

Jeffrey A. Meyers Commissioner

> Katja S. Fox Director

STATE OF NEW HAMPSHIRE 20 TO THE 2 TO THE DEPARTMENT OF HEALTH AND HUMAN SERVICES DIVISION OF BEHAVIORAL HEALTH

129 PLEASANT STREET, CONCORD, NH 03301 603-271-9422 1-800-852-3345 Ext. 9422 Fax: 603-271-8431 TDD Access: 1-800-735-2964 www.dhhs.nh.gov

April 7, 2016

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

REQUESTED ACTION

Authorize the Department of Health and Human Services Bureau of Behavioral Health to enter into an agreement with Mary Hitchcock Memorial Hospital (Vendor #177160), One Medical Center Drive, Lebanon, NH 03756 to provide a training program for the Community Mental Health Centers which will enable delivery of evidence-based Coordinated Specialty Care services for First Episode Psychosis patients, in an amount not to exceed \$90,161, effective upon Governor and Executive Council approval through September 30, 2016. 100% Federal Funds.

Funds to support this request are available in State Fiscal Year 2016 and State Fiscal Year 2017 upon availability and continued appropriation of funds in the future operating budget, with the ability to adjust encumbrances between State Fiscal Years through the Budget Office without Governor and Executive Council approval, if needed and justified.

05-95-92-920010-7143 HEALTH AND SOCIAL SERVICES, DEPT OF HEALTH AND HUMAN SERVICES, HHS: BUREAU OF BEHAVIORAL HEALTH

STATE FISCAL YEAR	CLASS	TITLE	ACTIVITY CODE	AMOUNT
2016	102	Contracts for Program Scvs	92207143	\$80,209
2017	102.	Contracts for Program Scvs	92207143	\$9,952
			Total:	\$90,161

EXPLANATION

The purpose of this agreement is to provide training services to the Community Mental Health Centers, which will enable delivery of evidence-based Coordinated Specialty Care services for First Episode Psychosis patients. First Episode Psychosis is a comprehensive approach to treatment for individuals with first or early stage manifestation of a psychotic disorder. Early intervention services for First Episode Psychosis can improve symptoms and restore functioning in a manner superior to standard care services.

The Vendor will develop and implement a training program for Community Mental Health Centers, statewide, in fidelity with evidence based First Episode Psychosis training models. A statewide training program ensures a team-based approach to specialized early intervention programs. The approach emphasizes prompt detection; acute care during periods of crisis; and recovery-oriented services offered over a two to three year period.

Treatment services include Coordinated Specialty Care, which involves several professionals with varying levels and areas of expertise who provide evidence based treatments effective in improving clinical and functional outcomes among youth and young adults at risk for serious mental illness.

This contract was competitively bid. On November 25, 2015 the Department of Health and Human Services issued a Request for Proposals for a trainer for First Episode Psychosis (FEP) Treatment Services. The request for proposals was available on the Department of Health and Human Services website from November 25, 2015 through January 8, 2016. There was one proposal submitted.

The proposal was evaluated based on the criteria published in the Request for Proposals by a team of individuals with program specific knowledge and expertise. Mary Hitchcock Memorial Hospital was selected. The bid summary is attached.

This contract contains language which allows for the option to renew the contract for up to two (2) additional years, subject to the continued availability of funds, satisfactory performance and approval by Governor and Executive Council.

The Vendor will design, develop, coordinate and administer training programs and curricula to Community Mental Health Centers, statewide, which include collaborative work between the Department and the Community Mental Health Centers to ensure all parties have the most recent training curricula available. The Vendor will provide and maintain all necessary supplies and equipment for training session and will be responsible for securing the training venues, marketing training opportunities, and conducting registration functions at training location. The Vendor will also explore the needs of on-line delivery for appropriate curricula on a continuous basis and will provide an analysis of such delivery to the Department in its final report.

Her Excellency, Margaret Wood Hassan and Her Honorable Council Page 3 of 3

Should the Governor and Executive Council determine not to approve this request, the Department would not have the resources to train the Community Mental Health Center to appropriately treat First Episode Psychosis, which may increase the need for emergency room visits, which would negatively impact the citizens of New Hampshire.

Area served: Statewide

Source of Funds: 100% Federal Funds, 0% General Funds

In the event that the federal funds become no longer available, no further general funds will be requested to support this contract.

Respectfully submitted

VIJ SFX

Katja S. Fox Director

1/11

Approved by: Veffrey A. Meyer



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

Trainer for First Episode Psychosis (FEP) Treatment Services

RFP #16-DHHS-DCBCS-BBH-07

RFP Number

Actual Points	153	. 0	0	0	0
Maximum Points	195	195	195	195	195
Pass/Fail					

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4· 0

Beth Anne Nichols, Mental Health	Block Grant State Planner	David LaCroix, Peer Support

Reviewer Names

2. Specialist, NHH Rehabilitation Dept

3. Molly Gray, Consumer Advocate

Elizabeth Fenner-Lukaitis, Acute Care Donna Walker, Mental Health, Services Coordinator, DHHS 4

P.J. Nadeau, OBO, Audit-Finance Finance/Audit Administrator III Administrator Ġ. ø.

Jim Dall, Director Prog Support, 7 Jim Dail, Circon DHHS Medicaid Administration Subject: Trainer for First Episode Psychosis (FEP) Treatment Services

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

		GENERAL	I ROVISIONS	
	1. IDENTIFICATION	N.		
-	1.1 State Agency Name		1.2 State Agency Address	
	Department of Health & H	uman Services	129 Pleasant Street Concord, NH 03301	
	1.3 Contractor Name		1.4 Contractor Address	
	Mary Hitchcock Memorial	Hospital	One Medical Center Drive Lebanon, NH 03756	
	1.5 Contractor Phone	1.6 Account Number	1.7 Completion Date	1.8 Price Limitation
	Number (603) 650-5606	05-95-92920010-7143-102- 0731	September 30, 2016	\$90,161
	1.9 Contracting Officer fo		1.10 State Agency Telephone No	umber
	Eric D. Borrin, Director		(603) 271-9558	
	1.11 Contractor Signature	_	1.12 Name and Title of Contract	
	Rus /	2 MD	Robert A. GRE-	Hellh Maragement
	proven to be the person whe indicate with block 1.2. 1.13 by Fignature of Hotar	State of New Humpshine County of Grobefore the undersigned officer, personal lose name is signed in block 1.11, and any Public or Justice of the Peace	lly appeared the person identified in	
•		Notary or Justice of the Peace		
	Lausa K. R	oacs Notary Publ	ic	
	1.14 State Agency Signat	ture	1.15 Name and Title of State A	gency Signatory
	Zin ?	Date: 4/7/16 I. Department of Administration, Division	Katjas Fix, S	Director, DRH
	1.16 Approval by the N.H	I. Department of Administration, Divisi	ion of Personnel (if applicable)	
	Ву:		Director, On:	
	1.17 Approval by the Atto	orney General (Form, Substance and Ex	xecution) (if applicable)	
	Ву: Ш	vernor and Executive Council (If applied	Horny 4/18/14	
	1.18 Approval by the Gov	vernor and Executive Council (If applied	cable) \	
	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

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.

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

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.



Exhibit A

Scope of Services

1. Provisions Applicable to All Services

- 1.1. The Contractor will 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.

2. Scope of Services

- 2.1. The Contractor shall provide training to Community Mental Health Centers, statewide, on First Episode Psychosis Treatment Services used to treat individuals ages fifteen (15) to thirty-five (35) who present with symptoms of a psychotic disorder and meet State eligibility criteria for either a:
 - 2.1.1. Serious Emotional Disturbance (SED) or Serious Emotional Disturbance with Interagency Involvement (SED-IA) as determined through the use of the Child and Adolescent Needs and Strengths (CANS) assessment; or
 - 2.1.2. Serious Mental Illness (SMI) as determined through the use of the Adult Needs and Strengths Assessment (ANSA).
- 2.2. The Contractor shall provide a training program to ensure Community Health Centers, statewide, can implement First Episode Psychosis (FEP) treatment services and continue those services beyond the training period, which shall include, but not be limited to:
 - 2.2.1. Initial Assessments.
 - 2.2.2. Clinical and Support Skills.
 - 2.2.3. Coordination of FEP treatment.
- 2.3. The Contractor shall train Community Mental Health Center (CMHC) staff in the FEP NAVIGATE Model, which includes but is not limited to:
 - 2.3.1. Training all team FEP team members in fundamental information about FEP.
 - 2.3.2. Training on how to use joint decision-making with clients and natural supports.



Exhibit A

- 2.3.3. Specialty training for specific staff roles, which includes but is not limited to:
 - 2.3.3.1. Motivational interviewing strategies.
 - 2.3.3.2. Cognitive-behavioral strategies.
 - 2.3.3.3. Strategies for involving family members and other supporters.
- 2.3.4. Clinical and support skills that will enable all team members to:
 - 2.3.4.1. Use shared decision-mailing with clients, family members and other supporters.
 - 2.3.4.2. Identify characteristics of individuals with first episode or early psychosis.
 - 2.3.4.3. Describe how clients with first episode schizophrenia differ from those who experience multi-episode schizophrenia.
 - 2.3.4.4. Identify the key needs of individuals with firs or early psychosis.
 - 2.3.4.5. Contribute to the weekly FEP NAVIGATE team meetings.
 - 2.3.4.6. Identify key outcomes that can be improved by clients who participate in FEP treatment.
- 2.4. The Contractor shall ensure CMHCs FEP teams include, but are not limited to:
 - 2.4.1. A Program Director who is trained to:
 - 2.4.1.1. Educate the community on FEP in order to increase early recognition of psychosis.
 - 2.4.1.2. Recruit individuals who have begun to experience psychosis.
 - 2.4.1.3. Lead the FEP team.
 - 2.4.2. A Family Education (FE) Clinician (who may also be the Program Director) who is trained to:
 - 2.4.2.1. Assist natural supports in learning:
 - 2.4.2.1.1. General information about psychosis
 - 2.4.2.1.2. How to manage psychosis.
 - 2.4.2.1.3. How to support each other and build 'family resiliency.'



Exhibit A

	2.4.2.2.	Conduct outreach and recruitment to community agencies.
	2.4.2.3.	Evaluate potential clients for the NAVIGATE program.
	2.4.2.4.	Use engagement strategies to involve clients in treatment.
	2.4.2.5.	Conduct weekly team meetings and collaborative treatment planning meetings.
	2.4.2.6.	Identify common reactions in family members of individuals with FEP.
	2.4.2.7.	Use engagement strategies to involve natural supports in treatment.
	2.4.2.8.	Conduct illness education sessions with natural supports of persons with early psychosis.
	2.4.2.9.	Identify and teach coping strategies for natural supports in order to assist them in responding to clients in a supportive manner.
	2.4.2.10.	Teach communication and problem solving skills to the client's natural supports.
	2.4.2.11.	Assist natural supports to identify and strengthen their own resiliency.
2.4.3.		ber (psychiatrist, nurse practitioner or physician's who is trained to:
	2.4.3.1.	Use low doses of medications to treat FEP.
	2.4.3.2.	Understand special issues of relevance to individuals experiencing FEP, which may include but is not limited to:
		2.4.3.2.1. Avoiding authoritarian approaches.
		2.4.3.2.2. Using strategies for accommodating client ambivalence
	2.4.3.3.	Identify early signs that an individual sis developing symptom of psychosis.
	2.4.3.4.	Describe the differences between recommended medication sequences for first episode and multi-episode schizophrenia.
	2.4.3.5.	Integrate the use of the Client Self-Questionnaire in client appointments.



Exhibit A

- 2.4.3.6. Use strategies for joint decision-making as it applies to prescribing medication for clients.
- 2.4.3.7. Use strategies for retaining early phase psychosis clients in treatment.
- 2.4.3.8. Describe outcome differences between RAISE-ETP (FEP NAVIGATE) treatment programs and standard care for early phase psychosis.
- 2.4.4. An Individual Resiliency Trainer (IRT) who is trained to:
 - 2.4.4.1. Assist individuals identify and work towards their goals
 - 2.4.4.2. Teach individuals strategies and skills to build resiliency in coping with psychosis while staying on track with their lives.
 - 2.4.4.3. Focus on individual strengths and resiliency to assist with personal recovery goal setting.
 - 2.4.4.4. Identify strategies that individuals can use to cope with psychosis.
 - 2.4.4.5. Educate clients about the negative effects of substance use on psychosis and provide a message of hope and optimism for overcoming substance use problems.
 - 2.4.4.6. Assist clients with processing the experience of having a first episode of psychosis.
 - 2.4.4.7. Use cognitive behavioral therapy techniques such as cognitive restructuring.
 - 2.4.4.8. Use psychoeducational techniques to teach clients about psychosis and recover.
- 2.4.5. A Supported Employment And Education (SEE) Specialist) trained to:
 - 2.4.5.1. Assist individuals identify their educational and/or employment goals.
 - 2.4.5.2. Assist individuals with achieving their educational and/or employment goals.
 - 2.4.5.3. Identify key principles for supporting individuals in pursuing evaluation and employment goals.
 - 2.4.5.4. Collaborative complete a Career Inventory.
 - 2.4.5.5. Use strategies to assist individuals with identifying specific career goals.



Exhibit A

- 2.4.5.6. Provide rapid job search and rapid school search to clients, based on client preference.
- 2.4.5.7. Develop job and school opportunities in the community for FEP clients.
- 2.4.5.8. Provide follow along supports for clients who have obtained a job or enrolled in school.
- 2.4.6. A specified FEP team member or a separate case manager trained to:
 - 2.4.6.1. Trained to assist individuals obtain needed services through community resources, such as housing and transportation.
- 2.4.7. A Peer Support who is either a specified FEP team member or and individual from an outside peer specialist program who is trained to:
 - 2.4.7.1. Assist clients by sharing experiences of recovery.
 - 2.4.7.2. Assist clients to get back on track with their lives, which may include, but is not limited to:
 - 2.4.7.2.1. Working.
 - 2.4.7.2.2. Attending school.
 - 2.4.7.2.3. Fostering positive relationships.
 - 2.4.7.2.4. Developing a strong support system.
- 2.5. The Contractor shall implement FEP NAVIGATE Training in three phases, as approved by the Department, which include:
 - 2.5.1. Phase 1- Readiness Assessment and Preparation. The Contractor shall complete an assessment of and provide support for the Community Mental Health Center to ensure the agency is prepared to implement the NAVIGATE program. Phase 1 activities include, but are not limited to:
 - 2.5.1.1. Telephone consultations with the Community Mental Health Center in order to assess readiness for receiving training. The Contractor shall ensure consultations are conducted in the presence of the CMHC administrative and clinical leadership and topics include, but are not limited to:
 - 2.5.1.1.1. Discussion of the facility and its services, including but not limited to, any current early psychosis efforts; characteristics of the current population served; and plans for implementing FEP NAVIGATE.

Contractor Initials _____



Exhibit A

2.5.1.1.2.	Overview of Phase 2 and Phase 3 format requirements.
2.5.1.1.3.	Identification and formal 'buy-in' of local FEP leadership team and stakeholders.

- 2.5.1.1.4. Identification of proposed FEP team members, with special attention to scope of practice; need for any additional training; optimal case size; and plans for release from current duties.
- 2.5.1.1.5. Review of resources needed to implement the NAVIGATE program, with development of plans to access any resources currently not available at the agency.
- 2.5.1.1.6. Development of funding streams and strategies.
- 2.5.1.1.7. Discussion of plans for the prescriber regarding the time that shall be dedicated to regular meetings with clients, weekly team meetings and monthly consultation calls.
- 2.5.1.1.8. Responses to administrative or clinical leadership questions regarding NAVIGATE.
- 2.5.1.2. Telephone consultations with Community Mental Health Centers that will prepare the agency to implement FEP NAVIGATE, on topics that include but are not limited to:
 - 2.5.1.2.1. Strategies for program development.
 - 2.5.1.2.2. Strategies for setting up the team.
 - 2.5.1.2.3. Establishment of enrollment criteria.
 - 2.5.1.2.4. Methods of working with private insurance and public assistance.
 - 2.5.1.2.5. Development of a referral network.
 - 2.5.1.2.6. Specific time that shall be set aside for staff to participate in team meetings and consultation calls.
 - 2.5.1.2.7. Identification of outcome measures.



Exhibit A

- 2.5.1.2.8. Establishment of materials and routines for outreach, referrals and engagement.
- 2.5.2. Phase 2 Intensive Staff Training The Contractor shall provide intensive 'hands-on' in-person training in the NAVIGATE components for the team(s). Intensive staff training shall include, but is not limited to:
 - 2.5.2.1. Providing two full days of in-person training for the IRT, Director/Family; and SEE, otherwise known as the psychosocial team members.
 - 2.5.2.2. Ensuring a minimum of five (5) hours of training is available and dedicated to the prescriber, of which:
 - 2.5.2.2.1. Two (2) hours shall be on prescriber-specific training.
 - 2.5.2.2.2. Three (3) hours shall be on team training.
 - 2.5.2.3. Providing an additional full day of additional on-site training after the two (2) day training is complete. The additional day of training shall be specific to the SEE and focus on:
 - 2.5.2.3.1. Engaging with the community to create relationships with local employers in order to complete job development for clients.
 - 2.5.2.3.2. Developing and reviewing SEE record-keeping to promote fidelity measures that provide valuable information to funders, trainers/supervisors and clients/natural supports.
- 2.5.3. Phase 3 Consultation and Fidelity Monitoring for Successful Implementation The Contractor shall provide ensure NAVIGATE Trainer/Consultants conduct follow-up telephone consultation to Community Mental Health Centers on actively using NAVIGATE components, including trouble-shooting the overall implementation of the model (beginning the first month following the in-person training and continuing for up to one year following the in-person training). The Contractor shall:
 - 2.5.3.1. Provide monthly consulting calls to the prescriber for up to twelve (12) months after completing the initial training.



Exhibit A

2.5.3.2.	Ensure prescriber fidelity by documenting prescriber practices and reviewing practices post implementation.
2.5.3.3.	Ensure clinical fidelity by reviewing case presentations and reviewing random cases post implementation.
2.5.3.4.	Conduct consultation calls once every two weeks to the Director/Family Clinician, IRT Clinician and SEE Specialist.
2.5.3.5.	Tape and rate Family Clinician and IRT Fidelity Sessions to establish clinical fidelity, based on the fidelity scales established during the RAISE research phase of NAVIGATE.
2.5.3.6.	Observe; by tape, joining by telephone or by on-site visit; and rate a minimum of four (4) team meetings to ensure Director Fidelity
2.5.3.7.	Review regular summaries of weekly team meetings conducted by the Director to ensure Director Fidelity.
2.5.3.8.	Ensure SEE Fidelity through review of:
	2.5.3.8.1. Documentation of completed career inventories and community job development.
	2.5.3.8.2. Record keeping on contacts with clients and community resources.
	2.5.3.8.3. Case presentations.
2.5.3.9.	Conduct a minimum of one (1) full day on-site observation of the SEE in the clinic and in the community.

- 2.6. The Contractor shall ensure FEP NAVIGATE trainees in the Community Mental Health Centers receive reference materials that supplement the trainings provided, including but not limited to:
 - 2.6.1. Copies of the NAVIGATE Team Members' Guide for all team members.
 - 2.6.2. Copies of the Director's Manuals, Family Education Manual, IRT manual, SEE manual and Prescriber's Manual, and links to Recovery Videos featuring clients and family members, for each Director receiving training.
 - 2.6.3. Copies of the IRT Manual and links to the IRT videos for all IRT clinicians.

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Contractor Initials	3/20/16

Date



Exhibit A

- 2.6.4. Copies of the Family Education Manual and links to Recovery videos featuring family members for all Family Education Clinicians.
- 2.6.5. Copies of the SEE manual and links to recovery videos featuring clients who are working an/or in school for all SEE Specialists.
- 2.6.6. Copies of the Prescriber's Manual and links to Recovery videos featuring clients talking about the role of medication in their recovery for all prescribers.
- 2.7. The Contractor shall provide certification requirements to FEP team members, which shall include, but not be limited to:
 - 2.7.1. Requirements for prescriber certification, that include but are not limited to:
 - 2.7.1.1. Participation in a minimum of ten (10) prescriber consultation calls.
 - 2.7.1.2. Meeting fidelity criteria that include, but are not limited to:
 - 2.7.1.2.1. Providing consultation data that indicates a minimum of 80% of clients served are being prescribed according to the NAVIGATE model.
 - 2.7.1.2.2. Providing consultation data regarding laboratory result and how those results have been addressed.
 - 2.7.1.2.3. Presenting a minimum of two (2) randomly selected cases that shall be judged by the NAVIGATE consultant to determine if the NAVIGATE prescribing model was utilized.
 - 2.7.2. Requirements for director certification, that include but are not limited to:
 - 2.7.2.1. Participation in a minimum of fourteen (14) consultation calls, of which are scheduled twice per month for the first six (6) months and once per month for the second six (6) months.
 - 2.7.2.2. Providing monthly written summary reports, in accordance with the Director Manual, to the Family Clinician consultant, which shall include but not be limited to the number of following meetings that were held:
 - 2.7.2.2.1. NAVIGATE team meetings.

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Date 3/21/16



Exhibit A

		EXIIID	IL A
		2.7.2.2.2.	IRT supervision.
		2.7.2.2.3.	Family supervision.
		2.7.2.2.4.	SEE supervison.
		2.7.2.2.5.	Collaborative treatment planning meetings.
		2.7.2.2.6.	Accompaniments of SEE specialist community visits.
	2.7.2.3.		minimum of four (4) team meetings (one that include the NAVIGANT consultant by one.
	2.7.2.4.	Responding on team me	to the NAVIGANT consultant's feedback etings.
	2.7.2.5.	Meeting fide to:	elity criteria that includes, but is not limited
		2.7.2.5.1.	Conducting a minimum of 80% of the required meetings.
		2.7.2.5.2.	Achieving an average of 3 on the Director Fidelity Scale for a minimum of three (3) team meetings that were observed.
		2.7.2.5.3.	Achieving an average of 3 on the Team Fidelity Scale as assessed by the NAVIGATE Director/Family consultant.
2.7.3.	Requirement not limited		Clinician certification, that include but are
	2.7.3.1.	•	n in a minimum of forty-two (42) weekly tings about IRT.
	2.7.3.2.	Audiotaping sheets.	IRT sessions and completing IRT contact
	2.7.3.3.		taped IRT sessions and completed IRT ets to the NAVIGATE IRT Consultant.
	2.7.3.4.		to NAVIGATE consultant feedback on ontact sheets providing in Section 2.7.3.3.
	2.7.3.5.	Submitting to different sta	tapes from a minimum of two (2) clients at ges of IRT.
	2.7.3.6.	•	T fidelity criteria for both standard and ed modules, which includes but are not
			A . A



Exhibit A

- 2.7.3.6.1. Receiving a minimum rating of 3 on the IRT fidelity score for quality of session item on a minimum of four (4) consecutive sessions, as assessed by the NAVIGATE Consultant.
- 2.7.3.6.2. Receiving a minimum rating of 3 on the RIRT fidelity score for the overall quality of session item on a minimum of four (4) consecutive sessions, as assessed by the NAVIGATE Consultant.
- 2.7.4. Requirements for Family Clinician certification, that include but are not limited to:
 - 2.7.4.1. Participation in a minimum of fourteen (14) consultation calls with the NAVIGATE Consultant.
 - 2.7.4.2. Audiotaping family sessions and completing family contact sheets in accordance with the Family Consultant Manual.
 - 2.7.4.3. Submitting taped family sessions and completed family contact sheets to the NAVIGATE Consultant.
 - 2.7.4.4. Responding to the NAVIGATE Consultant's feedback regarding the sessions in Section 2.7.4.2.
 - 2.7.4.5. Working with a minimum of two (2) families throughout the educational sessions to completion.
 - 2.7.4.6. Meeting family clinician fidelity criteria, which include but are not limited to:
 - 2.7.4.6.1. Receiving a rating of 3 on 'Overall quality of session' for 3 of the 4 rated sessions on a minimum of two (2) families, for a total of 8 rated sessions.
 - 2.7.4.6.2. Audiotaping and submitting a minimum of one consultation session for a minimum of two (2) families to the NAVIGATE consultant for rating and feedback.
- 2.7.5. Requirements for SEE Specialist certification, that include but are not limited to:
 - 2.7.5.1. Participating in a minimum of 42 meetings about SEE.
 - 2.7.5.2. Participating in a one-day site visit with SEE NAVIGATE Consultant while conducting business in the community.



Exhibit A

- 2.7.5.3. Providing sufficient information to the SEE NAVIGATE Consultant in order for the consultant to complete the Kansas Employment Specialist Job Performance Evaluation Scale and the NAVIGATE SEE Fidelity Scale, which may include role plays with the consultant in order to complete the entire assessment.
- 2.7.5.4. Presenting a minimum of one (1) case to the consultant that indicates supports in progress to employment.
- 2.7.5.5. Presenting a minimum of one (1) case to the consultant that indicates supports in progress to education.
- 2.7.5.6. Meeting SEE Specialist Fidelity criteria, which include but are not limited to:
 - 2.7.5.6.1. Demonstration of satisfactory performance on job development skills, educational opportunity development skills and observed interactions with clients, natural supports, employers and educators.
 - 2.7.5.6.2. Demonstration of satisfactory ratings on both NAVIGATE SEE Fidelity Scale and the Kansas Employment Specialist Job Performance Evaluation Scale.
 - 2.7.5.6.3. Presentation of a minimum of two (2) cases to the consultant showing evidence of fulfilling a minimum of 80% of SEE principles.
- 2.8. The Contractor shall provide Team Fidelity and Clinical Provider certification requirements to the Community Mental Health Centers, which shall include, but not be limited to:
 - 2.8.1. Information that indicates FEP teams must provide fully integrated NAVIGATE services to a minimum of five (5) clients for a period of not less than nine (9) months.
 - 2.8.2. Observation provided by NAVIGATE through consultation calls with the director, team meetings and reviews of records.
 - 2.8.3. Attendance to a one (1) hour webinar that describes new developments in the field of FEP.



Exhibit A

- 2.8.4. Attendance to a minimum of two (2) hours of webinars that describe new strategies and skills for the implementation of NAVIGATE, specifically.
- 2.8.5. Submitting examples of current work in accordance with each team member's discipline.
- 2.9. The Contractor shall provide Trainer Certification and Trainer Re-Certification opportunities to all individuals who have completed clinical certification requirements. The Contractor shall:
 - 2.9.1. Notify the Department, in writing, of potential trainers in each of the Community Mental Health Centers.
 - 2.9.2. Provide the Department with a written plan to increase the number of FEP trainers available to other Community Mental Health Centers that do not have FEP Teams in place.

3. Reporting

- 3.1. The Contractor shall provide quarterly reports that include, but are not limited to:
 - 3.1.1. A narrative summary of activities completed for the previous quarter that includes, but is not limited to:
 - 3.1.1.1. Specific contacts made to Community Mental Health Centers.
 - 3.1.1.2. Barriers experienced with obtaining Community Mental Health Center buy-in for FEP Teams.
 - 3.1.1.3. Plan for the following quarter to overcome barriers experienced in the previous quarter.
 - 3.1.2. Assessment of agencies and support provided to agencies for the purpose of readiness to implement the NAVIGATE program.
 - 3.1.3. A narrative report on the in-person training conducted for NAVIGATE teams, which shall include but not be limited to:
 - 3.1.3.1. Roles and attendance.
 - 3.1.3.2. Brief assessment of strengths for each team.
 - 3.1.3.3. Brief assessment of challenges for each team.
 - 3.1.4. A narrative report on follow-up consultation by NAVIGATE Trainer/Consultants on conducting of each NAVIGATE component.
 - 3.1.5. A narrative report that outlines trouble-shooting activities conducted during overall implementation of the model.
 - 3.1.6. Written recommendations for the following quarter.



Exhibit A

4. Deliverables

- 4.1. The Contractor shall provide a timeline for implementation rollout as described in Section 2.5 to the Department for approval within ten (10) days of the contract effective date.
- 4.2. The Contractor shall commence implementation of Phase 1 in Section 2.5.1 no later than 60 days prior to providing hands-on training described in Section 2.5.2 (Phase 2).
- 4.3. The Contractor shall provide an overview of Phase 2 and Phase 3 format requirements to the Department no later than thirty (30) days prior to providing Intensive Staff Training described in Section 2.5.2 (Phase 2).
- 4.4. The Contractor shall provide all reference materials that supplement the trainings no later than 14 days before the commencement of the Intensive Staff Training described in Section 2.5.2 (Phase 2).
- 4.5. The Contractor shall provide formal and detailed certification and recertification requirements as described in Section 2.7 to the Department and to the FEP teams at the Community Mental Health Centers within fifteen (15) days of the contract effective date.
- 4.6. The Contractor shall provide all NAVIGATE fidelity scales to be used, including but not limited to: SEE, prescribing model, Director Fidelity Scale, Team Fidelity Scale, and IRT, to the Department no later than thirty (30) days prior to providing Intensive Staff Training described in Section 2.5.2 (Phase 2).
- 4.7. The Contractor shall provide quarterly reports, as described in Section 3, every ninety (90) days, beginning no later than 45 days after the contract effective date and continuing to the contract end date.

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Exhibit B

Method and Conditions Precedent to Payment

- 1. The State shall pay the Contractor an amount not to exceed the Price Limitation, block 1.8, for the services provided by the Contractor pursuant to Exhibit A, Scope of Services.
- 2. This contract is funded with general and federal funds. Department access to supporting funding for this project is dependent upon the criteria set forth in the Catalog of Federal Domestic Assistance (CFDA) (https://www.cfda.gov) #93.778 US Department of Health & Human Services, Centers for Medicare and Medicaid Services.
- 3. The Contractor shall use and apply all contract funds for authorized direct and indirect costs to provide services in Exhibit A, Scope of Services, in accordance with Exhibit B-1, Budget through Exhibit B-2, Budget.
- 4. The Contractor shall not use or apply contract funds for capital additions or improvements, entertainment costs, or any other costs not approved by the Department.
- 5. Payment for services provided in accordance with Exhibit A, Scope of Services, shall be made as follows:
 - 5.1. Payments shall be made on cost reimbursement basis only, for allowable expenses and in accordance with Exhibits B-1, Budget through Exhibit B-2, Budget.
 - 5.2. Allowable costs and expenses shall include those expenses detailed in Exhibit B-1, Budget through Exhibit B-2, Budget.
 - 5.3. The Contractor shall submit monthly invoices using invoice forms provided by the Department, and will reference contract budget detail on each invoice.
 - 5.4. The Contractor shall submit supporting documentation and required reports in Exhibit A, Scope of Services, Section 4, that support evidence of actual expenditures, in accordance with Exhibit B-1, Budget through Exhibit B-2, Budget for the previous month by the tenth (10th) working of the current month.
 - 5.5. The invoices for services outlined in Exhibit B-1, Budget, through Exhibit B-2 Budget shall be submitted preferably by e-mail on Department approved invoices to:

State Planner or Designee
Department of Health and Human Services
Bureau of Behavioral Health
105 Pleasant Street
Concord, NH 03301
beth.nichols@dhhs.state.nh.us

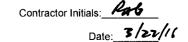




Exhibit B

- 5.6. The State shall make payment to the Contractor within thirty (30) days of receipt of each invoice for Contractor services provided pursuant to this Agreement.
- 6. A final payment request shall be submitted no later than forty (40) days from the Form P37, General Provisions, Contract Completion Date, Block 1.7.
- 7. Notwithstanding anything to the contrary herein, the Contractor agrees that funding under this Contract may be withheld, in whole or in part, in the event of noncompliance with any State or Federal law, rule or regulation applicable to the services provided, or if the said services have not been completed in accordance with the terms and conditions of this Agreement.
- 8. Notwithstanding paragraph 18 of the Form P-37, General Provisions, an amendment limited to transfer the funds within the budgets in Exhibit B-1 and Exhibit B-2 and within the price limitation, can be made by written agreement of both parties and may be made without obtaining approval of the Governor and Executive Council.

Contractor initials. PRL Date: 3/1/1

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

Bidder/Program Name: Mary Hitchcock Memorial Hospital

Budget Request for: Trainer for First Episode Psychosis (FEP) Treatment Services

Budget Period: April 1, 2016 through June 30, 2016

		Total Program Cost		0.00	Contractor Share / Match		Fun	Funded by DHHS contract share	nare
Line Item	Direct Incremental		Total	Direct Incremental	Indirect	Total	Direct Incremental	Indirect Fixed	Total
1. Total Salary/Wages	\$ 3,813.00	s	\$ 3,813.00	s		5	\$ 3,813.00	•	3,813.00
2. Employee Benefits	\$ 1,257.00 \$	\$	\$ 1,257.00 \$	\$ 0	s	9	\$ 1,257.00	\$	1,257,00
3. Consultants		\$	S	5	S	S		- 8	
4. Equipment:	\$	49	s	9		\$		- \$	\$
Rental	s		8	S	s	•	,	\$	
Repair and Maintenance	\$		S	5	5	5		- \$	S
Purchase/Depreciation	\$		•		s			. \$	
5. Supplies:				8		\$		- \$	S
Educational					S				
Lab	\$		5	8	5	\$			· s
Pharmacy			5	s	S			- \$	s
Medical			59		6			- \$	\$
Office	1,397.00		\$ 1,397.00	\$ 0	s	5	1,397.00	\$	1,397.00
6. Travel	\$ 1,984.00 \$	- 8	\$ 1,984.00	- \$ 0			1,984.00		1,984.00
7. Occupancy		69		6	5			- \$	\$
8. Current Expenses		49	s		•	\$			\$
Telephone	\$	49	49	s	- 8	\$			\$
Postage	s	€9	S	s	\$	5		\$	· s
Subscriptions	\$		\$		•			- \$	\$
Audit and Legal	s		\$	s	s	9			\$
Insurance	s	\$	S	,	5	\$			- \$
Board Expenses			8	s	s	\$			\$
9. Software						s	-		
 Marketing/Communications 	\$	s	s			\$.			\$
11. Staff Education and Training	\$		9		5	\$	•	\$	\$
12. Subcontracts/Agreements	\$ 64,467.00	- \$ (\$ 64,467.00	\$ 0	5	\$	\$ 64,467.00		\$ 64,467.00
13. Other (specific details mandatory:	\$			•	\$	\$,		\$
Indirect As A Percent of Direct	\$ 7,291.00	- 8	\$ 7,291.00	- \$ 0	- 8	\$	\$ 7,291.00		\$ 7,291.00
			9			5	-	\$	
	4			\$	9	\$			
TOTAL	\$ 80,209.00		\$ 80,209.00	\$ 0	. \$	•	80,209.00		\$ 80,209.00
Indirect As A Percent of Direct		%0:0							

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

Bidder/Program Name: Mary Hitchcock Memorial Hospital

Budget Request for: Trainer for First Episode Psychosis (FEP) Treatment Services

Budget Period: July 1, 2016 through September 30, 2016

		To	tal Program Cos			SEC. 2. (87. 88238.37.6) -/	Contractor Share / Match	Match		Func	Funded by DHHS contract share	are
l'ne item	Direct Incremental		Indirect		Total	Direct Incremental	Indirect Fixed	Total		Direct Incremental	Indirect Fixed	Total
. Total Salary/Wages	3.6	13.00		s	3,813.00		s	- 8	\$			\$ 3,813.00
Employee Benefits	\$ 1,2	1,257.00 \$		65	1,257.00		\$	\$		1,257.00		\$ 1,257.00
Consultants	S			s	\$		8	₩.			•	
. Equipment:	S	٠,		S	,		8	\$			\$	
Rental	69			s,			\$	*			•	
Repair and Maintenance	s	69		s	\$	٠.	\$	\$				
Purchase/Depreciation	69			s	•		\$	4	-			
Supplies:	8			s			\$	- 9				
Educational	s	\$		s	•		\$	\$			8	
Lab	9		'	s			\$	\$	- \$			
Pharmacy	S	\$		s			\$	\$ -				
Medical	S			s	-		s	. 8				
Office	5.1.3	1,397.00 \$		s	1,397.00		S	\$,	1,397.00		\$ 1,397.00
Travel		184.00 \$		s	1,984.00		s		- \$	1,	•	\$ 1,984.00
Occupancy	S	\$ 00.765		s	\$ 00.765		\$			297.00		\$ 597.00
Current Expenses	s	5		s	-	,	S	. 8			\$	
Telephone	S		'	S			\$	\$.	\$		9	
Postage	s	\$ -		\$,		\$		٠.		9	
Subscriptions	S	\$		s	5)	٠,	\$	9				
Audit and Legal	s			s		,	\$	\$	\$			
Insurance	65	٠,		s			\$				- ·	
Board Expenses	s	φ		€			s	-	٠.		· ·	
Software	s	\$	•	89	8		8		٠,		€9	·
10. Marketing/Communications	s	· .		S			\$	\$	٠.			S
 Staff Education and Training 	\$			\$			\$		٠,		€9	
12. Subcontracts/Agreements	8	· .		s	•		s	9				
13. Other (specific details mandatory):	S			s			\$	\$	- \$			
Indirect As A Percent of Direct	s	904.00		s,	904.00		\$	\$		904.00		\$ 904.00
	s	\$ -		S	-		\$. 8	•		8	
	s	s ·		S	,		S	- 8			8	
TOTAL	9	9.952.00		s	9.952.00		\$	<u>s</u>	•	9,952.00	•	\$ 9,952.00





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:

Contractor Initials Park



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.

