions. The Contractor shall have written agreements with all subcontractors, specifying the work to be performed and how corrective action shall be managed if the subcontractor's performance is inadequate. The Contractor shall manage the subcontractor's performance on an ongoing basis and take corrective action as necessary. The Contractor shall annually provide the State with a list of all subcontractors provided for under this Agreement and notify the State of any inadequate subcontractor performance.

1.6. Paragraph 14, Insurance, is amended by modifying subparagraph 14.1.2 to read:

14.1.2. 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 or registered to conduct business in the State of New Hampshire.

1.7. Paragraph 14, Insurance, is amended by modifying subparagraph 14.3 to read:

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 insurance policy. The certificate(s) of insurance and any renewals thereof shall be attached and are incorporated herein by reference.

New Hampshire Department of Health and Human Services
Project ECHO for COVID-19 Vaccination

EXHIBIT B

Scope of Services

1. Statement of Work

1.1. The Contractor shall implement a Project Extension for Community Healthcare Outcomes (ECHO) for COVID-19 Vaccination to engage and train healthcare and community influencers to promote COVID-19 vaccinations, especially among individuals disproportionately affected by COVID-19. The Contractor shall:

1.1.1. Utilize an innovative, interactive education and mentorship training model to promote COVID-19 vaccinations in communities.

1.1.2. Ensure trainings are provided in sessions lasting up to eight (8) training sessions per course, for a minimum of three (3) courses.

1.1.3. Develop a curriculum, which will incorporate health equity principles and social vulnerability data into topics and includes, but is not limited to:

1.1.3.1. Behavioral insights to promote COVID-19 vaccination.

1.1.3.2. Information to increase vaccine confidence.

1.1.3.3. Vaccination Basics relative to mechanisms of action, safety, and effectiveness.

1.1.3.4. COVID-19 vaccine hesitancy, concerns, myths and misconceptions.

1.1.3.5. Evidence-based methods to increase vaccine confidence and improve COVID-19 vaccine uptake.

1.1.4. Establish a panel of expert presenters, which include but are not limited to:

1.1.4.1. Infectious disease specialist.

1.1.4.2. Vaccine hesitancy expert.

1.1.4.3. Healthcare communication specialist.

1.1.4.4. Community-based health professional.

1.1.4.5. Equity subject matter expert.

1.1.5. Hire a facilitator(s) to oversee the trainings.

1.1.6. Recruit participants.

1.1.7. Create and/or disseminate resources and materials for public use on COVID-19 hesitancy, as approved by the Department.

1.1.8. Record Project ECHO for COVID-19 Vaccination sessions for Department and public use.

1.2. The Contractor shall recruit to enroll a cohort of participants, statewide, for each multi-session course for target audiences including, but not limited to:

1.2.1. Health care staff, which includes, but is not limited to:

1.2.1.1. Physicians, Advanced Registered Nurse Practitioners (ARNPs), Physician Assistants (Pas).

1.2.1.2. Nurses.

1.2.1.3. Medical assistants.

1.2.1.4. Psychologists and counselors.

1.2.1.5. Other health care staff.

1.2.2. Community health influencers which include, but are not limited to:

1.2.2.1. Community health workers.

1.2.2.2. Faith leaders.

1.2.2.3. Parish nurses.

1.2.2.4. Emergency Medical Technicians (EMTs) and paramedics.

1.2.2.5. Recovery coaches.

1.2.2.6. Employers.

1.2.2.7. Home health aides.

1.2.2.8. Supportive housing services.

1.2.2.9. Food pantry staff.

1.2.2.10. Municipal officers, which may include, but are not limited to, town health officers and selectmen.

1.3. The Contractor shall ensure participant recruitment activities include, but are not limited to:

1.3.1. Mailing or emailing invitations.

1.3.2. Soliciting participation through existing contacts.

1.4. The Contractor shall obtain Department and other stakeholder input when developing curriculum content for each Project ECHO for COVID-19 Vaccination course.

1.5. The Contractor shall develop course objectives for each course, which may include, but are not limited to:

1.5.1. Empowering community health influencers with knowledge and strategies to promote confidence in COVID-19 vaccines at the community level.

1.5.2. Preparing clinical staff who work in health care settings to resolve

vaccine hesitancy among patients.

1.5.3. Ensuring factual COVID-19 vaccine resources and best practice information is widely available to community health influencers, health care providers, and the public.

1.6. The Contractor shall ensure course content, objectives and learning evaluation measures include but are not limited to pre-and post- evaluation instruments. The Contractor shall:

1.6.1. Ensure course content, objectives and learning evaluation measures, including but not limited to pre- and post-evaluation instruments are provided to the Department.:

1.6.2. Develop session schedules and orientation schedules for the Project ECHO for COVID-19 Vaccination panel members.

1.6.3. Create and distribute a survey to all participants, which measures the impact of each individual's learning, which includes, but is not limited to:

1.6.3.1. Knowledge related to COVID-19 vaccinations.

1.6.3.2. Increased confidence in ability to address COVID-19 vaccination hesitation in the individual's community.

1.6.3.3. Whether the training activity addressed community needs regarding COVID-19 vaccine confidence whereby if the individual's answer is 'no,' the Contractor shall specify how the training will better address community needs regarding COVID-19 vaccination confidence in future trainings.

1.7. The Contractor shall establish processes to ensure public dissemination of recorded Project ECHO for COVID-19 Vaccination courses, materials and related resources, until the content is no longer relevant.

1.8. The Contractor shall establish systems to collect and report data related to Project ECHO for COVID-19 Vaccination, including, but not limited to:

1.8.1. Dates that ECHO sessions occurred.

1.8.2. ECHO session topics.

1.8.3. Number and demographics of ECHO session participants which shall include:

1.8.3.1. Organization tye (i.e. Public Health State/Municipal/Councils/Associations, Health Care, Schools, Community Service Organizations, Businesses, Special Care (Seniors, Disabilities),or Legislative office)

1.8.3.2. Organization location

1.8.4. Individuals who presented didactics and on what topics.

1.8.5. Document agendas and other resources.

1.8.6. Evidence of follow up with participants as needed to completed evaluations.

1.9. The Contractor shall comply with applicable state and federal regulations to implement mechanisms ensuring data security and protection of personal health information is maintained.

1.10. The Contractor shall provide timely communication with project staff and participation in regular check-ins with the Department as requested.

2. Exhibits Incorporated

2.1. The Contractor shall manage all confidential data related to this Agreement in accordance with the terms of Exhibit K, DHHS Information Security Requirements.

2.2. The Contractor shall comply with all Exhibits D through J and K, which are attached hereto and incorporated by reference herein.

3. Reporting Requirements

3.1. The Contractor shall submit narrative reports, as directed by the Department, which include but are not limited to:

3.1.1. Quarterly Reports: 1-3 page narrative description of Project ECHO for COVID-19 Vaccination Hesitancy activities completed during the previous quarter, which includes, but is not limited to:

3.1.1.1. Overview of project and status update.

3.1.1.2. Listing of panel members by role, curriculum and content description.

3.1.1.3. Outreach and participant recruitment efforts.

3.1.1.4. Course curriculum and slides.

3.1.1.5. Course status with number of sessions completed.

3.1.1.6. Successes and challenges in project implementation, participant feedback, survey administration and results as indicated.

3.1.1.7. Number and types of participants enrolled in course.

3.1.1.8. Number of participants who attended each session.

3.1.1.9. Number of participants who attended all sessions.

3.1.1.10. Listing of recorded Project ECHO for COVID-19 Vaccination courses.

3.1.1.11. Materials and related resources.

3.1.1.12. Listing of recorded Project ECHO for COVID-19 Vaccination courses materials and related resources available for public dissemination.

3.1.2. Annual Report: The Contractor shall submit a brief 2-4 page annual report according to the schedule and instructions provided by the Department, unless otherwise notified at least thirty (30) days prior to any changes in the submission schedule, of the major activities and accomplishments that include, but are not limited to:

3.1.2.1. Narrative description of activities performed, successes and challenges of implementing Project ECHO for COVID-19 Vaccination.

3.1.2.2. Description of activities to promote vaccine uptake among populations disproportionality affected by COVID-19

3.1.2.3. Total number of courses with the number of sessions per course.

3.1.2.4. Number of attendees by type of course.

3.1.2.5. Percentage of survey responses for each course with a summary of survey results for each course.

4. Performance Measures

4.1. The Department will monitor Contractor performance by:

4.1. Establishing a Project ECHO for COVID-19 Vaccination Hesitancy team withinthree (3) months of the contract effective date.

4.2. Developing the Project ECHO for COVID-19 Vaccination Hesitancy curriculumwithin six (6) months of the contract effective date.

4.3. Initiating Project ECHO for COVID-19 Vaccination Hesitancy courses within nine (9) months of the contract effective date.

4.4. Optimize post-course survey completion through iterative improvement cycles and outreach processes that include contacting non-responders with up to 2 reminders.

4.5. Ensuring a minimum of 70% of Project ECHO for COVID-19 Vaccination Hesitancy survey respondents report an increase in knowledge related to COVID-19 vaccinations.

4.6. Ensuring a minimum of 70% of Project ECHO for COVID-19 Vaccination Hesitancy survey respondents participants report an increased confidence in the ability toaddress COVID-19 vaccination hesitancy.

4.7. Actively and regularly, collaborate with the Department to enhance contract management, improve results, and adjust program delivery and policy based on successful outcomes.

4.8. Where applicable, the Contractor shall collect and share data with the Department in a format specified by the Department.

5. Additional Terms

5.1. Impacts Resulting from Court Orders or Legislative Changes

5.1.1. The Contractor agrees that, to the extent future state or federal legislation or court orders may have an impact on the Services described herein, the State has the right to modify Service priorities and expenditure requirements under this Agreement so as to achieve compliance therewith.

5.2. Required Disclosures for Federal Awardee Performance and Integrity Information

5.2.1. System (FAPIIS): Consistent with 45 CFR 75.113, applicants and recipients must disclose in a timely manner, in writing to the CDC, with a copy to the HHS Office of Inspector General (OIG), all information related to violations of federal criminal law involving fraud, bribery, or gratuity violations potentially affecting the federal award. Subrecipients must disclose, in a timely manner in writing to the prime recipient (pass through entity) and the HHS OIG, all information related to violations of federal criminal law involving fraud, bribery, or gratuity violations potentially affecting the federal award. Disclosures must be sent in writing to the CDC and to the HHS OIG at the following addresses:

5.2.2. CDC, Office of Grants Services
Freda Johnson, Grants Management Specialist
Centers for Disease Control and Prevention
Branch 1
2939 Flowers Road, MS-TV-2
Atlanta, GA 30341
Email: kcr8@cdc.gov (Include "Mandatory Grant Disclosures" in subject line)
AND
U.S. Department of Health and Human Services
Office of the Inspector General
ATTN: Mandatory Grant Disclosures,
Intake Coordinator
330 Independence Avenue, SW
Cohen Building, Room 5527
Washington, DC 20201
Fax: (202)-205-0604 (Include "Mandatory Grant Disclosures" in subject line)
or Email: MandatoryGranteeDisclosures@oig.hhs.gov

5.3. Credits and Copyright Ownership

5.3.1. All documents, notices, press releases, research reports and other materials prepared during or resulting from the performance of the services of the Agreement shall include the following statement, "The preparation of this (report, document etc.) was financed under an Contract with the State of New Hampshire, Department of Health and Human Services, with funds provided in part by the State of New Hampshire and/or such other funding sources as were available or required, e.g., the United States Department of Health and Human Services."

5.3.2. All materials produced or purchased under the Agreement shall be made available to the Department for its use.

5.3.3. Prior to any publication of the materials produced hereunder, Contractor shall forward to Department a copy of the disclosure for review and comment at least thirty (30) days prior to submission for publication. Contractor shall consider all comment from the Department in good faith and remove any confidential information of the Department's identified during such review. Contractor shall acknowledge the Department's contributions in all such publications

5.3.4. The Contractor shall not reproduce any materials produced under the Agreement without prior written approval from the Department, except as allowed by Paragraph 5.3.3 above.

5.4. Records

5.4.1. The Contractor shall keep records that include, but are not limited to:

5.4.1.1. Books, records, documents and other electronic or physical data evidencing and reflecting all costs and other expenses incurred by the Contractor in the performance of the Contract, and all income received or collected by the Contractor.

5.4.1.2. All records must be maintained in accordance with accounting procedures and practices, which sufficiently and properly reflect all such costs and expenses, and which are acceptable to the Department, and to include, without limitation, all ledgers, books, records, and original evidence of costs such as purchase requisitions and orders, vouchers, requisitions for materials, inventories, valuations of in-kind contributions, labor time cards, payrolls, and other records requested or required by the Department.

5.4.2. During the term of this Agreement and the period for retention hereunder, the Department, the United States Department of Health and Human Services, and any of their designated representatives shall have access to all reports and records maintained pursuant to the Agreement for purposes of audit, examination, excerpts and

number of units provided for in the Agreement and upon payment of the price limitation hereunder, the Agreement and all the obligations of the parties hereunder (except such obligations as, by the terms of the Agreement are to be performed after the end of the term of this Agreement and/or survive the termination of the Agreement) shall terminate, provided however, that if, upon review of the Final Expenditure Report the Department shall disallow any expenses claimed by the Contractor as costs hereunder theDepartment shall retain the right, at its discretion, to deduct the amount of such expenses as are disallowed or to recover such sums from the Contract.

New Hampshire Department of Health and Human Services
Project ECHO for COVID-19 Vaccination

EXHIBIT C

Payment Terms

1. This Agreement is funded by 100%, Federal Funds from the Immunization Cooperative Agreements, as awarded on June 1, 2021, by the Centers for Disease Control, CFDA # 93.268, FAIN # NH23IP922595
2. For the purposes of this Agreement:
   - 2.1. The Department has identified the Contractor as a Subrecipient, in accordance with 2 CFR 200.331.
   - 2.2. The Department has identified this Agreement as NON-R&D, in accordance with 2 CFR §200.332.
   - 2.3. The de minimis Indirect Cost Rate of 31% applies in accordance with 2 CFR §200.414.
3. Payment shall be on a cost reimbursement basis for actual expenditures incurred in the fulfillment of this Agreement, and shall be in accordance with the approved line item, as specified in Exhibits C-1, Budget through Exhibit C-2, Budget.
4. The Contractor shall submit an invoice in a form satisfactory to the Department by the twenthy fifth (25th) working day of the following month, which identifies and requests reimbursement for authorized expenses incurred in the prior month. The Contractor shall ensure the invoice is completed, dated and returned to the Department in order to initiate payment.
5. In lieu of hard copies, all invoices may be assigned an electronic signature and emailed to DPHSContractBilling@dhhs.nh.gov , or invoices may be mailed to:

   Financial Manager
   Department of Health and Human Services
   129 Pleasant Street
   Concord, NH 03301
6. The Department shall make payment to the Contractor within thirty (30) days of receipt of each invoice, subsequent to approval of the submitted invoice and if sufficient funds are available, subject to Paragraph 4 of the General Provisions Form Number P-37 of this Agreement.
7. The final invoice shall be due to the Department no later than sixty (60) days after the contract completion date specified in Form P-37, General Provisions Block 1.7 Completion Date.
8. The Contractor must provide the services in Exhibit B, Scope of Services, in compliance with funding requirements.
9. The Contractor agrees that funding under this Agreement may be withheld, in whole or in part in the event of non-compliance with the terms and conditions of Exhibit B, Scope of Services.

10. Notwithstanding anything to the contrary herein, the Contractor agrees that funding under this agreement may be withheld, in whole or in part, in the event of non-compliance with any Federal or State law, rule or regulation applicable to the services provided, or if the said services or products have not been satisfactorily completed in accordance with the terms and conditions of this agreement.

11. Notwithstanding Paragraph 17 of the General Provisions Form P-37, changes limited to adjusting amounts within the price limitation and adjusting encumbrances between State Fiscal Years and budget class lines through the Budget Office may be made by written agreement of both parties, without obtaining approval of the Governor and Executive Council, if needed and justified.

12. Audits

    12.1. The Contractor must email an annual audit to melissa.s.morin@dhhs.nh.gov if **any** of the following conditions exist:

        12.1.1. Condition A - The Contractor expended $750,000 or more in federal funds received as a subrecipient pursuant to 2 CFR Part 200, during the most recently completed fiscal year.

        12.1.2. Condition B - The Contractor is subject to audit pursuant to the requirements of NH RSA 7:28, III-b, pertaining to charitable organizations receiving support of $1,000,000 or more.

        12.1.3. Condition C - The Contractor is a public company and required by Security and Exchange Commission (SEC) regulations to submit an annual financial audit.

    12.2. If Condition A exists, the Contractor shall submit an annual single audit performed by an independent Certified Public Accountant (CPA) to the Department within 120 days after the close of the Contractor's fiscal year, conducted in accordance with the requirements of 2 CFR Part 200, Subpart F of the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal awards.

    12.3. If Condition B or Condition C exists, the Contractor shall submit an annual financial audit performed by an independent CPA within 120 days after the close of the Contractor's fiscal year.

    12.4. In addition to, and not in any way in limitation of obligations of the Contract, it is understood and agreed by the Contractor that the Contractor shall be held liable for any state or federal audit exceptions and shall return to the Department all payments made under the Contract to which exception has been taken, or which have been disallowed because of such an exception.

Exhibit C-1 Budget

New Hampshire Department of Health and Human Services

Contractor Name: Mary Hitchcock Memorial Hospital

Budget Request for: Project ECHO for COVID-19 Vaccination

Budget Period: FY22 7/1/2021-06/30/2022

Line Item	Total Program Cost			Contractor Share / Match			Funded by DHHS contract share		
	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total
1. Total Salary/Wages	$ 15,030.00	$ 4,659.00	$ 19,689.00	$ -	$ -	$ -	$ 15,030.00	$ 4,659.00	$ 19,689.00
2. Employee Benefits	$ 3,280.00	$ 1,017.00	$ 4,297.00	$ -	$ -	$ -	$ 3,280.00	$ 1,017.00	$ 4,297.00
3. Consultants	$ 41,477.00	$ 12,858.00	$ 54,335.00	$ -	$ -	$ -	$ 41,477.00	$ 12,858.00	$ 54,335.00
4. Equipment:	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Rental	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Repair and Maintenance	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Purchase/Depreciation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
5. Supplies	$ 1,082.00	$ 335.00	$ 1,417.00	$ -	$ -	$ -	$ 1,082.00	$ 335.00	$ 1,417.00
Educational	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Lab	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Pharmacy	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Medical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Office	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
6. Travel	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
7. Occupancy	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
8. Current Expenses	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Telephone	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Postage	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Subscriptions	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Audit and Legal	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Insurance	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Board Expenses	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
9. Software	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
10. Marketing/Communications	$ 200.00	$ 62.00	$ 262.00	$ -	$ -	$ -	$ 200.00	$ 62.00	$ 262.00
11. Staff Education and Training	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
12. Subcontracts/Agreements	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
13. Other (specific details mandatory):	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
TOTAL	$ 61,069.00	$ 18,931.00	$ 80,000.00	$ -	$ -	$ -	$ 61,069.00	$ 18,931.00	$ 80,000.00
Indirect As A Percent of Direct		31.0%							

Contractor Initials BM

Date 9/24/2021

Exhibit C-2 Budget

New Hampshire Department of Health and Human Services

Contractor Name: Mary Hitchcock Memorial Hospital

Budget Request for: Project ECHO for COVID-19 Vaccination

Budget Period: FY23 7/1/2022-06/30/2023

Line Item	Total Program Cost			Contractor Share / Match			Funded by DHHS contract share		
	Direct	Indirect	Total	Direct	Indirect	Total	Direct	Indirect	Total
1. Total Salary/Wages	$ 3,105.00	$ 993.00	$ 4,098.00	$ -	$ -	$ -	$ 3,105.00	$ 993.00	$ 4,098.00
2. Employee Benefits	$ 783.00	$ 243.00	$ 1,026.00	$ -	$ -	$ -	$ 783.00	$ 243.00	$ 1,026.00
3. Consultants	$ 11,027.00	$ 3,418.00	$ 14,445.00	$ -	$ -	$ -	$ 11,027.00	$ 3,418.00	$ 14,445.00
4. Equipment:	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Rental	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Repair and Maintenance	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Purchase/Depreciation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
5. Supplies:	$ 150.00	$ 47.00	$ 197.00	$ -	$ -	$ -	$ 150.00	$ 47.00	$ 197.00
Educational	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Lab	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Pharmacy	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Medical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Office	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
6. Travel	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
7. Occupancy	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
8. Current Expenses	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Telephone	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Postage	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Subscriptions	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Audit and Legal	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Insurance	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Board Expenses	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
9. Software	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
10. Marketing/Communications	$ 200.00	$ 62.00	$ 262.00	$ -	$ -	$ -	$ 200.00	$ 62.00	$ 262.00
11. Staff Education and Training	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
12. Subcontracts/Agreements	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
13. Other (specific details mandatory):	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
TOTAL	$ 15,266.00	$ 4,734.00	$ 20,000.00	$ -	$ -	$ -	$ 15,266.00	$ 4,734.00	$ 20,000.00
Indirect As A Percent of Direct		31.0%							

Contractor Initials BM

Date 9/24/2021

CERTIFICATION REGARDING DRUG-FREE WORKPLACE REQUIREMENTS

The Contractor identified in Section 1.3 of the General Provisions agrees to comply with the provisions of Sections 5151-5160 of the Drug-Free Workplace Act of 1988 (Pub. L. 100-690, Title V, Subtitle D; 41 U.S.C. 701 et seq.), and further agrees to have the Contractor's representative, as identified in Sections 1.11 and 1.12 of the General Provisions execute the following Certification:

ALTERNATIVE I - FOR GRANTEES OTHER THAN INDIVIDUALS

US DEPARTMENT OF HEALTH AND HUMAN SERVICES - CONTRACTORS
US DEPARTMENT OF EDUCATION - CONTRACTORS
US DEPARTMENT OF AGRICULTURE - CONTRACTORS

This certification is required by the regulations implementing Sections 5151-5160 of the Drug-Free Workplace Act of 1988 (Pub. L. 100-690, Title V, Subtitle D; 41 U.S.C. 701 et seq.). The January 31, 1989 regulations were amended and published as Part II of the May 25, 1990 Federal Register (pages 21681-21691), and require certification by grantees (and by inference, sub-grantees and sub-contractors), prior to award, that they will maintain a drug-free workplace. Section 3017.630(c) of the regulation provides that a grantee (and by inference, sub-grantees and sub-contractors) that is a State may elect to make one certification to the Department in each federal fiscal year in lieu of certificates for each grant during the federal fiscal year covered by the certification. The certificate set out below is a material representation of fact upon which reliance is placed when the agency awards the grant. False certification or violation of the certification shall be grounds for suspension of payments, suspension or termination of grants, or government wide suspension or debarment. Contractors using this form should send it to:

Commissioner
NH Department of Health and Human Services
129 Pleasant Street,
Concord, NH 03301-6505

1. The grantee certifies that it will or will continue to provide a drug-free workplace by:
   - 1.1. Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the grantee's workplace and specifying the actions that will be taken against employees for violation of such prohibition;
   - 1.2. Establishing an ongoing drug-free awareness program to inform employees about
     - 1.2.1. The dangers of drug abuse in the workplace;
     - 1.2.2. The grantee's policy of maintaining a drug-free workplace;
     - 1.2.3. Any available drug counseling, rehabilitation, and employee assistance programs; and
     - 1.2.4. The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;
   - 1.3. Making it a requirement that each employee to be engaged in the performance of the grant be given a copy of the statement required by subparagaph 1.1.
   - 1.4. Notifying the employee in the statement required by subparagraph 1.1 that, as a condition of employment under the grant, the employee will
     - 1.4.1. Abide by the terms of the statement; and
     - 1.4.2. Notify the employer in writing of his or her conviction for a violation of a criminal drug statute occurring in the workplace no later than five calendar days after such conviction;
   - 1.5. Notifying the agency in writing, within ten calendar days after receiving notice under subparagraph 1.4.2 from an employee or otherwise receiving actual notice of such conviction. Employers of convicted employees must provide notice, including position title, to every grant officer on whose grant activity the convicted employee was working, unless the Federal agency

has designated a central point for the receipt of such notices. Notice shall include the identification number(s) of each affected grant;

1.6. Taking one of the following actions, within 30 calendar days of receiving notice under subparagraph 1.4.2, with respect to any employee who is so convicted
   1.6.1. Taking appropriate personnel action against such an employee, up to and including termination, consistent with the requirements of the Rehabilitation Act of 1973, as amended; or
   1.6.2. Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency;

1.7. Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs 1.1, 1.2, 1.3, 1.4, 1.5, and 1.6.

2. The grantee may insert in the space provided below the site(s) for the performance of work done in connection with the specific grant.

Place of Performance (street address, city, county, state, zip code) (list each location)
One Medical Center Drive, Lebanon, NH 03756

Check ☐ if there are workplaces on file that are not identified here.

Contractor Name: Dartmouth Hitchcock

9/24/2021
Date

Barbara Moskalenko
Name: Barbara Moskalenko
Title: Director Research Operations

New Hampshire Department of Health and Human Services
Exhibit E

CERTIFICATION REGARDING LOBBYING

The Vendor identified in Section 1.3 of the General Provisions agrees to comply with the provisions of Section 319 of Public Law 101-121, Government wide Guidance for New Restrictions on Lobbying, and 31 U.S.C. 1352, and further agrees to have the Contractor's representative, as identified in Sections 1.11 and 1.12 of the General Provisions execute the following Certification:

US DEPARTMENT OF HEALTH AND HUMAN SERVICES - CONTRACTORS
US DEPARTMENT OF EDUCATION - CONTRACTORS
US DEPARTMENT OF AGRICULTURE - CONTRACTORS

Programs (indicate applicable program covered):
*Temporary Assistance to Needy Families under Title IV-A
*Child Support Enforcement Program under Title IV-D
*Social Services Block Grant Program under Title XX
*Medicaid Program under Title XIX
*Community Services Block Grant under Title VI
*Child Care Development Block Grant under Title IV

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement (and by specific mention sub-grantee or sub-contractor).

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement (and by specific mention sub-grantee or sub-contractor), the undersigned shall complete and submit Standard Form LLL, (Disclosure Form to Report Lobbying, in accordance with its instructions, attached and identified as Standard Exhibit E-I.)

3. The undersigned shall require that the language of this certification be included in the award document for sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Vendor Name: Dartmouth Hitchcock

9/24/2021
Date

Barbara Moskalenko
Name: Barbara Moskalenko
Title: Director Research Operations

CERTIFICATION REGARDING DEBARMENT, SUSPENSION AND OTHER RESPONSIBILITY MATTERS

The Contractor identified in Section 1.3 of the General Provisions agrees to comply with the provisions of Executive Office of the President, Executive Order 12549 and 45 CFR Part 76 regarding Debarment, Suspension, and Other Responsibility Matters, and further agrees to have the Contractor's representative, as identified in Sections 1.11 and 1.12 of the General Provisions execute the following Certification:

INSTRUCTIONS FOR CERTIFICATION

1. By signing and submitting this proposal (contract), the prospective primary participant is providing the certification set out below.

2. The inability of a person to provide the certification required below will not necessarily result in denial of participation in this covered transaction. If necessary, the prospective participant shall submit an explanation of why it cannot provide the certification. The certification or explanation will be considered in connection with the NH Department of Health and Human Services' (DHHS) determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such person from participation in this transaction.

3. The certification in this clause is a material representation of fact upon which reliance was placed when DHHS determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, DHHS may terminate this transaction for cause or default.

4. The prospective primary participant shall provide immediate written notice to the DHHS agency to whom this proposal (contract) is submitted if at any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

5. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549: 45 CFR Part 76. See https://www.govinfo.gov/app/details/CFR-2004-title45-vol1/CFR-2004-title45-vol1-part76/context.

6. The prospective primary participant agrees by submitting this proposal (contract) that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by DHHS.

7. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions," provided by DHHS, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

8. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or involuntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List (of excluded parties).

9. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and

information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

10. Except for transactions authorized under paragraph 6 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal government, DHHS may terminate this transaction for cause or default.

PRIMARY COVERED TRANSACTIONS

11. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:
    - 11.1. are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
    - 11.2. have not within a three-year period preceding this proposal (contract) been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or a contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
    - 11.3. are not presently indicted for otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (I)(b) of this certification; and
    - 11.4. have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

12. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal (contract).

LOWER TIER COVERED TRANSACTIONS

13. By signing and submitting this lower tier proposal (contract), the prospective lower tier participant, as defined in 45 CFR Part 76, certifies to the best of its knowledge and belief that it and its principals:
    - 13.1. are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.
    - 13.2. where the prospective lower tier participant is unable to certify to any of the above, such prospective participant shall attach an explanation to this proposal (contract).

14. The prospective lower tier participant further agrees by submitting this proposal (contract) that it will include this clause entitled "Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion - Lower Tier Covered Transactions," without modification in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

Contractor Name: Dartmouth Hitchcock

9/24/2021

Date

Barbara Moskalenko

Name: Barbara Moskalenko
Title: Director Research Operations

CERTIFICATION OF COMPLIANCE WITH REQUIREMENTS PERTAINING TO FEDERAL NONDISCRIMINATION, EQUAL TREATMENT OF FAITH-BASED ORGANIZATIONS AND WHISTLEBLOWER PROTECTIONS

The Contractor identified in Section 1.3 of the General Provisions agrees by signature of the Contractor's representative as identified in Sections 1.11 and 1.12 of the General Provisions, to execute the following certification:

Contractor will comply, and will require any subgrantees or subcontractors to comply, with any applicable federal nondiscrimination requirements, which may include:

- the Omnibus Crime Control and Safe Streets Act of 1968 (42 U.S.C. Section 3789d) which prohibits recipients of federal funding under this statute from discriminating, either in employment practices or in the delivery of services or benefits, on the basis of race, color, religion, national origin, and sex. The Act requires certain recipients to produce an Equal Employment Opportunity Plan;

- the Juvenile Justice Delinquency Prevention Act of 2002 (42 U.S.C. Section 5672(b)) which adopts by reference, the civil rights obligations of the Safe Streets Act. Recipients of federal funding under this statute are prohibited from discriminating, either in employment practices or in the delivery of services or benefits, on the basis of race, color, religion, national origin, and sex. The Act includes Equal Employment Opportunity Plan requirements;

- the Civil Rights Act of 1964 (42 U.S.C. Section 2000d, which prohibits recipients of federal financial assistance from discriminating on the basis of race, color, or national origin in any program or activity);

- the Rehabilitation Act of 1973 (29 U.S.C. Section 794), which prohibits recipients of Federal financial assistance from discriminating on the basis of disability, in regard to employment and the delivery of services or benefits, in any program or activity;

- the Americans with Disabilities Act of 1990 (42 U.S.C. Sections 12131-34), which prohibits discrimination and ensures equal opportunity for persons with disabilities in employment, State and local government services, public accommodations, commercial facilities, and transportation;

- the Education Amendments of 1972 (20 U.S.C. Sections 1681, 1683, 1685-86), which prohibits discrimination on the basis of sex in federally assisted education programs;

- the Age Discrimination Act of 1975 (42 U.S.C. Sections 6106-07), which prohibits discrimination on the basis of age in programs or activities receiving Federal financial assistance. It does not include employment discrimination;

- 28 C.F.R. pt. 31 (U.S. Department of Justice Regulations – OJJDP Grant Programs); 28 C.F.R. pt. 42 (U.S. Department of Justice Regulations – Nondiscrimination; Equal Employment Opportunity; Policies and Procedures); Executive Order No. 13279 (equal protection of the laws for faith-based and community organizations); Executive Order No. 13559, which provide fundamental principles and policy-making criteria for partnerships with faith-based and neighborhood organizations;

- 28 C.F.R. pt. 38 (U.S. Department of Justice Regulations – Equal Treatment for Faith-Based Organizations); and Whistleblower protections 41 U.S.C. §4712 and The National Defense Authorization Act (NDAA) for Fiscal Year 2013 (Pub. L. 112-239, enacted January 2, 2013) the Pilot Program for Enhancement of Contract Employee Whistleblower Protections, which protects employees against reprisal for certain whistle blowing activities in connection with federal grants and contracts.

The certificate set out below is a material representation of fact upon which reliance is placed when the agency awards the grant. False certification or violation of the certification shall be grounds for suspension of payments, suspension or termination of grants, or government wide suspension or debarment.

New Hampshire Department of Health and Human Services
Exhibit G

In the event a Federal or State court or Federal or State administrative agency makes a finding of discrimination after a due process hearing on the grounds of race, color, religion, national origin, or sex against a recipient of funds, the recipient will forward a copy of the finding to the Office for Civil Rights, to the applicable contracting agency or division within the Department of Health and Human Services, and to the Department of Health and Human Services Office of the Ombudsman.

The Contractor identified in Section 1.3 of the General Provisions agrees by signature of the Contractor's representative as identified in Sections 1.11 and 1.12 of the General Provisions, to execute the following certification:

1. By signing and submitting this proposal (contract) the Contractor agrees to comply with the provisions indicated above.

Contractor Name: Dartmouth Hitchcock

9/24/2021
Date

Barbara Moskalenko
Name: Barbara Moskalenko
Title: Director Research Operations

CERTIFICATION REGARDING ENVIRONMENTAL TOBACCO SMOKE

Public Law 103-227, Part C - Environmental Tobacco Smoke, also known as the Pro-Children Act of 1994 (Act), requires that smoking not be permitted in any portion of any indoor facility owned or leased or contracted for by an entity and used routinely or regularly for the provision of health, day care, education, or library services to children under the age of 18, if the services are funded by Federal programs either directly or through State or local governments, by Federal grant, contract, loan, or loan guarantee. The law does not apply to children's services provided in private residences, facilities funded solely by Medicare or Medicaid funds, and portions of facilities used for inpatient drug or alcohol treatment. Failure to comply with the provisions of the law may result in the imposition of a civil monetary penalty of up to $1000 per day and/or the imposition of an administrative compliance order on the responsible entity.

The Contractor identified in Section 1.3 of the General Provisions agrees, by signature of the Contractor's representative as identified in Section 1.11 and 1.12 of the General Provisions, to execute the following certification:

1. By signing and submitting this contract, the Contractor agrees to make reasonable efforts to comply with all applicable provisions of Public Law 103-227, Part C, known as the Pro-Children Act of 1994.

Contractor Name: Dartmouth Hitchcock

9/24/2021
Date

Barbara Moskalenko
Name: Barbara Moskalenko
Title: Director Research Operations

HEALTH INSURANCE PORTABILITY AND ACCOUNTABILITY ACT (HIPAA) BUSINESS ASSOCIATE AGREEMENT

Exhibit I is not applicable to this Agreement.

Remainder of page intentionally left blank.

New Hampshire Department of Health and Human Services
Exhibit J

CERTIFICATION REGARDING THE FEDERAL FUNDING ACCOUNTABILITY AND TRANSPARENCY ACT (FFATA) COMPLIANCE

The Federal Funding Accountability and Transparency Act (FFATA) requires prime awardees of individual Federal grants equal to or greater than $25,000 and awarded on or after October 1, 2010, to report on data related to executive compensation and associated first-tier sub-grants of $25,000 or more. If the initial award is below $25,000 but subsequent grant modifications result in a total award equal to or over $25,000, the award is subject to the FFATA reporting requirements, as of the date of the award.
In accordance with 2 CFR Part 170 (Reporting Subaward and Executive Compensation Information), the Department of Health and Human Services (DHHS) must report the following information for any subaward or contract award subject to the FFATA reporting requirements:

1. Name of entity
2. Amount of award
3. Funding agency
4. NAICS code for contracts / CFDA program number for grants
5. Program source
6. Award title descriptive of the purpose of the funding action
7. Location of the entity
8. Principle place of performance
9. Unique identifier of the entity (DUNS #)
10. Total compensation and names of the top five executives if:
    - 10.1. More than 80% of annual gross revenues are from the Federal government, and those revenues are greater than $25M annually and
    - 10.2. Compensation information is not already available through reporting to the SEC.

Prime grant recipients must submit FFATA required data by the end of the month, plus 30 days, in which the award or award amendment is made.
The Contractor identified in Section 1.3 of the General Provisions agrees to comply with the provisions of The Federal Funding Accountability and Transparency Act, Public Law 109-282 and Public Law 110-252, and 2 CFR Part 170 (Reporting Subaward and Executive Compensation Information), and further agrees to have the Contractor's representative, as identified in Sections 1.11 and 1.12 of the General Provisions execute the following Certification:
The below named Contractor agrees to provide needed information as outlined above to the NH Department of Health and Human Services and to comply with all applicable provisions of the Federal Financial Accountability and Transparency Act.

Contractor Name: Dartmouth Hitchcock

9/24/2021
Date

Barbara Moskalenko
Name: Barbara Moskalenko
Title: Director Research Operations

FORM A

As the Contractor identified in Section 1.3 of the General Provisions, I certify that the responses to the below listed questions are true and accurate.

1. The DUNS number for your entity is: 06-991-0297

2. In your business or organization's preceding completed fiscal year, did your business or organization receive (1) 80 percent or more of your annual gross revenue in U.S. federal contracts, subcontracts, loans, grants, sub-grants, and/or cooperative agreements; and (2) $25,000,000 or more in annual gross revenues from U.S. federal contracts, subcontracts, loans, grants, subgrants, and/or cooperative agreements?

   X NO _____ YES

   If the answer to #2 above is NO, stop here

   If the answer to #2 above is YES, please answer the following:

3. Does the public have access to information about the compensation of the executives in your business or organization through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C.78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986?

   _____ NO X YES

   If the answer to #3 above is YES, stop here

   If the answer to #3 above is NO, please answer the following:

4. The names and compensation of the five most highly compensated officers in your business or organization are as follows:

   Name: _____ Amount: _____

   Name: _____ Amount: _____

   Name: _____ Amount: _____

   Name: _____ Amount: _____

   Name: _____ Amount: _____

New Hampshire Department of Health and Human Services
DHHS Security Requirements
Exhibit K

A. Definitions

The following terms may be reflected and have the described meaning in this document:

1. "Breach" means the loss of control, compromise, unauthorized disclosure, unauthorized acquisition, unauthorized access, or any similar term referring to situations where persons other than authorized users and for an other than authorized purpose have access or potential access to personally identifiable information, whether physical or electronic. With regard to Protected Health Information, "Breach" shall have the same meaning as the term "Breach" in section 164.402 of Title 45, Code of Federal Regulations.

2. "Computer Security Incident" shall have the same meaning "Computer Security Incident" in section two (2) of NIST Publication 800-61, Computer Security Incident Handling Guide, National Institute of Standards and Technology, U.S. Department of Commerce.

3. "Confidential Information," "Confidential Data," or "Data" (as defined in Exhibit K), means all confidential information disclosed by one party to the other such as all medical, health, financial, public assistance benefits and personal information including without limitation, Substance Abuse Treatment Records, Case Records, Protected Health Information and Personally Identifiable Information.

   Confidential Information also includes any and all information owned or managed by the State of NH - created, received from or on behalf of the Department of Health and Human Services (DHHS) or accessed in the course of performing contracted services - of which collection, disclosure, protection, and disposition is governed by state or federal law or regulation. This information includes, but is not limited to Protected Health Information (PHI), Personal Information (PI), Personal Financial Information (PFI), Federal Tax Information (FTI), Social Security Numbers (SSN), Payment Card Industry (PCI), and or other sensitive and confidential information.

4. "End User" means any person or entity (e.g., contractor's employee, business associate, subcontractor, other downstream user, etc.) that receives DHHS data or derivative data in accordance with the terms of this Contract.

5. "HIPAA" means the Health Insurance Portability and Accountability Act of 1996 and the regulations promulgated thereunder.

6. "Incident" means an act that potentially violates a security policy, which includes successful attempts) to gain unauthorized access to a system or its data, unwanted disruption or denial of service, the unauthorized use of a system for the processing or

storage of data; and changes to system hardware, firmware, or software characteristics without the owner's knowledge, instruction, or consent. Incidents include the loss of data through theft or device misplacement, loss or misplacement of hardcopy documents, and misrouting of physical or electronic documents or mail.

7. "Open Wireless Network" means any network or segment of a network that is not designated by the State of New Hampshire's Department of Information Technology or delegate as a protected network (designed, tested, and approved, by means of the State, to transmit) will be considered an open network and not adequately secure for the transmission of unencrypted PI, PFI, PHI or confidential DHHS data.

8. "Personal Information" (or "PI") means information which can be used to distinguish or trace an individual's identity, such as their name, social security number, personal information as defined in New Hampshire RSA 359-C:19, biometric records, etc., alone, or when combined with other personal or identifying information which is linked or linkable to a specific individual, such as date and place of birth, mother's maiden name, etc.

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

10. "Protected Health Information" (or "PHI") has the same meaning as provided in the definition of "Protected Health Information" in the HIPAA Privacy Rule at 45 C.F.R. § 160.103.

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

12. "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.

I. RESPONSIBILITIES OF DHHS AND THE CONTRACTOR

A. Business Use and Disclosure of Confidential Information.

1. The Contractor must not use, disclose, maintain or transmit Confidential Information

except as required or permitted under this Contract or required by law. Further, Contractor, including but not limited to all its directors, officers, employees and agents, must not use, disclose, maintain or transmit PHI in any manner that would constitute a violation of the Privacy and Security Rule.

2. The Contractor must not disclose any Confidential Information in response to a request for disclosure on the basis that it is required by law, in response to a subpoena, etc., without first notifying DHHS so that DHHS has an opportunity to consent or object to the disclosure.
3. The Contractor agrees that DHHS Data or derivative there from disclosed to an End User must only be used pursuant to the terms of this Contract.

II. METHODS OF SECURE TRANSMISSION OF DATA

1. Application Encryption. If Contractor is transmitting DHHS Data containing Confidential Data between applications, the Contractor attests the applications have been evaluated by an expert knowledgeable in cyber security and that said application's encryption capabilities ensure secure transmission via the internet.
2. Computer Disks and Portable Storage Devices. Contractor may not use computer disks or portable storage devices, such as a thumb drive, as a method of transmitting DHHS Data.
3. Encrypted Email. Contractor may only employ email to transmit Confidential Data if email is encrypted and being sent to and being received by email addresses of persons authorized to receive such information.
4. Encrypted Web Site. If Contractor is employing the Web to transmit Confidential Data, the secure socket layers (SSL) must be used and the web site must be secure. SSL encrypts data transmitted via a Web site.
5. File Hosting Services, also known as File Sharing Sites. Contractor may not use file hosting services, such as Dropbox or Google Cloud Storage, to transmit Confidential Data.
6. Ground Mail Service. Contractor may only transmit Confidential Data via *certified* ground mail within the continental U.S. and when sent to a named individual.
7. Laptops and PDA. If Contractor is employing portable devices to transmit Confidential Data said devices must be encrypted and password-protected.
8. Open Wireless Networks. Contractor may not transmit Confidential Data via an open wireless network. End User must employ a virtual private network (VPN) when remotely transmitting via an open wireless network.
9. Remote User Communication. If Contractor is employing remote communication to

access or transmit Confidential Data, a secure method of transmission or remote access, which complies with the terms and conditions of Exhibit K, must be used.

