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STATE OF NEW HAMPSHIRE
DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION FOR BEHAVIORAL HEALTH

Jeffrey A. Meyers
Commissioner

Katja S. Fox
Director

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April 23, 2019

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 for Behavioral Health to enter into an agreement with Mary-Hitchcock Memorial Hospital, One Medical Center Drive, Lebanon, New Hampshire 03756-0001, (Vendor # 177160) to develop a statewide education initiative regarding early intervention services to individuals experiencing Early Serious Mental Illness or First Episode Psychosis, in an amount not to exceed $593,600 effective May 15, 2019, or upon date of Governor and Executive Council approval, whichever is later, through September 30, 2020. 100% Federal Funds.

Funds are available in the following accounts for State Fiscal Year (SFY) 2019, and are anticipated to be available in SFY 2020 and SFY 2021, upon the availability and continued appropriation of funds in the future operating budgets, with authority to adjust amounts within the price limitation and adjust encumbrances between State Fiscal Years through the Budget Office if needed and justified.

05-95-92-922010-41200000 HEALTH AND SOCIAL SERVICES, DEPT OF HEALTH AND HUMAN SVS, HHS: DIVISION FOR BEHAORIAL HEALTH, BUREAU OF MENTAL HEALTH SERVICES, MENTAL HEALTH BLOCK GRANT

Fiscal Year	Class/Account	Class Title	Job Number	Total Amount
SFY 2019	102-500731	Contracts for Prog Svc	92224120	$8,324
SFY 2020	102-500731	Contracts for Prog Svc	92224120	$476,721
SFY 2021	102-500731	Contracts for Prog Svc	92224120	$108,555
			Total	**$593,600**

EXPLANATION

The purpose of this request is to develop a statewide education initiative regarding the importance and availability of early intervention services to individuals experiencing Early Serious Mental Illness (ESMI) and/or First Episode Psychosis (FEP), as well as to develop and implement an evidence-based model that provides treatment for ESMI, including psychotic disorders and/or FEP statewide.

The Substance Abuse and Mental Health Services Administration (SAMHSA) requires that 10-percent of the State's Mental Health Block Grant (MHBG) be set aside to address ESMI and/or FEP.

The vendor will implement a statewide campaign to increase public awareness and provide education around the importance and availability of early intervention services to people experiencing FEP/ESMI. The vendor will also conduct a research initiative through consultation with the Department and a diverse group of stakeholders to create steps and timelines toward the development, consensus, and implementation of a robust, statewide evidence-based early intervention program for individuals experiencing ESMI and/or FEP.

Based on the State's population, it is estimated that between 200 and 400 residents develop a first episode of psychosis each year. Symptoms of early mental illness often go unrecognized and untreated. Left untreated, the illness can intensify, requiring crisis intervention, and become a chronic condition requiring ongoing intensive levels of care.

Early intervention in episodes of FEP and other ESMI is shown to decrease the need for higher levels of care, such as psychiatric hospitalization or other inpatient or residential services, that are more expensive.

The following performance measures will be used to determine the effectiveness of the agreement and the vendor will provide to the Department, on a quarterly basis, the following:

- Outreach efforts to providers and stakeholders
- Identified community partners
- Stakeholder feedback
- Statewide education efforts
- Updates to anti-stigma campaigns and provided activities

The vendor will provide to the Department, on an annual basis, the following:

- Work plan status
- Accomplishments
- Obstacles
- Any other important findings

Mary-Hitchcock Memorial Hospital was selected for this project through a competitive bid process. A Request for Proposals was posted on the Department of Health and Human Services website from December 26, 2018 through January 23, 2019. The Department received one (1) proposal. The proposal was reviewed and scored by a team of individuals with program-specific knowledge. The review included a thorough discussion of the strengths and weaknesses of the proposals. The Score Summary Sheet is attached.

As referenced in the Request for Proposals and in Exhibit C-1 of this contract, the Department has the option to extend contract services for up to four (4) additional years, contingent upon satisfactory delivery of services, available funding, agreement of the parties and approval of the Governor and Council.

Should the Governor and Executive Council not authorize this request, the Department would not have the resources to address the needs of individuals experiencing ESMI and FEP, thereby increasing the likelihood of emergency room visits and inpatient hospitalizations, placing the burden on the acute care system, and the negative impact on the lives of individuals with ESMI in New Hampshire.

Area served: Statewide.

Source of Funds: Source of Funds: 100% Federal Funds from Substance Abuse and Mental Health Services Administration.

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

Respectfully submitted,

Jeffrey A. Meyers
Commissioner

New Hampshire Department of Health and Human Services
Office of Business Operations
Contracts & Procurement Unit
Summary Scoring Sheet

First Episode Psychosis Planning & Implementation
RFP Name

RFP-2019-DBH-03-FIRST
RFP Number

Bidder Name	Pass/Fail	Maximum Points	Actual Points
1. Mary Hitchcock Memorial Hospital		330	288
2.			
3.			

Subject: First Episode Psychosis/Early Serious Mental Illness Program Planning (RFP-2019-DBH-03-FIRST-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 NH 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		1.4 Contractor Address One Medical Center Drive Lebanon, NH 03756-0001	
1.5 Contractor Phone Number (603) 650-7549	1.6 Account Number 05-095-092-922010-41200000-102-500731	1.7 Completion Date September 30, 2020	1.8 Price Limitation $593,600.00
1.9 Contracting Officer for State Agency Nathan D. White, Director Bureau of Contracts and Procurement		1.10 State Agency Telephone Number 603-271-9631	
1.11 Contractor Signature		1.12 Name and Title of Contractor Signatory Daniel P. Jantzen, Chief Financial Officer	

1.13 Acknowledgement: State of New Hampshire County of Grafton

On 4-15-2019, before the undersigned officer, personally appeared the person identified in block 1.12, or satisfactorily proven to be the person whose name is signed in block 1.11, and acknowledged that s/he executed this document in the capacity indicated in block 1.12.

1.13.1 Signature of Notary Public or Justice of the Peace

[Seal]

FAITH E. JOHNSTON
MY COMMISSION EXPIRES SEPT 2, 2021
NOTARY PUBLIC
NEW HAMPSHIRE

1.13.2 Name and Title of Notary or Justice of the Peace

Faith Johnston, Notary

1.14 State Agency Signature Date: 4/22/19	1.15 Name and Title of State Agency Signatory Katja S Fox, Director

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

By: Director, On:

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

By: Lindsay Courmen, Attorney On: 4/29/19

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

By: On:

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

3. EFFECTIVE DATE/COMPLETION OF SERVICES.
3.1 Notwithstanding any provision of this Agreement to the contrary, and subject to the approval of the Governor and Executive Council of the State of New Hampshire, if applicable, this Agreement, and all obligations of the parties hereunder, shall become effective on the date the Governor and Executive Council approve this Agreement as indicated in block 1.18, unless no such approval is required, in which case the Agreement shall become effective on the date the Agreement is signed by the State Agency as shown in block 1.14 ("Effective Date").
3.2 If the Contractor commences the Services prior to the Effective Date, all Services performed by the Contractor prior to the Effective Date shall be performed at the sole risk of the Contractor, and in the event that this Agreement does not become effective, the State shall have no liability to the Contractor, including without limitation, any obligation to pay the Contractor for any costs incurred or Services performed. Contractor must complete all Services by the Completion Date specified in block 1.7.

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

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

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

7. PERSONNEL.
7.1 The Contractor shall at its own expense provide all personnel necessary to perform the Services. The Contractor warrants that all personnel engaged in the Services shall be qualified to perform the Services, and shall be properly licensed and otherwise authorized to do so under all applicable laws.
7.2 Unless otherwise authorized in writing, during the term of this Agreement, and for a period of six (6) months after the Completion Date in block 1.7, the Contractor shall not hire, and shall not permit any subcontractor or other person, firm or corporation with whom it is engaged in a combined effort to perform the Services to hire, any person who is a State employee or official, who is materially involved in the procurement, administration or performance of this

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

8. EVENT OF DEFAULT/REMEDIES.
8.1 Any one or more of the following acts or omissions of the Contractor shall constitute an event of default hereunder ("Event of Default"):
8.1.1 failure to perform the Services satisfactorily or on schedule;
8.1.2 failure to submit any report required hereunder; and/or
8.1.3 failure to perform any other covenant, term or condition of this Agreement.
8.2 Upon the occurrence of any Event of Default, the State may take any one, or more, or all, of the following actions:
8.2.1 give the Contractor a written notice specifying the Event of Default and requiring it to be remedied within, in the absence of a greater or lesser specification of time, thirty (30) days from the date of the notice; and if the Event of Default is not timely remedied, terminate this Agreement, effective two (2) days after giving the Contractor notice of termination;
8.2.2 give the Contractor a written notice specifying the Event of Default and suspending all payments to be made under this Agreement and ordering that the portion of the contract price which would otherwise accrue to the Contractor during the period from the date of such notice until such time as the State determines that the Contractor has cured the Event of Default shall never be paid to the Contractor;
8.2.3 set off against any other obligations the State may owe to the Contractor any damages the State suffers by reason of any Event of Default; and/or
8.2.4 treat the Agreement as breached and pursue any of its remedies at law or in equity, or both.

9. DATA/ACCESS/CONFIDENTIALITY/ PRESERVATION.
9.1 As used in this Agreement, the word "data" shall mean all information and things developed or obtained during the performance of, or acquired or developed by reason of, this Agreement, including, but not limited to, all studies, reports, files, formulae, surveys, maps, charts, sound recordings, video recordings, pictorial reproductions, drawings, analyses, graphic representations, computer programs, computer printouts, notes, letters, memoranda, papers, and documents, all whether finished or unfinished.
9.2 All data and any property which has been received from the State or purchased with funds provided for that purpose under this Agreement, shall be the property of the State, and shall be returned to the State upon demand or upon termination of this Agreement for any reason.
9.3 Confidentiality of data shall be governed by N.H. RSA chapter 91-A or other existing law. Disclosure of data requires prior written approval of the State.

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

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

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

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

14. INSURANCE.
14.1 The Contractor shall, at its sole expense, obtain and maintain in force, and shall require any subcontractor or assignee to obtain and maintain in force, the following insurance:
14.1.1 comprehensive general liability insurance against all claims of bodily injury, death or property damage, in amounts of not less than $1,000,000per occurrence and $2,000,000 aggregate ; and
14.1.2 special cause of loss coverage form covering all property subject to subparagraph 9.2 herein, in an amount not less than 80% of the whole replacement value of the property.
14.2 The policies described in subparagraph 14.1 herein shall be on policy forms and endorsements approved for use in the State of New Hampshire by the N.H. Department of Insurance, and issued by insurers licensed in the State of New Hampshire.

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14.3 The Contractor shall furnish to the Contracting Officer identified in block 1.9, or his or her successor, a certificate(s) of insurance for all insurance required under this Agreement. Contractor shall also furnish to the Contracting Officer identified in block 1.9, or his or her successor, certificate(s) of insurance for all renewal(s) of insurance required under this Agreement no later than thirty (30) days prior to the expiration date of each of the insurance policies. The certificate(s) of insurance and any renewals thereof shall be attached and are incorporated herein by reference. Each certificate(s) of insurance shall contain a clause requiring the insurer to provide the Contracting Officer identified in block 1.9, or his or her successor, no less than thirty (30) days prior written notice of cancellation or modification of the policy.

15. WORKERS' COMPENSATION.

15.1 By signing this agreement, the Contractor agrees, certifies and warrants that the Contractor is in compliance with or exempt from, the requirements of N.H. RSA chapter 281-A *("Workers' Compensation").*

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

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

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

18. AMENDMENT. This Agreement may be amended, waived or discharged only by an instrument in writing signed by the parties hereto and only after approval of such amendment, waiver or discharge by the Governor and Executive Council of the State of New Hampshire unless no such approval is required under the circumstances pursuant to State law, rule or policy.

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

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

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

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

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

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

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Date 4/25/19

Scope of Services

1. Provisions Applicable to All Services

1.1. The Contractor shall submit a detailed description of the language assistance services they will provide to persons with limited English proficiency to ensure meaningful access to their programs and/or services within ten (10) days of the contract effective date.

1.2. The Contractor agrees that, to the extent future legislative action by the New Hampshire General Court or federal or state court orders may have an impact on the Services described herein, the State Agency has the right to modify Service priorities and expenditure requirements under this Agreement so as to achieve compliance therewith.

1.3. Notwithstanding any other provision of the Contract to the contrary, no services shall continue after June 30, 2019, and the Department shall not be liable for any payments for services provided after June 30, 2019, unless and until an appropriation for these services has been received from the state legislature and funds encumbered for the SFY 2020-2021 biennia.

1.4. For the purposes of this Agreement, the Department has identified the Contractor as a Contractor, in accordance with 2 CFR 200.0. et seq.

2. Scope of Services – Phase I – Stakeholder Engagement & Planning

2.1. Project Planning & Management

2.1.1. The Contractor shall manage the development of a statewide education initiative on evidence-based early intervention services for individuals experiencing Early Serious Mental Illness (ESMI), including First Episode Psychosis (FEP). The Contractor shall:

2.1.1.1. Design a proposed Project Plan, for Department approval, that includes names and roles of the Project Team, responsible individual and affiliation, milestones, key activities and ownership of all proposed activities which shall include, but not be limited to:

2.1.1.1.1. Surveying of all ten (10) of New Hampshire's Community Mental Health Centers (CMHCs) to determine existing programs/outreach currently utilized which shall include, but not be limited to:

2.1.1.1.1.1. Meeting with agency leaders, providers and clients and their families to learn

about existing services and experiences delivering and accessing FEP/ESMI treatment;

2.1.1.1.1.2. Assess current barriers and facilitators to FEP/ESMI treatment from the perspectives of stakeholders;

2.1.1.1.1.3. Consult with colleagues from each of New Hampshire's ten (10) Community Mental Health Centers to identify the leaders, administrators, and providers with extensive knowledge of existing FEP/ESMI programs and outreach who can complete the survey on behalf of the agency;

2.1.1.1.1.4. Conduct a 45-minute telephone interview with one (1) representative from each of the four stakeholder groups at each agency. Respondents will be compensated with a $20 gift card to complete the interview; and

2.1.1.1.1.5. Prepare results of the survey for a report to the Department.

2.1.1.2. Develop a Kick-Off meeting that includes subject matter experts and other key stakeholders, including individuals with lived experience, families and peers.

2.1.1.2.1. The Kick-Off meeting agenda will include an overview of the project and its purpose, goals and deliverables, introduction and roles of team members and key stakeholders;

2.1.1.2.2. Presentations will be given by subject matter experts on evidence-based treatment models for FEP/ESMI;

2.1.1.2.3. Key stakeholders will be invited to give brief 10-minute presentations on how their respective organizations could play a role in supporting an education initiative on evidence-based early intervention services for individuals experiencing FEP/ESMI; and

2.1.1.2.4. The kick-off meeting will culminate in the formation of

ongoing stakeholder workgroups to develop and execute the approved public awareness plan.

2.1.2. The Contractor shall assess evidence-based practices and current models locally and nationally evaluating associated costs to develop a statewide ESMI/FEP treatment model that will be implemented statewide. This process will include, but not be limited to:

2.1.2.1. Conducting a systematic review of existing public health databases and academic databases;

2.1.2.2. Consulting with subject matter experts who have conducted rigorous research on FEP/ESMI treatment models, including research evaluating clinical outcomes and cost effectiveness of comprehensive, integrated care for first episode psychosis; and

2.1.2.3. Consulting with mental health authorities from other states with similar populations and geography as New Hampshire with experience implementing a statewide FEP/ESMI treatment model.

2.1.3. The Contractor shall conduct research to determine types of education and outreach plans that have been most successful in the State of New Hampshire (NH), and in other states similar to NH, including, but not limited to:

2.1.3.1. Working with key leaders and staff representing New Hampshire's 13 Regional Public Health Networks involving broad public health interests, including local health departments and health officers, health care providers, social service agencies, schools, fire, police, emergency medical services, media and advocacy groups, behavioral health, and leaders in the business, government, and faith communities to address complex public health issues;

2.1.3.2. Consulting with subject matter experts on FEP/ESMI models and mental health authorities from other states similar to NH that have implemented statewide education initiatives on evidence-based early intervention services for individuals experiencing FEP/ESMI;

2.1.3.3. Talking with mental health from states such as serving large rural populations that have implemented state plans to address first episode psychosis; and

2.1.3.4. Seeking to meet with and learn from states that have adapted

evidence-based FEP/ESMI treatment models with telehealth technology to increase the reach of these interventions.

2.2. Stakeholder Engagement

2.2.1. The Contractor shall ensure broad stakeholder engagement through project activities that are identified in the Project Plan, including, but not limited to:

2.2.1.1. The survey;

2.2.1.2. Kick-off meeting;

2.2.1.3. Workgroup sessions; and

2.2.1.4. Development and execution of the statewide public awareness campaign, which shall include, but not be limited to:

2.2.1.4.1. Newsletters; and

2.2.1.4.2. Electronic communications, including blogs and social media.

2.2.2. The Contractor shall ensure stakeholders include, but are not limited to:

2.2.2.1. The Department;

2.2.2.2. Community Mental Health Centers;

2.2.2.3. Peer support agencies and clubhouses;

2.2.2.4. Integrated Delivery Networks;

2.2.2.5. Public Health Networks;

2.2.2.6. Relevant psychiatric hospital unit staff;

2.2.2.7. Primary care providers;

2.2.2.8. High school and college counselors; and

2.2.2.9. The public, including individuals with lived experience and family members.

2.2.2.10. The Department of Education (DOE).

2.2.3. The Contractor shall facilitate workgroup sessions in order to provide information to and extrapolate information from subject matter experts regarding standardizing education and outreach services, which shall

include, but not be limited to:

2.2.3.1. Quarterly project team meetings with the steering committee;

2.2.3.1.1. The steering committee will consist of:

2.2.3.1.1.1. Subject matter experts in Evidence-based practices and Treatment models for FEP;

2.2.3.1.1.2. NAMI representatives;

2.2.3.1.1.3. FEP Program leadership;

2.2.3.1.1.4. Department representatives; and

2.2.3.1.1.5. MHPAC representatives.

2.2.3.2. Quarterly stakeholder meetings;

2.2.3.2.1. The stakeholder meetings will consist of a Stakeholder Advisory Board which will include, but not be limited to:

2.2.3.2.1.1. An individual with lived experience;

2.2.3.2.1.2. A family member;

2.2.3.2.1.3. Peer;

2.2.3.2.1.4. Community health centers;

2.2.3.2.1.5. Peer support agencies;

2.2.3.2.1.6. Club Houses;

2.2.3.2.1.7. A representative from NAMI; and

2.2.3.2.1.8. The NH Children's Behavioral Health Collaborative.

2.2.3.3. Monthly meetings with the stakeholder workgroup.

2.3. The Contractor shall leverage their existing network of key stakeholders, including provider networks, and collaborate with community agencies to engage family and peer networks throughout the state to engage, motivate and extract expertise from a diverse group of stakeholders to participate in workgroup activities and maintain interest in ESMI/FEP.

2.4. The Contractor's project team shall apply guiding principles for effective

stakeholder engagement in the project which shall include, but not be limited to:

2.4.1. Trust;

2.4.2. Honesty;

2.4.3. Co-learning;

2.4.4. Transparency;

2.4.5. Partnership; and

2.4.6. Respect.

2.5. The Contractor shall utilize key activities and practical strategies to engage, motivate and extract expertise from a diverse group of stakeholders, which shall include, but not be limited to:

2.5.1. Identify key stakeholders during the first month of the FEP/ESMI program planning, including:

2.5.1.1. Talking one-on-one with a diverse group of stakeholders either through telephone calls or in person, whichever is most convenient for the stakeholder and the project team;

2.5.1.2. Providing information about the goals of the project;

2.5.1.3. Determining what is most important to stakeholders regarding educating the public about FEP/ESMI and available services;

2.5.1.4. Seeking stakeholder's perspective on how their respective agencies might play a role in developing a public awareness campaign, and giving input on a statewide treatment model;

2.5.1.5. Inviting potentially interested stakeholders to attend a brief 15-minute virtual meeting, offered on multiple days and times, where they will receive detailed information about the project and specific role of key stakeholders; and

2.5.1.6. Providing stakeholders with financial compensation extending beyond their out-of-pocket expenses to recognize the value of their time and effort.

2.5.2. The Contractor shall motivate key stakeholders by connecting, listening and then leading, which shall include, but not be limited to:

2.5.2.1. Communicate regularly with stakeholders throughout the project to reaffirm goals and share progress by tailoring messages to

the needs and interests of the targeted stakeholders;

2.5.2.2. Be specific about what is needed from each stakeholder and the stakeholder group to move the project forward;

2.5.2.3. Plan meeting agendas and action steps to maximize productivity and efficiency of stakeholder workgroup and advisory board meetings; and

2.5.2.4. Use testimonials from individuals who have experienced FEP/ESMI and their families to motivate key stakeholders to participate in workgroup activities and maintain interest in FEP/ESMI.

2.5.2.5. Extract expertise from key stakeholders by soliciting during three (3) key project activities, which shall include:

2.5.2.5.1. The project kick-off meeting;

2.5.2.5.1.1. Invite key stakeholders to give brief 10-minute presentations on how their respective organizations could play a role in supporting an education initiative on evidence-based early intervention services for individuals experiencing FEP/ESMI.

2.5.2.5.2. Monthly workgroup sessions;

2.5.2.5.2.1. Key stakeholders will be involved in each step of creating a public awareness campaign for FEP/ESMI, including planning the campaign, determining target audiences, creating messages, selecting communication tools and implementing the campaign which may include news releases, writing letters to editors and op-eds, and digital communications.

2.5.2.5.3. Quarterly Stakeholder Advisory Board meetings.

2.5.2.5.3.1. Actively seek input from stakeholders on key decisions including effective ways to communicate the importance of FEP/ESMI to providers, parents, and

educators by encouraging everyone to participate in the discussion.

2.6. The Contractor's project team shall work with key stakeholders and subject matter experts to modify and adapt FEP/ESMI models to address population and geography barriers, including, but not limited to:

2.6.1. Culturally tailoring educational initiatives, recruitment methods, and treatment models for minority groups;

2.6.2. Using telehealth and other mobile technologies to deliver treatment to patients in rural areas;

2.6.3. Leverage digital technologies, including social media and web tools to create and disseminate a campaign to increase public awareness about the importance of FEP/ESMI and available services; and

2.6.4. Utilize a web conferencing system to facilitate online advisory and workgroup meetings to enable stakeholders to conveniently participate in program planning should they be unable to attend in person.

2.7. The Contractor shall employ collective decision making approaches in developing Phase I of this project including, but not limited to:

2.7.1. Recognizing and defining decisions to be made;

2.7.2. Developing the specific criteria for its accomplishment;

2.7.3. Evaluating the available alternatives relative to those criteria;

2.7.4. Identifying the challenges involved;

2.7.5. Identifying the best choice among all options considering the challenges regarding NH's population and geography; and

2.7.6. Reaching consensus so that a majority approve of a given course of action and modifying and/or removing objectionable features of a given course of action to achieve full consensus of the group.

2.8. The Contractor's project team will work closely with stakeholders during workgroup sessions and quarterly advisory board meetings to ensure the approved statewide public awareness plan is executed.

2.9. The Contractor will utilize various means of communications to support the public

awareness campaign, which shall include, but not be limited to:

2.9.1. Media relations;

2.9.2. Community relations;

2.9.3. Social media;

2.9.4. Brand management;

2.9.5. Marketing;

2.9.6. Advertising;

2.9.7. Web services;

2.9.8. Educational collateral;

2.9.9. Publication development;

2.9.10. Visual design;

2.9.11. Video; and

2.9.12. Photography.

3. Scope of Services – Phase II - Implementation

3.1. The Contractor's project team shall work with the Department to select a statewide ESMI/FEP model that will be utilized to deliver ESMI/FEP services, which includes, but is not limited to:

3.1.1. Reviewing literature on FEP/ESMI programs;

3.1.2. Discussing options with consultants;

3.1.3. Gathering findings from Phase I; and

3.1.4. Engaging with the Department.

3.2. The Contractor shall develop a plan for expanding the adoption and use of the ESMI/FEP model for agencies that include, but are not limited to:

3.2.1. Community Health Centers, which include Federally Qualified Health

Centers (FQHC), FQHC look-alikes, and Rural Health Centers;

3.2.2. Community Mental Health Centers;

3.2.3. New Hampshire Hospital; and

3.2.4. Key Department program areas include, but are not limited to:

3.2.4.1. The Bureau Elderly and Adult Services;

3.2.4.2. The Bureau of Mental Health Services;

3.2.4.3. The Bureau of Children's Behavioral Health;

3.2.4.4. The Division for Children, Youth and Families; and

3.2.4.5. Statewide mental health providers.

3.3. The Contractor shall schedule meetings for agency leaders and stakeholders.

3.4. In collaboration with the Department, and based on decisions on program selection and next steps made, during Phase I, the Contractor shall develop materials including written material, webinars, and slides, and offer face-to-face education, training, and technical assistance to key stakeholders from Phase I of the project to be sure that they understand the model choice and to build agreement and support for the model.

3.4.1. The Contractor shall keep a tally of the number of stakeholders enrolled in the training.

3.5. The Contractor shall develop and execute a statewide public awareness campaign, as approved by the Department, to ensure individuals and individual supports are aware of services available to them for ESMI/FEP.

3.5.1. The Contractor shall provide the number of individuals reached by the campaign.

3.6. The Contractor's proposed work plan including realistic time lines for Phase I and Phase II, dates, key activities and responsible staff is included in Exhibit L.

3.7. The Contractor shall deliver trainings in a manner that minimizes staff disruption

to everyday operations, including, but not limited to:

3.7.1. In-person trainings;

3.7.2. Webinars, which shall be offered at various times, including:

3.7.2.1. Lunchtime;

3.7.2.2. Late in the day; and

3.7.2.3. Recorded and posted for viewing at stakeholder's convenience.

3.8. The Contractor's proposed training plan for all stakeholders shall include, but not be limited to:

3.8.1. Reviewing literature;

3.8.2. Expert recommendations;

3.8.3. Individuals living with mental health issues;

3.8.4. The Department's process for deciding on a model;

3.8.5. Key active components of the model; and

3.8.6. The plan for model implementation.

3.9. The Contractor shall utilize incentives to promote fidelity to the selected model.

3.9.1. incentives in this project will depend on the following:

3.9.1.1. The actual model that is chosen and how fidelity is measured in that model;

3.9.1.2. The experience of using incentives for fidelity of the chosen model, for example, whether or not research supports the effectiveness of fidelity incentives for this model; and

3.9.1.3. The preference of DHHS.

4. Reporting and Deliverables

4.1. The Contractor's project team shall provide detailed reports to the Department

and stakeholders following the completion of Phase I, which will describe:

4.1.1. The Phase I work;

4.1.2. The collaborative network;

4.1.3. Stakeholder involvement;

4.1.4. Number of attendees at kick-off meeting;

4.1.5. Number of stakeholder agencies actively engaged in the process and enrolled in training;

4.1.6. Number of target groups actively engaged in the process;

4.1.7. Number of workgroup sessions;

4.1.8. Number of public forums;

4.1.9. Number of meetings with agency leaders and stakeholders;

4.1.10. Program planning models used to develop the Phase II plan;

4.1.11. The FEP/ESMI treatment model selected;

4.1.12. The rationale for the treatment model selected;

4.1.13. An assessment of the commitment of the mental health providers who will be tasked with offering the service; and

4.1.14. The research used to design the education/outreach, anti-stigma campaign to be executed in Phase II.

4.2. The Contractor's project team shall track progress on Phase II work plan and submit to the Department as follows:

4.2.1. Quarterly reports summarizing outreach efforts to:

4.2.1.1. Providers and stakeholders;

4.2.1.2. Identified community partners;

4.2.1.3. Stakeholder feedback;

4.2.1.4. Statewide education efforts; and

4.2.1.5. Updates on anti-stigma campaign activities.

4.2.2. Annual reports at the end of each phase of the project summarizing:

4.2.2.1. The status of the project;

4.2.2.2. Accomplishments;

4.2.2.3. Obstacles; and

4.2.2.4. Any other important findings.

4.3. The Contractor will provide credits on all documents, notices, press releases, research reports and other materials, in accordance with Exhibit C, Paragraph 13.

4.4. Phase I

4.4.1. A work plan covering the contract time frame within 30 days of contract approval;

4.4.2. A Plan for collaborative network(s) and stakeholder involvement within 30 days of contract approval; and

4.4.3. All Phase I work plan items executed, within the agreed-upon time frame

4.5. Phase II

4.5.1. Selection of an evidence-based ESMI/FEP treatment model selected and justification for its selection within 6 months of contract approval; and

4.5.2. A plan for program expansion/implementation by mental health treatment providers who have committed to the program within one year of contract approval.

New Hampshire Department of Health and Human Services

First Episode Psychosis/Early Serious Mental Illness Program Planning

Exhibit B

Method and Conditions Precedent to Payment

1. The State shall pay the Contractor an amount not to exceed the Form P-37, Block 1.8, Price Limitation for the services provided pursuant to Exhibit A, Scope of Services.
2. This Agreement is funded with federal funds as follows: 100% Federal Funds from U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Mental Health Block Grant, Catalog of Federal Domestic Assistance (CFDA) #93.958, FAIN #BO9SM010035-19.
3. The Contractor agrees to provide the services in Exhibit A, Scope of Service in compliance with funding requirements, of the federal grant identified in Section 2, above.
4. Failure to meet the scope of services may jeopardize the funded Contractor's current and/or future funding.
5. Payment for said services shall be made monthly as follows:
   5.1. 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 B-1 Budget through Exhibit B-3, Budget.
   5.2. The Contractor shall submit an invoice in a form satisfactory to the State by the twentieth working day of each month, which identifies and requests reimbursement for authorized expenses incurred in the prior month.
   5.3. The Contractor shall ensure the invoice is completed, signed, dated and returned to the Department in order to initiate payment.
   5.4. The State 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.
6. The Contractor shall keep detailed records of their activities related to Department-funded programs and services and have records available for Department review, as requested.
7. The final invoice shall be due to the State no later than forty (40) days after the contract completion date specified in Form P-37, General Provisions Block 1.7 Completion Date.
8. In lieu of hard copies, all invoices may be assigned an electronic signature and emailed to beth.nichols@dhhs.nh.gov or invoices may be mailed to:

Exhibit B

Beth Anne Nichols
MHGB State Plan Administrator
Department of Health and Human Services
Division of Behavioral Health
Bureau of Mental Health Services
129 Pleasant Street
Concord, NH 03301

9. Payments may be withheld pending receipt of required reports or documentation as identified in Exhibit A, Scope of Services and in this Exhibit B.
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 18 of the General Provisions P-37, changes limited to adjusting amounts between budget line items, related items, amendments of related budget exhibits within the price limitation, and to adjusting encumbrances between State Fiscal Years, may be made by written agreement of both parties and may be made without obtaining approval of the Governor and Executive Council.

New Hampshire Department of Health and Human Services
COMPLETE ONE BUDGET FORM FOR EACH BUDGET PERIOD

Instructions: Fill out the Direct/Indirect columns only for both Contractor Share and Funded by DHHS. Everything else will automatically populate.

Contractor name Mary Hitchcock Memorial Hospital

Budget Request for: RFP-2019-DBH-03-FIRST
First Episode Psychosis Early Serious Mental Illness Program Planning
Budget Period: SFY 2019

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	$ 4,815.00	$ 1,411.00	$ 6,226.00	$ -	$ -	$ -	$ 4,815.00	$ 1,411.00	$ 6,226.00
2. Employee Benefits	$ 1,623.00	$ 476.00	$ 2,099.00	$ -	$ -	$ -	$ 1,623.00	$ 476.00	$ 2,099.00
3. Consultants	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
4. Equipment:	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Rental	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Repair and Maintenance	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Purchase/Depreciation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
5. Supplies:	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
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	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
11. Staff Education and Training	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
12. Subcontracts/Agreements	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
13. Other (specific details mandatory):	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
TOTAL	$ 6,438.00	$ 1,886.00	$ 8,324.00	$ -	$ -	$ -	$ 6,438.00	$ 1,886.00	$ 8,324.00
Indirect As A Percent of Direct		29.3%							

Contractor Initials
Date 4/5/19

New Hampshire Department of Health and Human Services
COMPLETE ONE BUDGET FORM FOR EACH BUDGET PERIOD

Instructions: Fill out the Direct/Indirect columns only for both Contractor Share and Funded by DHHS. Everything else will automatically populate.

Contractor name Mary Hitchcock Memorial Hospital

Budget Request for: RFP-2019-DBH-03-FIRST
First Episode Psychosis Early Serious Mental Illness Program Planning
Budget Period: SFY 2020

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	$ 152,462.00	$ 44,671.00	$ 197,133.00	$ -	$ -	$ -	$ 152,462.00	$ 44,671.00	$ 197,133.00
2. Employee Benefits	$ 44,276.00	$ 12,973.00	$ 57,249.00	$ -	$ -	$ -	$ 44,276.00	$ 12,973.00	$ 57,249.00
3. Consultants	$ 21,700.00	$ 6,358.00	$ 28,058.00	$ -	$ -	$ -	$ 21,700.00	$ 6,358.00	$ 28,058.00
4. Equipment:	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Rental	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Repair and Maintenance	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Purchase/Depreciation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
5. Supplies:	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Educational	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Lab	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Pharmacy	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Medical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Office	$ 3,880.00	$ 1,137.00	$ 5,017.00	$ -	$ -	$ -	$ 3,880.00	$ 1,137.00	$ 5,017.00
6. Travel	$ 11,296.00	$ 3,310.00	$ 14,606.00	$ -	$ -	$ -	$ 11,296.00	$ 3,310.00	$ 14,606.00
7. Occupancy	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
8. Current Expenses	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Telephone	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Postage	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Subscriptions	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Audit and Legal	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Insurance	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Board Expenses	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
9. Software	$ 600.00	$ 176.00	$ 776.00	$ -	$ -	$ -	$ 600.00	$ 176.00	$ 776.00
10. Marketing/Communications	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
11. Staff Education and Training	$ 400.00	$ 117.00	$ 517.00	$ -	$ -	$ -	$ 400.00	$ 117.00	$ 517.00
12. Subcontracts/Agreements	$ 159,682.00	$ 25,000.00	$ 159,682.00	$ -	$ -	$ -	$ 159,682.00	$ 25,000.00	$ 159,682.00
13. Other (specific details mandatory):	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
A. Stakeholders Honorariums	$ 2,100.00	$ 615.00	$ 2,715.00	$ -	$ -	$ -	$ 2,100.00	$ 615.00	$ 2,715.00
B. CMHC survery reimbursements	$ 800.00	$ 234.00	$ 1,034.00	$ -	$ -	$ -	$ 800.00	$ 234.00	$ 1,034.00
C. Refreshments for Kick-Off Meeting	$ 2,017.00	$ 591.00	$ 2,608.00	$ -	$ -	$ -	$ 2,017.00	$ 591.00	$ 2,608.00
TOTAL	$ 399,213.00	$ 77,508.00	$ 476,721.00	$ -	$ -	$ -	$ 399,213.00	$ 77,508.00	$ 476,721.00
Indirect As A Percent of Direct		19.4%							

Contractor Initials
Date 4/15/19

New Hampshire Department of Health and Human Services
COMPLETE ONE BUDGET FORM FOR EACH BUDGET PERIOD

Instructions: Fill out the Direct/Indirect columns only for both Contractor Share and Funded by DHHS. Everything else will automatically populate.

Contractor name: Mary Hitchcock Memorial Hospital

Budget Request for: RFP-2019-DBH-03-FIRST
First Episode Psychosis Early Serious Mental Illness Program Planning
Budget Period: SFY 2021

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	$ 38,116.00	$ 11,168.00	$ 49,284.00	$ -	$ -	$ -	$ 38,116.00	$ 11,168.00	$ 49,284.00
2. Employee Benefits	$ 11,260.00	$ 3,299.00	$ 14,559.00	$ -	$ -	$ -	$ 11,260.00	$ 3,299.00	$ 14,559.00
3. Consultants	$ 2,600.00	$ 762.00	$ 3,362.00	$ -	$ -	$ -	$ 2,600.00	$ 762.00	$ 3,362.00
4. Equipment:	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Rental	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Repair and Maintenance	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Purchase/Depreciation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
5. Supplies:	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Educational	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Lab	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Pharmacy	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Medical	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Office	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
6. Travel	$ 3,879.00	$ 1,137.00	$ 5,016.00	$ -	$ -	$ -	$ 3,879.00	$ 1,137.00	$ 5,016.00
7. Occupancy	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
8. Current Expenses	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Telephone	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Postage	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Subscriptions	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Audit and Legal	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Insurance	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Board Expenses	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
9. Software	$ 150.00	$ 44.00	$ 194.00	$ -	$ -	$ -	$ 150.00	$ 44.00	$ 194.00
10. Marketing/Communications	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
11. Staff Education and Training	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
12. Subcontracts/Agreements	$ 35,235.00	$ -	$ 35,235.00	$ -	$ -	$ -	$ 35,235.00	$ -	$ 35,235.00
13. Other (specific details mandatory):	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
A. Stakeholders Honorariums	$ 700.00	$ 205.00	$ 905.00	$ -	$ -	$ -	$ 700.00	$ 205.00	$ 905.00
B. CMHC survery reimbursements	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
C. Refreshments for Kick-Off Meeting	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
TOTAL	$ 91,940.00	$ 16,615.00	$ 108,555.00	$ -	$ -	$ -	$ 91,940.00	$ 16,615.00	$ 108,555.00
Indirect As A Percent of Direct		18.1%							

Contractor Initials

Date 4/15/19

SPECIAL PROVISIONS

Contractors Obligations: The Contractor covenants and agrees that all funds received by the Contractor under the Contract shall be used only as payment to the Contractor for services provided to eligible individuals and, in the furtherance of the aforesaid covenants, the Contractor hereby covenants and agrees as follows:

1. **Compliance with Federal and State Laws:** If the Contractor is permitted to determine the eligibility of individuals such eligibility determination shall be made in accordance with applicable federal and state laws, regulations, orders, guidelines, policies and procedures.