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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.

- 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, bylaws 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

Contractor Initials MG

Exhibit C - Special Provisions



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.

DEFINITIONS

As used in the Contract, the following terms shall have the following meanings:

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.

DEPARTMENT: NH Department of Health and Human Services.

FINANCIAL MANAGEMENT GUIDELINES: Shall mean that section of the Contractor Manual which is entitled "Financial Management Guidelines" and which contains the regulations governing the financial activities of contractor agencies which have contracted with the State of NH to receive funds.

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 to be provided to eligible individuals 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.

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.

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 the time to time.

CONTRACTOR MANUAL: Shall mean that document prepared by the NH Department of Administrative Services containing a compilation of all regulations promulgated pursuant to the New Hampshire Administrative Procedures Act. NH RSA Ch 541-A, for the purpose of implementing State of NH and federal regulations promulgated thereunder.

SUPPLANTING OTHER FEDERAL FUNDS: The Contractor guarantees that funds provided under this Contract will not supplant any existing federal funds available for these services.



REVISIONS TO GENERAL PROVISIONS

- 1. Subparagraph 4 of the General Provisions of this contract, Conditional Nature of Agreement, is replaced as follows:
 - 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.
- 2. Subparagraph 10 of the General Provisions of this contract, 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.
- 3. The Division reserves the right to renew the Contract for up to two additional years, subject to the continued availability of funds, satisfactory performance of services and approval by 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

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- 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.

Place of Performance (street address, city, county, state, zip code) (list each location)

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.

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

Contractor Name:

Name:
Title:



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.)
- 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:

3/22/16 Date

Name: Title:

Exhibit E – Certification Regarding Lobbying

Contractor Initials

Date 3/24/

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CU/DHHS/110713 Page 1 of 1



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

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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:

Date

Name: Title:

Contractor Initials

Date 3/27/16



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.

Exhibit G



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

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

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

Contractor Name:

Math no

3/22/16 Date

Title:

Exhibit G



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:

3/22/16 Date

Name: Title:

Contractor Initials



Exhibit I

HEALTH INSURANCE PORTABLITY ACT BUSINESS ASSOCIATE AGREEMENT

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

(1) Definitions.

- a. "Breach" shall have the same meaning as the term "Breach" in section 164.402 of Title 45, Code of Federal Regulations.
- b. "Business Associate" has the meaning given such term in section 160.103 of Title 45, Code of Federal Regulations.
- "Covered Entity" has the meaning given such term in section 160.103 of Title 45, Code of Federal Regulations.
- d. "Designated Record Set" shall have the same meaning as the term "designated record set" in 45 CFR Section 164.501.
- e. "Data Aggregation" shall have the same meaning as the term "data aggregation" in 45 CFR Section 164.501.
- "Health Care Operations" shall have the same meaning as the term "health care operations" in 45 CFR Section 164.501.
- g. "HITECH Act" means the Health Information Technology for Economic and Clinical Health Act, TitleXIII, Subtitle D, Part 1 & 2 of the American Recovery and Reinvestment Act of 2009.
- h. "HIPAA" means the Health Insurance Portability and Accountability Act of 1996, Public Law 104-191 and the Standards for Privacy and Security of Individually Identifiable Health Information, 45 CFR Parts 160, 162 and 164 and amendments thereto.
- i. "Individual" shall have the same meaning as the term "individual" in 45 CFR Section 160.103 and shall include a person who qualifies as a personal representative in accordance with 45 CFR Section 164.501(g).
- "Privacy Rule" shall mean the Standards for Privacy of Individually Identifiable Health Information at 45 CFR Parts 160 and 164, promulgated under HIPAA by the United States Department of Health and Human Services.
- k. "Protected Health Information" shall have the same meaning as the term "protected health information" in 45 CFR Section 160.103, limited to the information created or received by Business Associate from or on behalf of Covered Entity.

3/2014

Health Insurance Portability Act **Business Associate Agreement** Page 1 of 6

Contractor Initials ###

(1)

Exhibit I

- "Required by Law" shall have the same meaning as the term "required by law" in 45 CFR Section 164.103.
- m. "Secretary" shall mean the Secretary of the Department of Health and Human Services or his/her designee.
- n. "Security Rule" shall mean the Security Standards for the Protection of Electronic Protected Health Information at 45 CFR Part 164, Subpart C, and amendments thereto.
- o. <u>"Unsecured Protected Health Information"</u> means protected health information that is not secured by a technology standard that renders protected health information unusable, unreadable, or indecipherable to unauthorized individuals and is developed or endorsed by a standards developing organization that is accredited by the American National Standards Institute.
- p. Other Definitions All terms not otherwise defined herein shall have the meaning established under 45 C.F.R. Parts 160, 162 and 164, as amended from time to time, and the HITECH Act.

(2) <u>Business Associate Use and Disclosure of Protected Health Information.</u>

- a. Business Associate shall not use, disclose, maintain or transmit Protected Health Information (PHI) except as reasonably necessary to provide the services outlined under Exhibit A of the Agreement. Further, Business Associate, including but not limited to all its directors, officers, employees and agents, shall not use, disclose, maintain or transmit PHI in any manner that would constitute a violation of the Privacy and Security Rule.
- b. Business Associate may use or disclose PHI:
 - I. For the proper management and administration of the Business Associate;
 - II. As required by law, pursuant to the terms set forth in paragraph d. below; or
 - III. For data aggregation purposes for the health care operations of Covered Entity.
- c. To the extent Business Associate is permitted under the Agreement to disclose PHI to a third party, Business Associate must obtain, prior to making any such disclosure, (i) reasonable assurances from the third party that such PHI will be held confidentially and used or further disclosed only as required by law or for the purpose for which it was disclosed to the third party; and (ii) an agreement from such third party to notify Business Associate, in accordance with the HIPAA Privacy, Security, and Breach Notification Rules of any breaches of the confidentiality of the PHI, to the extent it has obtained knowledge of such breach.
- d. The Business Associate shall not, unless such disclosure is reasonably necessary to provide services under Exhibit A of the Agreement, disclose any PHI in response to a request for disclosure on the basis that it is required by law, without first notifying Covered Entity so that Covered Entity has an opportunity to object to the disclosure and to seek appropriate relief. If Covered Entity objects to such disclosure, the Business

Contractor Initials Ref.

Date 3/22/16



Exhibit I

Associate shall refrain from disclosing the PHI until Covered Entity has exhausted all remedies.

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

(3) Obligations and Activities of Business Associate.

- a. The Business Associate shall notify the Covered Entity's Privacy Officer immediately after the Business Associate becomes aware of any use or disclosure of protected health information not provided for by the Agreement including breaches of unsecured protected health information and/or any security incident that may have an impact on the protected health information of the Covered Entity.
- b. The Business Associate shall immediately perform a risk assessment when it becomes aware of any of the above situations. The risk assessment shall include, but not be limited to:
 - The nature and extent of the protected health information involved, including the types of identifiers and the likelihood of re-identification;
 - o The unauthorized person used the protected health information or to whom the disclosure was made;
 - Whether the protected health information was actually acquired or viewed
 - o The extent to which the risk to the protected health information has been mitigated.

The Business Associate shall complete the risk assessment within 48 hours of the breach and immediately report the findings of the risk assessment in writing to the Covered Entity.

- The Business Associate shall comply with all sections of the Privacy, Security, and Breach Notification Rule.
- d. Business Associate shall make available all of its internal policies and procedures, books and records relating to the use and disclosure of PHI received from, or created or received by the Business Associate on behalf of Covered Entity to the Secretary for purposes of determining Covered Entity's compliance with HIPAA and the Privacy and Security Rule.
- e. Business Associate shall require all of its business associates that receive, use or have access to PHI under the Agreement, to agree in writing to adhere to the same restrictions and conditions on the use and disclosure of PHI contained herein, including the duty to return or destroy the PHI as provided under Section 3 (I). The Covered Entity shall be considered a direct third party beneficiary of the Contractor's business associate agreements with Contractor's intended business associates, who will be receiving PHI



Exhibit I

pursuant to this Agreement, with rights of enforcement and indemnification from such business associates who shall be governed by standard Paragraph #13 of the standard contract provisions (P-37) of this Agreement for the purpose of use and disclosure of protected health information.

- f. Within five (5) business days of receipt of a written request from Covered Entity,
 Business Associate shall make available during normal business hours at its offices all
 records, books, agreements, policies and procedures relating to the use and disclosure
 of PHI to the Covered Entity, for purposes of enabling Covered Entity to determine
 Business Associate's compliance with the terms of the Agreement.
- g. Within ten (10) business days of receiving a written request from Covered Entity, Business Associate shall provide access to PHI in a Designated Record Set to the Covered Entity, or as directed by Covered Entity, to an individual in order to meet the requirements under 45 CFR Section 164.524.
- h. Within ten (10) business days of receiving a written request from Covered Entity for an amendment of PHI or a record about an individual contained in a Designated Record Set, the Business Associate shall make such PHI available to Covered Entity for amendment and incorporate any such amendment to enable Covered Entity to fulfill its obligations under 45 CFR Section 164.526.
- Business Associate shall document such disclosures of PHI and information related to such disclosures as would be required for Covered Entity to respond to a request by an individual for an accounting of disclosures of PHI in accordance with 45 CFR Section 164.528.
- j. Within ten (10) business days of receiving a written request from Covered Entity for a request for an accounting of disclosures of PHI, Business Associate shall make available to Covered Entity such information as Covered Entity may require to fulfill its obligations to provide an accounting of disclosures with respect to PHI in accordance with 45 CFR Section 164.528.
- k. In the event any individual requests access to, amendment of, or accounting of PHI directly from the Business Associate, the Business Associate shall within two (2) business days forward such request to Covered Entity. Covered Entity shall have the responsibility of responding to forwarded requests. However, if forwarding the individual's request to Covered Entity would cause Covered Entity or the Business Associate to violate HIPAA and the Privacy and Security Rule, the Business Associate shall instead respond to the individual's request as required by such law and notify Covered Entity of such response as soon as practicable.
- I. Within ten (10) business days of termination of the Agreement, for any reason, the Business Associate shall return or destroy, as specified by Covered Entity, all PHI received from, or created or received by the Business Associate in connection with the Agreement, and shall not retain any copies or back-up tapes of such PHI. If return or destruction is not feasible, or the disposition of the PHI has been otherwise agreed to in the Agreement, Business Associate shall continue to extend the protections of the Agreement, to such PHI and limit further uses and disclosures of such PHI to those purposes that make the return or destruction infeasible, for so long as Business

Contractor Initials PAT



Exhibit I

Associate maintains such PHI. If Covered Entity, in its sole discretion, requires that the Business Associate destroy any or all PHI, the Business Associate shall certify to Covered Entity that the PHI has been destroyed.

(4) Obligations of Covered Entity

- a. Covered Entity shall notify Business Associate of any changes or limitation(s) in its Notice of Privacy Practices provided to individuals in accordance with 45 CFR Section 164.520, to the extent that such change or limitation may affect Business Associate's use or disclosure of PHI.
- b. Covered Entity shall promptly notify Business Associate of any changes in, or revocation of permission provided to Covered Entity by individuals whose PHI may be used or disclosed by Business Associate under this Agreement, pursuant to 45 CFR Section 164.506 or 45 CFR Section 164.508.
- c. Covered entity shall promptly notify Business Associate of any restrictions on the use or disclosure of PHI that Covered Entity has agreed to in accordance with 45 CFR 164.522, to the extent that such restriction may affect Business Associate's use or disclosure of PHI.

(5) Termination for Cause

In addition to Paragraph 10 of the standard terms and conditions (P-37) of this Agreement the Covered Entity may immediately terminate the Agreement upon Covered Entity's knowledge of a breach by Business Associate of the Business Associate Agreement set forth herein as Exhibit I. The Covered Entity may either immediately terminate the Agreement or provide an opportunity for Business Associate to cure the alleged breach within a timeframe specified by Covered Entity. If Covered Entity determines that neither termination nor cure is feasible, Covered Entity shall report the violation to the Secretary.

(6) <u>Miscellaneous</u>

- a. <u>Definitions and Regulatory References</u>. All terms used, but not otherwise defined herein, shall have the same meaning as those terms in the Privacy and Security Rule, amended from time to time. A reference in the Agreement, as amended to include this Exhibit I, to a Section in the Privacy and Security Rule means the Section as in effect or as amended.
- b. <u>Amendment</u>. Covered Entity and Business Associate agree to take such action as is necessary to amend the Agreement, from time to time as is necessary for Covered Entity to comply with the changes in the requirements of HIPAA, the Privacy and Security Rule, and applicable federal and state law.
- c. <u>Data Ownership</u>. The Business Associate acknowledges that it has no ownership rights with respect to the PHI provided by or created on behalf of Covered Entity.
- d. <u>Interpretation</u>. The parties agree that any ambiguity in the Agreement shall be resolved to permit Covered Entity to comply with HIPAA, the Privacy and Security Rule.

Contractor Initials 246

Exhibit I

- Segregation. If any term or condition of this Exhibit I or the application thereof to any e. person(s) or circumstance is held invalid, such invalidity shall not affect other terms or conditions which can be given effect without the invalid term or condition; to this end the terms and conditions of this Exhibit I are declared severable.
- f. Survival. Provisions in this Exhibit I regarding the use and disclosure of PHI, return or destruction of PHI, extensions of the protections of the Agreement in section (3) I, the defense and indemnification provisions of section (3) e and Paragraph 13 of the standard terms and conditions (P-37), shall survive the termination of the Agreement.

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

general
hier



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:

Date

3/22/16

Name Title:

Contractor Initials 446

Date 3/23/16



FORM A

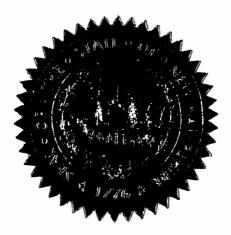
As the Contractor identified in Section 1.3 of the General Provisions, I certify that the responses to the below listed questions are true and accurate.

pei	ow listed questions are true and accurate.
1.	The DUNS number for your entity is: 0699 1029 7
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?
	NOYES
	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?
	NOYES
	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:

State of New Hampshire Department of State

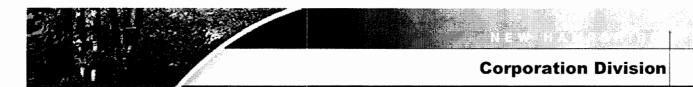
CERTIFICATE

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 formed August 7, 1889. I further certify that it is in good standing as far as this office is concerned, having filed the return(s) and paid the fees required by law.



In TESTIMONY WHEREOF, I hereto set my hand and cause to be affixed the Seal of the State of New Hampshire, this 8th day of April, A.D. 2015

William M. Gardner Secretary of State



Search
By Business Name
By Business ID
By Registered Agent
Annual Report
File Online
Guidelines
Name Availability
Name Appeal Process

Date: 4/8/2016 Filed Documents

(Annual Report History, View Images, etc.)

Business Name History

Name Name Type
MARY HITCHCOCK MEMORIAL HOSPITAL Legal

Non-Profit Corporation - Domestic - Information

Business ID: 68517

Status: Good Standing

Entity Creation Date: 8/7/1889

Principal Office Address: One Medical Center Drive

Lebanon NH 03756

Principal Mailing Address: No Address

Expiration Pate:

Perpetual

Expiration Date: Perpetual

Last Annual Report Filed Date: 9/22/2015 10:56:03 AM
Last Annual Report Filed: 2015

Registered Agent

Agent Name:

Office Address: No Address
Mailing Address: No Address

Important Note: The status reflected for each entity on this website only refers to the status of the entity's filing requirements with this office. It does not necessarily reflect the disciplinary status of the entity with any state agency. Requests for disciplinary information should be directed to agencies with licensing or other regulatory authority over the entity.

Privacy Policy | Accessibility Policy | Site Map | Contact Us

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

CERTIFICATE OF VOTE/AUTHORITY

- I, Charles G. Plimpton, of Dartmouth-Hitchcock Clinic and Mary Hitchcock Memorial Hospital, do hereby certify that:
 - 1. I am the duly elected Treasurer of the Board of Trustees of Dartmouth-Hitchcock Clinic and Mary Hitchcock Memorial Hospital;
 - 2. The following is a true and accurate excerpt from the December 7th, 2012 Bylaws of Dartmouth-Hitchcock Clinic and Mary Hitchcock Memorial Hospital:

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

- "In exercising this [fiduciary] duty, the Board may, consistent with the Corporation's Articles of Agreement and these Bylaws, delegate authority to the Board of Governors, Board Committees and various officers the right to give input with respect to issues and strategies, incur indebtedness, make expenditures, enter into contracts and agreements and take such other binding actions on behalf of the Corporation as may be necessary or desirable."
- 3. Article I Section A, as referenced above, provides authority for the chief officers, including the Chief Executive Officer and Chief Population Health Management 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. Robert A. Greene, MD is the Executive Vice President and Chief Population Health Management 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 Treasurer of the Board of Trustees of Dartmouth-Hitchcock Clinic and Mary Hitchcock Memorial Hospital this 6th day of April, 2016.

Charles G. Plimpton, Board Treasurer

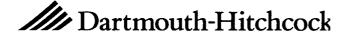
STATE OF NH

COUNTY OF GRAFTON

The foregoing instrument was acknowledged before me this 6th day of April, 2016, by Charles G. Plimpton.

Notary Public

Notary Public
My Commission Expires: May 9, 2017



CERTIFICATE OF VOTE/AUTHORITY

I, Anne-Lee Verville, of Dartmouth-Hitchcock Clinic and Mary Hitchcock Memorial Hospital, do hereby certify that:

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

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

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

IN WITNESS WHEREOF, I have hereunto set my hand as the Chair of the Board of Trustees of Dartmouth-Hitchcock Clinic and Mary Hitchcock Memorial Hospital this 15th day of March, 2016.

STATE OF NH

COUNTY OF GRAFTON

The foregoing instrument was acknowledged before me this 15th day of March, 2016, by Anne-Lee Verville.

HILLIAM A ANTHINIA

Notary Public

My Commission Expires: May 9 2017

CERTIFICATE OF INSURANCE

DATE: March 22, 2016

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 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 have 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		0002015-A	07/01/2015	06/30/2016	GENERAL AGGREGATE	\$2,000,000
COMMERCIAL GENERAL LIABILITY					PRODUCTS- COMP/OP AGGREGATE PERSONAL ADV INJURY	
x	CLAIMS MADE				EACH OCCURRENCE FIRE DAMAGE	\$1,000,000
	OCCURRENCE				MEDICAL EXPENSES	
PROFESSIONAL LIABILITY		0002015-A	07/01/2015	06/30/2016	EACH OCCURENCE	\$1,000,000
					ANNUAL AGGREGATE	\$3,000,000
OTHER						

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

Certificate of Insurance issued as evidence of insurance for activities related to the State of New Hampshire Contract.

CERTIFICATE HOLDER

State of New Hampshire 129 Pleasant Street- Brown Bldg 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

Soull & Minahar

Client#: 317075 DARTMOUTHH1

ACORD.

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 4/15/2016

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

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

certificate floider in fied of such	i endorsement(s).					
PRODUCER		CONTACT Jessica Kelley				
HUB Healthcare Solutions		PHONE (A/C, No, Ext): 978-661-6233 FAX (A/C, No	866-381-4798			
HUB International New England 100 Central Street, 2nd Floor Holliston, MA 01746		E-MAIL ADDRESS: jessica.kelley@hubinternational.com				
		INSURER(S) AFFORDING COVERAGE	NAIC #			
		INSURER A: Safety National Casualty Corp				
INSURED	-1. 44 - 411. 04	INSURER B:				
Dartmouth Hitchcock Medical Center 1 Medical Center Dr., #4b		INSURER C:				
		INSURER D :				
Lebanon, NH 0375	•	INSURER E :				
		INSURER F:				
COVERAGES	CERTIFICATE NUMBER	DEVISION NUMBER				

	•		INS	INSURER E :				
INSURER F:								
CO	VERAGES CER	TIFICATI	E NUMBER:			REVISION NUMBER:		
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INSR LTR	TYPE OF INSURANCE	ADDL SUB	BR POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMIT	S	AND THE PERSON OF THE PERSON O
	GENERAL LIABILITY		_			EACH OCCURRENCE	\$	
	COMMERCIAL GENERAL LIABILITY					DAMAGE TO RENTED PREMISES (Ea occurrence)	\$	
	CLAIMS-MADE OCCUR					MED EXP (Any one person)	\$	
						PERSONAL & ADV INJURY	\$	
						GENERAL AGGREGATE	S	
	GEN'L AGGREGATE LIMIT APPLIES PER:					PRODUCTS - COMP/OP AGG	S	
	POLICY JECT LOC					COMBINED SINGLE LIMIT	\$	
	AUTOMOBILE LIABILITY	111111111111111111111111111111111111111				(Ea accident)	\$	
	ANY AUTO ALL OWNED SCHEDULED					BODILY INJURY (Per person) BODILY INJURY (Per accident)	\$	
	AUTÓS AUTÓS NON-OWNED					PROPERTY DAMAGE	\$	
	HIRED AUTOS AUTOS					(Per accident)	\$	
	UMBRELLA LIAB OCCUR					EACH OCCURRENCE	\$	
	EXCESS LIAB CLAIMS-MADE					AGGREGATE	\$	
	DED RETENTION \$						\$	
Α	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY		AGC4053417	07/01/2015	07/01/2016	X WC STATU- OTH- TORY LIMITS ER		
	ANY PROPRIETOR/PARTNER/EXECUTIVE N	N/A				E.L. EACH ACCIDENT	\$1000	000
	(Mandatory in NH)					E.L. DISEASE - EA EMPLOYEE	s1000	000
	If yes, describe under DESCRIPTION OF OPERATIONS below					E.L. DISEASE - POLICY LIMIT	s1000	000
	DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required) Evidence of Workers Compensation coverage.							
CEI	RTIFICATE HOLDER		C	ANCELLATION				

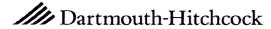
CERTIFICATE HOLDER		CANCELLATION

State of New Hampshire Attn: Denise Shelburne **Contracts & Procurement Unit 129** Pleasant Street - Brown Bldg. Concord, NH 03301

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

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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



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Dartmouth-Hitchcock Health and Subsidiaries

Consolidated Financial Statements June 30, 2015 and 2014

Dartmouth-Hitchcock Health and Subsidiaries Index

June 30, 2015 and 2014

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Independent Auditor's Report

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

We have audited the accompanying consolidated financial statements of Dartmouth-Hitchcock Health and Subsidiaries (the "Health System"), which comprise the consolidated balance sheets as of June 30, 2015 and 2014, and the related consolidated statements of operations and changes in net assets and of cash flows for the years ended June 30, 2015 and 2014.

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.

Auditor's Responsibility

Our responsibility is to express an opinion on the consolidated financial statements based on our audits. We did not audit the consolidated financial statements of The Cheshire Medical Center, a subsidiary whose sole member is Dartmouth-Hitchcock Health, which statements reflect total assets constituting 9.7% of consolidated total assets at June 30, 2015 and total revenues of 3.5% of consolidated total revenues for the year then ended. Those statements as of June 30, 2015 and for the four months then ended 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 The Cheshire Medical Center, is based solely on the report of the other auditors. We did not audit the consolidated financial statements of New London Hospital Association, Inc. and Subsidiaries, a subsidiary whose sole member is Dartmouth-Hitchcock Health, which statements reflect total assets constituting 3.8% of consolidated total assets at June 30, 2014 and total revenues of 3.0% of consolidated total revenues for the year then ended. Those statements as of June 30, 2014 and for the nine months then ended 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 New London Hospital Association, Inc. and Subsidiaries, is based solely on the report of the other auditors. We conducted our audit 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.



Opinion

In our opinion, based on our audits and the reports of the other auditors, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Health System at June 30, 2015 and 2014, and the results of its operations and changes in net assets and its cash flows for the years ended June 30, 2015 and 2014 in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matter

As discussed in Note 2 to the consolidated financial statements, the Health System changed the manner in which it accounts for investment gains and losses recognized within periodic pension cost in 2015. Our opinion is not modified with respect to this matter.

Other Matter

Our audit was conducted for the purpose of forming an opinion on the consolidated financial statements taken as a whole. The consolidating information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the consolidated financial statements. The consolidating information has been subjected to the auditing procedures applied in the 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 and results of operations and changes in unrestricted net assets 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 and results of operations and changes in unrestricted net assets of the individual companies.

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November 27, 2015

Dartmouth-Hitchcock Health and Subsidiaries Consolidated Balance Sheets June 30, 2015 and 2014

(in thousands of dollars)	dollars) 2015			2014
Assets				
Current assets				
Cash and cash equivalents	\$	38,909	\$	50,927
Patient accounts receivable, net of estimated uncollectibles of \$92,532				
and \$124,404 at June 30, 2015 and 2014 (Note 4)		204,272		184,606
Prepaid expenses and other current assets (Note 13)	<u></u>	100,586		91,302
Total current assets		343,767		326,835
Assets limited as to use (Notes 5, 7, and 10)		620,425		629,185
Other investments for restricted activities (Notes 5 and 7)		132,016		101,675
Property, plant, and equipment, net (Note 6)		601,355		484,753
Other assets		88,450		72,508
Total assets	\$	1,786,013	\$	1,614,956
Liabilities and Net Assets				
Current liabilities				
Current portion of long-term debt (Note 10)	\$	17,179	\$	13,281
Line of credit (Note 13)		1,200		-
Current portion of liability for pension and other postretirement				
plan benefits (Note 11)		5,961		5,142
Accounts payable and accrued expenses (Note 13)		120,221		93,023
Accrued compensation and related benefits		94,864		78,575
Estimated third-party settlements (Note 4)		36,599		30,677
Total current liabilities		276,024		220,698
Long-term debt, excluding current portion (Note 10)		575,484		550,703
Insurance deposits and related liabilities (Note 12)		62,356		68,498
Interest rate swaps (Notes 7 and 10)		24,740		24,413
Liability for pension and other postretirement plan benefits,				
excluding current portion (Note 11)		187,568		139,056
Other liabilities		56,109	_	47,980
Total liabilities		1,182,281		1,051,348
Net assets				
Unrestricted (Note 9)		474,194		462,675
Temporarily restricted (Notes 8 and 9)		76,457		64,664
Permanently restricted (Notes 8 and 9)		53,081		36,269
Total net assets		603,732		563,608
Commitments and contingencies (Notes 4, 6, 7, 10, and 13)		 		
Total liabilities and net assets	\$	1,786,013	\$	1,614,956

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, 2015 and 2014

(in thousands of dollars)	2014	
Unrestricted revenue and other support		
Net patient service revenue, net of provision for bad debt		
(\$17,562 and \$47,606 in 2015 and 2014), (Notes 1 and 4)	\$ 1,380,559	\$ 1,229,848
Contracted revenue (Note 2)	80,835	92,390
Other operating revenue (Note 2 and 5)	82,993	64,804
Net assets released from restrictions	15,637	11,670
Total unrestricted revenue and other support	1,560,024	1,398,712
Operating expenses		
Salaries	776,402	675,716
Employee benefits	213,975	209,052
Medical supplies and medications	219,967	196,397
Purchased services and other	205,704	169,956
Medicaid enhancement tax (Note 4)	51,996	34,488
Depreciation and amortization	67,213	57,729
Interest (Note 10)	18,442	18,436
Expenditures relating to net assets released from restrictions	15,637	11,670
Total operating expenses	1,569,336	1,373,444
Operating (loss) gain	(9,312)	25,268
Nonoperating gains (losses)		
Investment (losses) gains (Notes 5 and 10)	(11,015)	56,804
Other losses	(1,241)	(4,473)
Contribution revenue from acquisition (Note 3)	92,499	33,692
Total nonoperating gains (losses), net	80,243	86,023
Excess of revenue over expenses	\$ 70,931	\$ 111,291

Dartmouth-Hitchcock Health and Subsidiaries Consolidated Statements of Operations and Changes in Net Assets, Continued Years Ended June 30, 2015 and 2014

(in thousands of dollars)	2015		2014
Unrestricted net assets			
Excess of revenue over expenses	\$ 70,931	\$	111,291
Net assets released from restrictions	2,411		763
Change in funded status of pension and other postretirement			
benefits (Note 11)	(60,892)		19,669
Change in fair value of interest rate swaps (Note 10)	 (931)		1,538
Increase in unrestricted net assets	 11,519	•••	133,261
Temporarily restricted net assets			
Gifts, bequests, sponsored activities	10,625		18,295
Investment gains	1,797		1,171
Change in net unrealized (losses) gains on investments	(1,619)		2,998
Net assets released from restrictions	(18,048)		(12,433)
Contribution of temporarily restricted net assets from acquisition	 19,038		386
Increase in temporarily restricted net assets	 11,793		10,417
Permanently restricted net assets			
Gifts and bequests	202		2,961
Contribution of permanently restricted net assets from acquisition	 16,610		2,053
Increase in permanently restricted net assets	 16,812		5,014
Change in net assets	40,124		148,692
Net assets			
Beginning of year	 563,608		414,916
End of year	\$ 603,732	\$	563,608

Dartmouth-Hitchcock Health and Subsidiaries Consolidated Statements of Cash Flows Years Ended June 30, 2015 and 2014

(in thousands of dollars)		2015		2014
Cash flows from operating activities				
Change in net assets	\$	40,124	\$	148,692
Adjustments to reconcile change in net assets to net cash provided by				
operating and nonoperating activities				
Change in fair value of interest rate swaps		(104)		(968)
Provision for bad debt		17,562		47,606
Depreciation and amortization		67,414		58,216
Contribution revenue from acquisition		(128,147)		(36,131)
Change in funded status of pension and other postretirement benefits		60,892		(19,669)
Loss on disposal of fixed assets		670		313
Net realized (loses) gains and change in net unrealized (losses) gains on investments		15,795		(58,024)
Restricted contributions		(11,040)		(10,637)
Proceeds from sale of securities		723		413
Changes in assets and liabilities				
Patient accounts receivable, net		(17,151)		(54,587)
Prepaid expenses and other current assets		9,165		(7,669)
Other assets, net		(4,388)		(10,623)
Accounts payable and accrued expenses		(5,169)		10,658
Accrued compensation and related benefits		8,684		757
Estimated third-party settlements		2,637		2,389
Insurance deposits and related liabilities		(17,177)		(23,454)
Liability for pension and other postretirement benefits		(25,471)		(14,980)
Other liabilities		(669)		9,489
Net cash provided by operating and nonoperating activities	_	14,350		41,791
Cash flows from investing activities				
Purchase of property, plant, and equipment		(87,196)		(50,043)
Proceeds from sale of property, plant, and equipment		1,533		3,155
Purchases of investments		(166,589)		(107,216)
Proceeds from maturities and sales of investments		195,950		111,111
Cash received through acquisition		29,914		3,431
Net cash used by investing activities	_	(26,388)		(39,562)
Cash flows from financing activities				
Proceeds from line of credit		60,904		100,000
Payments on line of credit		(60,700)		(100,000)
Repayment of long-term debt		(54,682)		(27,351)
Proceeds from issuance of debt		43,452		17,066
Payment of debt issuance costs		6		(418)
Restricted contributions		11,040	_	8,519
Net cash provided (used) by financing activities		20	_	(2,184)
(Decrease) increase in cash and cash equivalents		(12,018)		45
Cash and cash equivalents		50,927		50,882
Beginning of year	_		_	
End of year	\$	38,909	\$	50,927
Supplemental cash flow information				
Interest paid	\$	21,659	\$	22,220
Asset appreciation due to affiliations		15,596		6,697
Construction in progress included in accounts payable and				
accrued expenses		1,955		10,550
Equipment acquired through issuance of capital lease obligations		1,741		744
Donated securities		685		413

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 Mary Hitchcock Memorial Hospital (MHMH) and Dartmouth-Hitchcock Clinic (DHC) (collectively referred to as "Dartmouth-Hitchcock" (D-H)), New London Hospital Association (NLH), Mt. Ascutney Hospital and Health Center (MAHHC) and The Cheshire Medical Center (Cheshire).

The "Health System" consists of D-HH, its affiliates and their subsidiaries.

D-HH currently operates one tertiary and three community acute care hospitals in NH and VT, one facility providing inpatient and outpatient mental health services, and one facility providing inpatient and outpatient rehabilitation medicine and long-term care. D-HH also operates two physician practices and a nursing home. D-HH 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 and Cheshire are New Hampshire (NH) not-for-profit corporations exempt from federal income taxes under Section 501(c)(3) of the Internal Revenue Code (IRC). MAHHC is a Vermont (VT) not-for-profit corporation exempt from federal income taxes under Section 501(c)(3) of the IRC.

Fiscal year 2015 includes a full year of operations of D-HH, D-H, NLH, MAHHC and four months of operations of Cheshire. Fiscal year 2014 includes a full year of operations of D-HH, D-H and nine months of operations of NLH (Note 3).

Community Benefits

The mission of the Health System is to 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.

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 States of NH and VT which outline the community and charitable benefits it provides. The broad 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 even though there is a financial loss because
 they meet the needs of the community and would not otherwise be available unless the
 responsibility was assumed by the government.
- Research support and other grants representing costs in excess of awards for numerous health research and service initiatives awarded to the organizations.
- Community health-related initiatives 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, 2015 and 2014, the Health System provided financial assistance to patients in the amount of approximately \$50,076,000 and \$56,372,000, respectively, as measured by gross charges. The estimated cost of providing this care for the years ended June 30, 2015 and 2014 was approximately \$20,781,000 and \$20,454,000, 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, 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 2014 was approximately \$109,696,000. The 2015 Community Benefits Reports are expected to be filed in February 2016.

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, 2014:

(Unaudited, in thousands of dollars)

Community health services	\$ 3,267
Health professional education	28,551
Subsidized health services	7,407
Research	5,421
Financial contributions	7,142
Community building activities	797
Community benefit operations	29
Charity care	20,454
Government-sponsored healthcare services	 159,446
Total community benefit value	\$ 232,514

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, 2015 and 2014, the Health System reported a provision for bad debt expense of approximately \$17,562,000 and \$47,606,000, respectively. The Health System also routinely provides services to Medicare patients at reimbursement levels that are below the costs of the care provided.

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 (ASC 954), which addresses the accounting for healthcare entities. In accordance with the provisions of ASC 954, net assets and revenue, expenses, gains, and losses 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 date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. 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 could differ from those estimates.

Excess of Revenue Over Expenses

The consolidated statements of operations and changes in net assets include 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, realized gains/losses on sales of investment securities and changes in unrealized gains/losses in investments are reported as nonoperating gains (losses).

Changes in unrestricted net assets which are excluded from 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 4).

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 4).

Contract Revenue

The Health System has various Professional Service Agreements (PSAs), pursuant to which certain facilities 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 7).

Investments in pooled/commingled investment funds, private equity funds and hedge funds that represent investments where the Health System owns shares or units of funds rather than the underlying securities in that fund are valued using the equity method of accounting with changes in value recorded in 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 sheets date on a non-distressed 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 restricted assets were invested in these pooled funds by purchasing units based on the market value of the pooled funds at the end of the month prior to receipt of any new additions to the funds. Interest, dividends, and realized and unrealized gains and losses earned on pooled funds are allocated monthly based on the weighted average units outstanding at the prior month-end.

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

Fair Value Measurement of Financial Instruments

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

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

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

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

Property, Plant, and Equipment

Property, plant, and equipment, and other real estate are stated at cost at the time of purchase or fair market 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 ten 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 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 as other assets, 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 \$2,700,000 as intangible assets associated with its affiliations. There were no impairment charges recorded for the years ended June 30, 2015 and 2014.

Derivative Instruments and Hedging Activities

The Health System applies the provisions of ASC 815, *Derivatives and Hedging*, to its derivative instruments, which requires that all derivative instruments be recorded at their respective fair value 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 or to 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 operation 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 nonoperating gains. Conditional promises to give and indications of intentions to give to the Health System are reported at fair market 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.