10. SSH File Transfer Protocol (SFTP), also known as Secure File Transfer Protocol. If Contractor is employing an SFTP to transmit Confidential Data, End User will structure the Folder and access privileges to prevent inappropriate disclosure of information. SFTP folders and sub-folders used for transmitting Confidential Data will be coded for 24-hour auto-deletion cycle (i.e. Confidential Data will be deleted every 24 hours).
11. Wireless Devices. If Contractor is transmitting Confidential Data via wireless devices, all data must be encrypted to prevent inappropriate disclosure of information.

III. RETENTION AND DISPOSITION OF IDENTIFIABLE RECORDS

The Contractor will only retain DHHS Data and any derivative of the data for the duration of this Contract. After such time, the Contractor will have thirty (30) days to destroy the data and any derivative in whatever form it may exist, unless, otherwise required by law or, if it is infeasible to return or destroy DHHS Data, protections are extended to such information, in accordance with the termination provisions in this Section. To this end, the parties must:

A. Retention

1. The Contractor agrees it will not store, transfer or process data collected in connection with the services rendered under this Contract outside of the United States. This physical location requirement shall also apply in the implementation of cloud computing, cloud service or cloud storage capabilities, and includes backup data and Disaster Recovery locations.
2. The Contractor agrees to ensure proper security monitoring capabilities are in place to detect potential security events that can impact State of NH systems and/or Department confidential information for contractor provided systems accessed or utilized for purposes of carrying out this contract.
3. The Contractor agrees to provide security awareness and education for its End Users in support of protecting DHHS Confidential information.
4. The Contractor agrees to retain all electronic and hard copies of Confidential Data in a secure location and identified in section IV. A.2
5. The Contractor agrees Confidential Data stored in a Cloud must be in a FedRAMP/HITECH compliant solution and comply with all applicable statutes and regulations regarding the privacy and security. All servers and devices must have currently-supported and hardened operating systems, current, updated, and

maintained anti-malware (e.g. anti-viral, anti-hacker, anti-spam, anti-spyware) utilities. The environment, as a whole, must have aggressive intrusion-detection and firewall protection.

6. The Contractor agrees to and ensures its complete cooperation with the State's Chief Information Officer in the detection of any security vulnerability of the hosting infrastructure.

B. Disposition

If the Contractor maintains any Confidential Information on its systems (or its sub-contractor systems) and it has not done so previously, the Contractor will implement policies and procedures to ensure that any storage media on which such data maybe recorded will be rendered unreadable and that the data will be un-recoverable when the storage media is disposed of. Upon request, the Contractor will provide the Department with copies of these policies and with written documentation demonstrating compliance with the policies. The written documentation will include all details necessary to demonstrate data contained in the storage media has been rendered unreadable and un-recoverable. Where applicable, regulatory and professional standards for retention requirements may be jointly evaluated by the State and Contractor prior to destruction.

1. Unless otherwise specified, within thirty (30) days of the termination of this Contract, Contractor agrees to destroy all hard copies of Confidential Data using a secure method such as shredding.
2. Unless otherwise specified, within thirty (30) days of the termination of this Contract, Contractor agrees to completely destroy all electronic Confidential Data by means of data erasure, also known as secure data wiping.

IV. PROCEDURES FOR SECURITY

A. Contractor agrees to safeguard the DHHS Data received under this Contract, and any derivative data or files, as follows:

1. The Contractor will maintain proper security controls to protect Department confidential information collected, processed, managed, and/or stored in the delivery of contracted services.
2. The Contractor will maintain policies and procedures to protect Department confidential information throughout the information lifecycle, where applicable, (from creation, transformation, use, storage and secure destruction) regardless of the media

used to store the data (i.e., tape, disk, paper, etc.).

3. The Contractor will maintain appropriate authentication and access controls to contractor systems that collect, transmit, or store Department confidential information where applicable.

4. If the Contractor will be sub-contracting any core functions of the engagement supporting the services for State of New Hampshire, the Contractor will ensure End-User will maintain an internal process or processes that defines specific security expectations, and monitoring compliance to security requirements that at a minimum match those for the Contractor, including breach notification requirements.

5. The Contractor will work with the Department to sign and comply with all applicable State of New Hampshire and Department system access and authorization policies and procedures, systems access forms, and computer use agreements as part of obtaining and maintaining access to any Department system(s). Agreements will be completed and signed by the Contractor and any applicable sub-contractors prior to system access being authorized.

6. If the Department determines the Contractor is a Business Associate pursuant to 45 CFR 160.103, the Contractor will execute a HIPAA Business Associate Agreement (BAA) with the Department and is responsible for maintaining compliance with the agreement.

7. The Contractor will not store any State of New Hampshire or Department data offshore or outside the boundaries of the United States unless prior express written consent is obtained from the Information Security Office leadership member within the Department.

8. Data Security Breach Liability. In the event of any computer security incident, incident, or breach Contractor shall make efforts to investigate the causes of the breach, promptly take measures to prevent future breach and minimize any damage or loss resulting from the breach. The State shall recover from the Contractor all costs of response and recovery from the breach, including but not limited to: credit monitoring services, mailing costs and costs associated with website and telephone call center services necessary due to the breach.

9. Contractor must, comply with all applicable statutes and regulations regarding the privacy and security of Confidential Information, and must in all other respects maintain the privacy and security of PI and PHI at a level and scope that is not less than the level and scope of, HIPAA Privacy and Security Rules (45 C.F.R. Parts 160 and 164) and 42 C.F.R. Part 2 that govern protections for individually identifiable

health information and as applicable under State law.

10. Contractor agrees to establish and maintain appropriate administrative, technical, and physical safeguards to protect the confidentiality of the Confidential Data and to prevent unauthorized use or access to it. The safeguards must provide a level and scope of security that is not less than the level and scope of security requirements established by the State of New Hampshire, Department of Information Technology. Refer to Vendor Resources/Procurement at https://www.nh.gov/doit/vendor/index.htm for the Department of Information Technology policies, guidelines, standards, and procurement information relating to vendors.

11. Contractor agrees to maintain a documented breach notification and incident response process. The Contractor must notify the DHHS Security Office and the Program Contact via the email addresses provided in Section VI of this Exhibit, immediately upon the Contractor determining that a breach or security incident has occurred and that DHHS confidential Information/data may have been exposed or compromised. This includes a confidential information breach, computer security incident, or suspected breach which affects or includes any State of New Hampshire systems that connect to the State of New Hampshire network.

12. Contractor must restrict access to the Confidential Data obtained under this Contract to only those authorized End Users who need such DHHS Data to perform their official duties in connection with purposes identified in this Contract.

13. The Contractor is responsible for End User oversight and compliance with the terms and conditions of the contract and Exhibit K.

DHHS reserves the right to conduct onsite inspections to monitor compliance with this Contract, including the privacy and security requirements provided in herein, HIPAA, and other applicable laws and Federal regulations until such time the Confidential Data is disposed of in accordance with this Contract.

V. LOSS REPORTING

The Contractor must immediately notify the State's Privacy Officer, Information Security Office and Program Manager of any Security Incidents and Breaches as specified in Section IV, paragraph 11 above.

The Contractor must further handle and report Incidents and Breaches involving PHI in accordance with DHHS's documented Incident Handling and Breach Notification procedures and in accordance with– the HIPAA, Privacy and Security Rules. In addition

to, and notwithstanding, Contractor's compliance with all applicable obligations and procedures, Contractor's procedures must also address how the Contractor will:

1. Identify Incidents;
2. Determine if personally identifiable information is involved in Incidents;
3. Report suspected or confirmed Incidents as required in this Exhibit or P-37;
4. Identify and convene a core response group to determine the risk level of Incidents and determine risk-based responses to Incidents; and
5. Determine whether Breach notification is required, and, if so, identify appropriate Breach notification methods, timing, source, and contents from among different options, and bear costs associated with the Breach notice as well as any mitigation measures.

Incidents and/or Breaches that implicate PI must be addressed and reported, as applicable, in accordance with NH RSA 359-C:20.

VI. PERSONS TO CONTACT

A. DHHS contact for Data Management or Data Exchange issues:
DHHSInformationSecurityOffice@dhhs.nh.gov

B. DHHS contacts for Privacy issues:
DHHSPrivacyOfficer@dhhs.nh.gov

C. DHHS contact for Information Security issues:
DHHSInformationSecurityOffice@dhhs.nh.gov

D. DHHS contact for Breach notifications:
DHHSInformationSecurityOffice@dhhs.nh.gov
DHHSPrivacyOfficer@dhhs.nh.gov

E. DHHS Program Area Contact:
Christine.Bean@dhhs.nh.gov

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 DARTMOUTH-HITCHCOCK CLINIC is a New Hampshire Nonprofit Corporation registered to transact business in New Hampshire on March 01, 1983. I further certify that all fees and documents required by the Secretary of State's office have been received and is in good standing as far as this office is concerned.

Business ID: **69168**

Certificate Number: **0005357409**

IN TESTIMONY WHEREOF,

I hereto set my hand and cause to be affixed the Seal of the State of New Hampshire, this 26th day of April A.D. 2021.

William M. Gardner

Secretary of State

Dartmouth-Hitchcock

Dartmouth-Hitchcock
Dartmouth-Hitchcock Medical Center
1 Medical Center Drive
Lebanon, NH 03756
Dartmouth-Hitchcock.org

CERTIFICATE OF VOTE/AUTHORITY

I, Edward H. Stansfield, III, of Dartmouth-Hitchcock Clinic and Mary Hitchcock Memorial Hospital, do hereby certify that:

1. I am the duly elected Chair of the Board of Trustees of Dartmouth-Hitchcock Clinic and Mary Hitchcock Memorial Hospital;
2. The following is a true and accurate excerpt from the December 7th, 2012 Bylaws of Dartmouth-Hitchcock Clinic and Mary Hitchcock Memorial Hospital:

   ARTICLE I – Section A. Fiduciary Duty. Stewardship over Corporate Assets

   "In exercising this [fiduciary] duty, the Board may, consistent with the Corporation's Articles of Agreement and these Bylaws, delegate authority to the Board of Governors, Board Committees and various officers the right to give input with respect to issues and strategies, incur indebtedness, make expenditures, enter into contracts and agreements and take such other binding actions on behalf of the Corporation as may be necessary or desirable."
3. Article I – Section A, as referenced above, provides authority for the chief officers, including the Chief Executive Officer, the Chief Clinical Officer, and other officers, of Dartmouth-Hitchcock Clinic and Mary Hitchcock Memorial Hospital to sign and deliver, either individually or collectively, on behalf of Dartmouth-Hitchcock Clinic and Mary Hitchcock Memorial Hospital.
4. Edward J. Merrens, MD is the Chief Clinical Officer of Dartmouth-Hitchcock Clinic and Mary Hitchcock Memorial Hospital and therefore has the authority to enter into contracts and agreements on behalf of Dartmouth-Hitchcock Clinic and Mary Hitchcock Memorial Hospital.

IN WITNESS WHEREOF, I have hereunto set my hand as the Chair of the Board of Trustees of Dartmouth-Hitchcock Clinic and Mary Hitchcock Memorial Hospital this 16 day of September, 2021.

Edward H. Stansfield, III, Board Chair

STATE OF NH

COUNTY OF GRAFTON

The foregoing instrument was acknowledged before me this 16th day of September, 2021, by Edward Stansfield.

LAURA K. RONDEAU
NOTARY PUBLIC
STATE OF NEW HAMPSHIRE
- MY COMMISSION EXPIRES APRIL 19, 2022 -

Notary Public
My Commission Expires: April 19, 2022

Dartmouth-Hitchcock

Dartmouth-Hitchcock Medical Center
Office of Research Operations
1 Medical Center Drive
Lebanon, NH 03756-1000

DELEGATION OF SIGNATURE AUTHORITY

RESEARCH CONTRACTS AND SPONSORED PROGRAM AGREEMENTS

The authority to sign contracts, grants, consortia, center, cooperative and other research and sponsored program agreements ("Contracts") on behalf of Mary Hitchcock Memorial Hospital and Dartmouth-Hitchcock Clinic (together, "Dartmouth-Hitchcock") is delegated by the Chief Executive Officer of Dartmouth-Hitchcock to the Executive Vice President, Dartmouth-Hitchcock Medical Center (and, in her absence or unavailability, to another Chief Officer of Dartmouth - Hitchcock).

The authority to sign Contracts on behalf of Dartmouth-Hitchcock *which have a funding amount not to exceed $1,000,000 and which have a term of less than five (5) years* is hereby sub- delegated by the Executive Vice President, DHMC to the Director of Research Operations and Interim Director of Research Finance

A Contract means an agreement between two or more persons that creates a legally binding obligation to do or not to do a thing A Contract may be titled as an agreement, a memorandum of understanding, memorandum of agreement, a promise to pay, or may use other terminology A Contract may or may not involve the payment of money

Additional sub-delegation of signature authority may only be made upon written authorization of the Executive Vice President, DHMC

An individual with delegated/sub-delegated signature authority who signs a Contract on behalf of Dartmouth-Hitchcock has the responsibility to ensure that the Contract follows Dartmouth- Hitchcock policies, rules and guidelines and all applicable laws and regulations.

The effective date of this sub-delegation shall be the date executed by the Executive Vice President, DHMC, as set forth below, and shall continue until revocation by the Executive Vice President, DHMC

Susan A Reeves, EdD, RN
Executive Vice President, DHMC

Date June 30, 2021

CERTIFICATE OF INSURANCE

DATE: July 1, 2021

COMPANY AFFORDING COVERAGE
Hamden Assurance Risk Retention Group, Inc.
P.O. Box 1687
30 Main Street, Suite 330
Burlington, VT 05401

INSURED
Dartmouth-Hitchcock Clinic
One Medical Center Drive
Lebanon, NH 03756
(603)653-6850

This certificate is issued as a matter of information only and confers no rights upon the Certificate Holder. This Certificate does not amend, extend or alter the coverage afforded by the policies below.

COVERAGES

The Policy listed below has been issued to the Named Insured above for the Policy Period notwithstanding any requirement, term or condition of any contract or other document with respect to which this certificate may be issued. The insurance afforded by the policy is subject to all the terms, exclusions and conditions of the policy. Limits shown may have been reduced by paid claims.

TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE	POLICY EXPIRATION DATE	LIMITS	
GENERAL LIABILITY	0002021-A	7/1/2021	7/1/2022	EACH OCCURRENCE	$1,000,000
				DAMAGE TO RENTED PREMISES	$1,000,000
X CLAIMS MADE				MEDICAL EXPENSES	N/A
				PERSONAL & ADV INJURY	$1,000,000
OCCURRENCE				GENERAL AGGREGATE	
OTHER				PRODUCTS-COMP/OP AGG	$1,000,000
PROFESSIONAL LIABILITY				EACH CLAIM	
CLAIMS MADE				ANNUAL AGGREGATE	
OCCURENCE					
OTHER					

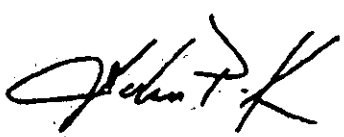
DESCRIPTION OF OPERATIONS/ LOCATIONS/ VEHICLES/ SPECIAL ITEMS (LIMITS MAY BE SUBJECT TO RETENTIONS)
Certificate is issued as evidence of insurance.

CERTIFICATE HOLDER

NH Department of Health & Human Services
129 Pleasant Street
Concord, NH 03301

CANCELLATION
Should any of the above described policies be cancelled before the expiration date thereof, the issuing company will endeavor to mail 30 DAYS written notice to the certificate holder named below, but failure to mail such notice shall impose no obligation or liability of any kind upon the company, its agents or representatives.

AUTHORIZED REPRESENTATIVES



DARTHIT-01 ASTOBERT

ACORD

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 6/30/2021

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 have ADDITIONAL INSURED provisions or 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 License # 1780862 HUB International New England 275 US Route 1 Cumberland Foreside, ME 04110	CONTACT NAME Angela Columbus PHONE (A/C, No, Ext) (774) 233-6204 FAX (A/C, No) E-MAIL ADDRESS Angela.Columbus@hubinternational.com
	INSURER(S) AFFORDING COVERAGE — NAIC #
	INSURER A Safety National Casualty Corporation — 15105
INSURED Dartmouth-Hitchcock Health 1 Medical Center Dr Lebanon, NH 03756	INSURER B INSURER C INSURER D INSURER E INSURER F

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 INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
	COMMERCIAL GENERAL LIABILITY						EACH OCCURRENCE	$
	☐ CLAIMS-MADE ☐ OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$
							MED EXP (Any one person)	$
							PERSONAL & ADV INJURY	$
	GEN'L AGGREGATE LIMIT APPLIES PER						GENERAL AGGREGATE	$
	☐ POLICY ☐ PRO-JECT ☐ LOC						PRODUCTS - COMP/OP AGG	$
	☐ OTHER							$
	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	$
	☐ ANY AUTO						BODILY INJURY (Per person)	$
	☐ OWNED AUTOS ONLY ☐ SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	☐ HIRED AUTOS ONLY ☐ NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
								$
	☐ UMBRELLA LIAB ☐ OCCUR						EACH OCCURRENCE	$
	☐ EXCESS LIAB ☐ CLAIMS-MADE						AGGREGATE	$
	☐ DED ☐ RETENTION $							$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N			AGC4065185	7/1/2021	7/1/2022	X PER STATUTE ☐ OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) ☐ N/A						E.L. EACH ACCIDENT	$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000

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

CERTIFICATE HOLDER

NH Dept of Health & Human Services
129 Pleasant Street
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

Dartmouth-Hitchcock

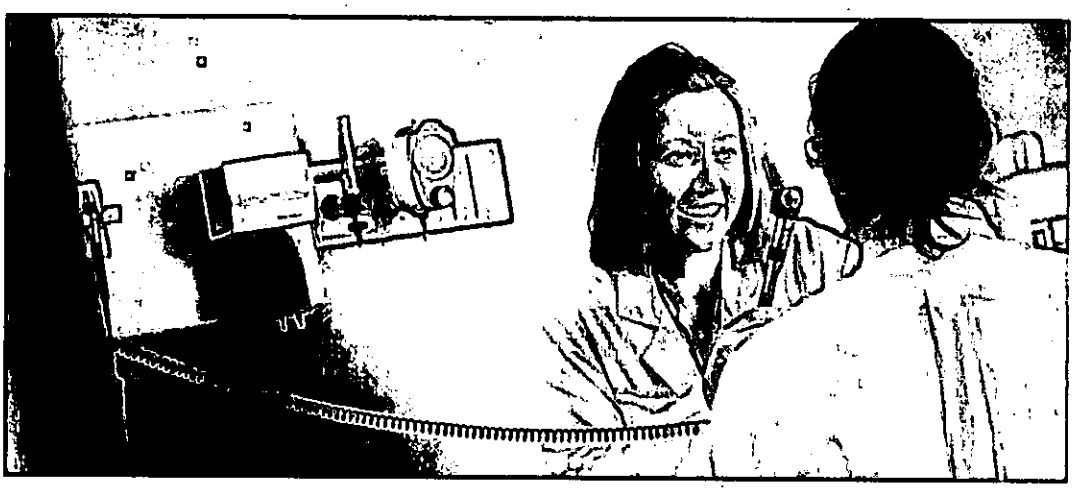
Menu

About Dartmouth-Hitchcock

Dartmouth-Hitchcock (D-H) is comprised of the Dartmouth-Hitchcock Medical Center (DHMC) and several clinics throughout New Hampshire and Vermont. Our physicians and researchers collaborate with Geisel School of Medicine scientists and faculty as well as other leading health care organizations to develop new treatments at the cutting edge of medical practice bringing the latest medical discoveries to the patient.

Dartmouth-Hitchcock includes:

Dartmouth-Hitchcock Medical Center (DHMC)



DHMC is the state's only academic medical center, and the only Level I Adult and Pediatric Trauma Center in New Hampshire. The Dartmouth-Hitchcock Advanced Response Team (DHART), based in Lebanon and Manchester, provides ground and air medical transportation to communities throughout northern New England. DHMC was named in 2021 as the #1 hospital in New Hampshire by U.S. News & World Report (https://health.usnews.com/best-hospitals/area/nh), and recognized for high performance in nine clinical specialties, procedures, and conditions.

The Dartmouth-Hitchcock Clinic

The Dartmouth-Hitchcock Clinic is a network of primary and speciality care physicians located throughout New Hampshire and Vermont, with major community group practices in Lebanon, Concord, Manchester, Nashua, and Keene, New Hampshire, and Bennington, Vermont.

Mary Hitchcock Memorial Hospital

Mary Hitchcock Memorial Hospital is New Hampshire's only teaching hospital, with an inpatient capacity of 396 beds.

Children's Hospital at Dartmouth-Hitchcock (CHaD)

CHaD is New Hampshire's only children's hospital and a member of the Children's Hospital Association, providing advanced pediatric inpatient, outpatient and surgical services at DHMC in Lebanon as well as in Bedford, Concord, Manchester, Nashua, and Dover, New Hampshire.

Norris Cotton Cancer Center (NCCC)

NCCC is a designated Comprehensive Cancer Center by the National Cancer Institute, and is one of the premier facilities for cancer treatment, research, prevention, and education. Interdisciplinary teams, devoted to the treatment of specific types of cancer, work together to care for patients of all ages in Lebanon, Manchester, Nashua, Keene, New Hampshire, and St. Johnsbury, Vermont.

Our mission, vision, and values

Our mission

We advance health through research, education, clinical practice and community partnerships, providing each person the best care, in the right place, at the right time, every time.

Our vision

Achieve the healthiest population possible, leading the transformation of health care in our region and setting the standard for our nation.

Our values

- Respect
- Integrity
- Commitment
- Transparency
- Trust
- Teamwork
- Stewardship
- Community

Learn more about us

- Facts and Figures
- Community Outreach
- Collaborations
- Population Health
- Awards and Honors
- History

Dartmouth-Hitchcock Health and Subsidiaries

Report on Federal Awards in Accordance With the Uniform Guidance
June 30, 2019
EIN #02–0222140

Dartmouth-Hitchcock Health and Subsidiaries
Index
June 30, 2019

Part I

Financial Statements and Schedule of Expenditures of Federal Awards

Report of Independent Auditors

To the Board of Trustees of
Dartmouth-Hitchcock Health and subsidiaries

Report on the Consolidated Financial Statements

We have audited the accompanying consolidated financial statements of Dartmouth-Hitchcock Health and its subsidiaries (the "Health System"), which comprise the consolidated balance sheets as of June 30, 2019 and 2018, and the related consolidated statements of operations and changes in net assets and of cash flows for the years then ended, and the related notes to the financial statements.

Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on the consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the Health System's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Health System's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

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Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Dartmouth-Hitchcock Health and its subsidiaries as of June 30, 2019 and 2018, and the results of their operations, changes in net assets and their cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matter

As discussed in Note 2 to the consolidated financial statements, the Health System changed the manner in which it accounts for revenue recognition from contracts with customers and the manner in which it presents net assets and reports certain aspects of its financial statements as a not-for-profit entity in 2019. Our opinion is not modified with respect to this matter.

Other Matters

Other Information

Our audit was conducted for the purpose of forming an opinion on the consolidated financial statements taken as a whole. The consolidating information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the consolidated financial statements. The consolidating information has been subjected to the auditing procedures applied in the audit of the consolidated financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the consolidated financial statements or to the consolidated financial statements themselves and other additional procedures, in accordance with auditing standards generally accepted in the United States of America. In our opinion, the consolidating information is fairly stated, in all material respects, in relation to the consolidated financial statements taken as a whole. The consolidating information is presented for purposes of additional analysis of the consolidated financial statements rather than to present the financial position, results of its operations, changes in net assets and cash flows of the individual companies and is not a required part of the consolidated financial statements. Accordingly, we do not express an opinion on the financial position, results of operations, changes in net assets and cash flows of the individual companies.

Our audit was conducted for the purpose of forming an opinion on the consolidated financial statements as a whole. The accompanying schedule of expenditures of federal awards for the year ended June 30, 2019 is presented for purposes of additional analysis as required by Title 2 U.S. *Code of Federal Regulations* Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance) and is not a required part of the consolidated financial statements. The information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the consolidated financial statements. The information has been subjected to the auditing procedures applied in the audit of the consolidated financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the consolidated financial statements or to the consolidated financial statements themselves, and other additional procedures, in accordance with auditing standards generally accepted in the United States of America. In

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our opinion, the schedule of expenditures of federal awards is fairly stated, in all material respects, in relation to the consolidated financial statements taken as a whole.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated November 26, 2019 on our consideration of the Health System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements and other matters for the year ended June 30, 2019. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing and not to provide an opinion on the effectiveness of internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Health System's internal control over financial reporting and compliance.

PricewaterhouseCoopers LLP

Boston, Massachusetts
November 26, 2019

Dartmouth-Hitchcock Health and Subsidiaries
Consolidated Balance Sheets
June 30, 2019 and 2018

(in thousands of dollars)	2019	2018
Assets		
Current assets		
Cash and cash equivalents	$ 143,587	$ 200,169
Patient accounts receivable, net of estimated uncollectible of $132,228 at June 30, 2018 (Note 4)	221,125	219,228
Prepaid expenses and other current assets	95,495	97,502
Total current assets	460,207	516,899
Assets limited as to use (Notes 5 and 7)	876,249	706,124
Other investments for restricted activities (Notes 5 and 7)	134,119	130,896
Property, plant, and equipment, net (Note 6)	621,256	607,321
Other assets	124,471	108,785
Total assets	$ 2,216,302	$ 2,070,025
Liabilities and Net Assets		
Current liabilities		
Current portion of long-term debt (Note 10)	$ 10,914	$ 3,464
Current portion of liability for pension and other postretirement plan benefits (Note 11)	3,468	3,311
Accounts payable and accrued expenses (Note 13)	113,817	95,753
Accrued compensation and related benefits	128,408	125,576
Estimated third-party settlements (Note 4)	41,570	41,141
Total current liabilities	298,177	269,245
Long-term debt, excluding current portion (Note 10)	752,180	752,975
Insurance deposits and related liabilities (Note 12)	58,407	55,516
Liability for pension and other postretirement plan benefits, excluding current portion (Note 11)	281,009	242,227
Other liabilities	124,136	88,127
Total liabilities	1,513,909	1,408,090
Commitments and contingencies (Notes 4, 6, 7, 10, and 13)		
Net assets		
Net assets without donor restrictions (Note 9)	559,933	524,102
Net assets with donor restrictions (Notes 8 and 9)	142,460	137,833
Total net assets	702,393	661,935
Total liabilities and net assets	$ 2,216,302	$ 2,070,025

The accompanying notes are an integral part of these consolidated financial statements.

Dartmouth-Hitchcock Health and Subsidiaries
Consolidated Statements of Operations and Changes in Net Assets
Years Ended June 30, 2019 and 2018

(in thousands of dollars)	2019	2018
Operating revenue and other support		
Patient service revenue	$ 1,999,323	$ 1,899,095
Provision for bad debts (Notes 2 and 4)	-	47,367
Net patient service revenue	1,999,323	1,851,728
Contracted revenue (Note 2)	75,017	54,969
Other operating revenue (Notes 2 and 5)	210,698	148,946
Net assets released from restrictions	14,105	13,461
Total operating revenue and other support	2,299,143	2,069,104
Operating expenses		
Salaries	1,062,551	989,263
Employee benefits	251,591	229,683
Medical supplies and medications	407,875	340,031
Purchased services and other	323,435	291,372
Medicaid enhancement tax (Note 4)	70,061	67,692
Depreciation and amortization	88,414	84,778
Interest (Note 10)	25,514	18,822
Total operating expenses	2,229,441	2,021,641
Operating income (loss)	69,702	47,463
Nonoperating gains (losses)		
Investment income, net (Note 5)	40,052	40,387
Other losses, net (Note 10)	(3,562)	(2,908)
Loss on early extinguishment of debt	(87)	(14,214)
Loss due to swap termination	-	(14,247)
Total nonoperating gains, net	36,403	9,018
Excess of revenue over expenses	$ 106,105	$ 56,481

Dartmouth-Hitchcock Health and Subsidiaries
Consolidated Statements of Operations and Changes in Net Assets
Years Ended June 30, 2019 and 2018

(in thousands of dollars)	2019	2018
Net assets without donor restrictions		
Excess of revenue over expenses	$ 106,105	$ 56,481
Net assets released from restrictions	1,769	16,313
Change in funded status of pension and other postretirement benefits (Note 11)	(72,043)	8,254
Other changes in net assets	-	(185)
Change in fair value of interest rate swaps (Note 10)	-	4,190
Change in interest rate swap effectiveness	-	14,102
Increase in net assets without donor restrictions	35,831	99,155
Net assets with donor restrictions		
Gifts, bequests, sponsored activities	17,436	14,171
Investment income, net	2,682	4,354
Net assets released from restrictions	(15,874)	(29,774)
Contribution of assets with donor restrictions from acquisition	383	-
Increase (decrease) in net assets with donor restrictions	4,627	(11,249)
Change in net assets	40,458	87,906
Net assets		
Beginning of year	661,935	574,029
End of year	$ 702,393	$ 661,935

The accompanying notes are an integral part of these consolidated financial statements.

Dartmouth-Hitchcock Health and Subsidiaries
Consolidated Statements of Cash Flows
Years Ended June 30, 2019 and 2018

(in thousands of dollars)	2019	2018
Cash flows from operating activities		
Change in net assets	$ 40,458	$ 87,906
Adjustments to reconcile change in net assets to net cash provided by operating and nonoperating activities		
Change in fair value of interest rate swaps	-	(4,897)
Provision for bad debt	-	47,367
Depreciation and amortization	88,770	84,947
Change in funded status of pension and other postretirement benefits	72,043	(8,254)
(Gain) on disposal of fixed assets	(1,101)	(125)
Net realized gains and change in net unrealized gains on investments	(31,397)	(45,701)
Restricted contributions and investment earnings	(2,292)	(5,460)
Proceeds from sales of securities	1,167	1,531
Loss from debt defeasance	-	14,214
Changes in assets and liabilities		
Patient accounts receivable, net	(1,803)	(29,335)
Prepaid expenses and other current assets	2,149	(8,299)
Other assets, net	(9,052)	(11,665)
Accounts payable and accrued expenses	17,898	19,693
Accrued compensation and related benefits	2,335	10,665
Estimated third-party settlements	429	13,708
Insurance deposits and related liabilities	2,378	4,556
Liability for pension and other postretirement benefits	(33,104)	(32,399)
Other liabilities	12,267	(2,421)
Net cash provided by operating and nonoperating activities	161,145	136,031
Cash flows from investing activities		
Purchase of property, plant, and equipment	(82,279)	(77,598)
Proceeds from sale of property, plant, and equipment	2,188	-
Purchases of investments	(361,407)	(279,407)
Proceeds from maturities and sales of investments	219,996	273,409
Cash received through acquisition	4,863	-
Net cash used in investing activities	(216,639)	(83,596)
Cash flows from financing activities		
Proceeds from line of credit	30,000	50,000
Payments on line of credit	(30,000)	(50,000)
Repayment of long-term debt	(29,490)	(413,104)
Proceeds from issuance of debt	26,338	507,791
Repayment of interest rate swap	-	(16,019)
Payment of debt issuance costs	(228)	(4,892)
Restricted contributions and investment earnings	2,292	5,460
Net cash (used in) provided by financing activities	(1,088)	79,236
(Decrease) increase in cash and cash equivalents	(56,582)	131,671
Cash and cash equivalents		
Beginning of year	200,169	68,498
End of year	$ 143,587	$ 200,169
Supplemental cash flow information		
Interest paid	$ 23,977	$ 18,029
Net assets acquired as part of acquisition, net of cash aquired	(4,863)	-
Noncash proceeds from issuance of debt	-	137,281
Use of noncash proceeds to refinance debt	-	137,281
Construction in progress included in accounts payable and accrued expenses	1,546	1,569
Equipment acquired through issuance of capital lease obligations	-	17,670
Donated securities	1,167	1,531

The accompanying notes are an integral part of these consolidated financial statements.

1. Organization and Community Benefit Commitments

Dartmouth-Hitchcock Health (D-HH) serves as the sole corporate member of the following entities: Dartmouth-Hitchcock Clinic and Subsidiaries (DHC), Mary Hitchcock Memorial Hospital and Subsidiaries (MHMH), (DHC and MHMH together are referred to as D-H), The New London Hospital Association and Subsidiaries (NLH), Windsor Hospital Corporation (d/b/a Mt. Ascutney Hospital and Health Center) and Subsidiaries (MAHHC), Cheshire Medical Center and Subsidiaries (Cheshire), Alice Peck Day Memorial Hospital and, effective July 1, 2018, Subsidiary (APD), and the Visiting Nurse and Hospice for Vermont and New Hampshire and Subsidiaries (VNH). The "Health System" consists of D-HH, its members and their subsidiaries.

The Health System currently operates one tertiary, one community and three acute care (critical access) hospitals in New Hampshire (NH) and Vermont (VT). One facility provides inpatient and outpatient rehabilitation medicine and long-term care. The Health System also operates multiple physician practices, a nursing home, a continuing care retirement community, and a home health and hospice service. The Health System operates a graduate level program for health professions and is the principal teaching affiliate of the Geisel School of Medicine (Geisel), a component of Dartmouth College.

D-HH, Dartmouth-Hitchcock Clinic, Mary Hitchcock Memorial Hospital, The New London Hospital Association, Cheshire Medical Center, and Alice Peck Day Memorial Hospital are NH not-for-profit corporations exempt from federal income taxes under Section 501(c)(3) of the Internal Revenue Code (IRC). Windsor Hospital Corporation and the Visiting Nurse and Hospice of VT and NH are VT not-for-profit corporations exempt from federal income taxes under Section 501(c)(3) of the IRC.

Community Benefits

The mission of the Health System is to advance health through clinical practice and community partnerships, research and education, providing each person the best care, in the right place, at the right time, every time.

Consistent with this mission, the Health System provides high quality, cost effective, comprehensive, and integrated healthcare to individuals, families, and the communities it serves regardless of a patient's ability to pay. The Health System actively supports community-based healthcare and promotes the coordination of services among healthcare providers and social services organizations. In addition, the Health System also seeks to work collaboratively with other area healthcare providers to improve the health status of the region. As a component of an integrated academic medical center, the Health System provides significant support for academic and research programs.

Certain member hospitals of the Health System file annual Community Benefits Reports with the State of NH which outline the community and charitable benefits each provides. VT hospitals are not required by law to file a state community benefit report. The categories used in the Community Benefit Reports to summarize these benefits are as follows:

- *Community Health Services* include activities carried out to improve community health and could include community health education (such as classes, programs, support groups, and materials that promote wellness and prevent illness), community-based clinical services (such as free clinics and health screenings), and healthcare support services (enrollment assistance in public programs, assistance in obtaining free or reduced costs medications, telephone information services, or transportation programs to enhance access to care, etc.).

- *Health Professions Education* includes uncompensated costs of training medical students, Residents, nurses, and other health care professionals.

- *Subsidized health services* are services provided by the Health System, resulting in financial losses that meet the needs of the community and would not otherwise be available unless the responsibility was assumed by the government.

- *Research support and other grants* represent costs in excess of awards for numerous health research and service initiatives awarded to the organizations within the Health System.

- *Financial Contributions* include financial contributions of cash, as well as in-kind contributions such as time, supplies, and expertise to local organizations to address community health needs.

- *Community-Building Activities* include expenses incurred to support the development of programs and partnerships intended to address public health challenges as well as social and economic determinants of health. Examples include physical improvements and housing, economic development, support system enhancements, environmental improvements, leadership development and training for community members, community health improvement advocacy, and workforce enhancement.

- *Community Benefit Operations* includes costs associated with staff dedicated to administering benefit programs, community health needs assessment costs, and other costs associated with community benefit planning and operations.

- *Charity Care and Costs of Government Sponsored Health Care* includes losses, at-cost, incurred by providing health care services to persons qualifying for hospital financial assistance programs, and uncompensated costs of providing health care services to patients who are Medicaid Beneficiaries.

- *The uncompensated cost of care for Medicaid* patients reported in the unaudited Community Benefits Reports for 2018 was approximately $139,683,000. The 2019 Community Benefits Reports are expected to be filed in February 2020.

The following table summarizes the value of the community benefit initiatives outlined in the Health System's most recently filed Community Benefit Reports for the year ended June 30, 2018:

(in thousands of dollars)

Government-sponsored healthcare services	$	246,064
Health professional education		33,067
Charity care		13,243
Subsidized health services		11,993
Community health services		6,570
Research		5,969
Community building activities		2,540
Financial contributions		2,360
Community benefit operations		1,153
Total community benefit value	$	322,959

2. Summary of Significant Accounting Policies

Basis of Presentation

The consolidated financial statements are prepared on the accrual basis of accounting in accordance with accounting principles generally accepted in the United States of America, and have been prepared consistent with the Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) 954, *Healthcare Entities*, which addresses the accounting for healthcare entities. The net assets, revenue, expenses, and gains and losses of healthcare entities are classified based on the existence or absence of donor-imposed restrictions. Accordingly, net assets without donor restrictions are amounts not subject to donor-imposed stipulations and are available for operations. Net assets with donor restrictions are those whose use has been limited by donors to a specific time period or purpose, or whose use has been restricted by donors to be maintained in perpetuity. All significant intercompany transactions have been eliminated upon consolidation.

Use of Estimates

The preparation of the consolidated financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the dates of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting periods. The most significant areas that are affected by the use of estimates include implicit and explicit pricing concessions, valuation of certain investments, estimated third-party settlements, insurance reserves, and pension obligations. Actual results may differ from those estimates.

Excess of Revenue Over Expenses

The consolidated statements of operations and changes in net assets include the excess of revenue over expenses. Operating revenues consist of those items attributable to the care of patients, including contributions and investment income on investments of net assets without donor restrictions, which are utilized to provide charity and other operational support. Peripheral activities, including contribution of net assets without donor restrictions from acquisitions, loss on early extinguishment of debt, loss due to swap termination, realized gains/losses on sales of investment securities and changes in unrealized gains/losses in investments are reported as nonoperating gains (losses).

Changes in net assets without donor restrictions which are excluded from the excess of revenue over expenses, consistent with industry practice, include contributions of long-lived assets (including assets acquired using contributions which by donor restriction were to be used for the purpose of acquiring such assets), change in funded status of pension and other postretirement benefit plans, and the effective portion of the change in fair value of interest rate swaps.

Charity Care

The Health System provides care to patients who meet certain criteria under their financial assistance policies without charge or at amounts less than their established rates. Because the Health System does not anticipate collection of amounts determined to qualify as charity care, they are not reported as revenue.

The Health System grants credit without collateral to patients. Most are local residents and are insured under third-party arrangements. The amount of charges for implicit price concessions is based upon management's assessment of historical and expected net collections, business and economic conditions, trends in federal and state governmental healthcare coverage, and other collection indicators (Notes 1 and 4).

Patient Service Revenue
The Health System applies the accounting provisions of ASC 606, *Revenue from Contracts with Customers* (ASC 606). Patient service revenue is reported at the amount of consideration to which the Health System expects to be entitled from patients, third party payors, and others for services rendered, including estimated retroactive adjustments under reimbursement agreements with third-party payors and implicit pricing concessions. Retroactive adjustments are accrued on an estimated basis in the period the related services are rendered and adjusted in future periods as estimates change or final settlements are determined (Note 4).

Contracted Revenue
The Health System has various Professional Service Agreements (PSAs), pursuant to which certain organizations purchase services of personnel employed by the Health System and also lease space and equipment. Revenue pursuant to these PSAs and certain facility and equipment leases and other professional service contracts have been classified as contracted revenue in the accompanying consolidated statements of operations and changes in net assets.

Other Revenue
The Health System recognizes other revenue which is not related to patient medical care but is central to the day-to-day operations of the Health System. Other revenue primarily consists of revenue from retail pharmacy, which the Health System records as customer revenues in the amounts that reflect the consideration to which it expects to be entitled in exchange for the prescription. Other revenue also includes joint operating agreements, grant revenue, cafeteria sales and other support service revenue.

Cash Equivalents
Cash equivalents include investments in highly liquid investments with maturities of three months or less when purchased, excluding amounts where use is limited by internal designation or other arrangements under trust agreements or by donors.

Investments and Investment Income
Investments in equity securities with readily determinable fair values, mutual funds and pooled/commingled funds, and all investments in debt securities are considered to be trading securities reported at fair value with changes in fair value included in the excess of revenues over expenses. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (Note 7).

Investments in pooled/commingled investment funds, private equity funds and hedge funds that represent investments where the Health System owns shares or units of funds rather than the underlying securities in that fund are valued using the equity method of accounting with changes in value recorded in the excess of revenues over expenses. All investments, whether held at fair value or under the equity method of accounting, are reported at what the Health System believes to be the amount they would expect to receive if it liquidated its investments at the balance sheet dates on a nondistressed basis.

Certain members of the Health System are partners in a NH general partnership established for the purpose of operating a master investment program of pooled investment accounts. Substantially all of the Health System's board-designated and assets with donor restrictions, such as endowment funds, were invested in these pooled funds by purchasing units based on the market value of the pooled funds at the end of the month prior to receipt of any new additions to the funds. Interest, dividends, and realized and unrealized gains and losses earned on pooled funds are allocated monthly based on the weighted average units outstanding at the prior month-end.

Investment income or losses (including change in unrealized and realized gains and losses on investments, change in value of equity method investments, interest, and dividends) are included in the excess of revenue over expenses and classified as nonoperating gains and losses, unless the income or loss is restricted by donor or law (Note 9).