2. **Time and Manner of Determination:** Eligibility determinations shall be made on forms provided by the Department for that purpose and shall be made and remade at such times as are prescribed by the Department.

3. **Documentation:** In addition to the determination forms required by the Department, the Contractor shall maintain a data file on each recipient of services hereunder, which file shall include all information necessary to support an eligibility determination and such other information as the Department requests. The Contractor shall furnish the Department with all forms and documentation regarding eligibility determinations that the Department may request or require.

4. **Fair Hearings:** The Contractor understands that all applicants for services hereunder, as well as individuals declared ineligible have a right to a fair hearing regarding that determination. The Contractor hereby covenants and agrees that all applicants for services shall be permitted to fill out an application form and that each applicant or re-applicant shall be informed of his/her right to a fair hearing in accordance with Department regulations.

5. **Gratuities or Kickbacks:** The Contractor agrees that it is a breach of this Contract to accept or make a payment, gratuity or offer of employment on behalf of the Contractor, any Sub-Contractor or the State in order to influence the performance of the Scope of Work detailed in Exhibit A of this Contract. The State may terminate this Contract and any sub-contract or sub-agreement if it is determined that payments, gratuities or offers of employment of any kind were offered or received by any officials, officers, employees or agents of the Contractor or Sub-Contractor.

6. **Retroactive Payments:** Notwithstanding anything to the contrary contained in the Contract or in any other document, contract or understanding, it is expressly understood and agreed by the parties hereto, that no payments will be made hereunder to reimburse the Contractor for costs incurred for any purpose or for any services provided to any individual prior to the Effective Date of the Contract and no payments shall be made for expenses incurred by the Contractor for any services provided prior to the date on which the individual applies for services or (except as otherwise provided by the federal regulations) prior to a determination that the individual is eligible for such services.

7. **Conditions of Purchase:** Notwithstanding anything to the contrary contained in the Contract, nothing herein contained shall be deemed to obligate or require the Department to purchase services hereunder at a rate which reimburses the Contractor in excess of the Contractors costs, at a rate which exceeds the amounts reasonable and necessary to assure the quality of such service, or at a rate which exceeds the rate charged by the Contractor to ineligible individuals or other third party funders for such service. If at any time during the term of this Contract or after receipt of the Final Expenditure Report hereunder, the Department shall determine that the Contractor has used payments hereunder to reimburse items of expense other than such costs, or has received payment in excess of such costs or in excess of such rates charged by the Contractor to ineligible individuals or other third party funders, the Department may elect to:

   7.1. Renegotiate the rates for payment hereunder, in which event new rates shall be established;
   7.2. Deduct from any future payment to the Contractor the amount of any prior reimbursement in excess of costs;

7.3. Demand repayment of the excess payment by the Contractor in which event failure to make such repayment shall constitute an Event of Default hereunder. When the Contractor is permitted to determine the eligibility of individuals for services, the Contractor agrees to reimburse the Department for all funds paid by the Department to the Contractor for services provided to any individual who is found by the Department to be ineligible for such services at any time during the period of retention of records established herein.

RECORDS: MAINTENANCE, RETENTION, AUDIT, DISCLOSURE AND CONFIDENTIALITY:

8. **Maintenance of Records:** In addition to the eligibility records specified above, the Contractor covenants and agrees to maintain the following records during the Contract Period:

8.1. Fiscal Records: books, records, documents and other 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 during the Contract Period, said records to 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.

8.2. Statistical Records: Statistical, enrollment, attendance or visit records for each recipient of services during the Contract Period, which records shall include all records of application and eligibility (including all forms required to determine eligibility for each such recipient), records regarding the provision of services and all invoices submitted to the Department to obtain payment for such services.

8.3. Medical Records: Where appropriate and as prescribed by the Department regulations, the Contractor shall retain medical records on each patient/recipient of services.

9. **Audit:** Contractor shall submit an annual audit to the Department within 60 days after the close of the agency fiscal year. It is recommended that the report be prepared in accordance with the provision of Office of Management and Budget Circular A-133, "Audits of States, Local Governments, and Non Profit Organizations" and the provisions of Standards for Audit of Governmental Organizations, Programs, Activities and Functions, issued by the US General Accounting Office (GAO standards) as they pertain to financial compliance audits.

9.1. Audit and Review: During the term of this Contract 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 Contract for purposes of audit, examination, excerpts and transcripts.

9.2. Audit Liabilities: 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.

10. **Confidentiality of Records:** All information, reports, and records maintained hereunder or collected in connection with the performance of the services and the Contract shall be confidential and shall not be disclosed by the Contractor, provided however, that pursuant to state laws and the regulations of the Department regarding the use and disclosure of such information, disclosure may be made to public officials requiring such information in connection with their official duties and for purposes directly connected to the administration of the services and the Contract; and provided further, that the use or disclosure by any party of any information concerning a recipient for any purpose not directly connected with the administration of the Department or the Contractor's responsibilities with respect to purchased services hereunder is prohibited except on written consent of the recipient, his attorney or guardian.

Notwithstanding anything to the contrary contained herein the covenants and conditions contained in the Paragraph shall survive the termination of the Contract for any reason whatsoever.

11. **Reports:** Fiscal and Statistical: The Contractor agrees to submit the following reports at the following times if requested by the Department.
    11.1. Interim Financial Reports: Written interim financial reports containing a detailed description of all costs and non-allowable expenses incurred by the Contractor to the date of the report and containing such other information as shall be deemed satisfactory by the Department to justify the rate of payment hereunder. Such Financial Reports shall be submitted on the form designated by the Department or deemed satisfactory by the Department.
    11.2. Final Report: A final report shall be submitted within thirty (30) days after the end of the term of this Contract. The Final Report shall be in a form satisfactory to the Department and shall contain a summary statement of progress toward goals and objectives stated in the Proposal and other information required by the Department.

12. **Completion of Services:** Disallowance of Costs: Upon the purchase by the Department of the maximum number of units provided for in the Contract and upon payment of the price limitation hereunder, the Contract and all the obligations of the parties hereunder (except such obligations as, by the terms of the Contract are to be performed after the end of the term of this Contract and/or survive the termination of the Contract) 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 the Department shall retain the right, at its discretion, to deduct the amount of such expenses as are disallowed or to recover such sums from the Contractor.

13. **Credits:** All documents, notices, press releases, research reports and other materials prepared during or resulting from the performance of the services of the Contract shall include the following statement:
    13.1. The preparation of this (report, document etc.) was financed under a 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.

14. **Prior Approval and Copyright Ownership:** All materials (written, video, audio) produced or purchased under the contract shall have prior approval from DHHS before printing, production, distribution or use. The DHHS will retain copyright ownership for any and all original materials produced, including, but not limited to, brochures, resource directories, protocols or guidelines, posters, or reports. Contractor shall not reproduce any materials produced under the contract without prior written approval from DHHS.

15. **Operation of Facilities: Compliance with Laws and Regulations:** In the operation of any facilities for providing services, the Contractor shall comply with all laws, orders and regulations of federal, state, county and municipal authorities and with any direction of any Public Officer or officers pursuant to laws which shall impose an order or duty upon the contractor with respect to the operation of the facility or the provision of the services at such facility. If any governmental license or permit shall be required for the operation of the said facility or the performance of the said services, the Contractor will procure said license or permit, and will at all times comply with the terms and conditions of each such license or permit. In connection with the foregoing requirements, the Contractor hereby covenants and agrees that, during the term of this Contract the facilities shall comply with all rules, orders, regulations, and requirements of the State Office of the Fire Marshal and the local fire protection agency, and shall be in conformance with local building and zoning codes, by-laws and regulations.

16. **Equal Employment Opportunity Plan (EEOP):** The Contractor will provide an Equal Employment Opportunity Plan (EEOP) to the Office for Civil Rights, Office of Justice Programs (OCR), if it has received a single award of $500,000 or more. If the recipient receives $25,000 or more and has 50 or

more employees, it will maintain a current EEOP on file and submit an EEOP Certification Form to the OCR, certifying that its EEOP is on file. For recipients receiving less than $25,000, or public grantees with fewer than 50 employees, regardless of the amount of the award, the recipient will provide an EEOP Certification Form to the OCR certifying it is not required to submit or maintain an EEOP. Non-profit organizations, Indian Tribes, and medical and educational institutions are exempt from the EEOP requirement, but are required to submit a certification form to the OCR to claim the exemption. EEOP Certification Forms are available at: http://www.ojp.usdoj/about/ocr/pdfs/cert.pdf.

17. **Limited English Proficiency (LEP):** As clarified by Executive Order 13166, Improving Access to Services for persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination on the basis of limited English proficiency (LEP). To ensure compliance with the Omnibus Crime Control and Safe Streets Act of 1968 and Title VI of the Civil Rights Act of 1964, Contractors must take reasonable steps to ensure that LEP persons have meaningful access to its programs.

18. **Pilot Program for Enhancement of Contractor Employee Whistleblower Protections:** The following shall apply to all contracts that exceed the Simplified Acquisition Threshold as defined in 48 CFR 2.101 (currently, $150,000)

CONTRACTOR EMPLOYEE WHISTLEBLOWER RIGHTS AND REQUIREMENT TO INFORM EMPLOYEES OF WHISTLEBLOWER RIGHTS (SEP 2013)

(a) This contract and employees working on this contract will be subject to the whistleblower rights and remedies in the pilot program on Contractor employee whistleblower protections established at 41 U.S.C. 4712 by section 828 of the National Defense Authorization Act for Fiscal Year 2013 (Pub. L. 112-239) and FAR 3.908.

(b) The Contractor shall inform its employees in writing, in the predominant language of the workforce, of employee whistleblower rights and protections under 41 U.S.C. 4712, as described in section 3.908 of the Federal Acquisition Regulation.

(c) The Contractor shall insert the substance of this clause, including this paragraph (c), in all subcontracts over the simplified acquisition threshold.

19. **Subcontractors:** DHHS recognizes that the Contractor may choose to use subcontractors with greater expertise to perform certain health care services or functions for efficiency or convenience, but the Contractor shall retain the responsibility and accountability for the function(s). Prior to subcontracting, the Contractor shall evaluate the subcontractor's ability to perform the delegated function(s). This is accomplished through a written agreement that specifies activities and reporting responsibilities of the subcontractor and provides for revoking the delegation or imposing sanctions if the subcontractor's performance is not adequate. Subcontractors are subject to the same contractual conditions as the Contractor and the Contractor is responsible to ensure subcontractor compliance with those conditions.

When the Contractor delegates a function to a subcontractor, the Contractor shall do the following:

19.1. Evaluate the prospective subcontractor's ability to perform the activities, before delegating the function
19.2. Have a written agreement with the subcontractor that specifies activities and reporting responsibilities and how sanctions/revocation will be managed if the subcontractor's performance is not adequate
19.3. Monitor the subcontractor's performance on an ongoing basis

19.4. Provide to DHHS an annual schedule identifying all subcontractors, delegated functions and responsibilities, and when the subcontractor's performance will be reviewed

19.5. DHHS shall, at its discretion, review and approve all subcontracts.

If the Contractor identifies deficiencies or areas for improvement are identified, the Contractor shall take corrective action.

20. **Contract Definitions:**

20.1. COSTS: Shall mean those direct and indirect items of expense determined by the Department to be allowable and reimbursable in accordance with cost and accounting principles established in accordance with state and federal laws, regulations, rules and orders.

20.2. DEPARTMENT: NH Department of Health and Human Services.

20.3. PROPOSAL: If applicable, shall mean the document submitted by the Contractor on a form or forms required by the Department and containing a description of the services and/or goods to be provided by the Contractor in accordance with the terms and conditions of the Contract and setting forth the total cost and sources of revenue for each service to be provided under the Contract.

20.4. UNIT: For each service that the Contractor is to provide to eligible individuals hereunder, shall mean that period of time or that specified activity determined by the Department and specified in Exhibit B of the Contract.

20.5. FEDERAL/STATE LAW: Wherever federal or state laws, regulations, rules, orders, and policies, etc. are referred to in the Contract, the said reference shall be deemed to mean all such laws, regulations, etc. as they may be amended or revised from time to time.

20.6. SUPPLANTING OTHER FEDERAL FUNDS: Funds provided to the Contractor under this Contract will not supplant any existing federal funds available for these services.

Contractor Initials
Date 4/15/19

REVISIONS TO STANDARD CONTRACT LANGUAGE

1. Revisions to Form P-37, General Provisions

1.1. Section 4, Conditional Nature of Agreement, is replaced as follows:

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, in whole or in part, under this Agreement are contingent upon continued appropriation or availability of funds, including any subsequent changes to the appropriation or availability 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 of Services provided in Exhibit A, Scope of Services, in whole or in part. In no event shall the State be liable for any payments hereunder in excess of appropriated or available funds. In the event of a reduction, termination or modification of appropriated or available funds, the State shall have the right to withhold payment until such funds become available, if ever. The State shall have the right to reduce, terminate or modify services under this Agreement immediately upon giving the Contractor notice of such reduction, termination or modification. The State shall not be required to transfer funds from any other source or account into the Account(s) identified in block 1.6 of the General Provisions, Account Number, or any other account in the event funds are reduced or unavailable.

1.2. Section 10, Termination, is amended by adding the following language:

10.1 The State may terminate the Agreement at any time for any reason, at the sole discretion of the State, 30 days after giving the Contractor written notice that the State is exercising its option to terminate the Agreement.

10.2 In the event of early termination, 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, including but not limited to, identifying the present and future needs of clients receiving services under the Agreement and establishes a process to meet those needs.

10.3 The Contractor shall fully cooperate with the State and shall promptly provide detailed information to support the Transition Plan including, but not limited to, any information or data requested by the State related to the termination of the Agreement and Transition Plan and shall provide ongoing communication and revisions of the Transition Plan to the State as requested.

10.4 In the event that services under the Agreement, including but not limited to clients receiving services under the Agreement are transitioned to having services delivered by another entity including contracted providers or the State, the Contractor shall provide a process for uninterrupted delivery of services in the Transition Plan.

10.5 The Contractor shall establish a method of notifying clients and other affected individuals about the transition. The Contractor shall include the proposed communications in its Transition Plan submitted to the State as described above.

1.3 Subsection 14.2 of Section 10, Insurance, is deleted and replaced as follows:

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.

1.4 The first sentence of Subsection 15.2 of Section 15, Workers' Compensation, is deleted and replaced as follows:

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 as required in N.H. RSA chapter 281-A.

2. Revisions to Standard Exhibits

2.1 Exhibit C

2.2.1 Section 10, Confidentiality of Records, is deleted and replaced as follows:

All information, reports, and records maintained hereunder or collected in connection with the performance of the services and the Contract shall be confidential and shall not be disclosed by the Contractor, provided however, that pursuant to state laws and the regulations of the Department regarding the use and disclosure of such information, disclosure may be made to public officials requiring such information in connection with their official duties and for purposes directly connected to the administration of the services and the Contract; and provided further, that the disclosure of any protected health information shall be in accordance with the regulatory provisions of HIPAA; and provided further that the use or disclosure by any party of any information concerning a recipient for any purpose not directly connected with the administration of the Department or the Contractor's responsibilities with respect to purchased services hereunder is prohibited except on written consent of the recipient, his/her attorney or guardian.

Notwithstanding anything to the contrary contained herein the covenants and conditions contained in the Paragraph shall survive the termination of the Contract for any reason whatsoever.

2.2.2 Section 14, Prior Approval and Copyright Ownership, is deleted and replaced as follows:

All materials (written, video, audio) produced or purchased under the contract shall have prior approval from DHHS before printing, production, distribution or use.

2.2 Exhibit I, Health Insurance Portability Act Business Associate Agreement, is not applicable to this Agreement and is deleted in its entirety.

3. Renewal

3.1. The Department reserves the right to extend this agreement for up to four (4) additional years, contingent upon satisfactory delivery of services, available funding, written agreement of the parties and approval of the Governor and Executive Council.

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 paragraph (a);
   1.4. Notifying the employee in the statement required by paragraph (a) 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)

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

Contractor Name:

4/15/19
Date

Name: Daniel P. Jantzen
Title: Chief Financial Officer

CERTIFICATION REGARDING LOBBYING

The Contractor 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.

Contractor Name:

4/15/19
Date

Name: Daniel P. Jantzen
Title: Chief Financial Officer

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 the attached definitions.

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:

4/15/19
Date

Name: Daniel P. Jantzen
Title: Chief Financial Officer

Contractor Initials
Date 4/15/19

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.

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:

4/15/19
Date

Name: Daniel P. Jantzen
Title: Chief Financial Officer

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:

4/15/19
Date

Name: Daniel P. Jantzen
Title: Chief Financial Officer

HEALTH INSURANCE PORTABILITY ACT
BUSINESS ASSOCIATE AGREEMENT

Pursuant to Exhibit C-1 of this Agreement, Exhibit I is not applicable.

Remainder of page intentionally left blank.

Contractor Initials
Date 4/16/19

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:

4/15/19
Date

Name: Daniel P. Santzen
Title: Chief Financial Officer

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 _____ 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: _____

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 will notify the State's Privacy Officer, and additional email addresses provided in Section VI, of any security breach within 24-hours of the time that the Contractor learns of its occurrence. 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 notify the State's Privacy Officer, Information Security Office and Program Manager of any Security Incidents and Breaches within 24- hours of the time that the Contractor learns of their occurrence.

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

EXHIBIT L
WORK PLAN

RFP-2019-DBH-03-FIRST - First Episode Psychosis/Early Serious Mental Illness Program Planning (Technical Proposal)

Key Activities	SFY 2020												SFY 2021			Responsible Staff
	July	Aug.	Sept	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Jul.	Aug.	Sep.	
	PHASE I				PHASE II											
Design a proposed project plan	X															Drs. Aschbrenner & Torrey
Internal team work plan development meetings	X															Drs. Aschbrenner & Torrey
Submit final plan to DHHS for approval	X															Drs. Aschbrenner & Torrey
Survey Community Mental Health Centers	X	X	X													Drs. Aschbrenner, Project Manager, Project Assistant
Design survey	X															Drs. Aschbrenner & Torrey, David Lynde
Conduct survey, anayze and interpret results		X	X													Drs. Aschbrenner, Project Manager, Project Assistant
Develop Kick-Off Meeting	X															Drs. Aschbrenner & Torrey, Project Manager, NAMI partners
Internal planning meetings to prepare agenda and plan logistcs	X															Drs. Aschbrenner & Torrey, Project Manager, NAMI partners
Invite key stakeholders and subject matter experts, coordinate travel	X															Project Manager, NAMI partners
Prepare meeting materials and handouts	X															Project Manager, Project Assistant, NAMI partners
Host one day in person kick-off meeting	X															Drs. Aschbrenner & Torrey, NAMI partners
Asess evidence-based practices, current treatment models, and costs	X	X	X													Drs. Aschbrenner and Torrey, Project Manager
Conduct a review of scientific literature and government databases	X	X	X													Project Manager, Project Assistant
Consult with subject matter experts	X	X	X													Drs. Aschbrenner and Torrey, Project Manager
Consult with other states that have implemented similar models	X	X	X													Drs. Aschbrenner and Torrey, Project Manager
Conduct research to determine effective types of education and outreach	X	X	X													Drs. Aschbrenner and Torrey, Project Manager
Conduct a review of literature on dissemination efforts	X	X														Project Manager, Project Assistant
Consult with subject matter experts and implementation teams	X	X	X	X												Drs. Aschbrenner and Torrey
Consult with other states that have done similar education and outreach	X	X														Drs. Aschbrenner and Torrey, Project Manager
Ensure broad stakeholder engagement (ongoing throughout)	X	X	X	X	X	X	X	X	X	X	X	X	X	X		Drs. Aschbrenner & Torrey, Project Manager, NAMI partners
Form Stakeholder Advisory Board	X															Drs. Aschbrenner and Torrey
Facilitate Stakeholder Advisory Board meetings			X		X		X			X			X		X	Drs. Aschbrenner & Torrey, Project Manager, NAMI partners
Facilitate monthly stakeholder workgroup meetings		X	X	X	X	X	X	X	X	X	X	X	X	X		Project Manager, NAMI partners
Conduct workgroup sessions with experts re: education and outreach		X	X	X												Project Manager, NAMI partners
Execute statewide public awareness intiative		X	X	X												Drs. Aschbrenner & Torrey, Project Manager, NAMI partners
Work with stakeholders to execute public awareness plan		X	X	X												Drs. Aschbrenner & Torrey, Project Manager, NAMI partners
3.2. Phase II: Implementation																
Select a statewide FEP/ESMI model					X	X	X									Drs. Aschbrenner & Torrey, Project Manager, NAMI partners
Meetings with DHHS to select a statewide FEP/ESMI model					X	X	X									Drs. Aschbrenner & Torrey, Project Manager, NAMI partners
Develop a plan for expanding adoption and use of FEP/ESMI model								X	X	X						Drs. Aschbrenner & Torrey, Project Manager, NAMI partners
Seek guidance from steering committee on plan for adoption and use								X								Drs. Aschbrenner & Torrey, Project Manager, NAMI partners
Meet with agency leaders to get input on feasiblity of plan									X							Drs. Aschbrenner & Torrey, Project Manager, NAMI partners
Finalize plan with DHHS										X	X	X				Drs. Aschbrenner & Torrey
Provide education, training, and TA to stakeholders									X	X	X	X				David Lynde and NAMI partners
Provide in-person model orientation sessions at each agency										X	X	X				David Lynde and NAMI partners
Facilitate a virtual learning community for key stakholders												X	X	X		Project Manager, David Lynde, and NAMI partners
Develop and execute a statewide anti-stigma campaign					X	X	X	X	X	X	X	X	X	X		Drs. Aschbrenner & Torrey, Project Manager, NAMI partners
Plan the campaign					X	X	X	X								Drs. Aschbrenner & Torrey, Project Manager, NAMI partners
Develop awareness strategies						X	X	X	X							Drs. Aschbrenner & Torrey, Project Manager, NAMI partners
Implement the campaign									X	X	X	X	X	X		Drs. Aschbrenner & Torrey, Project Manager, NAMI partners
Provide a final workplan to DHHS for implementation														X	X	Drs. Aschbrenner & Torrey, Project Manager, NAMI partners

State of New Hampshire

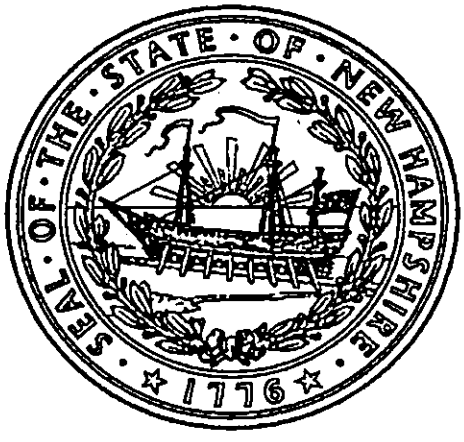
Department of State

CERTIFICATE

I, William M. Gardner, Secretary of State of the State of New Hampshire, do hereby certify that MARY HITCHCOCK MEMORIAL HOSPITAL is a New Hampshire Nonprofit Corporation registered to transact business in New Hampshire on August 07, 1889. 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: **68517**

Certificate Number: **0004496386**



IN TESTIMONY WHEREOF,

I hereto set my hand and cause to be affixed the Seal of the State of New Hampshire, this 15th day of April A.D. 2019.

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

1. I am the duly elected Vice 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 Financial Officer, 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. Daniel P. Jantzen is the Chief Financial 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 Vice Chair of the Board of Trustees of Dartmouth-Hitchcock Clinic and Mary Hitchcock Memorial Hospital this 15 day of April 2019.

Edward H. Stansfield, III, Board Vice Chair

STATE OF NH

COUNTY OF GRAFTON

The foregoing instrument was acknowledged before me this 15th day of April, 2019, 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

CERTIFICATE OF INSURANCE

DATE: 10/09/2018

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

INSURED
Mary Hitchcock Memorial Hospital – DH-H
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

This is to certify that the Policy listed below has been issued to the Named Insured 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. This policy issued by a risk retention group may not be subject to all insurance laws and regulations in all states. State insurance insolvency funds are not available to a risk retention group policy.

TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE	POLICY EXPIRATION DATE	LIMITS	
GENERAL LIABILITY	0002018-A	07/01/2018	06/30/2019	EACH OCCURRENCE	$1,000,000
				PRODUCTS-COMP/OP AGGREGATE	
X CLAIMS MADE				PERSONAL ADV INJURY	
				GENERAL AGGREGATE	$3,000,000
OCCURRENCE				FIRE DAMAGE	
OTHER				MEDICAL EXPENSES	
PROFESSIONAL LIABILITY	0002018-A	07/01/2018	06/30/2019	EACH CLAIM	$1,000,000
X CLAIMS MADE				ANNUAL AGGREGATE	$3,000,000
OCCURENCE					
OTHER					

DESCRIPTION OF OPERATIONS/ LOCATIONS/ VEHICLES/ SPECIAL ITEMS (LIMITS MAY BE SUBJECT TO RETENTIONS)

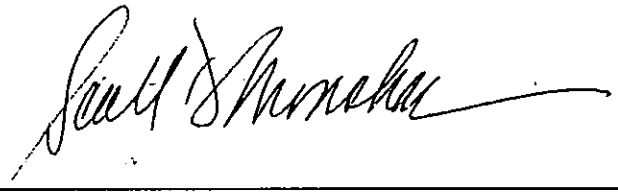
Certificate of Insurance issued as evidence of insurance for the development and operation of a substance use disorder treatment and recovery facility known as the "Dartmouth Hub."

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, 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 DMCDONALD

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 09/25/2018

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 100 Central Street, Suite 201 Holliston, MA 01746	CONTACT NAME: Dan McDonald PHONE (A/C, No, Ext): (508) 808-7293 FAX (A/C, No): (866) 235-7129 E-MAIL ADDRESS: dan.mcdonald@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						X PER STATUTE ☐ OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? ☐ (Mandatory in NH)	N / A		AGC4059104	07/01/2018	07/01/2019	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)
Evidence of Workers Compensation coverage for Mary Hitchcock Memorial Hospital

CERTIFICATE HOLDER

NH DHHS
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

Mission, Vision, & 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.

Values

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

Dartmouth-Hitchcock Health and Subsidiaries

Consolidated Financial Statements
June 30, 2018 and 2017

Dartmouth-Hitchcock Health and Subsidiaries
Index
June 30, 2018 and 2017

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Report of Independent Auditors

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

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, 2018 and June 30, 2017, and the related consolidated statements of operations, changes in net assets and cash flows for the years then ended.

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 did not audit the financial statements of Alice Peck Day Hospital, a subsidiary whose sole member is Dartmouth-Hitchcock Health, which statements reflect total assets of 2.8% of consolidated total assets at June 30, 2017 and total revenues of 3.3% of consolidated total revenue for the year then ended. Those statements were audited by other auditors whose report thereon has been furnished to us, and our opinion expressed herein, insofar as it relates to the amounts included for Alice Peck Day Hospital, is based solely on the report of the other auditors. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. 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.

pwc

Opinion

In our opinion, based on our audits and the report of the other auditors, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Dartmouth-Hitchcock Health and its subsidiaries as of June 30, 2018 and June 30, 2017, and the results of their operations, changes in net assets and cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matter

Our audits were 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 audits 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 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.

PricewaterhouseCoopers LLP

Boston, Massachusetts
November 7, 2018

Dartmouth-Hitchcock Health and Subsidiaries
Consolidated Balance Sheets
Years Ended June 30, 2018 and 2017

(in thousands of dollars)	2018	2017
Assets		
Current assets		
Cash and cash equivalents	$ 200,169	$ 68,498
Patient accounts receivable, net of estimated uncollectibles of $132,228 and $121,340 at June 30, 2018 and 2017 (Note 3)	219,228	237,260
Prepaid expenses and other current assets	97,502	89,203
Total current assets	516,899	394,961
Assets limited as to use (Notes 4 and 6)	706,124	662,323
Other investments for restricted activities (Notes 4 and 6)	130,896	124,529
Property, plant, and equipment, net (Note 5)	607,321	609,975
Other assets	108,785	97,120
Total assets	$ 2,070,025	$ 1,888,908
Liabilities and Net Assets		
Current liabilities		
Current portion of long-term debt (Note 9)	$ 3,464	$ 18,357
Current portion of liability for pension and other postretirement plan benefits (Note 10)	3,311	3,220
Accounts payable and accrued expenses (Note 12)	95,753	89,160
Accrued compensation and related benefits	125,576	114,911
Estimated third-party settlements (Note 3)	41,141	27,433
Total current liabilities	269,245	253,081
Long-term debt, excluding current portion (Note 9)	752,975	616,403
Insurance deposits and related liabilities (Note 11)	55,516	50,960
Interest rate swaps (Notes 6 and 9)	-	20,916
Liability for pension and other postretirement plan benefits, excluding current portion (Note 10)	242,227	282,971
Other liabilities	88,127	90,548
Total liabilities	1,408,090	1,314,879
Commitments and contingencies (Notes 3, 5, 6, 9, and 12)		
Net assets		
Unrestricted (Note 8)	524,102	424,947
Temporarily restricted (Notes 7 and 8)	82,439	94,917
Permanently restricted (Notes 7 and 8)	55,394	54,165
Total net assets	661,935	574,029
Total liabilities and net assets	$ 2,070,025	$ 1,888,908

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, 2018 and 2017

(in thousands of dollars)	2018	2017
Unrestricted revenue and other support		
Net patient service revenue, net of contractual allowances and discounts	$ 1,899,095	$ 1,859,192
Provision for bad debts (Note 1 and 3)	47,367	63,645
Net patient service revenue less provision for bad debts	1,851,728	1,795,547
Contracted revenue (Note 2)	54,969	43,671
Other operating revenue (Note 2 and 4)	148,946	119,177
Net assets released from restrictions	13,461	11,122
Total unrestricted revenue and other support	2,069,104	1,969,517
Operating expenses		
Salaries	989,263	966,352
Employee benefits	229,683	244,855
Medical supplies and medications	340,031	306,080
Purchased services and other	291,372	289,805
Medicaid enhancement tax (Note 3)	67,692	65,069
Depreciation and amortization	84,778	84,562
Interest (Note 9)	18,822	19,838
Total operating expenses	2,021,641	1,976,561
Operating income (loss)	47,463	(7,044)
Non-operating gains (losses)		
Investment gains (Notes 4 and 9)	40,387	51,056
Other losses	(2,908)	(4,153)
Loss on early extinguishment of debt	(14,214)	-
Loss due to swap termination	(14,247)	-
Contribution revenue from acquisition	-	20,215
Total non-operating gains, net	9,018	67,118
Excess of revenue over expenses	$ 56,481	$ 60,074

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, 2018 and 2017

(in thousands of dollars)	2018	2017
Unrestricted net assets		
Excess of revenue over expenses	$ 56,481	$ 60,074
Net assets released from restrictions	16,313	1,839
Change in funded status of pension and other postretirement benefits (Note 10)	8,254	(1,587)
Other changes in net assets	(185)	(3,364)
Change in fair value of interest rate swaps (Note 9)	4,190	7,802
Change in interest rate swap effectiveness	14,102	-
Increase in unrestricted net assets	99,155	64,764
Temporarily restricted net assets		
Gifts, bequests, sponsored activities	13,050	26,592
Investment gains	2,964	1,677
Change in net unrealized gains on investments	1,282	3,775
Net assets released from restrictions	(29,774)	(12,961)
Contribution of temporarily restricted net assets from acquisition	-	103
(Decrease) increase in temporarily restricted net assets	(12,478)	19,186
Permanently restricted net assets		
Gifts and bequests	1,121	300
Investment gains in beneficial interest in trust	108	245
Contribution of permanently restricted net assets from acquisition	-	30
Increase in permanently restricted net assets	1,229	575
Change in net assets	87,906	84,525
Net assets		
Beginning of year	574,029	489,504
End of year	$ 661,935	$ 574,029

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, 2018 and 2017

(in thousands of dollars)	2018	2017
Cash flows from operating activities		
Change in net assets	$ 87,906	$ 84,525
Adjustments to reconcile change in net assets to net cash provided by operating and non-operating activities		
Change in fair value of interest rate swaps	(4,897)	(8,001)
Provision for bad debt	47,367	63,645
Depreciation and amortization	84,947	84,711
Contribution revenue from acquisition	-	(20,348)
Change in funded status of pension and other postretirement benefits	(8,254)	1,587
(Gain) loss on disposal of fixed assets	(125)	1,703
Net realized gains and change in net unrealized gains on investments	(45,701)	(57,255)
Restricted contributions and investment earnings	(5,460)	(4,374)
Proceeds from sales of securities	1,531	809
Loss from debt defeasance	14,214	381
Changes in assets and liabilities		
Patient accounts receivable, net	(29,335)	(35,811)
Prepaid expenses and other current assets	(8,299)	7,386
Other assets, net	(11,665)	(8,934)
Accounts payable and accrued expenses	19,693	(17,820)
Accrued compensation and related benefits	10,665	10,349
Estimated third-party settlements	13,708	7,783
Insurance deposits and related liabilities	4,556	(5,927)
Liability for pension and other postretirement benefits	(32,399)	8,935
Other liabilities	(2,421)	11,431
Net cash provided by operating and non-operating activities	136,031	124,775
Cash flows from investing activities		
Purchase of property, plant, and equipment	(77,598)	(77,361)
Proceeds from sale of property, plant, and equipment	-	1,087
Purchases of investments	(279,407)	(259,201)
Proceeds from maturities and sales of investments	273,409	276,934
Cash received through acquisition	-	3,564
Net cash used in investing activities	(83,596)	(54,977)
Cash flows from financing activities		
Proceeds from line of credit	50,000	65,000
Payments on line of credit	(50,000)	(101,550)
Repayment of long-term debt	(413,104)	(48,506)
Proceeds from issuance of debt	507,791	39,064
Repayment of interest rate swap	(16,019)	-
Payment of debt issuance costs	(4,892)	(274)
Restricted contributions and investment earnings	5,460	4,374
Net cash provided by (used in) financing activities	79,236	(41,892)
Increase in cash and cash equivalents	131,671	27,906
Cash and cash equivalents		
Beginning of year	68,498	40,592
End of year	$ 200,169	$ 68,498
Supplemental cash flow information		
Interest paid	$ 18,029	$ 23,407
Net assets acquired as part of acquisition, net of cash aquired	-	16,784
Non-cash proceeds from issuance of debt	137,281	-
Use of non-cash proceeds to refinance debt	(137,281)	-
Building construction in process financed by a third party	-	8,426
Construction in progress included in accounts payable and accrued expenses	1,569	14,669
Equipment acquired through issuance of capital lease obligations	17,670	-
Donated securities	1,531	809

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 (APD), and the Visiting Nurse and Hospice of NH and VT and Subsidiaries (VNH). The "Health System" consists of D-HH, its affiliates 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 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, MHMH, DHC, NLH, Cheshire, and APD are NH not-for-profit corporations exempt from federal income taxes under Section 501(c)(3) of the Internal Revenue Code (IRC). MAHHC and VNH 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.

The Health System files annual Community Benefits Reports with the State of NH which outlines the community and charitable benefits it 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 lectures, 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.).

- *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 to participate 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.
- *Community health-related initiatives* occur outside of the organization(s) through various financial contributions of cash, in-kind, and grants to local organizations.
- *Community-building activities* include cash, in-kind donations, and budgeted expenditures for the development of programs and partnerships intended to address 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 (financial assistance)* represents services provided to patients who cannot afford healthcare services due to inadequate financial resources which result from being uninsured or underinsured. For the years ended June 30, 2018 and 2017, the Health System provided financial assistance to patients in the amount of approximately $39,446,000 and $29,934,000, respectively, as measured by gross charges. The estimated cost of providing this care for the years ended June 30, 2018 and 2017 was approximately $15,559,000 and $12,173,000, respectively. The estimated costs of providing charity care services are determined applying a ratio of costs to charges to the gross uncompensated charges associated with providing care to charity patients. The ratio of costs to charges is calculated using total expenses, less bad debt, divided by gross revenue.
- *Government-sponsored healthcare services* are provided to Medicaid and Medicare patients at reimbursement levels that are significantly below the cost of the care provided.
- *The uncompensated cost of care for Medicaid* patients reported in the unaudited Community Benefits Reports for 2017 was approximately $126,867,000. The 2018 Community Benefits Reports are expected to be filed in February 2019.

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, 2017:

(Unaudited, in thousands of dollars)

Government-sponsored healthcare services	$	287,845
Health professional education		33,197
Subsidized health services		30,447
Charity care		11,070
Community health services		6,829
Research		3,308
Community building activities		1,487
Financial contributions		1,417
Community benefit operations		913
Total community benefit value	$	376,513

The Health System also provides a significant amount of uncompensated care to its patients that are reported as provision for bad debts, which is not included in the amounts reported above. During the years ended June 30, 2018 and 2017, the Health System reported a provision for bad debt expense of approximately $47,367,000 and $63,645,000, respectively.