Change in Accounting

During 2015, the Health System elected to change its method of accounting for pension and postrefirement benefits. For purposes of calculating the expected return on plan assets, the Health System will no longer use an averaging technique permitted under Generally Accepted Accounting

Principles (GAAP) for the market-related value of plan assets, but instead will use the actual fair value of plan assets. These changes are intended to improve the transparency of the Health System's operating results by more quickly recognizing the effects of current economic and interest rate trends on plan investments and assumptions. These changes have been reported through retrospective application to all periods presented. The impact of the change in accounting for the years ended June 30, 2015 and 2014 was an approximate (reduction) increase in pension expense of (\$4,800,000) and \$4,900,000, respectively.

Recently Issued Accounting Pronouncements

In May 2014, the FASB issued a standard on Revenue from Contracts with Customers. This standard implements a single framework for recognition of all revenue earned from customers. This framework ensures that entities appropriately reflect the consideration to which they expect to be entitled in exchange for goods and services by allocating transaction price to identified performance obligations and recognizing revenue as performance obligations are satisfied. Qualitative and quantitative disclosures are required to enable users of financial statements to understand the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers. The standard is effective for fiscal years beginning after December 15, 2017. The Health System is evaluating the impact this will have on the combined financial statements beginning in Fiscal Year 2018.

3. Acquisitions

Effective July 1, 2014 D-HH became the sole corporate member of Windsor Hospital Corporation (dba Mt. Ascutney Hospital and Health Center "MAHHC") through an affiliation agreement. MAHHC is a not-for-profit corporation providing inpatient and outpatient care services to residents of Windsor County, Vermont. MAHHC is the sole corporate member of Historic Homes of Runnemede, Inc. a not-for-profit Vermont corporation providing recreational, educational and residential care services for the aging. In addition, MAHHC is the sole corporate member of Mt. Ascutney Hospital Community Health Foundation, Inc. which is a not-for-profit Vermont corporation providing health education and promotion programs aimed at improving the health status of the Windsor community. MAHHC and its subsidiaries have a fiscal year end of September 30th.

Effective March 2, 2015 D-HH became the sole corporate member of The Cheshire Medical Center (Cheshire) through an affiliation agreement. Cheshire is a not-for-profit acute care hospital providing inpatient and outpatient services to the residents of Merrimack and Sullivan counties. Cheshire is the sole corporate member of The Cheshire Health Foundation (Cheshire Foundation), a not-for-profit corporation that carries on fundraising activities and manages related investments. Cheshire and Cheshire Foundation have a fiscal year end of June 30th. The D-HH's 2015 consolidated financial statements reflect four months of activity for Cheshire and Cheshire Foundation beginning March 2, 2015.

In accordance with applicable accounting guidance on not-for-profit mergers and acquisitions, The Health System recorded contribution income of approximately \$128,147,000 reflecting the fair value of the contributed net assets of MAHHC and Cheshire and their subsidiaries on the transaction dates. Of this amount, \$92,499,000 represents unrestricted net assets and is included as a nonoperating gain in the accompanying consolidated statements of operations. Restricted contribution income of \$19,038,000 and \$16,610,000 was recorded within temporarily and permanently restricted net assets, respectively, in the accompanying consolidated statements of changes in net assets. No consideration was exchanged for the net assets contributed and acquisition costs are expensed as incurred.

The fair value of assets, liabilities, and net assets contributed by MAHHC and Cheshire and their subsidiaries at July 1, 2014 and March 2, 2015 were as follows:

(in thousands)				
	MAHHC	Cheshire	Total	
Assets				
Cash and cash equivalents	\$ 4,159	\$ 25,755	29,914	
Patient accounts receivable, net	7,063	13,014	20,077	
Prepaid expenses and other current assets	1,368	3,345	4,713	
Assets limited as to use	15,168	46,440	61,608	
Property, plant, and equipment, net	17,644	81,275	98,919	
Other assets	2,398	5,698	8,096	
Total assets acquired	\$ 47,800	\$ 175,527	223,327	
Liabilities				
Accounts payable and accrued expenses	\$ 2,174	\$ 19,709	21,883	
Accrued compensation and related benefits	2,590	5,016	7,606	
Estimated third-party settlements	3,285	-	3,285	
Long-term debt	10,213	29,052	39,265	
Interest rate swaps	431	-	431	
Other liabilities	6,693	16,017	22,710	
Total liabilities assumed	25,386	69,794	95,180	
Net Assets				
Unrestricted	15,672	76,827	92,499	
Temporarily restricted	752	18,286	19,038	
Permanently restricted	5,990	10,620	16,610	
Total net assets	22,414	105,733	128,147	
Total liabilities and net assets	\$ 47,800	\$ 175,527	223,327	

A summary of the financial results of MAHHC and Cheshire and their subsidiaries included in the consolidated statements of operations and changes in net assets for the period from the dates of acquisition, July 1, 2014 and March 2, 2015 through June 30, 2015 is as follows:

(in thousands)						
	MAHHC Cheshire		Cheshire	Total		
Total operating revenues	\$	49,628	\$	53,824	\$	103,452
Total operating expenses		51,098		55,288		106,386
Operating loss		(1,470)		(1,464)		(2,934)
Nonoperating gains		117		452		569
Deficit of revenues over expenses		(1,353)		(1,012)		(2,365)
Net assets released from restriction used for capital purchases		679		1,010		1,689
Change in funded status of pension and other						
postretirement benefits		(790)		2,875		2,085
Change in fair value on interest rate swaps		159		-		159
Net assets transferred from affiliate		15,672		76,827		92,499
Increase in unrestricted net assets	\$	14,367	\$	79,700	\$	94,067

A summary of the consolidated financial results of the Health System for the years ended June 30, 2015 and 2014 as if the transactions had occurred on July 1, 2013 is as follows (unaudited):

(in thousands)		
	2015	2014
Total operating revenues	\$ 1,658,250	\$ 1,595,128
Total operating expenses	1,671,124	1,572,044
Operating (loss) gain	(12,874)	23,084
Nonoperating gains	81,277	90,522
Excess of revenues over expenses	68,403	113,606
Net assets released from restriction used for capital purchases	2,411	790
Change in funded status of pension and other post retirement benefits	(65,128)	20,017
Change in fair value on interest rate swaps	(931)	1,538
Increase in unrestricted net assets	\$ 4,755	\$ 135,951

4. 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, 2015 and 2014:

(in thousands of dollars)	2015	2014
Gross patient service revenue	\$ 3,656,514	\$ 3,235,142
Less: Contractual allowances	2,258,393	1,957,688
Less: Provision for bad debt	 17,562	 47,606
Net patient service revenue	\$ 1,380,559	\$ 1,229,848

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, 2015 and 2014:

(in thousands of dollars)	2015					
Receivables						
Patients	\$	123,881	\$	156,967		
Third-party payors		171,141		150,258		
Nonpatient		1,782		1,785		
	\$	296,804	\$	309,010		

The allowance for estimated uncollectibles is \$92,532,000 and \$124,404,000 as of June 30, 2015 and 2014.

The following table categorizes payors into five groups and their respective percentages of gross patient service revenue for the years ended June 30, 2015 and 2014:

	2015	2014
Medicare	40 %	39 %
Anthem/Blue Cross	21	20
Commercial insurance	20	21
Medicaid	15	13
Self-pay/Other	4	77
	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, 2015 and 2014 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 the 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 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 is not impacted by CAH designation. Medicare reimburses nursing home care based on an acuity driven prospective payment system with no retrospective settlement.

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, 2015 and 2014, the Health System recorded State of NH Medicaid Enhancement Tax (MET) expense of \$51,996,000 and \$34,488,000, respectively. The tax is calculated at 5.5% of certain gross patient revenues in accordance with instructions received from the State of NH. The MET expense is included in operating expenses in the consolidated statements of operations and changes in net assets.

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 the agreement the parties have agreed to resolve all pending litigation related to MET and Medicaid Rates, including the Catholic Medical Center Litigation, the Northeast Rehabilitation Litigation, 2014 DRA Refund Requests, and the State Rate Litigation. As part of the Medicaid Enhancement Tax Agreement Effective July 1, 2014, a "Trust / Lock Box" dedicated fund mechanism will be established for receipt and distribution of all MET proceeds with all monies used exclusively to support Medicaid services. During the years ended June 30, 2015 and 2014, the Health System received disproportionate share hospital (DSH) payments of \$10,152,016 and \$12,631,782, respectively.

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 over the next several years with an anticipated end date of December 31, 2016, depending on the program. The Health System has recognized \$4,175,164 and \$6,833,075 in meaningful use incentives for both the Medicare and Vermont Medicaid programs during the years ended June 30, 2015 and 2014, 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.

Nonacute 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 (2007 -

2015). 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 2015 and 2014, changes in estimates related to the Health System's settlements with third-party payors resulted in increases in net patient service revenue of approximately \$5,550,206 and \$4,076,601, respectively, in the consolidated statements of operations and changes in net assets.

2015

3,653

10,921

132,016

28

3,101

6,212

101,675

28

2014

5. Investments

(in thousands of dollars)

Private equity funds

Hedge funds

Other

The composition of investments at June 30, 2015 and 2014 is set forth in the following table:

(III triousarius or donars)		20.0		20.7	
Assets limited as to use					
Internally designated by board					
Cash and short-term investments	\$	8,475	\$	7,463	
U.S. government securities	Ψ	36,634	Ψ	36,930	
Domestic corporate debt securities		80,254		83,224	
Global debt securities		111,156		126,451	
Domestic equities		106,350		111,970	
International equities		69,965		54,778	
Emerging markets equities		36,591		40,344	
REIT		621			
Private equity funds		26,843		25,146	
Hedge funds		56,590		50,370	
riouge fundo		533,479		536,676	
		000, 110		000,0.0	•
Investments held by captive insurance companies (Note 12)		07.700		45.007	
U.S. government securities		27,730		45,897	
Domestic corporate debt securities		32,017		22,005	
Global debt securities		4,883		3,770	
Domestic equíties		7,669		7,286	
International equities		12,869		13,058	•
		85,168	- —	92,016	
Held by trustee under indenture agreement (Note 10)					
Cash and short-term investments		1,778	_	493	
Total assets limited as to use	\$	620,425	\$	629,185	
(in thousands of dollars)		2015		2014	
Other investments for restricted activities					
Cash and short-term investments	\$	5,448	\$	4,215	
U.S. government securities		19,730		13,872	
Domestic corporate debt securities		34,548		26,689	
Global debt securities		18,947		19,034	
Domestic equities		18,354		15,901	
International equities		14,777		7,461	
Emerging markets equities		5,077		5,162	
REIT		533		-,	

Total other investments for restricted activities

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

The following tables summarize the investments by the accounting method utilized, as of June 30, 2015 and 2014. Accounting standards require disclosure of additional information for those securities accounted for using the fair value method, as shown in Note 7.

	2015									
(in thousands of dollars)	-1	Fair Value		Equity	Total					
Cash and short-term investments	\$	15,700	\$	-	\$	15,700				
U.S. government securities		84,095		-		84,095				
Domestic corporate debt securities		115,698		31,121		146,819				
Global debt securities		54,193		80,792		134,985				
Domestic equities		119,883		12,491		132,374				
International equities		25,790		71,822		97,612				
Emerging markets equities		95		41,571		41,666				
REIT		-		1,154		1,154				
Private equity funds		-		30,496		30,496				
Hedge funds		-		67,512		67,512				
Other		28		_ _		28				
	\$	415,482	\$	336,959	<u>\$</u>	752,441				
				2014						
(in thousands of dollars)	F	air Value		Equity	Total					
Cash and short-term investments	\$	12,171	\$	-	\$	12,171				
U.S. government securities		96,699		-		96,699				
Domestic corporate debt securities		101,467		30,451		131,918				
Global debt securities		67,544		81,711		149,255				
Domestic equities		123,620		11,537		135,157				
International equities		13,763		61,534		75,297				
Emerging markets equities		185		45,321		45,506				
Private equity funds		-		28,247		28,247				
Hedge funds		_		56,582		56,582				
Other		28		-		28				
	\$	415,477	\$	315,383	\$	730,860				

Investment income (losses) is comprised of the following for the years ended June 30, 2015 and 2014:

(in thousands of dollars)		2014		
Unrestricted				
Interest and dividend income, net	\$	7,927	\$	5,241
Net realized gains on sales of securities		12,432		15,464
Change in net unrealized gains on investments		(28,824)		38,685
		(8,465)		59,390
Temporarily restricted				
Interest and dividend income, net		. 1,151		294
Net realized gains on sales of securities		646		877
Change in net unrealized gains on investments		(1,619)		2,998
		178		4,169
	\$	(8,287)	\$	63,559

For the years ended June 30, 2015 and 2014 unrestricted investment income (losses) is reflected in the accompanying consolidated statements of operations and changes in net assets as operating revenue of approximately \$2,550,000 and \$2,586,000 and as nonoperating (losses) gains of approximately (\$11,015,000) and \$56,804,000, 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, 2015 and 2014, the Health System has committed to contribute approximately \$105,782,000 and \$101,285,000 to such funds, of which the Health System has contributed approximately \$66,918,000 and \$67,206,000 and has outstanding commitments of \$38,864,000 and 34,079,000, respectively.

6. Property, Plant, and Equipment

Property, plant, and equipment are summarized as follows at June 30, 2015 and 2014:

(in thousands of dollars)	2015	2014
Land	\$ 29,558	\$ 25,839
Land improvements	31,750	30,450
Buildings and improvements	714,689	619,243
Equipment	590,501	507,077
Equipment under capital leases	 17,824	 16,128
	 1,384,322	1,198,737
Less: Accumulated depreciation and amortization	 818,816	 729,757
Total depreciable assets, net	565,506	468,980
Construction in progress	 35,849	 15,773
	\$ 601,355	\$ 484,753

As of June 30, 2015 and 2014 construction in progress primarily consists of the construction of the Williamson Research building in Lebanon, NH and the renovation for new inpatient and outpatient rehabilitation space at MAHHC. The estimated cost to complete these projects is \$8,425,000 and \$13,250,000 at June 30, 2015 and 2014, respectively.

Depreciation and amortization expense included in operating and nonoperating activities was approximately \$67,414,000 and \$58,216,000 for 2015 and 2014, respectively.

7. Fair Value Measurements

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

Cash and short-term investments: Consists of money market funds and are valued at 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.

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, 2015 and 2014:

	2015									
									Redemption	Days'
(in thousands of dollars)		Level 1		Level 2		Level 3		Total	or Liquidation	Notice
Assets										
Investments										
Cash and short term investments	\$	15,700	\$	-	\$	-	\$	15,700	Daily	1
U.S. government securities		84,095		-		-		84,095	Daily	1
Domestic corporate debt securities		34,671		81,027		-		115,698	Daily-Monthly	1–15
Global debt securities		44,107		10,086		-		54,193	Daily-Monthly	1–15
Domestic equities		119,883		-		-		119,883	Daily-Monthly	1–10
International equities		25,790		-		-		25,790	Daily-Monthly	111
Emerging market equities		95		-		-		95	Daily-Monthly	1–7
Other	_		_	28		-	_	28	Not applicable	Not applicable
Total investments		324,341		91,141			_	415,482	-	
Deferred compensation plan assets										
Cash and short-term investments		2,988		-		-		2,988		
U.S. government securities		46		-		-		46		
Domestic corporate debt securities		5,765		-		-		5,765		
Global debt securities		748		-		-		748		
Domestic equities		21,861		-		· · · · · · · · · · · · · · · ·		21,861		
International equities		8,808		-		-		8,808		
Emerging market equities		2,232		•		-		2,232		
Real Estate		1,874		-		-		1,874		
Multi Strategy Fund		8,155		-		-		8,155		
Guaranteed Contract		-		-		78		78	_	
Total deferred compensation plan assets	_	52,477		•		78	_	52,555	Not applicable	Not applicable
Beneficial interest in trusts		-		-		9,345		9,345	Not applicable	Not applicable
Total assets	\$	376,818	\$	91,141	\$_	9,423	\$	477,382	-	
Liabilities									•	
Interest rate swaps	<u>\$</u>	<u>.</u>	\$	24,740	\$_	•	\$_	24,740	Not applicable	Not applicable
Total liabilities	\$	-	\$	24,740	<u>\$</u>	-	\$_	24,740	•	

	2014								
							T	Redemption	Days'
(in thousands of dollars)	Level 1		Level 2		Level 3		Total	or Liquidation	Notice
Assets									
Investments									
Cash and short term investments	11,144	\$	1,027	\$	-	\$	12,171	Daily	1
U.S. government securities	96,699		-		-		96,699	Daily	1
Domestic corporate debt securities	33,201		68,266				101,467	Daily-Monthly	1–15
Global debt securities	57,911		9,633		-		67,544	Daily-Monthly	1-15
Domestic equities	123,620				-		123,620	Daily-Monthly	1-10
International equities	13,763		-				13,763	Daily-Monthly	1–11
Emerging market equities	185		-		-		185	Daily-Monthly	1-7
Other			28		-	_	28	Not applicable	Not applicable
Total investments	336,523		78,954	_		_	415,477	•	
Deferred compensation plan assets									
Cash and short-term investments	2,753		26				2,779		
U.S. government securities	80		-		-		80		
Domestic corporate debt securities	4,798				-		4,798		
Global debt securities	835		-		-		835		
Domestic equities	19,318		-		-		19,318		
International equities	8,735		-		-		8,735		
Emerging market equities	2,198		-		-		2,198		
Real Estate	1,665		-		-		1,665		
Multi Strategy Fund	6,079		-		-		6,079		
Guaranteed Contract	-		-		75		75		
Total deferred compensation plan assets	46,461		26	_	75		46,562	Not applicable	Not applicable
Beneficial interest in trusts			-		1,909	_	1,909	Not applicable	Not applicable
Contribution receivable from chantable						_		-	
Remainder trust			-		2,118		2,118	Not applicable	Not applicable
Total assets	\$ 382,984	\$_	78,980	<u>\$</u>	4,102	\$	466,066	•	
Liabilities									
Interest rate swaps	\$ <u>-</u>	\$_	24,413	\$_	-	\$_	24,413	Not applicable	Not applicable
Total liabilities	\$ -	\$	24,413	<u>\$</u>		\$_	24,413		

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.

				20	15			
Balance at beginning of year	In	eneficial terest in erpetual Trust	Contribution Receivable From Charitable Remainder Trust		Guaranteed Contract		Total	
	\$	1,909	\$	2,118	\$	75	\$ 4,102	
Purchases		-		-		3	3	
Sales		-		(2,118)		-	(2,118)	
Net unrealized gains (losses)		(198)		-			(198)	
Net asset transfer from affiliate		7,634	_	-			 7,634	
Balance at end of year	\$	9,345	\$		\$	78	\$ 9,423	

			20	14		
	 Contribution Beneficial Receivable From Interest in Charitable					
	erpetual Trust	Re	mainder Trust		anteed ntract	Total
Balance at beginning of year	\$ 1,823	\$	-	\$	72	\$ 1,895
Purchases Net unrealized gains (losses)	86		2,118 		3	 2,118 89
Balance at end of year	\$ 1,909	\$	2,118	\$	75	\$ 4,102

There were no transfers into and out of Level 1 and Level 2 measurements due to changes in valuation methodologies during the years ended June 30, 2015 and 2014.

8. Temporarily and Permanently Restricted Net Assets

Temporarily restricted net assets are available for the following purposes at June 30, 2015 and 2014:

(in thousands of dollars)	2015			2014		
Healthcare services	\$	30,368	\$	28,210		
Research		16,376		22,699		
Purchase of equipment		2,483		2,681		
Charity care		16,354		1,511		
Health education		9,181		7,688		
Other		1,695		1,875		
	\$	76,457	\$	64,664		

Dartmouth-Hitchcock Health and Subsidiaries

Consolidated Notes to Financial Statements Years Ended June 30, 2015 and 2014

Permanently restricted net assets consist of the following at June 30, 2015 and 2014:

(in thousands of dollars)	2015			2014		
Healthcare services	\$	25,015	\$	15,935		
Research		7,689		7,634		
Purchase of equipment		6,291		4,675		
Charity care		5,609		2,874		
Health education		8,454		5,129		
Other		23		22		
	\$	53,081	\$	36,269		

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

9. Board Designated and Endowment Funds

Net assets include approximately 60 individual 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 Act (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, 2015 and 2014.

Endowment net asset composition by type of fund consists of the following at June 30, 2015 and 2014:

	2015							
(in thousands of dollars)	Ur	restricted		emporarily lestricted		rmanently estricted		Total
Donor-restricted endowment funds Board-designated endowment funds	\$	- 26,405	\$	28,296 -	\$	44,491 -	\$	72,787 26,405
Total endowed net assets	\$	26,405	\$	28,296	\$	44,491	\$	99,192

	2014								
(in thousands of dollars)	Un	restricted		emporarily estricted		rmanently estricted		Total	
Donor-restricted endowment funds Board-designated endowment funds	\$	- 19,834	\$	13,738 -	\$	34,360	\$	48,098 19,834	
Total endowed net assets	\$	19,834	\$	13,738	\$	34,360	\$	67,932	

Changes in endowment net assets for the years ended June 30, 2015 and 2014:

	2015									
(in thousands of dollars)	Un	restricted		mporarily estricted		rmanently estricted		Total		
Balances at beginning of year	\$	19,834	\$	13,738	\$	34,360	\$	67,932		
Net investment return		143		(223)		1		(79)		
Contributions		-		974		254		1,228		
Transfers		-		(370)		158		(212)		
Release of appropriated funds		(664)		(2,425)		(46)		(3,135)		
Net asset transfer from affiliates		7,092		16,602		9,764		33,458		
Balances at end of year	\$	26,405	\$	28,296		44,491	\$	99,192		
Balances at end of year						44,491				
Beneficial interest in perpetual trust						8,590				
Permanently restricted net assets					\$	53,081				

	2014									
(in thousands of dollars)	Un	restricted		mporarily estricted		rmanently estricted		Total		
Balances at beginning of year	\$	19,304	\$	11,672	\$	31,255	\$	62,231		
Net investment return		341		3,457		_		3,798		
Contributions		-		42		809		851		
Transfers		450		(280)		243		413		
Release of appropriated funds		(261)		(1,539)		-		(1,800)		
Net asset transfer from affiliates		-		386		2,053		2,439		
Balances at end of year	\$	19,834	\$	13,738		34,360	\$	67,932		
Balances at end of year						34,360				
Beneficial interest in perpetual trust						1,909				
Permanently restricted net assets					\$	36,269				

10. Long-Term Debt

A summary of long-term debt at June 30, 2015 and 2014 follows:

Variable rate issues New Hampshire Health and Education Facilities Authority Revenue Bonds Series 2013, principal maturing in varying annual amounts, through August 2043 (9)* Series 2011, principal maturing in varying annual amounts, through August 2031 (4) Vermont Educational and Health Buildings Financing Agency (VEHFBA) Revenue Bonds Series 2010A, principal maturing in varying annual amounts, through August 2030 (8)* Fixed rate issues New Hampshire Health and Education Facilities Authority Revenue Bonds Series 2014A, principal maturing in varying annual amounts, through August 2022 (1)	\$ 17,668 90,005 8,182 26,960 14,530	2	17,923 93,395 -
New Hampshire Health and Education Facilities Authority Revenue Bonds Series 2013, principal maturing in varying annual amounts, through August 2043 (9)* Series 2011, principal maturing in varying annual amounts, through August 2031 (4) Vermont Educational and Health Buildings Financing Agency (VEHFBA) Revenue Bonds Series 2010A, principal maturing in varying annual amounts, through August 2030 (8)* Fixed rate issues New Hampshire Health and Education Facilities Authority Revenue Bonds Series 2014A, principal maturing in varying annual amounts, through August 2022 (1)	90,005 8,182 26,960	2	,
Authority Revenue Bonds Series 2013, principal maturing in varying annual amounts, through August 2043 (9)* Series 2011, principal maturing in varying annual amounts, through August 2031 (4) Vermont Educational and Health Buildings Financing Agency (VEHFBA) Revenue Bonds Series 2010A, principal maturing in varying annual amounts, through August 2030 (8)* Fixed rate issues New Hampshire Health and Education Facilities Authority Revenue Bonds Series 2014A, principal maturing in varying annual amounts, through August 2022 (1)	90,005 8,182 26,960	2	•
Series 2013, principal maturing in varying annual amounts, through August 2043 (9)* Series 2011, principal maturing in varying annual amounts, through August 2031 (4) Vermont Educational and Health Buildings Financing Agency (VEHFBA) Revenue Bonds Series 2010A, principal maturing in varying annual amounts, through August 2030 (8)* Fixed rate issues New Hampshire Health and Education Facilities Authority Revenue Bonds Series 2014A, principal maturing in varying annual amounts, through August 2022 (1)	90,005 8,182 26,960	2	,
annual amounts, through August 2043 (9)* Series 2011, principal maturing in varying annual amounts, through August 2031 (4) Vermont Educational and Health Buildings Financing Agency (VEHFBA) Revenue Bonds Series 2010A, principal maturing in varying annual amounts, through August 2030 (8)* Fixed rate issues New Hampshire Health and Education Facilities Authority Revenue Bonds Series 2014A, principal maturing in varying annual amounts, through August 2022 (1)	90,005 8,182 26,960	2	,
Series 2011, principal maturing in varying annual amounts, through August 2031 (4) Vermont Educational and Health Buildings Financing Agency (VEHFBA) Revenue Bonds Series 2010A, principal maturing in varying annual amounts, through August 2030 (8)* Fixed rate issues New Hampshire Health and Education Facilities Authority Revenue Bonds Series 2014A, principal maturing in varying annual amounts, through August 2022 (1)	90,005 8,182 26,960	2	,
annual amounts, through August 2031 (4) Vermont Educational and Health Buildings Financing Agency (VEHFBA) Revenue Bonds Series 2010A, principal maturing in varying annual amounts, through August 2030 (8)* Fixed rate issues New Hampshire Health and Education Facilities Authority Revenue Bonds Series 2014A, principal maturing in varying annual amounts, through August 2022 (1)	8,182 26,960	2	93,395
Vermont Educational and Health Buildings Financing Agency (VEHFBA) Revenue Bonds Series 2010A, principal maturing in varying annual amounts, through August 2030 (8)* Fixed rate issues New Hampshire Health and Education Facilities Authority Revenue Bonds Series 2014A, principal maturing in varying annual amounts, through August 2022 (1)	8,182 26,960	2	-
Agency (VEHFBA) Revenue Bonds Series 2010A, principal maturing in varying annual amounts, through August 2030 (8)* Fixed rate issues New Hampshire Health and Education Facilities Authority Revenue Bonds Series 2014A, principal maturing in varying annual amounts, through August 2022 (1)	26,960		-
Series 2010A, principal maturing in varying annual amounts, through August 2030 (8)* Fixed rate issues New Hampshire Health and Education Facilities Authority Revenue Bonds Series 2014A, principal maturing in varying annual amounts, through August 2022 (1)	26,960		
annual amounts, through August 2030 (8)* Fixed rate issues New Hampshire Health and Education Facilities Authority Revenue Bonds Series 2014A, principal maturing in varying annual amounts, through August 2022 (1)	26,960		-
Fixed rate issues New Hampshire Health and Education Facilities Authority Revenue Bonds Series 2014A, principal maturing in varying annual amounts, through August 2022 (1)	26,960		
New Hampshire Health and Education Facilities Authority Revenue Bonds Series 2014A, principal maturing in varying annual amounts, through August 2022 (1)	•)	-
Authority Revenue Bonds Series 2014A, principal maturing in varying annual amounts, through August 2022 (1)	•)	<u>-</u>
Series 2014A, principal maturing in varying annual amounts, through August 2022 (1)	•)	_
amounts, through August 2022 (1)	•)	_
	•)	-
	14,530		
Series 2014B, principal maturing in varying annual	14,530		
amounts, through August 2033 (1)		,	-
Series 2012A, principal maturing in varying annual	70 705		7.005
amounts, through August 2031 (2)	73,725	•	74,695
Series 2012B, principal maturing in varying annual			
amounts, through August 2031 (2)	40,455	•	40,990
Series 2012, principal maturing in varying annual			
amounts, through July 2039 (7)*	28,818	i	-
Series 2010, principal maturing in varying annual			
amounts, through August 2040 (5)	75,000)	75,000
Series 2009, principal maturing in varying annual			
amounts, through August 2038 (6)	68,970	1	115,225
* Represents non-obligated group bonds			
Other			
Series 2012, principal maturing in varying annual			
amounts, through July 2019 (3)	144,000		146,000
Obligations under capital leases	3,369)	2,086
Note payable to a financial institution payable in interest free			
monthly installments through July 2015;			
collateralized by associated equipment	4		56
Note payable to a financial institution due in monthly interest			
only payments from October 2011 through September 2012, and			
monthly installments from October 2016 through			
2016, including principal and interest at 3.25%; collateralized by			
savings account	1,915		-
Note payable to a financial institution payable in interest free			
entire principal due June 2029 collateralized by land			
and building	555		-
·	594,156		565,370
Less	,		,
Original issue discount, net	1,493		1,386
Current portion	17,179		13,281
·	\$ 575,484		550,703

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

(in thousands of dollars)	2015
2016	\$ 17,179
2017	17,493
2018	17,971
2019	18,280
2020	143,235
Thereafter	 379,998
	\$ 594,156

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 and DHC.

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 of which are the Maximum Annual Debt Service Coverage Ratio (1.10x) and the Days Cash on Hand Ratio (> 75 days).

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

Through the DHOG, issued NHHEFA Revenue Bonds, Series 2014A and Series 2014B in August 2014. The proceeds from the Series 2014A and 2014B 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.

(2) Series 2012A and 2012B Revenue Bonds

Through 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.

(3) Series 2012 Bank Loan

Through 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 2019.

(4) Series 2011 Revenue Bonds

Through the DHOG, issued NHHEFA Revenue Bonds, Series 2011 in August 2011. The proceeds from the Series 2011 Revenue Bonds were primarily used to advance refund the Series 2001A Revenue Bonds. The Series 2011 Revenue Bonds accrue interest variably and mature at various dates through 2031 based on the one-month London Interbank Offered Rate (LIBOR). The variable rate as of June 30, 2015 and 2014 was 1.04% and 1.01%, respectively. The Series 2011 Bonds are callable by the bank upon the end of seven years or may be renegotiated at that time.

(5) Series 2010 Revenue Bonds

Through 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.

(6) Series 2009 Revenue Bonds

Through 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 3.00% and 6.00% and mature at various dates through August 2038.

Outstanding joint and several indebtedness of the DHOG at June 30, 2015 and 2014 approximates \$533,645,000 and \$545,305,000, respectively.

Non Obligated Group Bonds:

(7) Series 2012 Revenue Bonds

Issued through the NHHEFA \$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 are collateralized by an interest in its gross receipts under the terms of the bond agreement. 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 \$735,000 to \$1,750,000 through July 2039.

(8) Series 2010A Revenue Bonds

Issued through the VEHBFA \$9,244,000 of Revenue Bonds (Series 2010A). The funds were used to refund 2004 and 2005 Series A Bonds. The bonds are collateralized by gross receipts. The bonds shall bear interest at the one-month LIBOR rate plus 3.50%, multiplied by 6% adjusting monthly. The interest rate at June 30, 2015 was 2.29%. The bonds were purchased by TD Bank. Principal payments began on April 1, 2010 for a period of 20 years ranging in amounts from \$228,000 in 2014 to \$207,000 in 2030.

(9) Series 2013 Revenue Bonds

Issued through the NHHEFA \$15,520,000 tax exempt Revenue Bonds (Series 2013). The funds were used to refund Series 2007 Revenue Bonds, and for the construction of a new health center building in Newport, NH. The bonds are collateralized by the gross receipts and property. The bonds mature in variable amounts through 2043, the maturity date of the bonds, but are subject to mandatory tender in ten years. Interest is payable monthly and is equal to the sum of .72 times

the Adjusted LIBOR Rate plus .72 times the credit spread rate. As part of the bond refinancing, the swap arrangement was effectively terminated for federal tax purposes with respect to the Series 2007 Revenue Bonds but remains in effect.

The estimated fair value of the Health Systems total long-term debt as of June 30, 2015 and 2014 was approximately \$606,772,000 and \$555,500,000, respectively, which was determined by discounting the future cash flows of each instrument at rates that reflect rates currently observed in publicly traded debt markets for debt of similar terms to organizations with comparable credit risk. The inputs to the assumptions used to determine the estimated fair value are based on observable inputs and are classified as level 2. For variable rate debt, the carrying value is equal to the fair value.

The Health System Indenture agreements require establishment and maintenance of debt service reserves and other trustee held funds. Trustee held funds of approximately \$1,778,000 and \$493,000 at June 30, 2015 and 2014, respectively, are classified as assets limited as to use in the accompanying consolidated balance sheets.

For the years ended June 30, 2015 and 2014 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 \$18,442,000 and \$18,436,000 and is included in other nonoperating losses of \$3,449,000 and \$3,669,000, 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.
- 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.
- 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 is outstanding until 2017, 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.

At June 30, 2015 and 2014 the fair value of the Health System's interest rate swaps was a liability of \$24,740,000 and \$24,413,000, respectively. The change in fair value during the years ended June 30, 2015 and 2014 was a (decrease)/increase of (\$931,000) and \$1,538,000, respectively. For the years ended June 30, 2015 and 2014 the Health System recognized a non-operating gain/ (loss) of \$1,035,000 and (\$570,000) resulting from hedge ineffectiveness and amortization of frozen swaps.

11. Employee Benefits

All eligible employees of the Health System are covered under various defined benefit and/or define contribution plans. In addition, certain 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 have been approved by the applicable Board of Trustees to be frozen by December 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 deferred 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, 2015 and 2014:

(in thousands of dollars)	2015		2014
Service cost for benefits earned during the year	\$ 12,257	***	12,122
Interest cost on projected benefit obligation	42,276		41,821
Expected return on plan assets	(60,458)		(55,177)
Net prior service cost	380		380
Net loss amortization	21,133		17,285
Curtailment	 56	-	
	\$ 15,644	\$	16,431

The following assumptions were used to determine net periodic pension expense as of June 30, 2015 and 2014:

	2015	2014
Weighted average discount rate	4.40 % - 4.90 %	5.50 %
Rate of increase in compensation	Age Graded/0.00 % - 2.50 %	Age Graded
Expected long-term rate of return on plan assets	7.50 % - 7.75 %	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, 2015 and 2014:

(in thousands of dollars)	2015			2014
Change in benefit obligation				
Benefit obligation at beginning of year	\$	877,082	\$	812,374
Additional benefit obligation				
resulting from new affiliations		95,314		
Total benefit obligation at beginning of year		972,396		812,374
Service cost		12,257		12,122
Interest cost		42,276		41,821
Benefits paid		(34,803)		(31,467)
Expenses paid		(139)		-
Actuarial (gain) loss		41,135		94,207
Settlements		(44,979)		(51,975)
Benefit obligation at end of year		988,143		877,082
Change in plan assets				
Fair value of plan assets at beginning of year		783,890		718,064
Additional plan assets at fair value				
resulting from new affiliations		77,608		
Total fair value of plan assets at beginning of year		861,498		718,064
Actual return on plan assets		25,473		112,218
Benefits paid		(34,803)		(31,467)
Expenses paid		(139)		-
Employer contributions		38,002		37,050
Settlements		(44,979)		(51,975)
Fair value of plan assets at end of year		845,052		783,890
Funded status of the plans		(143,091)		(93,192)
Current portion of liability for pension		(2,758)		(46)
Long term portion of liability for pension		(140,333)		(93,146)
Liability for pension	\$	(143,091)	\$	(93,192)

For the years ended June 30, 2015 and 2014 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 as of June 30, 2015 and 2014:

(in thousands of dollars)	2015	2014		
Net actuarial loss Prior service cost	\$ 368,959 608	\$ 311,084 989		
	\$ 369,567	\$ 312,073		

The estimated amounts that will be amortized from unrestricted net assets into net periodic pension expense in 2016 are as follows:

(in thousands of dollars)

Unrecognized prior service cost	\$	380
Net actuarial loss	 -	26,098
	\$	26,478

The accumulated benefit obligation for the defined benefit pension plans was approximately \$971,193,000 and \$856,673,000 at June 30, 2015 and 2014, respectively.