Fair Value Measurement of Financial Instruments
The Health System estimates fair value based on a valuation framework that uses a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of fair value hierarchy, as defined by ASC 820, *Fair Value Measurements and Disclosures*, are described below:

Level 1	Unadjusted quoted prices in active markets that are accessible at the measurement date for assets or liabilities.
Level 2	Prices other than quoted prices in active markets that are either directly or indirectly observable as of the date of measurement.
Level 3	Prices or valuation techniques that are both significant to the fair value measurement and unobservable.

The Health System applies the accounting provisions of Accounting Standards Update (ASU) 2009-12, *Investments in Certain Entities That Calculate Net Asset Value per Share (or its Equivalent)* (ASU 2009-12). ASU 2009-12 allows for the estimation of fair value of investments for which the investment does not have a readily determinable fair value, to use net asset value (NAV) per share or its equivalent as a practical expedient, subject to the Health System's ability to redeem its investment.

The carrying amount of patient accounts receivable, prepaid and other current assets, accounts payable and accrued expenses approximates fair value due to the short maturity of these instruments.

Property, Plant, and Equipment
Property, plant, and equipment, and other real estate are stated at cost at the time of purchase or fair value at the time of donation, less accumulated depreciation. The Health System's policy is to capitalize expenditures for major improvements and to charge expense for maintenance and repair expenditures which do not extend the lives of the related assets. The provision for depreciation has been determined using the straight-line method at rates which are intended to amortize the cost of assets over their estimated useful lives which range from 10 to 40 years for buildings and improvements, 2 to 20 years for equipment, and the shorter of the lease term, or 5 to 12 years, for leasehold improvements. Certain software development costs are amortized using the straight-line method over a period of up to 10 years. Net interest cost incurred on borrowed funds during the

period of construction of capital assets is capitalized as a component of the cost of acquiring those assets.

The fair value of a liability for legal obligations associated with asset retirements is recognized in the period in which it is incurred, if a reasonable estimate of the fair value of the obligation can be made. When a liability is initially recorded, the cost of the asset retirement obligation is capitalized by increasing the carrying amount of the related long-lived asset. Over time, the liability is accreted to its present value each period and the capitalized cost associated with the retirement is depreciated over the useful life of the related asset. Upon settlement of the obligation, any difference between the actual cost to settle the asset retirement obligation and the liability recorded is recognized as a gain or loss in the consolidated statements of operations and changes in net assets.

Gifts of capital assets such as land, buildings, or equipment are reported as support, and excluded from the excess of revenue over expenses, unless explicit donor stipulations specify how the donated assets must be used. Gifts of capital assets with explicit restrictions that specify how the assets are to be used and gifts of cash or other assets that must be used to acquire capital assets are reported as restricted support. Absent explicit donor stipulations about how long those capital assets must be maintained, expirations of donor restrictions are reported when the donated or acquired capital assets are placed in service.

Bond Issuance Costs
Bond issuance costs, classified on the consolidated balance sheets within long-term debt, are amortized over the term of the related bonds. Amortization is recorded within interest expense in the consolidated statements of operations and changes in net assets using the straight-line method which approximates the effective interest method.

Intangible Assets and Goodwill
The Health System records within other assets on the consolidated balance sheets goodwill and intangible assets such as trade names and leases-in-place. The Health System considers trade names and goodwill to be indefinite-lived assets, assesses them at least annually for impairment or more frequently if certain events or circumstances warrant and recognizes impairment charges for amounts by which the carrying values exceed their fair values. The Health System has recorded $10,524,000 and $2,462,000 as intangible assets associated with its affiliations as of June 30, 2019 and 2018, respectively.

Derivative Instruments and Hedging Activities
The Health System applies the provisions of ASC 815, *Derivatives and Hedging*, to its derivative instruments, which require that all derivative instruments be recorded at their respective fair values in the consolidated balance sheets.

On the date a derivative contract is entered into, the Health System designates the derivative as a cash-flow hedge of a forecasted transaction or the variability of cash flows to be received or paid related to a recognized asset or liability. For all hedge relationships, the Health System formally documents the hedging relationship and its risk-management objective and strategy for undertaking the hedge, the hedging instrument, the nature of the risk being hedged, how the hedging instrument's effectiveness in offsetting the hedged risk will be assessed, and a description of the method of measuring ineffectiveness. This process includes linking cash-flow hedges to specific assets and liabilities on the consolidated balance sheets, specific firm commitments or forecasted transactions. The Health System also formally assesses, both at the hedge's inception and on an ongoing basis, whether the derivatives that are used in hedging transactions are highly

effective in offsetting changes in variability of cash flows of hedged items. Changes in the fair value of a derivative that is highly effective and that is designated and qualifies as a cash-flow hedge are recorded in net assets without donor restrictions until earnings are affected by the variability in cash flows of the designated hedged item. The ineffective portion of the change in fair value of a cash flow hedge is reported in excess of revenue over expenses in the consolidated statements of operations and changes in net assets.

The Health System discontinues hedge accounting prospectively when it is determined: (a) the derivative is no longer effective in offsetting changes in the cash flows of the hedged item; (b) the derivative expires or is sold, terminated, or exercised; (c) the derivative is undesignated as a hedging instrument because it is unlikely that a forecasted transaction will occur; (d) a hedged firm commitment no longer meets the definition of a firm commitment; and (e) management determines that designation of the derivative as a hedging instrument is no longer appropriate.

In all situations in which hedge accounting is discontinued, the Health System continues to carry the derivative at its fair value on the consolidated balance sheets and recognizes any subsequent changes in its fair value in excess of revenue over expenses.

Gifts

Gifts without donor restrictions are recorded net of related expenses as nonoperating gains. Conditional promises to give and indications of intentions to give to the Health System are reported at fair value at the date the gift is received. Gifts are reported with donor restrictions if they are received with donor stipulations that limit the use of the donated assets. When a donor restriction expires, that is, when a stipulated time restriction ends or purpose restriction is accomplished, net assets with donor restrictions are reclassified as net assets without donor restrictions and reported in the consolidated statements of operations and changes in net assets as net assets released from restrictions.

Recently Issued Accounting Pronouncements

In May 2014, the FASB issued ASU 2014-09 - *Revenue from Contracts with Customers (ASC 606)* and in August 2015, the FASB amended the guidance to defer the effective date of this standard by one year. ASU 2014-09 affects any entity that either enters into contracts with customers to transfer goods or services or enters into contracts for the transfer of nonfinancial assets unless those contracts are within the scope of other standards. The core principle of the guidance in ASU 2014-09 is that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The Health System adopted ASU 2014-09 effective July 1, 2018 under the modified retrospective method, and has provided the new disclosures required post implementation. For example, patient accounts receivable are shown net of the allowance for doubtful accounts of approximately $132,228,000 as of June 30, 2018 on the consolidated balance sheet. If an allowance for doubtful accounts had been presented as of June 30, 2019, it would have been approximately $121,544,000. While the adoption of ASU 2014-09 has had a material effect on the presentation of revenues in the Health System's consolidated statements of operations and changes in net assets, and has had an impact on certain disclosures, it has not materially impacted the financial position, results of operations or cash flows. Refer to Note 4, Patient Service Revenue and Accounts Receivable, for further details.

In February 2016, the FASB issued ASU 2016-02 – *Leases (Topic 842)*, which requires a lessee to recognize a right-of-use asset and a lease liability, initially measured at the present value of the lease payments, on its balance sheet. The standard also requires a lessee to recognize a single lease cost, calculated so that the cost of the lease is allocated over the lease term, on a generally straight-line basis. The guidance also expands the required quantitative and qualitative disclosures surrounding leases. The ASU is effective for fiscal years beginning after December 15, 2018, or fiscal year 2020 for the Health System. The Health System is evaluating the impact of the new guidance on the consolidated financial statements.

In January 2016, the FASB issued ASU 2016-01- *Recognition and Measurement of Financial Assets and Financial Liabilities*, which address certain aspects of recognition, measurement, presentation and disclosure of financial instruments. This guidance allows an entity to choose, investment-by-investment, to report an equity investment that neither has a readily determinable fair value, nor qualifies for the practical expedient for fair value estimation using NAV, at its cost minus impairment (if any), plus or minus changes resulting from observable price changes in orderly transactions for the identical or similar investment of the same issue. Impairment of such investments must be assessed qualitatively at each reporting period. Entities must disclose their financial assets and liabilities by measurement category and form of asset either on the face of the balance sheet or in the accompanying notes. The ASU is effective for annual reporting periods beginning after December 15, 2018 or fiscal year 2020 for the Health System. The provision to eliminate the requirement to disclose the fair value of financial instruments measured at cost (such as the fair value of debt) was early adopted during the year ended June 30, 2017.

In August 2016, the FASB issued ASU 2016-14 - *Presentation of Financial Statements for Not-for-Profit Entities.* The new pronouncement amends certain financial reporting requirements for not-for-profit entities. It reduces the number of classes of net assets from three to two: net assets with donor restrictions includes amount previously disclosed as both temporarily and permanently restricted net assets, net assets without donor restrictions includes amounts previously disclosed as unrestricted net assets. It expands the disclosure of expenses by both natural and functional classification. It adds quantitative and qualitative disclosures about liquidity and availability of resources. The ASU is effective for the Health System for the year ending June 30, 2019. The Health System has adopted this ASU on a retrospective basis, except for the presentation of expenses based on natural and functional classification and the discussion of liquidity, as permitted in the ASU. Please refer to Note 14, Functional Expenses, and Note 15, Liquidity.

In June 2018, the FASB issued ASU 2018-08, Not–for-Profit Entities (Topic 958), Clarifying the Scope and the Accounting Guidance for Contributions Received and Contributions Made. The new pronouncement was intended to assist entities in evaluating whether transactions should be accounted for as contributions or exchange transactions and whether a contribution is conditional. This ASU was effective for the Health System on July 1, 2018 on a modified prospective basis and did not have a significant impact on the consolidated financial statements of the Health System.

3. Acquisitions

Effective July 1, 2018, Alice Peck Day Memorial Hospital became the sole corporate member of APD LifeCare Center Inc. (LifeCare). LifeCare owns and operates Harvest Hill, an assisted living facility, the Woodlands, a residential living community and the Elizabeth S. Hughes Care Unit, which provides hospice care.

In accordance with applicable accounting guidance on not-for-profit mergers and acquisitions, Alice Peck Day Memorial Hospital recorded goodwill related to the acquisition of LifeCare of approximately $5,131,000. Restricted contribution income of $383,000 was recorded within net assets with donor restrictions in the accompanying consolidated statement of changes in net assets. Included in the transaction was LifeCare's cash balance of $4,863,000. No consideration was exchanged for the net assets assumed and acquisition costs were expensed as incurred. LifeCare's financial position, results of operations and changes in net assets are included in the consolidated financial statements as of and for the year ended June 30, 2019.

4. Patient Service Revenue and Accounts Receivable

The Health System reports patient service revenue at amounts that reflect the consideration to which it expects to be entitled in exchange for providing patient care. These amounts are due from patients, third-party payers (including managed care payers and government programs), and others; and they include variable consideration for retroactive revenue adjustments due to settlement of audits, reviews, and investigations. Generally, the Health System bills patients and third-party payers several days after the services were performed or shortly after discharge. Revenue is recognized as performance obligations are satisfied under contracts by providing healthcare services to patients.

The Health System determines performance obligations based on the nature of the services provided. Revenues for performance obligations satisfied over time are recognized based on actual charges incurred in relation to total expected charges as this method provides a reasonable estimate of the transfer of services over the term of performance obligations based on inputs needed to satisfy the obligations. Generally, performance obligations satisfied over time relate to patients receiving inpatient acute care services. For inpatient services, performance obligations are measured from admission to the point when there are no further services required for the patient, which is generally the time of discharge. For outpatient services and physician services, performance obligations are recognized at a point in time when the services are provided and no further patient services are deemed necessary.

Generally, the Health System's patient service performance obligations relate to contracts with a duration of less than one year, therefore the Health System has elected to apply the optional exemption provided in ASC 606-10-50-14a and, therefore, we are not required to disclose the aggregate amount of the transaction price allocated to performance obligations that are unsatisfied or partially unsatisfied at the end of the reporting period. This generally refers to inpatient services at the end of the reporting period. The performance obligations for these contracts are generally completed when the patients are discharged, which generally occurs within days or weeks of the end of the reporting period.

Established charges represent gross charges. They are not the same as actual pricing, and they generally do not reflect what a hospital is ultimately entitled to for services it provides. Therefore, they are not displayed in the Health System's consolidated statements of operations and changes in net assets.

Hospitals are paid amounts negotiated with insurance companies or set by government entities, which are typically less than established or standard charges. Gross charges are used to calculate Medicare outlier payments and to determine certain elements of payment under managed care contracts. Gross charges are what hospitals charge all patients prior to the application of contractual adjustments and implicit price concessions.

Explicit Pricing Concessions
Revenues for the Health System under the traditional fee-for service Medicare and Medicaid programs are based on prospectively determined rates per discharge or visit, reasonable (allowable) cost, or prospective rates per episodic period, depending on the type of provider.

- Inpatient acute care services provided to Medicare program beneficiaries are paid using the prospective payment system ("PPS") to determine rates-per-discharge. These rates vary according to a patient classification system ("DRG"), based on diagnostic, clinical and other factors. In addition, inpatient capital costs (depreciation and interest) are reimbursed by Medicare on the basis of a prospectively determined rate per discharge. Medicare outpatient services are paid on a prospective payment system, based on a pre-determined amount for each outpatient procedure (APC), subject to various mandated modifications. Retrospectively determined cost-based revenues under these programs, such as indirect medical education, direct graduate medical education, disproportionate share hospital, transplant services, and bad debt reimbursement are based on the hospital's cost reports and are estimated using historical trends and current factors. The Health System's payments for inpatient services rendered to New Hampshire ("NH") and Vermont ("VT") Medicaid beneficiaries are based on PPS, while outpatient services are reimbursed on a retrospective cost basis or fee schedules for NH beneficiaries. VT outpatient beneficiaries are paid on a prospective basis per outpatient procedure.

- Inpatient acute, swing, and outpatient services furnished by critical access hospitals ("CAH") are reimbursed by Medicare at 101% of reasonable costs, subject to 2% sequestration, excluding ambulance services and inpatient hospice care.

- Providers of home health services to patients eligible for Medicare home health benefits are paid on a prospective basis, with no retrospective settlement. The prospective payment is based on the scoring attributed to the acuity level of the patient at a rate determined by federal guidelines.

- Hospice services to patients eligible for Medicare hospice benefits are paid on a per diem basis, with no retrospective settlement, provided the aggregate annual Medicare reimbursement is below a predetermined aggregate capitated rate.

- The Health System's cost based services to Medicare and Medicaid are reimbursed during the year based on varying interim payment methodologies. Final settlement is determined after the submission of an annual cost report and subject to audit of this report by Medicare and Medicaid auditors, as well as administrative and judicial review. Because the laws, regulations, and rule interpretations, governing Medicare and Medicaid reimbursement are complex and change frequently, the estimates recorded could change over time by material amounts.

- Revenues under Managed Care Plans (Plans) consist primarily of payment terms involving mutually agreed upon rates per diagnosis, discounted fee-for service rates, or similar contractual arrangements. These revenues are also subject to review and possible audit. The Plans are billed for patient services on an individual patient basis. An individual patient's bill is subject to adjustments in accordance with contractual terms in place with the Plans following their review and adjudication of each bill.

The Health System is not aware of any claims, disputes, or unsettled matters with any payer that would materially affect its revenues for which it has not adequately provided in the accompanying Health System's consolidated financial statements.

The Health System provides charity care to patients who are unable to pay for healthcare services they receive as determined by financial conditions. Patients who qualify receive partial or full adjustments to charges for services rendered. The Health System's policy is to treat amounts qualified as charity care as explicit price concessions and as such are not reported in net patient service revenue.

During fiscal year 2016, Vermont state legislation passed changes to the tax base for home health providers from 19.30% of core home health care services (primarily Medicaid services) with a cap of 6% of net patient service revenue to 3.63% of net patient revenue for fiscal year 2017 and fiscal year 2018. Home health provider tax paid, which is included in other operating expenses, was $628,000 and $737,000 in 2019 and 2018, respectively.

On June 30, 2014, the NH Governor signed into law a bi-partisan legislation reflecting an agreement between the State of NH and 25 NH hospitals on the Medicaid Enhancement Tax (MET) Senate Bill 369. As part of the agreement, the parties have agreed to resolve all pending litigation related to MET and Medicaid Rates, including the Catholic Medical Center Litigation, the Northeast Rehabilitation Litigation, 2014 DRA Refund Requests, and the State Rate Litigation. As part of the MET Agreement Effective July 1, 2014, a "Trust / Lock Box" dedicated funding mechanism will be established for receipt and distribution of all MET proceeds with all monies used exclusively to support Medicaid services.

On May 22, 2018, the State of New Hampshire and all New Hampshire hospitals (NH Hospitals) signed a new settlement agreement and multi-year plan for Disproportionate Share Hospital (DSH) payments, with provisions to create alternative payments should there be federal changes to the DSH program by the United States Congress. The agreement may change or limit federal matching funds for MET when used to support DSH payments to hospitals and the Medicaid program, or change the definition of Uncompensated Care (UCC) for purposes of calculating DSH or other allowable uncompensated care payments. The term of the agreement is through state fiscal year (SFY) 2024. Under the agreement, the NH Hospitals forgo approximately $28,000,000 of DSH payment for SFY 2018 and 2019, in consideration of the State agreeing to form a pool of funds to make directed payments or otherwise increase rates to hospitals for SFY 2020 through 2024. The Federal share of payments to NH Hospitals are contingent upon the receipt of matching funds from Centers for Medicare & Medicaid Services (CMS) in the covered years. In the event that, due to changes in federal law, the State is unable to make payments in a way that ensures the federal matching funds are available, the Parties will meet and confer to negotiate in good faith an appropriate amendment to this agreement consistent with the intent of this agreement. The State is required to maintain the UCC Dedicated Fund pursuant to earlier agreements. The agreement prioritizes payments of funds to critical access hospitals at 75% of allowable UCC, the remainder thereafter is distributed to other NH Hospitals in proportion to their allowable uncompensated care amounts. During the term of this agreement, the NH Hospitals are barred from bringing a new claim in federal or state court or at Department of Revenue Administration (DRA) related to the constitutionality of MET.

During the years ended June 30, 2019 and 2018, the Health System received DSH payments of approximately, $69,179,000 and $66,383,000, respectively. DSH payments are subject to audit pursuant to the agreement with the state and therefore, for the years ended June 30, 2019 and 2018, the Health System recognized as revenue DSH receipts of approximately $64,864,000 and approximately $54,469,000, respectively.

During the years ended June 30, 2019 and 2018, the Health System recorded State of NH Medicaid Enhancement Tax ("MET") and State of VT Provider tax of $70,061,000 and $67,692,000, respectively. The taxes are calculated at 5.5% for NH and 6% for VT of certain net patient service revenues in accordance with instructions received from the States. The Provider taxes are included in operating expenses in the consolidated statements of operations and changes in net assets.

Implicit Price Concessions
Generally, patients who are covered by third-party payer contracts are responsible for related co-pays, co-insurance and deductibles, which vary depending on the contractual obligations of patients. The Health System also provides services to uninsured patients and offers those patients a discount from standard charges. The Health System estimates the transaction price for patients with co-pays, co-insurance, and deductibles and for those who are uninsured based on historical collection experience and current market conditions. The discount offered to uninsured patients reduces the transaction price at the time of billing. The uninsured and patient responsible accounts, net of discounts recorded, are further reduced through implicit price concessions based on historical collection trends for similar accounts and other known factors that impact the estimation process. Subsequent changes to the estimate of transaction price are generally recorded as adjustments to net patient service revenue in the period of change.

The implicit price concessions included in estimating the transaction price represent the difference between amounts billed to patients and the amounts the Health System expects to collect based on collection history with similar patients. Although outcomes vary, the Health System's policy is to attempt to collect amounts due from patients, including co-pays, co-insurance and deductibles due from insurance at the time of service while complying with all federal and state statutes and regulations, including but not limited to, the Emergency Medical Treatment and Active Labor Act (EMTALA). Through various systems and processes the Health System estimates Medicare and Medicaid net patient service revenue and cost report settlements and accrues final expected settlements. For filed cost reports, the accrual is recorded based on those filings, subsequent activity, and on historical trends and other relevant evidence. For periods in which a cost report is yet to be filed, accruals are based on estimates of what is expected to be reported, and any trends and relevant evidence. Cost reports generally must be filed within five months of the closing period.

Settlements with third-party payers for retroactive revenue adjustments due to audits, reviews or investigations are considered variable consideration and are included in the determination of the estimated transaction price for providing patient care using the most likely amount. These settlements are estimated based on the terms of the payment agreement with the payer, correspondence from the payer and historical settlement activity, including assessments to ensure that it is probable that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the retroactive adjustment is subsequently resolved. Estimated settlements are adjusted in future periods as adjustments become known, or as years are settled or are no longer subject to such audits, reviews or investigations. As of June 30, 2019 and 2018, the Health System had $52,470,000 and $52,041,000, respectively, reserved for estimated third-party settlements.

For the years ended June 30, 2019 and 2018, additional increases (decreases) in revenue of $1,800,000 and ($5,604,000), respectively, was recognized due to changes in its prior years related to estimated third-party settlements.

Net operating revenues for the hospital operations of the PPS and CAH, and other business segments consist primarily of patient service revenues, principally for patients covered by Medicare, Medicaid, managed care and other health plans as well as patients covered under the Health System's uninsured discount and charity care programs.

The table below shows the Health System's sources of net operating revenues presented at the net transaction price for the years ended June 30, 2019 and 2018.

	2019		
(in thousands of dollars)	**PPS**	**CAH**	**Total**
Hospital			
Medicare	$ 456,197	$ 72,193	$ 528,390
Medicaid	134,727	12,794	147,521
Commercial	746,647	64,981	811,628
Self pay	8,811	2,313	11,124
	1,346,382	152,281	1,498,663
Professional			
Professional	454,425	23,707	478,132
VNH			22,528
Other revenue			285,715
Total operating revenue and other support	$ 1,800,807	$ 175,988	$ 2,285,038

	2018		
(in thousands of dollars)	**PPS**	**CAH**	**Total**
Hospital			
Medicare	$ 432,251	$ 76,522	$ 508,773
Medicaid	117,019	10,017	127,036
Commercial	677,162	65,916	743,078
Self pay	10,687	2,127	12,814
	1,237,119	154,582	1,391,701
Professional			
Professional	412,605	24,703	437,308
VNH			22,719
Other revenue			203,915
Total operating revenue and other support	$ 1,649,724	$ 179,285	$ 2,055,643

Accounts Receivable

The principal components of patient accounts receivable as of June 30, 2019 and 2018 are as follows:

(in thousands of dollars)	2019	2018
Patient accounts recivable	$ 221,125	$ 351,456
Less: Allowance for doubtful accounts	-	(132,228)
Patient accounts receivable	$ 221,125	$ 219,228

The following table categorizes payors into four groups based on their respective percentages of gross patient accounts receivable as of June 30, 2019 and 2018:

	2019	2018
Medicare	34 %	34 %
Medicaid	12	14
Commercial	41	40
Self pay	13	12
Patient accounts receivable	100 %	100 %

5. Investments

The composition of investments at June 30, 2019 and 2018 is set forth in the following table:

(in thousands of dollars)	2019	2018
Assets limited as to use		
Internally designated by board		
Cash and short-term investments	$ 21,890	$ 8,558
U.S. government securities	91,492	50,484
Domestic corporate debt securities	196,132	109,240
Global debt securities	83,580	110,944
Domestic equities	167,384	142,796
International equities	128,909	106,668
Emerging markets equities	23,086	23,562
Real estate investment trust	213	816
Private equity funds	64,563	50,415
Hedge funds	32,287	32,831
	809,536	636,314
Investments held by captive insurance companies (Note 12)		
U.S. government securities	23,241	30,581
Domestic corporate debt securities	11,378	16,764
Global debt securities	10,080	4,513
Domestic equities	14,617	8,109
International equities	6,766	7,971
	66,082	67,938
Held by trustee under indenture agreement (Note 10)		
Cash and short-term investments	631	1,872
Total assets limited as to use	876,249	706,124
Other investments for restricted activities		
Cash and short-term investments	6,113	4,952
U.S. government securities	32,479	28,220
Domestic corporate debt securities	29,089	29,031
Global debt securities	11,263	14,641
Domestic equities	20,981	20,509
International equities	15,531	17,521
Emerging markets equities	2,578	2,155
Real estate investment trust	-	954
Private equity funds	7,638	4,878
Hedge funds	8,414	8,004
Other	33	31
Total other investments for restricted activities	134,119	130,896
Total investments	$ 1,010,368	$ 837,020

Investments are accounted for using either the fair value method or equity method of accounting, as appropriate on a case by case basis. The fair value method is used for all debt securities and equity securities that are traded on active markets and are valued at prices that are readily available in those markets. The equity method is used when investments are made in pooled/commingled investment funds that represent investments where shares or units are owned of pooled funds rather than the underlying securities in that fund. These pooled/commingled funds make underlying investments in securities from the asset classes listed above. All investments, whether the fair value or equity method of accounting is used, are reported at what the Health System believes to be the amount that the Health System would expect to receive if it liquidated its investments at the balance sheets date on a nondistressed basis.

The following tables summarize the investments by the accounting method utilized, as of June 30, 2019 and 2018. Accounting standards require disclosure of additional information for those securities accounted for using the fair value method, as shown in Note 7.

	2019		
(in thousands of dollars)	**Fair Value**	**Equity**	**Total**
Cash and short-term investments	$ 28,634	$ -	$ 28,634
U.S. government securities	147,212	-	147,212
Domestic corporate debt securities	164,996	71,603	236,599
Global debt securities	55,520	49,403	104,923
Domestic equities	178,720	24,262	202,982
International equities	76,328	74,878	151,206
Emerging markets equities	1,295	24,369	25,664
Real estate investment trust	213	-	213
Private equity funds	-	72,201	72,201
Hedge funds	-	40,701	40,701
Other	33	-	33
	$ 652,951	$ 357,417	$ 1,010,368

	2018		
(in thousands of dollars)	**Fair Value**	**Equity**	**Total**
Cash and short-term investments	$ 15,382	$ -	$ 15,382
U.S. government securities	109,285	-	109,285
Domestic corporate debt securities	95,481	59,554	155,035
Global debt securities	49,104	80,994	130,098
Domestic equities	157,011	14,403	171,414
International equities	60,002	72,158	132,160
Emerging markets equities	1,296	24,421	25,717
Real estate investment trust	222	1,548	1,770
Private equity funds	-	55,293	55,293
Hedge funds	-	40,835	40,835
Other	31	-	31
	$ 487,814	$ 349,206	$ 837,020

Investment income is comprised of the following for the years ended June 30, 2019 and 2018:

(in thousands of dollars)	2019	2018
Net assets without donor restrictions		
Interest and dividend income, net	$ 11,333	$ 12,324
Net realized gains on sales of securities	17,419	24,411
Change in net unrealized gains on investments	12,283	4,612
	41,035	41,347
Net assets with donor restrictions		
Interest and dividend income, net	987	1,526
Net realized gains on sales of securities	2,603	1,438
Change in net unrealized gains on investments	(908)	1,390
	2,682	4,354
	$ 43,717	$ 45,701

For the years ended June 30, 2019 and 2018 investment income is reflected in the accompanying consolidated statements of operations and changes in net assets as operating revenue of approximately $983,000 and $960,000 and as nonoperating gains of approximately $40,052,000 and $40,387,000, respectively.

Private equity limited partnership shares are not eligible for redemption from the fund or general partner, but can be sold to third party buyers in private transactions that typically can be completed in approximately 90 days. It is the intent of the Health System to hold these investments until the fund has fully distributed all proceeds to the limited partners and the term of the partnership agreement expires. Under the terms of these agreements, the Health System has committed to contribute a specified level of capital over a defined period of time. Through June 30, 2019 and 2018, the Health System has committed to contribute approximately $164,319,000 and $137,219,000 to such funds, of which the Health System has contributed approximately $109,584,000 and $91,942,000 and has outstanding commitments of $54,735,000 and $45,277,000, respectively.

6. Property, Plant, and Equipment

Property, plant, and equipment are summarized as follows at June 30, 2019 and 2018:

(in thousands of dollars)	2019	2018
Land	$ 38,232	$ 38,058
Land improvements	42,607	42,295
Buildings and improvements	898,050	876,537
Equipment	888,138	818,902
Equipment under capital leases	15,809	20,966
	1,882,836	1,796,758
Less: Accumulated depreciation and amortization	1,276,746	1,200,549
Total depreciable assets, net	606,090	596,209
Construction in progress	15,166	11,112
	$ 621,256	$ 607,321

As of June 30, 2019, construction in progress primarily consists of an addition to the ambulatory surgical center located in Manchester, NH as well as renovations taking place at the various pharmacy locations to bring their facilities compliant with Regulation USP800. The estimated cost to complete the ambulatory surgical center at June 30, 2019 is approximately $59,000,000 over the next two fiscal years while the pharmacy renovation is estimated to cost approximately $6,300,000 over the next fiscal year.

The construction in progress reported as of June 30, 2018 for the building renovations taking place at the birthing pavilion in Lebanon, NH was completed during the first quarter of fiscal year 2019 and the information systems PeopleSoft project for Alice Peck Day Memorial Hospital and Cheshire was completed in the fourth quarter of fiscal year 2019.

Depreciation and amortization expense included in operating and nonoperating activities was approximately $88,496,000 and $84,729,000 for 2019 and 2018, respectively.

7. Fair Value Measurements

The following is a description of the valuation methodologies for assets and liabilities measured at fair value on a recurring basis:

Cash and Short-Term Investments
Consists of money market funds and are valued at net asset value (NAV) reported by the financial institution.

Domestic, Emerging Markets and International Equities
Consists of actively traded equity securities and mutual funds which are valued at the closing price reported on an active market on which the individual securities are traded (Level 1 measurements).

U.S. Government Securities, Domestic Corporate and Global Debt Securities
Consists of U.S. government securities, domestic corporate and global debt securities, mutual funds and pooled/commingled funds that invest in U.S. government securities, domestic corporate and global debt securities. Securities are valued based on quoted market prices or dealer quotes where available (Level 1 measurement). If quoted market prices are not available, fair values are based on quoted market prices of comparable instruments or, if necessary, matrix pricing from a third party pricing vendor to determine fair value (Level 2 measurements). Matrix prices are based on quoted prices for securities with similar coupons, ratings and maturities, rather than on specific bids and offers for a designated security. Investments in mutual funds are measured based on the quoted NAV as of the close of business in the respective active market (Level 1 measurements).

The preceding methods may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. Furthermore, although the Health System believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date.

Investments are classified in their entirety based on the lowest level of input that is significant to the fair value measurement. The following tables set forth the consolidated financial assets and liabilities that were accounted for at fair value on a recurring basis as of June 30, 2019 and 2018:

	2019					
(in thousands of dollars)	Level 1	Level 2	Level 3	Total	Redemption or Liquidation	Days' Notice
Assets						
Investments						
Cash and short term investments	$ 28,634	$ -	$ -	$ 28,634	Daily	1
U.S. government securities	147,212	-	-	147,212	Daily	1
Domestic corporate debt securities	34,723	130,273	-	164,996	Daily–Monthly	1–15
Global debt securities	28,412	27,108	-	55,520	Daily–Monthly	1–15
Domestic equities	171,318	7,402	-	178,720	Daily–Monthly	1–10
International equities	76,295	33	-	76,328	Daily–Monthly	1–11
Emerging market equities	1,295	-	-	1,295	Daily–Monthly	1–7
Real estate investment trust	213	-	-	213	Daily–Monthly	1–7
Other	-	33	-	33	Not applicable	Not applicable
Total investments	488,102	164,849	-	652,951		
Deferred compensation plan assets						
Cash and short-term investments	2,952	-	-	2,952		
U.S. government securities	45	-	-	45		
Domestic corporate debt securities	4,932	-	-	4,932		
Global debt securities	1,300	-	-	1,300		
Domestic equities	22,403	-	-	22,403		
International equities	3,576	-	-	3,576		
Emerging market equities	27	-	-	27		
Real estate	11	-	-	11		
Multi strategy fund	48,941	-	-	48,941		
Guaranteed contract	-	-	89	89		
Total deferred compensation plan assets	84,187	-	89	84,276	Not applicable	Not applicable
Beneficial interest in trusts	-	-	9,301	9,301	Not applicable	Not applicable
Total assets	$ 572,289	$ 164,849	$ 9,390	$ 746,528		

	2018					
(in thousands of dollars)	Level 1	Level 2	Level 3	Total	Redemption or Liquidation	Days' Notice
Assets						
Investments						
Cash and short term investments	$ 15,382	$ -	$ -	$ 15,382	Daily	1
U.S. government securities	109,285	-	-	109,285	Daily	1
Domestic corporate debt securities	41,488	53,993	-	95,481	Daily–Monthly	1–15
Global debt securities	32,874	16,230	-	49,104	Daily–Monthly	1–15
Domestic equities	157,011	-	-	157,011	Daily–Monthly	1–10
International equities	59,924	78	-	60,002	Daily–Monthly	1–11
Emerging market equities	1,296	-	-	1,296	Daily–Monthly	1–7
Real estate investment trust	222	-	-	222	Daily–Monthly	1–7
Other	-	31	-	31	Not applicable	Not applicable
Total investments	417,482	70,332	-	487,814		
Deferred compensation plan assets						
Cash and short-term investments	2,637	-	-	2,637		
U.S. government securities	38	-	-	38		
Domestic corporate debt securities	3,749	-	-	3,749		
Global debt securities	1,089	-	-	1,089		
Domestic equities	18,470	-	-	18,470		
International equities	3,584	-	-	3,584		
Emerging market equities	28	-	-	28		
Real estate	9	-	-	9		
Multi strategy fund	46,680	-	-	46,680		
Guaranteed contract	-	-	86	86		
Total deferred compensation plan assets	76,284	-	86	76,370	Not applicable	Not applicable
Beneficial interest in trusts	-	-	9,374	9,374	Not applicable	Not applicable
Total assets	$ 493,766	$ 70,332	$ 9,460	$ 573,558		

The following table is a rollforward of financial instruments classified by the Health System within Level 3 of the fair value hierarchy defined above.

	2019		
(in thousands of dollars)	Beneficial Interest in Perpetual Trust	Guaranteed Contract	Total
Balances at beginning of year	$ 9,374	$ 86	$ 9,460
Net unrealized gains (losses)	(73)	3	(70)
Balances at end of year	$ 9,301	$ 89	$ 9,390

	2018		
(in thousands of dollars)	Beneficial Interest in Perpetual Trust	Guaranteed Contract	Total
Balances at beginning of year	$ 9,244	$ 83	$ 9,327
Net unrealized gains	130	3	133
Balances at end of year	$ 9,374	$ 86	$ 9,460

There were no transfers into and out of Level 1 and 2 measurements due to changes in valuation methodologies during the years ended June 30, 2019 and 2018.

8. Net Assets With Donor Restrictions

Net assets with donor restrictions are available for the following purposes at June 30, 2019 and 2018:

(in thousands of dollars)	2019	2018
Healthcare services	$ 20,140	$ 19,570
Research	26,496	24,732
Purchase of equipment	3,273	3,068
Charity care	12,494	13,667
Health education	19,833	18,429
Other	3,841	2,973
Investments held in perpetuity	56,383	55,394
	$ 142,460	$ 137,833

Income earned on donor restricted net assets held in perpetuity is available for these purposes.

9. Board Designated and Endowment Funds

Net assets include numerous funds established for a variety of purposes including both donor-restricted endowment funds and funds designated by the Board of Trustees to function as endowments. Net assets associated with endowment funds, including funds designated by the Board of Trustees to function as endowments, are classified and reported based on the existence or absence of donor-imposed restrictions.

The Board of Trustees has interpreted the NH and VT Uniform Prudent Management of Institutional Funds Acts (UPMIFA or Act) for donor-restricted endowment funds as requiring the preservation of the original value of gifts, as of the gift date, to donor-restricted endowment funds, absent explicit donor stipulations to the contrary. The Health System's net assets with donor restrictions which are to be held in perpetuity consist of (a) the original value of gifts donated to the permanent endowment, (b) the original value of subsequent gifts to be held in perpetuity, and (c) accumulations to the permanent endowment made in accordance with the direction of the applicable donor gift instrument at the time the accumulation is added to the fund, if any. Collectively these amounts are referred to as the historic dollar value of the fund.

Net assets without donor restrictions include funds designated by the Board of Trustees to function as endowments and the income from certain donor-restricted endowment funds, and any accumulated investment return thereon, which pursuant to donor intent may be expended based on trustee or management designation. Net assets with donor restrictions that are temporary in nature, either restricted by time or purpose, include funds appropriated for expenditure pursuant to endowment and investment spending policies, certain expendable endowment gifts from donors, and any retained income and appreciation on donor-restricted endowment funds, which are restricted by the donor to a specific purpose or by law. When the restrictions on these funds have been met, the funds are reclassified to net assets without donor restrictions.

In accordance with the Act, the Health System considers the following factors in making a determination to appropriate or accumulate donor-restricted endowment funds: the duration and preservation of the fund; the purposes of the donor-restricted endowment fund; general economic conditions; the possible effect of inflation and deflation; the expected total return from income and the appreciation of investments; other resources available; and investment policies.

The Health System has endowment investment and spending policies that attempt to provide a predictable stream of funding for programs supported by its endowment while ensuring that the purchasing power does not decline over time. The Health System targets a diversified asset allocation that places emphasis on investments in domestic and international equities, fixed income, private equity, and hedge fund strategies to achieve its long-term return objectives within prudent risk constraints. The Health System's Investment Committee reviews the policy portfolio asset allocations, exposures, and risk profile on an ongoing basis.

The Health System, as a policy, may appropriate for expenditure or accumulate so much of an endowment fund as the institution determines is prudent for the uses, benefits, purposes, and duration for which the endowment is established, subject to donor intent expressed in the gift instrument and the standard of prudence prescribed by the Act.

From time to time, the fair value of assets associated with individual donor-restricted endowment funds may fall below their original contributed value. Such market losses were not material as of June 30, 2019 and 2018.

Endowment net asset composition by type of fund consists of the following at June 30, 2019 and 2018:

	2019		
(in thousands of dollars)	Without Donor Restrictions	With Donor Restrictions	Total
Donor-restricted endowment funds	$ -	$ 78,268	$ 78,268
Board-designated endowment funds	31,421	-	31,421
Total endowed net assets	$ 31,421	$ 78,268	$ 109,689

	2018		
(in thousands of dollars)	Without Donor Restrictions	With Donor Restrictions	Total
Donor-restricted endowment funds	$ -	$ 78,197	$ 78,197
Board-designated endowment funds	29,506	-	29,506
Total endowed net assets	$ 29,506	$ 78,197	$ 107,703

Changes in endowment net assets for the years ended June 30, 2019 and 2018 are as follows:

(in thousands of dollars)	2019 Without Donor Restrictions	2019 With Donor Restrictions	2019 Total
Balances at beginning of year	$ 29,506	$ 78,197	$ 107,703
Net investment return	1,184	2,491	3,675
Contributions	804	1,222	2,026
Transfers	(73)	(1,287)	(1,360)
Release of appropriated funds	-	(2,355)	(2,355)
Balances at end of year	$ 31,421	$ 78,268	$ 109,689

(in thousands of dollars)	2018 Without Donor Restrictions	2018 With Donor Restrictions	2018 Total
Balances at beginning of year	$ 26,389	$ 75,457	$ 101,846
Net investment return	3,112	4,246	7,358
Contributions	-	1,121	1,121
Transfers	5	(35)	(30)
Release of appropriated funds	-	(2,592)	(2,592)
Balances at end of year	$ 29,506	$ 78,197	$ 107,703

10. Long-Term Debt

A summary of long-term debt at June 30, 2019 and 2018 is as follows:

(in thousands of dollars)	2019	2018
Variable rate issues		
New Hampshire Health and Education facilities Authority (NHHEFA) revenue bonds		
Series 2018A, principal maturing in varying annual amounts, through August 2037 (1)	$ 83,355	$ 83,355
Fixed rate issues		
New Hampshire Health and Education facilities Authority revenue bonds		
Series 2018B, principal maturing in varying annual amounts, through August 2048 (1)	303,102	303,102
Series 2017A, principal maturing in varying annual amounts, through August 2040 (2)	122,435	122,435
Series 2017B, principal maturing in varying annual amounts, through August 2031 (2)	109,800	109,800
Series 2014A, principal maturing in varying annual amounts, through August 2022 (3)	26,960	26,960
Series 2018C, principal maturing in varying annual amounts, through August 2030 (4)	25,865	-
Series 2012, principal maturing in varying annual amounts, through July 2039 (5)	25,145	25,955
Series 2014B, principal maturing in varying annual amounts, through August 2033 (3)	14,530	14,530
Series 2016B, principal maturing in varying annual amounts, through August 2045 (6)	10,970	10,970
Total variable and fixed rate debt	$ 722,162	$ 697,107

A summary of long-term debt at June 30, 2019 and 2018 is as follows:

(in thousands of dollars)	2019	2018
Other		
Series 2010, principal maturing in varying annual amounts, through August 2040 (7)*	$ -	$ 15,498
Note payable to a financial institution payable in interest free monthly installments through July 2015; collateralized by associated equipment*	445	646
Note payable to a financial institution with entire principal due June 2029 that is collateralized by land and building. The note payable is interest free*	323	380
Mortgage note payable to the US Dept of Agriculture; monthly payments of $10,892 include interest of 2.375% through November 2046*	2,629	2,697
Obligations under capital leases	17,526	18,965
Total other debt	20,923	38,186
Total variable and fixed rate debt	722,162	697,107
Total long-term debt	743,085	735,293
Less: Original issue discounts and premiums, net	(25,542)	(26,862)
Bond issuance costs, net	5,533	5,716
Current portion	10,914	3,464
	$ 752,180	$ 752,975

* Represents nonobligated group bonds

Aggregate annual principal payments required under revenue bond agreements and capital lease obligations for the next five years ending June 30 and thereafter are as follows:

(in thousands of dollars)	
2020	$ 10,914
2021	10,693
2022	10,843
2023	7,980
2024	3,016
Thereafter	699,639
	$ 743,085

Dartmouth-Hitchcock Obligated Group (DHOG) Bonds
MHMH established the DHOG in 1993 for the original purpose of issuing bonds financed through NHHEFA or the "Authority": The members of the obligated group consist of D-HH, MHMH, DHC, Cheshire, NLH, MAHHC, and, effective August 15, 2018, APD. D-HH is designated as the obligated group agent.