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, unrestricted net assets are amounts not subject to donor-imposed stipulations and are available for operations. Temporarily restricted net assets are those whose use has been limited by donors to a specific time period or purpose. Permanently restricted net assets have 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 the allowance for estimated uncollectible accounts and contractual allowances, 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 unrestricted investments, which are utilized to provide charity and other operational support. Peripheral activities, including unrestricted contribution income 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 non-operating gains (losses).

Changes in unrestricted net assets 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 and Provision for Bad Debts

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. Additions to the allowance for uncollectible accounts are made by means of the provision for bad debts. Accounts written off as uncollectible are deducted from the allowance and subsequent recoveries are added. The amount of the provision for bad debts 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 3).

Net Patient Service Revenue
Net patient service revenue is reported at the estimated net realizable amounts from patients, third party payors, and others for services rendered, including estimated retroactive adjustments under reimbursement agreements with third-party payors and bad debt expense. 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 3).

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. This revenue includes retail pharmacy, joint operating agreements, grant revenue, cafeteria sales, meaningful use incentive payments 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/comingled 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 6).

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 affiliates 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 permanently restricted assets were invested in these pooled funds by purchasing units based on the fair 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 unrestricted investments, change in value of equity method investments, interest, and dividends) are included in the excess of revenue over expenses and classified as non-operating gains and losses, unless the income or loss is restricted by donor or law (Note 8).

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 unrestricted 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 depreciation and amortization in the consolidated statements of operations and changes in net assets using the straight-line method which approximates the effective interest method.

Trade Names
The Health System records trade names as intangible assets within other assets on the consolidated statements of financial position. The Health System considers trade names 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 $2,462,000 and $2,700,000 as intangible assets associated with its affiliations as of June 30, 2018 and 2017, 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 unrestricted net assets 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 and Bequests
Unrestricted gifts and bequests are recorded net of related expenses as non-operating 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 as either temporarily or permanently restricted 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, temporarily restricted net assets are reclassified as unrestricted net assets 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* 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 is in the process of completing an evaluation of the requirements of the new standard, which became effective on July 1, 2018. In addition, the Health System is in the process of drafting the new disclosures required post implementation. The Health System plans to use a modified retrospective method of application to adopt ASU 2014-09 on July 1, 2018. The Health System will use a portfolio approach to apply the new model to classes of payers with similar characteristics and analyze cash collection trends over an appropriate collection look-back period depending on the payer. Adoption of ASU 2014-09 will result in changes to the presentation for and disclosure of revenue related to uninsured or underinsured patients. Prior to the adoption of ASU 2014-09, a significant portion of the provision for doubtful accounts related to self-pay patients, as well as co-pays and deductibles owed to the Health System by patients. Under ASU 2014-09, the estimated uncollectible amounts due from these patients are generally considered a direct reduction to net operating revenues and, correspondingly, result in a material reduction in the amounts presented separately as provision for doubtful accounts. The Health System is also in the process of completing an assessment of the impact of the new standard on other operating revenue and various reimbursement programs that represent variable consideration. These include supplemental state Medicaid programs, disproportionate share payments and settlements with third party payers. The payment mechanisms for these types of programs vary by state. While the adoption of ASU 2014-09 will

have a material effect on the presentation of net operating revenues in the Health System's consolidated statements of operations and changes in net assets, and will impact certain disclosures, it will not materially impact the financial position, results of operations or cash flows.

In February 2016, the FASB issued ASU 2016-02 - *Leases*, 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, including revisions to the classification of net assets and expanded disclosure requirements concerning expenses and liquidity. The ASU is effective for the Health System for the year ending June 30, 2019. The Health System is evaluating the impact of the new guidance on the consolidated financial statements.

3. Patient Service Revenue and Accounts Receivable

Patient service revenue is reported net of contractual allowances and the provision for bad debts as follows for the years ended June 30, 2018 and 2017:

(in thousands of dollars)	2018	2017
Gross patient service revenue	$ 5,180,649	$ 4,865,332
Less: Contractual allowances	3,281,554	3,006,140
Provision for bad debt	47,367	63,645
Net patient service revenue	$ 1,851,728	$ 1,795,547

Accounts receivable are reduced by an allowance for estimated uncollectibles. In evaluating the collectability of accounts receivable, the Health System analyzes past collection history and identifies trends for several categories of self-pay accounts (uninsured, residual balances, pre-collection accounts and charity) to estimate the appropriate allowance percentages in establishing

the allowance for bad debt expense. Management performs collection rate look-back analyses on a quarterly basis to evaluate the sufficiency of the allowance for estimated uncollectibles. Throughout the year, after all reasonable collection efforts have been exhausted, the difference between the standard rates and the amounts actually collected, including contractual adjustments and uninsured discounts, will be written off against the allowance for estimated uncollectibles. In addition to the review of the categories of revenue, management monitors the write offs against established allowances as of a point in time to determine the appropriateness of the underlying assumptions used in estimating the allowance for estimated uncollectibles.

Accounts receivable, prior to adjustment for estimated uncollectibles, are summarized as follows at June 30, 2018 and 2017:

(in thousands of dollars)	2018	2017
Receivables		
Patients	$ 94,104	$ 90,786
Third-party payors	250,657	263,240
Nonpatient	6,695	4,574
	$ 351,456	$ 358,600

The allowance for estimated uncollectibles is $132,228,000 and $121,340,000 as of June 30, 2018 and 2017.

The following table categorizes payors into five groups and their respective percentages of gross patient service revenue for the years ended June 30, 2018 and 2017:

	2018	2017
Medicare	43 %	43 %
Anthem/Blue Cross	18	18
Commercial insurance	20	20
Medicaid	13	13
Self-pay/other	6	6
	100 %	100 %

The Health System has agreements with third-party payors that provide for payments at amounts different from their established rates. A summary of the acute care payment arrangements in effect during the years ended June 30, 2018 and 2017 with major third-party payors follows:

Medicare
The Health System's inpatient acute care services provided to Medicare program beneficiaries are paid at prospectively determined rates-per-discharge. These rates vary according to a patient classification system that is 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. Under this system, outpatient services are reimbursed based on a pre-determined amount for each outpatient procedure, subject to various mandated modifications. The Health System is reimbursed during the year for services to Medicare beneficiaries based on varying interim

payment methodologies. Final settlement is determined after the submission of an annual cost report and subsequent audit of this report by the Medicare fiscal intermediary.

Certain of the Health System's affiliates qualify as Critical Access Hospitals (CAH), which are reimbursed by Medicare at 101% of reasonable costs, subject to 2% sequestration, for its inpatient acute, swing bed, and outpatient services, excluding ambulance services and inpatient hospice care. They are reimbursed at an interim rate for cost based services with a final settlement determined by the Medicare Cost Report filing. The nursing home and Rehabilitation distinct part units are not impacted by CAH designation. Medicare reimburses both services based on an acuity driven prospective payment system with no retrospective settlement.

Certain of the Health System's affiliates qualify as Home Health and Hospice Providers. Providers of home health services to clients 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 client at a rate determined by federal guidelines. Hospice services to clients 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. Revenue is recognized as the services are performed based on the fixed rate amount.

Medicaid
The Health System's payments for inpatient services rendered to NH Medicaid beneficiaries are based on a prospective payment system, while outpatient services are reimbursed on a retrospective cost basis or fee schedules. NH Medicaid Outpatient Direct Medical Education costs are reimbursed, as a pass-through, based on the filing of the Medicare cost report. Payment for inpatient and outpatient services rendered to VT Medicaid beneficiaries are based on prospective payment systems and the skilled nursing facility is reimbursed on a prospectively determined per diem rate.

During the years ended June 30, 2018 and 2017, the Health System recorded State of NH Medicaid Enhancement Tax (MET) and State of VT Provider Tax of $67,692,000 and $65,069,000, respectively. The taxes are calculated at 5.4% for NH and 6% for VT of certain net patient revenues in accordance with instructions received from the States. The provider taxes are included in Medicaid enhancement tax in the consolidated statements of operations and changes in net assets.

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 purchased services and other in the consolidated statements of operations and changes in net assets, was $737,000 and $645,000 in 2018 and 2017, 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 "SB 369". As part of this 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.

In May of 2018, the State of NH and NH Hospitals reached a new seven-year agreement through 2024. Under the terms of this agreement, the hospitals agreed to accept approximately $28 million less in DSH payments to which they are entitled in fiscal year 2018 and fiscal year 2019 in exchange for greater certainty about both future DSH payments and increases in Medicaid reimbursement rates. The new agreement contains a number of safeguards. In the event of adverse federal legislative or administrative changes to the DSH program, the agreement provides for alternative payments (e.g., other Medicaid supplemental payments or rate increases that will compensate the hospitals for any loss of DSH revenue). Additionally, the hospitals have filed a declaratory judgment petition based on the terms of the 2018 agreement, to which the State of NH has consented and on which a court order has been entered. If the State of NH breaches any term of the 2018 agreement, the hospitals are entitled to recoup the balance of DSH payments forfeited in fiscal year 2018 and fiscal year 2019.

Pursuant to this agreement, the State of NH made DSH payments to D-HH member hospitals in NH in the aggregate amount of approximately $66,383,000 for fiscal year 2018. In fiscal year 2017, D-HH member hospitals in NH received approximately $59,473,000.

The Health Information Technology for Economic and Clinical Health (HITECH) Act included in the American Recovery and Reinvestment Act (ARRA) provides incentives for the adoption and use of health information technology by Medicare and Medicaid providers and eligible professionals. The Health System has recognized meaningful use incentives of $344,000 and $1,156,000 for both the Medicare and Vermont Medicaid programs during the years ended June 30, 2018 and 2017, respectively.

Laws and regulations governing the Medicare and Medicaid programs are complex and subject to interpretation. Compliance with laws and regulations can be subject to future government review and interpretation as well as significant regulatory action; failure to comply with such laws and regulations can result in fines, penalties and exclusion from the Medicare and Medicaid programs.

Other

For services provided to patients with commercial insurance, the Health System receives payment for inpatient services at prospectively determined rates-per-discharge, prospectively determined per diem rates or a percentage of established charges. Outpatient services are reimbursed on a fee schedule or at a discount from established charges.

Non-acute and physician services are paid at various rates under different arrangements with governmental payors, commercial insurance carriers and health maintenance organizations. The basis for payments under these arrangements includes prospectively determined per visit rates, discounts from established charges, fee schedules, and reasonable cost subject to limitations.

The Health System has provided for its estimated final settlements with all payors based upon applicable contracts and reimbursement legislation and timing in effect for all open years (2013 - 2018). The differences between the amounts provided and the actual final settlement, if any, is recorded as an adjustment to net patient service revenue as amounts become known or as years are no longer subject to audits, reviews and investigations. During 2018 and 2017, changes in prior estimates related to the Health System's settlements with third-party payors resulted in (decreases) increases in net patient service revenue of ($5,604,000) and $2,000,000 respectively, in the consolidated statements of operations and changes in net assets.

4. Investments

The composition of investments at June 30, 2018 and 2017 is set forth in the following table:

(in thousands of dollars)	2018	2017
Assets limited as to use		
Internally designated by board		
Cash and short-term investments	$ 8,558	$ 9,923
U.S. government securities	50,484	44,835
Domestic corporate debt securities	109,240	100,953
Global debt securities	110,944	105,920
Domestic equities	142,796	129,548
International equities	106,668	95,167
Emerging markets equities	23,562	33,893
Real Estate Investment Trust	816	791
Private equity funds	50,415	39,699
Hedge funds	32,831	30,448
	636,314	591,177
Investments held by captive insurance companies (Note 11)		
U.S. government securities	30,581	18,814
Domestic corporate debt securities	16,764	21,681
Global debt securities	4,513	5,707
Domestic equities	8,109	9,048
International equities	7,971	13,888
	67,938	69,138
Held by trustee under indenture agreement (Note 9)		
Cash and short-term investments	1,872	2,008
Total assets limited as to use	706,124	662,323
Other investments for restricted activities		
Cash and short-term investments	4,952	5,467
U.S. government securities	28,220	28,096
Domestic corporate debt securities	29,031	27,762
Global debt securities	14,641	14,560
Domestic equities	20,509	18,451
International equities	17,521	15,499
Emerging markets equities	2,155	3,249
Real Estate Investment Trust	954	790
Private equity funds	4,878	3,949
Hedge funds	8,004	6,676
Other	31	30
Total other investments for restricted activities	130,896	124,529
Total investments	$ 837,020	$ 786,852

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 when debt securities or equity securities 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 non-distressed basis.

The following tables summarize the investments by the accounting method utilized, as of June 30, 2018 and 2017. Accounting standards require disclosure of additional information for those securities accounted for using the fair value method, as shown in Note 6.

(in thousands of dollars)	2018 Fair Value	2018 Equity	2018 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

(in thousands of dollars)	2017 Fair Value	2017 Equity	2017 Total
Cash and short-term investments	$ 17,398	$ -	$ 17,398
U.S. government securities	91,745	-	91,745
Domestic corporate debt securities	121,631	28,765	150,396
Global debt securities	45,660	80,527	126,187
Domestic equities	144,618	12,429	157,047
International equities	29,910	94,644	124,554
Emerging markets equities	1,226	35,916	37,142
Real Estate Investment Trust	128	1,453	1,581
Private equity funds	-	43,648	43,648
Hedge funds	-	37,124	37,124
Other	30	-	30
	$ 452,346	$ 334,506	$ 786,852

Investment income is comprised of the following for the years ended June 30, 2018 and 2017:

(in thousands of dollars)	2018	2017
Unrestricted		
Interest and dividend income, net	$ 12,324	$ 4,418
Net realized gains on sales of securities	24,411	16,868
Change in net unrealized gains on investments	4,612	30,809
	41,347	52,095
Temporarily restricted		
Interest and dividend income, net	1,526	1,394
Net realized gains on sales of securities	1,438	283
Change in net unrealized gains on investments	1,282	3,775
	4,246	5,452
Permanently restricted		
Change in net unrealized gains on beneficial interest in trust	108	245
	108	245
	$ 45,701	$ 57,792

For the years ended June 30, 2018 and 2017 unrestricted investment income is reflected in the accompanying consolidated statements of operations and changes in net assets as operating revenue of approximately $960,000 and $1,039,000 and as non-operating gains of approximately $40,387,000 and 51,056,000, 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, 2018 and 2017, the Health System has committed to contribute approximately $137,219,000 and $119,719,000 to such funds, of which the Health System has contributed approximately $91,942,000 and $81,982,000 and has outstanding commitments of $45,277,000 and $37,737,000, respectively.

5. Property, Plant, and Equipment

Property, plant, and equipment are summarized as follows at June 30, 2018 and 2017:

(in thousands of dollars)	2018	2017
Land	$ 38,058	$ 38,058
Land improvements	42,295	37,579
Buildings and improvements	876,537	818,831
Equipment	818,902	766,667
Equipment under capital leases	20,966	20,495
	1,796,758	1,681,630
Less: Accumulated depreciation and amortization	1,200,549	1,101,058
Total depreciable assets, net	596,209	580,572
Construction in progress	11,112	29,403
	$ 607,321	$ 609,975

As of June 30, 2018, construction in progress primarily consists of the building renovations taking place at the birthing pavilion in Lebanon, NH as well as the information systems PeopleSoft project for APD and Cheshire. The estimated cost to complete the birthing pavilion at June 30, 2018 is $200,000 and the estimated cost to complete the PeopleSoft project is $2,775,000.

The construction in progress for the Hospice & Palliative Care building reported as of June 30, 2017 was completed during the second quarter of fiscal year 2018 and APD's medical office building was completed in the fourth quarter of fiscal year 2018.

Depreciation and amortization expense included in operating and non-operating activities was approximately $84,947,000 and $84,711,000 for 2018 and 2017, respectively.

6. 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).

Interest Rate Swaps
The fair value of interest rate swaps, are determined using the present value of the fixed and floating legs of the swaps. Each series of cash flows are discounted by observable market interest rate curves and credit risk. All interest rate swaps held by the Health System were extinguished as part of Series 2018A and Series 2018B bond issuance (Note 9).

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 management 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, 2018 and 2017:

	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		

	2017					
(in thousands of dollars)	Level 1	Level 2	Level 3	Total	Redemption or Liquidation	Days' Notice
Assets						
Investments						
Cash and short term investments	$ 17,398	$ -	$ -	$ 17,398	Daily	1
U.S. government securities	91,745	-	-	91,745	Daily	1
Domestic corporate debt securities	66,238	55,393	-	121,631	Daily–Monthly	1–15
Global debt securities	28,142	17,518	-	45,660	Daily–Monthly	1–15
Domestic equities	144,618	-	-	144,618	Daily–Monthly	1–10
International equities	29,870	40	-	29,910	Daily–Monthly	1–11
Emerging market equities	1,226	-	-	1,226	Daily–Monthly	1–7
Real estate investment trust	128	-	-	128	Daily–Monthly	1–7
Other	-	30	-	30	Not applicable	Not applicable
Total investments	379,365	72,981	-	452,346		
Deferred compensation plan assets						
Cash and short-term investments	2,633	-	-	2,633		
U.S. government securities	37	-	-	37		
Domestic corporate debt securities	8,802	-	-	8,802		
Global debt securities	1,095	-	-	1,095		
Domestic equities	28,609	-	-	28,609		
International equities	9,595	-	-	9,595		
Emerging market equities	2,706	-	-	2,706		
Real estate	2,112	-	-	2,112		
Multi strategy fund	13,083	-	-	13,083		
Guaranteed contract	-	-	83	83		
Total deferred compensation plan assets	68,672	-	83	68,755	Not applicable	Not applicable
Beneficial interest in trusts	-	-	9,244	9,244	Not applicable	Not applicable
Total assets	$ 448,037	$ 72,981	$ 9,327	$ 530,345		
Liabilities						
Interest rate swaps	$ -	$ 20,916	$ -	$ 20,916	Not applicable	Not applicable
Total liabilities	$ -	$ 20,916	$ -	$ 20,916		

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

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

	2017		
(in thousands of dollars)	Beneficial Interest in Perpetual Trust	Guaranteed Contract	Total
Balances at beginning of year	$ 9,087	$ 80	$ 9,167
Purchases	-	-	-
Sales	-	-	-
Net unrealized gains	157	3	160
Net asset transfer from affiliate	-	-	-
Balances at end of year	$ 9,244	$ 83	$ 9,327

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, 2018 and 2017.

7. Temporarily and Permanently Restricted Net Assets

Temporarily restricted net assets are available for the following purposes at June 30, 2018 and 2017:

(in thousands of dollars)	2018	2017
Healthcare services	$ 19,570	$ 32,583
Research	24,732	25,385
Purchase of equipment	3,068	3,080
Charity care	13,667	13,814
Health education	18,429	17,489
Other	2,973	2,566
	$ 82,439	$ 94,917

Permanently restricted net assets consist of the following at June 30, 2018 and 2017:

(in thousands of dollars)	2018	2017
Healthcare services	$ 23,390	$ 22,916
Research	7,821	7,795
Purchase of equipment	6,310	6,274
Charity care	8,883	6,895
Health education	8,784	10,228
Other	206	57
	$ 55,394	$ 54,165

Income earned on permanently restricted net assets is available for these purposes.

8. 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 classifies as permanently restricted net assets (a) the original value of gifts donated to the permanent endowment, (b) the original value of subsequent gifts to the permanent endowment, 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.

Unrestricted net assets 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. Temporarily restricted net assets 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 temporary restrictions on these funds have been met, the funds are reclassified to unrestricted net assets.

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, 2018 and 2017.

Endowment net asset composition by type of fund consists of the following at June 30, 2018 and 2017:

	2018			
(in thousands of dollars)	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Donor-restricted endowment funds	$ -	$ 31,320	$ 46,877	$ 78,197
Board-designated endowment funds	29,506	-	-	29,506
Total endowed net assets	$ 29,506	$ 31,320	$ 46,877	$ 107,703

	2017			
(in thousands of dollars)	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Donor-restricted endowment funds	$ -	$ 29,701	$ 45,756	$ 75,457
Board-designated endowment funds	26,389	-	-	26,389
Total endowed net assets	$ 26,389	$ 29,701	$ 45,756	$ 101,846

Changes in endowment net assets for the year ended June 30, 2018:

	2018			
(in thousands of dollars)	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Balances at beginning of year	$ 26,389	$ 29,701	$ 45,756	$ 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	$ 31,320	46,877	$ 107,703

Balances at end of year	46,877
Beneficial interest in perpetual trust	8,517
Permanently restricted net assets	$ 55,394

Changes in endowment net assets for the year ended June 30, 2017:

	2017			
(in thousands of dollars)	**Unrestricted**	**Temporarily Restricted**	**Permanently Restricted**	**Total**
Balances at beginning of year	$ 26,205	$ 25,780	$ 45,402	$ 97,387
Net investment return	283	5,285	2	5,570
Contributions	-	210	300	510
Transfers	-	(26)	22	(4)
Release of appropriated funds	(99)	(1,548)	-	(1,647)
Net asset transfer from affiliates	-	-	30	30
Balances at end of year	$ 26,389	$ 29,701	$ 45,756	$ 101,846

Balances at end of year	45,756
Beneficial interest in perpetual trust	8,409
Permanently restricted net assets	$ 54,165

9. Long-Term Debt

A summary of long-term debt at June 30, 2018 and 2017 is as follows:

(in thousands of dollars)	2018	2017
Variable rate issues		
New Hampshire Health and Education Facilities Authority (NHHEFA) Revenue Bonds		
Series 2018A, principal maturing in varying annual amounts, through August 2036 (1)	$ 83,355	$ -
Series 2016A, principal maturing in varying annual amounts, through August 2046 (3)	-	24,608
Series 2015A, principal maturing in varying annual amounts, through August 2031 (4)	-	82,975
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	-
Series 2017A, principal maturing in varying annual amounts, through August 2039 (2)	122,435	-
Series 2017B, principal maturing in varying annual amounts, through August 2030 (2)	109,800	-
Series 2016B, principal maturing in varying annual amounts, through August 2046 (3)	10,970	10,970
Series 2014A, principal maturing in varying annual amounts, through August 2022 (6)	26,960	26,960
Series 2014B, principal maturing in varying annual amounts, through August 2033 (6)	14,530	14,530
Series 2012A, principal maturing in varying annual amounts, through August 2031 (7)	-	71,700
Series 2012B, principal maturing in varying annual amounts, through August 2031 (7)	-	39,340
Series 2012, principal maturing in varying annual amounts, through July 2039 (11)	25,955	26,735
Series 2010, principal maturing in varying annual amounts, through August 2040 (9)	-	75,000
Series 2009, principal maturing in varying annual amounts, through August 2038 (10)	-	57,540
Total variable and fixed rate debt	$ 697,107	$ 430,358

A summary of long-term debt at June 30, 2018 and 2017 is as follows (continued):

(in thousands of dollars)	2018	2017
Other		
Revolving Line of Credit, principal maturing through March 2019 (5)	$ -	$ 49,750
Series 2012, principal maturing in varying annual amounts, through July 2025 (8)	-	136,000
Series 2010, principal maturing in varying annual amounts, through August 2040 (12)*	15,498	15,900
Note payable to a financial institution payable in interest free monthly installments through July 2015; collateralized by associated equipment*	646	811
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*	380	437
Mortgage note payable to the US Dept of Agriculture; monthly payments of $10,892 include interest of 2.375% through November 2046*	2,697	2,763
Obligations under capital leases	18,965	3,435
Total other debt	38,186	209,096
Total variable and fixed rate debt	697,107	430,358
Total long-term debt	735,293	639,454
Less: Original issue discounts and premiums, net	(26,862)	862
Bond issuance costs, net	5,716	3,832
Current portion	3,464	18,357
	$ 752,975	$ 616,403

*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)	2018
2019	$ 3,464
2020	10,495
2021	10,323
2022	10,483
2023	7,579
Thereafter	692,949
	$ 735,293

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 MHMH, DHC, Cheshire, NLH and MAHHC. 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 non-operating 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. A loss on the extinguishment of debt of approximately $13,636,000 was recognized in non-operating gains (losses) on the statement of operations and changes in net assets, as a result of the refinancing. 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 2016A and 2016B Revenue Bonds

The DHOG issued NHHEFA Revenue Bonds, Series 2016A and 2016B in July 2016 through a private placement with a financial institution. The Series 2016A Revenue Bonds were primarily used to refund Series 2013A and Series 2013B and the Series 2016B Revenue Bonds were used to finance 2016 projects. Interest is equal to the sum of .70 times one month LIBOR plus .70 times the spread. The variable rate as of June 30 2017 was 1.48% The Series 2016B is fixed with an interest rate of 1.78% and matures at various dates through 2046. The Series 2016A Revenue Bonds were refunded in February 2018.

(4) Series 2015A Revenue Bonds

The DHOG issued NHHEFA Revenue Bonds, Series 2015A in September 2015 through a private placement with a financial institution. The Series 2015A Revenue Bonds were primarily used to refinance a portion of the Series 2011 Revenue Bonds and to cover cost of issuance. The Series 2015A Revenue Bonds accrue interest variably and mature at various dates through 2031 based on the one-month London Interbank Offered Rate (LIBOR). The Series 2015A Revenue Bonds were refunded in February 2018.

(5) Revolving Line of Credit

The DHOG entered into a Revolving Line of Credit with TD Bank, N.A. (TD Bank). Interest on the TD Bank loan accrues variably and matures at various dates through March 2019. The Revolving Line of Credit was refunded in February 2018.

(6) 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.

(7) Series 2012A and 2012B Revenue Bonds

The DHOG issued NHHEFA Revenue Bonds, Series 2012A and Series 2012B in November 2012. The proceeds from the Series 2012A and 2012B were used to advance refund the Series 2002 Revenue Bonds and to cover cost of issuance. Interest on the 2012A Revenue Bonds is fixed with an interest rate of 2.29% and matures at various dates through 2031. Interest on the Series 2012B Revenue Bonds is fixed with an interest rate of 2.33% and matures at various dates through 2031. The Series 2012A and Series 2012B Revenue Bonds were refunded in December 2017.

(8) Series 2012 Bank Loan

The DHOG issued the Bank of America, N.A. Series 2012 note, in July 2012. The proceeds from the Series 2012 note were used to prefund the D-H defined benefit pension plan. Interest on the Series 2012 note accrues at a fixed rate of 2.47% and matures at various dates through 2025. The Series 2012 Bank Loan was refunded in February 2018.

(9) Series 2010 Revenue Bonds

The DHOG issued NHHEFA Revenue Bonds, Series 2010, in June 2010. The proceeds from the Series 2010 Revenue Bonds were primarily used to construct a 140,000 square foot ambulatory care facility in Nashua, NH as well as various equipment. Interest on the bonds accrue at a fixed rate of 5.00% and mature at various dates through August 2040. The Series 2010 Revenue Bonds were defeased in December 2017.

(10)Series 2009 Revenue Bonds

The DHOG issued NHHEFA Revenue Bonds, Series 2009, in August 2009. The proceeds from the Series 2009 Revenue Bonds were primarily used to advance refund the Series 2008 Revenue Bonds. Interest on the Series 2009 Revenue Bonds accrue at varying fixed rates between 5.00% and 6.00% and mature at various dates through August 2038. The Series 2009 Revenue Bonds were defeased in December 2017.

(11)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%). Principal is payable in annual installments ranging from $780,000 to $1,750,000 through July 2039. The Series 2012 Revenue Bonds were refunded in February 2018.

Outstanding joint and several indebtedness of the DHOG at June 30, 2018 and 2017 approximates $697,107,000 and $616,108,000, respectively.

Non Obligated Group Bonds

(12)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. APD may prepay certain of these bonds according to the terms of the loan and trust agreement. The bonds are redeemable at any time by APD at par value plus any accrued interest. The bonds are also subject to optional tender for purchase (as a whole) in November 2020 at par plus accrued interest.

The Health System Indenture agreements require establishment and maintenance of debt service reserves and other trustee held funds. Trustee held funds of approximately $1,872,000 and $2,008,000 at June 30, 2018 and 2017, respectively, are classified as assets limited as to use in the accompanying consolidated balance sheets (Note 4). The debt service reserves are mainly comprised of escrowed funds held for future interest payments for the Cheshire debt.

For the years ended June 30, 2018 and 2017 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 $18,822,000 and $19,838,000 and is included in other non-operating losses of $2,793,000 and $3,135,000, 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.

A summary of the Health System's derivative financial instruments is as follows:

- A Fixed Payor Swap designed as a cash flow hedge of the NHHEFA Series 2011 Revenue Bonds. The Swap had an initial notional amount of $91,040,000. The Swap Agreement requires the Health System to pay the counterparty a fixed rate of 4.56% in exchange for the counterparty's payment of 67% of USD-LIBOR-BBA. The Swap's term matches that of the associated bonds. The 2011 interest rate swap was not integrated with the 2011 bonds. When the 2011 bonds were refinanced, the swap became associated with the 2015 bond. The Fixed Payor Swap was terminated in February 2018.

- An Interest Rate Swap to hedge the interest rate risk associated with the NHHEFA Series 2013 Revenue Bonds. The Swap had an initial notional amount of $15,000,000. The Swap Agreement requires the Health System to pay the counterparty a fixed rate of 3.94% in exchange for the counterparty's payment at 67% of USD-LIBOR-BBA. The Swap term matches that of the associated bonds. The Interest Rate Swap was terminated in February, 2018.

- An Interest Rate Swap to hedge the interest rate risk associated with the VEHFBA Series 2010A Revenue Bonds. The Swap had an initial notional amount of $7,244,000. The Swap Agreement requires the Health System to pay the counterparty a fixed rate of 2.41% in exchange for the counterparty's payment of 69% of USD-LIBOR-BBA. The swap was terminated in September 2016, while the bonds will remain outstanding until 2030.

The obligation of the Health System to make payments on its bonds with respect to interest is in no way conditional upon the Health System's receipt of payments from the interest rate swap agreement counterparty.

As of June 30, 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 non-operating loss due to swap termination of $14,247,000 relating to the swap termination. As of June 30, 2017, the fair value of the Health System's interest rate swaps was a liability of $20,916,000. The change in fair value during the years ended June 30, 2018 and 2017 was a decrease of $4,897,000 and $8,002,000, respectively. For the years ended June 30, 2018 and 2017 the Health System recognized a non-operating gain of $145,000 and $124,000 resulting from hedge ineffectiveness and amortization of frozen swaps.

10. Employee Benefits

All eligible employees of the Health System are covered under various defined benefit and/or define contribution plans. In addition, certain affiliates 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 or had been approved by the applicable Board of Trustees to be frozen by January 31, 2017.

In December of 2016 the Board of Trustees approved to accelerate the freeze date on the remaining pension plan from December 31, 2017 to January 31, 2017. Effective with that date, the last of the participants earning benefits in any of the Health System's defined benefit plans will no longer earn benefits under the 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, 2018 and 2017:

(in thousands of dollars)	2018	2017
Service cost for benefits earned during the year	$ 150	$ 5,736
Interest cost on projected benefit obligation	47,190	47,316
Expected return on plan assets	(64,561)	(64,169)
Net prior service cost	-	109
Net loss amortization	10,593	20,267
Special/contractural termination benefits	-	119
One-time benefit upon plan freeze acceleration	-	9,519
	$ (6,628)	$ 18,897

The following assumptions were used to determine net periodic pension expense as of June 30, 2018 and 2017:

	2018	2017
Discount rate	4.00 % – 4.30 %	4.20 % – 4.90 %
Rate of increase in compensation	N/A	Age Graded - N/A
Expected long-term rate of return on plan assets	7.50 % – 7.75 %	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, 2018 and 2017:

(in thousands of dollars)	2018	2017
Change in benefit obligation		
Benefit obligation at beginning of year	$ 1,122,615	$ 1,096,619
Service cost	150	5,736
Interest cost	47,190	47,316
Benefits paid	(47,550)	(43,276)
Expenses paid	(172)	(183)
Actuarial (gain) loss	(34,293)	6,884
One-time benefit upon plan freeze acceleration	-	9,519
Benefit obligation at end of year	1,087,940	1,122,615
Change in plan assets		
Fair value of plan assets at beginning of year	878,701	872,320
Actual return on plan assets	33,291	44,763
Benefits paid	(47,550)	(43,276)
Expenses paid	(172)	(183)
Employer contributions	20,713	5,077
Fair value of plan assets at end of year	884,983	878,701
Funded status of the plans	(202,957)	(243,914)
Less: Current portion of liability for pension	(45)	(46)
Long term portion of liability for pension	(202,912)	(243,868)
Liability for pension	$ (202,957)	$ (243,914)

For the years ended June 30, 2018 and 2017 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 unrestricted net assets include approximately $418,971,000 and $429,782,000 of net actuarial loss as of June 30, 2018 and 2017, respectively.

The estimated amounts to be amortized from unrestricted net assets into net periodic pension expense in fiscal year 2019 for net actuarial losses is $10,357,000.

The accumulated benefit obligation for the defined benefit pension plans was approximately $1,087,991,000 and $1,123,010,000 at June 30, 2018 and 2017, respectively.

The following table sets forth the assumptions used to determine the benefit obligation at June 30, 2018 and 2017:

	2018	2017
Discount rate	4.20 % – 4.50 %	4.00 % – 4.30 %
Rate of increase in compensation	N/A	N/A - 0.00 %

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 June 30, 2018 and 2017, it is expected that the LDI strategy will hedge approximately 60% and 55%, respectively, 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 6. 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, 2018 and 2017:

	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 6	See Note 6
Hedge funds	-	-	44,250	44,250	Quarterly–Annual	60–96
Total investments	$ 369,051	$ 471,659	$ 44,273	$ 884,983		

	2017					
(in thousands of dollars)	Level 1	Level 2	Level 3	Total	Redemption or Liquidation	Days' Notice
Investments						
Cash and short-term investments	$ 23	$ 29,792	$ -	$ 29,815	Daily	1
U.S. government securities	7,875	-	-	7,875	Daily–Monthly	1–15
Domestic debt securities	140,498	243,427	-	383,925	Daily–Monthly	1–15
Global debt securities	426	90,389	-	90,815	Daily–Monthly	1–15
Domestic equities	154,597	16,938	-	171,535	Daily–Monthly	1–10
International equities	9,837	93,950	-	103,787	Daily–Monthly	1–11
Emerging market equities	2,141	45,351	-	47,492	Daily–Monthly	1–17
REIT funds	362	2,492	-	2,854	Daily–Monthly	1–17
Private equity funds	-	-	96	96	See Note 6	See Note 6
Hedge funds	-	-	40,507	40,507	Quarterly–Annual	60–96
Total investments	$ 315,759	$ 522,339	$ 40,603	$ 878,701		

The following table presents additional information about the changes in Level 3 assets measured at fair value for the years ended June 30, 2018 and 2017:

	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) gains	-	(51)	(51)
Net unrealized gains	3,743	29	3,772
Balances at end of year	$ 44,250	$ 23	$ 44,273

	2017		
(in thousands of dollars)	Hedge Funds	Private Equity Funds	Total
Balances at beginning of year	$ 38,988	$ 255	$ 39,243
Sales	(880)	(132)	(1,012)
Net realized (losses) gains	33	36	69
Net unrealized gains	2,366	(63)	2,303
Balances at end of year	$ 40,507	$ 96	$ 40,603

The total aggregate net unrealized gains (losses) included in the fair value of the Level 3 investments as of June 30, 2018 and 2017 were approximately $14,743,000 and $7,965,000, respectively. There were no transfers into and out of Level 3 measurements during the years ended June 30, 2018 and 2017.

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, 2018 and 2017.

The weighted average asset allocation for the Health System's Plans at June 30, 2018 and 2017 by asset category is as follows:

	2018	2017
Cash and short-term investments	4 %	3 %
U.S. government securities	5	1
Domestic debt securities	41	44
Global debt securities	9	10
Domestic equities	20	20
International equities	11	12
Emerging market equities	5	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 $20,480,000 to the Plans in 2019 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)

2019	$ 49,482
2020	51,913
2021	54,249
2022	56,728
2023	59,314
2024 – 2027	329,488

Defined Contribution Plans

The Health System has an employer-sponsored 401(a) plan for certain of its affiliates, 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 $38,563,000 and $33,375,000 in 2018 and 2017, 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 affiliate and plan. No employer contributions were made to any of these plans in 2018 and 2017 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, 2018 and 2017:

(in thousands of dollars)	2018	2017
Service cost	$ 533	$ 448
Interest cost	1,712	2,041
Net prior service income	(5,974)	(5,974)
Net loss amortization	10	689
	$ (3,719)	$ (2,796)

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, 2018 and 2017:

(in thousands of dollars)	2018	2017
Change in benefit obligation		
Benefit obligation at beginning of year	$ 42,277	$ 51,370
Service cost	533	448
Interest cost	1,712	2,041
Benefits paid	(3,174)	(3,211)
Actuarial loss (gain)	1,233	(8,337)
Employer contributions	-	(34)
Benefit obligation at end of year	42,581	42,277
Funded status of the plans	$ (42,581)	$ (42,277)
Current portion of liability for postretirement medical and life benefits	$ (3,266)	$ (3,174)
Long term portion of liability for postretirement medical and life benefits	(39,315)	(39,103)
Liability for postretirement medical and life benefits	$ (42,581)	$ (42,277)

For the years ended June 30, 2018 and 2017 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 unrestricted net assets are as follows:

(in thousands of dollars)	2018	2017
Net prior service income	$ (15,530)	$ (21,504)
Net actuarial loss	3,336	2,054
	$ (12,194)	$ (19,450)

The estimated amounts that will be amortized from unrestricted net assets into net periodic postretirement income in fiscal year 2019 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, 2019 and thereafter:

(in thousands of dollars)	
2019	$ 3,266
2020	3,298
2021	3,309
2022	3,315
2023	3,295
2024-2027	15,156

In determining the accumulated postretirement medical and life benefit obligation, the Health System used a discount rate of 4.50% in 2018 and an assumed healthcare cost trend rate of 6.00%, trending down to 4.75% in 2021 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, 2018 and 2017 by $1,088,000 and $1,067,000 and the net periodic postretirement medical benefit cost for the years then ended by $81,000 and $110,000, 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, 2018 and 2017 by $996,000 and $974,000 and the net periodic postretirement medical benefit cost for the years then ended by $72,000 and $96,000, respectively.