The following table sets forth the assumptions used to determine the benefit obligation at June 30, 2015 and 2014:

	2015	2014	
Weighted average discount rate	4.90 % - 5.00 %	4.90 %	
Rate of increase in compensation	Age Graded/0.00 % - 2.50 %	Age Graded	
Expected long-term rate of return on plan assets	7.50 % - 7.75 %	7.75 %	

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, 2015 and 2014, it is expected that the LDI strategy will hedge approximately 65% and 70%, 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 %	2 %
U.S. government securities	0–5	1
Domestic debt securities	20–58	42
Global debt securities	626	10
Domestic equities	5–35	18
International equities	515	10
Emerging market equities	3–13	5
REIT Funds	0–5	-
Private equity funds	0–5	-
Hedge funds	5–18	12

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

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

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

The hierarchy and inputs to valuation techniques to measure fair value of the Plans' assets are the same as outlined in Note 7. In addition, the estimation of fair value of investments in private equity and hedge funds for which the underlying securities do not have a readily determinable value is made using the NAV per share or its equivalent as a practical expedient. The Health System's Plans own interests in these funds rather than in securities underlying each fund and, therefore, are generally required to consider such investments as Level 2 or Level 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, 2015 and 2014:

						201	5		
								Redemption	
(in thousands of dollars)		Level 1	Level 2		Level 3		Total	or Liquidation	Days' Notice
Investments									
Cash and short-term investments	\$	8,235	\$ 32,876	\$	-	\$	41,111	Daily	1
U.S. government securities		4,193	-		-		4,193	Daily-Monthly	1-15
Domestic debt securities		85,948	246,352		-		332,300	Daily-Monthly	1–15
Global debt securities		3 6,532	45,119		-		81,651	Daily-Monthly	1–15
Domestic equities		152,458	16,532		-		168,990	Daily-Monthly	110
International equities		15,284	79,659				94,943	Daily-Monthly	1–11
Emerging market equities		376	38,237		-		38,613	Daily-Monthly	117
REIT Funds			1,628				1,628	Daily-Monthly	117
Private equity funds		-	-		437		437	See Note 7	See Note 7
Hedge funds	_		 39,110	_	42,076		81,186	Quarterly-Annual	60-96
Total investments	\$	303,026	\$ 499,513	\$	42,513	\$	845,052		

	2014									
	_								Redemption	
(in thousands of dollars)		Level 1		Level 2		Level 3		Total	or Liquidation	Days' Notice
Investments										
Cash and short-term investments	\$	7,205	\$	51,347	\$	-	\$	58,552	Daily	1
Domestic debt securities		74,388.		241,679		-		316,067	Daily-Monthly	1–15
Global debt securities		39,591		46,151				85,742	DailyMonthly	1-15
Domestic equities		131,761		10,390		-		142,151	Daily-Monthly	1–10
International equities		-		77,262		-		77,262	Daily-Monthly	1–11
Emerging market equities		-		41,537		-		41,537	Daily-Monthly	1–17
Private equity funds		-		-		3,944		3,944	See Note 7	See Note 7
Hedge funds			_	30,169	_	28,466	_	58,635	Quarterly-Annual	6096
Total investments	\$	252,945	\$	498,535	\$	32,410	\$	783,890		

The following table presents additional information about the changes in Level 3 assets measured at fair value for the years ended June 30, 2015 and 2014:

	2015								
	Private								
(in thousands of dollars)	Hed	lge Funds	Equ	ity Funds		Total			
Balances at beginning of year	\$	28,466	\$	3,944	\$	32,410			
Additions resulting from new affiliations		14,362		-		14,362			
Sales		(2,391)		(3,168)		(5,559)			
Net realized (losses) gains		(246)		258		12			
Net unrealized gains		1,885		(597)		1,288			
Balances at end of year	\$	42,076	\$	437	\$	42,513			

(in thousands of dollars)	Hec	Hedge Funds Eq		Private Equity Funds		Total
Balances at beginning of year	\$	26,449	\$	12,761	\$	39,210
Purchases		_		6		6
Sales		(709)		(9,220)		(9,929)
Net realized (losses) gains		(59)		1,470		1,411
Net unrealized gains		2,785		(1,073)		1,712
Balances at end of year	\$	28,466	\$	3,944	\$	32,410

The total aggregate net unrealized gains (losses) included in the fair value of the Level 3 investments as of June 30, 2015 and 2014 were approximately \$5,234,000 and \$7,187,000, respectively. There were no transfers into and out of Level 3 measurements during the years ended June 30, 2015 and 2014.

There were no transfers into and out of Level 1 and Level 2 measurements due to changes in valuation methodologies during the years ended June 30, 2015 and 2014.

The weighted average asset allocation for the Health System's Plans at June 30, 2015 and 2014 by asset category is as follows:

	2015	2014
Cash and short-term investments	5 %	7 %
Domestic debt securities	39	40
Global debt securities	10	11
Domestic equities	20	18
International equities	11	10
Emerging market equities	5	5
Private equity funds	-	1
Hedge funds	10	8
	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 7.75% per annum.

The Health System is expected to contribute approximately \$37,000,000 to the Plans in 2016.

The following benefit payments, which reflect expected future service, as appropriate, are expected to be paid for the year ending June 30, 2016 and thereafter:

(in thousands of dollars)	Pension Pla	ans	
2016	\$ 37,716	3	
2017	40,158	3	
2018	43,006	3	
2019	46,233	3	
2020	49,955	5	
2021-2025	299.954	į	

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 \$30,204,000 and \$33,068,000 in 2015 and 2014, respectively, are included in employee benefits in the accompanying consolidated statements of operations and changes in net assets.

The Health System also has available to employees of certain affiliates various 403(b) and tax-sheltered annuity plans in which they can participate. Plan specifications vary by affiliate and plan. No employer contributions were made to any of these plans in 2015 and 2014, 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 cost is comprised of the components listed below for the years ended June 30, 2015 and 2014:

(in thousands of dollars)	2015	2014		
Service cost	\$ 527	\$	1,803	
Interest cost	2,347		4,411	
Amortization of net transition asset	 		7	
	\$ 2,874	\$	6,221	

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, 2015 and 2014:

(in thousands of dollars)	2015			2014		
Change in benefit obligation						
Benefit obligation at beginning of year	\$	51,006	\$	84,538		
Additional benefit obligation						
resulting from new affiliations		471		-		
		51,477		84,538		
Service cost		527		1,803		
Interest cost		2,347		4,411		
Benefits paid		(5,236)		(5,770)		
Actuarial loss		1,323		5,450		
Plan amendments		_		(39,426)		
Benefit obligation at end of year		50,438		51,006		
Funded status of the plans		(50,438)		(51,006)		
Current portion of liabiality for postretirement						
medical and life benefits		(3,203)		(5,096)		
Long term portion of liability for						
postretirement medical and life benefits		(47,235)		(45,910)		
Liability for postretirement medical						
and life benefits	\$	(50,438)	\$	(51,006)		

The plan amendments are primarily related to the Board's decision to offer retiree health care benefits to certain affiliates post-65 retirees and covered post-65 dependents through a private Medicare exchange beginning in April 2015.

For the years ended June 30, 2015 and 2014 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 cost and included in the change in unrestricted net assets are as follows:

(in thousands of dollars)	2015	2014
Net prior service (credit) cost Net actuarial loss (gain)	\$ (33,452) 10,260	\$ (39,426) 9,559
	\$ (23,192)	\$ (29,867)

The estimated amounts that will be amortized from unrestricted net assets into net periodic postretirement expense in 2015 and 2014 are as follows:

(in thousands of dollars)	2015		2014
Net prior service (credit) cost Net loss (gain)	\$ (5,974) 610	\$	(5,974) 513
rectioss (gain)		_	
	\$ (5,364)	\$	(5,461)

In determining the accumulated postretirement medical and life benefit obligation, the Health System used a discount rate of 4.7% in 2015 and an assumed healthcare cost trend rate of 7.25%, trending down to 4.75% in 2020 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, 2015 and 2014 by \$4,479,000 and \$4,411,000 and the net periodic postretirement medical benefit cost for the years then ended by \$275,000 and \$576,000, 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, 2015 and 2014 by \$3,790,000 and \$3,759,000 and the net periodic postretirement medical benefit cost for the years then ended by \$233,000 and \$649,000, respectively.

12. Professional and General Liability Insurance Coverage

D-H, along with Dartmouth College and The Cheshire Medical Center are provided professional and general liability insurance on a claims-made basis through Hamden Assurance Risk Retention Group, Inc. (RRG), a Vermont captive insurance company. 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.

NLH and MAHHC are covered for malpractice claims under a modified claims-made policy purchased through NEAH. While NLH and MAHHC 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 NLH or MAHHC 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, 2015 and 2014 are summarized as follows:

				2015	
		HAC		RRG	Total
(in thousands of dollars)		(audited)	(ur	naudited)	
Assets	\$	100,418	\$	2,289	\$ 102,707
Shareholders' equity		13,620		755	14,375
Net income		-		186	186
				2014	
		HAC		RRG	Total
(in thousands of dollars)	1	(audited)	(a	udited)	
Assets	\$	104,644	\$	1,880	\$ 106,524
Shareholders' equity		13,620		569	14,189
Net income		-		26	26

13. Commitments and Contingencies

Litigation

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

Operating Leases and Other Commitments

The Health System leases certain facilities and equipment under operating leases with varying expiration dates. The Health System's rental expense totaled approximately \$10,215,000 and \$9,925,000 for the years ended June 30, 2015 and 2014, respectively. Minimum future lease payments under non-cancelable operating leases at June 30, 2015 were as follows:

(in thousands of dollars)

2016	\$ 8	,272
2017	5	,774
2018	3	3,971
2019	2	,583
2020		939
Thereafter		722
	\$ 22	2,261

Line 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 \$60,000,000. Interest is variable and determined using LIBOR or the Wall Street Journal Prime Rate. The Loan Agreements are due to expire ranging from December 31, 2015 through May 31, 2016. The Health System has outstanding balances under the lines of credits in the amount of \$1,200,000 and \$0 at June 30, 2015 and 2014, respectively. Interest expense was approximately \$193,000 and \$185,000, respectively, and is included in the consolidated statements of operations and changes in net assets.

14. Functional Expenses

Operating expenses of the Health System by function are as follows for the years ended June 30, 2015 and 2014:

(in thousands of dollars)	2015	2014
Program services Management and general Fundraising	\$ 1,335,316 225,983 8,037	\$ 1,192,696 172,626 8,122
	\$ 1,569,336	\$ 1,373,444

15. Subsequent Events

The Health System has assessed the impact of subsequent events through November 27, 2015, 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.

Through 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. The Series 2015A Revenue Bonds accrue interest variably and mature at various dates through 2032.

Consolidating Supplemental Info	

Dartmouth-Hitchcock Health and Subsidiaries Consolidating Balance Sheets June 30, 2015

(in thousands of dollars)	J	D-HH (parent)	Sul	D-H and Subsidiaries	Su	Cheshire and Subsidiaries	Suk	NLH and Subsidiaries	≥ ග	MAHHC and Subsidiaries	ä	Eliminations	ပိ	Health System Consolidated
Assets Current assets	•	Š	•		•		•				•		,	
Cash and cash equivalents Patient accounts receivable, net Prepaid expenses and other current assets	A	388 - 11,574	A	9,279 177,287 102,954	A	16,525 14,053 7,921	es.	7,512 7,388 3,632	A	5,105 5,544 2,616	es.	. (28,111)	A	38,909 204,272 100,586
Total current assets		11,962		289,520		38,499		18,632	l •	13,265		(28,111)		343,767
Assets limited as to use		•		570,057		23,302		13,412		13,654				620,425
Other investments for restricted activities		, a		113,117		18,899		- 27 507		10 203				132,016
Other assets		4,263		66,837		10,130	i	5,451		3,903		(2,134)		88,450
Total assets	σ	16,843	s	1,500,575	s,	173,623	_φ	75,092	ا ہے ا	50,125	₆	(30,245)	ا م	1,786,013
Liabilities and Net Assets Current liabilities														
Current portion of long-term debt	es.	,	ь	15,196	ь	952	s	199	4	370	69		69	17,179
Line of credit		•		•		•		•		1,200				1,200
Current portion of liability for pension and other postretirement plan benefits		. '		3 240		2712				•				7 961
Accounts payable and accrued expenses		15,708		104,697		20,024		3,843		4,059		(28,110)		120,221
Accrued compensation and related benefits		•		85,064		4,936		2,373		2,491				94,864
Estimated third-party settlements		'		26,961		-		6,755	-	2,883		,	1	36,599
Total current liabilities		15,708		235,167		28,624		13,632		11,003		(28,110)		276,024
Long-term debt, excluding current portion		٠		518,799		28,083		18,020		10,582				575,484
Insurance deposits and related liabilities		•		62,356		•		•		•				62,356
Interest rate swaps Liability for pension and other postretirement		•		20,937		•		3,531		272				24,740
plan benefits, excluding current portion		•		175,948		5,662		•		5,958		•		187,568
Other liabilities		•		51,303	Ì	3,671		1,135		,		•	- 1	56,109
Total liabilities	1	15,708	1	1,064,510		66,040		36,318		27,815		(28,110)	1	1,182,281
Net assets														
Unrestricted		1,135		346,900		79,700		34,227		14,367		(2,135)		474,194
Temporarily restricted		•		56,751		17,330		326		2,050		•		76,457
Permanently restricted		•		32,414	١	10,553		4,221		5,893	-		- !	53,081
Total net assets		1,135		436,065		107,583		38,774		22,310		(2,135)		603,732
Commitments and contingencies	ļ													
Total liabilities and net assets	s,	16,843	ام	1,500,575	ر _م	173,623	ر _م	75,092	اي	50,125	ω	(30,245)	اي	1,786,013
									-					

Assets Current assets Cash and cash equivalents Patient accounts receivable, net Prepaid expenses and other current assets Total current assets Assets limited as to use Other investments for restricted activities Property, plant, and equipment, net Other assets Liabilities and Net Assets Current liabilities Current portion of liability for pension and other postretirement plan benefits Accounts payable and accrued expenses Accrued compensation and related benefits Estimated third-party settlements Total current liabilities	<i>9</i> 9 9	8,252 177,287 102,425 287,964 570,057 89,176 458,368 66,675 1,472,240 15,196 15,196 102,666 85,064 26,961 233,136	ω ω ω	182 182 338 520 520 1,536 1,536	и и и	845 438 1,283 1,283 4,117 4,117	Eliminations (247) (247) (247) (247) (247)	S S S S S S S S S S S S S S S S S S S	D-H and Subsidiaries 9,279 177,287 102,954 289,520 570,057 113,117 461,044 66,837 1,500,575 15,196 3,249 104,697 85,064 26,961
Long-term debt, excluding current portion Insurance deposits and related liabilities Interest rate swaps Liability for pension and other postretirement plan benefits, excluding current portion Other liabilities	İ	518,799 62,356 20,937 175,948 51,303						ļ	518,799 62,356 20,937 175,948 51,303
Total liabilities Net assets Unrestricted Temporarily restricted Permanently restricted Total net assets Commitments and contingencies Total liabilities and net assets	es	329,168 50,297 30,296 409,761		1,536 14,517 6,294 2,118 22,929		3,215	(247)		346,900 56,751 32,414 436,065

Dartmouth-Hitchcock Health and Subsidiaries Consolidating Balance Sheets June 30, 2014

tin thousands of dollars)	нн-о	D-H and	g.	NLH and Subsidiaries	ij	11 20 30 30 30 30 30 30 30 30 30 30 30 30 30	, 5	Health System
Assets			9				5	
Current assets	377	v	46 371	4 179	v		€	50 927
Patient accounts receivable, net		•			•	•	•	184,606
Prepaid expenses and other current assets	4,503		92,807	2,907		(8,915)	Ì	91,302
Total current assets	4,880		317,244	13,626		(8,915)		326,835
Assets limited as to use	•	618	618,393	10,792		٠		629,185
Other investments for restricted activities Property plant and equipment pet	. 454		101,675	30 101				101,675
Other assets	3,213		62,960	7,870		(1,535)		72,508
Total assets	\$ 8,627	\$ 1,5	390	71,389	s	(10,450)	s s	1,614,956
Liabilities and Net Assets								
Current liabilities								
Current portion of long-term debt	· •	\$ 12	12,487	794	sə	•	s)	13,281
Current portion of liability for pension and								
other postretirement plan benefits			5,142	•		• 1		5,142
Accounts payable and accrued expenses	9,623		89,408	2,907		(8,915)		93,023
Accrued compensation and related benefits	•	76	76,407	2,168		•		78,575
Estimated third-party settlements			25,103	5,574		-		30,677
Total current liabilities	9,623		208,547	11,443		(8,915)		220,698
Long-term debt, excluding current portion	•	532	532,336	18,367		•		550,703
Insurance deposits and related liabilities	•	68	68,498	•		•		68,498
Interest rate swaps	•	21	21,103	3,310				24,413
Liability for pension and other postretirement								
plan benefits, excluding current portion	•	139	139,056	' '		•		139,056
		46	46,568	1,412		,		47,980
Total liabilities	9,623	1,016,108	,108	34,532		(8,915)		1,051,348
Net assets								
Unrestricted	(966)	`	432,909	32,297		(1,535)		462,675
Temporarily restricted	•	64	64,346	318		•		64,664
Permanently restricted		32	32,027	4,242		-		36,269
Total net assets	(966)		529,282	36,857		(1,535)		563,608
Commitments and contingencies								
Total liabilities and net assets	\$ 8,627	\$ 1,545,390	390	\$ 71,389	ر د	(10,450)	s,	1,614,956
					Ī			

Dartmouth-Hitchcock and Subsidiaries Consolidating Balance Sheets June 30, 2014

(in thousands of dollars)	D-H Obligated Group	THF		DHMC	Eliminations		D-H and Subsidiaries
Assets Current assets Cash and cash equivalents Patient accounts receivable net Prepaid expenses and other current assets	\$ 45,438 178,066 92,372	\$ 213	€	720	\$ - - (232)	(2	46,371 178,066 92,807
Total current assets	315,876	384	 	1,216	(232)	່ ໄລ	317,244
Assets limited as to use	618,393	'		•			618,393
Other investments for restricted activities Property, plant and equipment not	77,622	24,053		. 2 678			101,675
Other assets	62,791	10		159			62,960
Total assets	\$ 1,517,123	\$ 24,449	σ	4,050	\$ (232)	چ ا	1,545,390
Liabilities and Net Assets Current liabilities							
Current portion of long-term debt	\$ 12,487	. ↔	€9	•	49	€9	12,487
Current portion of liability for pension and other postretirement plan benefits	5.142	•		•			5.142
Accounts payable and accrued expenses	87,663	1,304		673	(232)	2	89,408
Accrued compensation and related benefits	76,407			•	,	. ,	76,407
Estimated third-party settlements	25,103	•		•		ٔ ا	25,103
Total current liabilities	206,802	1,304		673	(232)	(Z	208,547
Long-term debt, excluding current portion	532,336	•		٠			532,336
Insurance deposits and related liabilities	68,498	•		•			68,498
Interest rate swaps	21,103	•		,			21,103
Liability for pension and other postretirement							
pian benefits, excluding current portion Other liabilities	139,056 46,568	•				. ,	139,056
Total liabilities	1,014,363	1,304		673	(232)	່ ໄລ	1,016,108
Net assets			 				
Unrestricted	415,333	14,358		3,218			432,909
Temporarily restricted	57,518	699'9		159			64,346
Permanently restricted	29,909	2,118	1			-	32,027
Total net assets	502,760	23,145		3,377			529,282
Commitments and contingencies							
Total liabilities and net assets	\$ 1,517,123	\$ 24,449	ا _م	4,050	\$ (232)	اي اي	1,545,390

Dartmouth-Hitchcock Health and Subsidiaries Consolidating Statements of Operations and Changes in Unrestricted Net Assets Year Ended June 30, 2015

(in thousands of dollars)	3	D-HH (parent)	D-H and Subsidiaries		NLH and Subsidiaries	S. S.	Cheshire and Subsidiaries	MAHHC and Subsidiaries	and	Eliminations	Con	Health System Consolidated
Unrestricted revenue and other support												
Net patient service revenue	₩	•	\$ 1,225,872	72 \$	56,356	s	52,536	8	46,102	\$ (307)	8	1,380,559
Contracted revenue		•	82,091	91	•		•			(1,256)		80,835
Other operating revenue		12,203	69,663	33	3,063		1,076	.,	3,526	(6,538)		82,993
Net assets released from restrictions		'	15,314	4	111		212		'	,		15,637
Total unrestricted revenue and other support		12,203	1,392,940	8 	59,530		53,824	4	49,628	(8,101)		1,560,024
Operating expenses												
Salaries		096	694,373	73	27,562		20,949	2	24,076	8,482		776,402
Employee benefits		263	194,619	19	5,764		5,724		6,112	1,493		213,975
Medical supplies and medications		139	201,451	51	5,910		8,712		3,736	19		219,967
Purchased services and other		17,448	168,029	29	13,206		13,535	-	11,888	(18,402)		205,704
Medicaid enhancement tax		•	45,839	39	1,941		2,363		1,853	•		51,996
Depreciation and amortization		75	56,649	49	4,075		3,436		2,978	•		67,213
interest		•	16,781	81	849		357		455	•		18,442
Expenditures relating to net assets												
released from restrictions		,	15,314	4	111		212		,	,		15,637
Total operating expenses		18,885	1,393,055	55	59,418		55,288	5	51,098	(8,408)		1,569,336
Operating margin (loss)	,	(6,682)	(1	(115)	112		(1,464))	(1,470)	307		(9,312)
Nonoperating gains (losses)												
Investment (losses) gains		•	(12,011)	11)	625		311		9	•		(11,015)
Other, net		338	(2,880)	80)	1,409		141		22	(307)		(1,241)
Contribution revenue from acquisition		92,499		·	•		•			•		92,499
Total nonoperating (losses) gains, net		92,838	(14,891)	91)	2,034		452		117	(307)		80,243
(Deficiency) excess of revenue over expenses		86,156	(15,006)	(90	2,146		(1,012)		(1,353)	•		70,931
Unrestricted net assets												
Net assets released from restrictions (Note 8)		•	7	717	9		1,010		629	•		2,411
Change in funded status of pension and other												
postretirement benefits		•	(62,977)	(77)	•		2,875		(200)	•		(60,892)
Net assets transferred (from) to affiliates		(84,626)	(7,873)	73)	•		76,827	_	15,672	•		
Additional paid in capital		00			•				٠	(009)		
Change in fair value on interest rate swaps	ļ		8	(698)	(221)		.		159	•		(931)
(Decrease) increase in unrestricted net assets	₽	2,130	\$ (86,008)	(8)	1,930	ام	79,700	€	14,367	\$ (600)	æ	11,519

Dartmouth-Hitchcock and Subsidiaries Consolidating Statements of Operations and Changes in Unrestricted Net Assets Year Ended June 30, 2015

D-H and Subsidiaries	\$ 1,225,872 82,091 69,663 15,314	1,392,940	194,619	168,029 45,839 56,649 16,781	15,314	(12,011) (2,880) (14,891) (15,006)	717 (62,977) (7,873) (869) \$ (86,008)
Eliminations	\$ (230) (4,103)	(4,335)	152	(1,918)	(807)	3,528	
DHMC	6,482	6,482	1 1	6,484	6,484	(2)	(2)
7HT	847 2,356 704	3,907		3,375	704 4,079 (172)	68	263
D-H Obligated Group	\$ 1,225,874 \$ 81,474 64,928 14,610	1,386,886	194,467	160,088 45,839 56,649 16.781	14,610 1,383,299 3,587	(12,079) (6,408) (18,487) (14,900)	(62,977) (7,873) (869) \$ (86,165)
(in thousands of dollars)	Unrestricted revenue and other support Net patient service revenue Contracted revenue Other operating revenue	Total unrestricted revenue and other support Operating expenses Salaries	Employee benefits Medical supplies and medications	Purchased services and other Medicaid enhancement tax Depreciation and amortization Interest	Expenditures relating to net assets released from restrictions Total operating expenses Operating margin (loss)	Nonoperating gains (losses) Investment (losses) gains Other, net Total nonoperating (losses) gains, net (Deficiency) excess of revenue over expenses	Unrestricted net assets Net assets released from restrictions (Note 8) Change in funded status of pension and other postretirement benefits Net assets transferred (from) to affiliates Change in fair value on interest rate swaps (Decrease) increase in unrestricted net assets

Dartmouth-Hitchcock Health and Subsidiaries Consolidating Statements of Operations and Changes in Unrestricted Net Assets Year Ended June 30, 2014

Health System Eliminations Consolidated	- \$ 1,229,848 - 92,390 (2,191) 64,804 - 11,670	(2,191) 1,398,712 2,537 675,716 570 209.052		(2,605) 1,373,444 414 25,268	. 56,804 (414) (4,473) . 33,692 (414) 86,023	. 19,669 . (1,348) 1,538 . (1,348) \$ 133,261
NLH and Subsidiaries	39,482 \$	21,070	7,512 5,897 1,852 2,711 659	94,578 (2,841)	1,144 287 - 1,431 (1,410)	15 33,692 - - - - - - - - - - - - - - - - - - -
D-H and Subsidiarles	\$ 1,190,366 \$ 91,386 62,399 11,576	1,355,727 651,038 203,388	188,885 162,069 32,636 54,915 17,777	11,576	55,927 (4,679) - 51,248 84,691	748 19,669 (4,435) 1,538 \$ 102,211
D-HH (parent)	\$ 1,004 2,435	1,071	7,702	9,187	(267) 333 33,692 33,758 28,010	(29,257) 1,348
(in thousands of dollars)	Unrestricted revenue and other support Net patient service revenue Contracted revenue Other operating revenue Net assets released from restrictions	Total unrestricted revenue and other support Operating expenses Salaries Employee benefits	Medical supplies and medications Purchased services and other Medicaid enhancement tax Depreciation and amortization	Expenditures relating to net assets released from restrictions Total operating expenses Operating margin	Nonoperating gains (losses) Investment gains Other, net Contribution revenue from acquisition Total nonoperating gains, net Excess (deficiency) of revenue over expenses	Unrestricted net assets Net assets released from restrictions (Note 8) Change in funded status of pension and other postretirement benefits Net assets transferred to affiliate Additional paid in capital Change in fair value on interest rate swaps Increase (decrease) in unrestricted net assets

Dartmouth-Hitchcock and Subsidiaries Consolidating Statements of Operations and Changes in Unrestricted Net Assets Year Ended June 30, 2014

D-H and Subsidiaries	\$ 1,190,366 91,386 62,399 11,576 1,355,727	651,038 203,388 188,885	32,636 32,636 54,915 17,77 11,576	1,322,284	55,927 (4,679) 51,248 84,691	748 19,669 (4,435) 1,538 \$ 102,211
Eliminations	(358) (3,544)	1,057 129 (20)	(696,7)	(1,423)	2,479	· · · · · · · · · · · · · · · · · · ·
DHMC	6,933		21 21	6,955		
井	710 1,704 1,302 3,716	1 1 1 6	2,816	4,118	2,529	263
D-H Obligated Group	\$ 1,190,366 \$ 91,034 57,306 10,274 1,348,980	649,981 203,259 188,905	154,908 32,636 54,894 17,777 10,274	1,312,634	53,398 (7,158) 46,240 82,586	485 19,669 (4,435) 1,538 \$ 99,843 \$
(in thousands of dollars)	Unrestricted revenue and other support Net patient service revenue Contracted revenue Other operating revenue Net assets released from restrictions Total unrestricted revenue and other support	Operating expenses Salaries Employee benefits Medical supplies and medications	Furchased services and other Medicaid enhancement tax Depreciation and amorfization Interest Expenditures relating to net assets released from restrictions	Total operating expenses Operating margin	Nonoperating gains (losses) Investment gains Other, net Total nonoperating gains, net Excess (deficiency) of revenue over expenses	Unrestricted net assets Net assets released from restrictions (Note 8) Change in funded status of pension and other postretirement benefits Net assets transferred to affiliate Change in fair value on interest rate swaps Increase (decrease) in unrestricted net assets

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

BOARDS OF TRUSTEES AND OFFICERS

(19 Total Trustees)

Effective: January 1, 2016

Troyen A. Brennan, MD, MPH (Wendy Warring) MHMH/DHC/D-HH Trustee Executive Vice President and Chief Medical Officer of CVS Health	MHMH/DHC: Elected on 3/20/2015. Term began 4/1/2015. Full term expires 12/31/2023. D-HH: Elected on 3/20/2015 as a DHC rep.
R. William Burgess, Jr. (Barbara) MHMH/DHC/D-HH Trustee Managing Partner, ABS Ventures	MHMH/DHC: Elected on 12/5/2014. Term began 1/1/2015. Full term expires 12/31/2023. D-HH: Elected on 9/19/2014 to complete Bill Helman's term as DC rep through 12/31/2014 and to begin his own 4 yr term on 1/1/2015 (ending 12/31/2018).
Jeffrey A. Cohen, MD (Renee Vebell) MHMH/DHC Trustee Chair, Dept. of Neurology	MHMH/DHC: Elected on 12/4/2015. Term began 1/1/2016. Full term expires 12/31/2018.
Duane A. Compton, PhD MHMH/DHC/D-HH Trustee Ex-Officio: Interim Dean, Geisel School of Medicine at Dartmouth	MHMH/DHC/D-HH: Ex-officio (effective 7/15/2014).

William J. Conaty (Sue) MHMH/DHC/D-HH Trustee President, Conaty Consulting, LLC	MHMH/DHC: Term began 6/1/2011. Full term expires 5/31/2020. D-HH: Elected DHC rep. trustee (on 12/9/11) effective 1/1/2012.
Vincent S. Conti (Meredith) MHMH/DHC/D-HH Trustee Retired President & CEO, Maine Medical Center	MHMH/DHC: President appointed to MHMH Aug-Dec 2009. Nominated to both MHMH/DHC on 8/13/09 for a term to start 1/1/2010. Full term expires 12/31/2018. D-HH: Elected 12/2/09 as an MHMH rep.
Denis A. Cortese, MD (Donna) MHMH/DHC/D-HH Trustee Foundation Professor at Arizona State University (ASU) and Director of ASU's Healthcare Delivery and Policy Program 1	MHMH: President appointed to MHMH effective 9/1/2012 (approved by the BoT 6/15/12). Nominated to both MHMH/DHC on 12/7/12 for a term to start 1/1/2013. Full term expires 12/31/2021. D-HH: Elected on 3/15/13 as an MHMH rep.
Barbara J. Couch (Richard) MHMH/DHC/D-HH Boards' Secretary President of Hypertherm's HOPE Foundation (includes leadership of all of Hypertherm's philanthropic and volunteer initiatives)	MHMH/DHC: Nominated on 3/25/09; completed D. Weaver's term through 12/31/09. Full term began 1/1/2010. Full term expires 12/31/2018.
; ;	D-HH: Elected DHC rep.

Paul P. Danos, PhD (Mary Ellen)	MHMH/DHC: Elected
MHMH/DHC/D-HH Trustee	2/5/2014 for a term
Dean Emeritus; Laurence F. Whittemore Professor of	beginning immediately.
Business Administration, Tuck School of Business at	Term expires 12/31/2016.
Dartmouth	Full term expires
	5/31/2022.
	B.III. El . I BIIG
	D-HH: Elected DHC rep.
	trustee (on 2/5/2014)
	effective immediately.
Senator Judd A. Gregg (Kathleen)	MHMH/DHC: Term
	began 1/1/2013. Full term
MHMH/DHC Trustee	expires 12/31/2021.
Senior Advisor to SIFMA	expires 12/31/2021.
1	
,	
M Procke Harndon MD (Eric Millor)	D-H: Elected on
M. Brooke Herndon, MD (Eric Miller)	3/20/2015 for a 3 year
MHMH/DHC (Lebanon Physician) Trustee	term that began 1/1/2015
Staff Physician, Primary Care, DHMC (Heater Road)	and end 12/31/2017.
	and end 12/31/2017.
,	
Parkers C. Iakat MD (Marker)	D-H: Elected on
Barbara C. Jobst, MD (Markus)	12/6/2013 for a 3 year
MHMH/DHC (Lebanon Physician) Trustee	
Section Chief of Adult Neurology at DHMC and Director	term to begin 1/1/2014 and end 12/31/2016.
of the Dartmouth-Hitchcock Epilepsy Center	and end 12/31/2016.
!	
	CONTRACTOR OF THE TOTAL STATE OF THE STATE O
Laura K. Landy (Robert Corman)	MHMH: President
MHMH/DHC/D-HH Trustee	appointed to MHMH
President and CEO of the Fannie E. Rippel Foundation	effective 9/1/2012
1. coment and CDO of the Faither D. Reppet Foundation	(approved by the BoT
	6/15/12).
	Nominated to both
	MHMH/DHC on 12/7/12
	for a term to start
	1/1/2013. Full term
	expires 12/31/2021.
, ,	D-HH: Elected on 3/15/13
•	as an MHMH rep.
	as all wil her rep.

Robert A. Oden, Jr., PhD (Teresa) MHMH/DHC/D-HH Boards' Vice Chair Retired President, Carleton College !	MHMH/DHC: President appointee to MHMH (1/27/11 - 12/31/11). Elected to MHMH/DHC Boards on 12/9/11 for a term 1/1/2012 - 12/31/2014. Full term expires 12/31/2020. Became Board Chair 1/1/2013. Term expired 12/31/15. Vice-Chair: 1/1/16 D-HH: Elected DHC rep. trustee (on 12/9/11) effective 1/1/2012.
Charles G. Plimpton (Barbara Nyholm) MHMH/DHC/D-HH Boards' Treasurer Retired Investment Banker	MHMH/DHC: Elected on 3/20/2015. Term began 4/1/2015. Full term expires 12/31/2023. Board Treasurer: 1/1/16 D-HH: Elected on 3/20/2015 as an MHMH rep.
Timothy D. Scherer, MD MHMH/DHC Trustee Associate Medical Director of Specialty Services, D-H Nashua	MHMH/DHC: Elected on 12/4/2015. Term began 1/1/2016. Full term expires 12/31/2018.
Brian C. Spence, MD, MHCDS (Kirsten Glass, VMD) MHMH/DHC Trustee Associate Professor of Anesthesiology	MHMH/DHC: Elected on 12/4/2015. Term began 1/1/2016. Full term expires 12/31/2018.

Anne-Lee Verville	MHMH/DHC:
MHMH/DHC/D-HH Boards' Chair	Completed Fuehrer's term
Retired senior executive, IBM	through 12/31/08.
	Nominated on 12/17/08.
	Term began 1/1/2009.
	Full term expires
	12/31/2017.
	D-HH: Elected 9/3/10 as
	an MHMH rep. trustee.
	Re-elected on 12/6/2013
	as a DHC rep for a term to
	end on 12/31/2015. Re-
	elected as MHMH rep on
	12/4/15.
	Vice-Chair effective
	10/1/2014. Board Chair
	eff: 1/1/16
James N. Weinstein, DO, MS (Mimi)	MHMH/DHC/D-HH:
MHMH/DHC/D-HH Trustee	Ex-officio as DHC
Ex-officio: CEO, Dartmouth-Hitchcock; President,	President effective
D-HH	1/14/2010. Ex-officio as
<i>D-</i> пп	CEO of D-H began
	11/1/2011. Voted by the
	D-HH Board as President
	on 9/1/2012 or upon
	vacancy. Became
	President on 11/14/2011
	when Dr. Colacchio
	resigned.

Member of D-HH, not a member of D-H:

D-HH: elected to the Board on 6/28/13 for a term to begin immediately and end on 12/31/2015.
Elected on 12/4/2015 for a
term effective as of 1/1/2016 as a Physician Rep.
(NOTE: Term expired on D-H Board 12/31/2015)

Administrative Support:

Kimberley A. Gibbs (603/650-8779) Director, Governance & Leadership One Medical Center Drive, Lebanon, NH 03756 kimberley.a.gibbs@hitchcock.org

Fax: 603/650-7440

Claire M. Lillie (603/650-5244) Exec. Coordinator for Governance & Leadership claire.m.lillie@hitchcock.org

Susan Gingerich, MSW

EDUCATION

1978 - 1980 Simmons School of Social Work, Boston, Massachusetts. M.S.W.

1971 - 1975 Wellesley College, Wellesley, Massachusetts. B.A. in Psychology.

PROFESSIONAL POSITIONS

10/03 to present <u>Independent Consultant and Trainer</u>, Philadelphia, PA.

Providing workshops and follow-up consultation for Illness Management and Recovery (IMR), Recovery After an Initial Schizophrenia Episode (RAISE), NAVIGATE Early Treatment Program, Social Skills Training, Helping

Individuals Reduce Relapses, and Working with Families of Persons with Mental

Illness.

3/2014 to present Coordinator of training for NAVIGATE Early Treatment Program

10/2012 to present Boston University, Boston, MA

Member of the development team and trainer for Health Technology Program, part of a grant from Center for Medicare and Medicaid Improvement (CMMI) for using technology to help improve mental health and prevent hospitalizations.

10/00 to 2013 New Hampshire-Dartmouth Psychiatric Research Center, Concord, NH.

Co-chair of the development team and trainer for the following:

IMR (Illness Management and Recovery), part of SAMHSA'S Evidence-

Treatment Practices toolkit project

NAVIGATE Treatment Model, part of the RAISE (Recovery After an Initial

Schizophrenia Episode) multi-site NIMH project

Relapse Prevention Planning component of The Health Technology Program, part of the Improving Care and Reducing Costs project, sponsored by CMMI (Center

for Medicare and Medicaid Innovation).