Revenue Bonds issued by members of the DHOG are administered through notes registered in the name of the Bond Trustee and in accordance with the terms of a Master Trust Indenture. The Master Trust Indenture contains provisions permitting the addition, withdrawal, or consolidation of members of the DHOG under certain conditions. The notes constitute a joint and several obligation of the members of the DHOG (and any other future members of the DHOG) and are equally and ratably collateralized by a pledge of the members' gross receipts. The DHOG is also subject to certain annual covenants under the Master Trust Indenture, the most restrictive is the Annual Debt Service Coverage Ratio (1.10x).

(1) Series 2018A and Series 2018B Revenue Bonds

The DHOG issued NHHEFA Revenue Bonds, Series 2018A and Series 2018B in February 2018. The Series 2018A Revenue Bonds were primarily used to refund a portion of Series 2015A and Series 2016A. The Series 2018B were primarily used to refund a portion of Series 2015A and Series 2016A, Revolving Line of Credit, Series 2012 Bank Loan and the Series 2015A and Series 2016A Swap terminations. A loss on the extinguishment of debt of approximately $578,000 was recognized in nonoperating gains (losses) on the statement of operations and changes in net assets, as a result of the refinancing. The interest on the Series 2018A Revenue Bonds is variable with a current interest rate of 5.00% and matures in variable amounts through 2037. The interest on the Series 2018B Revenue Bonds is fixed with an interest rate of 4.18% and matures in variable amounts through 2048.

(2) Series 2017A and Series 2017B Revenue Bonds

The DHOG issued NHHEFA Revenue Bonds, Series 2017A and Series 2017B in December, 2017. The Series 2017A Revenue Bonds were primarily used to refund Series 2009 and Series 2010 and the Series 2017B Revenue Bonds were used to refund Series 2012A and Series 2012B. The interest on the Series 2017A Revenue Bonds is fixed with an interest rate of 5.00% and matures in variable amounts through 2040. The interest on the Series 2017B Revenue Bonds is fixed with an interest rate of 2.54% and matures in variable amounts through 2031.

(3) Series 2014A and Series 2014B Revenue Bonds

The DHOG issued NHHEFA Revenue Bonds, Series 2014A and Series 2014B in August 2014. The proceeds from the Series 2014A and 2014B Revenue Bonds were used to partially refund the Series 2009 Revenue Bonds and to cover cost of issuance. Interest on the 2014A Revenue Bonds is fixed with an interest rate of 2.63% and matures at various dates through 2022. Interest on the Series 2014B Revenue Bonds is fixed with an interest rate of 4.00% and matures at various dates through 2033.

(4) Series 2018C Revenue Bonds

The DHOG issued NHHEFA Revenue Bonds, Series 2018C in August, 2018. The Series 2018C Revenue Bonds were used primarily to refinance the Series 2010 Revenue Bonds. The interest on the series 2018C Revenue Bonds is fixed with an interest rate of 3.22% and matures in variable amounts through 2030.

(5) Series 2012 Revenue Bonds

The NHHEFA issued $29,650,000 of tax-exempt Revenue Bonds, Series 2012. The proceeds of these bonds were used to refund 1998 and 2009 Series Bonds, to finance the settlement cost of the interest rate swap, and to finance the purchase of certain equipment and renovations. The bonds have fixed interest coupon rates ranging from 2.0% to 5.0% (a net interest cost of 3.96%), and matures in variable amounts through 2039.

(6) Series 2016B Revenue Bonds

The DHOG issued NHHEFA Revenue Bonds, Series 2016B in July 2016 through a private placement with a financial institution. The Series 2016B Revenue Bonds were used to finance 2016 projects. The Series 2016B is fixed with an interest rate of 1.78% and matures at various dates through 2045.

Outstanding joint and several indebtedness of the DHOG at June 30, 2019 and 2018 approximates $722,162,000 and $697,107,000, respectively.

Non Obligated Group Bonds
(1) Series 2010 Revenue Bonds

The Business Finance Authority (BFA) of the State of NH issued Revenue Bonds, Series 2010. Interest is based on an annual percentage rate equal to the sum of (a) 69% of the 1-Month LIBOR rate plus (b) 1.8975/5. The Health System redeemed these bonds in August 2018.

The Health System Indenture agreements require establishment and maintenance of debt service reserves and other trustee held funds. Trustee held funds of approximately $631,000 and $1,872,000 at June 30, 2019 and 2018, respectively, are classified as assets limited as to use in the accompanying consolidated balance sheets (Note 5). The debt service reserves are mainly comprised of escrowed funds held for future principal and interest payments.

For the years ended June 30, 2019 and 2018 interest expense on the Health System's long term debt is reflected in the accompanying consolidated statements of operations and changes in net assets as operating expense of approximately $25,514,000 and $18,822,000 and other nonoperating losses of $3,784,000 and $2,793,000, respectively.

Swap Agreements
The Health System is subject to market risks such as changes in interest rates that arise from normal business operation. The Health System regularly assesses these risks and has established business strategies to provide natural offsets, supplemented by the use of derivative financial instruments to protect against the adverse effect of these and other market risks. The Health System has established clear policies, procedures, and internal controls governing the use of derivatives and does not use them for trading, investment, or other speculative purposes.

As of June 30, 2019 and 2018, there was no liability for interest rate swaps as all remaining swaps were terminated in February 2018. For the year ended June 30, 2018, the Health System recognized a nonoperating loss due to swap termination of $14,247,000 relating to the swap termination. The change in fair value during the year ended June 30, 2018 was a decrease of $4,897,000. For the year ended June 30, 2018 the Health System recognized a nonoperating gain of $145,000 resulting from hedge ineffectiveness and amortization of frozen swaps.

11. Employee Benefits

All eligible employees of the Health System are covered under various defined benefit and/or define contribution plans. In addition, certain members provide postretirement medical and life benefit plans to certain of its active and former employees who meet eligibility requirements. The postretirement medical and life plans are not funded.

All of the defined benefit plans within the Health System have been frozen and therefore there are no remaining participants earning benefits in any of the Health System's defined benefit plans.

The Health System continued to execute the settlement of obligations due to retirees in the defined benefit plans through bulk lump sum offerings or purchases of annuity contracts. The annuity purchases follow guidelines established by the Department of Labor (DOL). The Health System anticipates continued consideration and/or implementation of additional settlements over the next several years.

Defined Benefit Plans
Net periodic pension expense included in employee benefits in the consolidated statements of operations and changes in net assets is comprised of the components listed below for the years ended June 30, 2019 and 2018:

(in thousands of dollars)	2019	2018
Service cost for benefits earned during the year	$ 150	$ 150
Interest cost on projected benefit obligation	47,814	47,190
Expected return on plan assets	(65,270)	(64,561)
Net loss amortization	10,357	10,593
Total net periodic pension expense	$ (6,949)	$ (6,628)

The following assumptions were used to determine net periodic pension expense as of June 30, 2019 and 2018:

	2019	2018
Discount rate	3.90 % – 4.60%	4.00 % – 4.30 %
Rate of increase in compensation	N/A	N/A
Expected long-term rate of return on plan assets	7.50%	7.50 % – 7.75 %

The following table sets forth the funded status and amounts recognized in the Health System's consolidated financial statements for the defined benefit pension plans at June 30, 2019 and 2018:

(in thousands of dollars)	2019	2018
Change in benefit obligation		
Benefit obligation at beginning of year	$ 1,087,940	$ 1,122,615
Service cost	150	150
Interest cost	47,814	47,190
Benefits paid	(51,263)	(47,550)
Expenses paid	(170)	(172)
Actuarial (gain) loss	93,358	(34,293)
Settlements	(42,306)	-
Benefit obligation at end of year	1,135,523	1,087,940
Change in plan assets		
Fair value of plan assets at beginning of year	884,983	878,701
Actual return on plan assets	85,842	33,291
Benefits paid	(51,263)	(47,550)
Expenses paid	(170)	(172)
Employer contributions	20,631	20,713
Settlements	(42,306)	-
Fair value of plan assets at end of year	897,717	884,983
Funded status of the plans	(237,806)	(202,957)
Less: Current portion of liability for pension	(46)	(45)
Long term portion of liability for pension	(237,760)	(202,912)
Liability for pension	$ (237,760)	$ (202,912)

As of June 30, 2019 and 2018 the liability, for pension is included in the liability for pension and other postretirement plan benefits in the accompanying consolidated balance sheets.

Amounts not yet reflected in net periodic pension expense and included in the change in net assets without donor restrictions include approximately $478,394,000 and $418,971,000 of net actuarial loss as of June 30, 2019 and 2018, respectively.

The estimated amounts to be amortized from net assets without donor restrictions into net periodic pension expense in fiscal year 2020 for net actuarial losses is $12,032,000.

The accumulated benefit obligation for the defined benefit pension plans was approximately $1,135,770,000 and $1,087,991,000 at June 30, 2019 and 2018, respectively.

The following table sets forth the assumptions used to determine the benefit obligation at June 30, 2019 and 2018:

	2019	2018
Discount rate	4.20% - 4.50%	4.20 % – 4.50 %
Rate of increase in compensation	N/A	N/A

The primary investment objective for the Plan's assets is to support the Pension liabilities of the Pension Plans for Employees of the Health System, by providing long-term capital appreciation and by also using a Liability Driven Investing ("LDI") strategy to partially hedge the impact fluctuating interest rates have on the value of the Plan's liabilities. As of both June 30, 2019 and 2018, it is expected that the LDI strategy will hedge approximately 60% of the interest rate risk associated with pension liabilities. To achieve the appreciation and hedging objectives, the Plans utilize a diversified structure of asset classes designed to achieve stated performance objectives measured on a total return basis, which includes income plus realized and unrealized gains and losses.

The range of target allocation percentages and the target allocations for the various investments are as follows:

	Range of Target Allocations	Target Allocations
Cash and short-term investments	0–5%	3 %
U.S. government securities	0–10	5
Domestic debt securities	20–58	38
Global debt securities	6–26	8
Domestic equities	5–35	19
International equities	5–15	11
Emerging market equities	3–13	5
Real estate investment trust funds	0–5	0
Private equity funds	0–5	0
Hedge funds	5–18	11

To the extent an asset class falls outside of its target range on a quarterly basis, the Health System shall determine appropriate steps, as it deems necessary, to rebalance the asset class.

The Boards of Trustees of the Health System, as Plan Sponsors, oversee the design, structure, and prudent professional management of the Health System's Plans' assets, in accordance with Board approved investment policies, roles, responsibilities and authorities and more specifically the following:

- Establishing and modifying asset class targets with Board-approved policy ranges,
- Approving the asset class rebalancing procedures,
- Hiring and terminating investment managers, and
- Monitoring performance of the investment managers, custodians and investment consultants.

The hierarchy and inputs to valuation techniques to measure fair value of the Plans' assets are the same as outlined in Note 7. In addition, the estimation of fair value of investments in private equity and hedge funds for which the underlying securities do not have a readily determinable value is made using the NAV per share or its equivalent as a practical expedient. The Health System's Plans own interests in these funds rather than in securities underlying each fund and, therefore, are generally required to consider such investments as Level 2 or 3, even though the underlying securities may not be difficult to value or may be readily marketable.

The following table sets forth the Health System's Plans' investments and deferred compensation plan assets that were accounted for at fair value as of June 30, 2019 and 2018:

	2019					
(in thousands of dollars)	Level 1	Level 2	Level 3	Total	Redemption or Liquidation	Days' Notice
Investments						
Cash and short-term investments	$ 166	$ 18,232	$ -	$ 18,398	Daily	1
U.S. government securities	48,580	-	-	48,580	Daily–Monthly	1–15
Domestic debt securities	122,178	273,424	-	395,602	Daily–Monthly	1–15
Global debt securities	428	75,146	-	75,574	Daily–Monthly	1–15
Domestic equities	159,259	18,316	-	177,575	Daily–Monthly	1–10
International equities	17,232	77,146	-	94,378	Daily–Monthly	1–11
Emerging market equities	321	39,902	-	40,223	Daily–Monthly	1–17
REIT funds	357	2,883	-	3,240	Daily–Monthly	1–17
Private equity funds	-	-	21	21	See Note 7	See Note 7
Hedge funds	-	-	44,126	44,126	Quarterly–Annual	60–96
Total investments	$ 348,521	$ 505,049	$ 44,147	$ 897,717		

	2018					
(in thousands of dollars)	Level 1	Level 2	Level 3	Total	Redemption or Liquidation	Days' Notice
Investments						
Cash and short-term investments	$ 142	$ 35,817	$ -	$ 35,959	Daily	1
U.S. government securities	46,265	-	-	46,265	Daily–Monthly	1–15
Domestic debt securities	144,131	220,202	-	364,333	Daily–Monthly	1–15
Global debt securities	470	74,676	-	75,146	Daily–Monthly	1–15
Domestic equities	158,634	17,594	-	176,228	Daily–Monthly	1–10
International equities	18,656	80,803	-	99,459	Daily–Monthly	1–11
Emerging market equities	382	39,881	-	40,263	Daily–Monthly	1–17
REIT funds	371	2,686	-	3,057	Daily–Monthly	1–17
Private equity funds	-	-	23	23	See Note 7	See Note 7
Hedge funds	-	-	44,250	44,250	Quarterly–Annual	60–96
Total investments	$ 369,051	$ 471,659	$ 44,273	$ 884,983		

The following table presents additional information about the changes in Level 3 assets measured at fair value for the years ended June 30, 2019 and 2018:

	2019		
(in thousands of dollars)	Hedge Funds	Private Equity Funds	Total
Balances at beginning of year	$ 44,250	$ 23	$ 44,273
Net unrealized losses	(124)	(2)	(126)
Balances at end of year	$ 44,126	$ 21	$ 44,147

	2018		
(in thousands of dollars)	Hedge Funds	Private Equity Funds	Total
Balances at beginning of year	$ 40,507	$ 96	$ 40,603
Sales	-	(51)	(51)
Net realized losses	-	(51)	(51)
Net unrealized gains	3,743	29	3,772
Balances at end of year	$ 44,250	$ 23	$ 44,273

The total aggregate net unrealized gains (losses) included in the fair value of the Level 3 investments as of June 30, 2019 and 2018 were approximately $14,617,000 and $14,743,000, respectively. There were no transfers into and out of Level 3 measurements during the years ended June 30, 2019 and 2018.

There were no transfers into and out of Level 1 and 2 measurements due to changes in valuation methodologies during the years ended June 30, 2019 and 2018.

The weighted average asset allocation for the Health System's Plans at June 30, 2019 and 2018 by asset category is as follows:

	2019	2018
Cash and short-term investments	2 %	4 %
U.S. government securities	5	5
Domestic debt securities	44	41
Global debt securities	9	9
Domestic equities	20	20
International equities	11	11
Emerging market equities	4	5
Hedge funds	5	5
	100 %	100 %

The expected long-term rate of return on plan assets is reviewed annually, taking into consideration the asset allocation, historical returns on the types of assets held, and the current economic environment. Based on these factors, it is expected that the pension assets will earn an average of 7.50% per annum.

The Health System is expected to contribute approximately $20,426,000 to the Plans in 2020 however actual contributions may vary from expected amounts.

The following benefit payments, which reflect expected future service, as appropriate, are expected to be paid for the years ending June 30 and thereafter:

(in thousands of dollars)

2020	$ 50,743
2021	52,938
2022	55,199
2023	57,562
2024	59,843
2025 – 2028	326,737

Defined Contribution Plans
The Health System has an employer-sponsored 401(a) plan for certain of its members, under which the employer makes base, transition and discretionary match contributions based on specified percentages of compensation and employee deferral amounts. Total employer contributions to the plan of approximately $40,537,000 and $38,563,000 in 2019 and 2018, respectively, are included in employee benefits in the accompanying consolidated statements of operations and changes in net assets.

Various 403(b) and tax- sheltered annuity plans are available to employees of the Health System. Plan specifications vary by member and plan. No employer contributions were made to any of these plans in 2019 and 2018, respectively.

Postretirement Medical and Life Benefits
The Health System has postretirement medical and life benefit plans covering certain of its active and former employees. The plans generally provide medical or medical and life insurance benefits to certain retired employees who meet eligibility requirements. The plans are not funded.

Net periodic postretirement medical and life benefit (income) cost is comprised of the components listed below for the years ended June 30, 2019 and 2018:

(in thousands of dollars)	2019	2018
Service cost	$ 384	$ 533
Interest cost	1,842	1,712
Net prior service income	(5,974)	(5,974)
Net loss amortization	10	10
	$ (3,738)	$ (3,719)

The following table sets forth the accumulated postretirement medical and life benefit obligation and amounts recognized in the Health System's consolidated financial statements at June 30, 2019 and 2018:

(in thousands of dollars)	2019	2018
Change in benefit obligation		
Benefit obligation at beginning of year	$ 42,581	$ 42,277
Service cost	384	533
Interest cost	1,842	1,712
Benefits paid	(3,149)	(3,174)
Actuarial loss	5,013	1,233
Employer contributions	-	-
Benefit obligation at end of year	46,671	42,581
Funded status of the plans	$ (46,671)	$ (42,581)
Current portion of liability for postretirement medical and life benefits	$ (3,422)	$ (3,266)
Long term portion of liability for postretirement medical and life benefits	(43,249)	(39,315)
Liability for postretirement medical and life benefits	$ (46,671)	$ (42,581)

As of June 30, 2019 and 2018, the liability for postretirement medical and life benefits is included in the liability for pension and other postretirement plan benefits in the accompanying consolidated balance sheets.

Amounts not yet reflected in net periodic postretirement medical and life benefit income and included in the change in net assets without donor restrictions are as follows:

(in thousands of dollars)	2019	2018
Net prior service income	$ (9,556)	$ (15,530)
Net actuarial loss	8,386	3,336
	$ (1,170)	$ (12,194)

The estimated amounts that will be amortized from net assets without donor restrictions into net periodic postretirement income in fiscal year 2020 for net prior service cost is $5,974,000.

The following future benefit payments, which reflect expected future service, as appropriate, are expected to be paid for the year ending June 30, 2020 and thereafter:

(in thousands of dollars)	
2020	$ 3,468
2021	3,436
2022	3,394
2023	3,802
2024	3,811
2025-2028	17,253

In determining the accumulated postretirement medical and life benefit obligation, the Health System used a discount rate of 3.70% in 2019 and an assumed healthcare cost trend rate of 6.50%, trending down to 5.00% in 2024 and thereafter. Increasing the assumed healthcare cost trend rates by one percentage point in each year would increase the accumulated postretirement medical benefit obligation as of June 30, 2019 and 2018 by $1,601,000 and $1,088,000 and the net periodic postretirement medical benefit cost for the years then ended by $77,000 and $81,000, respectively. Decreasing the assumed healthcare cost trend rates by one percentage point in each year would decrease the accumulated postretirement medical benefit obligation as of June 30, 2019 and 2018 by $1,452,000 and $996,000 and the net periodic postretirement medical benefit cost for the years then ended by $71,000 and $72,000, respectively.

12. Professional and General Liability Insurance Coverage

Mary Hitchcock Memorial Hospital and Dartmouth-Hitchcock Clinic, along with Dartmouth College, Cheshire Medical Center, The New London Hospital Association, Mt. Ascutney Hospital and Health Center, and the Visiting Nurse and Hospice for VT and NH are provided professional and general liability insurance on a claims-made basis through Hamden Assurance Risk Retention Group, Inc. (RRG), a VT captive insurance company. Effective November 1, 2018 Alice Peck Day Memorial Hospital is provided professional and general liability insurance coverage through RRG. RRG reinsures the majority of this risk to Hamden Assurance Company Limited (HAC), a captive insurance company domiciled in Bermuda and to a variety of commercial reinsurers. Mary Hitchcock Memorial Hospital, Dartmouth-Hitchcock Clinic, and Dartmouth College have ownership interests in both HAC and RRG. The insurance program provides coverage to the covered institutions and named insureds on a modified claims-made basis which means coverage is triggered when claims are made. Premiums and related insurance deposits are actuarially determined based on asserted liability claims adjusted for future development. The reserves for outstanding losses are recorded on an undiscounted basis.

Selected financial data of HAC and RRG, taken from the latest available financial statements at June 30, 2019 and 2018, are summarized as follows:

	2019		
(in thousands of dollars)	HAC	RRG	Total
Assets	$ 75,867	$ 2,201	$ 78,068
Shareholders' equity	13,620	50	13,670

	2018		
(in thousands of dollars)	HAC	RRG	Total
Assets	$ 72,753	$ 2,068	$ 74,821
Shareholders' equity	13,620	50	13,670

13. Commitments and Contingencies

Litigation

The Health System is involved in various malpractice claims and legal proceedings of a nature considered normal to its business. The claims are in various stages and some may ultimately be brought to trial. While it is not feasible to predict or determine the outcome of any of these claims, it is the opinion of management that the final outcome of these claims will not have a material effect on the consolidated financial position of the Health System.

Operating Leases and Other Commitments

The Health System leases certain facilities and equipment under operating leases with varying expiration dates. The Health System's rental expense totaled approximately $12,707,000 and $14,096,000 for the years ended June 30, 2019 and 2018, respectively.

Minimum future lease payments under noncancelable operating leases at June 30, 2019 were as follows:

(in thousands of dollars)	
2020	$ 11,342
2021	10,469
2022	7,488
2023	6,303
2024	4,127
Thereafter	5,752
	$ 45,481

Lines of Credit

The Health System has entered into Loan Agreements with financial institutions establishing access to revolving loans ranging from $2,000,000 up to $30,000,000. Interest is variable and determined using LIBOR or the Wall Street Journal Prime Rate. The Loan Agreements are due to expire March 27, 2020. There was no outstanding balance under the lines of credit as of June 30, 2019 and 2018. Interest expense was approximately $95,000 and $232,000, respectively, and is included in the consolidated statements of operations and changes in net assets.

14. Functional Expenses

Operating expenses are presented by functional classification in accordance with the overall service missions of the Health System. Each functional classification displays all expenses related to the underlying operations by natural classification. Salaries, employee benefits, medical supplies and medications, and purchased services and other expenses are generally considered variable and are allocated to the mission that best aligns to the type of service provided. Medicaid enhancement tax is allocated to program services. Interest expense is allocated based on usage of debt-financed space. Depreciation and amortization is allocated based on square footage and specific identification of equipment used by department.

Operating expenses of the Health System by functional and natural basis are as follows for the year ended June 30, 2019:

	2019			
(in thousands of dollars)	Program Services	Management and General	Fundraising	Total
Operating expenses				
Salaries	$ 922,902	$ 138,123	$ 1,526	$ 1,062,551
Employee benefits	178,983	72,289	319	251,591
Medical supplies and medications	406,782	1,093	-	407,875
Purchased services and other	212,209	108,783	2,443	323,435
Medicaid enhancement tax	70,061	-	-	70,061
Depreciation and amortization	37,528	50,785	101	88,414
Interest	3,360	22,135	19	25,514
Total operating expenses	$ 1,831,825	$ 393,208	$ 4,408	$ 2,229,441

Operating expenses of the Health System by functional classification are as follows for the year ended June 30, 2018:

(in thousands of dollars)

Program services	$ 1,715,760
Management and general	303,527
Fundraising	2,354
	$ 2,021,641

15. Liquidity

The Health System is substantially supported by cash generated from operations. In addition, the Health System holds financial assets for specific purposes which are limited as to use. Thus, certain financial assets reported on the accompanying consolidated balance sheet may not be available for general expenditure within one year of the balance sheet date.

The Health System's financial assets available at June 30, 2019 to meet cash needs for general expenditures within one year of June 30, 2019 are as follows:

(in thousands of dollars)

Cash and cash equivalents	$ 143,587
Patient accounts receivable	221,125
Assets limited as to use	876,249
Other investments for restricted activities	134,119
Total financial assets	1,375,080
Less: Those unavailable for general expenditure within one year:	
Investments held by captive insurance companies	66,082
Investments for restricted activities	134,119
Other investments with liquidity horizons greater than one year	97,063
Total financial assets available within one year	$ 1,077,816

For the years ending June 30, 2019 and June 30, 2018, the Health System generated positive cash flow from operations of approximately $161,853,000 and $136,031,000, respectively. In addition, the Health System's liquidity management plan includes investing excess daily cash in intermediate or long term investments based on anticipated liquidity needs. The Health System has an available line of credit of up to $30,000,000 which it can draw upon as needed to meet its liquidity needs. See Note 13 for further details on the line of credit.

16. Subsequent Events

The Health System has assessed the impact of subsequent events through November 26, 2019, the date the audited consolidated financial statements were issued, and has concluded that there were no such events that require adjustment to the audited consolidated financial statements or disclosure in the notes to the audited consolidated financial statements other than as noted below.

Effective September 30, 2019, the Boards of Trustees of D-HH, GraniteOne Health, Catholic Medical Center Health Services, and their respective member organizations approved a Combination Agreement to combine their healthcare systems. If regulatory approval of the

transaction is obtained, the name of the new system will be Dartmouth-Hitchcock Health GraniteOne.

The GraniteOne Health system is comprised of Catholic Medical Center (CMC), a community hospital located in Manchester NH, Huggins Hospital located in Wolfeboro NH, and Monadnock Community Hospital located in Peterborough NH. Both Huggins Hospital and Monadnock Community Hospital are designated as Critical Access Hospitals. GraniteOne is a non-profit, community based health care system.

On September 13, 2019, the Board of Trustees of D-HH approved the issuance of up to $100,000,000 par of new debt. On October 17, 2019, D-HH closed on the direct placement tax-exempt borrowing of $99,165,000 on behalf of the DHOG acting through the New Hampshire Health and Education Facilities Authority and issued its DHOG Issue, Series 2019A Bonds.

On January 29, 2020, D-HH closed on a tax-exempt borrowing of $125,000,000 on behalf of the DHOG acting through the New Hampshire Health and Education Facilities Authority and issued its DHOG Issue, Series 2020A Bonds.

17. Subsequent Events - Unaudited

Subsequent to the issuance of the audited financial statements on November 26, 2019, the novel strain of coronavirus emerged and in January 2020 the World Health Organization has declared the novel coronavirus a Public Health Emergency of International Concern. Beginning in March 2020, the State of New Hampshire and Vermont have adopted various measures to address the spread of this pandemic, including supporting social distancing, requests to stay home unless necessary (i.e., groceries or medications) and work from home recommendations. Such restrictions and the perception that such orders or restrictions could occur, have resulted in business closures, work stoppages, slowdowns and delays, work-from-home policies, travel restrictions and cancellation of events, including the rescheduling of elective or non-critical procedures (which management believes is temporary and such procedures will be performed at a later date) and redeployment of resources to address the novel coronavirus needs, among other effects. The outbreak has also negatively impacted the financial markets and has and may continue to materially affect the returns on and value of our investments. While we expect that the novel coronavirus may negatively impact our 2020 results, we believe we have sufficient liquidity to meet our operating and financing needs; however, given the difficulty in predicting the ultimate duration and severity of the impact of the novel coronavirus on our organization, the economy and the financial markets, the ultimate impact may be material.

Consolidating Supplemental Information – Unaudited

Dartmouth-Hitchcock Health and Subsidiaries
Consolidating Balance Sheets
June 30, 2019

(In thousands of dollars)	Dartmouth-Hitchcock Health	Dartmouth-Hitchcock	Cheshire Medical Center	Alice Peck Day Memorial	New London Hospital Association	Mt. Ascutney Hospital and Health Center	Eliminations	DH Obligated Group Subtotal	All Other Non-Oblig Group Affiliates	Eliminations	Health System Consolidated
Assets											
Current assets											
Cash and cash equivalents	$ 42,456	$ 47,465	$ 9,411	$ 7,066	$ 10,462	$ 8,372	$ -	$ 125,232	$ 18,355	$ -	$ 143,587
Patient accounts receivable, net	-	180,938	15,880	7,279	8,960	5,010	-	218,067	3,058	-	221,125
Prepaid expenses and other current assets	14,178	139,034	8,563	2,401	5,567	1,423	(74,083)	97,083	1,421	(3,009)	95,495
Total current assets	56,634	367,437	33,854	16,746	24,989	14,805	(74,083)	440,382	22,834	(3,009)	460,207
Assets limited as to use	92,802	668,485	18,759	12,884	12,427	11,619	-	836,576	39,673	-	876,249
Notes receivable, related party	553,484	752	-	1,406	-	-	(554,236)	1,406	(1,406)	-	-
Other investments for restricted activities	-	91,882	6,970	31	2,973	6,323	-	108,179	25,940	-	134,119
Property, plant, and equipment, net	22	432,277	87,147	30,945	41,946	17,797	-	590,134	31,122	-	621,256
Other assets	24,864	108,208	1,279	15,019	8,042	4,388	(10,970)	148,830	(3,013)	(21,346)	124,471
Total assets	$ 727,806	$ 1,689,041	$ 128,009	$ 76,831	$ 88,377	$ 54,932	$ (639,289)	$ 2,125,507	$ 115,150	$ (24,355)	$ 2,216,302
Liabilities and Net Assets											
Current liabilities											
Current portion of long-term debt	$ -	$ 8,226	$ 830	$ 954	$ 547	$ 262	$ -	$ 10,819	$ 95	$ -	$ 10,914
Current portion of liability for pension and other postretirement plan benefits	-	3,468	-	-	-	-	-	3,468	-	-	3,468
Accounts payable and accrued expenses	55,499	99,884	15,620	8,299	3,878	2,776	(74,083)	109,873	6,953	(3,009)	113,817
Accrued compensation and related benefits	-	110,839	5,851	3,694	2,313	4,270	-	126,767	1,641	-	128,408
Estimated third-party settlements	-	26,405	103	1,290	10,851	2,921	-	41,570	-	-	41,570
Total current liabilities	55,499	248,822	22,404	12,237	17,589	10,229	(74,083)	292,497	8,689	(3,009)	298,177
Notes payable, related party	-	526,202	-	-	28,034	-	(554,236)	-	-	-	-
Long-term debt, excluding current portion	643,257	44,820	24,503	35,604	643	11,465	(10,970)	749,322	2,858	-	752,180
Insurance deposits and related liabilities	-	56,786	440	513	388	240	-	58,367	40	-	58,407
Liability for pension and other postretirement plan benefits, excluding current portion	-	268,427	10,262	-	-	4,320	-	281,009	-	-	281,009
Other liabilities	-	96,201	1,104	28	1,585	-	-	100,918	23,218	-	124,136
Total liabilities	698,756	1,241,056	58,713	48,382	48,239	26,254	(639,289)	1,482,113	34,805	(3,009)	1,513,909
Commitments and contingencies											
Net assets											
Net assets without donor restrictions	28,832	356,880	63,051	27,853	35,518	21,242	-	533,176	48,083	(21,308)	559,933
Net assets with donor restrictions	18	91,103	6,245	796	4,620	7,436	-	110,218	32,262	(40)	142,460
Total net assets	28,850	447,983	69,296	28,449	40,138	28,678	-	643,394	80,345	(21,348)	702,393
Total liabilities and net assets	$ 727,606	$ 1,689,041	$ 128,009	$ 76,831	$ 88,377	$ 54,932	$ (639,289)	$ 2,125,507	$ 115,150	$ (24,355)	$ 2,216,302

Dartmouth-Hitchcock Health and Subsidiaries
Consolidating Balance Sheets
June 30, 2019

(in thousands of dollars)	D-HH and Other Subsidiaries	D-H and Subsidiaries	Cheshire and Subsidiaries	NLH and Subsidiaries	MAHHC and Subsidiaries	APD and Subsidiaries	VNH and Subsidiaries	Eliminations	Health System Consolidated
Assets									
Current assets									
Cash and cash equivalents	$ 42,456	$ 48,052	$ 11,952	$ 11,120	$ 8,549	$ 15,772	$ 5,686	$ -	$ 143,587
Patient accounts receivable, net	-	160,938	15,880	8,960	5,060	7,260	3,007	-	221,125
Prepaid expenses and other current assets	14,178	139,832	9,460	5,567	1,401	1,678	471	(77,092)	95,495
Total current assets	56,634	368,822	37,292	25,647	15,010	24,730	9,164	(77,092)	460,207
Assets limited as to use	92,602	707,597	17,383	12,427	12,738	12,685	20,817	-	876,249
Notes receivable, related party	553,484	752	-	-	-	-	-	(554,236)	-
Other investments for restricted activities	-	99,807	24,985	2,973	6,323	31	-	-	134,119
Property, plant, and equipment, net	22	434,953	70,846	42,423	19,435	50,338	3,239	-	621,256
Other assets	24,864	108,366	7,388	5,476	1,931	8,688	74	(32,316)	124,471
Total assets	$ 727,606	$ 1,720,297	$ 157,894	$ 88,946	$ 55,437	$ 96,472	$ 33,294	$ (663,644)	$ 2,216,302
Liabilities and Net Assets									
Current liabilities									
Current portion of long-term debt	$ -	$ 8,226	$ 830	$ 547	$ 288	$ 954	$ 69	$ -	$ 10,914
Current portion of liability for pension and other postretirement plan benefits	-	3,468	-	-	-	-	-	-	3,468
Accounts payable and accrued expenses	55,499	100,441	19,356	3,879	2,856	6,704	2,174	(77,092)	113,817
Accrued compensation and related benefits	-	110,839	5,651	2,313	4,314	4,192	1,099	-	128,408
Estimated third-party settlements	-	26,405	103	10,851	2,921	1,290	-	-	41,570
Total current liabilities	55,499	249,179	26,140	17,590	10,379	13,140	3,342	(77,092)	298,177
Notes payable, related party	-	526,202	-	28,034	-	-	-	(554,236)	-
Long-term debt, excluding current portion	643,257	44,820	24,503	643	11,763	35,604	2,560	(10,970)	752,180
Insurance deposits and related liabilities	-	56,788	440	388	240	513	40	-	58,407
Liability for pension and other postretirement plan benefits, excluding current portion	-	286,427	10,262	-	4,320	-	-	-	281,009
Other liabilities	-	98,201	1,115	1,585	-	23,235	-	-	124,136
Total liabilities	698,756	1,241,615	62,460	48,240	26,702	72,492	5,942	(642,298)	1,513,909
Commitments and contingencies									
Net assets									
Net assets without donor restrictions	28,832	379,498	65,873	36,087	21,300	22,327	27,322	(21,306)	559,933
Net assets with donor restrictions	18	99,184	29,561	4,619	7,435	1,653	30	(40)	142,460
Total net assets	28,850	478,682	95,434	40,706	28,735	23,980	27,352	(21,346)	702,393
Total liabilities and net assets	$ 727,606	$ 1,720,297	$ 157,894	$ 88,946	$ 55,437	$ 96,472	$ 33,294	$ (663,644)	$ 2,216,302

Dartmouth-Hitchcock Health and Subsidiaries
Consolidating Balance Sheets
June 30, 2018

(in thousands of dollars)	Dartmouth-Hitchcock Health	Dartmouth-Hitchcock	Cheshire Medical Center	New London Hospital Association	Mt. Ascutney Hospital and Health Center	Eliminations	DH Obligated Group Subtotal	All Other Non-Oblig Group Affiliates	Eliminations	Health System Consolidated
Assets										
Current assets										
Cash and cash equivalents	$ 134,634	$ 22,544	$ 6,688	$ 9,419	$ 6,604	$ -	$ 179,889	$ 20,280	$ -	$ 200,169
Patient accounts receivable, net	-	176,981	17,183	8,302	5,055	-	207,521	11,707	-	219,228
Prepaid expenses and other current assets	11,964	143,893	6,551	5,253	2,313	(72,361)	97,613	4,766	(4,877)	97,502
Total current assets	146,598	343,418	30,422	22,974	13,972	(72,361)	485,023	36,753	(4,877)	516,899
Assets limited as to use	8	616,929	17,438	12,821	10,829	-	658,025	48,099	-	706,124
Notes receivable, related party	554,771	-	-	-	-	(554,771)	-	-	-	-
Other investments for restricted activities	-	87,613	8,591	2,981	6,238	-	105,423	25,473	-	130,896
Property, plant, and equipment, net	36	443,154	66,759	42,438	17,356	-	569,743	37,578	-	607,321
Other assets	24,863	101,078	1,370	5,906	4,280	(10,870)	126,527	3,604	(21,346)	108,785
Total assets	$ 726,276	$ 1,592,192	$ 124,580	$ 87,120	$ 52,675	$ (638,102)	$ 1,944,741	$ 151,507	$ (26,223)	$ 2,070,025
Liabilities and Net Assets										
Current liabilities										
Current portion of long-term debt	$ -	$ 1,031	$ 810	$ 572	$ 187	$ -	$ 2,600	$ 864	$ -	$ 3,464
Current portion of liability for pension and other postretirement plan benefits	-	3,311	-	-	-	-	3,311	-	-	3,311
Accounts payable and accrued expenses	54,995	82,061	20,107	6,705	3,029	(72,361)	94,536	6,094	(4,877)	95,753
Accrued compensation and related benefits	-	106,485	5,730	2,457	3,796	-	118,498	7,078	-	125,576
Estimated third-party settlements	3,002	24,411	-	9,855	1,625	-	38,893	2,448	-	41,141
Total current liabilities	57,997	217,299	26,647	19,419	8,637	(72,361)	257,838	16,484	(4,877)	269,245
Notes payable, related party	-	527,348	-	27,425	-	(554,771)	-	-	-	-
Long-term debt, excluding current portion	644,520	52,878	25,354	1,179	11,270	(10,870)	724,231	28,744	-	752,975
Insurance deposits and related liabilities	-	54,616	465	155	240	-	55,476	40	-	55,516
Liability for pension and other postretirement plan benefits, excluding current portion	-	232,696	4,215	-	5,316	-	242,227	-	-	242,227
Other liabilities	-	85,577	1,107	1,405	-	-	88,089	38	-	88,127
Total liabilities	702,517	1,170,412	57,788	49,583	25,463	(638,102)	1,367,861	45,306	(4,877)	1,408,090
Commitments and contingencies										
Net assets										
Net assets without donor restrictions	23,759	334,882	61,828	32,897	19,812	-	473,178	72,230	(21,306)	524,102
Net assets with donor restrictions	-	86,898	4,964	4,640	7,400	-	103,902	33,971	(40)	137,833
Total net assets	23,759	421,780	66,792	37,537	27,212	-	577,080	106,201	(21,346)	661,935
Total liabilities and net assets	$ 726,276	$ 1,592,192	$ 124,580	$ 87,120	$ 52,675	$ (638,102)	$ 1,944,741	$ 151,507	$ (26,223)	$ 2,070,025

Dartmouth-Hitchcock Health and Subsidiaries
Consolidating Balance Sheets
June 30, 2018

(In thousands of dollars)	D-HH and Other Subsidiaries	D-H and Subsidiaries	Cheshire and Subsidiaries	NLH and Subsidiaries	MAHHC and Subsidiaries	APD	VNH and Subsidiaries	Eliminations	Health System Consolidated
Assets									
Current assets									
Cash and cash equivalents	$ 134,634	$ 23,094	$ 8,621	$ 9,982	$ 6,654	$ 12,144	$ 5,040	$ -	$ 200,169
Patient accounts receivable, net	-	176,981	17,183	8,302	5,109	7,996	3,657	-	219,228
Prepaid expenses and other current assets	11,964	144,755	5,520	5,276	2,294	4,443	488	(77,238)	97,502
Total current assets	146,598	344,830	31,324	23,560	14,057	24,583	9,185	(77,238)	516,899
Assets limited as to use	8	635,028	17,438	12,821	11,862	9,612	19,355	-	706,124
Notes receivable, related party	554,771	-	-	-	-	-	-	(554,771)	-
Other investments for restricted activities	-	95,772	25,873	2,981	6,238	32	-	-	130,896
Property, plant, and equipment, net	36	445,829	70,607	42,920	19,065	25,725	3,139	-	607,321
Other assets	24,863	101,235	7,526	5,333	1,886	130	126	(32,316)	108,785
Total assets	$ 726,276	$ 1,622,694	$ 152,768	$ 87,615	$ 53,108	$ 60,082	$ 31,807	$ (664,325)	$ 2,070,025
Liabilities and Net Assets									
Current liabilities									
Current portion of long-term debt	$ -	$ 1,031	$ 610	$ 572	$ 245	$ 739	$ 67	$ -	$ 3,464
Current portion of liability for pension and other postretirement plan benefits	-	3,311	-	-	-	-	-	-	3,311
Accounts payable and accrued expenses	54,995	82,613	20,052	6,714	3,092	3,596	1,929	(77,238)	95,753
Accrued compensation and related benefits	-	106,485	5,730	2,487	3,831	5,814	1,229	-	125,576
Estimated third-party settlements	3,002	24,411	-	9,655	1,625	2,448	-	-	41,141
Total current liabilities	57,997	217,851	26,592	19,428	8,793	12,597	3,225	(77,238)	269,245
Notes payable, related party	-	527,346	-	27,425	-	-	-	(554,771)	-
Long-term debt, excluding current portion	644,520	52,878	25,354	1,179	11,593	25,792	2,629	(10,970)	752,975
Insurance deposits and related liabilities	-	54,816	465	155	241	-	39	-	55,516
Liability for pension and other postretirement plan benefits, excluding current portion	-	232,696	4,215	-	5,316	-	-	-	242,227
Other liabilities	-	85,577	1,117	1,405	-	28	-	-	88,127
Total liabilities	702,517	1,170,964	57,743	49,592	25,943	38,417	5,893	(642,979)	1,408,090
Commitments and contingencies									
Net assets									
Net assets without donor restrictions	23,759	356,518	65,069	33,383	19,764	21,031	25,884	(21,306)	524,102
Net assets with donor restrictions	-	95,212	29,956	4,640	7,401	634	30	(40)	137,833
Total net assets	23,759	451,730	95,025	38,023	27,165	21,665	25,914	(21,346)	661,935
Total liabilities and net assets	$ 726,276	$ 1,622,694	$ 152,768	$ 87,615	$ 53,108	$ 60,082	$ 31,807	$ (664,325)	$ 2,070,025

Dartmouth-Hitchcock Health and Subsidiaries
Consolidating Statements of Operations and Changes in Net Assets without Donor Restrictions
Year Ended June 30, 2019