11. Professional and General Liability Insurance Coverage

D-H, along with Dartmouth College, Cheshire, NLH and MAHHC 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, 2017 VNH 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. D-H 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.

APD are covered for malpractice claims under a modified claims-made policy purchased through New England Alliance for Health (NEAH). While APD remain in the current insurance program under this policy, the coverage year is based on the date the claim is filed; subject to a medical incident arising after the retroactive date (includes prior acts). The policy provides modified claims-made coverage for former insured providers for claims that relate to the employee's period of employment at APD and for services that were provided within the scope of the employee's duties. Therefore, when the employee leaves the corporation, tail coverage is not required.

Selected financial data of HAC and RRG, taken from the latest available audited and unaudited financial statements, respectively at June 30, 2018 and 2017 are summarized as follows:

	2018		
(in thousands of dollars)	**HAC** *(audited)*	**RRG** *(unaudited)*	**Total**
Assets	$ 72,753	$ 2,068	$ 74,821
Shareholders' equity	13,620	50	13,670
Net income	-	(751)	(751)

	2017		
(in thousands of dollars)	**HAC** *(audited)*	**RRG** *(unaudited)*	**Total**
Assets	$ 76,185	$ 2,055	$ 78,240
Shareholders' equity	13,620	801	14,421
Net income	-	(5)	(5)

12. 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 $14,096,000 and $15,802,000 for the years ended June 30, 2018 and 2017, respectively.

Minimum future lease payments under noncancelable operating leases at June 30, 2018 were as follows:

(in thousands of dollars)

2019	$ 12,393
2020	10,120
2021	8,352
2022	5,175
2023	3,935
Thereafter	10,263
	$ 50,238

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 29, 2019. There was no outstanding balance under the lines of credit as of June 30, 2018 and 2017. Interest expense was approximately $232,000 and $915,000, respectively, and is included in the consolidated statements of operations and changes in net assets.

13. Functional Expenses

Operating expenses of the Health System by function are as follows for the years ended June 30, 2018 and 2017:

(in thousands of dollars)	2018	2017
Program services	$ 1,715,760	$ 1,662,413
Management and general	303,527	311,820
Fundraising	2,354	2,328
	$ 2,021,641	$ 1,976,561

14. Subsequent Events

The Health System has assessed the impact of subsequent events through November 7, 2018, 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 July 1, 2018, APD became the sole corporate member of APD LifeCare Center Inc. APD LifeCare Center Inc. 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.

APD and APD LifeCare Center (LifeCare) were jointly liable for their Series 2010 Revenue Bonds; $26,000,000 outstanding as of June 30, 2018. As described in Note 9 to the financial statements, APD's portion was approximately $15,500,000 as of June 30, 2018. LifeCare's outstanding portion of approximately $10,500,000 was appropriately excluded from the consolidated financial statements as LifeCare was not affiliated with any of the members of the Health System as of June 30, 2018. On August 15, 2018, APD joined the DHOG and simultaneously issued NHHEFA Revenue Bonds, Series 2018C. The Series 2018C Revenue Bonds were used primarily to refinance the joint (APD and LifeCare) Series 2010 Revenue Bonds.

Consolidating Supplemental Information – Unaudited

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	(10,970)	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	2,487	3,796	-	118,498	7,078	-	125,576
Estimated third-party settlements	3,002	24,411	-	9,655	1,625	-	38,693	2,448	-	41,141
Total current liabilities	57,997	217,299	26,647	19,419	8,637	(72,361)	257,638	16,484	(4,877)	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	11,270	(10,970)	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)	1,367,661	45,306	(4,877)	1,408,090
Commitments and contingencies										
Net assets										
Unrestricted	23,759	334,882	61,828	32,897	19,812	-	473,178	72,230	(21,306)	524,102
Temporarily restricted	-	54,666	4,964	493	1,540	-	61,663	20,816	(40)	82,439
Permanently restricted	-	32,232	-	4,147	5,860	-	42,239	13,155	-	55,394
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	128	(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	$ 810	$ 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	-	54,616	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									
Unrestricted	23,759	356,518	65,069	33,383	19,764	21,031	25,884	(21,306)	524,102
Temporarily restricted	-	60,836	19,196	493	1,539	415	-	(40)	82,439
Permanently restricted	-	34,376	10,760	4,147	5,862	219	30	-	55,394
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 Balance Sheets
June 30, 2017

(In thousands of dollars)	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	$ 27,328	$ 10,645	$ 7,797	$ 6,662	$ -	$ 52,432	$ 16,066	$ -	$ 68,498
Patient accounts receivable, net	193,733	17,723	8,539	4,659	-	224,654	12,606	-	237,260
Prepaid expenses and other current assets	93,816	6,945	3,650	1,351	(16,585)	89,177	8,034	(8,008)	89,203
Total current assets	314,877	35,313	19,986	12,672	(16,585)	366,263	36,706	(8,008)	394,961
Assets limited as to use	580,254	19,104	11,784	9,058	-	620,200	42,123	-	662,323
Other investments for restricted activities	86,398	4,784	2,833	6,079	-	100,074	24,455	-	124,529
Property, plant, and equipment, net	448,743	64,933	43,264	17,167	-	574,107	35,868	-	609,975
Other assets	89,650	2,543	5,965	4,095	(11,520)	90,733	27,674	(21,287)	97,120
Total assets	$ 1,519,922	$ 126,657	$ 83,832	$ 49,071	$ (28,105)	$ 1,751,377	$ 166,826	$ (29,295)	$ 1,888,908
Liabilities and Net Assets									
Current liabilities									
Current portion of long-term debt	$ 16,034	$ 780	$ 737	$ 80	$ -	$ 17,631	$ 726	$ -	$ 18,357
Line of credit	-	-	-	550	(550)	-	-	-	
Current portion of liability for pension and other postretirement plan benefits	3,220	-	-	-	-	3,220	-	-	3,220
Accounts payable and accrued expenses	72,362	19,715	5,356	2,854	(16,585)	83,702	13,466	(8,008)	89,160
Accrued compensation and related benefits	99,638	5,428	2,335	3,448	-	110,849	4,062	-	114,911
Estimated third-party settlements	11,322	-	7,265	1,915	-	20,502	6,931	-	27,433
Total current liabilities	202,576	25,923	15,693	8,847	(17,135)	235,904	25,185	(8,008)	253,081
Long-term debt, excluding current portion	545,100	26,185	26,402	10,976	(10,970)	597,693	18,710	-	616,403
Insurance deposits and related liabilities	50,960	-	-	-	-	50,960	-	-	50,960
Interest rate swaps	17,606	-	3,310	-	-	20,916	-	-	20,916
Liability for pension and other postretirement plan benefits, excluding current portion	267,409	8,761	-	6,801	-	282,971	-	-	282,971
Other liabilities	77,622	2,636	1,426	-	-	81,684	8,864	-	90,548
Total liabilities	1,161,273	63,505	46,831	26,624	(28,105)	1,270,128	52,759	(8,008)	1,314,879
Commitments and contingencies									
Net assets									
Unrestricted	258,887	58,250	32,504	15,247	-	364,888	81,344	(21,285)	424,947
Temporarily restricted	88,473	4,902	345	1,363	-	75,083	19,836	(2)	94,917
Permanently restricted	31,289	-	4,152	5,837	-	41,278	12,887	-	54,165
Total net assets	358,649	63,152	37,001	22,447	-	481,249	114,067	(21,287)	574,029
Total liabilities and net assets	$ 1,519,922	$ 126,657	$ 83,832	$ 49,071	$ (28,105)	$ 1,751,377	$ 166,826	$ (29,295)	$ 1,888,908

Dartmouth-Hitchcock Health and Subsidiaries
Consolidating Balance Sheets
June 30, 2017

(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	$ 1,166	$ 27,760	$ 11,601	$ 8,280	$ 6,968	$ 8,129	$ 4,594	$ -	$ 68,498
Patient accounts receivable, net	-	193,733	17,723	8,539	4,681	8,878	3,706	-	237,260
Prepaid expenses and other current assets	3,884	94,305	5,899	3,671	1,340	4,179	518	(24,593)	89,203
Total current assets	5,050	315,798	35,223	20,490	12,989	21,186	8,818	(24,593)	394,961
Assets limited as to use	-	596,904	19,104	11,782	9,889	8,168	16,476	-	662,323
Other investments for restricted activities	6	94,210	21,204	2,833	6,079	197	-	-	124,529
Property, plant, and equipment, net	50	451,418	68,921	43,751	18,935	23,447	3,453	-	609,975
Other assets	23,866	89,819	8,586	5,378	1,812	283	183	(32,807)	97,120
Total assets	$ 28,972	$ 1,548,149	$ 153,038	$ 84,234	$ 49,704	$ 53,281	$ 28,930	$ (57,400)	$ 1,888,908
Liabilities and Net Assets									
Current liabilities									
Current portion of long-term debt	$ -	$ 16,034	$ 780	$ 737	$ 137	$ 603	$ 66	$ -	$ 18,357
Line of credit	-	-	-	-	550	-	-	(550)	-
Current portion of liability for pension and other postretirement plan benefits	-	3,220	-	-	-	-	-	-	3,220
Accounts payable and accrued expenses	5,996	72,806	19,718	5,365	2,946	5,048	1,874	(24,593)	89,160
Accrued compensation and related benefits	-	99,638	5,428	2,335	3,480	2,998	1,032	-	114,911
Estimated third-party settlements	6,165	11,322	-	7,265	1,915	766	-	-	27,433
Total current liabilities	12,161	203,020	25,926	15,702	9,028	9,415	2,972	(25,143)	253,081
Long-term debt, excluding current portion	-	545,100	26,185	26,402	11,356	15,633	2,697	(10,970)	616,403
Insurance deposits and related liabilities	-	50,960	-	-	-	-	-	-	50,960
Interest rate swaps	-	17,606	-	3,310	-	-	-	-	20,916
Liability for pension and other postretirement plan benefits, excluding current portion	-	267,409	8,761	-	6,801	-	-	-	282,971
Other liabilities	-	77,622	2,531	1,426	-	8,969	-	-	90,548
Total liabilities	12,161	1,161,717	63,403	46,840	27,185	34,017	5,669	(36,113)	1,314,879
Commitments and contingencies									
Net assets									
Unrestricted	16,367	278,895	60,758	32,897	15,319	18,965	23,231	(21,285)	424,947
Temporarily restricted	444	74,304	18,198	345	1,363	265	-	(2)	94,917
Permanently restricted	-	33,433	10,679	4,152	5,837	34	30	-	54,165
Total net assets	16,811	386,432	89,635	37,394	22,519	19,264	23,261	(21,287)	574,029
Total liabilities and net assets	$ 28,972	$ 1,548,149	$ 153,038	$ 84,234	$ 49,704	$ 53,281	$ 28,930	$ (57,400)	$ 1,888,908

Dartmouth-Hitchcock Health and Subsidiaries
Consolidating Statements of Operations and Changes in Unrestricted Net Assets
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
Unrestricted revenue and other support										
Net patient service revenue, net of contractual allowances and discounts	$ -	$ 1,475,314	$ 216,736	$ 60,486	$ 52,014	$ -	$ 1,804,550	$ 94,545	$ -	$ 1,899,095
Provisions for bad debts	-	31,358	10,957	1,554	1,440	-	45,319	2,048	-	47,367
Net patient service revenue less provisions for bad debts	-	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 unrestricted 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	105,607	30,360	24,854	(21,542)	945,623	42,035	1,605	989,263
Employee benefits	-	181,833	26,343	7,252	7,000	(5,385)	219,043	10,221	419	229,683
Medical supplies and medications	-	269,327	31,293	6,161	3,055	-	329,836	10,195	-	340,031
Purchased services and other	8,509	215,073	33,055	13,587	13,960	(19,394)	264,800	29,390	(2,818)	291,372
Medicaid enhancement tax	-	53,044	8,070	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	(8,882)	17,783	1,039	-	18,822
Total operating expenses	17,216	1,627,466	217,599	64,934	52,867	(55,203)	1,924,879	97,556	(794)	2,021,641
Operating (loss) margin	(9,064)	59,847	(7,845)	(1,781)	1,734	1,779	44,670	3,117	(324)	47,463
Non-operating (losses) gains										
Investment (losses) gains	(26)	33,628	1,408	1,151	858	(198)	36,821	3,566	-	40,387
Other, 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 (losses) gains, 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
Unrestricted net assets										
Net assets released from restrictions (Note 7)	-	15,038	-	4	252	-	15,294	19	-	15,313
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)	7,188	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	-	-	4,190
Change in funded status of interest rate swaps	-	14,102	-	-	-	-	14,102	-	-	14,102
Increase in unrestricted net assets	$ 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 Unrestricted Net Assets
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
Unrestricted revenue and other support									
Net patient service revenue, net of contractual allowances and discounts	$ -	$ 1,475,314	$ 216,736	$ 60,486	$ 52,014	$ 71,458	$ 23,087	$ -	$ 1,899,095
Provisions for bad debts	-	31,358	10,967	1,554	1,440	1,680	368	-	47,367
Net patient service revenue less provisions for bad debts	-	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	1,697	453	(11,640)	148,946
Net assets released from restrictions	658	11,984	620	52	44	103	-	-	13,461
Total unrestricted 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	8,684	15,772	1,004	981	223	975	65	(8,882)	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
Non-operating (losses) gains									
Investment (losses) gains	(26)	35,177	1,954	1,097	787	203	1,393	(198)	40,387
Other, net	(1,364)	(2,599)	(3)	1,278	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 (losses) gains, 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
Unrestricted net assets									
Net assets released from restrictions (Note 7)	-	16,058	-	4	251	-	-	-	16,313
Change in funded status of pension and other postretirement benefits	-	4,300	2,627	-	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 in unrestricted net assets	$ 7,392	$ 77,823	$ 4,311	$ 486	$ 4,445	$ 2,066	$ 2,653	$ (21)	$ 99,155

Dartmouth-Hitchcock Health and Subsidiaries
Consolidating Statements of Operations and Changes in Unrestricted Net Assets
Year Ended June 30, 2017

(in thousands of dollars)	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
Unrestricted revenue and other support									
Net patient service revenue, net of contractual allowances and discounts	$ 1,447,961	$ 214,265	$ 59,928	$ 48,072	$ (19)	$ 1,770,207	$ 88,985	$ -	$ 1,859,192
Provisions for bad debts	42,963	14,125	2,010	1,705	-	60,803	2,842	-	63,645
Net patient service revenue less provisions for bad debts	1,404,998	200,140	57,918	46,367	(19)	1,709,404	86,143	-	1,795,547
Contracted revenue	88,620	-	-	1,881	(41,771)	48,710	(4,995)	(44)	43,671
Other operating revenue	104,611	3,045	3,839	1,592	(1,148)	111,939	6,418	820	119,177
Net assets released from restrictions	9,550	639	116	61	-	10,366	756	-	11,122
Total unrestricted revenue and other support	1,607,779	203,824	61,873	49,881	(42,938)	1,880,419	88,322	776	1,969,517
Operating expenses									
Salaries	787,644	102,769	30,311	23,549	(21,784)	922,489	42,327	1,536	966,352
Employee benefits	202,178	26,632	7,071	5,523	(5,322)	236,082	8,392	381	244,855
Medical supplies and medications	257,100	30,692	6,143	2,905	(273)	296,567	9,513	-	306,080
Purchased services and other	208,671	28,068	12,795	13,224	(17,325)	245,433	45,331	(959)	289,805
Medicaid enhancement tax	50,118	7,800	2,923	1,620	-	62,461	2,608	-	65,069
Depreciation and amortization	66,067	10,238	3,881	2,138	-	82,324	2,238	-	84,562
Interest	17,352	1,127	819	249	(209)	19,338	500	-	19,838
Total operating expenses	1,589,130	207,326	63,943	49,208	(44,913)	1,864,694	110,909	958	1,976,561
Operating margin (loss)	18,649	(3,502)	(2,070)	673	1,975	15,725	(22,587)	(182)	(7,044)
Non-operating gains (losses)									
Investment gains (losses)	42,484	1,378	1,570	884	(209)	46,207	4,849	-	51,056
Other, net	(3,003)	-	(879)	570	(1,787)	(5,079)	740	186	(4,153)
Contribution revenue from acquisition	-	-	-	-	-	-	20,215	-	20,215
Total non-operating gains (losses), net	39,481	1,378	691	1,554	(1,976)	41,128	25,804	186	67,118
Excess (deficiency) of revenue over expenses	58,130	(2,124)	(1,379)	2,227	(1)	56,853	3,217	4	60,074
Unrestricted net assets									
Net assets released from restrictions (Note 7)	983	-	9	442	-	1,434	405	-	1,839
Change in funded status of pension and other postretirement benefits	(5,297)	4,031	-	(321)	-	(1,587)	-	-	(1,587)
Net assets transferred (from) to affiliates	(18,380)	900	143	986	-	(16,351)	16,351	-	-
Additional paid in capital	-	-	-	-	-	-	6,359	(6,359)	-
Other changes in net assets	-	-	-	(2,286)	-	(2,286)	(1,078)	-	(3,364)
Change in fair value on interest rate swaps	6,418	-	1,337	47	-	7,802	-	-	7,802
Increase in unrestricted net assets	$ 41,854	$ 2,807	$ 110	$ 1,095	$ (1)	$ 45,865	$ 25,254	$ (6,355)	$ 64,764

Dartmouth-Hitchcock Health and Subsidiaries
Consolidating Statements of Operations and Changes in Unrestricted Net Assets
Year Ended June 30, 2017

(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
Unrestricted revenue and other support									
Net patient service revenue, net of contractual allowances and discounts	$ -	$ 1,447,961	$ 214,265	$ 59,928	$ 48,072	$ 65,835	$ 23,150	$ (19)	$ 1,859,192
Provisions for bad debts	-	42,963	14,125	2,010	1,705	2,275	567	-	63,645
Net patient service revenue less provisions for bad debts	-	1,404,998	200,140	57,918	46,367	63,560	22,583	(19)	1,795,547
Contracted revenue	(5,802)	89,427	-	-	1,861	-	-	(41,815)	43,671
Other operating revenue	873	106,775	3,264	3,837	3,038	1,537	381	(328)	119,177
Net assets released from restrictions	-	10,200	639	116	61	106	-	-	11,122
Total unrestricted revenue and other support	(5,129)	1,611,400	204,043	61,871	51,327	65,203	22,964	(42,162)	1,969,517
Operating expenses									
Salaries	1,009	787,644	102,769	30,311	24,273	29,397	11,197	(20,248)	966,352
Employee benefits	293	202,178	26,832	7,071	5,686	5,532	2,404	(4,941)	244,855
Medical supplies and medications	-	257,100	30,692	6,143	2,905	7,760	1,753	(273)	306,080
Purchased services and other	16,021	212,414	29,902	12,653	13,626	16,564	6,907	(18,282)	289,805
Medicaid enhancement tax	-	50,118	7,800	2,923	1,620	2,608	-	-	65,069
Depreciation and amortization	26	66,067	10,396	3,886	2,242	1,532	413	-	84,562
Interest	-	17,352	1,127	819	249	487	33	(209)	19,838
Total operating expenses	17,349	1,592,873	209,318	63,806	50,601	63,860	22,707	(43,953)	1,976,561
Operating (loss) margin	(22,478)	18,527	(5,275)	(1,935)	726	1,343	257	1,791	(7,044)
Non-operating gains (losses)									
Investment (losses) gains	(321)	44,746	2,124	1,516	1,045	439	1,716	(209)	51,056
Other, net	-	(3,003)	-	(879)	581	(161)	888	(1,579)	(4,153)
Contribution revenue from acquisition	20,215	-	-	-	-	-	-	-	20,215
Total non-operating gains, net	19,894	41,743	2,124	637	1,626	278	2,604	(1,788)	67,118
(Deficiency) excess of revenue over expenses	(2,584)	60,270	(3,151)	(1,298)	2,352	1,621	2,861	3	60,074
Unrestricted net assets									
Net assets released from restrictions (Note 7)	-	1,075	-	9	442	158	155	-	1,839
Change in funded status of pension and other postretirement benefits	-	(5,297)	4,031	-	(321)	-	-	-	(1,587)
Net assets transferred (from) to affiliates	(3,864)	(18,380)	900	143	986	-	20,215	-	-
Additional paid in capital	6,359	-	-	-	-	-	-	(6,359)	-
Other changes in net assets	-	-	-	-	(2,286)	(1,078)	-		(3,364)
Change in fair value on interest rate swaps	-	6,418	-	1,337	47		-	-	7,802
(Decrease) increase in unrestricted net assets	$ (89)	$ 44,086	$ 1,780	$ 191	$ 1,220	$ 701	$ 23,231	$ (6,356)	$ 64,764

Dartmouth-Hitchcock Health and Subsidiaries
Notes to Supplemental Consolidating Information
June 30, 2018 and 2017

1. Basis of Presentation

The accompanying supplemental consolidating information includes the consolidating balance sheet and the consolidating statement of operations and changes in unrestricted net assets of D-HH and subsidiaries. All intercompany accounts and transactions between D-HH and 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.

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

BOARDS OF TRUSTEES AND OFFICERS
Effective: January 1, 2019

Jocelyn D. Chertoff, MD, MS, FACR MHMH/DHC (Clinical Chair/Center Director) Trustee *Chair, Dept. of Radiology*	**Robert A. Oden, Jr., PhD** MHMH/DHC/D-HH Trustee *Retired President, Carleton College*
Duane A. Compton, PhD MHMH/DHC/D-HH Trustee *Ex-Officio: Dean, Geisel School of Medicine at Dartmouth*	**Charles G. Plimpton, MBA** MHMH/DHC/D-HH Boards' Treasurer & Secretary *Retired Investment Banker*
William J. Conaty MHMH/DHC/D-HH Trustee *President, Conaty Consulting, LLC*	**Kurt K. Rhynhart, MD, FACS** MHMH/DHC (D-H Lebanon Physician Trustee Representative) Trustee *DHMC Trauma Medical Director and Divisional Chief of Trauma and Acute Care Surgery*
Joanne M. Conroy, MD MHMH/DHC/D-HH Trustee *Ex-Officio: CEO & President, D-H/D-HH*	**Kari M. Rosenkranz, MD** MHMH/DHC (Lebanon Physician) Trustee *Associate Professor of Surgery; Medical Director, Comprehensive Breast Program; and Vice Chair for Education, Department of Surgery*
Vincent S. Conti, MHA MHMH/DHC/D-HH Boards' Chair *Retired President & CEO, Maine Medical Center*	**Edward Howe Stansfield, III, MA** MHMH/DHC/D-HH Boards' Vice Chair *Senior VP, Resident Director for the Hanover, NH Bank of America/Merrill Lynch Office*
Paul P. Danos, PhD MHMH/DHC/D-HH Trustee *Dean Emeritus; Laurence F. Whittemore Professor of Business Administration, Tuck School of Business at Dartmouth*	**Pamela Austin Thompson, MS, RN, CENP, FAAN** MHMH/DHC/D-HH Trustee *Chief executive officer emeritus of the American Organization of Nurse Executives (AONE)*
Senator Judd A. Gregg MHMH/DHC Trustee *Senior Advisor to SIFMA*	**Jon W. Wahrenberger, MD, FAHA, FACC** MHMH/DHC (Lebanon Physician) Trustee *Clinical Cardiologist, Cardiovascular Medicine*
Cherie A. Holmes, MD, MSc MHMH/DHC/(Community Group Practice) Trustee *Medical Director, Acute Care Services, D-H Keene/Cheshire Medical Center*	**Marc B. Wolpow, JD, MBA** MHMH/DHC/D-HH Trustee *Co-Chief Executive Officer of Audax Group*
Laura K. Landy, MBA MHMH/DHC/D-HH Trustee *President and CEO of the Fannie E. Rippel Foundation*	**Steven "Steve" A. Paris, MD** D-HH Trustee (NOT a D-H Trustee) *Regional Medical Director, Community Group Practices (CGPs)*

Curriculum Vitae

Date Prepared: December 10, 2018

Name: Kelly Anne Aschbrenner

Office Address: 294 Daniel Webster Highway
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Nashua, NH 03064

Work Phone: 603-440-7541

Work Email: Kelly.aschbrenner@dartmouth.edu

Place of Birth: St. Louis, MO

Education:

1996-2000	BA	Communication/Psychology	Maryville University
2000-2002	AM	Clinical Social Work	University of Chicago
2002-2007	PhD	Social Welfare (Advisor: Dr. Jan Greenberg)	University of Wisconsin

Postdoctoral Training:

10/07-6/09	Research Fellow	Health Services Research (Advisors: Drs. Vincent Mor, Susan Allen, David Grabowski)	Brown University

Faculty Academic Appointments:

01/09-6/09	Instructor	Social Work	Boston College
06/09-06/10	Research Associate	Psychiatry	Geisel School of Medicine at Dartmouth College
07/10 –	Assistant Professor	Psychiatry	Geisel School of Medicine at Dartmouth College
2012 –	Adjust Assistant Professor	The Dartmouth Institute for Health Policy & Clinical Practice	Dartmouth College

Appointments at Hospitals/Affiliated Institutions:

07/16 –	Scientist	Psychiatry	Dartmouth-Hitchcock Health System

Committee Service:

Local

2014-2016	Committee for the Protection of Human Subjects	NH Department of Health and Human Services, Reviewer
2015-2018	Community Engaged Research Advisory Board	Dartmouth Clinical and Translational Sciences Institute, Member

Professional Societies:

2002-2014	Society for Social Work and Research	Member
2013 –	Mixed Methods Research Association	Member
2014 –	Society of Behavioral Medicine	Member, Abstract Selection Committee
2018 –	Society for Implementation Research Collaboration	Member

Grant Review Activities:

2015	Dartmouth SYNERGY Clinical and Translational Sciences Institute Pilot Awards	Geisel School of Medicine at Dartmouth College, Member
2016	Mental Health Services Research Committee (SERV)	NIMH, Ad hoc Member
2017	Effectiveness Trials for Treatment, Preventive, and Services Interventions	NIMH, Ad hoc Member
2017	Pilot Effectiveness Trials for Treatment, Preventive, and Services Interventions	NIMH, Ad hoc Member
2018	Gary Tucker Junior Investigator Award	Geisel School of Medicine at Dartmouth College, Member
2018	Biomedical Computing and Healthcare Informatics	NIH, Ad hoc Member
2018	Pilot Effectiveness Trials for Treatment, Preventive, and Services Interventions	NIMH, Ad hoc Member
2018	Early Psychosis Intervention Network (EPINET): Practice-Based Research to Improve Treatment Outcomes (R01s) and Data Coordinating Centers (U24s)	NIMH, Ad hoc Member

Editorial Activities:

Ad hoc Reviewer

Administration and Policy in Mental Health and Health
American Journal of Geriatric Psychiatry
BMC Health Services Research
BMC Psychiatry
Digital Health
Health Services & Outcomes Research
Health & Social Work
Implementation Science
International Journal of Geriatric Psychiatry
International Journal of Medical Informatics
Journal of Dual Diagnosis
Journal of HIV/AIDS & Social Services
Journal of Mental Health
Journal of Nervous and Mental Disease
Journal of the American Geriatrics Society
Journal of the American Medical Directors Association
PLoS ONE
Psychiatric Rehabilitation Journal
Psychiatric Research
Psychiatric Services
Social Psychiatry and Psychiatric Epidemiology

Social Work in Mental Health
The Lancet Psychiatry
Translational Behavioral Medicine: Practice, Policy, and Research

Honors and Prizes:

2010	Gary Tucker Junior Clinical Investigator Award	Geisel School of Medicine at Dartmouth	Research
2010	Student Loan Repayment Award for Clinical Investigators	National Institutes of Health	Research
2012	NARSAD Young Investigator Award	Brain & Behavioral Research Foundation	Research

Report of Funded and Unfunded Projects

Funding Information:

Past

2009-2015 Statewide Intervention to Reduce Early Mortality in Persons with Mental Illness
NIH/NIMH R01MH089811
Co-Investigator (PI: Stephen Bartels), $2,147,444 total direct costs
The major goal of this study was to evaluate the statewide implementation of a lifestyle intervention for adults with serious mental illness in community mental health centers.

2010-2012 Social Support for Addressing Cardiometabolic Risk in Persons with Serious Mental Illness
Department of Psychiatry, Geisel School of Medicine at Dartmouth
Principal Investigator, $30,000 total direct costs
The goal of this mixed methods study was to explore the role that family members and peers play in health behaviors among adults with serious mental illness.

2012-2015 Social Support for Health Promotion in Persons with Serious Mental Illness
Brain & Behavior Research Foundation (NARSAD)
Principal Investigator, $60,000 total direct costs
The goal of this pilot study was to assess the feasibility of harnessing social support for individuals with serious mental illness enrolled in a lifestyle intervention.

2015-2016 Translating Basic Social Network Science Discoveries to Enhance Interventions to Promote Smoking Cessation Among Adults with Serious Mental Illness
Dartmouth SYNERGY Clinical and Translational Science Institute
Principal Investigator, $30,000 total direct costs
The goal of this project was to explore the influence of social networks on smoking and smoking cessation among individuals with serious mental illness.

2016-2018 Administrative Supplement to RCT of a Learning Collaborative to Implement Health Promotion in Mental
NIH/NIMH R01MH102325
Co-Investigator, $107,905 total direct costs
The goal of this project is to develop and refine methods for studying adaptations to an evidence-based health promotion practice implemented in community mental health.

Current

2014-2019 RCT of a Learning Collaborative to Implement Health Promotion in Mental Health
NIH/NIMH R01MH102325
Co-Investigator (PI: Stephen Bartels), $2,332,241 total direct costs
The overarching goal of this study is to evaluate the effectiveness of a Virtual Learning Collaborative in the initial implementation of a new evidence-based practice in routine mental health settings, compared to typical implementation consisting of training with limited follow-up Technical Assistance.

2014-2019 Statewide Integrated Health Promotion to Decrease Obesity and Smoking in Community Mental Health Settings (Core Research Project for CDC Health Promotion Research Center at Dartmouth)
1U48DP005018
Co-Principal Investigator, $2,834,432 total direct costs
The goal of this mixed methods study is to explore the personal and social factors that influence long-term obesity and smoking outcomes among individuals with serious mental illness enrolled in health promotion programs at community mental health centers.

2016-2020 Peer Support and Mobile Technology Targeting Cardiometabolic Risk Reduction in Young Adults with SMI
NIH/NIMH R01MH110965
Principal Investigator, $1,425,041 total direct costs
The goal of this study is to evaluate the effectiveness of a of a group lifestyle intervention (PeerFIT) enhanced with digital health technology compared to one-on-one mobile lifestyle coaching in achieving clinically significant weight loss and improved fitness in young adults ages 18 to 35 with serious mental illness.

2018-2019 Developing a Mobile Lifestyle Coaching Intervention to Promote Physical Activity and Wellness in Youth with Serious Emotional Disorders
Hitchcock Foundation
Principal Investigator, $30,000
The goal of this pilot study is to develop and evaluate a mobile lifestyle coaching program for adolescents with serious emotional disorders in community mental health centers.

2018-2023 Integrated Physical and Mental Health Self-management Compared to Chronic Disease Self-Management in Persons with SMI
Patient Centered Outcomes Institute (PCORI)
Co-Investigator, $7,552,810 total direct costs
The goal of this study is to compare the effectiveness of Integrated-Illness Management and Recovery to the Chronic Disease Self-Management Program for improving illness self-management among persons with serious mental illness.

Projects Submitted for Funding

2019-2022 Development of a Social Support Intervention to Link Adults with Serious Mental Illness to Smoking Cessation Treatment
National Institute of Mental Health
Principal Investigator, $450,000 total direct costs
The goal of this project is the evaluate the feasibility of a support partner intervention to help adults with serious mental illness access and use smoking cessation treatment

2019-2020 Development and Evaluation of a Technology-based Intervention to Promote Wellness Among Adolescents in Community Mental Health
University of Wisconsin

Principal Investigator, $200,000 (submission date 1/7/19)
The goal of this project is to develop and pilot test technology-based intervention (MyFIT) that uses a popular mobile app and social media to facilitate wellness coaching and peer-to-peer and parent/caregiver support to promote wellness among adolescents ages 13-18 with depression and anxiety in community mental health treatment.

Unfunded Current Projects

2018 – Development and Implementation of a Peer Support Lifestyle Intervention for Adults with Serious Mental Illness in Assertive Community Treatment
Principal Investigator
The overall goal of this research is to adapt and evaluate a group-based lifestyle intervention for persons with serious mental illness who receive assertive community treatment in a community mental health center.

Report of Local Teaching and Training

Teaching of Students in Courses:

2003	Interpersonal Skills Development Graduate social work students	University of Wisconsin – Madison 3-hr sessions per week for 12 wks
2004	Social Work Research Methods Graduate social work students	University of Wisconsin – Madison 4-hr sessions per week for 12 wks
2004	History of Social Work Undergraduate social work students	University of Wisconsin – Madison 2-hr sessions per week for 12 wks
2009	Social Work Research Methods Graduate social work students	Boston College 2-hr sessions per week for 12 wks
2015	Mixed Methods Research Psychological Anthropology Undergraduate students	Dartmouth College Two-hour guest lecture

Formal Teaching of Residents, Clinical Fellows and Research Fellows (post-docs):

2018	Mixed Methods Research in Health Care Leadership Preventive Medicine Residency	Dartmouth-Hitchcock Health System One hour lecture

Laboratory and Other Research Supervisory Training Responsibilities:

2013-2018	Supervision of medical student research fellow/Geisel School of Medicine	One hour research team meeting per week and 1:1 supervision per week
2013-2018	Supervision of doctoral student research fellow/Geisel School of Medicine	One hour research team meeting per week and 1:1 supervision per week

Formally Mentored Medical and Graduate Students:

2012-2013 Stephanie Rolin, MD, Geisel School of Medicine at Dartmouth
Completed research fellowship with our group. Published a manuscript titled, "Characteristics and service use of older adults with schizophrenia and bipolar disorder" in the American Journal of Geriatric Psychiatry.

2013-2017 John Naslund, PhD, MPH, Geisel School of Medicine at Dartmouth
Completed doctoral thesis with our group. I served on Dr. Naslund's dissertation committee. Co-authored over 35 manuscripts with Dr. Naslund since 2012.