1/96 – 1/02 <u>Delaware Psychiatric Center, Newcastle, Delaware.</u>

Psychiatric Rehabilitation Consultant.

10/89-10/96 Eastern Pennsylvania Psychiatric Institute, Philadelphia, Pennsylvania.

Social Skills Trainer and Research Associate for the Educational Family Therapy

Program

12/88-1/91

New York State Psychiatric Institute, New York, New York.
Supervisor/consultant for Multiple Family Education groups, conducted as part of Family Support Demonstration Project (William McFarlane, MD).

12/87-7/89

Hillside Hospital, Long Island Jewish Medical Center, Glen Oaks, New York.

Mt. Sinai Hospital, New York, New York.

Research clinician for Post-Psychotic Depression Study (Sam Siris, MD).

PUBLICATIONS

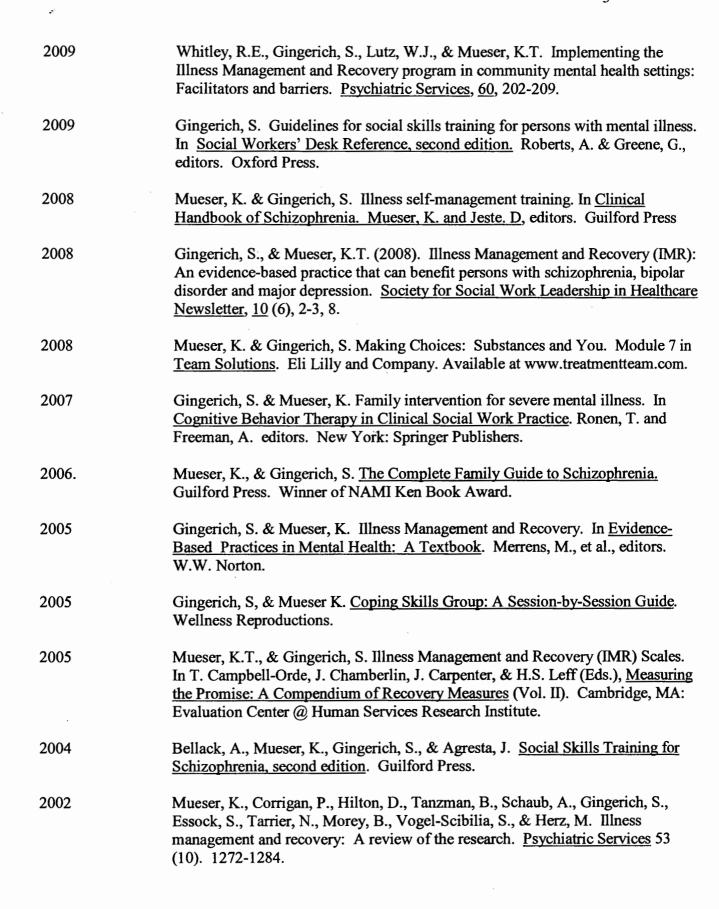
<u>PUBLICATIONS</u>	•
2013	Mueser, K.T., Gottlieb, J.D., & Gingerich, S. Social skills and problem solving training. In S.G. Hoffman (Ed.), Wiley Handbook of Cognitive Behavioral Therapy (pp. 243-271). New York: Wiley.
2013	Mueser, K.T., & Gingerich, S. Treatment of co-occurring psychotic and substance use disorders. <u>Social Work in Public Health</u> , <u>28</u> , 424-39.
2011	Mueser, K.T., & Gingerich, S. Relapse prevention and recovery in patients with psychosis: The role of psychiatric rehabilitation. <u>Psychiatric Times</u> , <u>28(6)</u> , 66-71.
2011	Mueser, K., & Gingerich, S. Collaborating with Families of People with Serious Mental Illness. In Rudnick, A. and Roe, D. (Editors). Serious Mental Illness: Person-Centered Approaches. NY, NY: Radcliffe Publishing.
2011	Gingerich, S. & Mueser, K. <u>Illness Management and Recovery: Personalized Skills and Strategies for Those with Mental Illness.</u> (Client handouts, Practitioner Session-by-Session Guidelines, Implementation Guide, CD-ROM, DVD of introduction and practitioner training vignettes). Center City, MN: Hazelden Publications.
2011	Mueser, S. & Gingerich, S. Illness Management and Recovery. In Vandiver, V. (Ed.). <u>Best Practices in Mental Health: A Pocket Guide</u> . New York, NY: Oxford University Press.
2011	Mueser, K.T., & Gingerich, S. Illness self-management programmes. In G. Thornicroft, G. Szmukler, K.T. Mueser, & R.E. Drake (Eds.), Oxford Textbook of Community Mental Health. Oxford, England: Oxford University Press (pp. 211-219
2010	Meyer, P., Mueser, K. & Gingerich, S. A guide to implementation and clinical practice of Illness Management and Recovery for people with schizophrenia. In

Meyer, P., Mueser, K. & Gingerich, S. A guide to implementation and clinical practice of Illness Management and Recovery for people with schizophrenia. In Rubin, Springer, and Trawver (Eds.), <u>Psychosocial treatment of Schizophrenia</u>. New York, NY: Wiley.

- 279. Wojcik JD, Shindul-Rothschild J, Norris AE, Wolfe B, Stone W, Mesholam-Gately RI, Giuliano AJ, Green A, Seidman LJ, Keshavan M. Clinical Characteristics of People in Randomized Clinical Trials of Frist Episode Schizophrenia Spectrum Disorders: Attrition vs. Non-Attrition Groups. Abstracts for the 13th International Congress on Schizophrenia Research. Schizophrenia Bulletin, 2011: 37(suppl 1): 326.
- 280. Gamsby JJ, Gulick D, Templeton E, Wang W, Loros JJ, Dunlap JC, Green AI. The circadian Period genes modulate both alcohol drinking and the effects of clozapine on drinking behavior in mice. Program No. 164.11. 2011 Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, 2011. Online.
- 281. Gulick D, Templeton E, Green AI. Delta-9-tetrahydrocannabinol decreases alcohol intake in the Syrian golden hamster. Program No. 427.04. 2011 Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, 2011. Online.
- 282. Gulick D, Bonvini L, Templeton E, Sonstegard A, Bucci DJ, Green AI. Clozapine inhibition of alcohol intake in Syrian Golden Hamsters: Selectivity, Motivation and Reward. Program No. 869.14. 2012 Neuroscience Meeting Planner. New Orleans, LA: Society for Neuroscience, 2012. Online.
- 283. Fischer AS, Whitfield-Gabrieli S, Roth RM, Brunette MF, Green AI. Effects of cannabis and THC on resting state functional connectivity of the brain reward circuit in patients with schizophrenia and cannabis use disorder. Program No. 867.10. 2012 Neuroscience Meeting Planner. New Orleans, LA: Society for Neuroscience, 2012.
- 284. Green AI, Fischer AS, Roth RM, Whitfield-Gabrieli S, Gulick D, Brunette M. Developing Treatments for Schizophrenia and Co-occurring Substance Use Disorder: Targeting Brain Reward Circuitry. New Clinical Drug Evaluation Unit, 53rd annual meeting, 2013. Online.
- 285. Green AI, Fischer AS, Roth RM, Whitfield-Gabrieli S, Gulick D, Brunette, M. Developing treatments for schizophrenia and co-occurring substance use disorder: Targeting brain reward circuitry. Bethesda, MD: National Institute of Mental Health Annual Conference, 2013.
- 286. Fischer AS, Whitfield-Gabrieli S, Roth RM, Brunette MF, Green AI. Effects of Smoked Cannabis and Oral Delta-9-tetrahydrocannabinol on Functional Connectivity of Reward Circuitry in Patients With Schizophrenia. Proceedings of the 2013 American Neuropsychiatric Association Annual Meeting. The Journal of Neuropsychiatry and Clinical Neurosciences, 2013; 25(2): 161-166.
- 287. Fischer AS, Whitfield-Gabrieli S, Roth RM, Brunette MF, Green AI. Resting state functional connectivity of the brain reward circuit in patients with schizophrenia and cannabis use disorder. Schizophrenia Bulletin Proceedings of the 14th International Congress on Schizophrenia Research. 2013; 39(Suppl 1): 30-31.
- 288. Fischer AS, Whitfield-Gabrieli S, Roth RM, Brunette MF, Green AI. Alterations in functional connectivity of reward circuitry induced by cannabis and THC in patients with schizophrenia and cannabis use disorder. 13th International Congress on Schizophrenia Research, Orlando, FL, 2013.
- 289. Fischer AS, Whitfield-Gabrieli S, Roth RM, Brunette MF, Green AI. Effects of smoked cannabis and oral delta-9-tetrahydrocannabinol on functional connectivity of the brain reward circuit in patients with schizophrenia. American Neuropsychiatric Association Annual Meeting, Boston, MA, 2013.

- 290. Fischer AS, Whitfield-Gabrieli S, Roth RM, Green AI. Cannabinoid agonists, functional connectivity of the default mode network, and working memory performance in patients with schizophrenia and cannabis use disorder. American College of Neuropsychopharmacology 53rd Annual Meeting, Phoenix, AZ, 2014.
- 291. Fischer AS, Whitfield-Gabrieli S, Roth RM, Green AI. Cannabis and THC: Effects on intrinsic functional brain organization of the default mode network in patients with schizophrenia and cannabis use disorder. Society of Biological Psychiatry: 69th Annual Scientific Meeting, New York, NY, 2014.
- 292. Fischer AS, Whitfield-Gabrieli S, Roth RM, Brunette MF, Green AI. Delineating brain reward circuit abnormalities in patients with schizophrenia and cannabis use disorder a resting state functional connectivity (rs-fcMRI) approach. Poster presented at: 4th Biennial Conference on Resting State Brain Connectivity, Boston, MA, 2014.
- 293. Whitfield-Gabrieli S, Fischer AS, Roth RM, Green AI. Functional connectivity of the default mode network in patients with schizophrenia and the effects of cannabinoid agonist administration. Poster presented at: 4th Biennial Conference on Resting State Brain Connectivity, Boston, MA, 2014.
- 294. Khokhar, J., Green, A. Deconstructing clozapine further: Toward medication for alcohol use disorder in schizophrenia. Neuroscience Research Day, Lebanon, NH, 2014.
- 295. Khokhar, J., Green, A. Deconstructing clozapine further: Toward medication for alcohol use disorder in schizophrenia. Biological Psychiatry, 2014, 75 (9): 393S.
- 296. Khokhar, J., Green, A. Lessons from Clozapine: Toward treatment development for alcohol use disorder in schizophrenia. Research Society on Alcoholism, Bellevue, WA. Alcoholism: Clinical and Experimental Research, 2014, 38: 333A.
- 297. Khokhar, J., Green, A. Deconstructing clozapine further: Toward medication for alcohol use disorder in schizophrenia. CPDD San Juan Puerto Rico. Drug and Alcohol Dependence, In press.
- 298. Green AI. Alcoholism in patients with schizophrenia: A unifying hypothesis? Research Society on Alcoholism. 2014.
- 299. Fischer AS, Whitfield-Gabrieli S, Roth R, Green AI. Improvement in anti-correlation between regions of the "task positive" and defauilt mode and networks induced by cannabis and THC in patients with schizophrenia: Implications for working memory? International Congress on Schizophrenia Research, Colorado Springs, Colorado, 2015.
- 300. Green AI. Alcohol and Schizophrenia: Approaches to Pharmacologic Intervention. American Psychiatric Association, Toronto, Ontario, 2015.
- 301. Green AI. Substance Use and Schizophrenia: Risk and Reward. International Congress of Dual Disorders, Addictions and Other Mental Disorders. Barcelona, Spain, 2015.
- 302. Green AI. Cannabis Use in Schizophrenia. International Congress of Dual Disorders, Addictions and Other Mental Disorders. Barcelona, Spain, 2015.

303. 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.



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200	McFarlane, W., Gingerich, S., Deakins, S., Dunne, E., Horen, B., & Newmark, M Co-author of four chapters in Multiple Family Groups in the Treatment of Sever Psychiatric Disorders by William McFarlane. Guilford Press.
2002	Gingerich, S. Guidelines for social skills training for persons with mental illness. In <u>Social Workers' Desk Reference, First Edition</u> . Roberts, A. & Greene, G., editors. Oxford Press.
2002	Gingerich, S. Social workers as crisis counselors. In <u>Social Workers</u> in <u>Mental Health Practice</u> . Kia Bentley, editor. Wordsworth-Brooks/Cole.
199	Gingerich, S. Stigma: Critical issues for clinicians assisting individuals with severe mental Illness. <u>Cognitive and Behavioral Practice</u> 5 (13): 277-285.
199	Bellack, A., Mueser, K., Gingerich, S., & Agresta, J. Social Skills Training For Schizophrenia. New York: Guilford Press.
199	Gingerich, S. & Bellack, A. Research-based family interventions for the treatment of schizophrenia. <u>Clinical Psychologist</u> 48 (1): 24-27.
	Reprinted in Research on Social Work Practice 6 (1): 122-126.
1994	Mueser, K. & Gingerich, S. Coping with Schizophrenia: A Guide for Families. Oakland: New Harbinger Publications.
199	Mueser, K., Gingerich, S., & Rosenthal, C. Educational family therapy for schizophrenia: a new treatment model for clinical service and research. Schizophrenia Research 13: 99-108.
199	Mueser, K., Gingerich, S., & Rosenthal, C. Familial factors in psychiatry. <u>Current Opinion in Psychiatry</u> 6: 251-257.
199	Mason, S., Gingerich, S., & Siris, S. Patients and caregivers' adaptation to improvement in schizophrenia. Hospital and Community Psychiatry 41(5): 541-544.
	Reprinted in Critical Strategies for Academic Thinking and Writing, Boston: Bedford Books of St. Martin's Press, 628-634.
198	Siris, S., Cutler, J., Owen, A., Mason, S., Gingerich, S., & Lang, M. Controlled trial of adjunctive imipramine maintenance in schizophrenic patients with remitted post-psychotic depressions. <u>American Journal of Psychiatry</u> 146: 1495-1497.
198	Falloon, I., Gingerich, S., Mueser, K., Rappaport, S. McGill, C., & Hole, V. Behavioral Family Therapy: A Workbook. Buckingham, England: FACTS Press

1983	Vannicelli, M., Gingerich, S., & Ryback, R. Family problems related to the treatment and outcome of alcoholic patients. <u>British Journal of Addictions</u> .
MANUALS	
2013	Gingerich, S., Meyer, P., & Mueser, K. Relapse Prevention Planning manual for the Health Technology Program (part of a grant from CMMI, the Center for Medicaid and Medicare Improvement)
2013	Gingerich, S., Miller, J., Monroe-Devita, M., Mors, G., Mueser, K., & Hamilton, A. ACT+IMR: <u>Integrating Illness Management and Recovery into Assertive Community Treatment Teams</u> .
2013	Meyer, P., Gingerich, S., Fox, L., & Mueser, K. <u>Minnesota Clinical Competency Scale for Enhanced IMR for Co-occurring Disorders</u> , First Edition.
2011	Overall co-editor and contributing author to the following RAISE-Early Treatment Program manuals: <u>Individual Resiliency Training</u> , <u>Family Education Program</u> , <u>Supported Employment and Education</u> , and <u>Team Members' Guide</u> .
2009	Gingerich, S., Arnold, K. & Mueser, K. <u>The Happy, Healthy Life Group</u> (an Adaptation of the Illness Management and Recovery Toolkit for Persons with Mental Illness and Intellectual Disabilities and/or Cognitive Challenges).
2007	Meyer, P., Gingerich, S., & Mueser, K. Minnesota IMR Clinical Competency Scale.
2006	Gingerich, S. & Agresta, J. Multiple Family Groups for Adolescents with Mood Disorders.
2002	Gingerich, S., & Mueser, K., <u>Illness Management and Recovery: Implementation Toolkit</u> . Substance Abuse and Mental Health Services Administration.
2001	Gingerich, S. Conducting Groups for Clients in an Inpatient Psychiatric Facility.
1994	Bellack, A., Gingerich, S., Agresta, J. & Mueser, K. Social Skills Training for Psychiatric Clients with Persistent Symptoms.
1991	Mueser, K., Gingerich, S. & Rosenthal, C. Educational Family Therapy.
1989	McFarlane, W., Deakins, S., Gingerich, S., Horen, B., & Newmark, M. Conducting Multiple Family Psychoeducational Groups.

CURRICULUM VITAE

Name:

Alan Ivan Green, M.D.

Office Address:

Department of Psychiatry, Geisel School of Medicine at Dartmouth

Postdoctoral Training

Internship and	d 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-	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

Hospital Appointments

_	1981-1984	Assistant Clinical Director, Southard Clinic,
	1002 2000	Massachusetts Mental Health Center
	1982-2008 1983-2004	Staff Psychiatrist, Massachusetts Mental Health Center
	1983-2004	Medical Staff, New England Deaconess Hospital
	1904-1993	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
Other Pr		sitions 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	,
	1975-1975	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 A	dministrative	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
Committ	ee Service	
	1983-1984	Vice President, Clinical Staff Organization, Massachusetts Mental Health Center
	1984	President, Clinical Staff Organization, Massachusetts Mental Health Center

	4004 1005	Man I. Green CV 1/12/10
	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-	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
Duofossi		<i>g</i>
Protessi	onal 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 R	eview Activiti	es
	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
		Weinber, ZAAT DD To 1, WAAA Concept Review - Human Lab 1 anduigms
Editoria	l 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

F

Research Funding Current Federal Grants 2012-2017 NIDA R01DA032533 PI: Green	Clozapine for cannabis use disorder in schizophrenia
2013-2019 NIDA R01DA034699 PI: Green	Cannabis, schizophrenia and reward: self-medication and agonist treatment?
2013-2018 NCATS 1 UL1 TR001086-01 NCATS 1KL2TR001088-01 PI: Green	Dartmouth SYNERGY The Dartmouth Clinical and Translational Science Institute
2014-2015 NCATS 3UL1TR001086-02S2 PI: Green	Development of a Cross-CTSA IRB Reliance Program (National IRB Reliance Initiative)
2015- 2016 NIAAA/Fast-Track Drugs & Biol 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

2015-2020 NIH/NIDA

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:

2015-2016

Alkermes
PI: Green

Olanzapine-Samidorphan in Alcohol-Preferring Rodents

Past NARSAD Grant:

1998-2002

Toward the prevention of schizophrenia:

NARSAD

treatment of negative symptoms

Independent Investigator Award

and neurocognitive deficits in

PI: Green

first degree relatives

Past Federal Grants

1993-2001

Clozapine response and biogenic

NIMH RO1MH49891

PI: Green

amines in schizophrenia

1994-1999

NIMH RO1MH52376

Clozapine vs. haloperidol in first episode schizophrenia

PI: Green

1995-2001

Clozapine vs. olanzapine: an

NIMH RO1MH49891-Supp.

effectiveness study. Clinical Services

PI: Green

Supplement to Grant #RO1MH49891

1995-1998

NIMH RO1MH49891-Supp. to

Minority Supplement to Grant #RO1MH49891

PI: Green

1999-2004

Alcoholism and schizophrenia:

NIAAA RO1AA11904

Effects of clozapine

PI: Green

1999-2004

Minority Supplement to NIAAA

NIAAA RO1AA11904

Grant #RO1AA11904

PI: Green

2004-2007

Antipsychotics and alcohol

NIAAA R03AA014644

drinking in rodents

PI: Green

2000-2008

Cannabis and schizophrenia:

NIDA R01DA 13196

Effects of clozapine

PI: Green

2001-2009

NIMH R21MH62157

Clozapine, cannabis and first episode schizophrenia

PI: Green

2004-2009

Cannabis and schizophrenia:

NIDA R21DA019215-01

fMRI Reward Circuit Biomarker

PI: Green

2007-2009

Efficacy of quetiapine fumarate sustained

NIAAA CSP-1027

release for the treatment of alcohol dependency

PI: Green in very heavy drinkers

2007-2010

Toward a Rat Model of

NIMH 5R03MH075833-02

Alcohol Abuse in Schizophrenia

PI: Chau; Co-PI: Green

Efficacy of Levetiracetam Extended

NIAAA/Fast Track NCIG-002

Release for the treatment of alcohol dependency

in very heavy drinkers

PI: Green 2009-2011

2009-2011

NIAAA R13AA018603

Conference: Integrating Etiologic Models and Optimizing Treatment for Alcohol Disorders in

PI: Green

Schizophrenia Patients

2010-2012

NIDA R21 DA029131

Improving Substance Use and Clinical Outcomes in Heavy Cannabis

Users

PI: Sevy

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

Cannabis and Schizophrenia:

NIDA R01DA026799

Self-Medication and Agonist Treatment?

PI: Green

(No Cost Extension)

2010-2013

Deconstructing Clozapine: Toward Medication for

NIAAA R01AA018151

Alcoholism in Schizophrenia

PI: Green

(No Cost Extension)

2011-2014

Alcoholism and Schizophrenia: A Translational Approach to

NIAAA R21AA019534

Treatment

PI: Green

(No Cost Extension)

2014-2015

NCATS 3UL1TR001086-02S1

Enhancing Clinical Research Professionals' Training

PI: Green

and Qualifications

Past Investigator Initiated Grants

1989-1990

Subgroups of psychotic patients:

Milton Fund

pharmacologic, biochemical and

Harvard Medical School

clinical differences

PI: Green

1991-1994

Sandoz Research Institute

PI: Green

Clozapine in psychotic patients

1993-1994

Eli Lilly & Co.

PI: Green

Biochemical predictors and correlates

Biochemical predictors and correlates

of response to olanzapine

of response to OPC-14597

1994-1996

Otsuka America Pharm., Inc.

PI: Green

1997-1999 Eli Lilly & Co.

PI: Green

prolactin level and ovarian function

1997-1999 **Novartis Pharmaceuticals**

PI: Green

Clozapine's effect on prolactin level

Olanzapine vs. typical neuroleptics:

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

Quetiapine in schizophrenia and comorbid

2000-2007

AstraZeneca PI: Green 2000-2007 Eli Lilly & Co. PI: Green 2003-2008 AstraZeneca PI: Green 2006-2008 Cyberonics Inc. PI: Green 2004-2008

PI: Green

PI: Green

substance use disorder (retrospective)

Olanzapine in patients with comorbid substance use disorder and schizophrenia (retrospective)

Efficacy of quetiapine in treating patients with active substance use disorder and schizophrenia

Does vagus nerve stimulation limit alcohol drinking in the alcohol-preferring Syrian golden hamster?

Risperidone and alcohol drinking in the Syrian golden hamster Janssen Research Foundation and in the alcohol-preferring "P" rat. PI: Green

2004-2010 Risperidone long-acting for alcohol and schizophrenia treatment

Janssen Research Foundation (R-LAST). PI: Green

2007-2011 Paliperidone in alcohol drinking rodents Janssen Research Foundation

2013-2014 Iloperidone for alcohol use disorder in schizophrenia **Novartis**

Past Clinical Trials 1989-1991 Risperidone in the treatment of schizophrenia Janssen Research Foundation

PI: Green 1989-1990 SDZ HDC-912 in the treatment of

Sandoz Research Institute schizophrenia PI: Green

1991-1994 Remoxipride vs. haloperidol in schizophrenic outpatients Merck, Sharp & Dome PI: Green

1993-1997 Fixed-dose olanzapine vs. placebo in the treatment of schizophrenia Eli Lilly & Co. PI: Green

OPC-14597 vs. haloperidol and placebo 1994-1996 in the treatments of schizophrenia Otsuka America Pharm., Inc.

PI: Green

1994-1996 Inpatient study of ziprasidone and haloperidol in the acute Pfizer, Inc. exacerbation of schizophrenia and schizoaffective disorder PI: Green 1994-1996 Evaluating the safety and efficacy of two dose regimens of oral Pfizer, Inc. ziprasidone and haloperidol in the maintenance treatment PI: Green of outpatients with schizophrenia or schizoaffective disorder 1994-2000 Evaluating the safety and outcome of oral ziprasidone in subjects Pfizer, Inc. who have participated in previous clinical trials of ziprasidone PI: Green 1995-1996 A dose ranging study of OPC-14597 Otsuka America Pharm., Inc. in patients with schizophrenia PI: Green 1995-2002 An open-label tolerability study of OPC 14597 Otsuka America Pharm., Inc. in schizophrenic patients PI: Green 1996-1997 Health outcomes study of Seroquel and usual care in Zeneca Pharmaceuticals schizophrenia and schizoaffective disorder PI: Green 1996-1998 A comparison of risperidone and haloperidol for prevention of relapse in subjects with schizophrenia and schizoaffective Janssen Research Foundation PI: Green disorders 1997 A phase III randomized study comparing 2 doses of intramuscular ICON Clinical Research, Inc. ziprasidone (2 mg and 20 mg) in subjects with psychosis and PI: Green acute agitation 1997-1998 A multicenter, randomized, double-blind, placebo and active controlled study of MDL 100,907 in schizophrenic and Hoescht Marion Rousel, Inc. PI: Green schizoaffective patients 1997-1999 A multicenter, open-label, long-term follow-up, safety study Hoescht Marion Rousel, Inc. of MDL 100,907 in schizophrenic and schizoaffective patients PI: Green 1997-1999 A study of aripiprazole in schizophrenia Otsuka America Pharm., Inc. PI: Green 1997-2001 The acute and long-term efficacy of Eli Lilly & Co. olanzapine in first-episode psychotic disorders PI: Green 1998-2001 Clozapine vs. olanzapine in patients with schizophrenia and suicidality **Novartis Pharmaceuticals** PI: Green

A multicenter study of aripiprazole in the

2000-2002

Bristol-Myers Squibb

treatment of patients with acute schizophrenia

PI: Green

2000-2002

A multicenter trial of iloperidone in

Novartis Pharmaceuticals

PI: Green

patients with schizophrenia

2003-2005

Atomoxetine plus olanzapine for cognitive dysfunction

Eli Lilly & Co. in schizophrenia

PI: Green

2004-2006 Memantine in psychosis

Forest Laboratories

PI: Green

2008-2010 Neurocognitive effect of sertindole versus quetiapine in

H. Lundbeck A/S patients with schizophrenia.

PI: Green

2008-2010 A phase 2 study of LY2196044 compared with naltrexone and

Eli Lilly and Co. placebo in the treatment of alcohol dependence.

PI: Green

Teaching .

2008-

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

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),

PEMM 211: Neurobiology of Schizophrenia, Geisel School of Medicine at Dartmouth

	Hairi. Gleen CV 1/12/10
	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
1994-2002	Psychosis Seminar, Harvard Longwood Psychiatry Residency
1990-2002	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,
2002	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?"
3. Invited Pres	_
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,
1004	Schizophrenia: State-of-the-Art Review Conference, Boston, MA
1994	The New Pharmacology of Schizophrenia, Dartmouth-Hitchcock Medical Center,
1004	Dartmouth Medical School, Grand Rounds, Lebanon, NH
1994	New Antipsychotic Medications,
1005	Alliance for the Mentally Ill of Cape Cod and the Islands, Hyannis, MA
1995	The New Pharmacology of Schizophrenia, Harvard-Longwood Behavioral Neurology
1995	Seminar, Brigham & Women's Hospital, Boston, MA Should the role of clozapine be expanded? American College of
1993	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?
1770	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,
2001	Program Chair. Industry Symposium, APA Annual Meeting
2001	Psychopharmacology of Comorbid Substance Use Disorders, Industry Symposium,
2001	APA Annual Meeting
2001	Substance Abuse and Schizophrenia, Satellite Symposium of 7 th World Congress
2001	on Biological Psychiatry, Berlin, Germany
2001	Psychiatry Grand Rounds, Boston University Medical Center Psychiatry Grand Rounds, Harvard Longwood Program in Psychiatry
2001	Psychiatry Grand Rounds, University of Massachusetts Medical Center
2001	Psychiatry Grand Rounds, Wayne State School of Medicine, Detroit, MI
2002	Psychiatry Grand Rounds, Wayne State School of Wedlerie, Betroit, Will 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
2002	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	
2001	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."	
2001	Vermont Substance Abuse Conference, Fairlee, VT	
2004	"Neurobiology of Addiction." Annual Scientific Convention,	
2001	New Hampshire Medical Society, Bretton Woods, NH	
2005	Keynote Address: "Early Intervention in Psychosis."	
2005	NH Chapter of the Psychiatric Nursing Association, Stoweflake, VT	
2005	"Substance Abuse and Psychosis." XII International Symposium about Current Issues	
2005	and Controversies in Psychiatry, Barcelona, Spain	
2005	Pharmacotherapy. Substance Abuse and Schizophrenia. Symposium,	
2003	American Psychiatric Association Annual Meeting, Atlanta, GA	
2005	"Drugs and the Developing Brain." Dartmouth Center for Addiction, Research and	
2005	Education Symposium	
2005	"Cannabis and Psychosis."	
2005	Symposium at American Psychiatric Association Annual Meeting, Atlanta, GA	
2005	"Novel Medications Development for Cannabis Dependence Targeting Brain Reward	
2002	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	
2005	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."	
2002	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,	
2002	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	
2000	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	٠.
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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 ³ dln Teleconference, Atlanta, GA.
2006	"Substance Abuse and the Onset, Severity and Treatment of Schizophrenia."
2006	International Society of Addiction Medicine (VIII ISAM Meeting), Oporto, Portugal. "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."
2000	Psychiatry Grand Rounds, McMaster University, Hamilton, ON, Canada. September 16.
2009	"Cannabis and Schizophrenia" October 27-November 1.
2010	American Association of Child and Adolescent Psychiatry Annual Meeting. Honolulu, HI.
2010	"Concurrent Treatment of Cannabis Dependence in Patients with Schizophrenia."
2010	American Psychiatric Association Annual Meeting, New Orleans, LA. May 22-26.
2010	"Non-Psychotic Issues of Schizophrenic Patients: Schizophrenia and Substance Abuse."
2010	American Psychiatric Association Annual Meeting, New Orleans, LA. May 22-26.
2010	"Treatment of Schizophrenia and Co-Occurring Alcoholism"
2010	Research Society on Alcoholism Annual Meeting, San Antonio, TX. June 26-30.
2010	"Essential Psychopharmacology, 2010: Practice and Update" Howard Medical School Symmer Seminary, North Followyth, MA (Cone Cod), August 2.6
2011	Harvard Medical School Summer Seminars, North Falmouth, MA (Cape Cod). August 2-6.
2011	"Essential Psychopharmacology, 2011: Practice and Update" Howard Medical School Summer Seminary, North Falmouth, MA (Cana Cod), August 1.5
	Harvard Medical School Summer Seminars, North Falmouth, MA (Cape Cod). August 1-5.

2011	"December 4' - Classic Tec. 137 1' (' - C C C 1' 1 ' - 1C 1 / A1 ' "
2011	"Deconstructing Clozapine: Toward Medications for Schizophrenia and Substance Abuse."
	CINP (Collegium Internationale Neuro-Psychopharmacologicum)
2011	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 Davidenment," 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.
rormali	v Supervised Trainees (and current position)

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

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	Medicine)	
2010 - 2013	Adina Fischer, M.D., Ph.D. (Pre-doctoral Fellow)	
	Resident Physician, Psychiatry and Research Track, Stanford University	12
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 –	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 –	Hersh Trivedi	
	Dartmouth Undergraduate Student	
2013 –	Michael Sun	
	Dartmouth Undergraduate Student	
2013 –	Mia Harrow-Mortelliti	
	Dartmouth Undergraduate Student	
2014 –	Nicholas Deveau	
	Dartmouth Undergraduate Student	
2014 - 2014	David Mallick	
	Dartmouth Graduate Rotating Student	A.
2014 –	Jared Boyce	
	Dartmouth Undergraduate Student	
2015 –	Amanda Simon	
	Dartmouth Undergraduate Student	
2015 –	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	

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.
- 19. Holinger DP, Faux SF, Shenton ME, Sokol NS, Seidman LJ, Green AI, McCarley RW. Reversed temporal region asymmetries of P300 topography in left- and right-handed schizophrenic subjects. Electroencephalography and Clinical Neurophysiology. 1992 Nov-Dec; 84: 532-537.
- 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.
- 22. Seidman LJ, Pepple JR, Faraone SV, Kremen WS, Green AI, Brown WA, Tsuang MT. Neuropsychological performance in chronic schizophrenia in response to neuroleptic dose reduction. Biological Psychiatry. 1993 Apr 15-May 1; 33: 575-584.

- 23. Green AI, Austin CP. The psychopathology of pancreatic cancer: a psychobiologic probe. Psychosomatics. 1993 May-June; 34: 208-221.
- 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.
- 28. Berman I, Sapers BL, Chang HJ, Losonczy MF, Schmildler J, Green AI. Treatment of obsessive compulsive symptoms in schizophrenic patients with clomipramine. J. Clin. Psychopharm. 1995 Jun; 15(3): 206-210.
- 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.
- 30. Green AI. Psychopharmacology -- The Fourth Generation of Progress: book review. Psychiatric Services. 1996; 47(3): 312-313.
- 31. Green AI. Treatment-resistant and treatment-intolerant schizophrenia. J. Clin. Psychiatry-Monogr. Ser. 1996; 14(2): 8-9.
- 32. Green AI. Response to clozapine: outcomes. J Clin Psychiatry Monogr. Ser. 1996; 14(2): 20-21.
- 33. Green AI. Predictors of response to clozapine. J Clin Psychiatry Monogr. Ser. 1996; 14(2):25-26.
- 34. Green AI, Patel JK. The new pharmacology of schizophrenia. The Harvard Mental Health Letter. 1996; 13: 5-7.
- 35. Beasley CM, Sanger T, Satterlee W, Tollefson G, Tran P, Hamilton S, The Olanzapine HGAP Study Group. Olanzapine versus placebo: results of a double-blind, fixed-dose olanzapine trial. Psychopharm. 1996; 124: 159-167.
- 36. Patel JK, Salzman C, Green AI, Tsuang MT. Chronic schizophrenia: response to clozapine, risperidone and paroxetine. Am. J. Psychiatry. 1997 Apr; 154(4): 543-546.
- 37. Berman I, Merson A, Allan E, Pappas D, Green AI. Differential relationships between positive and negative symptoms and neuropsychological deficits in schizophrenia. Schizophrenia Research. 1997 May; 5: 1-10.
- 38. Lyons MJ, Toomey R, Meyer JM, Green AI, Eisen SA, Goldberg J, True WR, Tsuang MT. How do genes influence marijuana use? The role of subjective effects. Addiction. 1997 Apr; 92(4): 409-417.
- 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.

- 40. Kando JC, Shepski JC, Satterlee W, Patel JK, Reams SG, Green AI. Olanzapine: a new antipsychotic agent with efficacy in the management of schizophrenia. Ann. Pharmacotherapy. 1997 Nov; 31: 1325-1334.
- 41. Strous RD, Patel JK, Green AI. Clozapine in the treatment of refractory mania. Essential Psychopharmacology. 1998; 2(4): 385-402.
- 42. Berman I, Merson A, Viegner B, Losconczy MF, Pappas D, Green AI. Obsessions and compulsions as a distinct cluster of symptoms in schizophrenia: a neuropsychological study. J.Nerv. Ment. Dis. 1998 Mar; 86: 150-156.
- 43. Canuso CM, Hanau M, Jhamb K, Green AI. Olanzapine use in women with antipsychotic-induced hyperprolactinemia. Am. J. Psychiatry. 1998 Oct; 155(10): 1458.
- 44. Canuso CM, Goldstein JM, Green AI. The evaluation of women with schizophrenia. Psychopharmacology Bull. 1998; 34(3): 271-277.
- 45. Strous RD, Patel JK, Zimmet S, Green AI. Clozapine and paroxetine in the treatment of schizophrenia with obsessive-compulsive features. Am. J. Psychiatry. 1999 Jun; 156(6): 973-974.
- 46. Green AI, Zimmet SV, Strous RD, Schildkraut JJ. Clozapine for comorbid substance use disorder and schizophrenia: do patients with schizophrenia have a reward deficiency syndrome that can be ameliorated by clozapine? Harvard Review Psychiatry. 1999 Mar-Apr; 6(6): 289-296.
- 47. Tsuang MT, Stone WS, Seidman LJ, Faraone SV, Zimmet SV, Wojcik J, Kelleher J, Green AI Treatment of nonpsychotic relatives of patients with schizophrenia: four case studies. Biological Psychiatry 1999 Jun; 45: 1412-1418.
- 48. Green AI. An Introduction to Clinical Research in Psychiatry: book review. Psychiatric Services. 2000; 51(4): 539-540.
- 49. Canuso C, Goldstein J, Green AI. Schizophrenia in women: The role of estrogen. Primary Psychiatry. 2000; 7(4): 38-44.
- 50. Green, AI. What is the relationship between schizophrenia and substance abuse? The Harvard Mental Health Letter. 2000 Oct; 17(4): 8.
- 51. Drake RE, Xie H, McHugo GJ, Green AI. The effects of clozapine on alcohol and drug use disorders among patients with schizophrenia. Schizophrenia Bulletin. 2000; 26(2): 441-449.
- 52. Zimmet SV, Strous, RD, Burgess ES, Kohnstamm S, Green AI. Effects of clozapine on substance use in patients with schizophrenia and schizoaffective disorder: A retrospective survey. J. Clin. Psychopharm. 2000 Feb; 20(1): 94-98.
- 53. Green AI, Tohen M, Patel J, Banov M, DuRand C, Berman I, Chang H, Zarate C, Posener J, Lee H, Dawson R, Richards C, Cole J, Schatzberg A. Clozapine in the treatment of refractory psychotic mania. American J. Psychiatry. 2000 Jun; 157: 982-986.
- 54. Green AI, Patel JK, Goisman RM, Allison DB, Blackburn G. Weight gain from novel anti-psychotic drugs: need for action. General Hospital Psychiatry. 2000 Jul-Aug; 22: 224-235.
- 55. Faraone SV, Green AI, Seidman LJ, Tsuang MT. "Schizotaxia": Clinical implications and new directions for research. Schizophrenia Bulletin. 2001; 27(1): 18.
- 56. Patel JK, Caplan B, Green AI, Tamminga C. First episode psychosis: Critical management issues during the first two years. Harvard Review of Psychiatry. 2001; 9: 33-41.