(In thousands of dollars)	Dartmouth-Hitchcock Health	Dartmouth-Hitchcock	Cheshire Medical Center	Alice Peck Day Memorial	New London Hospital Association	Mt. Ascutney Hospital and Health Center	Eliminations	DH Obligated Group Subtotal	All Other Non-Oblig Group Affiliates	Eliminations	Health System Consolidated
Operating revenue and other support											
Patient service revenue	$ -	$ 1,580,562	$ 220,255	$ 69,794	$ 60,166	$ 46,029	$ -	$ 1,976,795	$ 22,527	$ -	$ 1,999,323
Contracted revenue	5,011	109,051	355	-	-	5,902	(46,100)	74,219	790	8	75,017
Other operating revenue	21,128	186,852	3,407	1,748	4,261	2,289	(22,076)	197,609	13,386	(297)	210,698
Net assets released from restrictions	369	11,556	732	137	177	24	-	12,995	1,110	-	14,105
Total operating revenue and other support	26,508	1,888,011	224,749	71,679	64,604	54,244	(68,176)	2,261,619	37,813	(289)	2,299,143
Operating expenses											
Salaries	-	898,311	107,671	37,287	30,549	26,514	(24,682)	1,045,660	15,785	1,106	1,062,551
Employee benefits	-	208,346	24,225	8,454	8,434	6,866	(3,763)	247,862	3,642	287	251,791
Medical supplies and medications	-	354,201	34,331	8,634	8,298	3,022	-	408,486	1,379	-	407,875
Purchased services and other	11,366	242,108	35,088	15,308	13,528	13,950	(21,176)	310,170	14,867	(1,822)	323,435
Medicaid enhancement tax	-	54,954	8,005	3,082	2,264	1,776	-	70,081	-	-	70,081
Depreciation and amortization	14	68,343	7,877	2,308	3,915	2,380	-	85,814	2,900	-	88,414
Interest	20,677	21,585	1,053	1,189	1,119	228	(20,850)	24,891	533	-	25,514
Total operating expenses	32,057	1,818,846	218,350	74,229	63,107	54,826	(70,471)	2,190,944	36,726	(229)	2,229,441
Operating (loss) margin	(5,549)	69,165	6,399	(2,550)	1,497	(582)	2,295	70,675	(913)	(60)	69,702
Nonoperating gains (losses)											
Investment income (losses), net	3,829	32,193	227	469	834	623	(199)	38,077	1,975	-	40,052
Other (losses) income, net	(3,784)	1,586	(187)	30	(240)	279	(2,087)	(4,413)	791	60	(3,562)
Loss on early extinguishment of debt	-	-	-	(87)	-	-	-	(87)	-	-	(87)
Loss on swap termination	-	-	-	-	-	-	-	-	-	-	-
Total non-operating gains (losses), net	145	33,779	40	412	594	902	(2,295)	33,577	2,766	60	36,403
(Deficiency) excess of revenue over expenses	(5,404)	102,944	6,439	(2,138)	2,091	320	-	104,252	1,853	-	106,105
Net assets without donor restrictions											
Net assets released from restrictions	-	419	565	-	402	318	-	1,704	85	-	1,789
Change in funded status of pension and other postretirement benefits	-	(85,005)	(7,720)	-	-	682	-	(72,043)	-	-	(72,043)
Net assets transferred to (from) affiliates	10,477	(18,380)	1,838	8,760	128	110	-	5,054	(5,054)	-	-
Additional paid in capital	-	-	-	-	-	-	-	-	-	-	-
Other changes in net assets	-	-	-	-	-	-	-	-	-	-	-
Change in fair value on interest rate swaps	-	-	-	-	-	-	-	-	-	-	-
Change in funded status of interest rate swaps	-	-	-	-	-	-	-	-	-	-	-
Increase in net assets without donor restrictions	$ 5,073	$ 21,998	$ 1,223	$ 6,622	$ 2,621	$ 1,430	$ -	$ 38,967	$ (3,136)	$ -	$ 35,831

Dartmouth-Hitchcock Health and Subsidiaries
Consolidating Statements of Operations and Changes In Net Assets without Donor Restrictions
Year Ended June 30, 2019

(In thousands of dollars)	D-HH and Other Subsidiaries	D-H and Subsidiaries	Cheshire and Subsidiaries	NLH and Subsidiaries	MAHHC and Subsidiaries	APD and Subsidiaries	VNH and Subsidiaries	Eliminations	Health System Consolidated
Operating revenue and other support									
Patient service revenue	$ -	$ 1,580,552	$ 220,254	$ 60,186	$ 48,029	$ 69,794	$ 22,528	$ -	$ 1,999,323
Contracted revenue	5,010	109,842	355	-	5,902	-	-	(46,092)	75,017
Other operating revenue	21,128	168,775	3,549	4,260	3,868	10,951	540	(22,373)	210,698
Net assets released from restrictions	371	12,637	732	177	26	162	-	-	14,105
Total operating revenue and other support	26,509	1,891,806	224,890	64,603	55,825	80,907	23,068	(68,465)	2,299,143
Operating expenses									
Salaries	-	868,311	107,706	30,549	27,319	40,731	11,511	(23,576)	1,062,551
Employee benefits	-	208,348	24,235	5,434	7,133	7,218	2,701	(3,476)	251,591
Medical supplies and medications	-	354,201	34,331	6,298	3,035	6,639	1,371	-	407,875
Purchased services and other	11,366	246,101	35,396	13,390	14,371	18,172	7,437	(22,798)	323,435
Medicaid enhancement tax	-	54,954	8,005	2,264	1,776	3,082	-	-	70,081
Depreciation and amortization	14	69,343	8,125	3,920	2,478	4,194	340	-	88,414
Interest	20,678	21,585	1,054	1,119	226	1,637	83	(20,850)	25,514
Total operating expenses	32,058	1,822,841	218,852	62,974	56,340	83,653	23,423	(70,700)	2,229,441
Operating (loss) margin	(5,549)	68,965	6,038	1,629	(515)	(2,746)	(355)	2,235	69,702
Non-operating gains (losses)									
Investment income (losses), net	3,929	33,310	129	785	645	469	983	(198)	40,052
Other (losses) income, net	(3,784)	1,586	(171)	(240)	288	31	765	(2,037)	(3,562)
Loss on early extinguishment of debt	-	-	-	-	-	(87)	-	-	(87)
Loss on swap termination	-	-	-	-	-	-	-	-	-
Total nonoperating gains (losses), net	145	34,896	(42)	545	933	413	1,748	(2,235)	36,403
(Deficiency) excess of revenue over expenses	(5,404)	103,861	5,996	2,174	418	(2,333)	1,393	-	106,105
Net assets without donor restrictions									
Net assets released from restrictions	-	484	565	402	318	-	-	-	1,769
Change in funded status of pension and other postretirement benefits	-	(65,005)	(7,720)	-	682	-	-	-	(72,043)
Net assets transferred to (from) affiliates	10,477	(16,360)	1,963	128	118	3,629	45	-	-
Additional paid in capital	-	-	-	-	-	-	-	-	-
Other changes in net assets	-	-	-	-	-	-	-	-	-
Change in fair value on interest rate swaps	-	-	-	-	-	-	-	-	-
Change in funded status of interest rate swaps	-	-	-	-	-	-	-	-	-
Increase in net assets without donor restrictions	$ 5,073	$ 22,980	$ 804	$ 2,704	$ 1,536	$ 1,296	$ 1,438	$ -	$ 35,831

Dartmouth-Hitchcock Health and Subsidiaries
Consolidating Statements of Operations and Changes in Net Assets Without Donor Restrictions
Year Ended June 30, 2018

(In thousands of dollars)	Dartmouth-Hitchcock Health	Dartmouth-Hitchcock	Cheshire Medical Center	New London Hospital Association	Mt. Ascutney Hospital and Health Center	Eliminations	DH Obligated Group Subtotal	All Other Non Oblig Group Affiliates	Eliminations	Health System Consolidated
Operating revenue and other support										
Patient service revenue	$ -	$ 1,475,314	$ 216,736	$ 60,486	$ 52,014	$ -	$ 1,804,550	$ 94,545	$ -	$ 1,899,095
Provision for bad debts	-	31,358	10,967	1,554	1,440	-	45,319	2,048	-	47,367
Net patient service revenue	-	1,443,956	205,769	58,932	50,574	-	1,759,231	92,497	-	1,851,728
Contracted revenue	(2,305)	97,291	-	-	2,169	(42,870)	54,285	716	(32)	54,969
Other operating revenue	9,799	134,461	3,365	4,169	1,814	(10,554)	143,054	6,978	(1,086)	148,946
Net assets released from restrictions	658	11,605	620	52	44	-	12,979	482	-	13,461
Total operating revenue and other support	8,152	1,687,313	209,754	63,153	54,601	(53,424)	1,969,549	100,673	(1,118)	2,069,104
Operating expenses										
Salaries	-	806,344	105,807	30,360	24,854	(21,542)	945,823	42,035	1,605	989,283
Employee benefits	-	181,833	26,343	7,252	7,000	(5,385)	219,043	10,221	419	229,683
Medical supplies and medications	-	289,327	31,293	6,161	3,055	-	329,836	10,195	-	340,031
Purchased services and other	8,509	215,073	33,065	13,587	13,960	(19,394)	264,800	29,390	(2,818)	291,372
Medicaid enhancement tax	-	53,044	6,070	2,659	1,744	-	65,517	2,175	-	67,692
Depreciation and amortization	23	66,073	10,217	3,934	2,030	-	82,277	2,501	-	84,778
Interest	8,684	15,772	1,004	981	224	(6,882)	17,783	1,039	-	18,822
Total operating expenses	17,216	1,627,466	217,599	64,934	52,867	(55,203)	1,924,679	97,556	(794)	2,021,841
Operating margin (loss)	(9,064)	59,847	(7,845)	(1,781)	1,734	1,779	44,870	3,117	(324)	47,263
Non-operating gains (losses)										
Investment income (losses), net	(26)	33,628	1,408	1,151	858	(198)	36,821	3,566	-	40,387
Other (losses) income, net	(1,364)	(2,599)	-	1,276	266	(1,581)	(4,002)	733	361	(2,908)
Loss on early extinguishment of debt	-	(13,909)	-	(305)	-	-	(14,214)	-	-	(14,214)
Loss on swap termination	-	(14,247)	-	-	-	-	(14,247)	-	-	(14,247)
Total non-operating gains (losses), net	(1,390)	2,873	1,408	2,122	1,124	(1,779)	4,358	4,299	361	9,018
(Deficiency) excess of revenue over expenses	(10,454)	62,720	(6,437)	341	2,858	-	49,028	7,416	37	56,481
Net assets without donor restrictions										
Net assets released from restrictions	-	16,036	-	4	252	-	16,294	19	-	16,313
Change in funded status of pension and other postretirement benefits	-	4,300	2,827	-	1,127	-	8,254	-	-	8,254
Net assets transferred to (from) affiliates	17,791	(25,355)	7,168	48	326	-	-	-	-	-
Additional paid in capital	-	-	-	-	-	-	-	58	(58)	-
Other changes in net assets	-	-	-	-	-	-	-	(185)	-	(185)
Change in fair value on interest rate swaps	-	4,190	-	-	-	-	4,190	-	-	4,190
Change in funded status of interest rate swaps	-	14,102	-	-	-	-	14,102	-	-	14,102
Increase in net assets without donor restrictions	$ 7,337	$ 75,995	$ 3,578	$ 393	$ 4,565	$ -	$ 91,868	$ 7,308	$ (21)	$ 99,155

Dartmouth-Hitchcock Health and Subsidiaries
Consolidating Statements of Operations and Changes in Net Assets Without Donor Restrictions
Year Ended June 30, 2018

(in thousands of dollars)	D-HH and Other Subsidiaries	D-H and Subsidiaries	Cheshire and Subsidiaries	NLH and Subsidiaries	MAHHC and Subsidiaries	APD	VNH and Subsidiaries	Eliminations	Health System Consolidated
Operating revenue and other support									
Patient service revenue	$ -	$ 1,475,314	$ 216,736	$ 60,486	$ 52,014	$ 71,458	$ 23,087	$ -	$ 1,899,095
Provision for bad debts	-	31,358	10,967	1,554	1,440	1,680	368	-	47,367
Net patient service revenue	-	1,443,956	205,769	58,932	50,574	69,778	22,719	-	1,851,728
Contracted revenue	(2,305)	98,007	-	-	2,169	-	-	(42,902)	54,969
Other operating revenue	9,799	137,242	4,061	4,166	3,168	1,897	453	(11,840)	148,946
Net assets released from restrictions	658	11,984	620	52	44	103	-	-	13,461
Total operating revenue and other support	8,152	1,691,189	210,450	63,150	55,955	71,578	23,172	(54,542)	2,069,104
Operating expenses									
Salaries	-	806,344	105,607	30,360	25,592	29,215	12,082	(19,937)	989,263
Employee benefits	-	181,833	28,343	7,252	7,162	7,406	2,653	(4,966)	229,683
Medical supplies and medications	-	289,327	31,293	6,181	3,057	8,484	1,709	-	340,031
Purchased services and other	8,512	218,690	33,431	13,432	14,354	19,220	5,945	(22,212)	291,372
Medicaid enhancement tax	-	53,044	8,070	2,659	1,743	2,176	-	-	67,692
Depreciation and amortization	23	66,073	10,357	3,939	2,145	1,831	410	-	84,778
Interest	6,684	15,772	1,004	981	223	975	65	(6,882)	18,822
Total operating expenses	17,219	1,631,083	218,105	64,784	54,276	69,307	22,864	(55,997)	2,021,641
Operating (loss) margin	(9,067)	60,106	(7,655)	(1,634)	1,679	2,271	308	1,455	47,463
Nonoperating gains (losses)									
Investment income (losses), net	(26)	35,177	1,954	1,097	787	203	1,393	(198)	40,387
Other (losses) income, net	(1,364)	(2,599)	(3)	1,276	273	(223)	952	(1,220)	(2,908)
Loss on early extinguishment of debt	-	(13,909)	-	(305)	-	-	-	-	(14,214)
Loss on swap termination	-	(14,247)	-	-	-	-	-	-	(14,247)
Total non-operating gains (losses), net	(1,390)	4,422	1,951	2,068	1,060	(20)	2,345	(1,418)	9,018
(Deficiency) excess of revenue over expenses	(10,457)	64,528	(5,704)	434	2,739	2,251	2,653	37	56,481
Net assets without donor restrictions									
Net assets released from restrictions	-	16,058	-	4	251	-	-	-	16,313
Change in funded status of pension and other postretirement benefits	-	4,300	2,827	-	1,127	-	-	-	8,254
Net assets transferred to (from) affiliates	17,791	(25,355)	7,188	48	328	-	-	-	-
Additional paid in capital	58	-	-	-	-	-	-	(58)	-
Other changes in net assets	-	-	-	-	-	(185)	-	-	(185)
Change in fair value on interest rate swaps	-	4,190	-	-	-	-	-	-	4,190
Change in funded status of interest rate swaps	-	14,102	-	-	-	-	-	-	14,102
Increase (decrease) in net assets without donor restrictions	$ 7,392	$ 77,823	$ 4,311	$ 486	$ 4,445	$ 2,066	$ 2,653	$ (21)	$ 99,155

Dartmouth-Hitchcock Health and Subsidiaries
Notes to Supplemental Consolidating Information
June 30, 2019 and 2018

1. Basis of Presentation

The accompanying supplemental consolidating information includes the consolidating balance sheet and the consolidating statement of operations and changes in net assets without donor restrictions of D-HH and its subsidiaries. All intercompany accounts and transactions between D-HH and its subsidiaries have been eliminated. The consolidating information presented is prepared on the accrual basis of accounting in accordance with accounting principles generally accepted in the United States of America consistent with the consolidated financial statements. The consolidating information is presented for purposes of additional analysis of the consolidated financial statements and is not required as part of the basic financial statements.

Schedule of Expenditures of Federal Awards

Dartmouth-Hitchcock Health and Subsidiaries
Schedule of Expenditures of Federal Awards
Year Ended June 30, 2019

	CFDA	Award Number/pass-through Identification Number	Funding Source	Pass-Through Entity	Total Expenditures	Amount Passed Through to Subrecipients
Federal Program						
Research and Development Cluster						
Department of Defense						
National Guard Military Operations and Maintenance (O&M) Projects	12.401	W81XWH1820078	Direct		$ 234,630	$ -
Military Medical Research and Development	12.420	W81XWH1810712	Direct		131,825	-
Military Medical Research and Development	12.420	R1143	Pass-Through	Trustees of Dartmouth College	2,055	-
					133,880	-
Department of Defense	12.RD	80232	Pass-Through	Creare, Inc.	46,275	-
					414,485	-
Environmental Protection Agency						
Science To Achieve Results (STAR) Research Program	66.509	3122084/852965	Pass-Through	University of Vermont	1,031	-
					1,031	-
Department of Health and Human Services						
Innovations in Applied Public Health Research	93.061	1 R01 TI000288	Direct		84,957	9,367
Environmental Health	93.113	6V23ES025781-06	Direct		111,125	-
Environmental Health	93.113	R1118	Pass-Through	Trustees of Dartmouth College	5,087	-
					116,212	-
NIEHS Superfund Hazardous Substances	93.143	R1099	Pass-Through	Trustees of Dartmouth College	6,457	-
Health Program for Toxic Substances and Disease Registry	93.161	AWD00010823	Direct		61,180	-
Research Related to Deafness and Communication Disorders	93.173	5R21DC015133-03	Direct		119,896	61,909
National Research Service Award in Primary Care Medicine	93.186	T32HP32520	Direct		308,112	-
Research and Training in Complementary and Integrative Health	93.213	R1112	Pass-Through	Trustees of Dartmouth College	21,197	-
Research and Training in Complementary and Integrative Health	93.213	R1187	Pass-Through	Trustees of Dartmouth College	448	-
Research and Training in Complementary and Integrative Health	93.213	12272	Pass-Through	Palmer College of Chiropractic	30,748	-
Research and Training in Complementary and Integrative Health	93.213	Not Provided	Pass-Through	Southern California University of Health	12,030	-
					64,421	-
Research on Healthcare Costs, Quality and Outcomes	93.226	5P30HS024403	Direct		641,114	-
Research on Healthcare Costs, Quality and Outcomes	93.226	R1128	Pass-Through	Trustees of Dartmouth College	6,033	-
Research on Healthcare Costs, Quality and Outcomes	93.226	R1148	Pass-Through	Trustees of Dartmouth College	4,696	-
					651,813	-
Mental Health Research Grants	93.242	1K08MH117347-01A1	Direct		84,211	-
Mental Health Research Grants	93.242	6K23MH116367-02	Direct		108,228	-
Mental Health Research Grants	93.242	5R01MH110986	Direct		220,078	84,823
Mental Health Research Grants	93.242	5T32MH073553-15	Direct		130,340	-
Mental Health Research Grants	93.242	5R25MH068502-17	Direct		157,589	-
Mental Health Research Grants	93.242	5R01MH107825-05	Direct		200,805	27,964
Mental Health Research Grants	93.242	R1082	Pass-Through	Trustees of Dartmouth College	11,740	-
Mental Health Research Grants	93.242	R1144	Pass-Through	Trustees of Dartmouth College	5,887	-
Mental Health Research Grants	93.242	R1156	Pass-Through	Trustees of Dartmouth College	4,721	-
					894,617	112,787

Dartmouth-Hitchcock Health and Subsidiaries
Schedule of Expenditures of Federal Awards
Year Ended June 30, 2019

	CFDA	Award Number/pass-through Identification Number	Funding Source	Pass-Through Entity	Total Expenditures	Amount Passed Through to Subrecipients
Drug Abuse and Addiction Research Programs	93.279	6R01DA034699-05	Direct		380,647	90,985
Drug Abuse and Addiction Research Programs	93.279	5R21DA044501-03	Direct		118,741	-
Drug Abuse and Addiction Research Programs	93.279	6R01DA041416-04	Direct		135,687	62,277
Drug Abuse and Addiction Research Programs	93.279	R1105	Pass-Through	Trustees of Dartmouth College	11,957	-
Drug Abuse and Addiction Research Programs	93.279	R1104	Pass-Through	Trustees of Dartmouth College	4,108	-
Drug Abuse and Addiction Research Programs	93.279	R1192	Pass-Through	Trustees of Dartmouth College	5,059	-
					666,200	153,262
Discovery and Applied Research for Technological Innovations to Improve Human Health	93.286	6K23EB026507-02	Direct		98,499	9,582
Discovery and Applied Research for Technological Innovations to Improve Human Health	93.286	6R21EB021456-03	Direct		23,293	-
Discovery and Applied Research for Technological Innovations to Improve Human Health	93.286	R1103	Pass-Through	Trustees of Dartmouth College	16,635	-
Discovery and Applied Research for Technological Innovations to Improve Human Health	93.286	5R21EB024771-02	Pass-Through	Trustees of Dartmouth College	5,938	-
					144,365	9,582
National Center for Advancing Translational Sciences	93.350	R1113	Pass-Through	Trustees of Dartmouth College	342,790	-
21st Century Cures Act - Beau Biden Cancer Moonshot	93.353	1204501	Pass-Through	Dana Farber Cancer Institute	186,421	-
Cancer Cause and Prevention Research	93.393	1R01CA225792	Direct		54,351	-
Cancer Cause and Prevention Research	93.393	R21CA227776A	Direct		28,640	-
Cancer Cause and Prevention Research	93.393	R01CA229197	Direct		85,701	-
Cancer Cause and Prevention Research	93.393	R1127	Pass-Through	Trustees of Dartmouth College	8,035	-
Cancer Cause and Prevention Research	93.393	R1097	Pass-Through	Trustees of Dartmouth College	5,870	-
Cancer Cause and Prevention Research	93.393	R1109	Pass-Through	Trustees of Dartmouth College	1,984	-
Cancer Cause and Prevention Research	93.393	DHMCCA222648	Pass-Through	The Pennsylvania State University	3,173	-
Cancer Cause and Prevention Research	93.393	R44CA210810	Pass-Through	Cairn Surgical, LLC	35,241	-
					203,995	-
Cancer Detection and Diagnosis Research	93.394	4R00CA190890-03	Direct		1,717	-
Cancer Detection and Diagnosis Research	93.394	5R37CA212187-03	Direct		106,110	2,907
Cancer Detection and Diagnosis Research	93.394	5R03CA219445-03	Direct		18,880	-
Cancer Detection and Diagnosis Research	93.394	R1079	Pass-Through	Trustees of Dartmouth College	23,031	-
Cancer Detection and Diagnosis Research	93.394	R1080	Pass-Through	Trustees of Dartmouth College	23,031	-
Cancer Detection and Diagnosis Research	93.394	R1086	Pass-Through	Trustees of Dartmouth College	8,772	-
Cancer Detection and Diagnosis Research	93.394	R1096	Pass-Through	Trustees of Dartmouth College	1,174	-
Cancer Detection and Diagnosis Research	93.394	R1124	Pass-Through	Trustees of Dartmouth College	83,174	-
					263,889	2,907
Cancer Treatment Research	93.395	1UG1CA233323-01	Direct		14,675	-
Cancer Treatment Research	93.395	6U10CA180854-06	Direct		27,790	-
Cancer Treatment Research	93.395	DAC-194321	Pass-Through	Mayo Clinic	36,708	-

Dartmouth-Hitchcock Health and Subsidiaries
Schedule of Expenditures of Federal Awards
Year Ended June 30, 2019

	CFDA	Award Number/pass-through Identification Number	Funding Source	Pass-Through Entity	Total Expenditures	Amount Passed Through to Subrecipients
Cancer Treatment Research	93.395	R1087	Pass-Through	Trustees of Dartmouth College	2,830	-
Cancer Treatment Research	93.395	110408	Pass-Through	Brigham and Women's Hospital	29,430	-
					102,233	-
Cancer Centers Support Grants	93.397	R1126	Pass-Through	Trustees of Dartmouth College	95,624	-
Cardiovascular Diseases Research	93.837	1UM1HL147371-01	Direct		11,774	-
Cardiovascular Diseases Research	93.837	7K23HL142836-02	Direct		65,544	-
					77,318	-
Lung Diseases Research	93.838	5R01HL122372-05	Direct		205,920	8,864
Arthritis, Musculoskeletal and Skin Diseases Research	93.846	5T32AR048710-16	Direct		73,049	-
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847	R1099	Pass-Through	Trustees of Dartmouth College	70,738	704
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	5R01NS052274-11	Direct		50,412	-
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853	16-210850-04	Direct		18,016	-
					68,428	-
Allergy and Infectious Diseases Research	93.855	R1081	Pass-Through	Trustees of Dartmouth College	3,787	-
Allergy and Infectious Diseases Research	93.855	RES513934	Pass-Through	Case Western Reserve University	4,170	-
Allergy and Infectious Diseases Research	93.855	R1165	Pass-Through	Trustees of Dartmouth College	14,582	-
					22,539	-
Biomedical Research and Research Training	93.859	R1100	Pass-Through	Trustees of Dartmouth College	14,901	-
Biomedical Research and Research Training	93.859	R1141	Pass-Through	Trustees of Dartmouth College	587	-
Biomedical Research and Research Training	93.859	R1145	Pass-Through	Trustees of Dartmouth College	241	-
					15,729	-
Child Health and Human Development Extramural Research	93.865	5P2CHD086841-04	Direct		127,400	10,132
Child Health and Human Development Extramural Research	93.865	5U01OD024946-03	Direct		280,914	-
Child Health and Human Development Extramural Research	93.865	5R01HD067270	Direct		314,058	223,885
Child Health and Human Development Extramural Research	93.865	R1119	Pass-Through	Trustees of Dartmouth College	13,264	-
Child Health and Human Development Extramural Research	93.865	51480	Pass-Through	Univ of Arkansas for Medical Sciences	4,896	-
					720,332	234,017
Aging Research	93.866	5R23AG051681-04	Direct		76,377	2,883
Aging Research	93.866	R1102	Pass-Through	Trustees of Dartmouth College	8,285	-
					84,662	2,883
Vision Research	93.867	5R21EY028677-02	Direct		28,751	3,149
Medical Library Assistance	93.879	R1107	Pass-Through	Trustees of Dartmouth College	4,273	-
Medical Library Assistance	93.879	R1180	Pass-Through	Trustees of Dartmouth College	1,244	-
					5,517	-
International Research and Research Training	93.989	R1123	Pass-Through	Trustees of Dartmouth College	5,936	-
International Research and Research Training	93.989	5R25TW007983-09	Pass-Through	Fogarty International Center	96,327	65,097
					102,263	65,097

Dartmouth-Hitchcock Health and Subsidiaries
Schedule of Expenditures of Federal Awards
Year Ended June 30, 2019

	CFDA	Award Number/pass-through Identification Number	Funding Source	Pass-Through Entity	Total Expenditures	Amount Passed Through to Subrecipients
Department of Health and Human Services	93.RD		Pass-Through	Lovelace Biomedical Research, Inc.	201,951	-
Total Department of Health and Human Services					5,970,977	953,327
Total Research and Development Cluster					6,289,493	953,327
Medicaid Cluster						
Medical Assistance Program	93.778	SNHH 3-18-19	Pass-Through	Southern New Hampshire Health	131,775	-
Medical Assistance Program	93.778	Not Provided	Pass-Through	NH Dept of Health and Human Services	1,453,796	-
Medical Assistance Program	93.778	RFP-2017-DCOM-01-PHYSI-01	Pass-Through	NH Dept of Health and Human Services	3,106,149	-
Medical Assistance Program	93.778	03420-72353	Pass-Through	Vermont Department of Health	99,381	
Medical Assistance Program	93.778	03410-2020-19	Pass-Through	Vermont Department of Health	118,796	
Total Medicaid Cluster					4,909,897	-
Highway Safety Cluster						
State and Community Highway Safety	20.600	19-286 Youth Operator	Pass-Through	NH Highway Safety Agency	66,680	-
State and Community Highway Safety	20.600	19-286 SUNH	Pass-Through	NH Highway Safety Agency	76,915	-
State and Community Highway Safety	20.600	19-286 Statewide CPS	Pass-Through	NH Highway Safety Agency	82,202	-
Total Highway Safety Cluster					225,777	-
Other Sponsored Programs						
Department of Justice						
Crime Victim Assistance	16.575	2015-VA-GX0007	Pass-Through	New Hampshire Department of Justice	237,692	-
Improving the Investigation and Prosecution of Child Abuse and the Regional and Local Children's Advocacy Centers	16.758	1-CLAR-NH-BA17	Pass-Through	National Children's Alliance	1,448	-
					239,140	-
Department of Education						
Race to the Top	84.412	03440-34118-18-ELCG24	Pass-Through	Vermont Dept for Children and Families	115,084	-
					115,084	-
Department of Health and Human Services						
Hospital Preparedness Program (HPP) and Public Health Emergency Preparedness (PHEP) Aligned Cooperative Agreements	93.074	Not Provided	Pass-Through	NH Dept of Health and Human Services	69,945	-
Blood Disorder Program: Prevention, Surveillance, and Research	93.080	GENFD0001588485	Pass-Through	Boston Children's Hospital	18,263	
Maternal and Child Health Federal Consolidated Programs	93.110	6 T73MC32930101	Direct		662,887	591,411
Maternal and Child Health Federal Consolidated Programs	93.110	0253-6545-4609	Pass-Through	Icahn School of Medicine at Mount Sinai	19,545	
					672,545	591,411
Emergency Medical Services for Children	93.127	7 H33MC32990100	Direct		137,067	
Centers for Research and Demonstration for Health Promotion and Disease Prevention	93.135	R1140	Pass-Through	Trustees of Dartmouth College	449,757	-
HIV-Related Training and Technical Assistance	93.145	Not Provided	Pass-Through	University of Massachusetts Med School	3,242	
Coordinated Services and Access to Research for Women, Infants, Children	93.153	H12HA31112	Direct		391,829	-
Substance Abuse and Mental Health Services Projects of Regional and National Significance	93.243	7H79SM063564-01	Direct		24,313	-
Substance Abuse and Mental Health Services Projects of Regional and National Significance	93.243	RFP-2018-DPHS-01-REGION-1	Pass-Through	NH Dept of Health and Human Services	85,361	-
Substance Abuse and Mental Health Services Projects of Regional and National Significance	93.243	Not Provided	Pass-Through	Vermont Department of Health	227,437	-
Substance Abuse and Mental Health Services Projects of Regional and National Significance	93.243	03420-A190088	Pass-Through	Vermont Department of Health	126,764	
					463,875	-
Drug Free Communities Support Program Grants	93.276	SH79SP020382	Direct		126,464	-
Department of Health and Human Services	93.628	RFP-2018-DPHS-01-REGION-1	Pass-Through	NH Dept of Health and Human Services	29,836	-

Dartmouth-Hitchcock Health and Subsidiaries
Schedule of Expenditures of Federal Awards
Year Ended June 30, 2019

	CFDA	Award Number/pass-through Identification Number	Funding Source	Pass-Through Entity	Total Expenditures	Amount Passed Through to Subrecipients
University Centers for Excellence in Developmental Disabilities Education, Research, and Service	93.632	19-029	Pass-Through	University of New Hampshire	2,811	-
Adoption Opportunities	93.652	AWD00008303	Direct		32,384	-
Adoption Opportunities	93.652	RFP-2018-DPHS-01-REGION-1	Pass-Through	NH Dept of Health and Human Services	110,524	-
					142,908	-
Preventive Health and Health Services Block Grant funded solely with Prevention and Public Health Funds (PPHF)	93.758	RFP-2018-DPHS-01-REGION-1	Pass-Through	NH Dept of Health and Human Services	343,297	-
University Centers for Excellence in Developmental Disabilities Education, Research, and Service	93.761	90FPSG0019	Direct		134,524	-
Opioid STR	93.788	RFP-2018-BDAS-05-INTEG	Pass-Through	NH Dept of Health and Human Services	954,356	61,208
Opioid STR	93.788	2019-BDAS-05-ACCES-04	Pass-Through	NH Dept of Health and Human Services	161,164	-
Opioid STR	93.788	SS-2019-BDAS-05-ACCES-02	Pass-Through	NH Dept of Health and Human Services	243,747	-
					1,359,267	61,208
Organized Approaches to Increase Colorectal Cancer Screening	93.800	5 NU58DP006086	Direct		912,937	-
Hospital Preparedness Program (HPP) Ebola Preparedness	93.817	03420-67558	Pass-Through	Vermont Department of Health	2,347	-
Maternal, Infant and Early Childhood Home Visiting Grant	93.870	03420-89515	Pass-Through	Vermont Department of Health	99,841	-
Maternal, Infant and Early Childhood Home Visiting Grant	93.870	03420-07623	Pass-Through	Vermont Department of Health	178,907	-
					278,748	-
National Bioterrorism Hospital Preparedness Program	93.889	03420-72725	Pass-Through	Vermont Department of Health	2,786	-
Rural Health Care Services Outreach, Rural Health Network Develop and Small Health Care Provider Quality Improvement	93.912	6 D06RH31057-02-C3	Direct		138,959	-
Grants to Provide Outpatient Early Intervention Services with Respect to HIV Disease	93.918	1 H76HA31664-01-00	Direct		273,666	-
Block Grants for Community Mental Health Services	93.958	9224120	Pass-Through	NH Dept of Health and Human Services	2,498	-
Block Grants for Community Mental Health Services	93.958	RFP-2017-DBH-05-FIRSTE	Pass-Through	NH Dept of Health and Human Services	32,625	-
					35,123	-
Block Grants for Prevention and Treatment of Substance Abuse	93.959	05-95-49-491510-2990	Pass-Through	NH Dept of Health and Human Services	69,276	-
Block Grants for Prevention and Treatment of Substance Abuse	93.959	Not Provided	Pass-Through	Foundation for Healthy Communities	54,356	-
Block Grants for Prevention and Treatment of Substance Abuse	93.959	05-95-49-491510-2990	Pass-Through	Foundation for Healthy Communities	1,895	-
Block Grants for Prevention and Treatment of Substance Abuse	93.959	03420-A180338	Pass-Through	Vermont Department of Health	58,204	-
					184,531	-
PPHF Geriatric Education Centers	93.969	U1QHP32519	Direct		726,055	-
Department of Health and Human Services	93.U01	RFP-2018-DPHS-05-INJUR	Pass-Through	NH Highway Safety Agency	80,107	-
Department of Health and Human Services	93.U02	Not Provided	Pass-Through	NH Dept of Health and Human Services	48,489	-
Department of Health and Human Services	93.U03	Not Provided	Pass-Through	NH Dept of Health and Human Services	56,419	-
Department of Health and Human Services	93.U04	Not Provided	Pass-Through	NH Dept of Health and Human Services	37,009	-
Department of Health and Human Services	93.U05	Not Provided	Pass-Through	NH Dept of Health and Human Services	39,653	-
Department of Health and Human Services	93.U06	Not Provided	Pass-Through	County of Cheshire	213,301	-
					474,978	-
Corporation for National and Community Service						
AmeriCorps	94.006	17ACHNH0010001	Pass-Through	Volunteer NH	72,297	-
					72,297	-
Total Other Programs					7,774,313	652,619
Total Federal Awards and Expenditures					$ 19,256,480	$ 1,315,948

Dartmouth-Hitchcock Health and Subsidiaries
Notes to Schedule of Expenditures of Federal Awards
June 30, 2019

1. Basis of Presentation

The accompanying schedule of expenditures of federal awards (the "Schedule") presents the activity of federal award programs administered by Dartmouth-Hitchcock Health and Subsidiaries (the "Health System") as defined in the notes to the consolidated financial statements and is presented on an accrual basis. The purpose of this Schedule is to present a summary of those activities of the Health System for the year ended June 30, 2019 which have been financed by the United States government ("federal awards"). For purposes of this Schedule, federal awards include all federal assistance entered into directly between the Health System and the federal government and subawards from nonfederal organizations made under federally sponsored agreements. The information in this Schedule in presented in accordance with the requirements of the Uniform Guidance. Pass-through entity identification numbers and CFDA numbers have been provided where available.

Visiting Nurse and Hospice of NH and VT ("VNH") received a Community Facilities Loan, CFDA #10.766, of which the proceeds were expended in the prior fiscal year. The VNH had an outstanding balance of $2,696,512 as of June 30, 2019. As this loan was related to a project that was completed in the prior audit period and the terms and conditions do not impose continued compliance requirements other than to repay the loan, we have properly excluded the outstanding loan balance from the Schedule.

2. Indirect Expenses

Indirect costs are charged to certain federal grants and contracts at a federally approved predetermined indirect rate, negotiated with the Division of Cost Allocation and therefore we do not use the de minimus 10% rate. The predetermined rate provided for the year ended June 30, 2019 was 29.3%. Indirect costs are included in the reported federal expenditures.

3. Related Party Transactions

The Health System has an affiliation agreement with Dartmouth College dated June 4, 1996 in which the Health System and the Geisel School of Medicine at Dartmouth College affirm their mutual commitment to providing high quality medical care, medical education and medical research at both organizations. Pursuant to this affiliation agreement, certain clinical faculty of the Health System participate in federal research programs administered by Dartmouth College. During the fiscal year ended June 30, 2019, Health System expenditures, which Dartmouth College reimbursed, totaled $3,979,033. Based on the nature of these transactions, the Health System and Dartmouth College do not view these arrangements to be subrecipient transactions but rather view them as Dartmouth College activity. Accordingly, this activity does not appear in the Health System's schedule of expenditures of federal awards for the year ended June 30, 2019.

Part II
Reports on Internal Control and Compliance

Report of Independent Auditors on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards*

To the Board of Trustees of
Dartmouth-Hitchcock Health and subsidiaries

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards,* issued by the Comptroller General of the United States, the consolidated financial statements of Dartmouth-Hitchcock Health and its subsidiaries (the "Health System"), which comprise the consolidated balance sheet as of June 30, 2019, and the related consolidated statements of operations and changes in net assets and of cash flows for the year then ended, and the related notes to the financial statements, and have issued our report thereon dated November 26, 2019, which included an emphasis of a matter paragraph related to the Health System changing the manner in which it accounts for revenue recognition from contracts with customers and the manner in which it presents net assets and reports certain aspects of its financial statements as a not-for-profit entity in 2019 as discussed in note 2 of the consolidated financial statements.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the Health System's internal control over financial reporting ("internal control") to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Health System's internal control. Accordingly, we do not express an opinion on the effectiveness of the Health System's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Health System's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

PricewaterhouseCoopers LLP

Boston, Massachusetts
November 26, 2019

Report of Independent Auditors on Compliance with Requirements That Could Have a Direct and Material Effect on Each Major Program and on Internal Control Over Compliance in Accordance with the Uniform Guidance

To the Board of Trustees of
Dartmouth-Hitchcock Health and subsidiaries

Report on Compliance for Each Major Federal Program

We have audited Dartmouth-Hitchcock Health and its subsidiaries' (the "Health System") compliance with the types of compliance requirements described in the *OMB Compliance Supplement* that could have a direct and material effect on each of the Health System's major federal programs for the year ended June 30, 2019. The Health System's major federal programs are identified in the summary of auditor's results section of the accompanying schedule of findings and questioned costs.

Management's Responsibility

Management is responsible for compliance with federal statutes, regulations and the terms and conditions of its federal awards applicable to its federal programs.

Auditors' Responsibility

Our responsibility is to express an opinion on compliance for each of the Health System's major federal programs based on our audit of the types of compliance requirements referred to above. We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the audit requirements of Title 2 U.S. *Code of Federal Regulations Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). Those standards and the Uniform Guidance require that we plan and perform the audit to obtain reasonable assurance about whether noncompliance with the types of compliance requirements referred to above that could have a direct and material effect on a major federal program occurred. An audit includes examining, on a test basis, evidence about the Health System's compliance with those requirements and performing such other procedures as we considered necessary in the circumstances.

We believe that our audit provides a reasonable basis for our opinion on compliance for each major federal program. However, our audit does not provide a legal determination of Dartmouth-Hitchcock Health and its subsidiaries compliance.

Opinion on Each Major Federal Program

In our opinion, Dartmouth-Hitchcock Health and its subsidiaries complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on each of its major federal programs for the year ended June 30, 2019.

Report on Internal Control Over Compliance

Management of the Health System are responsible for establishing and maintaining effective internal control over compliance with the types of compliance requirements referred to above. In planning and performing our audit of compliance, we considered the Health System's internal control over compliance with the types of requirements that could have a direct and material effect on each major federal program to determine the auditing procedures that are appropriate in the circumstances for the purpose of expressing an opinion on compliance for each major federal program and to test and report on internal control over compliance in accordance with the Uniform Guidance, but not for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, we do not express an opinion on the effectiveness of the Health System's internal control over compliance.

A *deficiency in internal control over compliance* exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, noncompliance with a type of compliance requirement of a federal program on a timely basis. A *material weakness in internal control over compliance* is a deficiency, or combination of deficiencies, in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a type of compliance requirement of a federal program will not be prevented, or detected and corrected, on a timely basis. A *significant deficiency in internal control over compliance* is a deficiency, or a combination of deficiencies, in internal control over compliance with a type of compliance requirement of a federal program that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over compliance was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of the Uniform Guidance. Accordingly, this report is not suitable for any other purpose.

PricewaterhouseCoopers LLP

Boston, Massachusetts
March 31, 2020

Part III
Findings and Questioned Costs

Dartmouth-Hitchcock and Subsidiaries
Schedule of Findings and Questioned Costs
Year Ended June 30, 2019

I. Summary of Auditor's Results

Financial Statements

Type of auditor's report issued	Unmodified opinion
Internal control over financial reporting	
Material weakness (es) identified?	No
Significant deficiency (ies) identified that are not considered to be material weakness (es)?	None reported
Noncompliance material to financial statements	No

Federal Awards

Internal control over major programs	
Material weakness (es) identified?	No
Significant deficiency (ies) identified that are not considered to be material weakness (es)?	None reported
Type of auditor's report issued on compliance for major programs	Unmodified opinion
Audit findings disclosed that are required to be reported in accordance with 2 CFR 200.516(a)?	No

Identification of major programs

CFDA Number	Name of Federal Program or Cluster
Various CFDA Numbers	Research and Development
93.800	Organized Approaches to Increase Colorectal Cancer Screening
93.788	Opiod STR
93.110	Maternal and Child Health Federal Consolidated Programs

Dollar threshold used to distinguish between Type A and Type B programs	$750,000
Auditee qualified as low-risk auditee?	Yes

Dartmouth-Hitchcock and Subsidiaries
Schedule of Findings and Questioned Costs
Year Ended June 30, 2019

II. Financial Statement Findings

None Noted

III. Federal Award Findings and Questioned Costs

None Noted

Dartmouth-Hitchcock and Subsidiaries
Summary Schedule of Prior Audit Findings and Status
Year Ended June 30, 2019

There are no findings from prior years that require an update in this report.