Local Invited Presentations:

No presentations below were sponsored by outside entities

2013	Mixed Methods for Health Services Research/Health Policy Fellow Brown Bag The Dartmouth Institute for Health Policy & Clinical Practice
2015	Social Networks and Health Behavior Change Interventions/Weekly seminar series Dartmouth Psychiatric Research Center
2017	Partnering with NAMI to Develop and Test a Support Person Intervention to Promote Smoking Cessation/Weekly seminar series Dartmouth Behavioral Health Research Seminar
2018	Translating Social Network Science to Inform Smoking Cessation Interventions for Persons with Mental Illness/Grand Rounds Norris Cotton Cancer Center, Geisel School of Medicine at Dartmouth College
2018	Early Intervention with Mobile Health Coaching and Peer Support to Address Health Risks Among Young People with Serious Mental Illness/Grand Rounds Department of Psychiatry, Geisel School of Medicine at Dartmouth College
2018	Intervention Adaptation in Implementation Science/Monthly seminar series Dartmouth Implementation Science Seminar
2018	Treating Tobacco Use Disorder Among Young People with SMI in an Integrated Community Mental Health Primary Care Program Dartmouth Behavioral Health Research Seminar

Report of Regional, National and International Invited Teaching and Presentations

No presentations below were sponsored by outside entities

Regional

2012	Innovative Approaches to Health Behavior Change in Psychiatric Disabilities Massachusetts Department of Mental Health annual meeting Boston, MA
2013	Peer Enhanced Model of Health Promotion in SMI Boston University Center for Psychiatric Rehabilitation seminar series Boston, MA
2014	Family and Social Support for Health Promotion National Alliance on Mental Illness annual meeting Concord, NH
2017	Lifestyle Interventions for Young Adults with SMI Department of Psychiatry, Harvard Medical School grand rounds Boston, MA
2018	Using Peer Support, Digital Technology, and Social Media to Improve the Health of Young Adults with Serious Mental Illness University of Connecticut School of Social Work Hartford, CT
2018	Health Promotion with Peer Support and Technology for Persons with Serious Mental Illness in Mental Health Settings State of Connecticut Department of Mental Health and Addiction Services Hartford, CT

National

2008	Parenting an Adult Child with Bipolar Disorder in Later Life (selected oral abstract) Society for Social Work and Research annual meeting Washington D.C
2011	In SHAPE: RCT of a Fitness Intervention for People with SMI (selected oral abstract) Society for Social Work and Research annual meeting Tampa, FL
2011	Family Contact and Health Status Among Older Adults with SMI (selected oral abstract) Society for Social Work and Research annual meeting Tampa, FL
2012	Family Support for Health Promotion Among Older Adults with SMI Grand Rounds – U.S. Department of Veterans Affairs Houston, Texas
2013	Social Influences on Health Behaviors in SMI Columbia University Department of Psychiatry New York, NY
2013	Social Support for Health Behavior Change Among Adults with SMI Enrolled in a Healthy Lifestyle Intervention (selected oral abstract) Society for Social Work and Research annual meeting San Diego, CA
2014	Partner Support for Smoking Cessation in People with SMI Mayo Clinic Department of Psychology Rochester, MN
2014	The Other 23 Hours: Fitness Provider Perspectives on Engaging Support for Health Behavior Change for Persons with SMI (selected oral abstract) Society for Social Work and Research annual meeting San Antonio, TX
2014	Feasibility a Peer and Technology Enhanced Health Promotion Intervention for Overweight and Obese Individuals with SMI (selected oral abstract) NIMH Conference on Mental Health Services Research Bethesda, MD
2014	Peer and Mobile Technology Enhanced Health Promotion for Adults with SMI Science of Dissemination and Implementation annual meeting (selected oral abstract) Bethesda, MD
2015	Implementing Evidence-based Health Promotion in Mental Health National Council for Behavioral Health annual meeting Orlando, FL
2016	Using mHealth to Address Health Behaviors in High-risk Populations: Challenges and Opportunities to Advance a Research Agenda (panel chair) Society of Behavioral Medicine annual meeting Washington, DC

International

2014	Feasibility of Family-based Intervention to Address Health Disparities in SMI International Mixed Methods International Research Association (selected oral abstract) Boston, MA

Report of Scholarship

Peer-Reviewed Scholarship in print or other media:

Research Investigations

1. Greenberg JS, Knudsen KJ, and **Aschbrenner KA.** Prosocial family processes and the quality of life of persons with schizophrenia. Psychiatr Serv. 2006 Dec;57(12):1771-7. PMID:17158493

2. Grabowski DC, **Aschbrenner KA**, Zeng F, and Mor V. Mental illness in nursing homes: Variations across states. Health Aff (Millwood). 2009 May-Jun;28(3):689-700. PMID:19414877

3. **Aschbrenner KA**, Greenberg J, and Seltzer MM. Parenting an adult child with bipolar disorder in later-life. J Nerv Ment Dis. 2009 May;197(5):298-304. PMID:19440101

4. Grabowski DC, **Aschbrenner KA**, Rome VF, and Bartels SJ. Quality of mental health care for nursing home residents: A literature review. Med Care Res Rev 2010 Dec;67(6):627-56. PMID:20223943

5. **Aschbrenner KA**, Greenberg JS, Allen SM, and Seltzer MM. Factors associated with subjective burden and personal gains among older parents of adults with serious mental illness. Psychiatr Serv 2010 Jun;61(6): 605-11. PMID: 20513684

6. **Aschbrenner KA**, Mueser KT, Bartels SJ, and Pratt SI. Family contact and its relationship to health functioning among older adults with serious mental illness. Psychiatr Rehabil J. 2011 Spring;34(4):295-303. PMID:21459745

7. **Aschbrenner KA,** Grabowski DC, Cai S, Bartels SJ, and Mor V. Nursing home admissions and long-stay conversions among persons with and without serious mental illness. J Aging and Soc Policy. 2011 Jul-Sep;23(3):286-304. PMID: 21740203

8. **Aschbrenner KA**, Cai S, Grabowski DC, Bartels SJ, and Mor V. Medical comorbidity and functional status in elderly vs. non-elderly persons with major mental illness newly admitted to nursing homes. Psychiatr Serv. 2011 Sep;62(9):1098-100. PMID:21885592

9. **Aschbrenner KA**, Carpenter-Song E, Mueser KT, Kinney A, Pratt S., and Bartels SJ. A qualitative study of social facilitators and barriers to health behavior change among persons with serious mental illness. Community Ment Health J. 2013 Apr;49(2):207-12. PMID:23054155

10. **Aschbrenner KA**, Bartels SJ, Mueser KT, Carpenter-Song E. and Kinney A. Consumer perspectives on involving family members and significant others in a healthy lifestyle intervention. Health Soc Work 2012 Nov;37(4):207-215. PMID: 23301434

11. **Aschbrenner KA**, Mueser KT, Bartels SJ, Pratt SI. (2013). Perceived social support for diet and exercise among persons with serious mental illness enrolled in a healthy lifestyle intervention. Psychiatr Rehab J. 2013 Jun;36(2):65-71. PMID:23647144

12. Bartels SJ, Pratt SI, **Aschbrenner KA,** Barre LK, Jue K, Wolfe RS, Xie H, McHugo GJ, Santos M, Williams GE, Naslund JA, and Mueser KT. Clinically significant improved fitness and weight loss among overweight persons with serious mental illness. Psychiatr Serv. 2013 Aug 1;64(8):729-736. PMID:23677386

13. Bartels SJ, Pratt SI, Mueser KT, Forester B, Wolfe RS, Cather C, Xie H, McHugo GJ, Bird B, **Aschbrenner KA,** and Naslund JA. Long-term outcomes of a randomized trial of integrated skills training and preventive health care for older adults with serious mental illness. Am J Geriatr Psychiatry. 2014 Nov;22(11):1251-61. PMID:23954039

14. Bartels SJ, **Aschbrenner KA,** Rolin S, Cimpean D, Naslund JA, and Faber M. Activating older

adults with serious mental illness for collaborative primary care visits. Psychiatr Rehabil J. 2013 Dec;36(4):278-88. PMID: 24219769

15. Naslund JA, Grande SW, **Aschbrenner KA**, and Elwyn G. Naturally occurring peer support through social media: the experiences of individuals with severe mental illness using YouTube. PLoS One. 2014 Oct 15;9(10):e110171. PMID: 25333470

16. **Aschbrenner KA**, Peppin R, Mueser KT, Naslund JA, Rolin SA, Faber MJ, and Bartels SJ. A mixed methods study of family involvement in medical care for older adults with serious mental illness and cardiovascular health risk. Int J of Psychiatry Med. 2014;48(2):121-33. PMID: 25377153

17. **Aschbrenner KA**, Ferron JC, Mueser KT, Bartels SJ, and Brunette MF. Social predictors of cessation treatment use among smokers with serious mental illness. Addict Behav. 2015 Feb;41:169-74. PMID: 25452062

18. Naslund JA, **Aschbrenner KA**, Barre LK, and Bartels SJ. Feasibility of popular mHealth technologies for activity tracking among individuals with serious mental illness. Telemed J E Health. 2015 Mar;21(3):213-6. PMID: 25536190

19. Jimenez DE, **Aschbrenner KA**, Burrows K, Pratt SI, Alegria M, and Bartels SJ. Perspectives of overweight Latinos with serious mental illness on barriers and facilitators to health behavior change. J Lat Psychol. 2015 Feb;3(1):11-22. PMID: 25664227

20. Bartels SJ, Pratt SI, **Aschbrenner KA**, Naslund JA, Barre LK, Wolfe R, Xie H, McHugo GJ, Jimenez DE, Jue K, Feldman J, Bird BL. Pragmatic randomized trial of health promotion coaching for obesity in serious mental illness and maintenance of outcomes. Am J Psychiatry. 2015 Apr;172(4):344-52. PMID: 25827032

21. **Aschbrenner KA**, Mueser KT, Bartels SJ, Carpeter-Song E., Pratt SI, Barre L, Naslund J, and Kinney A. The other 23 hours: A qualitative study of fitness provider perspectives on social support for health behavior change among adults with serious mental illness. Health Soc Work. 2015 May;40(2):91-9. PMID: 26027417

22. **Aschbrenner KA**, Brunette MF, McElvery R, Naslund JA, Scherer EA, Pratt SI, and Bartels SJ. Cigarette smoking and interest in quitting among overweight and obese adults with serious mental illness enrolled in a fitness intervention. J Nerv Ment Dis. 2015 Jun;203(6):473-6. PMID: 26034872

23. Naslund, JA, **Aschbrenner KA**. McHugo G, Marsch L, and Bartels SJ. Crowdsourcing for conducting randomized trials of internet delivered interventions in people with serious mental illness: A systematic review. Contemp Clin Trials. 2015 Sep;44:77-88. PMID: 26188164

24. **Aschbrenner KA**, Naslund JA, Barre LK, Mueser KT, Kinney A, and Bartels SJ. Peer health coaching for overweight and obese individuals with serious mental illness: Intervention development and initial feasibility study. Transl Behav Med. 2015 Sep;5(3):277-84. PMID: 26327933

25. Naslund JA, **Aschbrenner KA**, Scherer EA, Pratt SI, Wolfe R, and Bartels SJ. Lifestyle intervention for people with severe obesity and serious mental illness. Am J Prev Med. 2016 Feb;50(2):145-53. PMID: 26385164

26. Naslund JA, **Aschbrenner KA**, Pratt SI, and Bartels SJ. Comparison of people with serious mental illness and general population samples enrolled in lifestyle interventions for weight loss. Schizophr Res. 2015 Dec;169(1-3):486-488. PMID: 26427918

27. **Aschbrenner KA**, Naslund JA, Shevenell MD, Mueser KT, and Bartels SJ. Feasibility of behavioral weight loss treatment enhanced with peer support and mobile health technology for

individuals with serious mental illness. Psychiatr Q. 2016;87(3):401-15. PMID: 26462674

28. Naslund JA, **Aschbrenner KA,** and Marsch L, Bartels SJ. The future of mental health care: Peer-to-peer support and social media. Epidemiol and Psychiatr Sci. 2016 April;25(2):113-22. PMID: 26744309

29. **Aschbrenner KA,** Naslund JA, Gill LE, Bartels SJ, and Ben-Zeev D. A qualitative study of client-clinician text exchanges in a mobile health intervention for individuals with psychotic disorders and substance use. J Dual Diagn. 2016;12(1):63-71. PMID: 26829356

30. Jimenez DE, Burrows K, **Aschbrenner KA**, Pratt SI, Alegria M, and Bartels SJ. Health behavior change benefits: Perspectives of Latinos with serious mental illness. Transcult Psychiatry. 2016 June;53(3):313-29. PMID: 26873582

31. Naslund JA, **Aschbrenner KA,** and Bartels SJ. Wearable devices and smartphones for activity tracking among people with serious mental illness. Ment Health and Phys Act. 2016 Mar;10:10-17. PMID: 27134654

32. **Aschbrenner KA**, Naslund JA, Shevenell M, Kinney E, and Bartels SJ. A pilot study of a peer-group lifestyle intervention enhanced with mHealth technology and social media for adults with serious mental illness. J Nerv Ment Dis. 2016 June;204(6): 483-6. PMID: 27233056

33. Ben-Zeev D, Brian RM, **Aschbrenner KA**, Jonathan G, Steingard S. Video-based mHealth interventions for schizophrenia: Bringing the "pocket therapist" to life. Psychiatr Rehabil J. 2016 June 13. [Epub ahead of print]. PMID: 27295133

34. **Aschbrenner KA,** Mueser KT, Naslund JA, Gorin A, Kinney A, Daniels L, and Bartels SJ. Feasibility study of increasing social support to enhance a lifestyle intervention for individuals with serious mental illness. J Soc Social Work Res. 2016 Summer;7(2):289-313

35. Naslund JA, **Aschbrenner KA,** and Bartels SJ. Wearable devices and mobile technologies for supporting behavioral weight loss among people with serious mental illness. Psychiatry Res. 2016 Oct 30;244:139-44. PMID: 27479104

36. **Aschbrenner KA**, Naslund JA, and Bartels SJ. A mixed methods study of peer-to-peer support in a group-based lifestyle intervention for adults with serious mental illness. Psychiatr Rehabil J. 2016 Dec;39(4):328-334. PMID: 27560454

37. Naslund JA, **Aschbrenner KA,** and Bartels SJ. How people living with serious mental illness use smartphones, mobile apps, and social media. Psychiatr Rehab J. 2016 Dec;88(4):364-67. PMID: 27845533

38. Naslund JA, **Aschbrenner KA,** Marsch L, and Bartels SJ. Feasibility and acceptability of Facebook for health promotion among people with serious mental illness. Digital Health. 2016 Nov; 2 Epub Jun 1. PMID: 28367321

39. Naslund JA, **Aschbrenner KA,** Scherer EA, Pratt SI, and Bartels SJ. Health promotion for young adults with serious mental illness. Psychiatr Serv. 2017 Feb1;68(2):137-143. PMID: 27799016

40. **Aschbrenner KA**, Naslund JA, Gill L, Bartels SJ, O'Malley AJ, and Brunette MF. Preferences for smoking cessation support from family and friends among adults with serious mental illness. Psychiatr Q. 2017 Dec;88(4):701-710. PMID: 28091796

41. **Aschbrenner KA,** Mueser KT, Naslund JA, Gorin AA, Zawacki SA, Pratt SI, Kinney A and Bartels

SJ. Facilitating partner support for lifestyle change among adults with serious mental illness: A feasibility pilot study. Community Ment Health J. 2017 May;53(4): 394-404. PMID: 28176207

42. Naslund JA, **Aschbrenner KA,** Kim SJ, McHugo GJ, Unützer J, Bartels SJ and Marsch LA. Health behavior models for informing digital technology interventions for individuals with serious mental illness. Psychiatr Rehab J. 2017 Sep;40(3):325-335. PMID: 28182469

43. Brunette MF, **Aschbrenner KA,** Ferron JC, Ustinich L, Kelly M, and Grinley T. Use of computers and internet among people with severe mental illnesses at peer support centers. Psychiatr Rehab J. 2017 Dec;40(4):405-408. PMID: 28182473

44. Naslund JA, **Aschbrenner KA**, Pratt SI, Lohman MC, Scherer EA, McHugo GJ, Marsch LA, Unützer J, and Bartels SJ. Association between cardiovascular risk and depressive symptoms among people with serious mental illness. J Nerv Ment Dis. 2017 Aug;205(8):634-640. PMID: 28240625

45. Naslund JA, **Aschbrenner KA**, Marsch LA, McHugo GJ, and Bartels SJ. Facebook for supporting a lifestyle intervention for people with major depressive disorder, bipolar disorder, and schizophrenia: An exploratory study. Psychiatr Q. 2017 May. Epub ahead of print. PMID: 28470468

46. Rolin SA, **Aschbrenner KA**, Whiteman KL, Bartels SJ. Characteristics and service use of older adults with schizophrenia and bipolar disorder. Am J Geriatr Psychiatry 2017 Sep;25(9):941-950. PMID: 28478998

47. **Aschbrenner KA**, Dixon LB, Naslund JA, Bienvenida JC, McManus KL, Bartels SJ, and Brunette MF. A survey of family members' beliefs and attitudes about smoking and mental illness. J Dual Diagn. 2017 Jul-Sep;13(3):179-183. PMID: 28481179

48. **Aschbrenner KA**, Naslund JA, Gill L, Hughes T, O'Malley AJ, Bartels SJ, and Brunette MF. Qualitative analysis of social network influences on quitting smoking among individuals with serious mental illness. J Ment Health. 2017 Jul:1-7. Epub ahead of print. PMID: 28675331

49. Naslund JA, Whiteman K, McHugo GJ, **Aschbrenner KA**, Marsch LA, and Bartels SJ. Lifestyle interventions for weight loss among overweight and obese adults with serious mental illness: A systematic review and meta-analysis. Gen Hosp Psychiatry. 2017 Jul;47:83-102. PMID: 28807143.

50. Bartels SJ, **Aschbrenner KA,** Pratt SI, Naslund JA, Scherer EA, Zubkoff L, Cohen MJ, Williams GE, Wolfe RS, Jue K, and Brunette MF. Implementation of a Lifestyle Intervention for People with Serious Mental Illness in State-funded Mental Health Centers. Psychiatr Serv. 2018 Jun;69(6):664-670.

51. **Aschbrenner KA**, Bobak C, Schneider E, Naslund JA, Brunette MF, and O'Malley AJ. Egocentric social networks and smoking among adults with serious mental illness. Transl Behav Med. 2018 Jul;8(4):531-539.

52. **Aschbrenner KA,** Naslund JA, Grinley T, Bienvenida JCM, Bartels SJ, and Brunette MF. A Survey of Online and Mobile Technology Use at Peer Support Agencies. Psychiatr Q. 2018 Sep;89(3):539-548

53. **Aschbrenner KA**, Patten CA, and Brunette MF. Feasibility of a telephone coaching intervention for support persons to promote smoking cessation treatment utilization among smokers with mental illness. Transl Beh Med. 2018 Oct;8(5)785-792.

54. Fortuna, KL., Storm, M., Naslund, JA., **Aschbrenner, KA.**, Lohman, MC., Chow, PI., DiMilia, PR., & Bartels, SJ. Certified Peer Specialists and Older Adults with Serious Mental Illness' Perspectives of the Impact of a Peer-Delivered and Technology-Supported Self-Management Intervention. J Nerv Ment

Dis. 2018 Nov; 206(11):875-881

55. **Aschbrenner KA,** Naslund JA, Gorin AA, Mueser KT, Scherer EA, Viron M, Kinney A, & Bartels SJ. Peer Support and Mobile Health Technology Targeting Obesity-Related Cardiovascular Risk in Young Adults with Serious Mental Illness: Protocol for a Randomized Controlled Trial. Contemp Clin Trials. 2018 Nov;74:97-106.

56. Fortuna, KL, Storm, M., **Aschbrenner, KA**, & Bartels, SJ. Integration of Peer Philosophy into a Standardized Self-Management Mobile Health Intervention. Psychiatr Q. 2018 Dec;89(4):795-800.

57. Fortuna, KL, **Aschbrenner, KA**, Lohman, MC, Brooks, JC, Salzer, M, Walker, R, St. George, L., & Bartels, SJ. Smartphone Ownership, Use, and Willingness to Use Smartphones to Provide Peer-Delivered Services: Results From a National Online Survey. Psychiatr Q. 2018 Dec;89(4):947-956.

58. Naslund JA, Unutzer J, **Aschbrenner KA**, McHugo GJ, Bartels SJ. and Marsch LA. Exploring opportunities to support mental health care using social media: A survey of social media users with mental illness. Early Interv Psychiatry. Forthcoming.

59. Fortuna KL, Naslund JA, **Aschbrenner KA**, Lohman MC, Storm M., Batsis JA, Bartels SJ. Message Exchanges between Older Adults With Serious Mental Illness and Older Certified Peer Specialists in a Smartphone-Supported Self-Management Intervention. Psychiatr Rehabil J. Forthcoming.

60. Brunette MF, Ferron JC, **Aschbrenner KA,** Pratt, SI, Geiger, P, & Kosydar, S. Attitudes about smoking cessation treatment, intention to quit, and cessation treatment utilization among young adult smokers with severe mental illnesses. Addict Behav. 2019 Feb;89:248-255.

61. Naslund JA, & **Aschbrenner KA.** Digital Technology for Health Promotion: Opportunities to Address Excess Mortality in Persons Living with Severe Mental Disorders. Evidence-based Mental Health. Forthcoming.

Other peer-reviewed scholarship

1. Naslund JA, **Aschbrenner KA,** Araya R, Marsch LA, Unützer J, Patel V, and Bartels SJ. Digital technology for treating and preventing mental disorders: A review of the evidence from low-income and middle-income countries. Lancet Psychiatry. 2017 Jun;4(6):486-500. PMID:28433615.

2. Naslund JA, Kim SJ, **Aschbrenner KA**, McCulloch LJ, Brunette MF, Dallery J, Bartels SJ, and Marsch LA. Systematic review of social media interventions for smoking cessation. Addictive Behaviors. 2017 Oct;73:81-93. PMID: 28499259

Non-peer reviewed scholarship in print or other media:

Reviews, chapters, monographs and editorials

1. Gehlert S, **Kovac K**, and Song I. Rural women's mental health. In Rural women's health: Linking mental, behavioral, and physical health. Editors: R. T. Coward, L. Davis, C. H. Gold, C. H. Smiciklas-Wright, L. E. Thorndyke, & F. W. Vondracek. Publisher: New York: Springer Publishing.

2. Angell B, Cooke A, and **Kovac K**. First person accounts of stigma. In On the stigma of mental illness: Practical strategies for research and social change. Editor: Patrick W. Corrigan. Publisher: Washington, DC: American Psychological Association.

Letters to the Editor

1. **Aschbrenner KA**, Naslund JA, and Bartels SJ. Technology supported peer-to-peer lifestyle interventions for adults with serious mental illness. Psychiatr Serv. 2016 Aug;67(8):928-9. PMID: 27476896

2. **Aschbrenner KA** and Brunette MF. The Role of Peers in Health Promotion and Illness Management for Serious Mental Illness. Psychiatr Serv. 2018 May;69:5.

Thesis:

Aschbrenner KA. The Long-term Impact of Parenting an Adult Child with Severe Mental Illness. Dissertation. Madison, Wisconsin: The University of Wisconsin; 2007.

Abstracts, Poster Presentations and Exhibits Presented at Professional Meetings:

Aschbrenner KA, Greenberg JS, and Seltzer MM. "Identifying resilience and vulnerability in a community-based sample of aging parents of adults with serious mental illness", poster presentation, AHRQ National Research Service Award Trainee Conference, Washington D.C., 2008.

Aschbrenner KA, Grabowski DC, Cai S, Bartels S, and Mor, V. "Medical comorbidity and functional status in elderly vs. non-elderly persons with major mental illness newly admitted to nursing homes", poster presentation, American Association for Geriatric Psychiatry Annual Meeting, San Antonio, TX, 2011.

Aschbrenner, KA, Bartels SA, Pratt SI, Williams G, Jeudy M, and Jue K. "In SHAPE: CBPR and a Health Promotion Intervention to Reduce Early Mortality in a Health Disparity Population with Serious Mental Illness", poster presentation, Centers for Disease Control Prevention Research Centers Annual Meeting, Atlanta, GA, 2011.

Aschbrenner KA, Mueser KT, Naslund J.A Gorin A, Pratt S, and Bartels S. "Facilitating partner support to enhance health promotion in a health disparity population with serious mental illness", poster presentation, Society of Behavioral Medicine Annual Meeting, Washington, D.C., 2016.

Aschbrenner KA, Schneider E, Naslund JA, Brunette MF, and O'Malley AJ. "Smoking in the social networks of adults with serious mental illness enrolled in cessation treatment at mental health centers", poster presentation, Society of Behavioral Medicine Annual Meeting, San Diego, CA, 2017.

Aschbrenner KA, Naslund JA, Bienvenida JCM, Bartels SJ, and Brunette MF. "A Survey of Online and Mobile Technology Use at Peer Support Agencies", poster presentation, McLean Hospital Technology in Psychiatry Summit, Harvard Medical School, Boston, MA, 2017.

Aschbrenner KA, Bond G, Pratt S, Williams G, Jue K, and Bartels SJ. "Adaptations to Health Promotion Programs in Mental Health Settings", poster presentation, Annual Conference on the Science of Dissemination and Implementation in Health, Washington, D.C., 2017.

Aschbrenner, KA, Tomlinson, EF, Shea, K., Kinney, A., Nikitas, Z., Gorin, A., & Bartels, SJ. An mHealth Coach Facilitated Peer Intervention to Promote Physical Activity Among Adolescents in Community Mental Health: Pilot Design and Implementation. UConn Center for mHealth and Social Media, Storrs CT. May 2018.

Narrative Report

I lead an innovative program of locally, regionally and nationally funded research that has had a significant impact on the field of mental health by generating new strategies for adressing social determinants of health risk behaviors that have been intractable in vulnerable populations to date. My work focuses on developing and evaluating interventions that address social influences on health behavior change, including peer support and family relationships, in vulnerable groups, particularly among persons with serious mental illness (e.g., schizophrenia, bipolar disorder, and major depression). I also have a strong interest in studying how evidenced-based health interventions are adapted in real world practice settings for diverse organizations, providers, and patient populations to improve the effectiveness, reach and sustainability of interventions. My work blends intervention research, community-engagement, emerging technologies, mixed quantitative and qualitative methods, and implementation science. The combined areas of my expertise and scientific contributions are highly novel at Dartmouth and nationally. I have played a vital role in obtaining, sustaining and implementing numerous federally funded research grants related to these areas at Geisel.

I am leading the only team in the nation focused on an intervention that leverages peer social networks and technology to motivate health behavior change in young adults with serious mental illness (SMI). I am the PI of one of four R01 grants funded nationally by a special NIH funding announcement to support population-based approaches to interventions targeting cardiometabolic risk in young adults with SMI. The main cause of early death among persons with SMI is cardiovascular disease associated with risk factors that can be changed, such as obesity and smoking. Virtually all of the research to date on this problem has focused on middle aged and older adults. I have developed an intervention with a team of collaborators from Dartmouth, Boston University, Harvard Medical School and the University of Connecticut that uses social media and wearable activity trackers to enhance group lifestyle and exercise sessions that are engaging and highly relevant to young adults. The results of this study will have a significant impact on the field nationally and internationally by informing early intervention strategies to address cardiovascular risk among young people with SMI and will lay the groundwork for the first generation of evidence-based practices for this high-risk population.

In addition to my unique national role developing and testing health promotion interventions for young adults with SMI, I am also engaged in locally funded highly novel pilot studies in this area. I am leading a Hitchcock Foundation-funded Pilot Award in which we are conducting community-engaged research with high school-aged adolescents with SMI and their parents and caregivers and mental health providers to design and pilot test a mobile lifestyle intervention to increase physical activity in this high-risk adolescent group. Most community-engaged research includes adults; it is rare that adolescents are partners in research. However, partnering with youth could enhance the success and sustainability of adolescent mobile health interventions and inform implementation in mental health settings. I am ideally suited to lead this virtually unexplored area of research given my experience effectively leading community engaged research and expertise in peer support and health promotion for young adults with SMI. This innovative project will shed new light on the feasibility of leveraging popular technologies to extend the reach of mental health services targeting health promotion for young people.

I develop interventions that motivate health behavior change, but I am also interested in factors that help sustain these changes over the long run. My use of mixed methods and focus on social support for health behavior change and sustainability was unique and essential to the success of the grant application that funded the CDC Prevention Research Center (PRC) at Dartmouth. I am one of two PI's on the CDC PRC core research project in which we are conducting a mixed methods study of psychological, social, and environmental factors associated with long-term health outcomes for 500 people with obesity and mental illness and 400 smokers with mental illness who participated in a statewide, incentive-based health promotion program. Results from this groundbreaking study that integrates quantitative and qualitative data on factors that influence long-term health outcomes will inform future policy and interventions addressing health behaviors in high-risk Medicaid populations.

My research on health interventions for complex patient populations in real world settings has spawned my new line of research in implementation science. I am leading an NIMH-funded supplement to a national R01 study of implementation strategies for delivering health promotion in mental health. The supplement project involves a study of adaptations to an evidence-based intervention in routine mental health care settings. Adapting evidence-based interventions to fit provider characteristics, organizational contexts, and service settings may improve intervention delivery, patient engagement, and intervention effectiveness. However, modifying evidence-based interventions in the absence of guidance from theory and research may have a negative impact on implementation and patient outcomes. The goals of this study are to specify and evaluate adaptations to an evidence-based health coaching intervention (InSHAPE) targeting obesity in persons with SMI implemented in 48 mental health agencies across the US. This research will yield insights into the dynamic process of adaptation in routine health care settings and its impact on implementation and consumer outcomes.

As a component of my focus on implementation science, I conduct research that leverages large peer network organizations to implement evidence-based health interventions outside of traditional clinical settings. My expertise in social support and social networks enables me to lead this line of research with peer support and advocacy organizations. I recently partnered with the National Alliance on Mental Illness (NAMI), the nation's largest grassroots mental health organization, on a pilot study funded by Dartmouth Clinical and Translational Sciences Institute to address the high rates of smoking among individuals with mental illness. We adapted and pilot tested an evidence-based telephone coaching intervention for support persons to link loved ones with mental illness who smoke to cessation treatment. Future plans are to evaluate the support partner intervention in a pilot effectiveness study with the NAMI-NYC Metro organization, one of the largest NAMI national affiliates in the US.

Since joining the faculty at Geisel I have built a distinct and unique program of research using my expertise in behavioral interventions, peer and family social support, serious mental illness, community-engaged research, and mixed methods. As evidence of the national recognition and impact of my work, I have participated in six scientific review committees since 2016 at the National Institutes of Health because of my expertise in peer and social support, behavioral interventions, and mental health. I serve on the Community Engagement Advisory Board for Dartmouth Clinical Translational Sciences Institute, a role that enables me to have a direct impact on establishing standards and practices for partnered research at Dartmouth. In addition, my involvement in teaching and training at Geisel provides opportunities for students and fellows to receive guidance and mentoring on mixed methods and qualitative research. I have provided workshops and lectures on these methods at the Dartmouth-Hitchcock Leadership Preventive Medicine Residency and The Dartmouth Institute for Health Policy and Clinical Practice. I also contribute to national mentoring of the next generation of scholars in mixed methods as a faculty advisor in the NIH sponsored Mixed Methods Research Training Program for the Health Sciences at Johns Hopkins Bloomberg School of Public Health.

My work involves a unique blend of intervention research, community-engagement, emerging technologies, mixed methods, and implementation science. I am leading several projects at the forefront of social media research, peer-to-peer interventions for young adults and youth with SMI, and adaptation for implementation science. My program of research has the potential for high impact on the field of mental health by generating new strategies for addressing social determinants of health risk behaviors and implementing what works in real world treatment settings.

CURRICULUM VITAE

WILLIAM CHANDLER TORREY, M.D.
12-12-18

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Lebanon, New Hampshire 03756

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I. EDUCATION:

June, 1981	Dartmouth College, Hanover, New Hampshire B.A. Religion, cum laude with distinction.
June, 1985	Harvard Medical School, Boston, Massachusetts M.D.

II. POST DOCTORAL TRAINING:

1988-1989	Chief Resident in Psychiatry Dartmouth Hitchcock Medical Center Hanover, New Hampshire
1985-1988	Resident in Psychiatry Dartmouth-Hitchcock Medical Center Hanover, New Hampshire

III. ACADEMIC APPOINTMENTS:

1988-1989	Instructor in Clinical Psychiatry Dartmouth Medical School
1989-1992	Adjunct Assistant Professor of Clinical Psychiatry, Dartmouth Medical School
1992-2000	Assistant Professor of Psychiatry Dartmouth Medical School

2000-2009	Associate Professor of Psychiatry Dartmouth Medical School
2009-2012	Associate Professor of Psychiatry and of The Dartmouth Institute Geisel School of Medicine at Dartmouth
2012-present	Professor of Psychiatry and of The Dartmouth Institute Geisel School of Medicine at Dartmouth

IV. DARTMOUTH INSTITUTIONAL LEADERSHIP ROLES

1989-1993	Staff psychiatrist West Central Behavioral Health/Dartmouth-Hitchcock Lebanon, New Hampshire
1993-1994	Associate Medical Director West Central Behavioral Health/Dartmouth-Hitchcock Lebanon, New Hampshire
1994-2007	Medical Director West Central Behavioral Health/Dartmouth-Hitchcock Lebanon, New Hampshire
2003-2009	Medical Director Department of Psychiatry Geisel School of Medicine at Dartmouth Lebanon, New Hampshire
2009-present	Vice Chair for Clinical Services Department of Psychiatry Geisel School of Medicine at Dartmouth Lebanon, New Hampshire
2016-present	Associate Psychiatry Service Line Leader Dartmouth-Hitchcock Health Lebanon, New Hampshire

V. LICENSURE AND CERTIFICATION

1987-present	New Hampshire medical license #7636
1989-present	Vermont medical license #042-0008025
1990	Diplomat in Psychiatry, American Board of Psychiatry and Neurology

VI. HOSPITAL APPOINTMENTS:

1995-2002	Active Privileges Alice Peck Day Hospital Lebanon, New Hampshire
1989-2003	Courtesy Privileges Valley Regional Hospital Claremont, New Hampshire
2003-2005	Active Privileges Valley Regional Hospital Claremont, New Hampshire
2004-present	Active privileges Dartmouth-Hitchcock Medical Center Lebanon, New Hampshire
2011-2017	Courtesy Privileges Cheshire Medical Center Keene, New Hampshire
2016-present	Active privileges New Hampshire Hospital Concord, NH

VII. OTHER PROFESSIONAL POSITIONS:

1989-present	Research Associate Dartmouth Psychiatric Research Center Lebanon, New Hampshire
1993-2008	Coordinator of Community Psychiatry Training Department of Psychiatry, Dartmouth Medical School
1998-2003	Medical Director, Care Management Dartmouth-Hitchcock Behavioral Healthcare
2000-2001	Acting Director The West Institute at the Dartmouth Psychiatric Research Center Lebanon and Concord, New Hampshire
2001-2003	Research Director The West Institute at the Dartmouth Psychiatric Research Center Lebanon and Concord, New Hampshire

2001-2014	Scientific advisor, NAMI-NH Outreach Partnership Program Grant from the National Institute of Mental Health
2006- 2014	Scientific advisor, Upper Valley Depression and Bipolar Support Alliance
2009-2015	Training Coordinator PGY III psychiatry resident training Dartmouth-Hitchcock Medical Center Lebanon, New Hampshire
2015-present	Clinical Champion Substance Use Mental Health Initiative Population Health Division Dartmouth-Hitchcock Health

VIII. TEACHING ACTIVITIES:

1989-present	Course Director, Community Psychiatry Didactics for PGY III residents in psychiatry (12 sessions/year on community care of adults with severe mental illnesses)
1989-present	Direct Clinical Supervisor of residents in clinical care (psychopharmacology and psychotherapy supervision)
1989-present	Lecturer, numerous Department of Psychiatry teaching forums on topics such as schizophrenia, suicide, ethics, treatment planning, and quality improvement in healthcare.
1995-2014	Course Director, Individual Reading Elective in Psychiatry for Geisel School of Medicine students.
1991-present	Lecturer, Geisel School of Medicine Scientific Basis of Medicine lecturing in the psychiatry section on care of adults with severe mental illnesses
1991-present	Section Leader, Geisel School of Medicine Scientific Basis of Medicine psychiatric interviewing course teaching interviewing skills.
1997-2005	Lecturer, Paul Batalden's Center for Clinical Evaluative Studies course entitled "The Continual Improvement of Healthcare: An Overview" (ECS 117)

2002-2010	Lecturer, Dartmouth Psychology internship program on suicide assessment and recovery-oriented care for adults with severe mental illnesses
2007-2008	Faculty member, Dartmouth Summer Institute: Evidence-based Mental Health, Dartmouth College, Hanover, NH (a CME course teaching participants the skills to ask structured clinical questions, find the evidence, evaluate the evidence, and apply the knowledge)
2008-present	Course Director, Psychotherapy Seminar (a weekly seminar for PGY III residents teaching history, theory, and practice of dynamic psychotherapy)
2010-2015	Course Director, "What is New in Psychiatry – for non-Psychiatric Physicians and Nurses." Geisel School of Medicine annual CME course

IX. STUDENT/FELLOW ADVISING/MENTORING:

2010-2011	Academic mentor, Dartmouth Medical School student Albert Schweitzer Fellowship Project: "Improving Mental Health Care in the Upper Valley"
2012	Affiliate Advisor of Geisel School of Medicine medical students

X. RESEARCH FUNDING:

1989-1996	Co-PI, Annual research contract. Salary support of approximately $25,000/year funded by the New Hampshire Division of Behavior Health as part of the New Hampshire-Dartmouth Research Contract. Robert Drake, Principal Investigator. My role was to lead investigating the conversion of day treatment to supported employment for adults with severe mental illnesses and self-esteem and employment.
1996-2001	Faculty Fellow, "Mental health services research for persons with severe mental illness." Salary support $45,460/year funded by the National Institute for Mental Health through a Research Infrastructure Support Program (RISP) grant (#R24MH56147). Robert Drake, Principal Investigator.
1993-1997	Consultant. "Rhode Island supported employment project." Funded by a National Institute of Disability and Rehabilitation Research (NIDRR) grant (#8133650032). Robert Drake, Principal Investigator.

1996	Consultant. "Rural-based supported employment approaches." Funded by a Substance Abuse and Mental Health Services Administration (SAMHSA) grant (#UD75M51823). Albert Santos, Principal Investigator.
1996-1997	Principal Investigator. "New Hampshire clinical practice guidelines for adults in community support programs." New Hampshire Division of Behavior Health.
2000-2001	Co-PI. "Evidenced-based practice for adults with severe mental illness" The Robert Wood Johnson Foundation and SAMHSA. Robert Drake, Anthony Lehman, Principal Investigators.
1999-2003	Research Director, West Institute at the New Hampshire-Dartmouth Psychiatric Research Center. Funded by a grant from the West Foundation
2001-2003	Principal Investigator. New Hampshire and Vermont section of the National Evidence-Based Practices Project. Funded by a Substance Abuse and Mental Health Services Administration (SAMHSA)
2010-2013	Co-Investigator: Johnson & Johnson, Inc., "Development and Evaluation of Enhanced *HealthMedia® OVERCOMING™ Depression* to Support Collaborative Depression Treatment in Primary Care: The RESPECT-D-E (Enhanced) Trial" Mark Hegel, Principal Investigator.
2014-present	Co-Investigator. "Amplifying the Patient's Voice: Person-centered Versus Measurement-based Approaches in Mental Health" PCORI award (CDR-1306-02474), Kim MacDonald-Wilson, Patricia Deegan, Greg McHugo, Principal Investigators
2016-present	Co-Investigator. "Scaling up Science-Based Mental Health Interventions in Latin America" The National Institute of Mental Health (NIMH) U19 Grant, Lisa Marsch, Carlos Gomez, Principle Investigators

XI. PROGRAM DEVELOPMENT

As Vice Chair of Clinical Services in the Department of Psychiatry at Dartmouth I have been instrumental in developing clinical services. I have been particularly proud of our success in advancing access to behavioral health services through developing psychiatric services embedded in general healthcare settings within Dartmouth-Hitchcock.