- 57. Stone WS, Faraone SV, Seidman LJ, Green AI, Wojcik JD, Tsuang MT. Concurrent validation of schizotaxia: pilot study. Biological Psychiatry, 2001; 50(6): 434-40.
- 58. Csernansky JG, Mahmoud R, Brenner R, Risperidone-USA-79 Study Group. A comparison of risperidone and haloperidol for the prevention of relapse in patients with schizophrenia. N Eng J Med. 2002; 346(1): 16-22.
- 59. Green AI, Salomon MS, Brenner MJ, Rawlins K. Treatment of schizophrenia and comorbid substance use disorder. Current Drug Targets, 2002; 1(2):129-39.
- 60. Elman I, Goldstein DS, Green AI, Eisenhofer G, Folio CJ, Pickar D, Breier A. Effects of risperidone on the peripheral noradrenergic system in patients with schizophrenia: a comparison with clozapine and placebo. Neuropsychopharmacology, 2002; 27(2): 293-300.
- 61. Canuso CM, Goldstein J, Wojcik J, Dawson R, Brandman D, Klibanski A, Schildkraut JJ, Green AI. Antipsychotic medication, prolactin elevation, and ovarian function in women with schizophrenia and schizoaffective disorder. Psychiatry Research, 2002; 111(1): 11-20.
- 62. Potkin SG, Anand R, Alphs L, Fleming K, InterSePT Study Group. Neurocognitive performance does not correlate with suicidality in schizophrenic and schizoaffective patients at risk for suicide. Schizophrenia Research, 2003; 59: 59-66.
- 63. Green AI, Burgess ES, Dawson R, Zimmet SV, Strous RD. Alcohol and cannabis use in schizophrenia: effects of clozapine vs. risperidone. Schizophrenia Research, 2003; 60(1): 81-85.
- 64. Green AI, Canuso CM, Brenner MJ, Wojcik JD. Detection and management of comorbidity in patients with schizophrenia. Psychiatric Clinics of North America, 2003; 26(1): 115-139.
- 65. Noordsy DL, Green AI. Pharmacotherapy for schizophrenia and co-occurring substance use disorders. Current Psychiatry Report, 2003; 5(5): 340-346.
- 66. Meltzer HY, Alphs L, Green AI, Altamura AC, Anand R, Bertoldi A, Bourgeois M, Islam MZ, Kane J, Krishnan R, Lindenmayer JP, Potkin S and the InterSePT Study Group. Clozapine treatment for suicidality in schizophrenia: International Suicide Prevention Trial (InterSePT). Archives of General Psychiatry, 2003; 60(1): 82-91.
- 67. Stone WS, Seidman LJ, Wojcik JD, Green AI. Glucose effects on cognition in schizophrenia. Schizophrenia Research, 2003; 62(1-2): 93-103.
- 68. Lieberman JA, Tollefson G, Tohen M, Green AI, Gur RE, Kahn R, McEvoy J, Perkins D, Sharma T, Zipursky R, Wei H, Hamer RM, HGDH Study Group. Comparative efficacy and safety of atypical and conventional antipsychotic drugs in first-episode psychosis: A randomized, double-blind trial of olanzapine versus haloperidol. American J. Psychiatry, 2003; 160(8): 1396-1404.
- 69. Potkin SG, Alphs L, Hsu C, Krishnan KRR, Anand R, Young FK, Meltzer H, Green A, and the InterSePT Study Group. Predicting suicidal risk in schizophrenic and schizoaffective patients in a prospective two-year trial. Biol Psychiatry, 2003; 54(4): 444-452.
- 70. Drake RE, Green AI, Mueser KT, Goldman HH. The history of community mental health treatment and rehabilitation for persons with severe mental illness. Community Mental Health Journal, 2003; 39(5): 427-440.
- 71. Lindenmayer JP, Czobor P, Alphs L, Nathan A-M, Anand R, Islam Z, Chou JCY, InterSePT Study Group. The InterSePT scale for suicidal thinking reliability and validity. Schizophrenia Research 2003; 63: 161-170.

- 72. Green AI, Tohen MF, Hamer RM, Strakowski SM, Lieberman JA, Glick I, Clark WS, HGDH Research Group. First episode schizophrenia-related psychosis and substance use disorders: acute response to olanzapine and haloperidol. Schizophrenia Research, 2004; 66(2-3): 125-135.
- 73. Le Fauve CE, Litten RZ, Randall CL, Moak DH, Salloum IM, Green AI. Pharmacological treatment of alcohol abuse/dependence with psychiatric comorbidity, Alcoholism: Clinical and Experimental Research 2004; 28(2): 302-312.
- 74. Perkins DO, Lieberman JA, Gu H, Tohen M, McEvoy J, Green AI, Zipursky RB, Strakowski SM, Sharma T, Kahn RS, Gur R, Tollefson G, HDGH Research Group. Predictors of antipsychotic treatment response in patients with first-episode schizophrenia, schizoaffective, and schizophreniform disorders. Brit J Psychiatry, 2004; 185: 18-24.
- 75. Elman I, Rott D, Green AI, Langleben DD, Lukas SE, Goldstein DS, Breier A. Effects of pharmacological doses of 2-deoxyglucose on plasma catecholamines and glucose levels in patients with schizophrenia. Psychopharmacology (Berl), 2004; 176(3-4): 369-75.
- 76. Alphs LD, Anand R, Islam MZ, Meltzer HY, Kane J, Krishnan R, Green AI, Potkin S, Chouinard G, Lindenmayer J-P, Kerwin R. The international suicide prevention trial (InterSePT): Rationale and design of a trial comparing the relative ability of clozapine and olanzapine to reduce suicidal behavior in schizophrenia and schizoaffective patients. Schizophrenia Bulletin, 2004; 30: 577-86.
- 77. Green AI, Chau DT, Keung WM, Dawson R, Mesholam RI, Schildkraut JJ. Clozapine reduces alcohol drinking in Syrian golden hamsters. Psychiatry Research, 2004; 128(1): 9-20.
- 78. Keefe RSE, Seidman LJ, Christensen BK, Hamer RM, Sharma T, Sitskoorn MM, Lewine RRJ, Yurgelun-Todd DA, Gur RC, Tohen M, Tollefson GD, Sanger TM, Lieberman JA, HGDH Research Group. Comparative effect of atypical and conventional antipsychotic drugs on neurocognition in first-episode psychosis: A randomized, double-blind trial of olanzapine versus low doses of haloperidol. American J. Psychiatry, 2004; 161(6): 985-995.
- 79. Chau DT, Roth RM, Green AI. The neural circuitry of reward and its relevance to psychiatric disorders. Current Psychiatry Reports, 2004; 6(5): 391-399.
- 80. Lieberman JA, Tollefson GD, Charles C, Zipursky R, Sharma T, Kahn RS, Keefe RSE, Green AI, Gur RE, McEvoy J, Perkins D, Hamer RM, Gu H, Tohen M for the HGDH Study Group. Antipsychotic drug effects on brain morphology in first-episode psychosis. Archives of General Psychiatry, 2005; 62(4): 361-370.
- 81. Cimpean D, Torrey WC, Green AI. Schizophrenia and co-occurring general medical illness. Psychiatric Annals, 2005; 35(1): 70-81.
- 82. Strakowski SM, Johnson JL, DelBello MP, Hamer RM, Green AI, Tohen M, Lieberman JA, Glick I, Patel JK and HGDH Research Group. Quality of life during treatment with haloperidol or olanzapine in the year following a first psychotic episode. Schizophrenia Research, 2005; 78(2-3): 161-169.
- 83. Drake RE, Brunette MF, Mueser KT, Green AI. Management of patients with severe mental illness and co-occurring substance use disorder. Minerva Psichiatrica, 2005; 46: 119-132
- 84. Zipursky R, Gu H, Green AI, Perkins DO, Tohen M, McEvoy J, Strakowski SM, Sharma T, Kahn R, Gur R, Tollefson G, Lieberman JA, HGDH Research Group. Course and predictors of weight gain in first episode patients with psychosis treated with olanzapine or haloperidol. British Journal of Psychiatry, 2005;187: 537-43.

- 85. Niznikiewicz MA, Patel JK, McCarley R, Sutton J, Chau DT, Wojcik J, Green AI. Clozapine action on auditory P3 response in schizophrenia. Schizophrenia Research, 2005; 76(1): 119-121.
- 86. Brunette MF, Noordsy DL, Green AI. A challenging mix: co-occurring schizophrenia and substance use disorders. Psychiatric Times, 2005; 22(3): 29-33.
- 87. Torrey WC, Green AI, Drake RE. Psychiatrists and psychiatric rehabilitation. J Psychiatr Pract, 2005; 11: 155-160.
- 88. Brunette MF, Noordsy DL, Green AI, Buckley PF. Pharmacologic treatments for co-occurring substance use disorders in patients with schizophrenia: A Research Review, Journal of Dual Diagnosis, 2005; 1(2): 41-55.
- 89. Roth RM, Brunette MF, Green AI. Treatment of substance use disorders in schizophrenia: A unifying neurobiological mechanism? Current Psychiatry Reports, 2005; 7(4): 283-291.
- 90. Green AI. Editorial. Journal of Dual Diagnosis, 2005; 1(2): 7-9.
- 91. Green AI. Schizophrenia and comorbid substance use disorder: effects of antipsychotics. Journal of Clinical Psychiatry, 2005; 66 (suppl 6): 21-26.
- 92. Ziedonis DM, Smelson D, Rosenthal RN, Batki SL, Green AI, Henry RJ, Montoya I, Parks J, Weiss RD. Improving the care of individuals with schizophrenia and substance use disorders: Consensus recommendations. Journal of Psychiatric Practice, 2005 Sep; 11(5): 315-339. *PMC2599914*.
- 93. Perkins DO, Johnson JL, Hamer RM, Zipursky RB, Keefe RS, Centorrhino F, Green AI, Glick IB, Kahn RS, Sharma T, Tohen M, McEvoy JP, Weiden PJ, Lieberman JA. Predictors of antipsychotic medication adherence in patients recovering from a first psychotic episode. Schizophrenia Research, 2006; 83: 53-63.
- 94. Brunette MF, Drake RE, Xie H, McHugo GJ, Green AI. Clozapine use and relapse of substance use disorder among patients with co-occurring schizophrenia and substance use disorders. Schizophrenia Bulletin, 2006; 32(4): 637-43. *PMC2632279*.
- 95. Green AI, Lieberman JA, Hamer RM, Glick ID, Gur RE, Kahn RS, McEvoy JP, Perkins DO, Rothschild AJ, Sharma T, Tohen MF, Woolson S, Zipursky RB, HGDH Study Group. Olanzapine and haloperidol in first-episode psychosis: Two year data. Schizophrenia Research, 2006; 86(1-3): 234-243.
- 96. McHugo GJ, Drake RE, Brunette MF, Xie H, Essock SM, Green AI. Enhancing validity in co-occurring disorders treatment research. Schizophrenia Bulletin, 2006; 32(4): 655-665. *PMC2632278*.
- 97. Drake RE, Green AI. Introduction: Current research on co-occurring substance use disorder in schizophrenia. Schizophrenia Bulletin, 2006; 32 (4): 616-7. PMC2632281.
- 98. Green, AI. Treatment of schizophrenia and comorbid substance abuse: Pharmacologic approaches. Journal of Clinical Psychiatry, 2006; 67(suppl 7): 31-35.
- 99. Altamura AC, Mundo E, Bassetti R, Green A, Lindenmayer JP, Alphs L, Meltzer HY. Transcultural Differences in Suicide Attempters: Analysis on a High-Risk Population of Patients with Schizophrenia or Schizoaffective Disorder. Schizophrenia Research, 2007; 89 (3): 140-146.
- 100. Green AI. Pharmacotherapy for schizophrenia and co-occurring substance use disorders. Neurotoxicity Research, 2007; 11 (1): 33-40.

- 101. Green AI, Drake RE, Brunette MF, Noordsy DL. Schizophrenia and Co-Occurring Substance Use Disorder. American Journal of Psychiatry, 2007; 164 (3): 402-408.
- 102. Green AI. Substance Abuse and Schizophrenia: Pharmacological Approaches. Journal of Dual Diagnosis, 2007; 3(2): 63-72.
- 103. Green AI, Schatzberg AF. Joseph J Schildkraut, 1934-2006. Neuropsychopharmacology, 2007; 32 (8):1855-1856.
- 104. Dunayevich E, Ascher-Svanum H, Zhao F, Jacobson JG, Phillips G, Dellva MA, Green AI. Longer Time to Antipsychotic Treatment Discontinuation for Any Cause Is Associated with Better Functional Outcomes for Patients with Schizophrenia. Journal of Clinical Psychiatry, 2007; 68(8):1163-1171.
- 105. Green AI, Noordsy DL, Brunette MF, O'Keefe CO. Substance abuse and schizophrenia: Pharmacotherapeutic intervention. Journal of Substance Abuse Treatment, 2008; 34(1): 61-71. *PMC2930488*.
- 106. Wang JF, Min JY, Hampton TG, Amende I, Yan X, Malek S, Abelmann WH, Green AI, Zeind J, Morgan JP. Clozapine-induced myocarditis: Role of catecholamines in a murine model. Eur J Pharmacol, 2008; 592(1-3):123-7. NIHMS68208.
- 107. Dawson R, Green AI, Drake RE, McGlashan TH, Schanzer B, Lavori PW. Developing and Testing Adaptive Treatment Strategies Using Substance-Induced Psychosis as an Example. Psychopharmacology Bulletin, 2008; 41(3): 51-67. *PMC2615414*.
- 108. Brunette MF, O'Keefe C, Zimmet SV, Wojcik JD, Dawson R, Green AI. Clozapine, Olanzapine, or Typical Antipsychotics for Alcohol Use Disorder in Patients with Schizophrenia. Journal of Dual Diagnosis, 2008; 4 (4): 344-354.
- 109. Riggs PD, Levin FR, Green AI, and Vocci FJ. Comorbid Psychiatric and Substance Abuse Disorders: Recent Treatment Research. Substance Abuse, 2008; 29 (3): 51-63.
- 110. Lieberman JA, Papadakis K, Csernansky J, Litman R, Volavka J, Jia XD, Gage A; MEM-MD-29 Study Group. A randomized, placebo-controlled study of memantine as adjunctive treatment in patients with schizophrenia. Neuropsychopharmacology. 2009 Apr;34(5):1322-9.
- 111. Whitfield-Gabrieli S, Thermenos HW, Milanovic S, Tsuang MT, Faraone SV, McCarley RW, Shenton ME, Green AI, Nieto-Castanon A, LaViolette P, Wojcik J, Gabrieli JDE, Seidman LJ. Hyperactivity and Hyperconnectivity of the Default Network in Schizophrenia and in First Degree Relatives of Persons with Schizophrenia. Proceedings of the National Academy of Science (PNAS), 2009, Jan 27;106(4): 1279-84. PMC2633557.
- 112. Green AI. Statement 10: Managing Substance Abuse is A Key Target of Treatment. Proceedings and Data from the Schizophrenia Summit: A Critical Appraisal to Improve the Management of Schizophrenia. Journal of Clinical Psychiatry, 2009: 70 (Suppl 1): 37-40.
- 113. Brunette MF, O'Keefe C, Dawson R, Buckley P, Green AI. An open label study of quetiapine in patients with schizophrenia and alcohol disorders. Mental Health and Substance Use: Dual Diagnosis, 2009: 2(3):203-211.
- 114. Chau DT, Gulick D, Xie H, Dawson R, Green AI. Clozapine chronically suppresses alcohol drinking in Syrian golden hamsters. Neuropharmacology, 2010: 58(2): 351-356.

- 115. Henderson MB, Green AI, Bradford PS, Chau DT, Roberts DW, Leiter JC. Deep brain stimulation of the nucleus accumbens reduces alcohol intake in alcohol preferring rats during stable drinking and after alcohol deprivation. Neurosurgical Focus, 2010: 29(2):E12-18.
- 116. Gulick D, Green AI. Role of caloric homeostasis and reward in alcohol intake in Syrian golden hamsters. Physiol Behav, 2010: 101(4): 518-526. *PMC2957184*.
- 117. Green AI, Drake RE. From the Editors. Journal of Dual Diagnosis, 2010: 6(3-4): 189-191.
- 118. Green AI, Drake RE. Current Epidemiology and Emerging Interventions for People with Cooccurring Mental Illness and Substance Use Disorders. Journal of Dual Diagnosis, 2011: 7(1-2): 1-3.
- 119. Brunette MF, Dawson R, O'Keefe CD, Narasimhan M, Noordsy DL, Wojcik J, Green AI. A randomized trial of clozapine vs. other antipsychotics for cannabis use disorder in patients with schizophrenia. Journal of Dual Diagnosis, 2011: 7(1-2): 50-63.
- 120. Green AI, Drake RE. Perspectives on Treatment. Journal of Dual Diagnosis, 2011: 7(3): 115-116.
- 121. Chau DT, Ahmed J, Wang TT, Xie H, Dawson R, Green AI. Raclopride lessens the ability of clozapine to suppress alcohol drinking in Syrian golden hamsters. Neuropharm, 2011: 61(4): 646-52.
- 122. Litten RZ, Fertig J, Falk D, Ryan M, Mattson M, Collins J, Harrison C, Ciraulo D, Green AI, Johnson B, Pettinati H, Swift R, Afshar M, Brunette MF, Ait-Daoud Tiouririne N, Kampman K, Stout R. A Double-Blind, Placebo-Controlled Trial to Assess the Efficacy of Quetiapine Fumarate in Very Heavy Drinking Alcohol-Dependent Patients. Alcoholism: Clinical and Experimental Research, 2012: 36(3):406-416. PMC3248956.
- 123. Fertig JB, Ryan ML, Falk DE, Litten RZ, Mattson ME, Ransom J, Rickman WJ, Scott C, Ciraulo D, Green AI, Tiouririne NA, Johnson B, Pettinati H, Strain EC, Devine E, Brunette MF, Kampman K, A Tompkins D, Stout R. A Double-Blind, Placebo-Controlled Trial Assessing the Efficacy of Levetiracetam Extended-Release in Very Heavy Drinking Alcohol-Dependent Patients. Alcohol Clin Exp Res, 2012: 36(8):1421-1430. *PMC3355217*.
- 124. Green AI, Drake RE. From the Editors: Journal of Dual Diagnosis. 2012: 8(1): 1.
- 125. Green AI. Long-Acting Injectable Antipsychotic Medications in Patients With Comorbid Schizophrenia and Substance Use disorders. Journal of Dual Diagnosis, 2012: 8(1): 62-63.
- 126. Drake RE, Green AI. On Silos, Moieties, and Health Care Reform. Journal of Dual Diagnosis. 2012: 8(3): 169-170.
- 127. Evins AE, Green AI, Kane JM, Murray RM Sir. The effect of marijuana use on the risk for schizophrenia. J Clin Psychiatry. 2012: 73(11): 1463-1468.
- 128. Drake RE, Green AI. Will the complexities of dual diagnosis be addressed by health care reform? Journal of Dual Diagnosis. 2013: 9(1), 1-2.
- 129. Fetter J, Brunette M, Green AI. N3 Fatty Acids for Hypertriglyceridemia in Patients Taking Second-Generation Antipsychotics. Clin Schizophr Relat Psychoses. 2013: 7(2):73-77A.
- 130. Evins AE, Green AI, Kane JM, Murray RM Sir. Does using marijuana increase the risk for developing schizophrenia? J Clin Psychiatry. 2013: 74(4): e08.
- 131. Gamsby JJ., Templeton EL, Bonvini LA, Wang W, Loros, JJ, Dunlap JC, Green, AI, and Gulick D. The Circadian Per1 and Per2 Genes Influence Alcohol Intake, Reinforcement, and Blood Alcohol Levels. Behav Brain Res, 2013: 249C:15-21. PMC3672323

- 132. Green AI, Drake RE. The Challenge of Heterogeneity and Complexity in Dual Diagnosis. Journal of Dual Diagnosis. 2013: 9(2): 105-106.
- 133. Green AI. Approaching Polypharmacy. Journal of Dual Diagnosis. 2013: 9(2): 219.
- 134. Litten RZ, Ryan ML, Fertig JB, Falk DE, Johnson B, Dunn KE, Green AI, Pettinati HM, Ciraulo DA, Sarid-Segal O, Kampman K, Brunette MF, Strain EC, Tiouririne NA, Ransom J, Scott C, Stout R, for the National Institute on Alcohol Abuse and Alcoholism Clinical Investigations Group (NCIG) Study Group. A Double-Blind, Placebo-Controlled Trial Assessing the Efficacy of Varenicline Tartrate for Alcohol Dependence. Journal of Addiction Medicine. 2013. 7(4):277-286.
- 135. Green AI, Drake RE. From the Editors. Journal of Dual Diagnosis. 2013. 9 (3): 221.
- 136. Chau DT, Khokhar JY, Dawson R, Ahmed J, Xie H, Green AI. The comparative effects of clozapine versus haloperidol on initiation and maintenance of alcohol drinking in male alcohol-preferring P rat. Alcohol. 2013. 47(8): 611-618.
- 137. Drake RE, Green AI. Is Current Dual Diagnosis Research Sufficient? Journal of Dual Diagnosis. 2013. 9 (4): 269-270.
- 138. Drake RE, Green AI. New Awareness, New Populations, New Technologies, and New Ideas. Journal of Dual Diagnosis. 2014. 10 (1): 1-2.
- 139. Fischer AS, Whitfield-Gabrieli S, Roth RM, Brunette MF, Green AI. Impaired Functional Connectivity of Brain Reward Circuitry in Patients with Schizophrenia and Cannabis Use Disorder: Effects of Cannabis and THC. Schizophrenia Research. 2014. 158(1-3):176-182.
- 140. Mesholam-Gately RI, Gibson LE, Seidman LJ, Green AI. Schizophrenia and co-occurring substance use disorder: Reward, olfaction and clozapine. Schizophrenia Research. 2014. 155 (1-3): 45-51.
- 141. Gulick D, Chau DT, Khokhar JY, Dawson R, Green AI. Desipramine enhances the ability of risperidone to decrease alcohol intake in the Syrian golden hamster. Psychiatry Research, 2014. 218(3):329-34.
- 142. Akerman SC, Brunette MF, Noordsy DL, Green AI. Pharmacotherapy of Co-Occurring Schizophrenia and Substance Use Disorders. Current Addictions Reports, 2014. 1(4): 251-260.
- 143. Drake RE, Green AI. Developing Innovative Interventions for People with Dual Diagnosis. Journal of Dual Diagnosis, 2014. 10(4):174-176.
- 144. Fischer AS, Whitfield-Gabrieli S, Roth RM, Green AI. Response to "Cortico-accumbens circuitry in schizophrenia: Merely a reward system?" by Roland and Jardri (SCHRES-14-D-00731). Schizophrenia Research. 2015. 161(2-3): 519.
- 145. Akerman SC, Green AI. Treating Tobacco Use Disorder in Pregnant Women in Medication-Assisted Treatment for an Opioid Use Disorder: A Systematic Review Journal of Substance Abuse Treatment. Journal of Substance Abuse Treatment, 2015. 52: 40-47.
- 146. Khokhar JY, Chau DT, Dawson R, Green AI. Clozapine Reconstructed: Haloperidol's Ability To Reduce Alcohol Intake In The Syrian Golden Hamster Can Be Enhanced Through Noradrenergic Modulation By Desipramine And Idazoxan. Drug and Alcohol Dependence, 2015. 152:277-281.
- 147. Chau DT, Khokhar JY, Gulick D, Dawson R, Green AI. Desipramine enhances the ability of paliperidone to decrease alcohol drinking. Journal of Psychiatric Research, 2015. 69:9-18.

- 148. Green AI, Brunette MF, Dawson R, Buckley P, Wallace A, Hafez H, Herz M, Narasimhan M, Noordsy D, O'Keefe C, Sommi RW, Steinbook RM, Weeks M. Long-acting Injectable vs. Oral Risperidone for Schizophrenia and Co-occurring Alcohol Disorder: A Randomized Trial. The Journal of Clinical Psychiatry, Epub ahead of print, August 18, 2015. dx.doi.org/10.4088
- 149. Doucette WT, Khokhar JY, Green AI. Nucleus accumbens deep brain stimulation in a rat model of binge eating. Translational Psychiatry, In Press.
- 150. Brunette MF, Akerman SC, Dawson R, O'Keefe CD, Green AI. A Pilot Study of Quetiapine Plus Mirtazapine for Heavy Drinkers with Alcohol Use Disorder. Alcohol, Submitted.

Book Chapters

- 151. Snyder SH, Kuhar MJ, Green AI, Coyle JT, Shaskan EG. Uptake and subcellular localization of neurotransmitters in the brain. In: Pfeiffer C, Smythies J, eds. International review of neurobiology. vol 13. New York: Academic Press, 1970:127-158.
- 152. Green AI. The role of the federal government in the development of narcotic antagonists. In: Braude M, Harris L, May E, Smith J, Villareal J, eds. Narcotic antagonists: advances in biochemical psychopharmacology. vol 8. New York: Raven Press, 1973:576-577.
- 153. Green AI, Meyer RE, Shader RI. Heroin and Methadone Abuse: Acute and Chronic Management. In: Shader RI, ed. Manual of psychiatric therapeutics: practical psychopharmacology and psychiatry. Boston: Little, Brown and Co., 1975:203-210.
- 154. Salzman C, Green AI. Social drugs. In: Dukes MNG, ed. Side effects of drugs annual 8. Amsterdam, Netherlands: Excerpta Medica, 1984:44-47.
- 155. Schildkraut JJ, Green AI, Mooney JJ. Affective disorders: biochemical aspects. In: Kaplan HI, Sadock BJ, eds. Comprehensive textbook of psychiatry IV. Baltimore: Williams and Wilkins, 1985:769-778.
- 156. Salzman C, Green AI. Social drugs. In: Dukes MNG, ed. Side effects of drugs annual 9. Amsterdam, Netherlands: Excerpta Medica, 1985:33-38.
- 157. Green AI, Salzman C. Social drugs. In: Dukes MNG, ed. Side effects of drugs annual 10. Amsterdam, Netherlands: Excerpta Medica. 1986:34-39.
- 158. Salzman C, Green AI. Differential therapeutics: psychopharmacology. In: APA Annual Review. 1987;6:415-427.
- 159. Green AI, Salzman C. Social Drugs. In: Dukes MNG, ed. Side effects of drugs annual 11. Amsterdam, Netherlands: Excerpta Medica, 1987:31-36.
- 160. Green AI, Mooney JJ, Schildkraut JJ. The biochemistry of affective disorders: An overview. In: Nicholi AM, Jr., ed. The New Harvard Guide to Psychiatry. Boston: Harvard, 1988:129-138.
- 161. Green AI, Salzman, C. Social Drugs. In: Dukes MNG, ed. Side effects of drugs annual 12. Amsterdam, Netherlands: Excerpta Medica, 1988:33-39.
- 162. Schildkraut JJ, Green AI, Mooney JJ. Mood disorders: biochemical aspects. In: Kaplan HI, Sadock BJ, eds. Comprehensive Textbook of Psychiatry V (vol. 1). Baltimore: Williams and Wilkins, 1989, pp 868-879.
- 163. Green AI, Salzman C. Drugs of Abuse. In: Dukes MNG and Beeley L, eds. Side Effects of Drugs Annual 13. Amsterdam, Netherlands: Elsevier Science Publishers BV, 1989:24-31.

- 164. Green AI, Salzman C. Drugs of Abuse. In: Dukes MNG and Beeley L, eds. Side Effects of Drugs Annual 14. Amsterdam: Excerpta Medica, Elsevier Science Publishers BV 1990:28-34.
- 165. Green AI, Watsky EJ, Salzman C. Drugs of Abuse. In: Dukes MNG and Aronson JK, eds. Side Effects of Drugs Annual 15. Amsterdam: Elsevier Science Publishers BV. 1991:27-34.
- 166. Green AI, Watsky EJ, Salzman C. Drugs of Abuse. In: Dukes MNG and Aronson JK, eds. Side Effects of Drugs Annual 16. Amsterdam: Elsevier Science Publishers BV. 1993:22-28.
- 167. Shader RI, Green AI, Pildis MJ. Opioid abuse and dependence: Acute and chronic treatment. In: Shader RI. Manual of Psychiatric Therapeutics (2nd edition). Boston: Little Brown & Co. 1994:99-108.
- 168. Wong E, Salzman C, Green AI. Drugs of Abuse. In: Dukes MNG and Aronson JK. eds. Side Effects of Drugs Annual 17. Amsterdam: Elsevier Science Publishers BV. 1994:35-41.
- 169. Wong E, Patel JK, Green AI. Drugs of Abuse. In: Dukes MNG and Aronson JK, eds. Side Effects of Drugs Annual 18. Amsterdam, Netherlands: Elsevier Science Publishers BV. 1995:35-42.
- 170. Green AI, Mooney JJ, Posener JA, Schildkraut JJ. Mood disorders: biochemical aspects. In: Kaplan HI, Sadock BJ, eds. Comprehensive Textbook of Psychiatry VI. Baltimore, MD: Williams and Wilkins, 1995: 1089-1102.
- 171. Wong E, Patel JK, Green AI. Drugs of Abuse. In: Aronson JK, van Boxtel CJ, eds. Side Effects of Drugs Annual 19. Amsterdam, Netherlands: Elsevier Science Publishers BV. 1996:24-32.
- 172. Green AI, Tsuang MT, Schildkraut JJ. Catecholamines, their metabolites and response to typical and atypical neuroleptics. In: Friedhoff AJ and Amin F. eds. Plasma HVA Studies in Schizophrenia: Implications for Presynaptic Dopamine Dysfunction. American Psychiatric Association Press, 1997:61-78.
- 173. Patel, JK, Wong E, Green AI. Drugs of Abuse. In: Aronson JK, van Boxtel CJ, eds. Side Effects of Drugs Annual 20. Amsterdam, Netherlands: Elsevier Science Publishers BV. 1997:19-29.
- 174. Patel, JK, Wong E, Green AI. Drugs of Abuse. In: Aronson JK, van Boxtel CJ, eds. Side Effects of Drugs Annual 21. Amsterdam, Netherlands: Elsevier Science Publishers BV. 1998:22-36.
- 175. Tsuang MT, Faraone SV, Green AI. Schizophrenia and other psychotic disorders. In: Nicholi AM, Jr., ed. The New Harvard Guide to Psychiatry. Boston: Harvard, 1999; 240-280.
- 176. Wong E, Patel J, Green AI. Drugs of Abuse: In: Aronson JK, ed. Side Effects of Drugs Annual 22. Amsterdam, Netherlands: Elsevier Science Publishers BV. 1999:29-38.
- 177. Wong E, Patel J, Green AI. Drugs of Abuse: In: Aronson JK, ed. Side Effects of Drugs Annual 23. Amsterdam, Netherlands: Elsevier Science Publishers BV. 2000:34-43.
- 178. Wong E, Patel J, Green AI. Drugs of Abuse: In: Aronson JK, ed. Side Effects of Drugs Annual 24. Amsterdam, Netherlands: Elsevier Science Publishers BV. 2001:32-44.
- 179. Patel J, Wong E, Green AI. Drugs of Abuse: In: Aronson JK, ed. Side Effects of Drugs Annual 25. Amsterdam, Netherlands: Elsevier Science Publishers BV. 2002:34-46.
- 180. Woo TUW, Zimmet SV, Wojcik JD, Canuso CM, Green AI. Treatment of Schizophrenia. In Nemeroff C and Schatzberg AF, eds. The American Psychiatric Publishing Textbook of Psychopharmacology, Third Edition. American Psychiatric Publishing, Inc., 2003:885-912.

- 181. Brunette MF, Noordsy DL, Green AI. Co-occurring Substance Use and Other Psychiatric Disorders. In Lieberman JA, Stroup TS, Perkins DO, eds. The American Psychiatric Publishing Textbook of Schizophrenia, First Edition. American Psychiatric Publishing, Inc., 2006: 223-244.
- 182. Woo TUW, Zimmet SV, Wojcik JD, Canuso CM, Green AI. Treatment of Schizophrenia. In Schatzberg AF and Nemeroff C eds. Essentials of Clinical Psychopharmacology, Second Edition. American Psychiatric Publishing, Inc., 2006:503-533.
- 183. Green AI. Antipsychotics. In Kranzler HR and Korsmeyer P, eds. Encyclopedia of Drugs, Alcohol, & Addictive Behavior, Third Edition. Detroit, MI: McMillan Reference USA, Nov 19, 2008:4, 189-190.
- 184. Woo TUW, Canuso CM, Wojcik JD, Brunette MF, Green AI. Treatment of Schizophrenia. In Nemeroff C and Schatzberg AF, eds. The American Psychiatric Publishing Textbook of Psychopharmacology, Fourth Edition. American Psychiatric Publishing, Inc., Jan 6, 2009: 1135-1169.
- 185. Brunette MF, Noordsy DL, Green AI. Co-occurring Substance Use and Other Psychiatric Disorders. In Lieberman JA, Stroup TS, Perkins DO, eds. Essentials of Schizophrenia, First Edition. American Psychiatric Publishing, Inc., 2011: 131-158.
- 186. Woo TUW, Canuso CM, Wojcik JD, Brunette MF, Green AI. Treatment of Schizophrenia. In Nemeroff CB and Schatzberg AF, eds. Essentials of Psychopharmacology, Third Edition. American Psychiatric Publishing, Inc., 2013: 607-636.
- 187. Woo TUW, Canuso CM, Wojcik JD, Noordsy D, Brunette MF, Green AI. Treatment of Schizophrenia. In Nemeroff CB and Schatzberg AF, eds. Essentials of Psychopharmacology, Fifth Edition. American Pscyhiatric Publishing, Inc., In Press.

Research Abstracts:

- 188. Snyder SH, Green AI. Regional uptake kinetics of norepinephrine-H3 in rat brain. Pharmacologist. 1967 Aug; 9:183.
- 189. Green AI, Haubrich DR. Accumulation of radioactivity after incubation of rat brain slices with H3 choline. Trans Am Soc Neurochemistry. 1971; 2:75.
- 190. Salzman C, Green AI, Rodriguez-Villa F, Jaskiw G. Lorazepam-neuroleptic combination for acute disruptive behavior. American College of Neuropsychopharmacology Annual Meeting Abstracts.1985:189.
- 191. Green AI, Faraone SV, Brown WA. Prolactin shifts after neuroleptic withdrawal. APA New Research Abstracts, 140th Annual Meeting.1987 May: 77.
- 192. Shumway D, Tsuang M, Yin P, Faraone SV, Brown WA, Green AI. Eighty percent neuroleptic reduction in chronic psychotics. APA New Research Abstracts, 140th Annual Meeting. 1987 May: 76.
- 193. Faraone SV, Green AI, Tsuang MT, Yin P, Brown WA. Dosage reduction in neuroleptic refractory patients. APA New Research Abstracts, 141st Annual Meeting, 1988 May: 136.
- 194. Green AI, Alam M, Mooney JJ, Osser D, Richards GR, Salzman C. Symptom changes in fluphenazine decanoate patients. World Psychiatric Association Regional Symposium Book of Abstracts. 1988: 329.
- 195. Green AI, Boshes R, Cohen B. Schizophrenia -- psychopharmacologic strategies. World Psychiatric Association Regional Symposium Book of Abstracts. 1988:188.