DARTMOUTH-HITCHCOCK (D-H) | DARTMOUTH-HITCHCOCK HEALTH (D-HH)

BOARDS OF TRUSTEES AND OFFICERS

Effective: April 1, 2021

Edward Stansfield, MA *Senior VP, Resident Director for the Hanover, NH Bank of America/Merrill Lynch Office*	**Charles G. Plimpton, MBA** *Retired Investment Banker*
Jocelyn D. Chertoff, MD, MS, FACR *Chair, Dept. of Radiology*	**Kurt K. Rhynhart, MD, FACS** *DHMC Trauma Medical Director and Divisional Chief of Trauma and Acute Care Surgery*
Duane A. Compton, PhD *Ex-Officio: Dean, Geisel School of Medicine at Dartmouth*	**Pamela Austin Thompson, MS, RN, CENP, FAAN** *Chief executive officer emeritus of the American Organization of Nurse Executives (AONE)*
Paul P. Danos, PhD *Dean Emeritus; Laurence F. Whittemore Professor of Business Administration, Tuck School of Business at Dartmouth*	**Marc B. Wolpow, JD, MBA** *Co-Chief Executive Officer of Audax Group*
Roberta L. Hines, MD *Nicholas M. Greene Professor and Chair, Dept. of Anesthesiology, Yale School of Medicine*	**Mark W. Begor, MBA** *Chief Executive Officer, Equifax*
Laura K. Landy, MBA *President and CEO of the Fannie E. Rippel Foundation*	**Elof Eriksson, MD, PhD** *Professor Emeritus, Harvard Medical School and Chief Medical Officer, Applied Tissues Technologies, LLC*
Geraldine "Polly" Bednash, PhD, RN, FAAN *Adjunct Professor, Australian Catholic University and University of Vermont*	**Thomas P. Glynn, PhD** *CEO, Harvard Allston Land Company*
Trey Dobson, MD *Chief Medical Officer, Southwestern Vermont Medical Center & Medical Director for the D-H Practice, Bennington, Vermont*	**Aaron J. Mancuso, MD** *Staff Physician, Anesthesiology*
Gary L. Freed Jr., MD, PharmD *Medical Director of the Comprehensive Wound Clinic at D-H & Assistant Professor of Surgery, Geisel School of Medicine at Dartmouth*	**Jennifer L. Moyer, MBA** *Managing Director & CAO, White Mountains Insurance Group, Ltd.*
Robert S.D. Higgins, MD, MSHA *Surgeon-in-Chief, John Hopkins Hospital and the William Stewart Halstead Professor of Surgery and Director of the Department of Surgery at the Johns Hopkins University School of Medicine*	

INGER IMSET, BA, NBC-HWC [redacted] W: (603) 653-9006

[redacted] Inger.Imset@Dartmouth.edu

National Board-Certified Health Wellness Coach with extensive experience engaging patients, students, and faculty in Dartmouth related programming.

PROFESSIONAL EXPERIENCE

Clinical Instructor in Community and Family Medicine - Geisel School of Medicine (7/16 - present)

Program Specialist - Norris Cotton Cancer Center (7/17 - present/term position)

- Identify opportunities to educate and motivate lifestyle change in at-risk subsets of the population.
- Collaborate with healthcare providers & researchers to facilitate cancer prevention approaches.
- Coordinate implementation of National Cancer Institute initiatives within our catchment area.

Teaching Assistant - Geisel third year medical students (4/08 - present)

- Develop and teach curriculum in Shared Decision-Making (SDM) communication skills using Canvas learning management system in the Simulation-Based Education and Research Center at DHMC.

Health and Wellness Coach - High Value Health Care Collaborative/Primary Care, DHMC (3/13 - 7/17)

- Improved patient care services outcomes per patient reported data & process measures.
- Facilitated Population Health Innovation Fund outreach via instruction of Stanford's Living a Healthy Life workshops.
- Co-facilitator for Health Society and the Physician small group on Shared Medical Appointments.

Patient Support Corps Coordinator - Center for Shared Decision Making/SDM (3/13 - 8/15)

- Implemented patient engagement outreach interventions related to SDM and question listing.
- Instructed, trained, and supervised Dartmouth College and Geisel School of Medicine students.

Research Analyst - Center for Program Design and Evaluation (12/10 - 3/14)

- Conducted program evaluation interpreting and analyzing qualitative and quantitative data.
- Enhanced physician, patient, and student learning via multiple grant funded programs.
- Hired, trained, and supervised student employees.

Project Coordinator - Community and Family Medicine Department (4/08 - 7/12)

- Implementation of federal & state grant projects to increase primary healthcare professionals in NH (e.g., Rural Health Scholars, SEARCH). Contributed to dissemination of findings.

Project Coordinator - SDM Program VA Medical Center, The Dartmouth Institute (5/07 - 12/10)

- Implemented, engaged, and tracked patient participation in educational SDM research project.

Office Manager - Department of Obstetrics & Gynecology (2/97 - 5/07)

- Supervised and mentored the five employees within the Chairman's office.
- Organized all procedural aspects of physician recruitment and facilitated the hiring process.
- Managed DMS budget for $1 million/year educational programs.

INGER IMSET, BA, NBC-HWC [redacted] W: (603) 653-9006

[redacted] Inger.Imset@Dartmouth.edu

PUBLICATIONS / PRESENTATIONS / POSTERS

Schiffelbein JE, Carluzzo KL, Hasson RM, Alford-Teaster JA, **Imset I**, Onega T. Barriers, Facilitators, and Suggested Interventions for Lung Cancer Screening Among a Rural Screening-Eligible Population. Journal of Primary Care & Community Health, 2020, 11:1-9.
https://journals.sagepub.com/doi/10.1177/2150132720930544

Imset I, Presentation for national Shared Decision-Making Learning Collaborative. Topic: SDM training of third year medical students at The Geisel School of Medicine. March 19, 2020

Alford-Teaster J, **Imset I**, Schiffelbein JE, Olson A, Lyons K, Onega T. Barriers and Facilitators of Lung Cancer Screening Uptake in Rural Vermont and New Hampshire. Poster accepted for Dartmouth COOP Northern New England Practice-Based Research Network meeting, North Conway, NH. January 24-26, 2020.

Kim SJ, Schiffelbein JE, **Imset I**, Olson A. Myths and Distorted Perception about HPV Vaccine: Identifying Themes and Linguistic Characteristics of Parents' Comments via Facebook in Rural and Urban Populations. Abstract submitted for special issue of American Journal of Public Health, August 2019. Manuscript invitation submission January 2020.

Kim SJ, Schiffelbein JE, **Imset I**, Olson A. Myths and Perception about HPV Vaccine in Rural and Urban Populations: Identifying Themes and Linguistic Characteristics of Parents' Comments via Facebook. Article submission for the Journal of Medical Internet Research, Spring 2020.

Olson AL, Kim SJ, Schiffelbein JE, **Imset I**. Parental Views of Adolescent Human Papilloma Virus Vaccination: Virtual Focus Group in Urban and Rural Settings. Poster presentation for the Sixth NCI Cancer Centers HPV Vaccination Summit, Dallas, TX. November 14-15, 2019

Olson AL, Kim SJ, Schiffelbein JE, **Imset I**. Countering HPV Anti-Vax Misinformation via Social Media and Crowdsourcing Platforms Message-testing Experiments for HPV Vaccination Uptake. Poster presentation for Sixth NCI Cancer Centers HPV Vaccination Summit, Dallas, TX. November 14-15, 2019

Olson AL, Kim SJ, Schiffelbein JE, **Imset I**. HPV vaccination; Variation in counseling messages and use of a strong recommendation by pediatricians, family physicians and nurse practitioners. Poster presentation accepted for Pediatric Academic Societies (PAS) 2019 Meeting, Baltimore, MD, April 27-30, 2019

Olson AL, Kim SJ, Schiffelbein JE, **Imset I**. Parental Views of Adolescent Human Papilloma Virus Vaccination (HPV): In-person and Facebook Focus Group Differences. Poster accepted for Pediatric Academic Societies (PAS) 2019 Meeting, Baltimore, MD, April 27-30, 2019.

Onega T, Schiffelbein JE, Alford-Teaster J, **Imset I**, Carluzzo K. Barriers and Facilitators of Lung Cancer Screening Uptake and Tobacco Cessation in Rural New England. Abstract accepted for Annual Meeting of the American Society of Preventative Oncology online publication, Tampa, FL. March 10-12, 2019.

Kim SJ, Schiffelbein JE, **Imset I**, & Olson AL. Focus Groups on HPV Vaccine Via Facebook Ads: Identifying Themes and Linguistic Characteristics of User Comments. Abstract accepted for the 40th Annual Meeting and Scientific Sessions of the Society of Behavioral Medicine, Washington, DC. March 6-9, 2019.

INGER IMSET, BA, NBC-HWC [redacted] W: (603) 653-9006

[redacted] Inger.Imset@Dartmouth.edu

PUBLICATIONS / PRESENTATIONS / POSTERS (continued)

Morrow C, **Imset I**, Z-Covey A, Communication Skills for Community Engagement. Oral presentation for NH Public Health Association & Dartmouth-Hitchcock "Team Up, Take Action: Improving Population Health Together" in Nashua, NH 2016.

Herndon B, Berg S, **Imset I**, Z-Covey A, Health Coaching in the High Value Health Care Collaborative. Oral presentation for The Microsystem Festival /CMMI in Jonkoping, Sweden 2015.

Morrow C, **Imset I**, Vermont Public Radio interview 2014 http://digital.vpr.net/post/health-coaches-help-patients-battle-chronic-illness#stream/0

O'Connor S, Butcher RL, Adachi-Mejia AM, **Imset I**, Bazos DA, Schifferdecker KE. In Shape Together: A Multilevel, Intergenerational, Community-based Program to Promote Physical Activity and Reduce Sedentary Behavior. Abstract accepted for oral presentation to American Public Health Association Annual Meeting, Boston, MA 2013.

Article: Morrow C, Reed V, Eliassen S, **Imset I.** Shared Decision Making: Skill Acquisition for Year III Medical Students. Family Medicine 2011; 43:721-725.

EDUCATION / TRAINING

B.A., Sociology, Gettysburg College, Gettysburg, PA
National Board-Certified Health and Wellness Coach (2017)
Well Coaches School of Coaching: Certified Health and Wellness Coach (2016)
Stanford "Living a Healthy Life" Self-Management Program Master Trainer Certification (2016)
Graphic Arts Certification: University of New Hampshire (1991)

VOLUNTEER WORK/ PROFESSIONAL MEMBERSHIP

NIH National Outreach Network (NON) Communication Workgroup (2020)
Planning Committee Member for the VT Lung Cancer Screening Summit, American Lung Association (2018)
NIH National Outreach Network (NON) Measures and Resources Workgroup (2017)
Education Committee and Teaching Assistant, League of New Hampshire Craftsmen (2013-2014)
Patient-Advisory Board Member, Dartmouth Health Connect (2012-2013)
Upper Valley Humane Society, Board Vice President and Chair of Recruitment (1998-2003)

OMB No. 0925-0001 and 0925-0002 (Rev. 03/2020 Approved Through 02-28-2023)

BIOGRAPHICAL SKETCH

NAME: Kraft, Sally A

eRA COMMONS USER NAME (credential, e.g., agency login): SAKRAFT

POSITION TITLE: VP, Population Health, Dartmouth-Hitchcock

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE	Completion Date	FIELD OF STUDY
Williams College, Williamstown MA	BA	06/1979	Economics
University of Michigan Medical School, Ann Arbor MI	MD	05/1983	Medicine
Residency Internal Medicine, Santa Clara Valley Medical Center, San Jose CA		06/1987	Internal Medicine Residency
Pulmonary and Critical Care Medicine, Stanford University, Stanford CA		06/1991	Pulmonary and Critical Care Fellowships
University of Michigan School of Public Health, Ann Arbor MI	MPH	09/2006	Health Management and Policy

A. Personal Statement

My career has spanned the challenges of clinical practice to health system transformation to improvements in population health. After 20 years of clinical practice, I re-focused my career on system transformation and improving population health through the intentional alignment of clinical and community improvements. As the Vice President of Population Health for the Dartmouth-Hitchcock Health system, I am committed to improving both health care quality and access and the social drivers of health outcomes and inequities for populations across New Hampshire and Vermont. In particular, our region faces unique challenges due in access and the social determinants of health due to rural geography. Through the purposeful coordination of health care redesign and investing in community-based resources, I hope to learn how our health systems can be partners in pursuit of health.

B. Positions and Honors

Clinical, professional and academic positions:

1992 - 1993	Clinical Faculty, Pulmonary and Critical Care Medicine Stanford University Hospital, Stanford, CA
1992 - 1993	Physician, Pulmonary and Critical Care Medicine Palo Alto Medical Clinic, Palo Alto, CA
1994 - 1996	Physician, Pulmonary and Critical Care Medicine Physicians Plus Medical Group (now UWMF), Madison, WI
1996 - 1997	Physician, Pulmonary Medicine Department of Veterans Affairs, Livermore Hospital - Palo Alto, CA
1998 – 2014	Physician, Pulmonary Medicine University of Wisconsin Medical Foundation (UWMF)
2007 – 2014	Clinical Associate Professor, Department of Medicine University of Wisconsin School of Medicine and Public Health
2007 – 2014	Medical Director, UW Health Quality, Safety and Innovation Department University of Wisconsin Health System
2014 – 2015	Medical Director, High Value Healthcare Collaborative The Dartmouth Institute for Health Policy & Clinical Practice
2015 – 2017	Dissemination and Implementation Subject Matter Expert High Value Healthcare Collaborative
2014 – Present	Clinical Adjunct Associate Professor, Department of Medicine University of Wisconsin School of Medicine and Public Health

2015 – Present	Assistant Professor of Medicine Geisel School of Medicine at Dartmouth
2015 – Present	Co-Director Community Engaged Research Core Dartmouth Synergy, The Dartmouth Clinical and Translational Science Institute
2017 – Present	Assistant Professor of Medicine, The Dartmouth Institute Geisel School of Medicine at Dartmouth
2014 – Present	Vice President, Population Health Department Dartmouth-Hitchcock Health

Awards:

2016	GE HealthCities Leadership Academy Challenge Team Winner Introducing Advance Care Planning to Employers Project Lead: Dr. Sally Kraft
2016	AAMC Health Equity Research SnapShot Feature Dartmouth-Hitchcock Community Health Needs Assessment: Implementation Strategy Project Leaders: Dr. Sally Kraft, Mr. Greg Norman
2014	AAMC Learning Health System Research, Champion Award Connecting the Dots: Building the Infrastructure Linking Patient Care to Professional Education to Scholarly Work and back to the Patient Again. Primary applicant: Dr. Maureen Smith
2013	AAMC Learning Health Systems Research, Pioneer Award Connecting the Dots: Building the Infrastructure Linking Patient Care to Professional Education to Scholarly Work and back to the Patient Again. Primary applicant: Dr. Sally Kraft
2013	Robert Wood Johnson, Voices in Quality contest winner Using Data to Improve Colorectal Cancer Screening Rates

C. Contributions to Science

Learning health system: My work has contributed to the evidence base on learning health systems through the development of a framework to guide redesign efforts. In my role as medical director of the Quality, Safety and Innovation team at UW Health, I developed an evidence based framework that guided our redesign efforts in preventive, chronic disease, and organizational redesign.

a. Kraft SA, Caplan W, et al. Building a Learning Health System: Describing an Organizational Infrastructure to Support Continuous Learning. Learn Health Syst. Jul 12, 2017.
b. Kraft SA, Carayon P, Weiss J, Pandhi, N. A Simple Framework for Complex System Improvement. Am J Med Qual 2015; 30(3): 223-231.

Primary care redesign: My work has focused on health system redesign, specifically in the delivery of primary care services. This work has included contributions to learning about how primary care teams should be structured to meet the demands of the future and how academic health systems should evolve to support primary care transformation.

a. Pandhi N, Kraft S, Berkson S, Davis S, Kamnetz S, Koslov S, Trowbridge E, Caplan W. Developing primary care teams prepared to improve quality: a mixed-methods evaluation and lessons learned from implementing a microsystems approach. BMC Health Serv Res. 2018 Nov 9;18(1):847. doi: 10.1186/s12913-018-3650-4.
b. Pandhi N, Yang WL, Karp Z, Young A, Beasley JW, Kraft S, Carayon P. Approaches and challenges to optimizing primary care teams' electronic health record usage. Informatics in Primary Care 2014;21:142-151.
c. Koslov S, Trowbridge E, Kamnetz S, Kraft S, Grossman J, Pandhi N. Across the Divide: Primary Care Departments Working Together to Redesign Care to Achieve the Triple Aim. Healthcare 2016;4(3):200-206.
d. Caplan W, Davis S, Kraft S, Berkson S, Gaines ME, Schwab S, Pandhi N. Engaging patients at the front lines of primary care redesign: operational lessons for an effective program. Joint Commission Journal on Quality and Patient Safety 2014; 40: 544-540.

ARIEL A. PIKE

[redacted] • [redacted] • ariel.a.pike@hitchcock.org

Experience

Program Coordinator, Knowledge Map Department • June 2016 - Current
Dartmouth-Hitchcock Medical Center • One Medical Center Drive, Lebanon, NH

- Project management
- Project ECHO Coordinator
- Office operations
- Lead on department communications and marketing, including newsletters
- Document library management- maintains and updates web site content, organization and user interface.
- Trains Knowledge Map staff on technology and new programs, oversees implementation, updates and upgrades.

Administrative Assistant, Center for Nursing Excellence • September 2014 - June 2016
Dartmouth-Hitchcock Medical Center • One Medical Center Drive, Lebanon, NH

Duties included:

- Calendar management
- Project assistance
- Event planning
- Inventory management
- Process improvement

Senior Clinical Secretary, Department of Pulmonology & Critical Care • December 2012 - September 2014
Dartmouth-Hitchcock Medical Center • One Medical Center Drive, Lebanon, NH

- Scheduled new patient appointments, follow up appointments and outside appointments
- Referral reports
- Appointment pre-work
- Outside referrals and follow up
- Physician schedule development and maintenance
- Supply inventory
- Training for new employees and training content development

Skills and Qualifications

- Strong administrative skills
- Project management
- Effective calendar management
- Office operations
- Proficient in Microsoft Outlook, Word, PowerPoint, Excel, Publisher, and Visio
- Process improvement and standardization
- Organization

- Ability to juggle multiple projects
- Marketing/design
- Strong communication/listening and interpersonal skills

Trainings-

- Excel 2013 Training, Dartmouth-Hitchcock Medical Center
- Communicating with Confidence, Lynda.com Professional Skills
- Yellow Belt Certified, Value Institute Learning Center, Dartmouth-Hitchcock Medical Center
- Fundamentals of Successful Project Management, Skill Path Seminars

Education

High Point University, High Point, NC

- School of Business, 2009-'10

Clinical Career Training

- Licensed Nursing Assistant, 2012

CURRICULUM VITAE
May 2021

Name: Bryan John Marsh

Office address: Dartmouth-Hitchcock Medical Center, One Medical Center Drive, Lebanon, NH 03781

Home Address:

E-mail:

Place of Birth:

Education:

1976-1980	Dartmouth College. B.A., 1980
1981-1985	University of Chicago, Department of Anthropology. M.A., 1983.
1986-1990	University of Chicago Pritzker School of Medicine. M.D., 1990.

Postdoctoral Training:

Internship and Residency

1990-1991	Internship in Internal Medicine: Dartmouth-Hitchcock Medical Center, Lebanon NH
1991-1993	Residency in Internal Medicine: Dartmouth-Hitchcock Medical Center, Lebanon NH.

Fellowship

1993-1995	Fellowship in Infectious Diseases: Dartmouth-Hitchcock Medical Center, Lebanon NH.

Additional Training

February, 1996	Hartford Hospital Antibiotic Management Program.
May, 1995	Training Course in Hospital Epidemiology: The Society for Hospital Epidemiology of America.
2008-2009	Executive Education Program for Section Chiefs and Practice Managers. Tuck School of Business.

Licensure and Certification:

1993	State of New Hampshire, License no. 8898
1993-2017	Diplomate, American Board of Internal Medicine.
1996-present	Diplomate, American Board of Internal Medicine, Subspecialty of Infectious Disease, American Board of Internal Medicine.
2004	Credentialed, American Academy of HIV Medicine HIV Specialist

Academic Appointments:

1995-1997	Instructor in Medicine: Dartmouth Medical School.
1997-2006	Assistant Professor of Medicine: Dartmouth Medical School.
2006-present	Associate Professor of Medicine: Dartmouth Medical School

Hospital Appointments:

1993-1995	Affiliate Clinical Staff, Mary-Hitchcock Memorial Hospital, Lebanon NH.
1995-1997, 1999	Consultant Physician, Brattleboro Memorial Hospital, Brattleboro VT.
1995-1997	Associate Clinical Staff, Mary-Hitchcock Memorial Hospital, Lebanon NH.
1997-present	Clinical Staff, Mary-Hitchcock Memorial Hospital, Lebanon NH.
2002-present	Voting Member, The Hitchcock Clinic.

Other Professional Positions and Major Visiting Appointments:

1995-1997	Program Director, Lyndonville VT Outreach Clinic of the Infectious Disease Section, Dartmouth-Hitchcock Medical Center, Lebanon NH.
1996-present	Program Director, Manchester-Hitchcock Outreach clinic of the Infectious Disease Section, Dartmouth-Hitchcock Medical Center, Lebanon NH.

Hospital and Health Care Organization Clinical Responsibilities:

1995-present	Attending Physician, Infectious Disease Section, Dartmouth-Hitchcock Medical Center, Lebanon NH
1997-present	Program Director, Comprehensive Antimicrobial Program of Dartmouth-Hitchcock Medical Center, Lebanon NH.
7/99-2/00	Hospital Epidemiologist, Dartmouth-Hitchcock Medical Center, Lebanon NH

Major Administrative Responsibilities:

7/99-2/00	Acting Chief, Infectious Disease Section, Dartmouth-Hitchcock Medical Center, Lebanon NH
2002-present	Medical Director, Hitchcock Clinic HIV Program.
2007-2014	Acting Chief, Section of Infectious Disease and International Health, Dartmouth-Hitchcock Medical Center, Lebanon NH
2014-present	Chief, Section of Infectious Disease and International Health, Dartmouth-Hitchcock Medical Center, Lebanon NH

Major Committee Assignments:

International:

2003	Consultant, Kosovo HIV/AIDS Prevention Project (sponsored by Population Services International).
2005	Consultant, Guyana national HIV/AIDS Program.
2010	Consultant, Haiti national HIV/AIDS Program

National and Regional:

2001	Member and New Hampshire representative, ad hoc founding committee of the New England division of the American Academy of HIV Medicine.
2001-present	Member and New Hampshire representative, New England Board of the American Academy of HIV Medicine.
2002	Consultant responsible for development of guidelines for the management of Hepatitis C infections, New Hampshire Department of Corrections.
May 11, 2004	Member, White Coat Day (physician lobbying effort for HIV funding, organized by AAHIVM and HIVMA), Washington D.C..
2004-present	Member, Medical Advisory Committee to the New Hampshire AIDS Drug Assistance Program.

Dartmouth-Hitchcock Medical Center:

1994-1995	Committee Member, Infection Control Committee of Dartmouth-Hitchcock Medical Center
1995-1997	Ad hoc member of the Antimicrobial Subcommittee, with responsibility to develop a comprehensive antimicrobial policy, of the Pharmacy and Therapeutics Committee of Dartmouth-Hitchcock Medical Center, Lebanon NH.
7/99-2/00	Acting chair, Infections Committee, Dartmouth-Hitchcock Medical Center, Lebanon NH.
7/99-2/00	Acting co-chair, Antimicrobial Subcommittee of the Pharmacy and Therapeutics Committee of Dartmouth-Hitchcock Medical Center, Lebanon NH.
1997-present	Committee member, Antimicrobial Subcommittee of the Pharmacy and Therapeutics Committee of Dartmouth-Hitchcock Medical Center, Lebanon NH.
1998-2004	Committee member, Internship Selection Committee, Department of Medicine, Dartmouth-Hitchcock Medical Center, Lebanon NH.
1999-2011	Coordinator, Infectious Disease Section weekly clinical conference, Dartmouth-Hitchcock Medical Center, Lebanon NH.

2001-2010	Committee member, CIS Steering Group (advisory to the Board of Governors), Dartmouth-Hitchcock Medical Center, Lebanon NH.
2004	Dermatology Residency internal review committee.
3/10-present	Blood Borne Pathogen Committee, Dartmouth-Hitchcock Medical Center, Lebanon NH.

Professional Societies:

1993-present	Member, Northern New England Infectious Disease Society.
1997-2010	Member, Vermont Medical Society.
1996-present	Member, American Society for Microbiology.
1993-1997	Member-in-training, Infectious Disease Society of America.
1997-present	Member, Infectious Disease Society of America.
1998-present	Member, American College of Physicians.
2000-2010	Member of the American Academy of HIV Medicine.
2000-present	Member, International AIDS Society.
2001-present	Member, HIV Medicine Association of the Infectious Disease Society of America.

Community Service Related to Professional Work:

2004	Outside senior thesis examiner, Marlboro College

Editorial Boards:

Ad hoc reviewer: *AIDS. Clinical Infectious Diseases. The Journal of Infectious Diseases. Clinical Therapeutics*

Awards and Honors:

1980	Cum Laude, Dartmouth College.
1980	With Distinction in Biology, Dartmouth College.
1983	Roy Albert Prize for "outstanding work in the field of anthropology."
1996	Red Ribbon Physician Award of the Granite State AIDS Consortium "In recognition of Outstanding Medical Care to People Living with HIV/AIDS."

Report of Teaching:

1. Narrative report.

My interest in teaching is a reflection of my clinical focus – the care of people living with HIV/AIDS (PLWHA). The dramatic reduction in morbidity and mortality from HIV/AIDS in the U.S. in the last 10 years has been the result of a remarkable synergy between clinical and basic research, translated through the practice of expert clinicians. I thus hope not only to contribute to the development of expert clinicians but also to stimulate an awareness and understanding of the process of medical science that has led to the benefits now open to PLWHA in resource-rich settings.

HIV care is now truly a specialty of its own, so I consider my most important audience those who are actively involved in the care of PLWHA. To further this within the DHMC ID Section I have initiated two programs for the ID fellows. First, I established and run a biweekly one hour teaching session with the ID fellows, during which time we discuss sophisticated issues in the management of HIV infection. And second, I established an HIV teaching clinic at the Manchester Hitchcock Clinic, during which time I mentor the senior DHMC ID fellows in the care of a significant number of HIV patients. I believe that the combination of these two teaching venues has significantly improved the competence in HIV care of the ID fellows who graduate from our program.

I also provide training to established HIV experts both locally and regionally. At DHMC I am the most up-to-date and informed of the HIV providers and act as a resource to the other members of the section. Within the region I accept any and all opportunities to provide HIV training to other HIV treaters, most consistently by providing twice annual updates for the HIV providers in the southern region of the state and in Portland, Maine.

Finally, I have now provided significant training and education in HIV medicine to lead HIV physicians from Kosovo, Tanzania, and Guyana.

In addition to working with clinicians who are expert in HIV care I do feel a commitment to providing appropriate education to non-experts. The HIV mini-elective for DHMC medicine residents is the only structured exposure the residents have to HIV medicine, and I commit several hours per week to this activity.

2. Local contributions.

Dartmouth-Hitchcock Medical Center and Dartmouth Medical School

June, 2008	Primer on "The Diagnosis, Prevention, and Management of Tuberculosis" for the staff of the Dartmouth College Health Service Lecturer 12 physicians and other clinicians
5, 2005	"An introduction to HIV" in Anthropology 17 (The Anthropology of Health and Illness) Instructor Large undergraduate class at Dartmouth College One 1 hour didactic presentation
2004-present	Infectious Disease Section fellow didactic training in HIV/AIDS Instructor and discussion leader 3 ID fellows Two 1 hour didactic and discussion sessions/month
2002-present	Infectious Disease Section fellow clinical training in HIV/AIDS Clinical instructor 2 senior ID fellows One 3-4 hour intensive HIV clinic/month at the Manchester outreach clinic
2002	Medical Grand Rounds (HIV Update), DHMC
2000-present	Infectious Disease Updates for the staff of the Dartmouth College Health Service Lecturer 8-12 physicians and other clinicians One session/year, one hour of contact time, 3 hours of preparation
1998	Medical Grand Rounds (HIV Update), DHMC
1997-2010	HIV for the primary care provider Lecturer and panel discussant in an annual program presented by the DHMC ID Section 10-30 audience members One hour of contact time, 5 hours of preparation
1997- present	Infectious Disease Block, Scientific Basis of Medicine, DMS Lecturer and small group leader 70 DMS2 students for lectures, 20 for small groups 5 hours of contact time, 10 hours of preparation
1997- present	HIV mini-elective at DHMC Director and instructor 12-18 PGY-2/3 medicine residents/year 3 hours/week
1997- present	Infectious Disease Service, Department of Medicine Instructor. 1-3 DMS-4 and DOM residents rotating on the ID inpatient consult service 8 weeks/year, 1-2 hours/day of clinical teaching

3. Regional, national, or international contributions.

June, 2008	Grand Rounds at Valley Regional Hospital: "Updates in HIV Testing Guidelines." Lecturer 17 physicians
April, 2008	"CROI Conference Update" for southern NH HIV physicians Lecturer

12 physicians and other clinicians

April, 2008 — "HIVe Update" for Society of NH Pharmacists
Lecturer
80 pharmacists

September, 2005 — HIV/AIDS training for many Guyanese physicians
Principal instructor in a national training course in Guyana
5-8 hours/day for 1 week

June, 2005 — HIV/AIDS training for many Tanzanian physicians and students
Director and instructor (didactic and clinical) in Tanzania
5-8 hours/day for 2 weeks

May, 2005 — HIV/AIDS training for many Guyanese physicians and students
Director and instructor (didactic and clinical) in Guyana
5-8 hours/day for 1 week

2003 — HIV/AIDS training for two Infectious Disease physicians from Kosovo
Director and instructor
2 hours/day for 2 weeks

2003 — HIV/AIDS training for one Infectious Disease physician from Tanzania
Director and instructor
2 hours/day for 2 weeks

2001-present — HIV updates for HIV specialists affiliated with the Hitchcock Clinic HIV Program
Lecturer
4-8 physicians and other clinicians
Twice per year
2 hours of contact time, 5 hours preparation/session

2000 — Dartmouth Community Medical School, Fall series
Lecturer in an evening program on HIV/AIDS
Approximately 50 audience members
Two evening sessions, 10 hours preparation

1997-present — Grand Rounds at regional hospitals on various subjects (e.g. HIV, HCV, Community acquired pneumonia).
Lecturer
20-50 physicians
1-3 times/year
1 hour contact time/lecture, 5-10 hours of preparation

4. Teaching awards received.

5. Major curriculum offerings, teaching cases or innovative educational programs developed.

2005 — Formalization of an annual curriculum for the ID fellowship bimonthly HIV training course first established in 2004

2004 — I developed the first series of scheduled didactics/case based discussions within the ID Section for the ID fellows. We meet twice per month to discuss sophisticated aspects of the care of people living with HIV/AIDS.

2002 — I developed a new training experience in the clinical management of HIV/AIDS for the DHMC ID fellows. This consists of an intensive 3-4 hour HIV clinic once per month, during which I provide teaching in the medical care of people living with HIV and training in the development of coordinated care plans with affiliated care providers and community based organizations.

6. Education funding.

1998-present	I have received a small amount of funding (variable but always <0.05 FTE) from the New England AIDS Education and Training Grant
1997-present	The DHMC DOM committed to 0.10 FTE salary support for HIV teaching for the DOM residents, but I have never drawn on this support.

Report of Research Activities:

1. Current research projects

2005-present	Co-investigator for *STIRR Intervention for Dually Diagnosed Clients.*
2005-2006	PI for GlaxoSmithKline phase 3 trial of a new class of HIV antiviral (CCR5 blocker).
2004-2005	PI for Bristol Myers Squibb IMPACT trial, an observational trial of HIV resistance to antiviral therapy.
2004-2005	PI for GlaxoSmithKline ALOHA trial, a phase 4 trial of antiviral therapy.

2. Research funding information

2005-2008	Co-investigator. The STIRR Intervention for Dually Diagnosed Clients. NIMH, $10,412/year, 4/05-present; PI Stanley Rosenberg.
2000-2002	Co-investigator. Treatment of Chronic Viral Infections in Patients with Severe Mental Illness. New Hampshire State Hospital, $32,000 one time grant.
1998-2000	PI. A pilot Study of Dual Skin Testing with *M. avium* Sensitin and PPD in Health Care Workers with a 10-14 mm PPD Reaction. Department of Medicine, Dartmouth-Hitchcock Medical Center, $10,568.
1997-2001	Co-investigator. A survey of Tuberculosis and Sexually Transmitted Diseases. CDC, $62,112/year, 9/97-9/01; PI C. Robert Horsburgh.

Non-research grant funding information:

2002-present	PI and Medical Director. Southern NH Integrated Care, an HIV/AIDS Early Intervention Services Program. DHHS, Ryan White Title III EIS Program, $340,000/year total.
2000-present	Co-investigator. New England AIDS Education and Training Center. DHHS, $66,500/year total; $800/year salary support; sub-contract PI Richard Waddell.

Report of Clinical Activities:

I have two main clinical activities.

1. My major clinical focus is on the management of people living with HIV/AIDS (PLWHA). As such I have developed true expertise in this area and am confident that my knowledge and clinical skills are comparable to those of regional and national experts. I see HIV-infected patients both at DHMC and at the Hitchcock Clinic in Manchester, NH, and I now care for more PLWHA than does any other provider in northern New England.

   My interest in HIV has also been evidenced in my role as the Medical Director for the Hitchcock Clinic HIV Program, which I took on in 2002. As the Medical Director I have been committed to a process of integration and expansion and have helped steward the development of what is now a large regional program which receives close to 1 million dollars in grant funding annually to support patient care, HIV education, and other services. This program is about to undergo another significant expansion in the coming year with the addition of three new physicians within the ID Section, all of whom will be, amongst other responsibilities, providing HIV clinical care.

2. In addition to my focus on HIV I remain committed to being an expert general Infectious Disease clinician. I continue to spend eight to twelve weeks per year on the Infectious Disease inpatient service, during which time I care for patients with the entire range of infectious diseases seen in the population served by DHMC; and I care for patients with general infectious diseases in my outpatient clinic at DHMC.

BIBLIOGRAPHY

Original Articles:

1. von Reyn CF, Green PA, McCormick D, Huitt GA, Marsh BJ, Magnusson M, Barber TW. Dual Skin Testing with *Mycobacterium avium* Sensitin and Purified Protein Derivative: An Open Study of Patients with *M. avium* Complex Infection or Tuberculosis. Clinical Infectious Diseases 1994; 19:15-20.

2. Pinto-Powell R, Olivier KN, Marsh BJ, Donaldson S, Parker HW, Boyle W, Knowles M, Magnusson M, von Reyn CF. Skin testing with *Mycobacterium avium* Sensitin to Identify Infection with *M. avium* Complex in Cystic Fibrosis. Clinical Infectious Diseases 1996; 22(3):560-562.

3. von Reyn CF, Arbeit RD, Yeaman G, Waddell RD, Marsh BJ, Morin P, Modlin JF, Remold HG. Immunization of healthy adult subjects in the United States with a three dose series of inactivated *Mycobacterium vaccae*. Clinical Infectious Diseases. Clinical Infectious Diseases 1997; 24(5): 843-848.

4. Marsh BJ, von Reyn CF, Edwards J, Tosteson A, Arbeit RD, International MAC Study Group. The risks and benefits of childhood BCG immunization among adults with AIDS. AIDS. AIDS 1997; 11(5): 669-672.

5. Marsh BJ, von Reyn CF, Arbeit RD, Morin P. Immunization of HIV-infected adults with a 3 dose schedule of inactivated *Mycobacterium vaccae*. The American Journal of Medical Sciences 1997; 313 (6):377-383.

6. von Reyn CF, Marsh BJ, Waddell R, Lein AD, Tvaroha S, Morin P, Modlin JF. Cellular immune responses to mycobacteria after a five dose schedule of *Mycobacterium vaccae* among healthy and HIV-positive subjects in the United States. Clinical Infectious Diseases 1998; 27: 1517-1520.

7. von Reyn CF, Williams D, Horsburgh CR, Jaeger AS, Marsh BJ, Haslov K, Magnusson M. Dual skin testing with *Mycobacterium avium* sensitin and purified protein derivative to discriminate pulmonary disease due to *M. avium* complex from pulmonary disease due to *Mycobacterium tuberculosis*. Journal of Infectious Diseases 1998; 177:730-736.

8. Brunette MF, Drake RE, Marsh BJ, Torrey WC, Rosenberg SD, and the Five-Site Health and Risk Study Research Committee. Responding to blood-borne infections among persons with severe mental illness. Psychiatric Services 2003; 54 (6):860-865.

9. Rosenberg SD, Swanson JW, Wolford GL, Osher FC, Swartz MS, Essock SM, Butterfield MI, Marsh BJ, and the Five-Site Health and Risk Study Research Committee. The Five-Site Health and Risk Study of blood-borne infections among persons with severe mental illness. Psychiatric Services 2003; 54 (6):827-835.

10. Marsh BJ, San Vicente J, von Reyn CF. Utility of dual skin tests to evaluate tuberculin skin test reactions of 10-14 mm in healthcare workers. Infection Control and Hospital Epidemiology 2003;24:821-824.

11. Rosenberg S, Brunette M, Oxman T, Marsh B, Dietrich A, Mueser K, Drake R, Torrey W, Vidaver R. The STIRR Model of Best Practices for Blood-Borne Diseases Among Clients with Serious Mental Illness. Psychiatric Services 2004; 55 (6):660-664.

12. Rosenberg SD, Drake RE, Brunette MF, Wolford GL, Marsh BJ. Hepatitis C virus and HIV co-infection in people with severe mental illness and substance use disorders. AIDS 2005; 19 (suppl 3):S26-S33.

13. Reed C, von Reyn CF, Chamblee S, Ellerbrock TV, Johnson JW, Marsh BJ, Johnson LS, Trenschel RJ, Horsburgh CR. Environmental risk factors for infection with *Mycobacterium avium* complex. American Journal of Epidemiology 2006;1 64(1):32-40.

14. Lahey T, Lin M, Marsh B, Curtin J, Wood K, Eccles B, von Reyn CF. Increased Mortality in Rural Patients with HIV Patients in New England. AIDS Research and Human Retroviruses 2007; 23 (5): 693-98.

15. O'Donnell M, Chamblee S, von Reyn CF, Ellerbrock TV, Johnson J, Marsh BJ, Moreland JD, Narita M, Pedrosa M, Johnson LS, Horsburgh CR. Racial Disparities in Primary and Reactivation Tuberculosis in a Rural Community in the Southeastern U.S.. International Journal of Tuberculosis and Lung Disease 2010; 14(6): 733-40.

16. Horsburgh CR Jr, O'Donell M, Chamblee S, Moreland JL, Johnson J, Marsh BJ, Narita M, Johnson LS, von Reyn CF. Revisiting Rates of Reactivation Tuberculosis: a Population-Based approach. American Journal of Respiratory and Critical Care Medicine 2010; 182 (3): 420-5

17. Larson EM, O'Donnell M, Chamblee S, Horsburgh CR, Marsh BJ, Moreland JD, Johnson LS, von Reyn CF. Dual skin tests with *M. avium* sensitin and PPD to detect misdiagnosis of latent tuberculosis infection. International Journal of Tuberculosis and Lung Disease 2011; 15(11): 1504-9.

18. O'Donnell MR, Chamblee S, von Reyn CF, Marsh BJ, Moreland JD, Narita M, Johnson LS, HorsburghJr CR. Sustained reduction in Tuberculosis Incidence Following a Community-Based Participatory Intervention. Public Health Action 2012 in press.

Proceedings of Meetings:

Clinical Communication:

1. Lewis F, Marsh BJ, von Reyn CF. Fish Tank Exposure and Cutaneous Infections Due to Mycobacterium marinum: Tuberculin Skin Testing, Treatment, and Prevention. Clinical Infectious Diseases 2003; 37:390-397.

Reviews, Chapters, and Editorials:

1. Marsh BJ. Infectious Complications of HTLV-I Infection. Clinical Infectious Diseases 1996; 23(1):138-145.

2. Marsh BJ. A life-threatening adverse reaction during trimethoprim-sulfamethoxazole desensitization in a previously hypersensitive patient infected with human immunodeficiency virus. Clinical Infectious Diseases 1997, 25:754-755 [correspondence].

3. Marsh BJ. Human T-cell lymphotropic virus type I does not increase human immunodeficiency virus viral load in vivo. Journal of Infectious Diseases, Journal of Infectious Diseases 1997; 176:543-544 [correspondence].

4. Zegans M, Marsh B, Walton RC. Cytomegalovirus Retinitis in the Era of Highly Active Antiretroviral Therapy. International Ophthalmology Clinics 2000;40(2):127-135.

5. Kinlaw WB, Marsh B. Adiponectin and HIV-Lipodystrophy: Taking HAART. Endocrinology 2004, 145:484-486 [News & Views].

6. Mistler LA, Brunette MF, Marsh BJ, Vidaver RM, Luckoor R, Rosenberg SD. Hepatitis C Treatment for People with Severe Mental Illness. Psychosomatics 2006;47(2):1-15.

Books, Monographs and Textbooks:

1. Marsh BJ. A Critique of Optimal Foraging Theory in Anthropology. M.A. Thesis, University of Chicago, May, 1983.

2. Marsh BJ, et al.. Institutional Protocols for Decisions about Life-Sustaining Treatments - Special Report OTA-BA-389. U.S. Congress Office of Technology Assessment, Washington, D.C.: U.S. Government Printing Office, July, 1988.

Abstracts:

1. Marsh BJ, von Reyn CF, Edwards J, Tosteson A, Arbeit RD, International MAC Study Group. The risks and benefits of childhood BCG immunization among adults with AIDS. Infectious Disease Society of America 34th Annual Meeting. New Orleans, Louisiana. September 18-20, 1996.