XII. ENTREPRENEURIAL ACTIVITIES

none

XIII. MAJOR COMMITTEE ASSIGNMENTS:

National/International:

1997-1999	American Board of Psychiatry and Neurology, Board Examiner, Adult Psychiatry Part II certifying exam.
2014-present	Board of Directors, American Association of Community Psychiatry

Regional:

1990-1995	Human Rights Committee, member, United Developmental Services, Lebanon, New Hampshire
1997-2000	Medicaid Waiver Committee, member New Hampshire Department of Behavioral Health.
2001-2003	Board of Directors, member WestBridge, a private nonprofit organization providing outreach-oriented mental health services
2018-present	Board of Directors, member West Central Behavioral Health, Lebanon, NH

Institutional:

West Central Behavioral Health

1993-2007	Senior Leadership Committee, member West Central Behavioral Health, Lebanon, NH
1993-2007	Quality Improvement Committee, Chair West Central Behavioral Health, Lebanon, NH
1993-2007	Ethics Committee, Chair West Central Behavioral Health, Lebanon, NH

Department of Psychiatry, Geisel School of Medicine at Dartmouth

1985-present	Graduate Education Committee, member

Department of Psychiatry, Geisel School of Medicine

1989-present	Resident Candidate Admissions Committee, member Department of Psychiatry, Geisel School of Medicine
2003-present	Chairman's Advisory Committee, member Department of Psychiatry, Geisel School of Medicine
2003-2010	Strategic Planning Committee, Chair Department of Psychiatry, Geisel School of Medicine
2003-2014	Quality Improvement Committee, Chair Dartmouth Hitchcock Psychiatric Associates, Department of Psychiatry, Geisel School of Medicine
2003-2016	Compliance Committee, member Dartmouth Hitchcock Psychiatric Associates, Department of Psychiatry, Dartmouth Medical School
2003-2015	Psychopharmacology Quality Improvement Committee, Chair Dartmouth Hitchcock Psychiatric Associates, Department of Psychiatry, Geisel School of Medicine

Dartmouth Hitchcock Medical Center

2007	Board of Governors, stand in member (for Department Chairman) Dartmouth-Hitchcock Medical Center
2007-2008	Strategic Planning Steering Committee, member Dartmouth-Hitchcock Medical Center
2007-2009	Population Health Management Task Force, member Dartmouth-Hitchcock Medical Center
2008-2010	Population Health Committee, member Dartmouth-Hitchcock Medical Center
2007-2016	Information Systems Steering Committee, member Dartmouth-Hitchcock Medical Center
2008-2016	Behavioral Health in Primary Care Subcommittee, member Dartmouth-Hitchcock Medical Center
2008-present	Clinical Practice Committee, member Dartmouth-Hitchcock Medical Center

2008-2014	Emergency Room Psychiatry Committee, member Dartmouth-Hitchcock Medical Center
2009-2010	Board of Governor's Nominating Committee, member Dartmouth-Hitchcock Medical Center
2010-present	MyQuest Steering Committee, member Dartmouth-Hitchcock Medical Center

Geisel School of Medicine at Dartmouth

2012-2015	Complete Physician Workgroup of the Curriculum Redesign

XIV. MEMBERSHIPS, OFFICE AND COMMITTEE ASSIGNMENTS IN PROFESSIONAL SOCIETIES:

1985- present	American Psychiatric Association, member
1985-present	New Hampshire Psychiatric Society Resident Representative, 1987-1989 Representative for Community Psychiatry, 1993-1996 President-elect, 1996-1997 President, 1997-1998 Past President, 1998-May, 1999 Representative for Community Psychiatry, 1999-2003
1992-present	The American Association of Community Psychiatrists, member Board of Directors member, 2014-present

XV. EDITORIAL BOARDS:

none

XVI. JOURNAL REVIEWER ACTIVITY:

Active reviewer for journals including:

Community Mental Health Journal
Psychiatry
Psychiatric Rehabilitation Journal
Psychiatric ServiceAdministration and Policy in Mental Health and Mental Health Services Research
Psychiatric Services
Journal of General Internal Medicine
Journal of Dual Disorders

XVII. AWARDS AND HONORS:

1995	The Exemplary Psychiatrist Award National Alliance on Mentally Illness – Vermont Chapter
2011	The Leonard Tow 2011 Humanism in Medicine Award Dartmouth Medical School
2012	The Exemplary Psychiatrist Award National Alliance on Mentally Illness – New Hampshire Chapter
2012	Teaching Excellence in Continuing Medical Education Award Center for Continuing Education in the Health Sciences & Continuing Medical Education. Dartmouth-Hitchcock Medical Center

XVIII. INVITED PRESENTATIONS:

National/international location:

"Individual Placement and Support (IPS): A Community Mental Health Center Treatment Team Approach to Vocational Rehabilitation." Fourth Annual West Virginia Supported Employment Symposium, Huntington, West Virginia, May 20, 1993.

"Suicide and Community-Based Treatment Approaches." The Institute for Behavioral Health Training and Tennessee Association for Suicide Prevention, Knoxville, Tennessee, November 30, 1993.

"Individual Placement and Support: A Mental Health Center's Transition to Community Vocational Services." Connecticut's Eighth Annual Conference on Employment Supports, Cromwell, Connecticut, September 28, 1993.

"Patient and Family Education About Schizophrenia." With Kim Mueser, Ph.D. American Psychiatric Association's Institute on Psychiatric Services, Boston, MA., October 7, 1995.

"Vocational Support for People with Severe Mental Illnesses: What Happened when we Replaced Day Treatment with Supported Employment." 15th Annual New Jersey Psychiatric Rehabilitation Association Conference, Eatontown, New Jersey, November 16, 1995.

"Recovery-Oriented Services for Adults With Serious and Persistent Mental Illnesses", "Switching from Rehabilitative Day Treatment to Supported Employment", and "Vocational Services for Adults with Severe Mental Disorders." 1997 Georgia School for Best MHMRSA Practices, Macon, Georgia, November 14, 1997.

"Facilitating the Recovery of Adults with Severe Mental Illness" Keynote address for the summer meeting of the Mental Health Corporations of America, Portland, Oregon, August 16, 2000

"Integrated Mental Health and Substance Abuse Treatment for People with Severe Psychiatric Disorders" Keynote address for Montana State Conference on Mental Illness, Missoula, Montana, October 19, 2000

"Creating Dual Diagnosis Programs" Montana State Conference on Mental Illness, Missoula, Montana, October 20, 2000

"Facilitating the Recovery of Adults with Severe Mental Illnesses" and "A clinician's Perspective on Evidence-Based Practices: What Are They and Why Should I Care?" Catawba Hospital State Conference, Catawba, Virginia, October 19, 2001

"Implementing Evidence-Based Practice" National Association of State Mental Health directors (NASMHPD) Adult Services Director's Conference, Albuquerque, NM, October 22, 2001

"Supported Employment as an Evidence-Based Practice" Implementing Evidence-Based Practices: Building the Road to Recovery Conference. Springfield, IL, November 13 and 14, 2001

"The National Evidence-Based Project: Phase II" Science-to-Services Institute on Adult Mental Health Evidence-Based Practices" St. Petersburg, Florida, November 16, 2002

"Progress Report on the National Evidence-Based Practices Project: Creating Implementation Packages and Field-Testing Them in Mental Health Settings" 2003 Conference on State Mental Health Agency Services Research, Program Evaluation, and Policy, Baltimore, Maryland, February 9, 2003

"Shared Decision-Making in the Care of Adults with Severe Mental Illnesses: Easier Said than Done" Grand Rounds, University of Alabama Department of Psychiatry. Birmingham, AL, November 17, 2009

"Implementation Barriers, Strategies, and Facilitators: A Comparative Analysis of Five Evidence-Based Practices" Concurrent session. 3rd Annual NIH Conference on the Science of Dissemination and Implementation: Methods and Measurement. Bethesda, Maryland. March 15, 2010

"Implementing Supported Employment: What do we know?" 62nd Institute on Psychiatric Services, Boston, MA. October 13, 2010

"Implementing Integrated Treatment for Co-occurring Disorders." 62nd Institute on Psychiatric Services, Boston, MA. October 14, 2010

"Shared Decision-Making in the Care of Adults with Severe Mental Illnesses: Why and How" Grand Rounds, Cambridge Health Alliance, Harvard Medical School. Cambridge, MA, March 2, 2011

"Applying the Lessons from the National Implementing Evidence-Based Practices Project" Evidence-Based Interventions Implementation Methods Meeting, Administration for Children and Families, Department of Health and Human Services, Washington DC, May 24, 2011

"The National Implementing Evidence Based Practices Project: The Design, Implementation Packages, and Implementation Results." Global Implementation Conference, Washington DC, August 16, 2011

"Evidenced- based care for people with mental illnesses." Yale Healthcare Conference, New Haven, CT, April19, 2013

"Shared decision making in the care of adults with severe mental illnesses." Second Annual Challenges and Innovations in Rural Psychiatry Conference, State College, PA. June 23, 2015

"Dartmouth Collaborative Care." Partners Healthcare Behavioral Health Collaborative Care Symposium, Boston, MA, October 28, 2016

"Integrating Depression and Alcohol Use Disorder Care in Primary Care" Scaling Up Science-Based Mental Health Interventions in Latin America Webinar Series, Lebanon, NH, June 6, 2017

"Beyond Med Management" IPS: The Mental Health Services Conference, New Orleans, LA, October 21, 2017

"A population health approach to depression and substance use disorder care in primary care in the USA and Colombia", Colombia, September 22, 2018

"Meaning in Psychiatry" IPS, Chicago, Il, October 5, 2018

Regional/local location:

"Psychiatric Care of Adults with Developmental Disabilities." Developmental Disabilities Conference, University of Vermont, Burlington, Vermont, June 10, 1991.

"Psychiatric Interventions from a Life Course Perspective." Clinical Grand Rounds, Dartmouth Medical School Department of Psychiatry, Lebanon, N. H., December 11, 1991.

"Suicide and Persistent Mental Illness: A Continual Clinical and Risk-Management Challenge." Clinical Grand Rounds, Dartmouth Medical School Department of Psychiatry, Lebanon, N. H., February 9, 1993.

"Community Care of Adults with Developmental Disabilities and Mental Illness." Clinical Grand Rounds, Dartmouth Medical School Department of Psychiatry, Lebanon, N. H., June 21, 1994.

"Suicide and Persistent Mental Illness: Clinical Approaches to Reducing the Risk." Alice Peck Day Hospital Grand Rounds, Lebanon, NH., November 14, 1995.

"Integrating Clinical and Vocational Services for Persons with Severe Mental Illness." New Hampshire-Dartmouth Psychiatric Research Center Seminar, Lebanon, NH, November 17, 1995.

"A Community Rehabilitative Approach to Nonpsychotic Psychiatrically Disabled Individuals." Clinical Grand Rounds, Dartmouth Medical School Department of Psychiatry, Lebanon, N. H., December 19, 1995.

"A Community Approach to the Psychiatric Care of Adults with Developmental Disabilities." Conference sponsored by the New Hampshire Division of Mental Health, Concord, NH, May 9, 1996.

"Self-Esteem in Adults with Persistent Mental Illnesses: A Vocational Study." New Hampshire-Dartmouth Psychiatric Research Center Seminar, Lebanon, NH, May 10, 1996.

"The Role of Clinicians in Integrated Supported Employment." Grand Rounds, The Mental Health Center of Greater Manchester. Manchester, N.H., September 19, 1997.

"Supported Employment as an Important Element in the Process of Recovering from Severe Mental Disorders." New England Individual Placement and Support (IPS) Retreat, Newport, Rhode Island, June 5, 1997.

"Systems Thinking: Quality Improvement of Clinical Case Management Services for Adults with Severe Mental Disorders" Center for Evaluative Studies, Dartmouth Medical School, Hanover, NH. January 19, 1998.

"The Recovery Paradigm in Services for Adults with Severe Mental Illness" Clinical Grand Rounds, Dartmouth Medical School Department of Psychiatry, Lebanon, N. H. April 28, 1998.

"Making the Recovery Vision Come to Life: Application of Quality Improvement Methods to Community Support Services" The New Hampshire Division of Behavioral Health. May 27, 1998.

"Ethical Challenges of Rural Mental Health Practice" Special Grand Rounds, Dartmouth Medical School Department of Psychiatry, Lebanon, N.H. June 15, 1998.

"The Recovery Vision as a Service Improvement Guide for Community Mental Health Center Providers." The New Hampshire Division of Behavioral Health. July 15 and September 3, 1998.

"The Recovery Paradigm: Turning an Idea into Action" Grand Rounds, The Mental Health Center of Greater Manchester, Manchester, N.H. October 15, 1998.

"Recovery in Severe Mental Illness: The Importance of Work" Cabin Fever Series, White River Junction Veterans Affairs Hospital, White River Junction, Vermont, November 18, 1998.

"Antipsychotics Update" Grand Rounds, Valley Regional Hospital, Claremont, N.H. January 12, 1999.

"The Recovery Paradigm: Turning an Idea into Action" Grand Rounds, New Hampshire Hospital, Concord, NH, February 4, 1999.

"Community Treatment of Persons with Developmental Disabilities and Psychosis" Guest Lecturer, New England College, Henniker, NH, December 13, 1999

"Work and Self-Esteem in Adults with Severe Mental Illnesses" Clinical Grand Rounds, Dartmouth Medical School Department of Psychiatry, Lebanon, N. H. March 21, 2000

"Evidence-Based Practice for the Community Care of Adults with Severe Mental illnesses" Genesis Counseling Center, Laconia, NH. April 24, 2000

"Leading Systems Change" Keynote address for a conference entitled "Visions, alliances, change: Building leadership for mental health in New Hampshire." Laconia, NH, May 18, 2001

"Supported Employment as an Evidence-Based Practice" Community Education Series, Portsmouth, NH, January 17, 2002

"Supported Employment as an Evidence-Based Practice" Community Education Series, Manchester, NH, February 28, 2002

"Supported Employment: What works?" A partners for change conference on evidence-based practices., Nashua, NH April 12, 2002

"The Implementing Evidence-Based Practices Project: Theory and Practice" Clinical Grand Rounds, Dartmouth Medical School Department of Psychiatry, Lebanon, N. H. March 18, 2003.

"Leading Systems Change" Keynote address at a retreat of the White River Junction VA Psychiatry Department, February 23, 2004

"Suicide Assessment in Primary Care" Dartmouth-Hitchcock Medical Center, Lebanon, NH. June 10, 2004

"Suicide and Suicide Assessment in Adolescence" Teacher in-service. Hanover High School, Hanover NH, October 8, 2004

"Keeping the Safety Net Intact in Hard Times – Community Mental Health" Leadership New Hampshire Health Day, Dartmouth-Hitchcock Medical Center, Lebanon, NH, December 9, 2004

"I can't stand the pain – Suicide Assessment of Children" 2005 Annual School Health Symposium, Dartmouth-Hitchcock Medical Center, Lebanon, NH, January 24, 2005

"Helping Adults with Severe Mental Illness Meet their Life Goals: The Role of Psychiatric Rehabilitation" New Hampshire Hospital Grand Rounds, Concord, NH, October 6, 2005

"Implementing Evidence-Based Practices", Riverview Hospital Grand Rounds, Augusta, ME, October 13, 2005

"What is Mental Illness? What is Substance Abuse? How do they Relate to Criminal Behavior?" In a conference by the NH Judicial Branch entitled: Mental illness, substance abuse, and the criminal justice system: Opportunities for alternative sentencing. Concord, NH, November 7, 2008

"Behavioral Health: Good news, Bad news" 1st Annual Northern New England Rural Emergency Services and Trauma Symposium. Dartmouth-Hitchcock Medical Center, Lebanon, NH, November 7, 2008

"Access to Behavioral Health Services in New Hampshire" Leadership New Hampshire Health Day, Dartmouth-Hitchcock Medical Center, Lebanon, NH, December 11, 2008

"Shared Decision-Making in the Care of Adults with Severe Mental Illnesses: How to Make it Really Happen?" Riverview Hospital Grand Rounds, Augusta, ME, September 25, 2009

"Shared Decision-Making in the Care of Adults with Severe Mental Illnesses: Why and How" Grand Rounds, Department of Psychiatry, Dartmouth Medical School. Lebanon, NH, January 5, 2010

"Barriers, Strategies, and Facilitators in the National EBP Project: Relationship to Practice Fidelity." Riverview Hospital Grand Rounds, Augusta, ME, August 19, 2010

"Personality-Related Therapeutic Challenges: "Doctor you are not doing a thing for me, and your shirt isn't ironed"" What's New in Psychiatry? – For Non-Psychiatric Physicians and Nurses. CME Conference, Dartmouth Medical School Department of Psychiatry, Lebanon, NH. November 5, 2010

"Offering high-quality mental health care." Grand Rounds, VA Hospital, White River Junction, Vermont, August 3, 2011

"Current Issues in General Inpatient Psychiatry." Riverview Hospital Grand Rounds, Augusta, ME, January 26, 2012

"Getting Practices that Work to the People Who Need Them: Implementing Evidence-Based Depression Care in Primary Care." Maine Health Access Foundation Conference, Hallowell, ME, May 4, 2012

"Evidence-based care for people with psychiatric illness in primary care: "This is impossible – I need help – I am not a psychiatrist"" What's New in Psychiatry? – For Non-Psychiatric Physicians and Nurses. CME Conference, Geisel School of Medicine at Dartmouth, Lebanon, NH. November 5, 2012

"Providing quality care form the perspective of community psychiatrists." Psychiatric Research Center Seminar, Lebanon, NH, January 11, 2113

"Shared decision making in the care of adults with severe mental illnesses." NH Mental Health Symposium 2013, Bedford, NH, May 13, 2013

"Suicide assessment: The pain goes on and on – I don't think I can do it anymore" What's New in Psychiatry? – For Non-Psychiatric Physicians and Nurses. CME Conference, Geisel School of Medicine at Dartmouth, Lebanon, NH. November 18, 2013

"Dr. Torrey, you aren't doing a thing for me: Providing quality care for people with personality disorders." Northeast Medical Association Annual Meeting, Jay Peak, VT, March 11, 2014

"No health without mental health." Leadership New Hampshire Health Day, Dartmouth-Hitchcock Nashua, Nashua, NH, February 24, 2015

"No health without mental health" Northeast Medical Association Annual Meeting, Stowe, VT, March 3, 2015

"D-H learning effort in collaborative care" Center for Behavioral Health Technology Research Seminar, Lebanon, NH, March 17, 2017

"It takes a village to support health" Osher@Dartmouth, Hanover, NH, April 7, 2017

"Scaling up science-based mental health interventions in Latin America" Development and Evaluation of Digital Therapeutics for Behavior Change: Science, Methods, and CTBH Projects, Hanover, NH, October 26, 2017

"A population-based approach to mental health and substance use disorder care in primary care" New Hampshire Hospital Grand Rounds, Concord, NH, January 18, 2018

"A population-based approach to mental health and substance use disorder care" Northeast Medical Association Annual Meeting, Stowe, VT, March 6, 2018.

"Behavioral health challenges and opportunities in the work place" The Real Cost to Business: the Mental Health and Addiction Crisis, Hooksett, NH March 28, 2018.

"Integration of behavioral health in primary care in Latin America: The Latin American Project" Implementation Science and Digital Therapeutics Conference, Hanover NH December 18, 2018.

XIX. BIBLIOGRAPHY:

A. Peer-reviewed publications

Journal Articles:

1. Torrey WC: Psychiatric care of adults with developmental disabilities and mental illness in the community. Community Mental Health Journal, 29:461-476, 1993.

2. Drake RE, Becker DR, Torrey WC, Fox TS: Research on supported employment in New Hampshire: The Individual Placement and Support Model. In NASMHPD Research Institute Fourth Annual Conference on State Mental Health Agency Services Research. Arlington, VA: The National Association of State Mental Health Program Directors Research Incentives, 1993.

3. Torrey WC, Drake RE: Current concepts in the treatment of schizophrenia. Psychiatry, 57:278-285, 1994.

4. Drake RE, Becker DR, Biesanz JC, Torrey WC, Wyzik P, McHugo GL: Rehabilitative day treatment vs. Supported employment: I. Vocational outcomes. Community Mental Health Journal, 30:519-532, 1994.

5. Torrey WC, Becker DR, Drake RE: Rehabilitative day treatment vs. supported employment: II. Consumer, family and staff reactions to a program change. Psychosocial Rehabilitation Journal, 18(3), 67-75, 1995.

6. Lee AK, Vaillant GE, Torrey WC, Elder HE: A 50-year prospective study of the psychological sequelae of World War II combat. American Journal of Psychiatry, 152:516-522, 1995.

7. Torrey WC, Noordsy D: Reply to The role of psychiatrists in community mental health centers: A survey of job descriptions. Community Mental Health Journal, 31:579-581, 1995.

8. Drake RE, Becker DR, Biesanz JC, Wyzik PF, & Torrey, WC: Day treatment versus supported employment for persons with severe mental illness: A replication study. Psychiatric Services, 47, 1125-1127, 1996.

9. Mueser KT, Becker DR, Torrey WC, Xie H, Bond GR, Drake RE, Dain BJ: Work and nonvocational domains of functioning in persons with severe mental illness: A longitudinal analysis. Journal of Nervous and Mental Disease , 185(7), 419-426, 1997.

10. Torrey WC, Clark RE, Becker D, Wyzik PF, Drake RE: Switching from rehabilitative day treatment to supported employment. Continuum, 4, 27-38, 1997.

11. Torrey, WC, Bebout, R, Kline, J, Becker, DR, Alverson, M, Drake, RE: Practice guidelines for clinicians working in programs providing integrated vocational and clinical services for persons with severe mental disorders. Psychiatric Rehabilitation Journal, 21, 388-393, 1998.

12. Torrey WC, Mead S, Ross, G: Addressing the social needs of mental health consumers when day treatment programs convert to supported employment: Can consumer-run services play a role? Psychiatric Rehabilitation Journal 22(1): 73-75, 1998.

13. Becker DR, Torrey WC, Toscano R, Wyzik PF, Fox TS: Building recovery-oriented services: Lessons from implementing IPS in community mental health centers. Psychiatric Rehabilitation Journal 22(1): 51-54, 1998.

14. Noordsy DL, Torrey WC, Mead S, Brunette M, Potenza D, Copeland ME: Recovery-oriented psychopharmacology: Redefining the goals of antipsychotic treatment. Journal of Clinical Psychiatry, 61 (suppl 3):22-29, 2000.

15. Torrey WC, Mueser KT, McHugo GJ, Drake RE: Self-esteem as on outcome measure in vocational rehabilitation studies of adults with severe mental illness. Psychiatric Services, 51(2): 229-233, 2000.

16. Torrey WC, Wyzik PF: The recovery vision as a service improvement guide for community mental health center providers. Community Mental Health Journal, 36(2): 209-216, 2000.

17. Drake RE, Bond GR, Torrey WC: Psychiatry and rehabilitation. Community Mental Health Journal, Community Mental Health Journal, 36, 617-619, 2000.

18. Drake RE, Mueser KT, Torrey WC, Miller AL, Lehman AF, Bond GR, Goldman HH, Leff HS: Evidence-based treatment of schizophrenia. Current Psychiatry Reports, 2(5):393-397, 2000.

19. Torrey WC, Drake RE, Dixon L, Burns BJ, Flynn L, Rush AJ, Clark RE, Klatzker D: Implementing evidence-based practices for persons with severe mental illnesses. Psychiatric Services, 52:45-50, 2001.

20. Drake RE, Goldman HH, Leff HS, Lehman AF, Dixon L, Mueser KT, Torrey WC: Implementing evidence-based practices in routine mental health settings. Psychiatric Services, 52:179-182, 2001.

21. Torrey WC, Drake, RE: Implementing evidence-based treatment for persons with schizophrenia. International Psychiatry Today, 10(3):1-6, 2001.

22. Rosenberg SD, Mueser KT, Friedman MJ, Gorman PG, Drake RE, Vidaver RM, Torrey WC, Jankowski MK: Developing effective treatments for posttraumatic disorders among people with severe mental illness. Psychiatric Services, 52(11):1453-1461, 2001.

23. Swenson CR, Torrey WC, Koerner K: Implementing Dialectical Behavioral Therapy, Psychiatric Services, 53(2):171-178, 2002

24. Torrey WC, Drake RE, Cohen M, Fox LB, Gorman P, Wyzik P: The challenge of implementing and sustaining integrated dual disorders treatment programs. Community Mental Health Journal, 38(6):507-521, 2002

25. Noordsy D, Torrey WC, Mueser KT, Mead S, O'Keefe C, Fox L: Recovery from severe mental illness: An intrapersonal and functional outcome definition, International Review of Psychiatry, 14:318-326, 2002

26. Drake RE, Goldman HH, Leff HS, Lehman AF, Dixon L, Mueser KT, Torrey WC: Implementing evidence-based practice in routine mental health settings. Compendium Series: Psychosis & Schizophrenia, 2:18-19, 2002

27. Mueser KT, Torrey WC, Lynde D, Singer P, Drake RE: Implementing evidence-based practices for people with severe mental illness. Behavior Modification, 27(3):387-411, 2003

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

29. Torrey WC, Finnerty M, Evans A, Wyzik P: Strategies for leading the implementation of evidence-based practices, Psychiatric Clinics of North America, 26(4):883-897, 2003

30. Drake RE, Rosenberg SD, Teague GB, Bartels BJ, Torrey WC: Fundamental principles of evidence-based medicine applied to mental health care. Psychiatric Clinics of North America, 26(4):811-820, 2003

31. Drake RE, Torrey WC, McHugo GJ: Strategies for implementing evidence-based practices in routine mental health settings. Evidenced-based Mental Health, 6(1):6-7, 2003

32. Drake RE, Morse G, Brunette MF, Torrey WC: The evolving U.S. service model for patients with severe mental illness and co-occurring substance use disorder. Acta Neuropsychiatrica, 16:36-40, 2004

33. Salyers MP, Becker DR, Drake RE, Torrey WC, Wyzik PF: Ten-year follow-up of a supported employment program: Psychiatric Services, 55(3):302-308, 2004

34. Rosenberg S, Brunette M, Oxman T, Marsh B, Dietrich A, Mueser K, Drake RE, Torrey, W, Vidaver R: The STIRR Model of best practices for blood-borne diseases among clients with serious mental illness. Psychiatric Services, 55(6):660-664, 2004

35. American Diabetes Association (panel member). Consensus Development Conference on Antipsychotic Drugs and Obesity and Diabetes. Diabetes Care, 2004; 27:596-601

36. Cimpean D, Torrey WC, Green AI: Schizophrenia and co-occurring general medical illness. Psychiatric Annals, 35(1):71-81, 2005

37. Torrey WC, Lynde D, Gorman P: Promoting the implementation of practices that are supported by research: The National Implementing Evidence-Based Practice Project. Child and Adolescent Psychiatric Clinics of North America, 14:297-306, 2005

38. Torrey WC, Rapp CA, Van Tosh L, Appell C, Ralph RO: Recovery principles and evidence-based practice: essential ingredients of service improvement. Community Mental Health Journal, 41:91-100, 2005

39. Torrey WC: Current developments in psychiatric rehabilitation for adults with severe mental illnesses. Directions, 25:101-109, 2005

40. Torrey WC, Green R, Drake RE: Psychiatry and psychiatric rehabilitation. Journal of Psychiatric Practice, 11(3):1-6, 2005

41. Woltmann EM, Whitley R, McHugo GJ, Brunette M, Torrey WC, Coots L, Lynde D, Drake RE: The role of staff turnover in the implementation of evidence-based practices in mental health care. Psychiatric Services, 59:732–737, 2008

42. Drake RE, Cimpean D, Torrey WC: Shared decision making in mental health care: Prospects for personalized medicine. Dialogues in Clinical Neuroscience, 11:319-332, 2009

43. Shiner B, Green RL, Homa K, Watts BV, Groft A, Torrey WC, Oxman TE: Improving depression care in a psychiatry resident psychopharmacology clinic: measurement, monitoring, feedback, and education. Quality and Safety in Health Care, 19:234-238, 2010

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45. Torrey WC, Tepper M, Greenwold J: Implementing integrated services for adults with co-occurring substance use disorders and psychiatric illnesses: a research review. Journal of Dual Diagnosis 7(3): 150-161, 2011

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47. Torrey WC, Bond G, McHugo GJ, Swain K: Evidence-based practice implementation in community mental health settings: The relative importance of key domains of implementation activity. Administration and Policy in Mental Health and Mental Health Services Research. 39:353–364, 2012

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50. Carpenter-Song E, Torrey WC: "I always viewed this as the real psychiatry": Provider perspectives on community psychiatry as a career of first choice. Community Mental Health Journal 51:258-66, 2015

51. Aleem S, Torrey WC, Duncan MS, Hort SJ, Mecchella JN: Depression screening optimization in an academic rural setting. International Joural of Health Care Quality Assurance 28:709-25, 2015

52. Torrey WC, Griesemer I, Carpenter-Song E: Beyond med management. Psychiatric Services 68:618-620, 2017

53. Zisman-Ilani, Y, Shern, D, Deedan, P, Kreyenbuhl, J, Dixon, L, Drake, R, Torrey. WC, Mishra, M, Gorbenko, K, Elwyn, G: Continue, adjust of stop antipsychotic medication: developing and user testing an encounter decision aid for people with first-episode and long-term psychosis. BMC Psychiatry, 18:142, 1-11, 2018

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Books and Monographs:

1. Torrey WC, Wyzik PF: New Hampshire Clinical Practice Guidelines for Adults in Community Support Programs. Concord, N.H.: Department of Behavioral Health, 1997.

2. Camacho-Gonsalvas T, Leff HS, Torrey WC: Toolkit on Manuals and Workbooks for Psychosocial Interventions, The Evaluation Center@HSRI, Cambridge, MA, 2001.

3. Fox, Lindy, Robert E. Drake, Kim T. Mueser, Mary F. Brunette, Deborah R.Becker, Mark R. McGovern, Delia Cimpean, Stephen J. Bartels, William C. Torrey, Forrest P. Foster, David A. Strickler, Matthew R. Merrens, and Stephanie C. Acquilano. Integrated Dual Disorders Treatment: Best Practices, Skills, and Resources for Successful Client Care. Center City, MN: Hazelton, 2010

Book Chapters:

1. Drake RE, Bartels SJ, Torrey WC: Suicide in Schizophrenia; clinical approaches, in Depression in Schizophrenics. Edited by Williams R. Dalby JT. New York: Plenum Publishing Corporation, 1989.

2. Torrey WC, Drake RE, Bartels SJ: Suicide and persistent mental illness: A continual clinical and risk-management challenge. (pp.295-314), in Handbook for the Treatment of the Seriously Mentally Ill. Edited by Stephen Soreff. Hogrefe & Huber, Seattle, Washington, 1996.

3. Torrey WC: Community care of adults with developmental disabilities and mental illness. (pp.153-172), in Practicing Psychiatry in the Community: A Manual. Edited by Vaccaro JV, Clark, GH. American Psychiatric Press, Washington DC, 1996.

4. Torrey WC, Gorman P: Closing the gap between what services are and what they could be. (pp. 167-187), in Evidence-Based Mental Health Practice. Edited by Robert Drake, Matthew Merrens, David Lynde. WW Norton & Co, New York, 2006

5. Torrey WC, Brunette M: The challenge of integrated care at the program level (pp. 359-364). Oxford Textbook of Community Mental Health. Edited by Graham Thornicroft, George Szmukler, Kim Mueser, Bob Drake. Oxford University Press, Oxford, 2011

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EDUCATION

2006 — University of Michigan School of Public Health, Health Management and Policy – Ann Arbor, Michigan
Master of Public Health

1983 — University of Michigan Medical School – Ann Arbor, Michigan
Medical Doctor

1979 — Williams College – Williamstown, Massachusetts
B.A. *cum laude*, Economics

Residency

1985 - 1987 — Santa Clara Valley Medical Center – San Jose, CA
PGY 2-3, Internal Medicine

1983 - 1985 — St. Joseph Mercy Hospital – Ann Arbor, MI
PGY 1, Internal Medicine and General Surgery

Postgraduate/Fellowship

2006 - 2007 — Palo Alto Medical Foundation Research Institute and Center for Health Policy – Stanford University
Fellow, Quality Improvement

1989 - 1991 — Stanford University Hospital – Stanford, CA
Fellow, Pulmonary Medicine

1987 - 1988 — Stanford University Hospital – Stanford, CA
Fellow, Critical Care Medicine

EMPLOYMENT

2014 - Present — **VP, Population Health**
Dartmouth-Hitchcock Health System

2015-2017 — **Sepsis Dissemination and Implementation Lead, High Value Healthcare Collaborative**
The Dartmouth Institute for Health Policy & Clinical Practice

2014 - 2015	**Medical Director, High Value Healthcare Collaborative** *The Dartmouth Institute for Health Policy & Clinical Practice*
2013 - 2014	**Project Coordinator-MD, Population Health** *Dartmouth Hitchcock, Lebanon NH*
2007 - 2014	**Medical Director, UW Health Quality, Safety and Innovation Department** *University of Wisconsin Health System*
	Clinical Associate Professor – Department of Medicine *University of Wisconsin School of Medicine and Public Health*
1998 – 2014	**Physician, Pulmonary Medicine** *University of Wisconsin Medical Foundation (UWMF)*
1998	**Physician** *Elder Care of Dane County - Madison, WI*
1996 - 1997	**Physician, Pulmonary Medicine** *Department of Veterans Affairs, Livermore Hospital - Palo Alto, CA*
1994 - 1996	**Physician, Pulmonary and Critical Care Medicine** *Physicians Plus Medical Group (now UWMF) – Madison, WI*
1992 - 1993	**Physician, Pulmonary and Critical Care Medicine** *Palo Alto Medical Clinic – Palo Alto, CA*
1992 - 1993	**Clinical Faculty, Pulmonary and Critical Care Medicine** *Stanford University Hospital – Stanford, CA*

LICENSURE AND CERTIFICATION

Licensed in State of Wisconsin, Medicine and Surgery

2012	Recertified, Pulmonary Medicine
2002	Recertified, Pulmonary Medicine
1995	Board Certified, Critical Care Medicine
1992	Board Certified, Pulmonary Medicine
1987	Board Certified, Internal Medicine

PROFESSIONAL SOCIETY MEMBERSHIPS

2008 - Present	Group Practice Improvement Network, Member
1997 - 2014	American College of Chest Physicians, Member

2009 - 2012	American College of Physicians, Member
2009 - 2011	AMGA Quality Improvement Leadership Council, Member

PROFESSIONAL APPOINTMENTS

2017 – Present	Assistant Professor of Medicine and of The Dartmouth Institute Geisel School of Medicine, Dartmouth
2015 - Present	Assistant Professor of Medicine Geisel School of Medicine, Dartmouth
2014 - Present	Clinical Adjunct Associate Professor, Department of Medicine University of Wisconsin School of Medicine and Public Health
2015 - Present	Co-Director Community Engaged Research Core Dartmouth Synergy, The Dartmouth Clinical and Translational Science Institute
2015 - Present	Dissemination and Implementation Subject Matter Expert High Value Healthcare Collaborative
2007 - 2014	Clinical Associate Professor, Department of Medicine University of Wisconsin School of Medicine and Public Health

BOARD AND EXTERNAL COMMITTEE POSITIONS

2017- Present	Board of Directors, Member, Granite United Way
2014 - Present	Board of Directors, Member, Vital Communities
2014 - Present	Steering Committee Member, Upper Connecticut River Valley ReThink Committee
2009 - 2014	Board of Directors, Member, Wisconsin Collaborative for Healthcare Quality (WCHQ)
2010 - 2015	Board Member, University of Michigan School of Public Health, Health Management & Policy Alumni Board
2009 - 2011	Board Member, UW Health Innovation Program
2008 - 2011	Clinical Advisory Group – Wisconsin Health Information Organization, Physician Member
2010	Expert Panel Member – Development of AHRQ Care Coordination Measures, Stanford Health Policy

2008 - 2009	Chair, Madison Patient Safety Collaborative
2008 - 2009	Steering Committee, National Quality Forum (NQF), Clinically Enriched Administrative Data

ACADEMIC LEADERSHIP AND PROGRAM DEVELOPMENT

New Hampshire Delivery System Reform Incentive Program Waiver 1115

- Co-administrative lead, New Hampshire Region 1. Providing oversight for the design and implementation of Region 1 participation in the State, 5-year, $150 million DSRIP program focused on improving health for Medicaid beneficiaries with behavioral health disorders. Personally responsible for $19 million Region 1 budget.

Dartmouth-Hitchcock Health System

- Chartered and Co-Chair, D-H Health System Population Health Council which establishes population health strategies for the D-H system
- Administration of the Population Health Innovation Fund, a Board-designated fund to invest in innovations in population health
- Administrative lead, D-H Substance Use and Mental Health Initiative a 3-year program designed to establish a system-wide care model for D-H patients with behavioral health disorders
- Administrative lead, Community Health Worker program. Design and implementation of a new program employing community health workers at D-H.
- Administrative lead, Peer Mentoring and Peer Education. Dissemination of an evidence-based program of peer-led health education.
- Administrative lead of the D-H Honoring Care Decision program, an evidence-based program of advance care planning.

High Value Healthcare Collaborative

- Design and implemented ABMS approved Maintenance of Certification Portfolio Program
- Design and implemented Sepsis Dissemination and Implementation resources supporting nation-wide implementation of evidence-based sepsis care across Collaborative health system members

University of Wisconsin School of Medicine and Public Health

- Leadership for UW Health Maintenance of Certification Portfolio Program. UW Health was accepted as a Portfolio Sponsor in February, 2013. Provided leadership for the development and implementation of the UW Health MOC Portfolio Program.