- 196. Green AI, Faraone SV, Brown WA. Neuroleptic withdrawal: prolactin, symptom and abnormal movement correlations. American College of Neuropsychopharmacology Annual Meeting Abstracts. 1988:159.
- 197. Salzman C, Solomon D, Miyawaki E, Glassman R, Green AI. Benzodiazepine-neuroleptic control of psychotic behavior. American College of Neuropsychopharmacology Annual Meeting Abstracts, 1988:120.
- 198. Green AI, Faraone SV, Brown WA, Tsuang MT. The rate of neuroleptic dose reduction affects relapse rate in remitted schizophrenic patients. American College of Neuropsychopharmacology Annual Meeting Abstracts, 1989:112.
- 199. Green AI, Alam MY, Salzman C, Schatzberg AF, Schildkraut JJ. Plasma HVA and response to clozapine. Biol. Psychiatry, 1991; 29: 410S.
- 200. Green AI, Faraone SV, Brown WA, Tsuang MT. Neuroleptic reduction: development of subgroups. APA New Research Abstracts, 144th Annual Meeting. 1991: 226.
- 201. Green AI, Alam MY, Pappalardo KM, Salzman C, Schatzberg AF, Schildkraut JJ. Catecholamine metabolites and clozapine response. APA New Research Abstracts. 1991:144.
- 202. Green AI, DuRand CJ, Chang HJ, Berman I, Pappalardo KM, Schildkraut JJ. Catecholamine metabolites and clozapine response. APA Proceedings, 159, 1992.
- 203. Green AI, Alam MY, Boshes RA, Pappalardo KM, Fitzgibbon ME, Schildkraut JJ. Biochemical effects of clozapine and haloperidol. APA New Research Abstracts. 1992:145-146.
- 204. Chang HJ, Green AI, Boshes RA, Alam MY, Schildkraut JJ. Prolactin decrease and response to haloperidol. APA New Research Abstracts. 1992:20.
- 205. Green AI, Faraone SV, Brown WA, Guttierez J, Tsuang MT. Neuroleptic dose reduction studies: Clinical and neuroendocrine effects. American College of Neuropsychopharmacology Annual Meeting Abstracts, 1992.
- 206. Green AI, Jaretz NJ, Chang HHJ, Patel JK, Schildkraut JJ. Clinical neurobiology in the public sector. APA Proceedings, 1993:211.
- 207. Berman I, Sapers BL, Chang HHJ, Alpert M, Losonczy M, Green AI. Adjunctive clomipramine in obsessive schizophrenia. APA New Research Abstracts. 1993:61.
- 208. Cole JO, Zarate CA, Banov MD, Green AI. Clozapine in affective disorders. American College of Neuropsychopharmacology Annual Meeting Abstracts. 1993:69.
- 209. Cole JO, Green AI, Banov M, Patel JK, Chang HHJ, Tohen M. Clozapine in refractory manic psychosis. APA New Research Abstracts. 1993:455.
- 210. Green AI, Risperidone Study Group. Risperidone: A one-year open-label study. APA New Research Abstracts. 1994:614.
- 211. Patel J, Green AI, Banov M, Tohen M, Schatzberg AF, Cole JO. Clozapine Use in Treatment Refractory Mania and Psychosis. APA New Research Abstracts 1995:183.
- 212. Patel J, Green AI, Kalinowski A, Jaretz NJ, Schildkraut JJ. Serum prolactin level and clinical response to clozapine. APA New Research Abstracts. 1994:32.

- 213. Dooley PT, Patel JK, Kalinowski AG, Shafa R, Canuso CM, Green AI. Schizophrenia research subjects: gender differences. APA New Research Abstracts. 1996:118.
- 214. Kalinowski AG, Alam M, Patel JK, Schildkraut JJ, Green AI. Symptom instability and fluphenazine decanoate. APA New Research Abstracts. 1996;225.
- 215. Shafa R, Patel JK, Kalinowski AG, Schildkraut JJ, Green AI. Pituitary microadenoma, risperidone and clozapine. APA New Research Abstracts. 1996:80.
- 216. Stone WS, Seidman LJ, Kalinowski A, Shagrin B, Patel JK, Shafa R, Canuso C, Schildkraut JJ, Green AI. Effects of clozapine on cognitive functioning in treatment-refractory schizophrenia. Schiz Res 1997;24(1-2):188-189.
- 217. Strous RD, Faraone SV, Richards C, Yin P, Gutierrez J, Tsuang MT, Green AI. Tardive dyskinesia scores as predictor of relapse with neuroleptic dose reduction. Intl. Congress on Schizophrenia Research Abstracts. 1997. Schiz Res 1997;24(1-2): 273.
- 218. Strous RD, Faraone SV, Yin PY, Green AI. The predictive value of tardive dyskinesia scores for relapse with neuroleptic dose reduction. Psychopharmacology Bulletin, 1997; 33(3): 590.
- 219. Green AI, Drake RE, Zimmet SV, Strous RD, Burgess ES, Wie H, McHugo G, Schildkraut JJ. Alcoholism and schizophrenia: Effects of clozapine. American College of Neuropsychopharmacology Annual Meeting Abstracts, 1998.
- 220. Tsuang MT, Stone WS, Seidman LJ, Faraone SV, Zimmet S, Wojcik J, Kelleher J, Green A. Prediction of risk factors and early intervention in non-schizophrenic relatives of patients with schizophrenia. American College of Neuropsychopharmacology Annual Meeting Abstracts, 1998; 52.
- 221. Tsuang MT, Stone WS, Seidman LJ, Faraone SV, Zimmet SV, Wojcik J, Kelleher J, Green AI. Treatment of nonpsychotic relatives of patients with schizophrenia: four case studies. ANCP Abstracts, 1998.
- 222. Tsuang MT, Stone WS, Seidman LJ, Faraone SV, Zimmet S, Wojcik J, Kelleher J, Green AI. Steps towards the identification and treatment of schizotaxia. Biological Psychiatry, 1999; 45(8S): 104S.
- 223. Tsuang MT, Stone WS, Seidman LJ, Zimmet S, Wojcik J, Kelleher J, Green AI. Treatment of non-psychotic relatives of patients with schizophrenia: implications for research on prevention.

 Schizophrenia Research, 1999: 36(1-3):299.
- 224. Canuso CM, Goldstein JM, Wojcik J, Klibanski A, Bazar J, Green AI. Ovarian function in women with schizophrenia. Schizophrenia Research, 1999: 36(1-3): 273.
- 225. Green AI, Drake RE, Zimmet SV, Strous RD, Burgess E, Xie H, McHugo G, Kohnstamm S, Schildkraut JJ. Alcoholism and schizophrenia: Effects of clozapine. International Congress on Schizophrenia Abstracts 1999. Schizophrenia Research, 1999: 36(1-3): 280-281.
- 226. Goodman JM, Seidman LJ, Patti M, Strous RD, Strauss M, Caplan B, Patel JK, Zimmet S, Jenkins B, Green AI. A functional MRI study of working memory in first episode schizophrenic patients. International Congress on Schizophrenia Abstracts 1999. Schizophrenia Research, 1999: 36(1-3): 221-222.
- 227. Green, AI. Effects of antipsychotic induced prolactin elevation. Curr. Opin. Psychiatry Vol. 12 Supp 1, 197. 1999.

- 228. Strous RD, Zimmet SV, Burgess ES, Green AI. Clozapine use in dual diagnosis substance abuse and schizophrenia. Benefits and mechanism of action. Neuroscience Letters, 1999; Suppl 54: S39.
- 229. Canuso CM, Goldstein JM, Green AI. Ovarian Function in Women with Schizophrenia. Neuropsychopharmacology 2000 23(52), 533.
- 230. Green AI. Gender and Schizophrenia: The Role of Antipsychotic therapy. Neuropsychopharmacology 2000 23(52), 534.
- 231. Green AI, Tohen MF, Strakowski SM, Lieberman JA, Glick I, Clarke SW, HGDH Study Group. Comorbid substance use disorder and first episode schizophrenia: acute effects of olanzapine versus haloperidol. American College of Neuropsychopharmacology Annual Meeting Abstracts, 2000, 351.
- 232. Patel JK, Niznikiewisc M, Shafa R, Singh J, Canuso C, McCarley RW, Green AI. Clozapine enhances P300 amplitude in patients with schizophrenia. American College of Neuropsychopharmacology Annual Meeting Abstracts, 2000, 341.
- 233. Tsuang MT, Stone W, Faraone S, Seidman L, Wojcik J, Green A. Clinical implications of schizotaxia. World J. Biol. Psychiatry 2001, 138S.
- 234. Canuso CM, Goldstein JM, Wojcik J, Dawson R, Brandman D, Klibanski A, Green A. Ovarian dysfunction in women with schizophrenia: is hyperprolactinemia the whole story? Schiz. Res. 2001 49 (2 Suppl 1), 282.
- 235. Patel JK, Niznikiewicz MA, Shafa R, Jaskaran S, Canuso CM, McCarley RW, Green A. Clozapine enhances P300 amplitude in patients with schizophrenia. Schiz. Res. 2001 49 (2 Suppl 1), 255.
- 236. Green A, Tohen M, Strakowski SM, Lieberman JA, Glick ID, Clarke SW, HGDH Study Group. Comorbid substance use disorder and first episode schizophrenia: acute effects of olanzapine versus haloperidol. Schiz. Res. 2001 49 (2 Suppl 1), 230.
- 237. Perkins D, Boteva K, Green A, McEvoy J, Zipursky RB, Tohen M, HGDH Study Group. Duration of untreated illness in first-episode schizophrenia, schizophreniform, or schizoaffective disorders. Schiz. Res. 2001 49 (2 Suppl 1), 19-20.
- 238. Meltzer HY, Alphs L, Altamura C, Kerwin R, Chouinard G, Green A, Lindenmayer JP, Potkin S, Islam Z, Kane J, Krishnan R, Anand, R. Effect of clozapine on the reduction of suicidality in schizophrenia and schizoaffective disorder. American College of Neuropsychopharmacology Annual Meeting Abstracts, 2001, 195.
- 239. Elman I, Goldstein DS, Green AI, Pickar D, Breier A. Effects of risperidone on the peripheral noradrenergic system in patients with schizophrenia: a comparison with clozapine and placebo. American College of Neuropsychopharmacology Annual Meeting Abstracts, 2001, 163.
- 240. Green AI, Burgess ES, Zimmet SV, Dawson R, Strous RD. Alcohol and cannabis use in schizophrenia: effects of clozapine vs. risperidone. American College of Neuropsychopharmacology Annual Meeting Abstracts, 2001, 374.
- 241. Green AI, Keung WM, Chau DT, Dawson R, Mesholam RI, Schildkraut JJ. Clozapine Dramatically Reduces Alcohol Drinking In Hamsters. American College of Neuropsychopharmacology Annual Meeting Abstracts, 2003, 105.
- 242. Lieberman JA, Charles HC, Sharma T, Zipursky RB, Kahn R, Gur RE, Tohen M, Green AI, McEvoy JP, Perkins DO, Hamer RM, Nemeroff CB, Rothschild AJ, Kuldau JM, Strakowski SM, Tollefson GD, HGDH R. Group. Antipsychotic drug effects on progression of brain morphology in first

- episode schizophrenia. American College of Neuropsychopharmacology Annual Meeting Abstracts, 2003, 42.
- 243. Renshaw PF, Yurgelun-Todd DA, Wei H, Charles HC, Cohen BM, Tohen MF, Sharma T, Zipursky R, Kahn R, Gur R, Green AI, McEvoy J, Perkins D, Hamer RM, Nemeroff C, Rothchild A, Kuldau J, Strakowski S, Tollefson G, Lieberman J, and the HGDH Research Group. Olanzapine induced reductions in frontal lobe lactate levels correlate with treatment response in first episode psychosis. American College of Neuropsychopharmacology Annual Meeting Abstracts, 2003, 370.
- 244. Green AI, Keung WM, Chau DT, Dawson R, Mesholam RI, Schildkraut JJ. Clozapine Limits Alcohol Drinking in Hamsters: Implications For Treatment Of Schizophrenia. Schizophrenia Research, 2003; 60(1):312.
- 245. Lieberman J, Charles HC, Sharma T, Zipursky R, Kahn R, Gur R, Tohen M, Green AI, McEvoy J, Perkins D, Hamer RM, Nemeroff C, Rothschild A, Kuldau J, Strakowski S, Tollefson GD. Antipsychotic Treatment Effects On Progression Of Brain Pathomorphology In First Episode Schizophrenia. Schizophrenia Research, 2003; 60(1):293.
- 246. McEvoy J, Lieberman JA, Perkins D, Hamer RM, Sharma T, Zipursky R, Kahn R, Gur R, Centorrino F, Glick I, Green AI, Nemeroff C, Rothschild A, Strakowski S, Tohen M, Tollefson, GD. Long-Term Efficacy And Safety Of Atypical And Conventional Antipsychotic Drugs In First Episode Schizophrenia. Schizophrenia Research, 2003; 60(1):313.
- 247. Zipursky R, Gu H, Green AI, Centorrina I, Glick I, Perkins DO, McEvoy J, Sharma T, Gur R, Strakowski SM, Kahn R, Nemeroff C, Rothschild A, Lieberman JA. Clinical Correlates Of Weight Gain In First Episode Psychosis Patients Treated With Olanzapine. Schizophrenia Research, 2003; 60(1):372.
- 248. McEvoy J, Lieberman JA, Perkins D, Hamer RM, Sharma T, Zipursky R, Kahn R, Gur R, Centorrino F, Glick I, Green AI, Nemeroff C, Rothschild A, Strakowski S, Tohen M, Tollefson, GD. Long-Term Efficacy And Safety Of Atypical And Conventional Antipsychotic Drugs In First Episode Schizophrenia. Biological Psychiatry, 2003;53(85):65S.
- 249. Renshaw PF, Yurgelun-Todd DA, Wei H, Charles HC, Tohen M, Sharma T, Zipursky RB, Kahn R, Gur RE, Green AI, McEvoy JP, Perkins DO, Hamer RM, Nemeroff CB, Rothschild AJ, Kuldau JM, Strakowski SM, Tollefson GD, Lieberman JA. Olanzapine Induced Reductions In Frontal Lobe Lactate Levels Correlate With Treatment Response in First Episode Psychosis. Biological Psychiatry, 2003; 53(8S):67S.
- 250. Lieberman J, Charles HC, Sharma T, Zipursky R, Kahn R, Gur R, Tohen M, Green AI, McEvoy J, Perkins D, Hamer RM, Nemeroff C, Rothschild A, Kuldau J, Strakowski S, Tollefson GD. Antipsychotic Treatment Effects On Progression Of Brain Pathomorphology In First Episode Schizophrenia. Biological Psychiatry, 2003; 53(8S):178S.
- 251. Perkins DO, Lieberman JA, Gu H, Tohen M, McEvoy JP, Green AI, Zipursky RB, Strakowski SM, Sharma T, Kahn R, Gur RE, Tollefson GD. Predictors Of Antipsychotic Treatment Response In Patients With First Episode Schizophrenia, Schizoaffective, and Schizophreniform Disorders. Biological Psychiatry, 2003; 53(8S):182S-183S.
- 252. Zipursky R, Gu H, Green AI, Centorrina I, Glick I, Perkins DO, McEvoy J, Sharma T, Gur R, Strakowski SM, Kahn R, Nemeroff C, Rothschild A, Lieberman JA. Clinical Correlates Of Weight Gain In First Episode Psychosis Patients Treated with Olanzapine. Biological Psychiatry, 2003; 53(8S):185S.

- 253. Centorrino F, Hamer RM, Tohen M, Glick ID, McEvoy JP, Perkins DO, Sharma T, Zipursky RM, Kahn R, Gur RE, Green AI, Nemeroff CB, Rothschild AJ, Strakowski SM, Tollefson GD, Lieberman JA. Drug Attitudes and Treatment Adherence In A Clinical Trial Comparing Haloperidol and Olanzapine in First Episode Schizophrenia. Biological Psychiatry, 2003; 53(85):186S.
- 254. Green AI. Schizophrenia and substance abuse. Role of antipsychotics. Nordic Journal of Psychiatry, 2004; 58(2): 89.
- 255. Zipursky RB, Gu H, Charles C, Sharma T, Green AI, Gur RE, Kahn RS, Perkins D, Keefe R, Hamer RM, Tollefson GD, Tohen M, Lieberman JA. Clinical Correlates of MRI Brain Volumes in First Episode Psychosis, Schizophrenia Bulletin, 2005; 31(2): 408
- 256. Dunayevich E, Zhao F, Ascher-Svanum A, Mitchell CP, Phillips GA, Dellva MA, Green A. Longer time to all-cause antipsychotic discontinuation is associated with better schizophrenia treatment outcomes, Biol Psychiatry, 2005; 57:107S
- 257. Chau DT, Green AI. Aripiprazole Decreases Alcohol Drinking in Syrian Golden Hamsters. Neuropsychopharmacology, 2005; 30 (Suppl 1): S144-S145.
- 258. Green AI. Substance Abuse and Schizophrenia. Pharmacological Approaches. 24th CINP Congress. International Journal of Neuropsychopharmacology, 2006; 9(Suppl 1): S43.
- 259. Green AI, Brunette M, Noordsy D, Roth R. Treatment of comorbid cannabis use and schizophrenia. AACAP Annual Meeting Scientific Proceedings, 2006.
- 260. Green AI, Hamer RM, Woolson SL, Tohen M, Lieberman JA, HGDH Study Group. First episode psychosis and substance abuse: a two-year efficacy trial of olanzapine vs. haloperidol. American College of Neuropsychopharmacology Annual Meeting Abstracts. Neuropsychopharmacology, 2006; 31(Suppl 1): S112.
- 261. Green AI, Chau DT, Henderson MB, Ahmed J. Clozapine for alcohol abuse in schizophrenia: insights from clinical and animal studies, American College of Neuropsychopharmacology Annual Meeting Abstracts, 2007, 30.
- 262. Green AI, Hamer RM, Woolson SL, Tohen M, Lieberman JA, HGDH Study Group. First episode psychosis and substance abuse: a two-year efficacy trial of olanzapine vs. haloperidol. Abstracts for the 11th International Congress on Schizophrenia Research. Schizophrenia Bulletin, 2007; 33(2): 431.
- 263. Chau DT, Green AI. Clozapine for alcohol abuse in schizophrenia: Insights from animal studies. Research Society on Alcoholism Annual Conference abstracts. Alcoholism-Clinical and Experimental Research, 2008: 32(6):84A.
- 264. Whitfield-Gabrieli S, Thermenos HW, Milanovic S, Tsuang MT, Faraone SV, McCarley RW, Shenton ME, Green AI, LaViolette P, Wojcik J, Gabrieli JDE. Hyperactivity and Hyperconnectivity of the Default Network in Schizophrenia and in First Degree Relatives of Persons with Schizophrenia. Biological Psychiatry, 2008: 63(7 supplement 1): 272S.
- 265. Green AI. Early Detection and Treatment of Schizophrenia with Co-occurring Cannabis Use Disorder. American Academy of Child and Adolescent Psychiatry Annual Meeting Abstract. 2009.
- 266. Green AI, Brunette MF, Dawson R, Narasimhan M, Wallace A, Herz M, Sommi R, Buckley P, R-LAST Study Team. Oral vs. Long-acting Injectable Risperidone in Schizophrenia and Co-Occurring

- Alcohol Use Disorder. American College of Neuropsychopharmacology Annual Meeting Abstracts. Neuropsychopharmacology, 34, 2009.
- 267. Narasimhan M, Brunette MF, Dawson R, O'Keefe CD, Weeks MH, Buckley PF, Green AI. Longacting Risperidone for Schizophrenia and Co-Occurring alcohol Use Disorder. Abstracts for the 12th International Congress on Schizophrenia Research. Schizophrenia Bulletin, 2009: 35(suppl 1): 343.
- 268. Noordsy DL, Marshall JF, Smith JN, Green AI. Clozapine vs. Risperidone for People with First Episode Schizophrenia and Co-Occurring Cannabis Use Disorder. Abstracts for the 12th International Congress on Schizophrenia Research. Schizophrenia Bulletin, 2009: 35(suppl 1): 366.
- 269. Brunette M, Green AI, Buckley PF, O'Keefe C, Dawson R. Quetiapine for the Treatment of Patients with Schizophrenia and Alcohol Use Disorders. Abstracts for the 12th International Congress on Schizophrenia Research. Schizophrenia Bulletin, 2009: 35(suppl 1): 371.
- 270. Gulick D, Chau DT, Green AI. Clozapine decreases alcohol consumption but not sucrose consumption in Syrian Golden hamsters. Society for Neuroscience Annual Meeting 2009 Abstracts.
- 271. Gulick D, Chau D, Ahmed J, Wang T, Xie H, Dawson R, Green A. Raclopride Lessens the Ability of Clozapine to Suppress Alcohol Drinking in Syrian Golden Hamsters. American College of Neuropsychopharmacology Annual Meeting Abstracts. Neuropsychopharmacology, 35, 2010: S285.
- 272. Gulick D, Green AI. Role of caloric content and reward value in the consumption of alcohol by the Syrian golden hamster. Program No. 66.4. 2010 Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, 2010. Online.
- 273. Noordsy D, Smith JN, Green AI. Clozapine vs. Risperidone for People with First Episode Schizophrenia and Co-Occurring Cannabis Use Disorder. Second Biennial Schizophrenia International Research Society Conference. Schizophrenia Research, 2010, 117(2): 165-166.
- 274. Liebman HM, Pietersen CY, Thermenos H, Seidman LJ, Green AI, Woo TUW. The addition of tiagabine to antipsychotic medication in the treatment of recent-onset schizophrenia by modification of developmental pruning of prefrontal circuitry. Program No. 880.26. 2010 Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, 2010. Online.
- 275. Abdel-Fadeel NAM, McCarley R, Mesholam-Gately R, Wojcik J, Green A, Goldstein JM, Seidman LJ. Gender Differences in Clinical Presentation of First Episode Psychosis: Relationship to Premorbid Adjustment. Abstracts for the 13th International Congress on Schizophrenia Research. Schizophrenia Bulletin, 2011: 37(suppl 1): 275.
- 276. Green A, Chau DT, Gulick D, Ahmed J, Epstein K, Dawson R. Deconstructing clozapine: Toward medication development for alcoholism in schizophrenia. Abstracts for the 13th International Congress on Schizophrenia Research. Schizophrenia Bulletin, 2011: 37(suppl 1): 288.
- 277. Brunette MF, Dawson R, O'Keefe CD, Narasimhan M, Noordsy D, Wojcik J, Green AI. Clozapine vs. other antipsychotics for schizophrenia and co-occurring cannabis use disorder. Abstracts for the 13th International Congress on Schizophrenia Research. Schizophrenia Bulletin, 2011: 37(suppl 1): 297.
- 278. Shaskan NK, Thermenos HW, Seidman LJ, Green A, Woo TUW. The addition of tiagabine to antipsychotic medication in the treatment of recent-onset schizophrenia by modification of developmental reorganization of prefrontal circuitry. Abstracts for the 13th International Congress on Schizophrenia Research. Schizophrenia Bulletin, 2011: 37(suppl 1): 320.

Curriculum Vitae

William Roger Keller, M.D.

Assistant Professor, Department of Psychiatry, Geisel School of Medicine at Dartmouth

Date

January 12, 2016

Ed	u	ca	ti	01	n

2002 B.A., Mathematics, University of Maryland Baltimore County (Cum Laude)

2006 M.D., University of Texas Southwestern Medical School

Post Graduate Education and Training

2006 – 2011 Residency Research Track, Psychiatry, University of Maryland / Sheppard Pratt (Mentor

Robert Buchanan, MD)

2011 – 2013 Fellowship, NIMH-Funded (T32) Multidisciplinary Schizophrenia Research Fellowship,

Maryland Psychiatric Research Center, University of Maryland School of Medicine

(Mentor Robert Buchanan, MD)

Certifications

2011 Diplomat, American Board of Psychiatry and Neurology (ABPN)

2011 DEA-Recognized Waiver for Prescribing Narcotics for Maintenance or Detoxification

(allows prescription of buprenorphine in an office based setting)

Medical Licensures

2015 New Hampshire, Active

2008 Maryland, Active

Military Service

2012 - present Direct Commissioned Officer, Medical Corps, United States Army (Reserve Component)

Rank: Major (O4)

327th Combat Stress Control, Fort Dix, New Jersey

Employment

2016 – present	Assistant Professor of Psychiatry, Geisel School of Medicine at Dartmouth
2013 - 2015	Assistant Professor of Psychiatry, University of Maryland School of Medicine
2013 - 2015	Psychiatrist Baltimore VA Medical Center, Without Compensation Appointment
2010 - 2013	Staff Psychiatrist, Sheppard Pratt Hospital, Towson, Maryland (part-time)
2010 - 2013	Psychiatrist on Duty, Baltimore VA Medical Center, Baltimore, Maryland (per diem)

Professional Society Memberships

2003 - present American Medical Association 2010 - present American Psychiatric Association

2010 - 2015	Maryland Psychiatric Society
2010 - 2015	Maryland State Medical Society

Honors and Awards

1998 - 2002	Maryland Distinguished Scholar Award, Merit Scholarship
1998 - 2002	President's Fellow Award at University of Maryland Baltimore County, Merit
	Scholarship
2001	Golden Key National Honor Society
2002	Phi Beta Kappa
2004	Outstanding Presentation at 42 nd Medical Student Research Forum
2006	Excellence on the PRITE (Psychiatry Resident in Training Exam)
2007	Excellence on the PRITE (Psychiatry Resident in Training Exam)
2009	Excellence on the PRITE (Psychiatry Resident in Training Exam)
2009	Workshop Fellow American Society of Clinical Psychopharmacology Workshop on
	Clinical Trials
2011	Taylor Award for Best Resident Research Paper, University of Maryland School of
,	Medicine, Department of Psychiatry
2011	American Psychiatric Institute for Research and Education (APIRE)/Clinical Trials
	Research Fellowship Award, American Psychiatric Association (stipend \$45,000)
2012	The International Society for CNS Clinical Trials and Methodology New Investigator
	Award
2012	Seventeenth Annual Research Colloquium Award for Junior Investigators sponsored by
	American Psychiatric Association APA Workgroup on Research Training

Clinical Activities and Expertise

Board certified psychiatrist with clinical and research focus in the area of chronic and severe mental illness, schizophrenia, and schizoaffective disorder.

Administrative Service

Institutional Service

2007 - 2009	University of Maryland Medical Center Hospital Ethics Committee
2007	Donaldson Brown Psychiatry Resident Retreat Committee

National Service

ad hoc Reviewer

Schizophrenia Bullctin

Clinical Schizophrenia and Related Psychoses

BMJ Case Reports

Teaching Service

Supervision/Mentoring

2011 -2012 Supervisor, University of Maryland School of Medicine, Psychiatry Resident Research Elective; Supervision during research elective with ongoing project evaluating emotions

in schizophrenia, recruited participants and administered behavioral tasks Carol Vidal; 6 months, Mentor 2011 – 2012, 4 contact hours per week

2011 – 2012 Supervisor, University of Maryland School of Medicine, MPRC volunteer intern

Supervision during ongoing research project evaluating emotions in schizophrenia,

recruited participants and administered behavioral tasks

Yaakov Shugarman; 6 months, Mentor 2011 – 2012, 4 contact hours per week

[Argosy University; Doctor of Psychology; Matriculated Fall 2012]

2012 – present Clinical Skills Verification Examiner, American Association of Directors of Psychiatric Residency Training (AADPRT) version of assessment

Medical	Student	Teaching

2006 - 2008	Clinical supervision of medical students during their psychiatry clerkship 1 to 2, 3 rd year
	medical students 8 hours/day, 11 months/year
2009 - 2010	Moderator Spring Grove Hospital Clinical Case Conference for Junior Psychiatric
	Residents and Medical Students – 1 resident, 15 3 rd year medical students, 4 contact
	hours/year
2009 - 2010	Moderator Medical Student Teaching Introduction to Clinical Medicine Psychiatric
	Interviewing Skills, 8 2 nd year medical students, 3 contact hours/year
2014 - 2015	Preceptor 3 rd year Medical Student Clerkship for Outpatient Clinic, 24 contact hours/year
2015 - 2015	Moderator Medical Student Teaching Introduction to Clinical Medicine Psychiatric
	Interviewing Skills, 3 2 nd year medical students, 3 contact hours/year

Psychiatry Resident Teaching

2010 - 2014	Lecturer for Senior Psychiatric Residents Advanced Psychopharmacology Class;
	"Atypical Antipsychotics" and "Treatment Resistant Depression"; - 10 residents, 2
	contact hours/year
2011 - 2015	Lecturer for Junior Psychiatric Residents Schizophrenia Course; "Course and Prognosis
	of Schizophrenia" – 10 residents, 1 contact hours/year
2013 - 2015	Clinical supervisor of psychiatry resident outpatient rotation, 3 rd year psychiatry resident,
	12 months/year

Grants

Inactive

09/01/2011 - 08/31/2012

PI: Keller, under supervision of Bernard Fischer MD

Infection and Inflammation in Schizophrenia VISN 5 MIRECC Pilot Grant

Total Direct Costs: \$24,667

Publications

Peer-reviewed journal articles

- 1. Buchanan RW, Kreyenbuhl J, Kelly DL, Noel JM, Boggs DL, Fischer BA, Himelhoch S, Fang B, Peterson E, Aquino PR, Keller W. The 2009 schizophrenia PORT psychopharmacological treatment recommendations and summary statements. Schizophrenia Bulletin. 2010 Jan;36(1):71-93.
- 2. **Keller WR**, Fischer BA, Carpenter WT Jr. Revisiting the diagnosis of schizophrenia: Where have we been and where are we going? CNS Neuroscience & Therapeutics. 2011 Apr;17(2):83-8.
- 3. Fischer BA, Keller WR, Arango C, Pearlson GD, McMahon RP, Meyer WA, Francis A, Kirkpatrick B, Carpenter WT, Buchanan RW. Cortical structural abnormalities in deficit versus nondeficit schizophrenia. Schizophrenia Research. 2012 Apr;136(1-3):51-4.
- 4. Strauss, G.P., Hong, L.E., **Keller, W.R.**, Buchanan, R.W., Gold, J.M., Fischer, B.A., McMahon, R.P., Catalano, L.T., Culbreth, A.J., Carpenter, W.T., Kirkpatrick, B. Factor Structure of the Brief Negative Symptom Scale. Schizophrenia Research 2012;142:96-8.
- 5. Strauss, G.P., Keller, W.R., Buchanan, R.W., Gold, J.M., Fischer, B.A., McMahon, R.P., Catalano, L.T., Culbreth, A.J., Carpenter, W.T., Kirkpatrick, B. Next-Generation Negative Symptom Assessment

- for Clinical Trials: Validation of the Brief Negative Symptom Scale. Schizophrenia Research. 2012;142:88-92.
- 6. **Keller WR**, Kum LM, Wehring HJ, Koola MM, Buchanan RW, Kelly DL. A review of anti-inflammatory agents for symptoms of schizophrenia. Journal of Psychopharmacology. 2013;27:337-42.
- 7. Strauss GP, Horan WP, Kirkpatrick B, Fischer BA, Keller WR, Miski P, Buchanan RW, Green MF, Carpenter WT Jr. Deconstructing negative symptoms of schizophrenia: Avolition-apathy and diminished expression clusters predict clinical presentation and functional outcome. J Psychiatr Res 2013;47:783-90.
- 8. Kelly DL, Wehring HJ, Earl AK, Sullivan KM, Dickerson FB, Feldman S, McMahon RP, Buchanan RW, Warfel D, Keller WR, Fischer BA, Shim JC. Treating symptomatic hyperprolactinemia in women with schizophrenia: presentation of the ongoing DAAMSEL clinical trial (Dopamine partial Agonist, Aripiprazole, for the Management of Symptomatic ELevated prolactin). BMC Psychiatry. 2013 Aug 22;13:214.
- 9. Keller WR, Fischer BA, McMahon R, Meyer W, Blake M, Buchanan RW. Community adherence to schizophrenia treatment and safety monitoring guidelines. J Nerv Ment Dis. 2014 Jan;202(1):6-12.
- 10. **Keller WR**, Vidal C, Park ES, Strauss GP, Fischer BA. The risk of diabetes in deficit schizophrenia. Clin Schizophr Relat Psychoses. 2014 Jan;7(4):235-7
- 11. Buchanan RW, Weiner E, Kelly DL, Gold JM, Keller WR, Waltz JA, McMahon RP, Gorelick DA. Rasagiline in the Treatment of the Persistent Negative Symptoms of Schizophrenia. Schizophr Bull. 2014 Nov 2
- 12. Strauss GP, **Keller WR**, Koenig JI, Gold JM, Ossenfort KL, Buchanan RW. Plasma oxytocin levels predict olfactory identification and negative symptoms in individuals with schizophrenia. Schizophr Res. 2015 Jan 9
- 13. Strauss GP, Keller WR, Koenig JI, Sullivan SK, Gold JM, Buchanan RW. Endogenous oxytocin levels are associated with the perception of emotion in dynamic body expressions in schizophrenia. Schizophr Res. 2015 Jan 22
- 14. Warren, K.R., **Keller**, W. & Kelly, D.L. (2015). Brief Psychotic Disorder, *British Medical Journal*, online monograph (update): https://online.epocrates.com/u/29111118/Brief+psychotic+disorder.
- 15. Kelly DL, Sullivan KM, McEvoy JP, McMahon RP, Wehring HJ, Gold JM, Liu F, Warfel D, Vyas G, Richardson CM, Fischer BA, Keller WR, Koola MM, Feldman SM, Russ JC, Keefe RS, Osing J, Hubzin L, August S, Walker TM, Buchanan RW. Adjunctive Minocycline in Clozapine-Treated Schizophrenia Patients With Persistent Symptoms. J Clin Psychopharmacol. 2015 Aug;35(4):374-81.

Abstracts

- 1. **Keller WR**, Fischer BA, Meyer W, Blake M, McMahon R, Buchanan RW. Second generation antipsychotics in community treatment for schizophrenia. Schizophrenia Bulletin. 2011 Mar:37(suppl 1):98
- 2. Kreyenbuhl J, Buchanan R, Kelly D, Noel J, Boggs D, Fischer B, Himelhoch S, Fang B, Peterson E, Aquino P, Keller W. The 2009 schizophrenia patient outcomes research team (PORT)

psychopharmacological treatment recommendations. International Clinical Psychopharmacology. 26():e54-e55, September 2011.

- 3. Fischer BA, Rowland LM, Keller WR, Holcomb HH, Buchanan RW. Acamprosate acts as a partial agonist of the NMDA receptor: Evidence from a spectroscopy study in schizophrenia. ACNP 2011
- 4. Fischer BA, Keller WR, Vidal C, Park ES, Strauss GP. The risk of diabetes in deficit schizophrenia. Schiz Bulletin 2013;39 (suppl 1) 30-1.