2. Marsh BJ, von Reyn CF, Waddell R, Morin P, Remold HG, Arbeit RD. Immunization of HIV-infected adults with a 3 dose schedule of inactivated *Mycobacterium vaccae*. 4th Conference on Retroviruses and Opportunistic Infections. Washington, DC. January 22-26, 1997.

3. von Reyn CF, Williams DE, Horsburgh CR, Jaeger AS, Marsh BJ, Haslov K, Magnusson M. Dual skin testing with *Mycobacterium avium* sensitin and purified protein derivative to discriminate pulmonary disease due to *M. avium* complex from pulmonary disease due to *Mycobacterium tuberculosis*. Infectious Disease Society of America 35th Annual Meeting. San Francisco, CA. September 13-16, 1997.

4. Siegel CA, Bensen SP, Marsh BJ, Robertson DJ, Waddell R, et al. Skin testing to evaluate the association between Crohn's disease and mycobacterial infection. American College of Gastroenterology Annual Meeting. Seattle, WA October 18-23, 2002.

5. Rosenberg S, Marsh BJ, et al. Obstacles to the diagnosis and treatment of Hepatitis C among patients with severe mental illness. 14th International AIDS Conference. Barcelona, Spain. July 7-12, 2002

6. Ellerbrock TV, Chamblee S, Bush TJ, Johnson J, Marsh BJ, Lowell P, von Reyn CF, Scoles L, Horsburgh CR. Decreased HIV Prevalence in a Rural U.S. Community between 1986 and 2000. 10th Conference on Retroviruses and Opportunistic Infections. Boston, MA. February 10-14, 2003.

Other Published Material:

Curriculum Vita
Nan Cochran, MD

NAME: **Cochran, Nancy, M.D.**
"Nan"

ADDRESS: Home:
[redacted]

EDUCATION:

DATE	INSTITUTION	DEGREE
1981	Harvard Medical School	M.D.
1975	Radcliffe College, Harvard University	B.A. cum laude

POSTDOCTORAL TRAINING:

DATE	SPECIALTY	INSTITUTION
1981-1984	Primary Care-Internal Medicine Residency	University of Washington
2001-2005	Faculty Training Program	Academy on Communication in Health Care
2014	Intensive Negotiation Training (5 weeks)	Program on Negotiation, Harvard Law School

LICENSURE AND CERTIFICATION:

DATE	LICENSURE/CERTIFICATION
	Vermont License #42-0007425
	NH License 19706
	NPI# 1104852904
	NH DEA: FC8460040
1982	National Board of Medical Examiners
1984	Internal Medicine (no requirement for recertification)
1992	Geriatrics, recertified 2002

ACADEMIC APPOINTMENTS:

DATE	ACADEMIC TITLE	INSTITUTION
1984-1986	Clinical Instructor in Medicine	University of Washington School of Medicine
1986-2000	Assistant Professor of Medicine and Community and Family Medicine	Dartmouth Medical School
2000-2009	Associate Professor of Medicine and Community and Family Medicine	Dartmouth Medical School
2009-	Associate Professor of Medicine and The	Geisel School of Medicine at

present	Dartmouth Institute	Dartmouth

HOSPITAL APPOINTMENTS:

DATE	HOSPITAL TITLE	INSTITUTION
1986-2020	Staff Physician	V.A. Medical Center, White River Junction, Vermont

MEMBERSHIP, OFFICE & COMMITTEE ASSIGNMENTS IN PROFESSIONAL SOCIETIES:

DATE	SOCIETY	ROLE
1984-2020	Physicians for Social Responsibility	Member
1987-2020	Society of General Internal Medicine	Member
1991-present	Physicians for Human Rights	Member
2009-present	Academy on Communication in Health Care	Fellow President 2014-2015

AWARDS AND HONORS:

DATE	AWARD NAME
1997-1999	Schumann Fellowship, Hitchcock Foundation, to develop curriculum and teach motivational interviewing, Geisel
2004	AOA, Geisel Medical School, Hanover, NH
2008,2009, 2010	DHMC Teaching Awards for Excellence in Teaching
2016	Macy Educator Fellowship, Macy Institute, Harvard Medical School

Consulting Work

2010-2012	Consultant to Rochester, NY Academy of Medicine to provide Leadership, Negotiation and Team Building Training to leadership
2011-2015	Conflict Resolution Training Consultant to Cornell-Weil Medical College to provide interactive negotiation and conflict resolution training to Department of Medicine Faculty
2012	Conflict Resolution Training, Maine Physician Leadership Development Fellowship, Portland, Maine
2020-present	Facilitator, UCSF Diversity, Equity and Inclusion Workshops

MAJOR CLINICAL/TEACHING INTERESTS: Conflict Engagement Skills, Coaching, Responding Constructively to Micro-aggressions, Motivational interviewing, Shared Decision Making, Doctor-Patient relationship

RESEARCH FUNDING:

1. 1999 Schumann foundation grant, Geisel School of Medicine at Dartmouth. Funded 10% time to study and teach Motivational Interviewing
2. 2001-2003, Innovative Approaches to Teaching Sexual Health in Undergraduate Medical Education, Co-Principal Investigator, Pfizer Pharmaceutical Company, $100,000.

3. 2005-2009 Co-Principal Investigator, Shared Decision Making in Primary Care, Foundation for Informed Medical Decision Making, 20% FTE
4. 2009-2010, Principal Investigator, Shared Decision Making in Primary Care, Foundation for Informed Medical Decision Making, 20% FTE
5. 2014-5 Investigator, Integrating Shared Decision Making and Interprofessional Education, Macy Foundation, 20% FTE

TEACHING EXPERIENCE/CURRENT TEACHING RESPONSIBILITIES: Geisel School of Medicine at Dartmouth, The Dartmouth Institute for Health Policy and Clinical Practice

DATE	TEACHING
1993-1996	Co-Director, Health, Society, and the Physician Course (Year IV)
1995-2014	Curriculum Director, and Facilitator, On Doctoring (Years I/II)
1997-2014	Director, On Doctoring, the Introduction to Clinical Skills Course, Years I and II
2013-	Director of Enhancing Communication and Teamwork, MPH course teaching teamwork and conflict management skills at The Dartmouth Institute for Health Policy and Clinical Practice

National:

2005-2008	Co-Director, Faculty in Training Program, ACH
2005-present	Faculty in ACH
2009-present	Fellow in ACH
2014-15	President of ACH
2015-2020	Faculty Lead, Committee on Patient Engagement, ACH

INVITED National Presentations 2005-present (Regional not included):

DATE	TOPIC	ORGANIZATION	LOCATION
10/05	Shared Decision Making in Primary Care	Workshop at APP/ICC Conference	Chicago, IL
2007	Facilitating Behavior Change in Primary Care	Workshop for Maine College Health Educators	Maine
2007	Motivational Interviewing - Helping Patients Change Behavior,	Workshop at ACH Annual Meeting	Michigan
4/07	Introduction to Health Literacy	VISN 1 Summit	Bedford VA, MA
10/07	Working with Patients Challenged by Health Literacy	Workshop at ACH/ICC Conference	Charleston, SC
6/08	Developing High Performance Teams	ACH Summer Course	Mayo Clinic, Jacksonville, FL
10/08	Better Shared Decision Making in Primary Care	ACH Research Forum	Madison, WI
6/09	Plenary: Making Shared Decision Making a Reality	ACH Summer Course	Mayo Clinic, Rochester, MN
4/10	Doing the Right Thing: Shared Decision Making in Primary Care	National VA Summit on the Patient Centered Medical Home	Las Vegas, Nevada

3/12	Communication Skills Required for Shared Decision Making	ACH Winter Course	Scottsdale, AZ.
9/12	Communication Skills Required for Shared Decision Making	Summit for Kaiser Permanente leadership	Oakland, CA.
12/12	Improving Shared Decision Making	Geisinger Primary Care Leadership Summit	Geisinger, PA
9/13	Improving Shared Decision Making	Virginia Mason Health Center	Seattle, WA
10/13-2/16	From Tools to Relationships	Relationship and Conflict Management Skills to QI Coaches	TDI, Lebanon, NH
2/14	How to Provide Value Added Care	ACH Winter Course	Phoenix, Az

International Workshops:

DATE	TOPIC	ORGANIZATION	LOCATION
4/07	Better Shared Decision Making in Practice	SGIM	Toronto
6/11	Better Shared Decision Making In Practice		Lausanne, Switzerland
6/11	Teaching Essential Shared Decision ISDM Making Communication Skills in Practice		Maastricht, Holland
10/13	Improving Shared Decision Making	ICCH	Montreal

BIBLIOGRAPHY: Journal Articles and MedEd Portal:

1. Carney, PA, Bar-on ME, Grayson M, Klein M, *Cochran N*, et al. Assessing the Impact of Early Clinical Training in Medical Education: A Multi-Institutional Perspective. Academic Medicine January, 1999; S59-66.
2. Atkins, KM, Roberts, AE, *Cochran, N*. How Medical Students Can Bring About Curricular Change: An Example from Dartmouth Medical School. Academic Medicine. November, 1998: 1173-8.
3. Carney PA, Ogrinc G, Harwood BG, Schiffman JS, *Cochran N*. The influence of teaching setting on medical students' clinical skills development: Is the academic medical center the "gold standard?" Academic Medicine, 2005;80(12):1153-1158.
4. McCormick, Kinsey, *Cochran, N*. How Primary Care Providers Talk to Patients About Alcohol: A Qualitative Study, JGIM, 2006;21:966-972.
5. Ogrinc G, Eliassen MS, West A, Liu S, Schiffman J, *Cochran N*. Integrating Practice-Based Learning and Improvement into Medical Student Learning: Evaluating Complex Curricular Innovations. *Teaching and Learning in Medicine*. 2006
6. Ogrinc G, Eliassen MS, Schiffman JS, Pipas CF, *Cochran N*, Nierenberg DW, Carney PA. Preclinical Preceptorships in Medical School: Can Curricular Objectives Be Met in Diverse Teaching Settings? *Teaching and Learning in Medicine*. 2006; 18(2): 110-116.

7. Carney PA, Ogrinc G, Harwood BG, Schiffman JS, *Cochran N.* The influence of teaching setting on medical students' clinical skills development: Is the academic medical center the "gold standard?" *Academic Medicine*, 2005;80(12):1153-1158.
8. Stacey D, Hawker G, Dervin, G, Tomek, I, *Cochran N.*, Tugwell P. and O'Connor A.BMJ 2008; 336:954-955 Improving Shared Decision Making in Osteoarthritis.
9. Brackett C, Kearing S, Cochran N, Brooks WB. Strategies for Distributing Cancer Screening Decision Aids in Primary Care. Patient Education Counseling, 2010; 78: 166-168.
10. Brooks WB, Brackett CD, Cochran, N et al. Shared Decision Making in Primary Care: Systematic Use of a PSA Decision Aid, JGIM, 2009.
11. Duke P, Cochran N. How to Communicate Value Added Care: Negotiation and Saying No. MedEdPORTAL Publications; 2014. Available from: https://www.mededportal.org/publication/9894 http://dx.doi.org/10.15766/mep_2374-8265.9894
12. Elwyn, G. Cochran, N. Pignone, M. Shared Decision Making—The Importance of Diagnosing Preferences. JAMA Intern Med. 2017;177(9):1239-1240
13. Cochran, N et al. Beyond Fight or Flight: The Need for Conflict Management Training in Medical Education. Conflict Resolution Quarterly. https://doi.org/10.1002/crq.21218 3/26/18

Book Chapters:

Cochran, N. Shared Decision Making, in Transforming Patient Engagement: Health Information Technology and the Medical Home, 2011

Cochran, N. Challenging Conversations with Colleagues: Communication RX: Transforming Healthcare Through Relationship-Centered Communication. 2018 by The Academy of Communication in Healthcare.

Cochran, N. and Chou, C. Shared Decision-Making: Communication RX: Transforming Healthcare Through Relationship-Centered Communication. 2018 by The Academy of Communication in Healthcare.

Makoul, G and Cochran, N in Shared Decision Making, ed Glyn Elwyn.

Curriculum Vitae

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Email: Elizabeth.A.Talbot@Dartmouth.EDU

I. EDUCATION

DATE	INSTITUTION	DEGREE
Sept 1988 – May 1992	The Robert Wood Johnson Medical School, University of Medicine and Dentistry of New Jersey, Piscataway NJ	MD
Sept 1984 – May 1988	Mount Holyoke College, South Hadley MA, *Magna Cum Laude* – Thesis: "Latent *Chlamydia trachomatis* infections in cultured McCoy cells"	Bachelor of Arts
Sept 1980 – June 1984	Point Pleasant Borough High School, Point Pleasant NJ	High School Diploma

II. POSTDOCTORAL TRAINING

DATE	SPECIALTY	INSTITUTION
July 1998 – June 2000	Epidemic Intelligence Service Officer, International Activities, Division of TB Elimination	U.S. Centers for Disease Control and Prevention (CDC), Atlanta GA
July 1995 – June 1998	Infectious Disease Fellowship, Laboratory of Mycobacterial Genetics	Duke University Medical Center, Durham NC
Oct 1996	Hospital Epidemiology Training Course	SHEA/CDC, San Antonio TX
Feb 1996	Clinical Management and Control of TB	National Jewish Center for Immunology and Respiratory Medicine, Denver CO
July 1993 – June 1995	Internal Medicine Residency	Duke University Medical Center, Durham NC
July 1992 – June 1993	Medicine-Psychiatry Internship	University of Iowa Hospitals and Clinics, Iowa City IA

III. PROFESSIONAL DEVELOPMENT ACTIVITIES

DATES	TITLE	INSTITUTION
June 2019	Humanitarian Action: Challenges in 21st Century	Summer Institute, McGill University, Montreal CA
Winter 2019	Climate Change	United Nations online training
Nov 2018	High Threat Infectious Disease Response Training	National Ebola Training and Education Center, Boston MA
Dec 2018	Nontuberculous Mycobacterial Clinical Training	National Institutes of Health, Bethesda MD
May 2017	Wilderness Medicine Course	Wilderness Medicine Institute, Santa Fe NM
Sept 2016	Tropical Medicine Update Course	American Society of Tropical Medicine and Hygiene, Houston TX
Oct 2014	Ebola Deployment Preparedness Training	Center for Domestic Preparedness, CDC, Aniston Alabama
Feb 2014	Treatment of Nontuberculous Mycobacteria mini-fellowship	National Jewish Center for Immunology and Respiratory Medicine, Denver CO
Feb 2012	National Incident Management System training 100, 200 and 300	NH DHHS, Concord NH
Oct 1996	Hospital Epidemiology Training Course	SHEA/CDC, San Antonio TX
Feb 1996	Clinical Management and Control of TB	National Jewish Center for Immunology and Respiratory Medicine, Denver CO
Mar - July 1994	International Clinical Research Training Program	Duke University Medical Center, Vitoria Brazil
Mar – April 1992	Medical Student Clerkship	London School of Hygiene and Tropical Medicine, London UK

IV. ACADEMIC APPOINTMENTS

DATE	TITLE	INSTITUTION
Nov 2020 - present	Professor	Dartmouth Medical School, Department of Medicine, Lebanon NH
July 2009 - Nov 2019	Associate Professor	Dartmouth Medical School, Department of Medicine, Lebanon NH

July 2003 – July 2009	Assistant Professor	Dartmouth Medical School, Department of Medicine, Lebanon NH
July 2000 – July 2003	Associate Director, TB/HIV Research	BOTUSA Project, CDC, Botswana

V. INSTITUTIONAL LEADERSHIP ROLES

DATES	INSTITUTION	TITLE
Jan 2019 - Present	Dartmouth Global Health Leadership	Member
Aug 2016 - Present	Dartmouth Center for Healthcare Equity	Associate Director for Research
July 2004 - Present	DHMC International Health Clinic	Medical Director
2004 - Present	Co-chair of Readiness and Response to Epidemic Infectious Disease Threats (RARE) Subcommittee	DHMC
July 2007 – July 2016	Associate Medical Director for Infection Prevention and Control	DHMC, Lebanon NH
Fall 2010 - Present	Medical Committee for Medical Exemption from Mandatory Influenza Vaccination	DHMC, Lebanon NH

VI. LICENSURE AND CERTIFICATION

May 2018	Buprenorphine Waiver for medication-assisted treatment for substance use disorder
Oct 2010	Civil Surgeon for US Citizenship and Immigration Services
Nov 2006	Diplomate, Tropical Medicine and Hygiene (ASTMH)
April 2006	Commissioned Officer, US DHHS, FDA
July 2005	Travel Medicine Certification, International Society of Travel Medicine
July 2003	New Hampshire, Medical License 12111
Nov 1998	Diplomate, Infectious Disease
July 1995 – July 2004	North Carolina, Medical License
Nov 1995	Diplomate, American Board of Internal Medicine
1992	Diplomate, National Board of Medical Examiners

VII. HOSPITAL APPOINTMENTS

DATE	POSITION/TITLE	INSTITUTION
July 2003 – Present	Staff Physician, Infectious Disease and International Health Section	DHMC, Lebanon NH

VIII. OTHER PROFESSIONAL POSITIONS (NON-DARTMOUTH)

DATE	POSITION/TITLE	INSTITUTION/ORGANIZATION
Sept 2020 - Present	Branch Chief	Vaccine Allocation Strategy Branch, COVID-19 Response Team, State of New Hampshire
Sept 2020-Feb 2021	Course Director	International Society of Travel Medicine, Virtual Review Course
March 2020 – Present	Member	State Disaster Medical Advisory Committee, a Governor-appointed advisory committee for allocation of limited resources in the COVID public health emergency
Jan 2020 - Present	Subject Matter Expert, Incident Command	COVID-19 Response Team, State of New Hampshire
Jan 2020 – Present	Consultant, TB Biomarker Team	Gates Medical Research Institute
Jan – Aug 2019	Medical Advisor, Region 1	CDC Crimson Contagion (pandemic influenza) National Functional Exercise Planning Committee, August 12-16 2019
Jan – March 2019	Medical Review Committee	National TB Controllers Association Annual Conference Planning Committee
May 2018, April 2019	Member	Clinical Advisory Committee, Insmed Inc, for new TB drug amikacin liposomal inhalation Solution (ALIS or Aricayse)
Jan 2018-current	Member	Advisory Council, CDC Center of Excellence, Global Tuberculosis Institute, Newark NJ
April 2017 - current	Editorial Board	Rwandan Medical Journal
June – Dec 2016	Expert Witness	Oxford Immunotec v Qiagen (patent infringement case involving TB diagnostic)
Dec 2016	Member	TB Latent Infection Surveillance System Workgroup, CDC

2015 and 2016	Member	Planning Committee for Integrated STD/HIV/HCV/TB Conference, Division of Public Health Services (DPHS), New Hampshire Department of Health and Human Services (NH DHHS), Concord NH
2016	Member	Planning Committee for High Threat Pathogens Conference, DPHS, NH DHHS
Oct 2016 - Present	Clinical Advisor	Antimicrobial Resistance Advisory Workgroup, DPHS, NH DHHS
2015-2018	Member	Zika Planning Committee, DPHS, NH DHHS
Oct 2014 – Mar 2016	Training Coordinator	Ebola Technical Unit, International Medical Corps, Washington DC, and two deployments to Sierra Leone
2014-5	Member	CDC Infection Control and Response (ICAR, US Ebola Readiness) Team, DPHS, NH DHHS
Oct 2013 – Present	Member	Hospital Acquired Infections Technical Advisory Workgroup, DPHS, NH DHHS
Sept 2011 - 2015	Consultant	Foundation for Innovative New Diagnostics (FIND), Geneva Switzerland
July 2007 – Sept 2011	Medical Scientist	FIND, Geneva Switzerland
Aug 2009 - Present	TB Medical Director	DPHS, NH DHHS
Aug 2009 - Sept 2011	Medical Advisor	NH DHHS
2003 – 9, 2011 – Present	Deputy State Epidemiologist	NH DHHS
July 2007 – 2020	Member, New Diagnostics Working Group	STOP TB Partnership, Geneva
2003 – Present	Subject Matter Expert	DPHS, NH DHHS Incident Management Team. Example events include nosocomial HCV, anthrax exposure/case, Ebola, Zika, Eastern Equine Encephalitis Outbreak, nosocomial CJD exposure, widespread perfluorchemical contamination, nosocomial fungal infection of corneal transplants

July 2004 – June 2007	Research Director	DPHS, NH DHHS
July 2000 – June 2003	Commander with Top Secret Security Clearance	US Commissioned Corps
July 2000 – July 2003	Team Leader for TB/HIV, International Activities	Division of TB Elimination, CDC, Atlanta GA

IX. TEACHING ACTIVITIES

A. UNDERGRADUATE (NON-MEDICAL) EDUCATION

Date	Institution	Course Title	Role	Hours
Feb 6, 2020	Dartmouth College	Global Health Scholars Program Conference Series	Guest Lecturer on Impact of Climate Change on Emerging Infectious Diseases	2
April 5, 2019	Dartmouth College	National Public Health Week Lecture Series	Climate Change panelist, representing role of climate change on infectious diseases and human health	2
2015-2021, 2013, 2011, 2009, 2006, 2005	Dartmouth College	Global Health Elective	Lectures in Ebola, global pandemics, influenza pandemics, malaria, MDR TB, COVID-19	1/year
2001, 2002, 2003	Dartmouth College	Human Biology	Guest Lecturer: Response to Humanitarian Disasters	1/year
Oct 17 2016	Dartmouth College	Approaching uncertainty and failure in the practice of medicine: Patients, Policy and the	Cholera in Haiti	1

		International Health		
2021, 2019, 2016, 2017	Dartmouth College	BIOL 46: Microbiology BIOL 11 VIROLOGY	Guest lectures for emerging infections such as Ebola, Zika and COVID-19	1
April 11 2016	Dartmouth College	Global Health Scholars Program Conference Series	The Zika Outbreak	2

B. GRADUATE (NON-MEDICAL) EDUCATION

Date	Institution	Course Title	Role	Hours
Sept 4 2018	The Dartmouth Institute (TDI)	Epidemiology and Biostatistics	Teach ID Epidemiology	2
Mar 3 2016	TDI		Public Health Preparedness: The Ebola and Zika examples	3
2016-2021	Dartmouth, including Geisel, Tuck, TDI and undergraduates	Global Health Case Studies (elective)	Presented case studies of Ebola Virus Outbreak Response and Zika Virus	3/year
May 20 2015	Thayer	Medical Diagnostics and Monitoring	Created lecture Development of Diagnostics for Poverty-Related Disease	2

C. UNDERGRADUATE MEDICAL EDUCATION

CLASSROOM TEACHING

Date	Institution	Course Title	Role	Hours
2005-2007, 2010, 2012-2019	Geisel School of Medicine at Dartmouth (Geisel)	Scientific Basis of Medicine (SBM)	I teach the didactic lectures focused on international health, travel medicine and parasitology, as well as serving as a small group leader for the infectious diseases portions of the course.	6-8/year
2009, 2010,	Geisel	Medical Microbiology	I teach the lectures on TB, Leprosy and Nontuberculous Mycobacteria	2/year

2013-2018				
2007	Geisel	Infectious and Tropical Disease Elective	Filariasis: A Case Study of the Poverty Cycle	1

CLERKSHIP TEACHING

Since 2003, I have clinically supervised medical students in inpatient and outpatient settings of the Section of Infectious Disease and International Health.

D. GRADUATE MEDICAL EDUCATION

Date	Institution	Course Title	Role	Hours
Feb 14 2018	Dartmouth Hitchcock Medical Center (DHMC)	Medical Grand Rounds	Speaker: Outbreaks in the Anthropocene	1
Dec 6 2017	DHMC	AIDS Seminar	Co-lecturer with Dr. Lisa Adams on Global TB-HIV Update	1
Once monthly since 2005	DHMC webinar for statewide clinicians	Trip and Tropical Topics	Organizer, director, speaker for 50%	1/month, exclusive of administration
Sept 10 2015	DHMC	Pulmonary Fellow Didactic Series, Dartmouth Hitchcock	Nontuberculous Mycobacterial Infection Diagnosis and Treatment	1
2003-current	DHMC	ID fellows conference	Lectures focused on outbreak investigation, mycobacterial diseases, international health, travel medicine and parasitology	1/quarter
July 23 2004	DHMC	Medical Grand Rounds	Outbreaks and Public Health Preparedness, New Hampshire 2003-2004	
May 7 2009	DHMC	HIV Translational Research Conference	Urine Lipoarabinomannin Detection for TB	1

			Diagnosis in Tanzania	
2008, 2009	DHMC	ICU lecture series	I lecture in sepsis	1/year
2005, 2009, 2015	DHMC	Primary Care Residents Lecture series	Travel medicine	1/year
2005-current	DHMC	Internal Medicine Residents conference	Lecture in travel medicine; zoonotic, parasitic, bioterrorism, mycobacterial diseases	3-4/year
Sept 13 2013	Elliot Hospital, Manchester NH	Medical Grand Rounds	Tuberculosis Updates: New Drugs, New Diagnostics, New Hope	1
Dec 20 2013	DHMC	Medical Grand Rounds	Dartmouth's Impact in Rwanda: Developing Human Capital for Sustainable Health	1
Dec 13, 2013	DHMC	Medical Grand Rounds	Outbreaks in 2013: Relevance to DHMC Clinicians	1
Aug 30 2013	The Dartmouth Institute	Lecturer	Crash Course in Travel Medicine	3
2013	CHUB, Butare Rwanda	Medical residents infectious disease lectures	Through Clinton Foundation, HRH,	2/week for 3 months
2014-2017	Hopital Universitaire Mirebalais, Haiti	Medical residents infectious disease lectures	Partners in Health	1/week

E. OTHER CLINICAL EDUCATION

- During January 2020 through current of the COVID-19 pandemic, I lead standing statewide educational opportunities including Wednesday noon long term care facility partners' webinar, Wednesday 330-430 school partner call, Thursday noon clinical partners' science review, 5 Project Echo series, including as course director for vaccine hesitancy.
- During Zika epidemic in Americas, provided multiple educational outreaches to regional and DHMC clinicians. For example, presented in multiple conference calls to review testing algorithms for pregnant women and provided formal didactic at the NNEPQIN meeting in April 2017.
- During the Ebola epidemic in West Africa, I participated in the development of clinical training curriculum and established "Ebola University" with International Medical Corps for incoming

clinicians to take care of patients in the Ebola Treatment Units and provided on-site teaching during two deployments to Sierra Leone.

- Alice Werbel RN and I applied and were successful to apply for Dartmouth Haiti Earthquake Relief Fund (Rose M. Murphy and John Butterly administrators) in order to provide on-site mannequin-based 'train the trainers' clinical education to Hopital Universite Mirabelais, Haiti, during 2014 and 2015.
- Since 2003, I have clinically supervised infectious disease fellows and internal medicine residents in inpatient and outpatient settings of the Section of Infectious Disease and International Health
- Inclusive of instruction of residents and fellows during clinical practice.
- I have also initiated education initiatives in Haiti (through PEPFAR and DOMACE funding, see below)
- For 3 months on site (May 20-July 30 2013), I served as infectious diseases subspecialist providing didactic and clinical teaching on infectious and tropical diseases as part of the Rwandan national medical curriculum redesign in Butare Rwanda through the Clinton Foundation Human Resources for Health.

X. ADVISING/MENTORING (NonResearch)

A. UNDERGRADUATE STUDENTS

DATES	STUDENT'S NAME	PROGRAM
2019-Present	Christophe T. Courtine	Emergency COVID-19 Intern, NH DHHS
2008-10	Katherine E. Ferguson	Presidential Scholar
2015	Tara Kedia	Rodis Fellow

B. GRADUATE STUDENTS

DATES	STUDENT'S NAME	PROGRAM NAME
2019-Present	Taylor Selembo	CDC Public Health Associate at NH DHHS
2017	Hannah Leeman MPH	CDC Public Health Associate at NH DHHS

C. MEDICAL STUDENTS

DATES	STUDENT'S NAME	PROGRAM NAME
2017	Tolulope O. Kehinde	Global health career advice
2012-4	Kristen M Jogerst	PEPFAR funded work in Haiti

July 2000 – June 2003: Direct primary supervisor to 8 U.S. medical school students (each on 6 month on-site elective), Botswana, US CDC

D. RESIDENTS/FELLOWS

DATES	MENTEE'S NAME	SPECIALTY
2014-15	Leway Kailani (ID Fellow)	Ebola DEVOTE team
2014-201	Laura Shevy (ID Fellow)	Ebola DEVOTE team
2014-2015	Jessie Leyse (ID Fellow)	Ebola DEVOTE team

2015-2017	Merly Robert (ID Program Director)	Partners in Health, Haiti
2015-2016	Nessa Meshkaty (ID fellow, U Mass)	Partners in Health, Haiti
2017-Present	Suthanya Sornprom (ID Fellow)	Fellowship Mentor

XI. RESEARCH TEACHING/MENTORING

A. UNDERGRADUATE STUDENTS

DATES	STUDENT'S NAME	PROGRAM
2019-Present	Christophe Courtine	Emergency COVID-19 Intern at NH DHHS
2019- Present	Taylor Selembo	CDC Public Health Associate at NH DHHS
2017-2021	Hannah Leeman	CDC Public Health Associate at NH DHHS
2012	Katherine Ferguson	Presidential Scholar

B. GRADUATE STUDENTS

DATES	STUDENT'S NAME	PROGRAM NAME	DEGREE
2021 -Present	Rattanaporn Mahatanan	The Dartmouth Institute	MPH
2019	Ritika Zijoo	The Dartmouth Institute	MPH
2019	Varahi Travedi	The Dartmouth Institute	MPH
2016-2018	Hannah Bowman	NH DHHS	MPH
2016-2018	Christiaan A. Rees	Thayer	PhD
2016-2018	Theodore R. Mellors	Thayer	PhD

C. MEDICAL STUDENTS

DATES	STUDENT'S NAME	PROGRAM NAME
June –July 2016	Kara Abarcar	CHE-Dickey International Health Fellowship

D. RESIDENTS/FELLOWS/RESEARCH ASSOCIATES

DATES	STUDENT'S NAME	SPECIALTY
2021-Present	Rattanaporn Mahatanan (ID Fellow)	ID: Nontuberculous mycobacteremia
2021-Present	Anais Ovalle (ID Fellow)	ID: Nontuberculous mycobacteremia
2019-2020	Mark Abel (ID Fellow)	ID: Tropical medicine
2016-2019	Martha Desbiens (ID Fellow)	ID: TB; ID complications of substance use
2015-2019	David DeGijsel (ID Fellow)	ID: TB; ID complications of substance use
2014-2017	Laura Shevy MD (ID Fellow)	ID: multiple
2012-2014	Scott Crabtree MD (ID Fellow)	ID: IGRA research
2014-2019	Jessie Leyse MD (ID Fellow)	ID: Travel medicine
2006-8	David Blaney MD	Epidemic Intelligence Service, CDC
2004-8	Rachel Plotinsky MD	Epidemic Intelligence Service, then ID
2000-2	Lisa J Nelson, MD, MPH	Epidemic Intelligence Service, CDC

E. FACULTY

DATES	MENTEE'S NAME	SPECIALTY
2015-2020	Benjamin Chan MD, MPH	NH DHHS State Epidemiologist
2014-15	Anne Mathew MD	ID, DHMC then Nashua NH

XII. COMMUNITY SERVICE, EDUCATION, AND ENGAGEMENT

Date	Conference, Institution	Title	H/yr
Regional:			
March 30, 2020	Upper Valley Long Term Care Association	COVID-19 Guidance for Long Term Care Facilities	1
Weekly since March 27, 2020 - Present	Statewide LTCF Clinician Webinar	Long-term Care Facility Clinicians COVID-19 Updates	1h/w
March 25, 2020	NH Laboratory Reference Network monthly meeting	COVID-19 Diagnostics	1
March 24, 2020	NH Hospitals' Chief Medical Officer Webinar	COVID-19 NH Update	1
Weekly since March 20, 2020 - Present	Statewide Clinician Webinar	COVID-19: The Latest Science for Clinicians	1h/w
March 13, 2020	Medical Grand Rounds, Elliot Hospital	COVID-19: An Update on a Dynamic Situation for Busy Clinicians	1
March 6, 2020	Manchester and Nashua Health Department staff	COVID-19 Emergency Briefing	2
March 2, 2020	State of NH	COVID-19 Briefing for State Officials including Senators Shaheen and Hassan	2
Feb 27, 2020	Public Lecture sponsored by Dartmouth Center for Global Health Equity	US Emergency Legal Response to Novel Coronavirus	2
June 21, 2019	Global TB Institute Monthly TB Grand Rounds, Webinar	Mycobacteri-o-rama: TB and NTM Clinical Considerations	1
June 14, 2019	Emergency Preparedness Conference	Emerging Infections Relevant to New Hampshire	1.5
April 1, 2019	New England TB Clinicians Conference, Global TB Institute	Top 10 Updates in TB Diagnosis, Prevention, and Treatment	1.5
March 20 2019	NH Antimicrobial Stewardship Symposium	Culturing Stewardship Together/Animal and Human Case Studies (Session Moderator)	1.5

Jan 31 2019	The Exchange, NH Public Radio (call-in show), NPR	Winter Infections	1
June 1 2018	TB: Beyond the Basics	Two lectures: Latent TB Infection Updates and The TB Diagnostics, Treatment and Vaccine Pipeline	3
May 23 2018	NH Antimicrobial Stewardship Symposium	Global Perspectives on Antimicrobial Resistance and Antimicrobial Stewardship	1
April 19 2016	Global TB Institute Monthly TB Grand Rounds, Webinar	TB Tenosynovitis: Case and Review of the Literature	1
Mar 31 2016	Institute for Local Public Health Practice, Manchester NH	3 lectures: Emerging Infections, Vaccine Preventable Diseases and TB	3
Mar 24 2016	Nashua City Health Department, Dartmouth Hitchcock-Nashua	Most Important TB Breakthroughs: World TB Day	2
Mar 24 2016	High Threat Pathogens Conference, DPHS, NH DHHS, Concord NH	Opening remarks, then lecture on Update on Emerging Infections	1.5
Mar 23 2016	NH Immunization Conference, Manchester NH	Emerging Infectious Diseases	2
Mar 22 2016	Oxford Immunotec, Marborough MA	Top Ten Tuberculosis Updates	1
Mar 16 2016	The Science Café, Nashua NH	The Zika Epidemic	3
Feb 19 2016	NH Laboratory Network Meeting	Zika Soup to Nuts	0.5
Sept 21 2016	Ohler Speaker Series, New London Hospital, New London H	Emerging Infections	2
Mar 31 2015	26th Mason Library Lecture, Keene State College	Primer to Conduct Outbreak Investigations	2
2012, 2011, 2009, 2008	Dartmouth College Advanced Medical School	Several lectures: Extensively drug resistant TB, Superbugs and Antibiotic use, TB Diagnostics	2
2015 and 2016	DPHS, NH DHHS Integrated STD/HIV/HCV/TB Conference, Concord NH	Top 10 TB Breakthroughs (2015) and TB plenary lecture and LTBI testing and treatment workshop (2016)	3
Nov 3, 2015	Northeast Ambulatory Nurses' Network Quarterly Meeting, Manchester NH	Plenary: Global Health Security and lecture: What's New in Infectious Diseases	1

Nov 6 2015	New Hampshire Infection Control and Epidemiology Professionals Annual Conference, Concord NH	Biosecurity and the Importance of Infectious Disease Preparedness at All Levels – Even in New Hampshire	1
Oct 9 2015	Public Health Symposium, St. Anselm	Hepatitis C: Epidemiology, Testing and Treatment	1.5
Oct 15 2015	Infection Control Day, New Hampshire Healthcare Association Annual Conference, Concord NH	What's Trending in Infectious Diseases	1
May 21 2015	Connecticut Department of Corrections Webinar	TB Updates for Correctional Facilities	1
May 20 2015	New England TB Clinicians Conference, Clark University, Worcester MA	TB: An Annual Review	1
Aug 27 2014	DPHS NH DHHS Webinar	Ebola Update	1
Aug 20 2014	DPHS NH DHHS Webinar	Case Discussion: MERS Co-V	1
Aug 13 2014	DPHS NH DHHS Webinar	MERS Co-V Update	1
Nov 2 2013	New Hampshire Assistant Deputy Medical Examiner Meeting	Outbreak Investigations for Medical Examiners	1
Oct 18 2013	Vermont Infectious Diseases Conference, Vermont Department of Health, Burlington VT	Emerging Global Threats	1
Oct 18 2013	Latebreaker Session of the Northeast Epidemiologists Conference, Burlington VT	Creutzfeld Jacob Disease Investigation, NH	1
Oct 14 2013	NH Society of Health System Pharmacists, Manchester NH	Rational Control of Respiratory Viruses	1
Sept 13 2013	Elliot Hospital Medical Grand Rounds, Manchester NH	Tuberculosis Updates: New Drugs, New Diagnostics, New Hope	1
Sept 11 2013	Maine Annual TB Conference, Center for Disease Control, Lewiston ME	TB Global and Local Trends	1
Sept 11 2013	Maine Annual TB Conference, Center for Disease Control, Lewiston ME	Managing Challenging TB Cases	1

Aug 23 2013	Elliot Hospital Medical Grand Rounds, Manchester NH	Respiratory Viruses with Pandemic Potential	1
April 29 2013	Clinical Care of Refugees Conference, DPHS, NH DHHS, Manchester NH	Top TB Issues for Refugee Care	1
April 29 2013	Clinical Care of Refugees Conference, DPHS, NH DHHS, Manchester NH	Case-based Parasite Review	1
March 27 2013	New England Immunization Conference, NH DHHS, Manchester NH "	Global Outbreaks: Just a Plane Ride Away	1
March 22 2013	Annual Occupational Medicine Conference, Frisbie Hospital, Rochester NH	National Nosocomial Outbreaks: New Hampshire's Role	1
March 13 2013	Cheshire Medical Center Medical Grand Rounds, Kean NH	National Nosocomial Outbreaks: New Hampshire's Role	1
Feb 13 2013	NH Ambulatory Surgery Association Annual Meeting, Concord NH	Two Ambulatory Surgery Center Outbreaks: HCV and Fungal Meningitis	1
Feb 7 2013	NH Public Health Institute, Manchester NH	Communicable Disease Transmission by Air, Droplet and Droplet Nuclei	1
Sept 25 2013	New London Hospital Medical Grand Rounds, New London NH	Travel Medicine for Primary Care	1
March 2012	"Update on Immunizations"	New England Immunization Conference, NH DHHS, Manchester NH	1
Nov 18 2011	TB 101 course, sponsored by NH DHHS, Concord NH	TB Epidemiology: Powerful Hypnotic or Useful to Your Clinical Practice?	1
Oct 26, 2011	Annual Meeting of Northeast American Society of Microbiology, Waltham MA	The Pipeline of TB Diagnostics	1
June 10, 2011	TB: Beyond the Basics, NH DHHS and NJMS Global TB Center, Manchester NH	Myth Busters! TB Infection Control	1

June 10, 2011	TB: Beyond the Basics, NH DHHS and NJMS Global TB Center, Manchester NH	What's New in TB Diagnosis?"	1
March 23, 2011	TB Control Program NH DHHS, Concord NH	Xpert MTB/RIF: Evidence, WHO Policy Recommendations and Roadmap	1
Jan 26, 2011	TB Control Program NH DHHS, Concord NH	TB Diagnostics Update	1
March 25, 2010	Grand Rounds, Massachusetts General Hospital, Boston MA	CPC Case 25-2010 discussant	1
May 11, 2009	Managing Medical Emergencies Conference, Lebanon NH	Travel Medicine Emergencies	1
April 1, 2009	NH Laboratory Managers, Lebanon NH	IGRA Update	1
March 27, 2009	TB Clinical Conference for Physicians, New England Regional Training & Medical Consultation Consortium, York ME	The Most Important TB Publications: A Power Review	1
Jan 12, 2009	Colby Sawyer College, New London NH	Top Ten Tropical Medicine Issues for US Clinicians	1
March 29, 2008	TB Clinical Conference for Physicians, NE Regional Training & Medical Consultation Consortium, Waltham MA	Tuberculosis Diagnostics: New Developments	1
Oct 29, 2007	TB 2007: Recent Advances for an Ancient Disease, Nashua NH	Top Ten Differential TB Diagnoses	1
Oct 29, 2007	TB 2007: Recent Advances for an Ancient Disease, Nashua NH	Frontiers in TB Diagnosis	1
Jan 24, 2007	Eliminating TB Case by Case Series of Northeast TB Control Programs, Regional TB Webinar	Managing Hepatitis During TB Treatment	1
Nov 9, 2006	Managing Medical Emergencies Conference, Concord NH	What if the Chicken Crosses the Road? Scientific Update of H5N1 in Humans	1
Oct 26, 2006	Northeast Epidemiology Conference, Saratoga Springs NY	Eastern Equine Encephalitis Control in NH	1

Sept 29, 2006	TB 2006: Recent Advances for an Ancient Disease, Rochester NH	Top Ten Differential TB Diagnoses	1
Sept 29, 2006	TB 2006: Recent Advances for an Ancient Disease, Rochester NH	Blood-Based Testing for Latent Tuberculosis Infection	1
Sept 25, 2006	Pandemic Influenza Summit, Concord NH	How Recent Science Informs Pandemic Influenza Planning	1
Aug 17, 2006	Medical Grand Rounds, Androscoggin Valley Hospital, Berlin NH	The Changing Epidemiology of *C. difficile*	1
July 12, 2006	Medical Grand Rounds, Littleton Regional Hospital, Littleton NH	*C.* (more) *difficile*: Changing Epidemiology of *C. difficile*	1
June 21, 2006	Clinical Care of Refugees Conference, Manchester NH	Top Ten Infectious Disease Issues for Newly-Arrived Refugees	1
Jan 11, 2006	Workshop sponsored by NH Hospital Association, Concord NH	Controlling Multi-drug Resistant Microorganisms in Acute and Long-term Care Facilities	1
Jan 6, 2006	Medical Grand Rounds, Littleton Regional Hospital, Littleton NH	Pandemic Influenza Preparedness	1
Dec 15, 2006	Medical Grand Rounds, Cottage Hospital, Woodsville NH	Pandemic Respiratory Infection in the Healthcare Setting	1
Oct 6, 2005	Medical Grand Rounds, Alice Peck Day Hospital, Lebanon NH	Arbovirus Update: Eastern Equine Encephalitis in New Hampshire	1
Sept 30, 2005	Medical Grand Rounds, Memorial Hospital, North Conway NH	Community-Acquired MRSA	1
Sept 14, 2005	Medical Grand Rounds, Lakes Region General Hospital, Laconia, NH	Update on Avian Influenza	1
Aug 10, 2005	Medical Grand Rounds, Littleton Regional Hospital, Littleton NH	Public Health Preparedness	1
July 2005	Medical Grand Rounds, Androscoggin Valley Hospital, Berlin NH	Outbreak Investigations 101	1
June 2005	Workshop sponsored by NH Hospital Association, Concord NH	Controlling Multi-drug Resistant Microorganisms in Acute and Long-term Care Facilities	1

May 2005	Medical Grand Rounds, Cheshire Medical Center, Keene NH	Bacterial Meningitis in New Hampshire	1
Jan 11, 2005	Medical Grand Rounds, Exeter Hospital, Exeter NH	Your Friendly Neighborhood Health Department: A Year in Review	1
Nov 18, 2004	Managing Medical Emergencies Conference, Rochester NH	Public Health Emergencies, 2004	1
Oct 14, 2004	Northeast Epidemiology Conference, Meredith NH	New Hampshire Takes on Multidrug Resistant Organisms	1
Feb 11, 2004	DHHS Forensic Epidemiology Course, Concord NH	New Hampshire Response to SARS...and Beyond	1
Dec 2003	Tufts University, Boston MA	Public Health and Emergency Response in Africa	1
Aug 28, 2003	NH DHHS, Concord NH	Lessons from an African Field Site	1
Oct 2, 2003	St. Joseph Hospital CME Program, Nashua NH	Meningitis Update	1
Feb 1995	Duke University Medical Center, Durham NC	The Interaction of HIV and Tropical Diseases	1
National:			
March 11, 2020	Gates Medical Research Institute	COVID19: The latest science and state and federal perspectives on transition from containment to mitigation strategies	1
June 26, 2019	National Webinar, Oxford Immunotec	LTBI Surveillance or TB Elimination? A Rational Approach to Healthcare Personnel Screening	2
Feb 14 2018	National Webinar, Oxford Immunotec	Diagnosing TB in the US: Your Vital Role	3
Oct 2 2013	Annual TB Medical Consultants Meeting, Global Tuberculosis Institute, Newark NJ	Great News for Mycobacteriophiles	1
Dec 5 2011	2011 American Society of Tropical Medicine and Hygiene, Philadelphia PA	Symposium Chair, Symposium #60: Clinical Update: What's New in the Literature?	2

Oct 20 2011	TB Update Session, 2011 Infectious Disease Society Annual Meeting, Boston MA	Molecular TB Diagnostics	1
Oct 6 2010	New Tools Roundtable at the Regional Training and Consultation Meeting in Newark NJ	TB Diagnostics: What's New?	2
International:			
Dec 14 2018	International Webinar: TB CARE2 (USAID)	A Toolkit for Delivery Models to Improve IPT for Children and People Living with HIV: Results and Next Steps (with Lisa V. Adams, David DeGijsel, Samson Haumba)	1
Dec 3 2015	Sponsored Symposium at the International Union of TB and Lung Disease, Cape Town, RSA	Global IGRA and LTBI Guidelines: Practical Implications for Resource-Constrained Settings	2
May 27 2015	Workshop, International Travel Medicine Society Annual Conference, Quebec Canada	The Most Important Travel Medicine Papers in 2015	1
Nov 12 2012	American Society for Tropical Medicine and Hygiene Annual Conference Atlanta GA	Tuberculosis Update for Tropical Medicine Practitioners	1
March 23 2011	CoreTB Educational Series, Webinar	Xpert MTB/RIF: Evidence, WHO Policy Recommendations and Roadmap	1
Nov 2 2010	FHI Malaria Consultation Conference, Research Triangle Park, NC	Updates and Imperatives for Malaria Diagnosis	2
May 17 2010	American Thoracic Society International Conference, New Orleans, LA	TB Diagnostics: A New Era	1
Nov 5 2007	Fogarty Conference on Reducing Mortality from HIV-TB, Dar es Salaam Tanzania	Update on New TB Diagnostics	1
May 30, 2006	Global Health Council Annual Conference, Washington DC	The TB Diagnostic Pipeline	1
Feb 19, 2002	International TB/HIV Conference, WHO/CDC/USAID, Nairobi Kenya	International Research Ethics: The Botswana Experience	1

July 23-26, 2002	Workshop on the Ethical Review Complex Protocols, U.S. CDC, Francistown Botswana	Key Elements in the Ethical Review of Research" and "Research Confidentiality	1
July 19, 2000	International Conference on Emerging Infectious Diseases, Atlanta GA	A Tale of Three Studies: Behavioral Research to Improve Health Communications for HIV Control in Botswana	1
June 17, 1997	Chiang Mai University, Chiang Mai Thailand	The Search for New Life Forms Using the 16S rDNA PCR Target	1
May 30, 1997	Chiang Mai University, Chiang Mai Thailand	Molecular Epidemiology of *Mycobacterium tuberculosis*	1

Other Teaching Activities:

April 3-4 2013. Organized and spoke at "Radiology and New Diagnostics for TB Diagnosis in Haiti" Workshop funded by PEPFAR, Les Cayes Haiti

May 2010: Clinical response team to Haiti for laboratory and clinical technical assistance after the January 12, 2010 earthquake.