- Designed and implemented Healthcare Quality Improvement and Innovation, an elective course in QI for health professional students, Spring 2013
- Faculty sponsor for the medical student Quality Improvement and Innovation Interest Group, Fall 2012 – 2014
- Faculty mentor for UW School of Medicine and Public Health student summer internships in quality improvement, 2012 – 2014
- Faculty sponsor for medical student summer internships in Quality Improvement, 2012 - 2013
- Founding member PATH: Primary Care Academics Transforming Health, Fall 2012 – 2014

UW Health

- Physician leader for the development of the UW Health Dyad Leadership Program, developing physician-administrative leaders accountable for clinic and inpatient unit performance
- Physician leader for the development and implementation of the UW Health Improvement Network (UWHIN), a comprehensive education and training program in improvement science
- Established the UW Health Primary Care Patient and Family Advisory Council

UW Health Quality, Safety and Innovation

- Chartered the integrated UW Health Quality, Safety and Innovation Department, 2012
- Co-Chair, UW Health ACO Task Force, 2011
- Chartered UW Health Center for Clinical Knowledge Management, 2010

UWMF Care and Quality Innovations (CQI) Department

- Chartered a new department at UWMF dedicated to quality improvement, 2008
- Developed professional competencies for quality improvement staff, 2008
- Developed ongoing professional development learning sessions for improvement staff, 2008 - 2014

New Programs Developed in Performance Improvement Education and Leadership

- Ambulatory 401, quality improvement education for physicians and managers, 2007 - 2010.
- Ambulatory 402, ongoing improvement and leadership skills for physicians and managers, 2010 - 2011
- UW Health Dyad Leadership, education and training for dyad leaders (physicians and operational managers) across the enterprise, 2012 - 2014
- Performance Improvement Education (PIE), quality improvement education for teams, 2008 - 2014

CMS Demonstration Project:

- Leader of UW Health CMS PQRI Registry based reporting demonstration, 2008 - 2012

Ambulatory Care Innovations Grant (ACIG) Program

- Executive Co-Lead, ACIG Program
- Leader of this internal competitive grant program. Responsible for program development including creation of evidence based scoring for grant applications and final projects, continuous monitoring of grants over their one-year grant cycle, and the design and implementation of performance improvement education for grant recipients, 2008 – 2014

UW Health Pay for Performance Programs

- Chair of the UWMF P4P workgroup, designed and implemented the UW Health Primary Care Pay for Performance Program, 2008 – 2014
- Physician leader for implementation of the UW Health Annual Academic Advancement Award, 2013 - 2014

Industrial Engineering Affiliation

- Developed a formal collaborative program between UWMF and UW Industrial Engineering (IE) program, 2008 - 2014
- Program includes sponsorship and support of IE student projects at UWMF and IE students supporting ACIG grants

COMMITTEES AND MEMBERSHIPS

DARTMOUTH-HITCHCOCK

2016 – Present	D-H Quality Management Committee
2014 – Present	D-H Health System Population Health Council

UW HEALTH

2013 - 2014	Executive Physician Lead, UW Health Integrated Patient Education Committee
2010 - 2011	Executive Physician Lead, UW Health ACO Task Force
2010 - 2014	Steering Committee, UW Health Information Management Center
2009 - 2014	Executive Physician Lead, UW Health Quality Distinction Strategic Task Force
2009 - 2014	Co-Chair, UW Health ambulatory care operational directors meetings
2009 - 2013	Member, Network for Health Equity in Wisconsin
2008 - 2014	Executive Co-Lead, UW Health Center for Clinical Knowledge Management
2008 - 2013	Executive Co-Lead, Ambulatory Care Innovation Grant Program
2008 - 2013	Editorial Board and contributing member, UW Health Best Practice
2008 - 2013	Executive Physician Lead, UW Health Quality Week Steering Committee
2008 - 2009	Member, UW Health Service Task Force
2008 - 2009	Member, UW Health Strategic Steering Committee
2007 - 2014	Executive Co-Lead, UW Health Quality Council

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
D-H 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
Co-applicant: Dr. Maureen Smith

2013 Robert Wood Johnson, Voices in Quality contest winner
Using Data to Improve Colorectal Cancer Screening Rates

EDUCATIONAL COURSES AND LECTURES

2016 *Community Health Improvement,* Lecturer
The Dartmouth Institute Introduction to the Continual Improvement of Healthcare

2013 *Healthcare Quality Improvement and Innovation,* Lecturer
UW Health Population Science course of instruction

2012 *Quality of Healthcare,* Lecturer
UW Population Health/Industrial Systems Engineering

2011 *Leadership in Medicine and Public Health,* Lecturer
UW Population Health Sciences

2010 - 2012 *Quality Improvement – Practical Applications in Clinical Practice*, Lecturer
UW Health Primary Care Faculty Development Program

2010 - 2013 *Developing Physician Leaders in Quality Improvement,* Lecturer
UW Health Physician Leadership Development Program

2010 - 2013	*Building Improvement Skills for Managers,* Lecturer UW Medical Foundation, Foundations of Management Program
2010 - 2013	*Operations and Technology Management,* Lecturer UW School of Business
2009 - 2013	*Health Systems*, Lecturer University of Wisconsin School of Medicine and Public Health
2009 - 2011	*Law Seminar 940*, Lecturer University of Wisconsin Law School
2009	*Building Improvement Teams in Primary Care Clinics,* Lecture Wisconsin Research and Education Network
2009	*Perspective in Multidisciplinary Clinical & Translational Research*, Lecture University of Wisconsin School of Medicine and Public Health
2009 - 2013	*Introduction to Quality Improvement,* Mentor University of Wisconsin School of Medicine and Public Health - Pediatric Residents, Administrative Rotation
2007 - 2008	*Hands on Performance Improvement Training (HOPIT),* Developed curriculum and taught University of Wisconsin Hospital & Clinics and University of Wisconsin Medical Foundation Quality Improvement staff

PRESENTATIONS

2017	*Implementing Standard Care Models* Maine Medical Center, Grand Rounds
2016	*From Variable to Valuable: Implementing Standard Care Models in an AHC* The Dartmouth Institute, Research Seminar
2016	*Collaborating to Form and Run and Institutional MOC Portfolio Program* ABMS Quality Improvement Forum
2015	*Role of Collaboratives and Learning Networks in Improvement, Keynote plenary session* Dartmouth CO-OP Research Network
2014	*Creating the Framework to Link Scholarship to MOC and Quality Improvement* ABMS Conference 2014
2014	*Benefits of Linking QI to Research: Connecting the Dots*

AAMC Integrating Quality

2014 *Aligning Part IV MOC Activities with Institutional Priorities*
AAMC Integrating Quality

2014 *Implementing a MOC Portfolio Program at an Academic Health System*
ABMS Forum on Organizational Quality Improvement

2014 *A Brave New World: Redesigning Primary Care*
Department of Medicine, Grand Rounds
University of Wisconsin School of Medicine and Public Health

2013 *Alignment: A Critical Competency for Quality Improvement Departments*
AAMC Integrating Quality

Health Systems Engineering at the UW Health: Partnering to Redesign Care
AAMC Integrating Quality

2012 *A Guide to System Level Improvements*
IHI International Summit on Improving Patient Care in the Office Practice and Community

2012 *Quality Science 101*
Alliance for Continuing Medical Education Annual Conference

2010 *Health Care Reform and ACOs*
UWMF Board of Directors and UWSMPH Council of Chairs

2010 *Healthcare Quality: Excellence for Some but not for All*
Epic, Educational Session

2010 *Primary Care Redesign and Microsystems*
Wisconsin Collaborative for Healthcare Quality, Assembly Meeting

2009 *Integrating Quality: Linking Continuing Education and Quality Improvement in the Academic Medical Center*
AAMC, Annual Meeting – Boston

2009 *Smart Regulation: Can New Types of Governance Improve Health?*
Panel Member – Forum sponsored by University of Wisconsin Law School and Global Legal Studies Center; Institute for Clinical and Translational Research; HIP; Carbone Comprehensive Cancer Center; LaFollette School of Public Affairs

2009 *The Role of the MD in Quality Improvement*
UW Health – Quality Week Presentation

2009 *UW Health Experience with PQRI*
Faculty Practice Solutions Center (FPSC)

2009 *PQRI: Use of Registry Based Submission*
Epic User Group Meeting

2008 *The Medical Home*
Wisconsin Medical Society

PUBLICATIONS

Weiss Jennifer, Kraft Sally, Pandhi Nancy, Potvien Aaron, Carayon Pascale, Smith Maureen. Primary Care Provider Practice Patterns that are Concordant/Discordant with Colorectal Cancer Screening: A Retrospective Cohort Study. Clinical and Translational Gastroenterology. Accepted for publication. 2018.

Taenzer A, Kinslow A, Gorman C, Schoepflin Sanders S, Patel SJ, Kraft S, et al.. Dissemination and Implementation of Evidence Based Best Practice Across the High Value Healthcare Collaborative (HVHC) Using Sepsis as a Prototype – Rapidly Learning from Others. eGEMs (Generating Evidence & Methods to improve patient outcomes). 2017;5(3):5.

Kraft SA, Caplan W, Trowbridge E, Davis S, Berkson S, Kamnetz S, Pandhi N. Building a Learning Health System: Describing an Organizational Infrastructure to Support Continuous Learning. Learning Health Systems (in press); 2017.

Zhong X, Lee H, Williams M, Kraft S, Sleeth J, Welnick R, Hauschild L, Li J. Workload Balancing: Staffing Ration Analysis for Primary Care Redesign. Flexible Services and Manufacturing J 2016.

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.

Kraft SA, Carayon P, Weiss J, Pandhi, N. A Simple Framework for Complex System Improvement. Am J Med Qual 2015; 30(3): 223-231.

Kraft SA, Strutz E, Welnick R, Kay L, Pandhi N. Strange Bedfellows: A Local Insurer/Physician Partnership to Fund Innovation. J of Healthcare Quality 2015; 37(5): 298-310.

Trowbridge E, Berkson S, Koslov S, Kraft S, Jaffery J, Davis S, Kamnetz S, Lochner J, Pandhi N. Response to Greene et al. [eletter].Ann Fam Med. http://www.annfammed.org/content/13/3/235/reply#annalsfm_el_29153. June 4, 2015

Zhong X, M. Williams, J. Li, S. Kraft and J. Sleeth, "Primary Care Redesign: Review and a Simulation Study at a Pediatric Clinic," in Healthcare Data Analytics, Wiley Series on Operations Research and Management Science (WORMS), H. Yang and E. Lee Ed., John Wiley & Sons, 2015.

Zhong X, H.K. Lee, M. Williams, S.A. Kraft, J. Sleeth, R. Welnick, L. Hoschild and J. Li, "Staffing Ratio Analysis in Primary Care Redesign: A Simulation Approach," Proceedings of Second International Conference on Health Care Systems Engineering, Lyon, France, 2015.

X. Zhong, M. Williams, J. Li, S. Kraft and J. Sleeth, "Primary Care Redesign: A Simulation Study at a Pediatric Clinic," Proceedings of IEEE International Conference on Automation Science and Engineering, pp. 546-551, Taipei, Taiwan, 2014.

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.

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.

Weiss JM, Smith MA, Pickhardt PJ, Kraft SA, Flood GE, Kim DH, Strutz E, Pfau PR. Predictors of Colorectal Cancer Screening among Primary-Care Providers and Clinics. American J of Gastroenterology 2013; 108: 1159-67.

Benson M, Pier J, Kraft S, Kim D, Pickhardt P, Weiss J, Gopal D, Reichelderfer M, Pfau P. Optical Colonoscopy and Virtual Colonoscopy Numbers after Initiation of a CT Colonography Program. J of Gastrointestin Liver Disease 2012; 21: 391-5.

Sheehy A, Pandhi N, Coursin D, Flood G, Kraft S, Johnson H, Smith M. Minority Status and Diabetes Screening in an Ambulatory Population. Diabetes Care 2011; 34: 1289-94.

Thorpe C, Flood G, Kraft S, Everett C, Smith M. Effect of Patient Selection Methods on Provider Group Performance Estimates. Medical Care 2011; 49: 780-5.

McDonald KM, Sundaram V, Bravata DM, Lewis R, Lin N, Kraft S, McKinnon M, Paguntalan H, Owens DK. Care Coordination. Vol 7 of: Shojania KG, McDonald KM, Wachter RM, Owens DK, editors. Closing the Quality Gap: A Critical Analysis of Quality Improvement Strategies. Technical review 9 (prepared by the Stanford University-UCSF Evidence-based Practice Center under contract 290-02-0017). AHRQ Publication No. 04(07)-0051-7. Rockville, MD: Agency for Healthcare Research and Quality. June 2007.

Birnbaum ML, Kraft SA. Results of Critical Care and the Quality of Survival. Critical Care, Standards, Audit and Ethics. Edited by Tinker J, Browne RG, Sibbald WJ. Arnold 1996

Green RJ, Ruoss SJ, Kraft SA, Berry GJ, Raffin TA. Pulmonary Capillaritis and Alveolar Hemorrhage. Chest 1996; 110: 1305-16

Tapper DP, Duncan SR, Kraft SA, Kagawa FT, Marshall S, Theodore J. Detection of Inspiratory Resistive Loads by Heart-Lunt Transplant Recipients. American Review of Respiratory Disease 1992; 145: 458-460

Kraft SA, Mihm FG, Feely TW. Postoperative Endocrine Complications. Post Anesthesia Care. Edited by Vender J and Spiess B. W.B. Saunders, 1992.

Fujishima S, McGuire GP, Kraft SA, Raffin TA, Pearl RG. Isoproterenol Prevents Oxidant-Induced Injury in Isolated Rabbit Lungs. Journal of Clinical Pharmacology 1991.

Kraft SA, Larson CP, Shuer LM, Steinberg GK, Benson GV, Pearl RG. Effect of Hyperglycemia on Neuronal Changes in a Rabbit Model of Focal Cerebral Ischemia. Stroke 1990; 21: 447-450.

POSTER PRESENTATIONS

Pandhi, N, Berkson S, Caplan W, Davis S, Kamnetz, S, Koslov S, Trowbridge B, Karp Z, Kraft S. Finding a PATH to support scholarly careers: Primary care Academics Transforming Healthcare

Kraft S, Flood G, Prajapati P, Meredith M. Lean on Me: Aligning Improvement Interventions to Ease the Improvement Burden. AAMC Integrating Quality, June, 2013.

Fischer M, Kraft S, Prajapati P. QI Education at the University of Wisconsin School of Medicine and Public Health. AAMC Integrating Quality, June, 2013.

Weiss J, Smith M, Pickhardt P, Kraft S, Flood G, Kim D, Strutz E, Pfau P. Predictors of Colorectal Cancer Screening Variation among Primary Care Providers and Clinics. Awarded Best Population Science Cancer Research Poster. UW Carbone Cancer Center Research Retreat, February, 2013.

Pandhi N, Berkson S, Kraft S, Snellman M. Evaluating a Microsystems Approach to Supporting Primary Care Teams. AAMC Integrating Quality, June, 2012.

Kraft S, et al. Aligning Physician Educational Requirements with Organizational Quality Improvement. Poster presentation: AAMC Integrating Quality, June, 2011.

Kraft S, et al. Partnering Health Services Research and Organization Improvement to Redesign Systems. Poster presentation. AAMC Integrating Quality, June, 2011.

Thorpe C, Flood G, Kraft S, Everett C, Smith M. Diabetes Performance Measurement at the Group Practice Level: A Comparison of Methods for Assigning Medicare Beneficiaries with Diabetes to an Outpatient Provider Group. Presented at the Academy Health Conference 2009.

Kraft, S. Ambulatory 401: Leadership Training for Physician-Manager Dyads. Presented at AAMC Integrating Quality Conference June, 2010.

Kraft S, Flood G. Ambulatory Care Innovation Grants: Supporting Great Improvement Ideas. Presented at AAMC Integrating Quality Conference June, 2010.

Kraft S. University of Wisconsin Affiliation between Industrial Engineering and the Medical Foundation: Building Partnerships for Improvement. Presented at AAMC Integrating Quality Conference June, 2010.

RESEARCH ACTIVITIES

Awarded: Connecting the Dots: Building the Infrastructure Linking Patient Care to Professional Education to Scholarly Work and back to the Patient Again. AAMC Learning Health System Planning Award. 2014.

Awarded: Educational grant to support physician CME and MOC requirements while working on the UW Health Diabetes Improvement Initiative. Collaborative research with UWMF and the UW Health Office of Continuing Professional Development. Funded by Glaxo-Smith-Kline. 2010 - 2013

Awarded: Measuring and Reporting for Quality of Care: The AAO/PCPI/NCQA Eye Care Performance Measures. Collaborative research with UWMF, the Wisconsin Medical Society, and Metastar. Funded by the AMA. 2009 - 2010

Awarded: Guideline Adherence and Short/Long-term Health Outcomes in Patients with Diabetes. R01 Supported by Care and Quality Innovations, UWMF. Principal Investigator: Dr. Maureen Smith

Awarded: Novel Population Health Approach to Address CVD and Pulmonary Health Disparities. RC2 Supported by Care and Quality Innovations, UWMF. Principal Investigator: Dr. F. Javier Nieto

Awarded: Ambulatory Care Innovation Grant. Getting Healthy at UW Health. Funded by the Ambulatory Care Innovation Grant Program. Principal Investigator: Sally Kraft, MD MPH. 2011 - 2012

Awarded: Ambulatory Care Innovation Grant. Performance Improvement Education. Funded by the Ambulatory Care Innovation Grant Program. Principal Investigator: Sally Kraft, MD MPH. 2008

CURRICULUM VITAE

Name: Alan Ivan Green, M.D.

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One Medical Center Drive
Lebanon, NH 03756 **Phone**: 603-650-7549

Email: alan.i.green@dartmouth.edu **Fax:** 603-650-8415

Place of Birth: Norwalk, Connecticut

Education:

1965	A.B., Columbia College
1969	M.D., The Johns Hopkins University School of Medicine

Postdoctoral Training

Internship and Residencies

1969-1970	Intern in Medicine, Beth Israel Hospital, Boston
1972-1973	Junior Resident in Psychiatry, Boston City Hospital, Boston
1973-1975	Resident in Psychiatry, Massachusetts Mental Health Center, Boston
1975-1981	On medical leave due to systemic cytomegalovirus infection
1981-1982	Resident in Psychiatry, Massachusetts Mental Health Center, Boston

Research Fellowships

1970-1971	Staff Associate, National Institute of Mental Health, Laboratory of Pre-Clinical Pharmacology, Washington, D.C.
1971-1972	On assignment from NIMH to Special Action Office for Drug Abuse Prevention, Executive Office of the President
1982-1984	Clinical Research Training Fellow, Massachusetts Mental Health Center, Boston

Licensure and Certification

1974-2012	California, Board of Medical Quality Assurance
1975	Massachusetts, Board of Registration in Medicine, # 38430
1984	Certification by American Board of Psychiatry and Neurology, #26343
2003	New Hampshire, Board of Medicine, #11912

Faculty Academic Appointments

1969-1970	Clinical Fellow in Medicine, Harvard Medical School
1972-1982	Clinical Fellow in Psychiatry, Harvard Medical School
1982-1984	Senior Research Fellow in Psychiatry, Harvard Medical School
1984	Lecturer in Psychiatry, Harvard Medical School
1984-1994	Assistant Professor of Psychiatry, Harvard Medical School
1994- 2002	Associate Professor of Psychiatry, Harvard Medical School
2002-	Lecturer in Psychiatry, Harvard Medical School
2002-	Raymond Sobel Professor of Psychiatry, Geisel School of Medicine at Dartmouth
2002-	Chairman, Department of Psychiatry, Geisel School of Medicine at Dartmouth
2005-2016	Professor of Pharmacology and Toxicology, Geisel School of Medicine at Dartmouth
2010-	Associate Dean for Clinical and Translational Science, Geisel School of Medicine at Dartmouth
2010-	Director, SYNERGY: The Dartmouth Clinical and Translational Science Institute
2016-	Professor of Molecular and Systems Biology, Geisel School of Medicine at Dartmouth

Hospital Appointments

1981-1984	Assistant Clinical Director, Southard Clinic, Massachusetts Mental Health Center
1982-2008	Staff Psychiatrist, Massachusetts Mental Health Center
1983-2004	Medical Staff, New England Deaconess Hospital
1984-1993	Associate Director of Psychopharmacology, Massachusetts Mental Health Center
1983-1993	Program Director, Psychopharmacology Extramural Training Program, Massachusetts Mental Health Center
1984-2001	Attending Physician, Brockton VA Medical Center
1987-1999	Administrative Director to Director, Commonwealth Research Center, Massachusetts Mental Health Center
1993-2002	Medical Staff, Brigham & Women's Hospital
1999-2002	Director, Commonwealth Research Center, Massachusetts Mental Health Center, Harvard Medical School
1996-2002	Director, Office of Research Administration, Massachusetts Mental Health Center
1998-2002	Director, Neuropsychopharmacology Laboratory, Massachusetts Mental Health Center
2002-	Mary Hitchcock Memorial Hospital, Lebanon, NH
2004-	Consulting Staff, Beth Israel Deaconess Medical Center, Boston, MA
2002-	Chairman, Department of Psychiatry, Dartmouth-Hitchcock Medical Center

Other Professional Positions and Major Visiting Appointments

1971	Special Assistant to Director, Special Action Office for Drug Abuse Prevention, Executive Office of the President, Washington, D.C.
1971-1972	Acting Director of Research, Special Action Office for Drug Abuse Prevention, Executive Office of the President
1972-1973	Director of Biomedical Research, Special Action Office for Drug Abuse Prevention, Executive Office of the President
1973-1975	Consultant, Special Action Office for Drug Abuse Prevention, Executive Office of the President
2001-2002	Vice-President, Massachusetts Mental Health Institute
2001-2005	Member, Board of Directors, Massachusetts Mental Health Institute
2002-	Member, Board of Directors, West Central Behavioral Health
2002-	Member, Board of Governors, Dartmouth Hitchcock Medical Center
2002-	Director, Psychopharmacology Research Group, Department of Psychiatry, Geisel School of Medicine at Dartmouth

Major Administrative Leadership Appointments

1999-2002	Director, Commonwealth Research Center, Harvard Medical School Department of Psychiatry
2002-	Chairman, Department of Psychiatry, Geisel School of Medicine at Dartmouth
2010-	Director, SYNERGY: The Dartmouth Clinical and Translational Science Institute, Dartmouth College

Committee Service

1983-1984	Vice President, Clinical Staff Organization, Massachusetts Mental Health Center
1984	President, Clinical Staff Organization, Massachusetts Mental Health Center
1984-1985	Chairman, Task Force on Neuroleptic Agents, MA Department of Mental Health
1989-1991	Member, Clozapine Task Force, MA Department of Mental Health
1989-1990	Member, Committee on AIDS and Drugs, Harvard AIDS Institute
1991-2002	Member, Research Committee, Dept of Psychiatry, Harvard Medical School
1991-2002	Member, Research Committee, Massachusetts Mental Health Center
1993-1999	Member, MA Department of Mental Health, Research Advisory Committee
1995-1996	Member, Task Force on Informed Consent, MA Department of Mental Health
1998-2002	Member, Promotions Committee, Massachusetts Mental Health Center
2001-2005	Member, Board of Directors, Massachusetts Mental Health Institute
2002-	Advisory Board, Neuroscience Center, Geisel School of Medicine at Dartmouth
2002-2016	Member, Board of Governors, Dartmouth Hitchcock Medical Center
2002-	Member, Board of Directors, West Central Behavioral Health, Lebanon, NH
2013-	Member, National CTSA Steering Committee, NCATS, NIH

Professional Societies

1975-	Member, American Psychiatric Association
1982-	General Member, Massachusetts Psychiatric Society
1983-	Program Committee, Massachusetts Psychiatric Society
1983-1986	Newsletter Editor, Massachusetts Psychiatric Society
1996-	Member, Massachusetts Medical Society
1998-	Member, American Association for the Advancement of Science
1999-2003	Fellow, American Psychiatric Association
2001-	Member, American College of Neuropsychopharmacology
2003-	Distinguished Fellow, American Psychiatric Association
2007-	Distinguished Life Fellow of the American Psychiatric Association
2009-	Member, Collegium Internationale Neuro-Psychopharmacologicum
2011-	Fellow, American College of Neuropsychopharmacology
2012-	Member, Committee on Dual Disorders, World Psychiatric Association

Grant Review Activities

2002	Member, ZMHI/NRB w -13R Study Section (NIMH)
2002	Chairman, ZAAI BB22 Study Section (NIAAA)
2004	Member, Peer Review of RFA-DA-04-016 (NIDA)
2006	Member, Peer Review Panel of RFA DA06-002 (Pilot Clinical Trials) (NIDA)
2009	Member, NIDA "L" Review Committee
2010	Member, ZMH1 ERB-F (08) S Study Section (NIMH)
2010	Member, ZMH1 ERB-F (02) S Study Section (NIMH)
2011	Member, ZRG1 BDCN-C (02) M Study Section (NIH)
2014	Member, ZAA1 DD 10 1, NIAAA Concept Review - Human Lab Paradigms

Editorial Activities

1995-2013	Member, Editorial Board, Harvard Mental Health Letter
2003-	Member, Editorial Board, Schizophrenia Research
2003-	Member, Editorial Board, The Journal of Dual Diagnosis
2008-	Associate Editor, The Journal of Dual Diagnosis

2008-2010	Member, Physician Editorial Board, Neuropsychiatry Reviews
2009-	Assistant Editor, Addiction
2010-2013	Member, Editorial Board, Schizophrenia Bulletin
2010-	Co-Editor, The Journal of Dual Diagnosis

Honors and Prizes

1982	Ethel Dupont-Warren Award, Department of Psychiatry, Harvard Medical School
1988	William F. Milton Fund Award, Harvard Medical School
1990	Outstanding Teacher Award, Brockton VA Medical Center, Dept. of Psychiatry
1997	Best Doctors in Boston: Boston Magazine
1998	Outstanding Psychiatrist Award for Research, Massachusetts Psychiatric Society
1998	NARSAD Independent Investigator Award
1998	Best Doctors in America
1999-	Who's Who in America
2000	Peter Curran Lecturer, Mater Hospital Trust, Belfast, N. Ireland
2003	Distinguished Fellow, American Psychiatric Association
2004	Master of Arts (Hon.), Dartmouth College
2005	Best Doctors in America
2006	Turner Lecturer, Dartmouth Medical School
2007	Joseph J. Schildkraut Memorial Lecturer, University of Massachusetts
2007-	Distinguished Life Fellow of the American Psychiatric Association
2007-	Best Doctors in America
2011-	Fellow, American College of Neuropsychopharmacology
2013	Member of Honour, Spanish Society of Dual Pathology

Major Research Interests

1. Schizophrenia and comorbid substance use disorder: neuropharmacology, neuroimaging and treatment development
2. Medication development for addiction
3. Brain reward circuitry
4. Animal models
5. Early intervention in schizophrenia

Research Funding

Current Federal Grants

2017-2019 NIDA R21DA044501 PI: Green	Reward circuit dysfunction, substance use disorder, and schizophrenia: a preclinical fMRI-based connectivity study
2013-2020 NIDA R01DA034699 PI: Green	Cannabis, schizophrenia and reward: self-medication and agonist treatment?
2013-2019 NCATS 1 UL1 TR001086-03 NCATS 1KL2TR001088-03 PI: Green	Dartmouth SYNERGY| The Dartmouth Clinical and Translational Science Institute
2015-2020 NIH/NIDA 1UH2DA041713 PI: Marsch/Poldrack	Applying Novel Technologies and Methods to Inform the Ontology of Self-Regulation

Current Clinical Trials: None

Current Investigator Initiated Grants from Industry: None

Past NARSAD Grant:

1998-2002 NARSAD Independent Investigator Award PI: Green	Toward the prevention of schizophrenia: treatment of negative symptoms and neurocognitive deficits in first degree relatives

Past Federal Grants

1993-2001 NIMH RO1MH49891 PI: Green	Clozapine response and biogenic amines in schizophrenia
1994-1999 NIMH RO1MH52376 PI: Green	Clozapine vs. haloperidol in first episode schizophrenia
1995-2001 NIMH RO1MH49891-Supp. PI: Green	Clozapine vs. olanzapine: an effectiveness study. Clinical Services Supplement to Grant #RO1MH49891
1995-1998 NIMH RO1MH49891-Supp. PI: Green	Minority Supplement to Grant #RO1MH49891
1999-2004 NIAAA RO1AA11904 PI: Green	Alcoholism and schizophrenia: Effects of clozapine
1999-2004 NIAAA RO1AA11904 PI: Green	Minority Supplement to NIAAA Grant #RO1AA11904
2004-2007 NIAAA R03AA014644 PI: Green	Antipsychotics and alcohol drinking in rodents
2000-2008 NIDA R01DA 13196 PI: Green	Cannabis and schizophrenia: Effects of clozapine
2001-2009 NIMH R21MH62157 PI: Green	Clozapine, cannabis and first episode schizophrenia
2004-2009 NIDA R21DA019215-01 PI: Green	Cannabis and schizophrenia: fMRI Reward Circuit Biomarker
2007-2009 NIAAA CSP-1027 PI: Green	Efficacy of quetiapine fumarate sustained release for the treatment of alcohol dependency in very heavy drinkers

2007-2010 NIMH 5R03MH075833-02 PI: Chau; Co-PI: Green	Toward a Rat Model of Alcohol Abuse in Schizophrenia
2009-2011 NIAAA/Fast Track NCIG-002 PI: Green	Efficacy of Levetiracetam Extended Release for the treatment of alcohol dependency in very heavy drinkers
2009-2011 NIAAA R13AA018603 PI: Green	Conference: Integrating Etiologic Models and Optimizing Treatment for Alcohol Disorders in Schizophrenia Patients
2010-2012 NIDA R21 DA029131 PI: Sevy	Improving Substance Use and Clinical Outcomes in Heavy Cannabis Users
2011-2012 NIAAA/Fast Track NCIG-003 PI: Green	A Phase 2, Double-Blind, Placebo Controlled Trial to Assess the Efficacy of Varenicline Tartrate for Alcohol Dependence in Very Heavy Drinkers.
2009-2012 NIDA R01DA026799 PI: Green	Cannabis and Schizophrenia: Self-Medication and Agonist Treatment? (No Cost Extension)
2010-2013 NIAAA R01AA018151 PI: Green	Deconstructing Clozapine: Toward Medication for Alcoholism in Schizophrenia (No Cost Extension)
2011-2014 NIAAA R21AA019534 PI: Green	Alcoholism and Schizophrenia: A Translational Approach to Treatment (No Cost Extension)
2014-2015 NCATS 3UL1TR001086-02S1 PI: Green	Enhancing Clinical Research Professionals' Training and Qualifications
2014-2015 NCATS 3UL1TR001086-02S2 PI: Green	Development of a Cross-CTSA IRB Reliance Program (National IRB Reliance Initiative)
2015- 2017 NIAAA/Fast-Track Drugs & Biologics PI: Green	Randomized, Double Blind, Placebo-Controlled Trial of the Safety and Efficacy of HORIZANT® (Gabapentin Enacarbil) Extended-Release Tablets for the Treatment of Alcohol Use Disorder
2012-2017 NIDA R01DA032533 PI: Green	Clozapine for cannabis use disorder in schizophrenia
2015-2018 NCATS 3UL1TR001102-04S1 PI: Nadler	Harvard Clinical and Translational Science Center (Supplement): SMART IRB

Past Investigator Initiated Grants

1989-1990 Milton Fund Harvard Medical School PI: Green	Subgroups of psychotic patients: pharmacologic, biochemical and clinical differences
1991-1994 Sandoz Research Institute PI: Green	Clozapine in psychotic patients
1993-1994 Eli Lilly & Co. PI: Green	Biochemical predictors and correlates of response to olanzapine
1994-1996 Otsuka America Pharm., Inc. PI: Green	Biochemical predictors and correlates of response to OPC-14597
1997-1999 Eli Lilly & Co. PI: Green	Olanzapine vs. typical neuroleptics: prolactin level and ovarian function
1997-1999 Novartis Pharmaceuticals PI: Green	Clozapine's effect on prolactin level and ovarian function
1997-2000 Janssen Research Foundation PI: Green (with MT Tsuang)	Risperidone in relatives of patients with schizophrenia
1997-2001 Eli Lilly & Co. PI: Green	Olanzapine vs. haloperidol in first episode schizophrenia: an addendum study
1999-1999 Novartis Pharmaceuticals PI: Green	Clozapine in patients with schizophrenia and substance abuse
1999-2003 Eli Lilly & Co. PI: Green	Clozapine vs. olanzapine: an effectiveness study
2000-2001 Eli Lilly & Co. PI: Green	Preventing weight gain from novel antipsychotics (feasibility study)
2001-2002 Novartis Pharmaceuticals PI: Green	Does clozapine limit alcohol drinking in Syrian Golden Hamsters?
2002-2006 AstraZeneca PI: Green	Comparison of atypical antipsychotics in first episode schizophrenia

2004-2006
Bristol-Myers Squibb/Otsuka
PI: Green
Aripiprazole in alcohol drinking rodents

2000-2007
AstraZeneca
PI: Green
Quetiapine in schizophrenia and comorbid substance use disorder (retrospective)

2000-2007
Eli Lilly & Co.
PI: Green
Olanzapine in patients with comorbid substance use disorder and schizophrenia (retrospective)

2003-2008
AstraZeneca
PI: Green
Efficacy of quetiapine in treating patients with active substance use disorder and schizophrenia

2006-2008
Cyberonics Inc.
PI: Green
Does vagus nerve stimulation limit alcohol drinking in the alcohol-preferring Syrian golden hamster?

2004-2008
Janssen Research Foundation
PI: Green
Risperidone and alcohol drinking in the Syrian golden hamster and in the alcohol-preferring "P" rat.

2004-2010
Janssen Research Foundation
PI: Green
Risperidone long-acting for alcohol and schizophrenia treatment (R-LAST).

2007-2011
Janssen Research Foundation
PI: Green
Paliperidone in alcohol drinking rodents

2013-2014
Novartis
PI: Green
Iloperidone for alcohol use disorder in schizophrenia

2015-2016
Alkermes
PI: Green
Olanzapine-Samidorphan in Alcohol-Preferring Rodents

Past Clinical Trials

1989-1991
Janssen Research Foundation
PI: Green
Risperidone in the treatment of schizophrenia

1989-1990
Sandoz Research Institute
PI: Green
SDZ HDC-912 in the treatment of schizophrenia

1991-1994
Merck, Sharp & Dome
PI: Green
Remoxipride vs. haloperidol in schizophrenic outpatients

1993-1997 Eli Lilly & Co. PI: Green	Fixed-dose olanzapine vs. placebo in the treatment of schizophrenia
1994-1996 Otsuka America Pharm., Inc. PI: Green	OPC-14597 vs. haloperidol and placebo in the treatments of schizophrenia
1994-1996 Pfizer, Inc. PI: Green	Inpatient study of ziprasidone and haloperidol in the acute exacerbation of schizophrenia and schizoaffective disorder
1994-1996 Pfizer, Inc. PI: Green	Evaluating the safety and efficacy of two dose regimens of oral ziprasidone and haloperidol in the maintenance treatment of outpatients with schizophrenia or schizoaffective disorder
1994-2000 Pfizer, Inc. PI: Green	Evaluating the safety and outcome of oral ziprasidone in subjects who have participated in previous clinical trials of ziprasidone
1995-1996 Otsuka America Pharm., Inc. PI: Green	A dose ranging study of OPC-14597 in patients with schizophrenia
1995-2002 Otsuka America Pharm., Inc. PI: Green	An open-label tolerability study of OPC 14597 in schizophrenic patients
1996-1997 Zeneca Pharmaceuticals PI: Green	Health outcomes study of Seroquel and usual care in schizophrenia and schizoaffective disorder
1996-1998 Janssen Research Foundation PI: Green	A comparison of risperidone and haloperidol for prevention of relapse in subjects with schizophrenia and schizoaffective disorders
1997 ICON Clinical Research, Inc. PI: Green	A phase III randomized study comparing 2 doses of intramuscular ziprasidone (2 mg and 20 mg) in subjects with psychosis and acute agitation
1997-1998 Hoescht Marion Rousel, Inc. PI: Green	A multicenter, randomized, double-blind, placebo and active controlled study of MDL 100,907 in schizophrenic and schizoaffective patients
1997-1999 Hoescht Marion Rousel, Inc. PI: Green	A multicenter, open-label, long-term follow-up, safety study of MDL 100,907 in schizophrenic and schizoaffective patients
1997-1999 Otsuka America Pharm., Inc. PI: Green	A study of aripiprazole in schizophrenia

1997-2001 Eli Lilly & Co. PI: Green	The acute and long-term efficacy of olanzapine in first-episode psychotic disorders
1998-2001 Novartis Pharmaceuticals PI: Green	Clozapine vs. olanzapine in patients with schizophrenia and suicidality
2000-2002 Bristol-Myers Squibb PI: Green	A multicenter study of aripiprazole in the treatment of patients with acute schizophrenia
2000-2002 Novartis Pharmaceuticals PI: Green	A multicenter trial of iloperidone in patients with schizophrenia
2003-2005 Eli Lilly & Co. PI: Green	Atomoxetine plus olanzapine for cognitive dysfunction in schizophrenia
2004-2006 Forest Laboratories PI: Green	Memantine in psychosis
2008-2010 H. Lundbeck A/S PI: Green	Neurocognitive effect of sertindole versus quetiapine in patients with schizophrenia.
2008-2010 Eli Lilly and Co. PI: Green	A phase 2 study of LY2196044 compared with naltrexone and placebo in the treatment of alcohol dependence.

Teaching

1. Medical School Courses

1981-1985	Psychiatry 700a, Harvard Medical School
1982-1985	William James Seminar, Harvard Medical School
1983-1986	William James Seminar II, Harvard Medical School
1984-1985	Pathophysiology 905.0, Harvard Medical School
1984-1986	Psychiatry 700b, Harvard Medical School
1986-1989	Psychiatry 700, Harvard Medical School
1989-1997	Psychiatry 700mj, Harvard Medical School
2003-	Medical Neuropharmacology: Antipsychotics, Geisel School of Medicine at Dartmouth
2004-2009	Psych 606: Adolescent Alcohol Abuse, Dartmouth College
2005-	Neurobiology of Psychosis, Geisel School of Medicine at Dartmouth
2006	Pharmacology 131: Neuropharmacology and Imaging Biomarkers, Geisel School of Medicine at Dartmouth
2006-	Schizophrenia and Substance Abuse, Neuroscience Center, Geisel School of Medicine at Dartmouth
2007-	PEMM 131: Neuropharmacology and Imaging Biomarkers, Geisel School of Medicine at Dartmouth
2007-	PEMM 102: Neurotransmitter Transporters, Geisel School of Medicine at Dartmouth
2008-	PEMM 211: Neurobiology of Schizophrenia, Geisel School of Medicine at Dartmouth

2. Hospital Courses and Teaching Presentations

1982-	Psychopharmacology Lecture Series (Annual), Massachusetts Mental Health Center
1982-2002	Board Review Course (CME), Massachusetts Mental Health Center
1983-1993	Psychopharmacology Extramural Training Program (CME), Massachusetts Mental Health Center
1984	Lecturer: Psychoneuroendocrinology, Brockton VA Medical Center
1985-1986	Topics in Psychopharmacology (CME), Lenox, MA
1986-1991	Psychopharmacology Update (CME), Aruba
1986-1994	Psychopharmacology Case Conference and Seminar, Brockton VA Medical Center
1987-1988	Psychopharmacology Update (CME), Massachusetts Department of Mental Health
1989-1994	Psychosis Seminar, Massachusetts Mental Health Center
1989-1992	Affective Disorders Seminar, Massachusetts Mental Health Center
1990-1993	Anxiety Disorders Seminars, Massachusetts Mental Health Center
1991-	Harvard Medical School CME, Essential Psychopharmacology
1993-1994	Harvard Medical School CME, Psychopharmacology for the Family Physician
1993	Brockton VA Medical Center, Typical and Atypical Neuroleptic Drugs
1994	Harvard Longwood Psychiatry Residency, Pharmacological Approach to Schizophrenia
1994	MMHC CME, Psychopharmacology for the internist
1994-2002	Anxiety Disorders Courses, Harvard Longwood Psychiatry Residency
1996-2002	Psychosis Seminar, Harvard Longwood Psychiatry Residency
1997-	Course Director, Essential Psychopharmacology, Harvard CME
2000-2002	Harvard Longwood Psychiatry Residency: lectures on psychopharmacology of psychosis
2003-	Research Seminar, Dartmouth Psychiatry Residency Program
2003-	Psychopharmacology, Pharmacology Course, Year Two, Geisel School of Medicine at Dartmouth
2003-	Psychiatry Grand Rounds, Dartmouth Hitchcock Medical Center
2003	Lecturer, Neuroscience Center at Dartmouth
2003	Psychiatry Grand Rounds, New Hampshire Hospital
2004	Lecturer, Addiction Symposium, Dartmouth Center on Addiction, Recovery and Education
2005	Psychiatry Grand Rounds, New Hampshire Hospital
2005	Pharmacology and Toxicology Seminar Series, Dartmouth Medical School: "Brain Reward Circuit Dysfunction in Schizophrenia: A Target for Therapeutic Intervention?"
2006	Pharmacology 131 Spring Lecture, Dartmouth Medical School. Modern Approaches in Experimental Therapeutics: Neuropharmacology/Brain Imaging
2006	Neuroscience Center at Dartmouth, Pathophysiological Basis of Brain Disease Course: "Neurobiology of Schizophrenia."
2007-	Neuroscience Center at Dartmouth, Pathophysiological Basis of Brain Disease Course: "Neurobiology of Schizophrenia and Substance Abuse.
2011	Dartmouth Community Medical School "Alcohol and Drug Abuse: Is it all about reward?"
2017	Department of Medicine, Dartmouth Hitchcock Medical Center, Grand Rounds "Synergy"

3. Invited Presentations

1972	How Basic Science Might Solve Social Problems in Substance Abuse, Society of Neurosciences, Houston, Texas
1986	New Research in Affective Disorders, Psychiatry Grand Rounds,

University of Massachusetts

1989 Psychopharmacologic Probes in Psychotic Disorders, Psychiatry Grand Rounds, Dartmouth Medical School

1989 New Treatments for Psychosis, Grand Rounds, Fuller Memorial Hospital

1989 Psychopharmacology in the Substance Abusing Patient, Dual Diagnosis Conference, Fuller Memorial Hospital

1989 Treatment of Depression, Massachusetts Medical Society

1991 New Research in Psychosis, Medical Grand Rounds, Mt. Auburn Hospital, Harvard Medical School

1991 Psychopharmacologic Probes in Research on Psychosis, Psychiatry Grand Rounds, Beth Israel Hospital, Harvard Medical School

1991 New Anti-Psychotic Drugs, Massachusetts Psychiatry Society Scientific Meeting

1991 Seminar Leader, Biologic Basis of Schizophrenia, Psychosis Seminar, Beth Israel Hospital, Boston, MA

1991 Treatment-Resistant Psychosis, Psychiatry Grand Rounds, Boston University School of Medicine

1992 Biology of Psychosis, Psychosis Seminar, University of Massachusetts

1993 Seminar Leader, Interface of Psychopharmacology and Psychotherapy, Boston Psychoanalytic Institute

1993 Treatment-Resistant Psychosis, Brighton Marine Public Health Center, Brighton, MA

1993 Treatment-Resistant Psychosis, Psychiatry Grand Rounds, St. Elizabeth's Hospital, Brighton, MA

1992 New Atypical Neuroleptic Drugs, Neurology Grand Rounds, West Roxbury VA Medical Center

1992 Endocrine Aspects of Psychiatric Disorders, Endocrine Grand Rounds, Brigham & Women's Hospital, Boston, MA

1992 Treatment-Resistant Depression, Psychiatry Grand Rounds, St. Elizabeth's Hospital, Brighton, MA

1994 Massachusetts Alliance for the Mentally Ill, Brookline Affiliate, Brookline, MA

1994 The New Pharmacology of Schizophrenia, Grand Rounds, Hartford Hospital, CT

1994 The Neurodevelopmental Basis of Schizophrenia, MA Department of Mental Health, Schizophrenia: State-of-the-Art Review Conference, Boston, MA

1994 The New Pharmacology of Schizophrenia, Dartmouth-Hitchcock Medical Center, Dartmouth Medical School, Grand Rounds, Lebanon, NH

1994 New Antipsychotic Medications, Alliance for the Mentally Ill of Cape Cod and the Islands, Hyannis, MA

1995 The New Pharmacology of Schizophrenia, Harvard-Longwood Behavioral Neurology Seminar, Brigham & Women's Hospital, Boston, MA

1995 Should the role of clozapine be expanded? American College of Neuropsychopharmacology, San Juan, PR

1995 New Antipsychotic Drugs, Psychiatry Grand Rounds, Stanford Medical Center

1996 Psychiatry Grand Rounds, St. Elizabeth's Hospital, Brighton, MA

1996 An expanded role for clozapine? New Clinical Drug Evaluation Unit Annual Meeting, FL

1996 Psychopharmacology Grand Rounds, McLean Hospital, Belmont, MA

1996 Response to Typical and Atypical Neuroleptics: Clinical Symptoms and Plasma HVA, Schizophrenia and Genetics Conference, Bilbao, Spain

1996 Psychiatry Grand Rounds, Dartmouth Medical School

1997 Psychiatry Grand Rounds, University of Massachusetts Medical Center
1997 Psychiatry Grand Rounds, Beth Israel Deaconess Medical Center, Boston
1997 Psychopharmacology Rounds, Brigham and Women's Hospital, Boston
1997 Psychopharmacology Rounds, McLean Hospital, Belmont, MA
1997 Atypical Antipsychotics in Mood and Other Disorders, Stanford University School of Medicine
1998 Psychopharmacology Rounds, Cambridge Hospital, Cambridge, MA
1998 Psychiatry Grand Rounds, University of Rochester
1998 Novel antipsychotics in psychosis: changing expectations, Program Chair, Industry Symposium, APA annual meeting, Toronto
1998 Substance use disorder and schizophrenia: the role of antipsychotics, APA annual meeting, Toronto
1998 Psychiatry Grand Rounds, University of Vermont
1998 Early Intervention in Psychosis, Neurobiologic Basis. MA Department of Mental Health, Early Interventions in Psychosis Conference, Boston, MA
1999 Psychiatry Research Conference, University of Chicago
1999 Psychopharmacology of Schizophrenia, McLean Hospital
1999 Redefining Treatment-Resistant Schizophrenia, Program Chair and Lecturer, Industry Symposium, APA Annual Meeting, Washington, D.C.
1999 Effects of Antipsychotic-induced Prolactin Elevation, XI World Congress of Psychiatry, Hamburg, Germany
1999 Science Series, Tufts University School of Medicine, Department of Psychiatry
2000 Psychiatry Grand Rounds, University of Toronto.
2000 Psychiatry Grand Rounds, Downstate Medical Center, State University of New York
2000 Peter Curran Lecture, Mater Hospital Trust, Belfast, Northern Ireland
2000 Grand Rounds, Creedmore Psychiatric Center, Queens, New York.
2000 Chair, Gender, Schizophrenia and Antipsychotic Therapy. Second International Conference on Hormones, Brain and Neuropsychopharmacology. Rhodes, Greece
2000 Psychiatry Grand Rounds, Brown University School of Medicine.
2000 Lecturer, Arthur Noyes Schizophrenia Conference, Norristown State Hospital, PA
2000 Lecturer, Schizophrenia and Substance Abuse. Chile Psychiatric Association, La Serena, Chile (via videoconferencing).
2000 Massachusetts Psychiatric Society: Schizophrenia and comorbid substance use disorder.
2000 Treatments for Schizophrenia. Alliance for the Mentally Ill. Framingham, MA
2000 Psychiatry Grand Rounds, University of New Mexico, Albuquerque, NM
2000 Psychiatry Grand Rounds, Brockton VA Medical Center, Harvard Medical School
2001 Meeting the Challenge of Schizophrenia and Co-occurring Addictions, Program Chair. Industry Symposium, APA Annual Meeting
2001 Psychopharmacology of Comorbid Substance Use Disorders, Industry Symposium, APA Annual Meeting
2001 Substance Abuse and Schizophrenia, Satellite Symposium of 7th World Congress on Biological Psychiatry, Berlin, Germany
2001 Psychiatry Grand Rounds, Boston University Medical Center
2001 Psychiatry Grand Rounds, Harvard Longwood Program in Psychiatry

2001 Psychiatry Grand Rounds, University of Massachusetts Medical Center
2002 Psychiatry Grand Rounds, Wayne State School of Medicine, Detroit, MI
2002 Psychiatry Grand Rounds, University of Texas Southwestern, Dallas, Texas
2002 Psychopharmacology Conference, Silver Hill Hospital, New Canaan, Connecticut
2002 Research Seminar, Department of Psychiatry, Indiana University Mercer University
2003 Psychiatry Rounds, Harvard University Health Service, Cambridge, MA
2003 Schizophrenia and Substance Abuse, Thresholds Clinic, Chicago, Illinois
2003 Schizophrenia: Past, Present and Future, Central Vermont Medical Center
2003 Addiction Psychiatry Conference, SUNY Upstate Medical University, Syracuse, NY
2003 "Psychiatry and Neuroscience," Brattleboro Retreat Board of Directors, Grafton, VT
2004 Psychiatry Grand Rounds, Harvard Longwood Program in Psychiatry, Boston, MA
2004 Psychiatry Grand Rounds, University of Miami, Miami, Florida
2004 Psychiatry Grand Rounds, University of Pennsylvania, Philadelphia, PA
2004 Cannabis, Schizophrenia and Clozapine. Medications Development in Cannabis Dependence, NIDA, Rockville, MD
2004 Schizophrenia and Substance Abuse. Scandinavian College of Neuropsychopharmacology – Annual Meeting. Juan les Pins, France
2004 Can You Change the Course of Schizophrenia? Scandinavian College of Neuropsychopharmacology – Annual Meeting. Juan les Pins, France
2004 Psychiatry Grand Rounds, Yale Medical School, New Haven, CT
2004 Neuroscience Rounds, McLean Hospital, Harvard Medical School, Belmont, MA
2004 Neuropharmacology Seminar, Albany Medical College, Albany, NY
2004 Special Lecture: "What is Evidence?" McGill Dept of Psychiatry, Montreal, Canada
2004 Keynote Address: "Drugs and the Developing Brain: Adolescent Drug Use." Vermont Substance Abuse Conference, Fairlee, VT
2004 "Neurobiology of Addiction." Annual Scientific Convention, New Hampshire Medical Society, Bretton Woods, NH
2005 Keynote Address: "Early Intervention in Psychosis." NH Chapter of the Psychiatric Nursing Association, Stoweflake, VT
2005 "Substance Abuse and Psychosis." XII International Symposium about Current Issues and Controversies in Psychiatry, Barcelona, Spain
2005 Pharmacotherapy. Substance Abuse and Schizophrenia. Symposium, American Psychiatric Association Annual Meeting, Atlanta, GA
2005 "Drugs and the Developing Brain." Dartmouth Center for Addiction, Research and Education Symposium
2005 "Cannabis and Psychosis." Symposium at American Psychiatric Association Annual Meeting, Atlanta, GA
2005 "Novel Medications Development for Cannabis Dependence Targeting Brain Reward Circuitry." Symposium: Advancing Treatment for Marijuana Dependence. College on Problems of Drug Dependence Annual Meeting, Orlando, FL
2005 "Schizophrenia and Substance Abuse: A Reward Deficiency Syndrome?" Neurology Grand Rounds, Dartmouth Hitchcock Medical Center, Lebanon, NH
2005 "Schizophrenia and Co-occurring Substance Abuse: A Brain Reward Circuit Deficiency?" Dartmouth Symposium for the Life Science: Mechanisms of Brain Disorders. Dartmouth Hitchcock Medical Center, Lebanon, NH
2005 "Pharmacotherapy for Schizophrenia and Co-occurring Substance Use Disorders." International Meeting on Implications of Comorbidity for Etiology and Treatment of Neuropsychiatric Disorders. Mazagón, Spain

2005 "Current and Emerging Roles for Antipsychotic Therapy," Neuroscience Grand Rounds, University of Arizona, Tucson, AZ

2005 "Substance Abuse and the Vulnerable Brain," Great Issues in Medicine and Global Health Symposium, Dartmouth Hitchcock Medical Center, Lebanon, NH

2006 "Schizophrenia and Substance Abuse." NIDA Symposium on Models of Co-occurring Disorders, Bethesda, MD

2006 "Pharmacologic Approaches to Co-occurring Disorders." NIAAA, NIMH, and NIDA Joint Comorbidity Conference, Bethesda, MD

2006 "Substance Abuse and Schizophrenia." National Conference on Co-occurring Disorders, Indiana University, Indianapolis

2006 "Drugs, Alcohol and Teens." Turner Lecture Series. Sponsored by West Central Behavioral Health, Department of Psychiatry, Dartmouth Medical School, National Alliance for the Mentally Ill.

2006 "The Clinician's Dilemma: When to Use Two Antipsychotics?" I^3dln Teleconference, Atlanta, GA.

2006 "Substance Abuse and the Onset, Severity and Treatment of Schizophrenia." International Society of Addiction Medicine (VIII ISAM Meeting), Oporto, Portugal.

2006 "Schizophrenia and Substance Abuse: Is it all about Reward?" New Frontiers in Psychiatry, Stowe, VT.

2006 Vermont State Substance Abuse Conference, Lake Morey, VT.

2006 "Treatment of Comorbid Cannabis Use and Schizophrenia." American Academy of Child and Adolescent Psychiatry Annual Meeting, San Diego, CA.

2007 Joseph J. Schildkraut Memorial Lecture, University of Massachusetts

2007 Psychiatry Grand Rounds, Vanderbilt University, Nashville, TN.

2008 "Schizophrenia and Substance Abuse: Is it all about rewards?" Psychiatry Grand Rounds, Maine Medical Center, Portland, ME.

2008 "Deconstructing Clozapine: Toward New Medications for Alcoholism." NIAAA, Washington, DC.

2008 "Schizophrenia and Substance Abuse: Is it all about rewards?" Psychiatry Grand Rounds, Tufts Medical Center, Boston, MA.

2008 "Lifting the Veil on Mental Illness: Science in Psychiatry." Dartmouth Community Medical School

2008 "Targeting Reward Circuitry: Medication Development for Schizophrenia and Substance Abuse." 1st Annual Chairs Summit, Hilton Head Island, SC. June 27-29.

2009 "Schizophrenia and Substance Abuse: Approaching Pharmacotherapy." Plenary Session, CINP Thematic Conference, Edinburgh, UK. April 25-27.

2009 "A Translational Perspective on Clozapine: Clinical Utility." CINP Thematic Conference, Edinburgh, UK. April 25-27.

2009 "Update on the Pharmacologic Treatment of Schizophrenia." American Psychiatric Association Annual Meeting, San Francisco, CA. May 16-21.

2009 "Treatment of Schizophrenia and Co-Occurring Alcoholism." American Psychiatric Association Annual Meeting, San Francisco, CA. May 16-21.

2009 "Cannabis and Psychosis." Australian National Cannabis Conference, Sydney, Australia. September 7-8.

2009 "Deconstructing Clozapine: Toward Medication for Alcoholism in Schizophrenia." Psychiatry Grand Rounds, McMaster University, Hamilton, ON, Canada. September 16.

2009 "Cannabis and Schizophrenia" October 27-November 1. American Association of Child and Adolescent Psychiatry Annual Meeting. Honolulu, HI.

2010 "Concurrent Treatment of Cannabis Dependence in Patients with Schizophrenia." American Psychiatric Association Annual Meeting, New Orleans, LA. May 22-26.

2010 "Non-Psychotic Issues of Schizophrenic Patients: Schizophrenia and Substance Abuse." American Psychiatric Association Annual Meeting, New Orleans, LA. May 22-26.

2010 "Treatment of Schizophrenia and Co-Occurring Alcoholism" Research Society on Alcoholism Annual Meeting, San Antonio, TX. June 26-30.

2010 "Essential Psychopharmacology, 2010: Practice and Update" Harvard Medical School Summer Seminars, North Falmouth, MA (Cape Cod). August 2-6.

2011 "Essential Psychopharmacology, 2011: Practice and Update" Harvard Medical School Summer Seminars, North Falmouth, MA (Cape Cod). August 1-5.

2011 "Deconstructing Clozapine: Toward Medications for Schizophrenia and Substance Abuse." CINP (Collegium Internationale Neuro-Psychopharmacologicum) International Congress on Dual Disorders. Barcelona, Spain. October 4.

2011 "Does Use of Cannabis Increase Risk or Speed the Onset of Psychosis?" 2011 Course on the State of the Art in Addiction Medicine. October 27-29. American Society of Addiction Medicine, Washington, DC

2012 "Double Trouble: Co-occurrence of Alcoholism and Psychiatric Disorders." American Psychiatric Association. Philadelphia, PA. May 7, 2012.

2012 "Essential Psychopharmacology, 2012: Practice and Update" Harvard Medical School Summer Seminars, North Falmouth, MA (Cape Cod). Jul 31-Aug 3.

2013 "Schizophrenia and Co-Occurring Substance Use Disorders: Exploring Common Neurocircuits and Effective Treatments: NIAAA Panel Session." New clinical Drug Evaluation Unit of NIMH. Hollywood Beach, FL, May 29.

2013 "Deconstructing Clozapine: Toward Medications for Schizophrenia and Substance Abuse." Penn State Medical Center. Hershey, PA, September 19.

2013 "Use of Antipsychotics and Dual Pathology." International Congress. Spanish Society of Dual Pathology. Barcelona, Spain, October 25.

2014 "Substance Abuse in Schizophrenia: Targeting the Brain Reward Circuit" Neuroscience Day at Dartmouth. Lebanon, NH, February 21.

2014 "Brain Reward Circuit Activity: An Indicator of Therapeutic Efficacy?" Neurology Grand Rounds, Dartmouth Hitchcock Medical Center, Lebanon, NH, May 9.

2014 "Cannabis Use Disorder in Schizophrenia: Is this really self-medication?" 8th ALBATROS Congress, International Congress of Addictology. Paris, France, June 5.

2014 "Psychosis and Co-occurring Substance Use Disorder: Neural Circuitry, Models and New Treatment Development." International Society for Biomedical Research on Alcoholism/Research Society on Alcoholism Joint Congress, Bellevue, WA, June 24.

2014 "Antipsychotics, Biology and Treatment of Schizophrenia" Harvard Medical School Summer Seminar, July 28.

2015 "Journal of Dual Diagnosis"
"Substance Use and Schizophrenia: Risk and Reward"
"Cannabis Use in Schizophrenia"
"Clozapine for Substance Use Disorders in Schizophrenia: A Unifying Hypothesis?"
International Congress of Dual Disorders, Addictions and Other Mental Disorders. Barcelona, Spain, April 17-20.

2015 "Alcohol Use Disorder and Schizophrenia: Approaches to Pharmacologic Interventions" American Psychiatric Association. Toronto, Ontario, May 16.

2017 "Schizophrenia and Co-occurring Substance Use Disorders: Translational Research and Reward" World Conference of the World Association of Dual Disorders & International

Congress of the Spanish Society of Dual Disorders. Madrid, Spain, March 24.

2017 "Dartmouth Synergy: Accelerating the Impact of Discovery."
Medicine Grand Rounds, Dartmouth Hitchcock Medical Center, Lebanon, NH, June 2.

2017 "Biology and treatment of psychotic disorder"
Harvard Medical School Summer Seminar, August 1.

2017 "Concepts of early intervention and prevention; optimizing outcomes; treatment of alcohol and substance abuse in patients with psychosis."
Harvard Medical School Summer Seminar, August 1.

2018 "Biology and treatment of psychotic disorders: the new generation of antipsychotic drugs; clinical aspects of treatment: use of typical and atypical neuroleptics (including clozapine, risperidone, olanzapine, ziprasidone, aripiprazole and experimental agents)."
Harvard Medical School Summer Seminar, Essential Psychopharmacology, July 31.

2018 "Concepts of early intervention and prevention; optimizing outcomes; treatment of alcohol and substance abuse in patients with psychosis."
Harvard Medical School Summer Seminar, Essential Psychopharmacology, July 31.

Formally Supervised Trainees (and current position)

1987 – 1990 Mohammed Y Alam, M.D. (Post-doctoral Fellow)
Staff Psychiatrist, American Medical Research, Inc., Oak Brook, IL

1991 – 1993 Ileana Berman, M.D. (Post-doctoral Fellow)
Private Practice, Attleboro, MA

1991 – 1993 Howard H. J. Chang, M.D., M.P.H. (Post-doctoral Fellow)
Psychiatrist, South Shore Hospital, Weymouth, MA

1993 – 1995 Jayendra K. Patel, M.D. (Post-doctoral Fellow)
Private Practice, Lake Charles, LA

1994 – 1998 Rahim Shafa, M.D. (Post-doctoral Fellow)
Director, Novel Clinical Psychopharmacology Care, Natick, MA
Staff Psychiatrist, Metrowest & Greater Boston CNS Research Center

1995 – 1997 Carla Canuso, M.D. (Post-doctoral Fellow)
Senior Director of Neuroscience External Innovation at Johnson & Johnson

1997 – 1999 James Kelleher, M.D. (Post-doctoral Fellow)
Associate Professor, Clinical Psychiatry and Behavioral Sciences,
New York Medical College

1998 – 1999 Carmela Perez, Ph.D. (Post-doctoral Fellow)
Private Practice Psychoanalyst, New York, NY
Assistant Professor of Psychiatry, St. Vincent's Hospital
Assistant Professor of Psychiatry, New York Medical College

1998 – 2000 Rael Strous, M.D. (Post-doctoral Fellow)
Professor of Psychiatry, Sackler School of Medicine, Tel Aviv University.
Senior Psychiatrist, Be'er Ya'aqov Mental Health Center, Tel Aviv.

1998 – 2001 Jaskaran Singh, M.D. (Post-doctoral Fellow)
Senior Director, Clinical Research, Neuroscience at Janssen,
Johnson & Johnson Pharmaceutical Research and Development, San Diego, CA

1999 – 2001 Michael Rodriguez, Ph.D. (Post-doctoral Fellow)
Assistant Professor, Department of Psychology, Harvard University

2000 – 2001 Amani Michael, M.D. (Post-doctoral Fellow)
Psychiatrist, Integrated Behavioral Associates, Weymouth, MA

2000 – 2001 Wilson Woo, M.D., Ph.D. (Post-doctoral Fellow)
Assistant Professor of Psychiatry, Harvard Medical School, Cambridge, MA.
Director, Laboratory of Cellular Neuropathology, McLean Hospital, Boston, MA
Medical Director, Harvard Brain Tissue Resource Center,
Beth Israel Deaconess Medical Center, Boston, MA.

2001 – 2003 David Chau, Ph.D. (Post-doctoral Fellow)
Founder and President of Amazing Grace Pharmaceuticals

2002 – 2006 Vivianne Tawfik, M.D., Ph.D. (Pre-doctoral Student)
Instructor, Anesthesiology, Perioperative and Pain Medicine
Stanford School of Medicine, Stanford, CA.

2005 – 2006 Timothy Laumann (Dartmouth Undergraduate)
M.D. Ph.D. student, Washington University, St. Louis

2007 – 2010 Matthew Garlinghouse, Ph.D. (Post-doctoral Fellow)
Senior Neuropsychologist at Henry Ford Health Systems, Detroit, MI.

2007 – 2010 Michael Henderson, J.D. (Pre-doctoral Student)
Associate University Counsel, Temple University, Philadelphia, PA.

2009 – 2010 Victoria Stockman (Dartmouth Undergraduate)
PhD Student, Department of Systems Biology,
Columbia University Graduate School of Arts and Sciences, New York, NY.

2009 – 2011 Danielle Gulick, Ph. D. (Post-doctoral Fellow)
Assistant Professor, Morsani College of Medicine, University of South Florida

2009 – 2011 Natalie Colaneri (Dartmouth Undergraduate)
Visiting Researcher, Oxford Uehiro Centre for Practical Ethics,
University of Oxford, England.

2010 – 2011 Eric Arehart, M.D. Ph.D. (Post-doctoral Fellow)
Resident, Neurology, Duke Children's Hospital & Health Center, Durham, NC.

2010 – 2012 Yip Wong, B.S. (Pre-doctoral Fellow – Program in Experimental Molecular Medicine)

2010 – 2013 Adina Fischer, M.D., Ph.D. (Pre-doctoral Fellow)
Resident Physician, Psychiatry and Research Track, Stanford University

2011 – 2013 Sarah Aronson (Dartmouth Undergraduate)
MD-PhD Candidate, University of Maryland School of Medicine

2011 – 2013 Jill MacLeod, Ph.D. (Post-doctoral Fellow)
Biotoxin Monitoring, State of Maine Department of Marine Resources

2013– 2013 Jaime Bravo (Dartmouth Graduate Rotating Student)
Graduate Student in Biomedical Engineering, Dartmouth College

2011 – 2013 Wilder Doucette, M.D., Ph.D.
Assistant Professor of Psychiatry, Geisel School of Medicine

2012 – 2017 Jibran Khokhar, Ph.D. (Post-doctoral Fellow)
Department of Psychiatry, Postdoctoral Fellowship

2013 – 2015 Sarah C. Akerman, M.D.
Assistant Professor of Psychiatry, Geisel School of Medicine at Dartmouth

2013 – 2016 Hersh Trivedi
Dartmouth Undergraduate Student

2013 – 2017 Mia Harrow-Mortelliti
Dartmouth Undergraduate Student

2013 – 2019 Michael Sun
Dartmouth Undergraduate Student

2014 – 2016	Nicholas Deveau Dartmouth Undergraduate Student
2014 – 2014	David Mallick Dartmouth Graduate Rotating Student
2014 – 2016	Jared Boyce Dartmouth Undergraduate Student
2015 – 2017	Amanda Simon Dartmouth Undergraduate Student
2015 – 2017	Megan Cheng Dartmouth Undergraduate Student
2015 – 2015	Carey Allmendinger Dartmouth Graduate Rotation Student
2015 –	Rebecca Zegans Wesleyan Undergraduate Student
2015 –	Robert Tokhunts Dartmouth Medical Student
2015-	Lucas Dwiel (graduate student) Dartmouth Program in Experimental and Molecular Medicine
2016-	Angela Hendricks (Post-doctoral fellow) NIDA T32 Fellowship on Dual Disorders
2017-	Emily Kirk (Graduate Student) Dartmouth Medical Student
2017-	Diana Wallin (Post-doctoral Fellow)

Bibliography

Articles

1. Snyder SH, Green A, Hendley ED, Gfeller E. Noradrenaline: kinetics of accumulation into slice from different regions of rat brain. Nature. 1968; 218: 174-176.
2. Snyder SH, Green AI, Hendley ED. Kinetics of H3-norepinephrine accumulation into slices from different regions of the rat brain. J. Pharmacol. Exp. Ther. 1968 Nov; 164: 90-102.
3. Gfeller E, Green AI, Snyder SH. Regional differences in noradrenaline accumulation in monkey brain. Brain Research. 1968; 11: 263-267.
4. Green AI, Snyder SH, Iversen LL. Separation of catecholamine storing synaptosomes in different regions of rat brain. J. Pharmacol. Exp. Ther. 1969 Aug; 168(2): 264-271.
5. Kuhar M, Green AI, Snyder SH, Gfeller E. Separation of synaptosomes storing catecholamines and gamma-aminobutyric acid in rat corpus striatum. Brain Research. 1970 Jul; 21: 405-417.
6. Green AI. The role of the federal government in the development of narcotic antagonists. Adv Biochem Psychopharmacol. 1973; 8(0): 576-7.
7. Green AI. Thyroid function and affective disorders. Hosp Commun Psych 1984 Dec; 35: 1188-9.
8. Salzman C, Green AI, Rodriguez-Villa F, Jaskiw GE. Benzodiazepines combined with neuroleptics for management of severe disruptive behavior. Psychosomatics. 1986 Jan; 27: 17-22.

9. Green AI, Brown WA. Prolactin and neuroleptic drugs. Endocrin. Metabol. Clin. N. Amer. 1988 Mar; 17(1): 213-223. [Reprinted in: Neurologic Clinics. 1988 Feb; 6(1): 213-223.
10. Green AI. The Biology of Depression: book review. American J. of Psychiatry. 1989; 146: 390.
11. Faraone SV, Green AI, Brown WA, Yin P, Tsuang MT. Neuroleptic dose reduction in persistently psychotic patients. Hosp. Commun. Psych. 1989 Nov; 40: 1193-1195.
12. Green AI, Bennett MB, Salzman C. An extramural training program in psychopharmacology: one model for a state system? Hosp. Commun. Psych. 1989 Feb; 126-127.
13. Green AI, Faraone SV, Brown WA. Prolactin shifts after neuroleptic withdrawal. Psychiatry Research. 1990 Jun; 32: 213-219.
14. Green AI, Salzman C. Clozapine: Benefits and Risks. Hosp Commun Psych 1990 Apr; 41: 379- 380.
15. Reich JH, Green AI. Effect of personality disorders on outcome of treatment. J. Nerv. Ment. Dis. 1991 Feb; 179: 74-82.
16. Green AI. International Perspectives in Schizophrenia: book review. American J. of Psychiatry. 1992; 149: 566.
17. DuRand CJ, Jaretz NJ, Laddis A, Berman I, Green AI. Clozapine refusal. Hosp. Commun. Psych. 1992 Jan; 43: 85.
18. Berman I, Zalma A, DuRand C, Green AI. Clozapine-induced myoclonic jerks and drop attacks. J. Clin. Psychiatry. 1992 Sep; 53: 329-330.
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20. Green AI, Alam MY, Sobieraj JT, Pappalardo KM, Waternaux C, Salzman C, Schatzberg AF, Schildkraut JJ. Clozapine response and plasma catecholamines and their metabolites. Psychiatry Research. 1993 Feb; 46: 139-149.
21. Green AI, Alam MY, Boshes RA, Waternaux C, Pappalardo KM, Fitzgibbon ME, Tsuang MT, Schildkaut JJ. Haloperidol response and plasma catecholamines and their metabolites. Schizophrenia Research. 1993 Jun; 10: 33-37.
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23. Green AI, Austin CP. The psychopathology of pancreatic cancer: a psychobiologic probe. Psychosomatics. 1993 May-June; 34: 208-221.
24. Albanese M, Khantzian EJ, Green AI, Murphy SL. Decreased substance use in chronically psychotic patients treated with clozapine. Am. J. Psychiatry, 1994 May; 151: 780-781.
25. Green AI, Zalma A, Berman I, DuRand CJ, Salzman C. Clozapine following ECT: A two-step treatment. J. Clin. Psychiatry, 1994 Sep; 55(9): 388-390.
26. Kahn M, Green AI. Psychosis, delirium, or both? Harvard Review of Psychiatry. 1994 May-June; 2(1): 34-38.

27. Berman I, Kalinowski A, Berman SM, Langus J, Green AI. Obsessive and compulsive symptoms in chronic schizophrenia. Comprehensive Psychiatry, 1995 Jan-Feb; 36(1): 6-10.

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29. Green AI, Schildkraut JJ. Should clozapine be a first-line treatment for schizophrenia: the rationale for a double-blind clinical trial in first-episode patients. Harvard Review of Psychiatry, 1995 May-June; 3(1): 1-9.

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39. Patel JK, Green AI, Kalinowski A, Tsuang MT. Evaluation of a complex case: The value of a drug washout period. Am. J. Psychiatry. 1997 Dec; 154(12): 1747-1750.

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324. Green AI. Substance Use and Schizophrenia: Risk and Reward. International Congress of Dual Disorders, Addictions and Other Mental Disorders. Barcelona, Spain, 2015.

325. Green AI. Cannabis Use in Schizophrenia. International Congress of Dual Disorders, Addictions and Other Mental Disorders. Barcelona, Spain, 2015.

326. Green AI. Clozapine for Substance Use Disorders in Schizophrenia: A Unifying Hypothesis? International Congress of Dual Disorders, Addictions and Other Mental Disorders. Barcelona, Spain, 2015.

327. Khokhar JY, Chen X, Lu H, Gimi B, Stein EA, Green AI. Impaired Brain Reward Circuitry May Underlie Alcohol Drinking in a Rat Model of Schizophrenia and Co-Occurring Alcohol Use Disorder. American College of Neuropsychopharmacology. Hollywood, Florida, 2016.

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State of New Hampshire

BOARD OF MEDICINE

WILLIAM C TORREY, MD

License #: 7636

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6/30/2019

President Michael L Bair M.D

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New Hampshire Board of Medicine
121 South Fruit Street - STE 301
Concord, NH 03301-2414 (Chapt. 329-161)

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President Michael Bars M.D.

KEY ADMINISTRATIVE PERSONNEL

NH Department of Health and Human Services

Contractor Name: Mary Hitchcock Memorial Hospital

RFP-2019-DBH-03-FIRST

Name of Program: First Episode Psychosis/Early Serious Mental Illness Program Planning

BUDGET PERIOD: SFY 2019

NAME	JOB TITLE	SALARY	PERCENT PAID FROM THIS CONTRACT	AMOUNT PAID FROM THIS CONTRACT
Kelly Aschbrenner	Co-PI/Scientist	$96,304	20.00%	$4,815.00
William Torrey	Co-PI/Physician	$0	0.00%	$0.00
Sally Kraft	Other Significant Contributor	$0	0.00%	$0.00
Alan Green	Other Significant Contributor	$0	0.00%	$0.00
		$0	0.00%	$0.00
		$0	0.00%	$0.00
TOTAL SALARIES (Not to exceed Total/Salary Wages, Line Item 1 of Budget request)				$4,815.00

BUDGET PERIOD: SFY 2020

NAME	JOB TITLE	SALARY	PERCENT PAID FROM THIS CONTRACT	AMOUNT PAID FROM THIS CONTRACT
Kelly Aschbrenner	Co-PI/Scientist	$99,193	40.00%	$39,677.00
William Torrey	Co-PI/Physician	$334,750	10.00%	$33,475.00
Sally Kraft	Other Significant Contributor	$0	0.00%	$0.00
Alan Green	Other Significant Contributor	$0	0.00%	$0.00
		$0	0.00%	$0.00
		$0	0.00%	$0.00
TOTAL SALARIES (Not to exceed Total/Salary Wages, Line Item 1 of Budget request)				$73,152.00

BUDGET PERIOD: SFY 2021

NAME	JOB TITLE	SALARY	PERCENT PAID FROM THIS CONTRACT	AMOUNT PAID FROM THIS CONTRACT
Kelly Aschbrenner	Co-PI/Scientist	$99,193	40.00%	$9,919.00
William Torrey	Co-PI/Physician	$334,750	10.00%	$8,369.00
Sally Kraft	Other Significant Contributor	$0	0.00%	$0.00
Alan Green	Other Significant Contributor	$0	0.00%	$0.00
		$0	0.00%	$0.00
		$0	0.00%	$0.00
TOTAL SALARIES (Not to exceed Total/Salary Wages, Line Item 1 of Budget request)				$18,288.00