2003 - 2010: Participated in children's education programs at local parish, Our Lady of Fatima, including assisting 1st – 4th grade Sunday school and leading the Christmas pageant.

April – July 1997: Taught scientific English writing and conversation to Thai scientists, Chiang Mai University, Chiang Mai Thailand

February – March 1993: Development project volunteer. Conducted disease and nutrition survey in rural Ethiopian villages. World Vision, Ethiopia

February 1992: Medical clerkship. Assisted in primary care of Qunnault Indian Nation through the Public Health Service. Taholah Indian Reservation, Taholah WA

Summer 1989: Medical intern. Provided medical services in a mobile medical mission. Medical Group Missions, Azua Dominican Republic

Summer 1987: Medical intern. Participated in first aid, education and nutrition projects among rural Ifugua people. Batad Medical Mission, Banaue Philippines

Summer 1986: Research intern. Studied potential angiogenesis factors using rat and cell culture models. National Institutes for Health, Bethesda MD

XIII. PAST RESEARCH FUNDING

Dates	Project title and award number	Role	% effort	Sponsoring agency
Oct 2010 –	TB Care II to USAID: five-year cooperative agreement	Researcher toward Isoniazid Preventive Therapy	0.08	PI: University Research Co., LCC

Nov 2017		Implementation in Swaziland		(http://tbcare.net/content/who-we-are-introduction)
Aug 2011 – Aug 2015	CDC-RFA-GH11-1191, "Improvement of Integrated HIV Clinical-based Services (Counseling and Testing, Prevention of Mother to Child Transmission, TB/HIV, Care and Treatment) Through Financial and Technical Assistance to Centers of Excellence in Haiti under the President's Emergency Plan for AIDS Relief (PEPFAR)"	TB-HIV technical advisor	0.1	PI: GHESKIO, Haiti
April 2010 through Jan 2013	USAID TB IQC Task Order 01, Contract No. GHN-I-00-09-00006	Technical assistance to revise Tanzania and Democratic Republic of Congo pediatric TB treatment guidelines, train, implement and conduct monitoring and evaluation of implementation	0.05 - .20 FTE	PI: PATH
Oct 2014-2015	Dartmouth Haiti Earthquake Relief Fund	Co- PI with Alice Werbel RN: Providing a model of mannequin-based train the trainers clinical education to Hopital Universite Mirabelais, Haiti	$10,000	Rose M. Murphy and John Butterly administrators
July 2008	Oxford Immunotec	"Specificity of T SPOT® TB in Low TB Risk Populations at	$19,767	PI

		Dartmouth College"		
July 2009	Oxford Immunotec	"Evaluation of T SPOT® TB Xtend in a High TB Incidence Setting, Dar es Salaam Tanzania"	$70,000	PI
May 2007	Dartmouth Department of Medicine Research Grant funding	"Blood cultures and urinary LAM antigen detection for the diagnosis of tuberculosis among HIV-infected inpatients in Tanzania"	$25,000	PI
2007	Dartmouth International Health Group and Infectious Disease Society Association	"Effects of highly active antiretroviral therapy on employment and social integration, Accra Ghana"	$10,000	Principle Investigator: Isaac Howley (I served as his supervisor)
May 2006	Oxford Immunotec	"Evaluation of T SPOT® TB and QuantiFERON®-Gold Among Refugees and Healthcare Workers in New Hampshire	$41,987	

XIV. PROGRAM DEVELOPMENT

In the summer of 2019, I conceived and organized on behalf of DHMC a national monthly webinar series on management of challenging cases of nontuberculous mycobacterial infection. We have ~300 clinicians on our listserv, which I am co-managing with Keira Cohen MD at Johns Hopkins University

Led NH's participation in Sanofi Pasteur's Expanded Access Program for Stamaril, yellow fever vaccine to be used during national shortage of YFVax

In 2017, I began a multidisciplinary nontuberculous mycobacterial (NTM) clinic, engaging Pulmonary Medicine, Outpatient Antibiotic Therapy (OPAT), Respiratory Therapy, Specialty Pharmacy, ENT, and others ad hoc, in order to provide the necessary comprehensive care for NTM patients. We have created protocols, clinical templates, and plan regional advertisement for patient recruitment. We will add translational and operational research within the year.

I began and continue to lead a monthly meeting called "Trip and Tropical Topics", which is a CME/CEU seminar to advance institutional educational opportunities within the subspecialty of travel

and tropical infectious diseases. Medical students, residents, nurses and physicians attend this meeting, which is delivered in an in-person didactic format, plus available regionally through webinar format.

XV. MAJOR COMMITTEE ASSIGNMENTS AND CONSULTATIONS

National/International:

DATES	COMMITTEE	ROLE	INSTITUTION
Jan – Feb 2021	Clinical Committee	Member	North American Region of the International Union Against Tuberculosis and Lung Disease
Nov 2018 – current	Abstract Scientific Committee	Member	North American Region of the International Union Against Tuberculosis and Lung Disease
Jan 2018 – current	Advisory Council	Member	Global Tuberculosis Institute, Newark NJ
Oct 2014 - May 2015	Ebola Technical Unit	Training Coordinator	International Medical Corps
Nov 2011 - Jan 2014	TB Scientific Committee	Member	IMPAACT: International Maternal, Pediatric, Adolescent AIDS Clinical Trial Group, NIH-funded research consortium
Oct 2010 – Present	Pediatric TB	Consultant	TB CARE II
Jan 2009 - June 2014	TB PANNET	Partner for FIND	TB PANNET is a translational research consortium funded by the European Commission's Seventh Framework Programme for Research (FP7). TB PAN-NET conducts basic and clinical research related to MDR-TB, TB control and molecular epidemiology
Dec 2009 – 2013	Working Group for Pediatric TB Guideline Revision and Implementation	Consultant through Program for Appropriate Technology for Health (PATH)	Republic of Tanzania Ministry of Health
Nov 2007 - Present	Working Group on New Diagnostics	Member	Stop TB Partnership, World Health Organization, Geneva Switzerland

Jan 2006 – July 2007	Critical Backup Team	Field consultant for investigation and pandemic influenza control	Council of State and Territorial Epidemiologists and CDC
March 2005 – June 2007	Control of Multidrug-resistant *Salmonella* in Ground Beef	Committee Member	Hosted by NH DHHS and Tufts University, Boston MA
Feb – May 2003	Antimicrobial Resistance Containment and Surveillance	Consultant to develop guidelines	World Health Organization, Geneva Switzerland
Feb – May 2003	Global Fund for AIDS, TB and Malaria	Consultant to develop guidelines for countries to prevent antimicrobial drug resistance	World Health Organization, Geneva Switzerland
Aug. 2002 – July 2003	Consortium to Respond Effectively to the AIDS-TB Epidemic	Member and Editorial Board Member	Johns Hopkins University, Baltimore MD
May 2000 – July 2003	STOP TB's TB/HIV Working Group	Member, with role to assist development of consensus on research priorities	World Health Organization, Geneva Switzerland

Regional:

DATES	COMMITTEE	ROLE	INSTITUTION
Oct 2013 - Present	Healthcare Quality Commission	Member of this Governor-appointed taskforce	State of NH
2003-Present	Refugee Health Committee	Co-organized and moderated conference, "Clinical Care of Refugees" 2005, 2006, 2013	NH DHHS/ Dartmouth College
Apr 2009 - Present	Novel H1N1 Clinical Guidance Committee	Member	NH DHHS, Concord NH

Mar 27 2009	Planning Committee	Co-organized "Tuberculosis: Power Update for Busy Clinicians"	Regional Training and Medical Consultation Center and MA Dept. of Public Health
Oct 11-12 2005	NH Assessment of National Public Health Performance Standards	Technical expert	NH DHHS
Jan 2004 – Present	NH Immunization Advisory Board	Member	NH DHHS
Nov 2003 – Present	NH Communicable Epidemic Control Committee	Founder, Chairman	NH DHHS
Oct 2003 – Oct 2004	Council of State and Territorial Epidemiologist Chapter (CSTE)	Co-organized and co-moderated "2004 Northeast Epidemiologist Annual Meeting" – Oct. 13-15, 2004	NH DHHS and CSTE
July 2003 – Present	NH TB Advisory Board	Member	NH DHHS

Institutional:

DATES	COMMITTEE	ROLE	INSTITUTION
Nov 22-24 2019	Planning Committee for Northern New England Travel Medicine Conference: Over the River and Through the Woods Safely,	Lead	DHMC
Fall 2017 - Present	Global Health Colloquium	Member	Dartmouth College
Jan 2013 - Present	Readiness and Response to Epidemic Respiratory Infections	Chair	DHMC
March 2011 – Present	Mandatory Influenza Vaccine Technical Committee	Member	DHMC
January 2010 – Present	Global Health Steering Committee	Member	Dartmouth College
July 2007 – Present	Hospital Infections Committee	Member	DHMC
May 2006 – May 2007	NH Medical Surge Planning Committee	Chairman	NH DHHS
July 2005 – Feb 2006	NH Pandemic Influenza Drill Planning Committee	Epidemiology and Clinical Consultant	NH DHHS
June 2005 – Present	Pandemic Influenza Preparedness Ethics Subcommittee	Member	NH DHHS
May 2005 – Feb 2006	Strategic Prevention Framework Epidemiology Working Group	Chairman	NH DHHS
March 2005 – June 2006	NH Bioterrorism Strategic Team	Member	NH DHHS
Jan 2005 - Present	TB Interest Group for those at Dartmouth engaged in TB research	Founder and Chairman	DHMC
April 2005 - Present	Traveler's Health Group (monthly meeting for those who practice travel medicine)	Founder and Chairman	DHMC
Oct 2003 - Present	Epidemic Readiness Committee (epidemic respiratory infection preparation)	Member, Chairman since July 2007	DHMC
July 2003 – Present	Public Information Office (media communications)	Designated Contact	NH DHHS

July 2003 – Present	Emergency Physician on-call duty (Approximately bimonthly)	Member	NH DHHS
July 2003 – June 2007	Outbreak Investigation Weekly Rounds	Founder, Team Leader through June 2007	NH DHHS
July 2003 – Nov 2003	SARS Surveillance and Clinical Response for the State of NH	Working Group Chairman	NH DHHS

XVI. MEMBERSHIPS, OFFICE & COMMITTEE ASSIGNMENTS IN PROFESSIONAL SOCIETIES

DATES	SOCIETY	ROLE
2016 - Present	National TB Controllers Association, working group on TB Latent Infection Surveillance (TBLISS)	Member
2005 – Present	International Society for Travel Medicine	Member
2003 – Present	Northern New England Infectious Diseases Society	Member
1998 – Present	International Union Against TB and Lung Disease	Member
1996 – Present	American Society of Tropical Medicine and Hygiene	Member
1996 – 2000	American Society for Microbiology	Member
1995 – Present	Infectious Diseases Society of America	Member
1990 – Present	Alpha Omega Alpha	Member
1988 – 1999	Christian Medical and Dental Society	Member
1988 – 1999	American Medical Association	Member

XVII. EDITORIAL BOARDS

DATES	ROLE	BOARD NAME
May 2008	Reviewer	2009 Red Book Review Board – 28th Edition, Chapter assignment Needlestick Injuries and Hansen's Disease (Leprosy). Editors Drs Pickering, Baker, Kimberlin and Long
Nov 2007	Reviewer, Scientific Panel	Global Health Council, Infectious Disease Track, for 2008 Annual Meeting
March 21-23 2005	Member, Special Emphasis Panel	International Research in Infectious Disease (IRID) Program, National Institute of Allergy and Infectious Diseases (NIAID), NIH

June 2006	Member, Special Emphasis Panel	Tuberculosis Research Unit Contract Review, Division of Microbiology and Infectious Diseases, National Institute of Allergy and Infectious Diseases (NIAID), NIH
Aug 2002 – Present	Editorial Board Member	Consortium to Respond Effectively to the AIDS-TB Epidemic (CREATE)
Nov 2004 – Present	Editor	New Hampshire Communicable Disease Bulletin, a quarterly publication for US state epidemiologists and NH clinicians and partners

XVIII. JOURNAL REFEREE ACTIVITY

Ad hoc reviewer for: Clinical Infectious Diseases, Tuberculosis, Pediatric Infectious Diseases; PLoS, Bone Marrow Transplantation; The International Journal of TB and Lung Disease; International Journal of Epidemiology; American Journal of Tropical Medicine and Hygiene

XIX. AWARDS AND HONORS

DATE	AWARD
2021	Bi-State Primary Care Association Award
2020	Long term Care Facility Award, sponsored by ARC and NHH
2016	United States Centers for Disease Control and Prevention TB Elimination Champion
2012	Nomination to CDC's Charles C. Shepard Science Award (http://www.cdc.gov/niosh/awards/shepard/) for Research: Samandari T, Agizew TB, Nyirenda S, Tedla Z, Sibanda T, Shang N, Mosimaneotsile B, Motsamai OI, Bozeman L, Davis MK, **Talbot EA**, Moeti TL, Moffat HJ, Kilmarx PH, Castro KG, Wells CD. Continuous isoniazid therapy is superior to six months to prevent tuberculosis in tuberculin-skin-test-positive HIV-infected adults in Botswana. Lancet 2011; 377: 1588-1598
2009	Nomination to CDC's Charles C. Shepard Science Award for Manuscript: Greene SK, Daly ER, **Talbot EA**, Demma LJ, Holzbauer S, Patel NJ, Hill TA, Walderhaug MO, Hoekstra RM, Lynch MF, Painter JA. Recurrent multistate outbreak of *Salmonella* Newport associated with tomatoes from contaminated fields, 2005. Epidemiol Infect. 2008;136(2):157-65
2007	Dartmouth College Department of Medicine Teaching Award for Excellence in Teaching
2006	Nomination to CDC's Charles C. Shepard Science Award for Assessment and Epidemiology
2005	Nomination to CDC's Charles C. Shepard Science Award for Assessment and Epidemiology

2004	Nomination to CDC's Charles C. Shepard Science Award for Assessment and Epidemiology
2002	Achievement Medal, U.S. Public Health Service
2002	Exemplary Service Award, NCHSTP, US CDC
2001	Foreign Service Medal, US Public Health Service
1999	Mary Lyon Award, Mount Holyoke College
1998	Dade MicroScan Young Investigator Award, American Society of Microbiology
1992	Association of Women Psychiatrists Dickstein Award
1992	Janet M. Glasglow Memorial Achievement Citation
1992	Elected to Housestaff Affairs Committee, University of Iowa
1991	Alpha Omega Alpha, Robert Wood Johnson Medical School
1989	National Institutes of Health Research Scholar (NIAID)
1988 - 91	Mary P. Dole Medical Fellowship, Mount Holyoke College
1988	Magna Cum Laude, High Honors, Mount Holyoke College
1987	Phi Beta Kappa, Mount Holyoke College
1987	Student Leadership Award, Mount Holyoke College
1986	Charles A. Dana Intern for Summer Research, National Institutes for Health

XX. INVITED PRESENTATIONS:

(*) I was extended an invitation to present
(#) I presented a poster/talk, but not following a personalized invitation
(^) if the talk/presentation was CME activity.

International:

DATE	TOPIC/TITLE	ORGANIZATION	LOCATION
*^Feb 2020	The social implications of participant choice on adherence to Isoniazid Preventive Therapy (IPT): A follow-up study to high completion rates in Eswatini	Latebreaker program of the North American Regional Meeting of the International Union of Tuberculosis and Lung Disease	Chicago IL
*^Oct 1, 2019	Better tracking of deadly complications of substance use – Report of a collaborative analysis	ID Week (Infectious Disease Society of America Annual Conference)	Washington DC

	between public health and an academic medical center to assess substance use-associated infective endocarditis		
*^Oct 24, 2018	Integrated care and patient choice enable treatment completion of IPT in Swaziland	International Union Against TB and Lung Disease	The Hague, The Netherlands
*Sept 22 2016	Ethical Issues in the Zika Epidemic Response	Dartmouth Ethics Interest Group	Hanover NH
*^Sept 29 2016	Practical Aspects of Treatment of TB Infection	NH TB Conference	Manchester NH
*^Sept 29 2016	Case Based Approach to MDR TB Diagnosis and Treatment	NH TB Conference	Manchester NH
*Sept 30, 2016	Zika Updates Relevant to NH Clinicians	NH DHHS	NH Webinar
#July 12 2016	"Completion of Isoniazid Preventive Therapy among HIV Infected Patients in Swaziland"	Swaziland National Emergency Response Council on HIV and AIDS (NERCHA)	Mbane Swaziland
*July 3 2016	"Pediatric TB Treatment: Confirming the Basics and Preparing for Innovations"	Liangjiang International Pediatric Forum	Chongqing China
#^Nov 13, 2006	"Rapid implementation of a comprehensive control strategy including vaccination with Tdap in a hospital pertussis outbreak, New Hampshire 2006"	Infectious Disease Society of America Annual Conference Latebreaker Program	Toronto Canada
#^Aug 13-18 2006	"Characteristics of people living with HIV-1 screened for isoniazid preventive therapy - Botswana, 2004-6"	XVI International AIDS Conference	Toronto Canada
July 11-6 2004	"Diagnosing HIV and tuberculosis in children in Botswana"	XV International AIDS Conference	Bangkok Thailand
June 2003	"TB-HIV Research Priorities" (presenting author)	WHO TB-HIV Working Group Annual Meeting	Montreux Switzerland
Dec 1999	"Estimating the Impact of Different Treatment Strategies in Settings with High Rates of Multi-drug Resistant TB"	Tuberculosis Surveillance and Response Unit Conference	Tokyo Japan

National:

DATE	TOPIC	ORGANIZATION	LOCATION
*^June 2021	Focus on the Most Vulnerable: COVID-19 Outbreaks within New Hampshire Residential Facilities	Council of State and Territorial Epidemiologist	Virtual
*^Nov 17, 2021	Value of Whole Genome Sequencing during a Vancomycin Resistant Enterococci Cluster Investigation at an Acute Care Hospital, New Hampshire, 2019	Council of State and Territorial Epidemiologist, Healthcare Associated Infection/Antimicrobial Resistance Subcommittee Meeting	Virtual
*^April 8, 2019	Global TB Updates Relevant to US Microbiologists	Northeast Branch of the American Society for Microbiology and Northeast Assoc for Clin Microbiol and Infect Diseases	Portsmouth, NH
*^April 9, 2019	Trends in Infective Endocarditis: A Methodological Riddle	Northeast Branch of the American Society for Microbiology and Northeast Assoc for Clin Microbiol and Infect Diseases	Portsmouth, NH
*^June 4 2019	Trends of Infective Endocarditis at a Northern New England Academic Medical Center, from 2011 to 2017 - a Case for Improved Methods to Reliably Identify Associated Substance Use (abstract 11586)	Council of State and Territorial Epidemiologist Annual Meeting	Durham NC
*^June 10 2018	Small State, Big Collaboration: Creation of New Hampshire's First Statewide Antibiogram Guides Stewardship Efforts (abstract 9578)	Council of State and Territorial Epidemiologist Annual Meeting	West Palm Beach FL
*^May 21 2018	Novel TB Diagnostics: Urine, Breath, and Stool, Oh My!	National TB Controllers Association Annual Meeting	Palm Springs CA
#June 4 2017	A Cluster of Group A Streptococcus (GAS) Infection Among Persons Who Inject Drugs (PWID)	Council of State and Territorial Epidemiologist Annual Meeting, June 4-8, 2017	Boise, ID
#^June 20 2016	Workplace Safety Concerns Among Co-Workers of a Traveler Returning from an Ebola-Affected Country. Abstract 6139	Council of State and Territorial Epidemiologist Annual Meeting, June 19-23 2013,	Anchorage AK
June 12 2013	"National Nosocomial Hepatitis C Outbreak Investigation"	Council of State and Territorial Epidemiologists Annual Meeting	Pasadena CA

June 12 2013	"Hepatitis C Outbreak Investigation: Relevance of Controlled Medication Use Patterns"	Council of State and Territorial Epidemiologists Annual Meeting	Pasadena CA
Feb 20 2008	"Multistate Outbreak of *Salmonella* Typhimurium Associated with Consumption of Tomatoes in Restaurants", September–October 2006	Prevention Medicine Annual Meeting	Austin TX
June 26 2007	"Failure of the CSTE Case Definition to Exclude Pertussis During a Large Hospital Outbreak of a Cough Illness"	Council of State and Territorial Epidemiologists Annual Meeting	Atlantic City NJ
June 23 2007	"A Multistate Outbreak of *Salmonella* Oranienburg Infections Associated with Fruit Salad Served in Healthcare Settings - Northeastern United States and Canada, 2006"	Council of State and Territorial Epidemiologists Annual Meeting	Atlantic City, NJ
Apr 20, 2007	"Large Outbreak of Pertussis Like Illness at a Medical Center, New Hampshire, 2007"	Epidemic Intelligence Service Conference	Atlanta GA
Mar 5-8 2007	"Evidence for the ACIP Recommendations on Intervals and Administrative Sequence of Diphtheria Toxoid-Containing Vaccines"	National Immunization Conference	Kansas City MO
Mar 5-8 2007	"Safety of Tdap During a Mass Immunization of Healthcare Personnel"	National Immunization Conference	Kansas City MO
Nov 6, 2006	'Response to an Outbreak of Hepatitis A Among Illegal-Drug Users"	American Public Health Association	Boston MA
Nov. 6, 2006	"Pandemic Influenza Functional Exercise" – New Hampshire 2005	American Public Health Association	Boston MA
Nov 8, 2006	"An Evaluation of New Hampshire's Innovative Syndromic Tracking Encounter Management System (STEMS)"	American Public Health Association	Boston MA
Dec 14, 2005	"Lead Poisoning Among Refugee Children, New Hampshire"	American Public Health Association	Philadelphia PA
Apr 10, 2000	"Control of Drug Resistant TB, Botswana, 1999"	Epidemic Intelligence Service Conference	Atlanta GA

Apr 23, 1999	"TB in Foreign-born Persons, United States, 1993-1997"	Epidemic Intelligence Service Conference	Atlanta GA
Apr 25, 1999	"TB in Foreign-born Persons, United States, 1993-1997"	American Lung Association/American Thoracic Society International Conference	San Diego CA
Dec 2, 1996	Molecular Methods for the Identification of *Mycobacterium bovis* BCG	American Society of Tropical Medicine and Hygiene	Baltimore MD

Regional/Local:

DATE	TOPIC	ORGANIZATION	LOCATION
*^Nov 14, 2017	"Tuberculosis Primer"	Maine Centers for Disease Control Infectious Diseases Conference	Augusta ME
*^Oct 18 2017	MDR TB: A Primer for New England Clinical and Public Health Practioners	Northeast Regional Antimicrobial Resistance Conference "A Spectrum of Threat"	Northampton MA
Oct 25, 2012	"National Hepatitis C Outbreak: The Role of Public Health"	Annual Meeting of Northeast Epidemiologists	Meredith NH
Oct 26, 2006	"Safety of Tdap During a Mass Vaccination Campaign"	Annual Meeting of Northeast Epidemiologists	Saratoga Springs NY
Oct 27, 2006	"A Multistate Outbreak of *Salmonella* Oranienburg Infections Associated with Fruit Salad Served in Healthcare Settings—Northeastern United States, June – July 2006"	Late breaker program of Annual Meeting of Northeast Epidemiologists	Saratoga Springs NY
Nov 4, 2005	"Use of Intradermal Influenza Vaccine for Healthcare Workers During a Severe Vaccine Shortage"	Annual Meeting of Northeast Epidemiologists	Chatham MA
Sept 27, 2005	"TB Elimination in New Hampshire"	Northeast TB Controllers Meeting	Albany NY

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60. Frothingham R, Meeker-O'Connell WA, **Talbot EA**, George JW, Kreuzer KN. Cloning and expression of the pyrazinamidase gene [abstract U-78]. 96th General Meeting of the American Society for Microbiology, New Orleans LA, May 19-23 1996.

Presented at International Meetings:

1. **Talbot EA**, Moir W, Boyle P, Dube M, Leeman H, McLellan R. Evolving Approaches to Reduce the Reservoir of *Mycobacterium tuberculosis* at an Academic Medical Center. 23rd Annual Conference of the Union-North America Region. February 21-23, 2019, Vancouver, BC, Canada.
2. Leeman H, Hansen K, Chan BP, **Talbot EA**, Zimmermann C, Calderwood M, Dave A, Santos P. Small State, Big Collaboration: New Hampshire's Statewide Antibiograms Guide Stewardship Efforts. Abstract 72810. ID Week, Oct 3-7, 2018, San Francisco CA.
3. Gittzus JF, White JA, Caine L, Kansen K, Daly ER, Chan BP, Bowen H, Metcalf E, Pierce L, Kusch R, Benton C, Gao F, **Talbot EA**, Noble JT. An Outbreak of Invasive Group A Streptococcal Infections in Injection Drug Users. Abstract. Infectious Disease Society of America Annual Meeting, Oct 4-8 2017, San Diego CA.
4. Adams LV, **Talbot EA**, Mahlalela N, Ginindza S, Pasipamire M, Calnan M, Mazibuko S, Haumba S. Urgent Interventions to Improve Isoniazid Preventive Therapy Delivery in Swaziland Annual Meeting of the International Union Against Tuberculosis and Lung Disease, Oct 2016, Liverpool UK.
5. Adams LV, **Talbot EA**, Olatu R, Bunu Y. Effective Specialized Training and Implementation of National Pediatric Tuberculosis Clinical Guidelines in Tanzania. Annual Meeting of the International Union Against Tuberculosis and Lung Disease, Nov 3, 2013, Paris France.
6. **Talbot EA**, Plotinsky R, von Reyn CF. Patients Requiring Treatment for Primary and Secondary Forms of *Mycobacterium avium* complex Pulmonary Disease May Not Meet ATS Criteria. International Union Against TB and Lung Disease, Lille France, Oct 30, 2011.
7. Dionne-Odom J, Smith J, Krycki S, Adamski C, Gougelet R, Montero JT, Learmonth D, Snyder P, O'Mara E, Smith TL, **Talbot EA**. The New Hampshire Experience with Anthrax Post-exposure Prophylaxis. Infectious Disease Society of America Annual Meeting, Vancouver British Columbia, Oct 21-24, 2010.
8. **Talbot EA**, Maro I, Ferguson K, Adams LV, Mtei L, Matee M, von Reyn CF. Maintenance of Sensitivity of the T-SPOT®.*TB* assay Following Overnight Storage of Blood Samples in Dar es Salaam, Tanzania. International Union Against TB and Lung Disease, Berlin Germany, Nov 11-15, 2010.
9. **Talbot EA**, Blancy D, Taylor TH, Adams LV, Wieland-Alter W, von Reyn CF. Latent Class Analysis to Compare the Tuberculin Skin Test and Two Interferon-gamma Release Assays. International Union Against TB and Lung Disease, Berlin Germany, Nov 11-15, 2010.
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11. **Talbot EA**, Munseri PJ, Teixeira JP, von Reyn CF. Urinary LAM antigen detection for the diagnosis of TB among hospitalized HIV-infected TB suspects in Tanzania. International Union Against TB and Lung Disease, Cancun Mexico, Dec 3-7, 2009.
12. Green C, Hoelscher M, Kalunga G, Mwaba P, Reither K, Maboko L, Cannas A, Giradi E, Perkins M, **Talbot E**, Zumla A, Huggett J & the TB trDNA consortium. Evaluation of molecular diagnosis of tuberculosis using urine. International Union Against TB and Lung Disease, Cancun Mexico, Dec 3-7, 2009.

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14. Nyirenda S, Mosimaneotsile B, Agizew T, Tedla A, Motsamai O, **Talbot EA**, Kilmarx PH, Wells CD, Samandari T. Characteristics of people living with HIV-1 screened for isoniazid preventive therapy – Botswana, 2004-6. International Union Against TB and Lung Disease, Paris France, Oct 31- Nov 4, 2006.

15. Kirkland KB, Ptak J, Smith R, Taylor E, **Talbot EA**. The Holy Grail: Successful Reduction of Healthcare-Associated Infection Rates through Improved Hospital Wide Hand Hygiene (abstract 4269). Infectious Disease Society of America Annual Meeting, Oct 25-28 2008, Washington DC.

16. Howley IW, Lartey M, Machan JT, Obo-Akwa A, Flanigan TP, **Talbot EA**, Kwara A. Highly Active Antiretroviral Therapy and Effects on Employment, Accra, Ghana (abstract 2977). Infectious Disease Society of America Annual Meeting, Oct 25-28 2008, Washington DC.

17. Kirkland KB, **Talbot EA**, Edwards K, Decker M. Timing of immune responses to tetanus-diphtheria-acellular pertussis vaccine (Tdap) in healthcare providers (HCP): Implications for outbreak control. Infectious Disease Society of America Annual Meeting, Oct 2007, San Francisco CA.

18. **Talbot EA,** Chen L, Sanford C, McCarthy A. Research priorities in travel medicine. Abstract PO16.02 10th Conference of the ISTM, Vancouver, Canada May 20-24 2007.

19. **Talbot EA**, Brown K, Kirkland K, Baughman A, Kretsinger K, Halperin S, McLellan R, Patel M, Broder K. Safety of mass immunization with tetanus-diphtheria-acellular pertussis vaccine (Tdap) during a NH hospital pertussis outbreak. Infectious Disease Society of America Annual Meeting Latebreaker Program, Nov 13 2006, Canada.

20. Nyirenda S, Mosimaneotsile B, Agizew T, Tedla A, Motsamai O, **Talbot EA**, Kilmarx PH, Wells CD, Samandari T. Characteristics of people living with HIV-1 screened for isoniazid preventive therapy – Botswana, 2004-6. International Union Against TB and Lung Disease, Paris France, Oct 31- Nov 4, 2006.

21. Chideya SR, Laserson KF, Tan K, **Talbot EA**, Varma J, Cain K, Mwansa R, Wells CD. Use of Classification and Regression Tree (CART) Analysis to Develop a Diagnostic Decision Tree to Detect Tuberculosis among Sputum Smear-negative HIV-infected Persons in Botswana. International AIDS Conference, August 13-18 2006, Toronto Canada.

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23. Greene SK, Gagnon ER, **Talbot EA**, Holzbauer S, Demma L, Patel NJ, Braden C, Painter JA, and the S. Newport Outbreak Working Group. Multi-state outbreak of *Salmonella* Newport associated with tomatoes, July – September 2005. 2006 International Conference on Emerging Infectious Diseases, Atlanta GA, March 21 2006.

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25. Sheth A, **Talbot EA**, Mboya J, Kilmarx P, Wells CD, Samandari T. Relationship between TST reactivity and CD4 lymphocyte count among HIV1-co-infected adult TB patients, Botswana. International Union Against TB and Lung Disease, Paris France, October 18-20 2005
26. Mosimaneotsile B, Nyirenda S, Motsamai O, **Talbot EA**, Wells CD, Kilmarx P, Samandari T. Characteristics of persons living with HIV screened for isoniazid preventive therapy – Botswana 2004-5. International Union Against TB and Lung Disease, Paris France, October 18-20 2005.
27. Nelson LJ, Davis A, McCrann CH, Sugo C, Sonoto R, Notha M, Bakgethisis C, Wells CD, **Talbot EA**. Tuberculosis screening at a refugee camp in Botswana, 2003-2003. International Union Against TB and Lung Disease, Paris France, October 29-31 2003.
28. Agerton TB, Mosimaneotsile M, **Talbot EA**, Sentle CO, Koosimile BS, Wells CD. Prevalence and annual risk of TB infection, Botswana, 2002. International Union Against TB and Lung Disease, Paris France, October 29-31 2003.
29. Vranken P, Naicker M, Cloutier S, Wells CD, **Talbot EA**, Kilmarx PH. The conversion of the Electronic TB Register from DOS to Windows. International Union Against TB and Lung Disease, Paris France, October 29-31 2003.
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32. Nelson LJ, **Talbot EA**, Mwasekaga MJ, Notha M, Wells CD. Antituberculosis drug resistance and anonymous HIV surveillance among TB patients, Botswana 2002. TB Research and Surveillance Meeting, Dar es Salaam Tanzania, March 2003.
33. Smith M, Seeletso L, **Talbot EA**, Mogapi LG, Modise K, Katse P, Shaffer N, Tryon C, Hamborsky J, Luo C, Lloyd E. Benefits of pre-counseling video and discussion in prevention of mother-to-child-transmission (PMTC), Botswana, 2001. International AIDS Conference, Barcelona Spain, Abstract TuPe5389, July 8 2002.
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36. Oyewo TA, **Talbot EA**, Moeti TL, Binkin NJ, Tappero JW, Kenyon TA. Non-response to antibiotics predicts tuberculosis in AFB-smear-negative TB suspects, Botswana, 1997-1999. International Union Against Tuberculosis and Lung Disease Conference, Paris France, Abstract Pdisc-440, November 1-5 2001.

37. **Talbot EA**, Kenyon TA, Dooley L, Hsin G, Moeti TL, Halabi S, Binkin NJ. HIV risk factors among TB patients, Botswana, 1999. International AIDS Conference, Durban South Africa, Abstract WePe4298, July 12 2000.
38. **Talbot EA**, Kenyon TA, Mwasekaga MJ, Moeti TL, Mallon V, Binkin NJ. Control of drug resistant TB, Botswana, 1999. Africa Regional International Union Against Tuberculosis and Lung Disease Conference, Conakry Guinea, May 26-28 2000.
39. **Talbot EA**, Taylor Z, Laserson K, Simone P, Binkin NJ. Use of sensitivity testing and rapid resistance tests increases effectiveness and cost of treatment in settings with high rates of multi-drug resistant tuberculosis. North American International Union Against Tuberculosis and Lung Disease Conference, Vancouver BC, Abstract DR5, February 26 2000.
40. Teixeira L, Perkins MD, Keller RP, Palaci M, do Valle Dettoni V, Rocha LMC, **Talbot EA**, Johnson JL, Dietze R. Infection and disease among household contacts of patients with multidrug resistant tuberculosis: a case control study]. IUATLD World Conference on Lung Health, Madrid Spain, Abstract 65-PD, September 14-18 1999.
41. **Talbot EA**, Kenyon TA, Halabi S, Moeti TL, More K, Binkin NJ. Knowledge, attitudes and beliefs regarding TB preventive therapy for HIV-infected persons living in Botswana, 1999. 11th International Conference on AIDS and STDs in Africa, Lusaka Zambia, September 12 - 16 1999.
42. Lishimpi K, Waddell RD, von Reyn CF, Chileshe R, Baboo KS, Zumla A, Chintu C, [Acknowledged]. Disseminated mycobacterial infections in HIV-positive children in Lusaka, Zambia [abstract 14PT55-24] in 11th International Conference in AIDS and STDs in Africa, Lusaka Zambia, September 12-16 1999.
43. Waddell RD, von Reyn CF, Boboo KS, et al. [Acknowledged]. Childhood BCG immunization and the subsequent risk of adult disseminated mycobacterial disease among AIDS patients in Lusaka, Zambia [abstract 737] in 5th Conference of Retroviruses and Opportunistic Infections, Chicago Il, February 1-5 1998.
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MAJOR RESEARCH INTERESTS:

- Diagnosis of TB and latent TB infection in adults and children
- Impact assessment of tuberculosis diagnostic implementation
- Control of HIV-associated TB
- Epidemic response and preparedness
- Healthcare infection prevention and control

MANUSCRIPTS IN PREPARATION:

1. Trivedi T, **Talbot EA**, McLellan R, Boyle P, Dube M. Engaging Healthcare Personnel in a Latent Tuberculosis Infection Surveillance System: Enacting New U.S. Guidelines. Planned for Fast Track Submission In July to the Journal of Occupational and Environmental Medicine.

2. Grande SW, Adams LV, Maseko TSB, **Talbot EA**, deGijsel D, Mikal J, Simelane ZZ, Achili AA, Mkhontfo M, Haumba SM. The social implications of health status disclosure to encourage adherence: A follow-up study of IPT completion rates in Eswatini. In draft.
3. Daly ER, Chan B, **Talbot EA**, et al. Outbreak of legionellosis, Hampton, New Hampshire, 2018. In draft for submission to the Morbidity and Mortality Weekly Report.
4. Kaiser MA, Tsui E, **Talbot EA**, Zegans ME. Tuberculosis-related scleritis: Case and Review. In draft.

Updated by: Dr Elizabeth A. Talbot
This CV was last revised on Thursday, August 19, 2021

MARY HITCHCOCK MEMORIAL HOSPITAL

Key Personnel

FY22				
Name	Job Title	Salary	% Paid from this Contract	Amount Paid from this Contract
Sally Kraft	PI	$206,000	0%	$0
Inger Imset	Project Manager	$85,953	6%	$5,157
Elizabeth Talbot	Healthcare Provider	$206,000	2%	$4,120
Nancy "Nan" Cochran	Health Communications Expert	$206,000	1.5%	$3,090
Ariel Pike	Admin Support	$53,260	5%	$2,663
			Total	**$15,030**

FY23				
Name	Job Title	Salary	% Paid from this Contract	Amount Paid from this Contract
Sally Kraft	PI	$212,180	0%	$0
Inger Imset	Project Manager	$88,532	2%	$1,771
Elizabeth Talbot	Healthcare Provider	$212,180	0.50%	$1,061
Nancy "Nan" Cochran	Health Communications Expert	$212,180	0%	$0
Ariel Pike	Admin Support	$54,858	0.50%	$274
			Total	**$3,106**