Brief Communications

- 1. Keller W, Buchanan RW. Oxytocin and DMXB as Possible Treatments in Schizophrenia. VA Capital Health Care Network (VISN5), Mental Illness Research, Education, and Clinical Center (MIRECC). MIRECC Matters. 2009 Feb Volume 10 Issue 1
- 2. **Keller WR**. Review of The Recognition and Management of Early Psychosis edited by Henry J. Jackson and Patrick C. McGorry. New York: Cambridge University Press, 2009. Journal of Nervous and Mental Disease. 198(9):696-697, September 2010.
- 3. **Keller WR**, Vidal C, Park ES, Strauss GP, Fischer BA. The risk of diabetes in deficit schizophrenia [Letter to the Editor]. Clinical Schizophrenia and Related Psychoses. 2013 Mar 14:1-7.
- 4. **Keller WR**, Fischer BA, McMahon R, Meyer W, Buchanan RW. Open-Label Salsalate for the Treatment of Pre-diabetes in People with Schizophrenia [Letter to the Editor]. Schizophrenia Research 2013 Jul;147(2-3):408-9

Major Invited Speeches

Local

1. "Leukoariosis was quantitatively compared in Alzheimer's patients and normal controls using MR imaging of the brain."; 42nd Medical Student Research Forum University of Texas Southwestern Medical School, Dallas, TX. 2004

National

1. "Second generation antipsychotics in community treatment for schizophrenia."; 13th International Congress on Schizophrenia Research, Colorado Springs, CO. 2011

Proffered Communications

- 1. Fischer BA, Keller WR, Arango C, Pearlson G, McMahon RP, Meyer W, Francis A, Kirkpatrick B, Carpenter WT, Buchanan RW. Cortical structural abnormalities in deficit versus nondeficit schizophrenia. (Poster presented at the annual meeting of the American College of Neuropsychopharmacology, Miami Beach, FL.) December 2010
- 2. **Keller WR**, Fischer BA, Meyer W, Blake M, McMahon R, Buchanan RW. Second generation antipsychotics in community treatment for schizophrenia. (Poster presented at University of Maryland School of Medicine, Department of Psychiatry Research Day, Baltimore, MD.) May 2011
- 3. Fischer BA, Rowland LM, Keller WR, Holcomb HH, Buchanan RW. Acamprosate acts as a partial agonist of the NMDA receptor: Evidence from a spectroscopy study in schizophrenia. (Poster presented at the annual meeting of the American College of Neuropsychopharmacology, December 2011, Waikoloa Beach, HI.) December 2011

- 4. **Keller WR**, McMahon R, Buchanan RW. Salsalate for the Treatment of Pre-diabetes in People with Schizophrenia. (Poster presented at the International Society for CNS Trial and Clinical Methodology, Washington DC) February 2012
- 5. Catalano, L.T., Keller, W.R., Lee, B.G., Martins, D.O., Adams, J.L., Shugarman, Y.Y., Llerena, K., Gold, J.M., Buchanan, R.W., Strauss, G.P. The nature of emotional experience abnormalities in schizophrenia: Is it affective ambivalence or negative emotionality? (Poster presented at the Society for Research in Psychopathology, Ann Arbor, MI.) October 2012
- 6. Strauss, G.P., **Keller, W.R.**, Koenig, J.I., Catalano, L.T., Adams, J.L, Gold, J.M., Buchanan, R.W. Plasma Oxytocin Levels Predict Olfactory Identification and Hedonic Judgments in Individuals with Schizophrenia. (Poster presented at the Society for Research in Psychopathology, Ann Arbor, MI.) October 2012
- 7. Gregory P. Strauss, William R. Keller, James M. Gold, Robert W. Buchanan Associations between peripheral oxytocin levels and impaired social cognition in schizophrenia (Poster presented at the Schizophrenia International Research Conference, Florence, Italy.) April 2014
- 8. Ariel B. Katz, William R. Keller, James M. Gold, Robert W. Buchanan, Gregory P. Strauss Plasma Oxytocin Levels Predict Social Cue Recognition in Schizophrenia (Poster presented Society for Research in Psychopathology, Evanston, IL.) September 2014
- 9. Kayla M. Whearty, William R. Keller, James M. Gold, Robert W. Buchanan, Gregory P. Strauss Emotional Memory Impairment in Schizophrenia: An Encoding or Retrieval Deficit? (Poster presented Society for Research in Psychopathology, Evanston, IL.) September 2014
- 10. Katherine H. Frost, William R. Keller, Robert W. Buchanan, James M. Gold, James I. Koenig, Kathryn Ossenfort, Ariel B. Katz, Gregory P. Strauss Plasma Oxytocin Levels are Associated with Impaired Social Cognition and Neurocognition in Schizophrenia (Poster presented Society for Research in Psychopathology, Fajardo, PR.) November 2014
- 11. Britta Hahn, Alexander N. Harvey, Bernard A. Fischer, William R. Keller, Thomas J. Ross, Elliot A. Stein Nicotinic Modulation of the Default Network of Resting Brain Function in Non-Smokers (Poster presented at American College of Neuropsychopharmacology, Phoenix, AZ.) December 2014

David W. Lynde, MSW, LICSW Mental Health Services Consultant & Trainer

Education

- Boston University, Masters in Social Work, 1992
- University of New Hampshire, B.A. in Social Work, 1982

Employment

David W Lynde Independent Consultant and Trainer Implementing Evidence Based Mental Health Practices. 2004 - Present

- Deputy Project Director for Dissemination for the National Registry for Evidencebased Practices and Programs (NREPP) for the Substance Abuse and Mental Health Services Administration (SAMHSA) (Developmental Services Group, Inc.)
- Consultant to Arizona Department of Health Services vis-à-vis National Association of State Mental Health Program Directors regarding implementation of four EBPs
- Consultant to United States Department of Justice regarding Supported Employment implementation for State of Georgia Olmstead Settlement Agreement
- Consultant to Marc Gould Associates regarding the development and implementation of the Pathways to Careers employment model for people with mental illness
- Co-Director, Atlas Research & Easter Seals National Training Program for Veteran Administration Homeless Veteran Supported Employment Program
- Consultant and Trainer for Department of Veterans Affairs regarding national implementation of Supported Employment in Compensated Work Therapy program
- Developer, Trainer and Consultant regarding NIMH RAISE project for Supported Employment and Supported Education for national first episode psychosis project
- Evidence Based Practices implementation consultation and technical assistance to multiple state, county, municipal and national mental health systems regarding implementation of Evidence Based Mental Health Practices

Dartmouth Psychiatric Research Center, 2000-2013

- Co-Director, Dartmouth Evidence Based Practices (EBP) Center for Implementing Evidence-Based Mental Health Practices
- Consultant and Trainer regarding Organizational Change and Implementation of Evidence-Based Practices for State, County and Municipal Mental Health Systems
- Developer, Technical Assistant and Consultant regarding five Evidence Based Practices "toolkits" and implementation process for National Implementing Evidence Based Practices Project from SAMHSA
- Co-developer of the State Health Authority Yardstick (SHAY) to measure and guide State and System level implementation actions for evidence-based mental health services.
- National Core Staff, Johnson & Johnson Dartmouth Community Mental Health Program for multi-state implementation of Supported Employment Services

- Director of Consultation and Training services regarding implementation of EBPs for NH Bureau of Behavioral Health
- 2005-2008 Information technology workgroup leader and leadership committee member, Governor's Commission on the transformation of services for mental illness in New Hampshire
- Co-Chair and Quality Workgroup Leader for NH Governor's Commission on the transformation of mental health services

University of New Hampshire, Durham, NH

- Adjunct Faculty, Social Work Department, 1994-2005
- UNH Social Work Department Advisory Board, 1992-2010

Boston University School of Social Work

Adjunct Faculty, Graduate Social Work Program 2004-2005

Center for Life Management, Community Mental Health Center, Salem, NH

- Director of Community Support Programs, 1997-2000
- Director of Clinical Services, Community Support Programs, 1995-1997
- State Psychiatric Hospital Liaison 1990-1995
- Director of Outpatient Support Services, 1993-1995
- Clinician, Community Support Services, 1990-1993
- Case Manager, Community Support Services, 1987-1990
- Residential Manager, Adolescent Treatment Facility, 1985-1987

Publications

- Finnerty, M, Rapp, C, Bond, G, Lynde, D, Ganju, V, Goldman, H, "The State Health Authority Yardstick (SHAY)", Community Mental Health Journal, (2009) Vol. 45,(3): 228-236
- 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, (2008) Jul; 59 (7): 732-7
- Becker, D., Lynde, D., Swanson, S., "Strategies for State-Wide Implementation of Supported Employment: The Johnson & Johnson—Dartmouth Community Mental Health Program" Psychiatric Rehabilitation Journal 31 (2008) pp. 296 – 299
- Drake, RE, Merrens, MR, Lynde, DW (eds), <u>Evidence-Based Mental Health Practice:</u>
 A Textbook, Norton, NY, NY (2005)
- Drake RE, Essock SM, Shaner A, Carey K, Minkoff K, Kola L, Lynde D, et al.
 "Implementing Dual Diagnosis Services for Clients with Severe Mental Illness" Psychiatric Services 52 (2001): 469–475.
- Mueser K, Torrey W, Lynde D, et al. "Implementing Evidence-Based Practices for People with Severe Mental Illness" Behavior Modification 27 (2003): 387 – 411.
- 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 (2005): 297 – 306

Professional Licensure

 Licensed Independent Clinical Social Worker, State of New Hampshire, 1994-Present

Piper Suzanne Meyer-Kalos, Ph.D., LP

Education and Licensure		
Minnesota Licensed Psychologist (#LP5617)	April 30, 2013	
North Carolina Licensed Psychologist and Health Services Provider Psychologist (#3277)	October 2, 2006	
Postdoctoral Fellowship National Research Service Award (NRSA) Fellowship, Mental Health and Substance Abuse Systems and Services, Cecil G. Sheps Center for Health rvices Research, University of North Carolina Chapel Hill, North Carolina	2003- 2005	
Doctorate, Clinical Rehabilitation Psychology Purdue University School of Science, Indianapolis, IN Dissertation: The cognitive factor of the PANSS: A confirmatory factor analysis and related cognitive correlates	1997- 2003	
Master of Science, Clinical Rehabilitation Psychology Purdue University School of Science, Indianapolis, IN Master's Thesis: The impact of atypical antipsychotics on vocational outcomes	1999	
Bachelor of Arts, Psychology, Minor: Sociology DePauw University, Greencastle, IN	1995	

Professional Appointments/Employment

2013 - current

Director

Minnesota Center for Chemical and Mental Health (MNCAMH), St. Paul, MN

Director of a statewide center of excellence to provide training, research, and resources for emerging and existing practitioners and to build and sustain excellence in the delivery of mental realth services. Coordinating and conducting mental health and addictions research and workforce

development, acquiring external support, connecting the Center to the community providers, establishing center infrastructure, and supervising graduate research assistants.

Research Assistant Professor

2005 - 2013

UNC-CH Department of Psychology, Chapel Hill, NC

Research coordinator for a clinical psychology lab focused on psychosocial treatment for schizophrenia and the assessment of social cognition in schizophrenia. Supervised undergraduate lab staff, provided clinical supervision for research projects, participated in development of grants, and development of psychosocial curriculum. Developed community alliances with county/state agencies to recruit for research studies.

Research Projects:

- Recovery After Initial Schizophrenia Episode (RAISE). Co-developed an individual therapy for people with first episode psychosis, and conducted training, ongoing clinical supervision, and fidelity evaluations for 13 national sites.
- The Farm at Penny Lane. Coordinating the development of a garden/farm program for persons with mental health disorders. Developing program evaluation measures to evaluate nutrition, weight, mental health, and activity level.
- Positive Living. Adapted a positive psychology treatment for people with schizophrenia and conducted pilot studies with persons with schizophrenia. Utilized pilot research in recent grant application.
- Social Cognition and Interaction Training (SCIT). Project coordinator for a treatment aimed at improving social cognition for persons with schizophrenia.
- An investigation of Group Cognitive Behavioral Therapy (CBT) compared to Supportive Therapy for Auditory Hallucinations. Project coordinator and group facilitator.

<u>Postdoctoral Fellowship, Cecil G Sheps Center, University of North Carolina</u>

2003- 2005
Chapel Hill, North Carolina

Research Assistant, Mental Illness and Research Education and
Clinical Center (MIRECC), Veteran's Administration,
Baltimore, Maryland

<u>Intensive Case Manager</u>, CREOKS Mental Health Services,
Oklahoma State Certified Case Manager for Creek County.
Sapulpa, OK

Clinical Experience

<u>Postdoctoral Fellowship</u>, Department of Psychiatry, STEP Clinic, University of North Carolina, Chapel Hill, NC

2003 - 2005

 Provided manualized individual and therapy for adults with serious mental illness using Illness Management and Recovery and Graduated Recovery Intervention Program.

<u>Clinical Psychology Intern</u>, Serious Mental Illness Track University of Maryland School of Medicine, Baltimore, MD (APA approved program) 2002 - 2003

 Provided individual therapy and case management in an urban community mental health center. Taught psychoeducational groups and social skills training groups. Participated in specialty rotations including sex offender's treatment clinic and mental health and substance abuse treatment program for federal pretrial and probation.

<u>Practicum</u>, LaRue Carter Hospital, Indianapolis, IN

2000 - 2001

 Adolescent Inpatient Unit. Therapist for adolescents on an inpatient unit with developmental disabilities, learning disabilities, medical disorders, and behavioral problems.

<u>Practicum</u>, Indiana Women's Prison, dianapolis, IN

2000

 Special Needs Unit and Indiana Women's Intake Unit. Provided group therapy on the Special Needs Unit. Conducted psychological evaluations including tests of intelligence, personality, and neuropsychology.

<u>Practicum</u>, Counseling and Psychological Services, IUPUI Indianapolis, IN

2000

 University counseling center. Provided individual and couples counseling including cognitive-behavioral therapy for persons aged 18 to 45.

<u>Practicum</u>, Veterans Administration Indianapolis, IN

1998 - 1999

 Provided group and individual psychotherapy for individuals with psychiatric disabilities. Population was primarily those with serious mental illness.
 Assisted in research projects.

<u>Practicum</u>, Veterans Administration, NIMH Research Project, Indianapolis, IN

1998

Conduct assessment interviews for elderly depressed women, including SCID,

Teaching and Training Experience	
<u>Instructor</u> , University of Haifa, Israel, Social Cognition and Interaction Training (SCIT) and Positive Psychotherapy for people with schizophrenia.	September 2011
Consultation and Training, State of Missouri, Illness Management and Recovery for an inpatient forensic unit.	2011 - 2013
Consultation and Training, University of Medicine and Dentistry of New Jersey, for the state of New Jersey, Illness Management and Recovery, Supervisor's training for IMR, CBT strategies for IMR	2007 – 2013
Consultation and Training, Minnesota Department of Human Services, Illness Management and Recovery, Supervisor's training for IMR, CBT strategies For IMR, IMR Clinical Competency Scales	2006 – 2013
Consultation and Training, North Carolina Evidence-Based Practice Center, Wellness Management and Recovery	2004 – 2007
Recitation Instructor, Introductory Psychology, IUPUI, Indianapolis, IN	2002 - 2002
Awards	
Clinical Rehabilitation Psychology Outstanding Master's Student Award IUPUI, Indianapolis, IN	1999
Rehabilitation Services Administration Fellowship	1997 -1998
IUPUI, Indianapolis, IN	
Outstanding Service Award CREOKS Mental Health, Sapulpa, OK	1996
Professional Organizations	
American Psychological Association Association of Behavioral and Cognitive Therapy	2008-2009 2007-current

Publications

- Parks, A., Kleiman, E. M., Kashdan, T. B., Hausmann, L. R. M., Meyer, P. S., Day, A. M., Spillane, N. S., & Kahler, C. W. (in press). Positive Psychotherapeutic and Behavioral Interventions. In Jeste and Palmer, (eds.) Positive Psychiatry, A Clinical Handbook. American Psychiatric Press.
- Buck, B., Ludwig, K., Meyer, P. S., Penn, D. (2014). The use of narrative sampling in the assessment of social cognition: The Narrative of Emotions Task (NET). Psychiatry Research, 217(3), 233-239.
- Meyer, P. S., Johnson, D., Parks, A., Iwanski, C., Penn, D. (2012). Positive living:
 A pilot study of group positive psychotherapy for people with schizophrenia. <u>Journal of Positive Psychology</u>, 7(3), 239-248.
- Johnson, D.J., Penn, D.L., Fredrickson, B., Kring, A., Meyer, P., Brantley, M. (2011).
 Loving-kindness meditation for schizophrenia. <u>Schizophrenia Research</u>, 129(2/3), 137-140.
- Meyer, P. S. & Mueser, K. T. (2011). Resiliency in persons with severe mental illness. In Southwick, Litz, Charney, Friedman, (eds.) Resilience and Mental Health: Responding to challenges across the lifespan. Cambridge University Press.
- Garland, E. L., Fredrickson, B., Kring, A. M., Johnson, D. J., Meyer, P. S., Penn, D. L. (2010). Upward spirals of positive emotions counter downward spirals of negativity: Insights from the broaden-and-build theory and affective neuroscience on the treatment of emotion dysfunctions and deficits in psychopathology. Clinical Psychology Review, 30(7), 849-864.
- Meyer, P. S., Mueser, K. T., Gingerich, S. (2010). A guide for the implementation and clinical practice of Illness Management and Recovery for people with schizophrenia. In Rubin, A. and Springer, D. (eds.) Psychosocial treatment for schizophrenia. John Wiley & Sons.
- Penn, D. L., Keefe, R. S., Davis, S. M., Meyer, P. S., Perkins, D. O., Losardo, D., Lieberman, J. A., (2009). The effects of antipsychotic medications on emotion perception in patients with chronic schizophrenia in the CATIE trial. <u>Schizophrenia Research</u>, 115 (1), 17-23.
- Penn, D. L., Meyer, P. S., Evans, E., Cai, K., Wirth, R. J., Burchinal, M. (2009). A randomized controlled trial of group cognitive behavior therapy versus enhanced supportive therapy for auditory hallucinations. Schizophrenia Research, 109 (1-3), 52-59.
- Johnson, D.J., Penn, D.L., Fredrickson, B., Kring, A., Meyer, P., Brantley, M. (2009). Loving-kindness meditation to enhance the psychological recovery of individuals with persistent negative symptoms of schizophrenia: A case study. Journal of Clinical Psychology, 65(5), 499-509.
- Johnson, D. P., Penn, D. L., Bauer, D. J., Meyer, P., Evans, E. (2008). Predictors of the therapeutic alliance in group therapy for individuals with treatment-resistant auditory hallucinations. <u>British Journal of Clinical Psychology</u> 47(2), 171-183.

- Morrissey, J. P., Meyer, P. S., Cuddeback, G. (2007). Extending ACT to criminal justice settings: Origins, evidence, and future directions. Community Mental Health Journal 43(5), 527-544.
- Meyer, P.S. & Morrissey, J. P. (2007). Assertive community treatment, intensive case mangement, and the paradox of rural mental health services. <u>Psychiatric Serivces</u> 58(1), 121-127.
- Cuddeback, G., Morrissey, J. P., Meyer, P. S. (2006). How many assertive community treatment teams do we need? <u>Psychiatric Services</u> 57(12), 1803-1806.
- Mueser, K. T., **Meyer, P. S.**, Penn, D. L., Clancy, R., Clancy, D. M., Salyers, M. P. (2006). The Illness Management and Recovery program: Rationale, development, and preliminary findings. <u>Schizophrenia Bulletin</u>, 32, S32-S43.
- Evans, J. D., Bond, G. R., **Meyer, P. S.**, Kim, H. W., Lysaker, P. H., Gibson, P. J., Tunis, S. (2004). Cognitive and clinical predictors of success in vocational rehabilitation in schizophrenia. <u>Schizophrenia Research</u>, 70(2-3), 331-342.
- Bond, G. R., Kim, H. W., **Meyer, P. S.**, Gibson, P. J., Tunis, S., Evans, J. D., Lysaker, P., McCoy, M. L., Dincin, J., Xie, H. (2004). Response to Vocational Rehabilitation During Treatment with First- or Second-Generation Antipsychotics. <u>Psychiatric Services</u>, 55, 59-66.
- Salyers, M. P., Evans, L. J., Bond, G. R., Meyer, P. S. (2004). Barriers to assessment and treatment of posttraumatic stress disorder and other trauma-related problems in people with severe mental illness: Clinician perspectives. <u>Community Mental Health Journal</u>, 40, 17-31.
- Meyer, P. S., Bond, G. R., Tunis, S. L., McCoy, M. L. (2002). Comparison between atypical and traditional antipsychotics in work status for clients in a psychiatric rehabilitation program. <u>Journal of Clinical Psychiatry</u>, 63, 108-116.
- Lysaker, P.H., Meyer, P.S., Evans, J.E., Clements, C.A. & Marks, K.A. (2001) Psychosocial correlates of childhood sexual trauma in schizophrenia. <u>Psychiatric Services</u>, *52*, 1485-1488.
- Lysaker, P.H., Meyer, P.S., Evans, J.E., & Marks, K.A. (2001). Neurocognitive correlates of self reported sexual abuse in schizophrenia spectrum disorders. <u>Annals of Clinical Psychiatry</u>, 13, 89-92.
- Bond, G.R. & Meyer, P. S. (1999). The role of medications in the employment of people with schizophrenia. <u>Journal of Rehabilitation</u>, 65(4), 9-16.

Presentations

- Meyer, P.S., (July 2011). <u>Positive Living: A pilot study of group positive psychotherapy for people with schizophrenia</u>. Symposium at Second World Congress on Positive Psychology.
- Meyer, P.S., Johnson, D., Penn, D. L. (November 2009). <u>Positive living: An adaptation of group positive psychotherapy for people with psychotic disorders</u>. Symposium at the Association for Behavioral and Cognitive Therapies.
- Meyer, P.S., Penn, D.L., Roberts, D., Koren, D. (November 2008). <u>The relationship between metacognition, social cognition, and social functioning in schizophrenia</u>. Poster presentation at the Association for Behavioral and Cognitive Therapies.
- Johnson, D., Penn, D., Meyer, P., Fredrickson, B., Kring, A., Brantley, M. (November 2008). <u>Loving kindness group meditation for the negative symptoms of schizophrenia</u>. Poster presentation at the Association for Behavioral and Cognitive Therapies.
- Meyer, P.S., Penn, D.L., Evans, E., Cai, K., Burchinal, M. (November 2007) <u>A randomized controlled trial of group CBT and supportive therapy for auditory hallucinations.</u> Poster presentation at the Association for Behavioral and Cognitive Therapies.
- Meyer, P.S., Penn, D., Mueser, K., Waldheter, E. (April 2005). A pilot study of illness management and recovery for persons with psychotic disorders. Poster presentation at the International Congress on Schizophrenia Research.
- Teyer, P.S. & Morrissey, J. P. (June 2004). <u>Overlooked Obstacles in Disseminating Assertive Community Treatment in Rural Settings</u>. Poster presentation at the NIMH Trainees Research Conference.
- Meyer, P.S., Gearon, J., Bellack, A., & Brown, C. (March 2003). <u>The Relationship Between</u>

 <u>Traumatic Life Events and Posttraumatic Stress Disorder in Substance Abusing Women with Schizophrenia</u>. Poster presentation at the International Congress on Schizophrenia Research.
- Bond, G.R., Meyer, P.S., Kim, H., Marks, K. & Tunis, S.L. (February 2001). The promise of new antipsychotics and psychiatric rehabilitation for improving work outcomes: Why haven't state mental health systems embraced best practices? Oral presentation at the NASMHPD Eleventh Annual Conference on State Mental Health Agency Services Research, Program Evaluation.
- Kim, H.W., Tunis, S.L., Bond, G.R., Marks, K.A., & Meyer, P.S. (2001). <u>Psychiatric Symptoms</u> & Adverse Events Commonly Reported During Antipsychotic Treatment for Individuals with Schizophrenia Participating in Psychiatric Rehabilitation Programs. Poster presentation at the Annual Convention of the American Psychiatric Association.
- Lysaker, P.H., Evans, J.D., Kim, H.W., Marks, K.A., Meyer, P.S., Tunis. S.L., & Bond, G.R. (2001). <u>Symptoms and work performance in schizophrenia</u>. Poster presentation at the International Congress of Schizophrenia.
- Meyer, P. S., Kim, H. W., Bond, G. R., Tunis, S., McCoy, M., & Dincin, J. (October, 2000). Impact of Antipsychotic Medications on Vocational Outcomes for Persons with

- <u>Schizophrenia</u>. Oral presentation at the MRI/UPENN Rehabilitation and Research Training Center 4th Biennial Research Seminar on Work.
- Meyer, P., Bond, G. R., Herbeck, D., McCoy, T., and Rowan, D. (May 1999). The promise of newer antipsychotics: Implications for social and vocational outcomes. Workshop presented at International Association of Psychosocial Rehabilitation Services. Minneapolis, MN.
- Meyer, P. S., Bond, G. R., McCoy, T., Herbeck, D., Rowan, D., and Tunis, S. (April, 1999).

 The influence of atypical antipsychotics on work outcomes. Poster presented at the International Congress on Schizophrenia Research, Santa Fe, NM.

Unpublished Manuscripts

- Meyer, P. S. and Morrissey, J. P. (2004). <u>Assertive community treatment in North Carolina:</u>
 <u>Implementation status and training needs</u>. Report submitted to North Carolina Science to Service, Research Triangle Park, NC.
- Bond, G., Meyer, P., Rollins, A., McCoy, M., Herbeck, D., and Rowan, D. (1998). <u>The impact of atypical antipsychotics on vocational outcomes in a psychiatric rehabilitation agency</u>. Reported submitted to Eli Lilly, Indianapolis, IN.

References Available upon Request

Curriculum Vitae

DELBERT GAIL ROBINSON, M.D.

RIRT	HDATE	- AND	PI A	CE
	DUALI			CE

Nashville, TN USA

EDUCATION AND TRAINING

GRADUATE

POST-GRADUATE

INING		
	1971-1975	Vanderbilt University, Nashville, TN B.A., Molecular Biology, 1975.
	1976-1979	The University of Tennessee Center for the Health Sciences, Memphis,TN, M.D., 1979.
	1979-1980	The Mary Hitchcock Memorial Hospital Dartmouth College, Hanover, New Hampshire Internship.
	1980-1983	Western Psychiatric Institute and Clinic, University of Pittsburgh, PA Resident: General Psychiatry.

College of Physicians & Surgeons

Columbia University, NY, NY

Research Fellow

•

7/83-6/85

PROFESSIONAL EMPLOYMENT AND HOSPITAL APPOINTMENTS:

7/82-7/83	Affective Disorders Module Western Psychiatric Institute and Clinic Chief Resident
1984/6/85	College of Physicians & Surgeons Columbia University, NY, NY Instructor in Clinical Psychiatry
1984-6/85	Columbia Presbyterian Medical Center, NY, NY Assistant Psychiatrist
7/85-12/85	Downstate Medical School, Brooklyn, NY Assistant Professor of Clinical Psychiatry
7/85-12/85	Kings County Hospital, Brooklyn, NY Chief, Medical Student Teaching Ward
1/86-present	The Zucker Hillside Hospital, division of

North Shore Long Island Jewish Health System

Glen Oaks, NY Research Psychiatrist

1/91-1/99 The Zucker Hillside Hospital, division of North Shore Long Island Jewish Health System Glen Oaks, NY Chief, Obsessive Compulsive Disorders Program

1/91-2004 The Zucker Hillside Hospital, division of North Shore Long Island Jewish Health System Glen Oaks, NY Chief, Clinical Assessment and Training Unit of the Clinical Research Center for the Study of Schizophrenia

1/96-1/98 The Zucker Hillside Hospital, division of North Shore Long Island Jewish Health System Glen Oaks, NY Acting Co-Director, Clinical Research Center for the Study of Schizophrenia

1/96-1/99 The Zucker Hillside Hospital, division of North Shore Long Island Jewish Health System Glen Oaks, NY Co-Director, Psychopharmacology Unit of the Clinical Research Center for the Study of Schizophrenia

1/01-Present Feinstein Institute for Medical Research
North Shore-Long Island Jewish Health System
Associate Investigator

11/03-6/05 Co-Director, Scientific Direction And Administration Unit, Intervention Research Center for Course of Illness in Schizophrenia: Optimizing Outcomes.

7/05-6/10 The Zucker Hillside Advanced Center for Intervention and Services Research. Early Phase Schizophrenia: Optimizing Outcomes Co-Director

7/05-6/10 The Zucker Hillside Advanced Center for Intervention and Services Research. Early Phase Schizophrenia: Optimizing Outcomes Co-Director, Scientific Direction and Administration Unit

- 7/05-Present The Zucker Hillside Advanced Center for Intervention and Services Research. Early Phase Schizophrenia: Optimizing Outcomes/Early Phase Psychosis: Informing Treatment Decisions
 Co-Director, Trials Operation Unit
- 7/05-6/10 The Zucker Hillside Advanced Center for Intervention and Services Research. Early Phase Schizophrenia: Optimizing Outcomes Co-Director, Research Network Development Core
- 7/05-6/10 The Zucker Hillside Advanced Center for Intervention and Services Research. Early Phase Schizophrenia: Optimizing Outcomes Director, Functional Outcomes Assessment Unit
- 5/08-4/14 The Zucker Hillside CIDAR Dissecting
 Heterogeneity of Treatment Response of First
 episode Schizophrenia
 Co-Director, Operations and Clinical
 Assessment Core
- 7/10-Present The Zucker Hillside Advanced Center for Intervention and Services Research. Early Phase Schizophrenia: Optimizing Outcomes Director, Adherence Unit

OTHER ACADEMIC APPOINTMENTS:

4/91-6/04 Albert Einstein College of Medicine
New York, NY
Assistant Professor of Psychiatry and Behavioral
Sciences

7/04-6/09 Albert Einstein College of Medicine
New York, NY
Associate Professor of Psychiatry and
Behavioral Sciences

7/09-6/11 Albert Einstein College of Medicine
New York, NY
Professor of Psychiatry and Behavioral Sciences

6/11-present Hofstra North Shore-LIJ School of Medicine at

Hofstra University Hempstead, NY

Professor of Psychiatry and of Molecular

Medicine

BOARD CERTIFICATION:

1980 Medical License - Pennsylvania 1983 Medical License - New York 1985 Board Certification in Psychiatry

PROFESSIONAL SOCIETY MEMBERSHIP:

American Psychiatric Association International Early Psychosis Association American College of Neuropsychopharmacology

AWARDS AND HONORS

1975 Phi Beta Kappa (Vanderbilt)

1979 Outstanding Student in Psychiatry (The University of

Tennessee)

2000 Exemplary Psychiatrists Award from the National

Alliance for the Mentally III

OTHER PROFESSIONAL ACTIVITIES

JOURNAL REVIEWER

Archives of General Psychiatry American Journal of Psychiatry Acta Psychiatrica Scandinavica

Schizophrenia Bulletin Neuropsychopharmacology

Schizophrenia Research Journal of Substance Abuse

Primary Psychiatry

Clinical Psychology Review Journal of Clinical Psychiatry Journal of Mental Health

International Journal of Neuropsychopharmacology

Journal of Clinical Psychopharmacology

GRANT REVIEWER

National Institute of Mental Health (former member of the Neural Basis Of

Psychopathology, Addictions And Sleep Disorders Study Section; ad hoc for other study sections)

Peer Review Committee, Schizophrenia Trials Network (NIMH)

Ontario Mental Health Foundation

The Netherlands Organisation for Health Research and Development

Deutsche Forschungsgemeinschaft (DFG) German Research Foundation

Feinstein Institute for Medical Research

NATIONAL COMMITTEES

DSM-IV Work Group Advisor, Schizophrenia and Other Psychotic Disorders

Principal Contributor, American Psychiatric Association Task Force for the Handbook of Psychiatric Measures

Member, Psychopharmacologic Drugs Advisory Committee, Center For Drug Evaluation And Research, U.S. Food And Drug Administration

Texas Medication Algorithm Project

NATIONAL WORKSHOPS

First Episode Schizophrenia: Preventing Chronicity, Improving Outcomes, National Institute of Mental Health

NEW YORK STATE COMMITTEES

First Episode of Psychosis Augmented Treatment Program (FEAT) Workgroup, New York State Office of Mental Health

HOSPITAL COMMITTEES

Long Island Jewish Research Committee

Quality Assurance Committee, Hillside Research Department

Protocol Review Committee, Hillside Research Department

Scientific Executive Advisory Committee, Feinstein Institute for Medical Research, North Shore-Long Island Jewish Research Institute

PRINCIPAL INVESTIGATOR (FUNDED STUDIES)

Nocturnal Polysomnography in Obsessive-Compulsive Disorder (Long Island Jewish Faculty Award) 1/90 - 6/92

Double-Blind 12-Week Parallel Comparison of Sertraline and Placebo in Outpatients with Obsessive Compulsive Disorder (Pfizer Pharmaceuticals) 9/91 - 8/93

Double-Blind Parallel Comparison of Sertraline, Imipramine and Placebo in Outpatients with Dysthymia (Pfizer Pharmaceuticals) and Double-Blind Follow-Up Study of Sertraline, Imipramine and Placebo in Outpatients with Dysthymia (Pfizer Pharmaceuticals) 11/91 - 10/93

Double-Blind Parallel Comparison of Sertraline and Desipramine in Outpatients with Concurrent Major Depression and Obsessive Compulsive Disorder (Pfizer Pharmaceuticals) and Double-Blind Follow-Up Study of Sertraline and Desipramine in Outpatients with Concurrent Major Depression and Obsessive Compulsive Disorder (Pfizer Pharmaceuticals) 8/92 - 9/95

Brain Morphology in Obsessive Compulsive Disorder (National Institute of Mental Health) 5/92 - 4/95

Sertraline Treatment Followed by a Double-Blind Comparison of Sertraline and Placebo in the Prevention of Relapse in Outpatients with Obsessive Compulsive Disorder (Pfizer Pharmaceuticals) 3/94 - 9/96

12-Week Double-Blind Comparison of Two Sertraline Dose Regimens in "Nonresponder" Outpatients with Obsessive Compulsive Disorder (Pfizer Pharmaceuticals) 9/94 - 4/96

Fluvoxamine: A Multi-Center, Placebo-Controlled, Randomized, Double-Blind Relapse Prevention Study in the Maintenance Treatment of Outpatients with Obsessive-Compulsive Disorder (Solvay Pharmaceuticals) 1/96 - 12/00

A Prospective, Randomized, International Parallel-Group Comparison of Clozaril/Leponex vs Zyprexa in the Reduction of Suicidality in Patients with Schizophrenia and SchizoAffective Disorder Who Are at Risk for Suicide (Novartis Pharmaceuticals) 4/98 - 4/01

Olanzapine in Attentional Deficits in Schizophrenia (Lilly Research Institute; investigator initiated)

5/98 - 5/03

Preventing Morbidity in First Episode Schizophrenia, Part 1 and Part 2 (competing renewal) (National Institute of Mental Health) 9/98 – 6/11

Long-Acting Risperidone For Patients Who Fail Their First Antipsychotic Treatment Trial (NARSAD) 9/05 – 5/13

2-Way Pagers to Improve Schizophrenia Medication Adherence (National Institute of Mental Health) 5/06 - 3/10

Detecting Which Patients With Schizophrenia Will Improve With Omega 3 Treatment (National Institute of Mental Health) 7/13-6/15

SITE PRINCIPAL INVESTIGATOR

Decision Support for Smoking Cessation in Young Adults with Severe Mental Illness (National Cancer Institute) 9/12-ongoing

DIRECTOR

ACISR: Early Phase Psychosis: Informing Treatment Decisions Adherence Unit 7/10-ongoing

Co-DIRECTOR

ACISR: Early Phase Schizophrenia-Optomizing Outcomes Adherence Unit 9/05- 6/10

CIDAR: Dissecting Heterogeneity of Treatment Response of First episode Schizophrenia Operations and Clinical Assessment Core (National Institute of Mental Health) 5/08 – 4/13

CO-PRINCIPAL INVESTIGATOR

Prospective Study of First Episode Schizophrenia (National Institute of Mental Health) 8/87 - 6/96

CO-INVESTIGATOR

Course of Illness in Schizophrenia: Optomizing Outcomes Schizophrenia (National Institute of Mental Health) 2/00 – 1/06

Longitudinal Neuroimaging of First Episode Schizophrenia (National Institute of Mental Health) 7/00 - 6/05

Recovery After Initial Schizophrenia Episode (National Institute of Mental Health)
7/09-ongoing

Improving Substance Use and Clinical Outcomes in Heavy Cannabis Users (National Institute of Health) 7/10-6/13

Improving Quality And Reducing Cost In Schizophrenia Care With New Technologies And New Personnel (CMMS/CMMI) 7/12-ongoing

A Cluster Randomized, Multi-center, Parallel-group, Rater-blind Study Comparing Treatment with Aripiprazole Once Monthly and Treatment as Usual on Effectiveness in First Episode and Early Phase Illness in Schizophrenia (Investigator Initiated, supported by Otsuka) 8/14-ongoing

CONSULTANT

Educational Material for Geriatric Psychopharmacology: Phase I (Small Business Innovation Research Program)
7/96 - 12/96

Educational Material for Geriatric Psychopharmacology: Phase II (Small Business Innovation Research Program) 11/00 – 4/05

A New Scale to Assess Psychopathology in Schizophrenia (NARSAD) 6/01 – 11/05

BIBLIOGRAPHY

ORIGINAL COMMUNICATIONS IN REVIEWED JOURNALS:

Akiskal HS, King D, Rosenthal T, Robinson D, Scott-Strauss A: Chronic depressions Part I. Clinical and familial characteristics in 137 probands. Journal of Affective Disorders

3:297-315, 1981.

Robinson DG and Spiker DG: Delusional depression: A one year follow-up. Journal of Affective Disorders 9:79-83, 1985.

McGrath PJ, Robinson D, Stewart JW: Atypical panic attacks in major depression. American Journal of Psychiatry 142:1224, 1985.

Ryan ND, Puig-Antich J, Ambrosini P, Rabinovich H, Robinson D, Nelson B, Iyengar S, Twomey J: The clinical picture of major depression in children and adolescents. Archives of General Psychiatry 44:854-861, 1987.

Ryan NC, Puig-Antich J, Rabinovich H, Ambrosini P, Robinson D, Nelson B, Novacencko H: Growth hormone response to desmethylimipramine in depressed and suicidal adolescents. Journal of Affective Disorders 15:323-337, 1988.

Wager S, Robinson D, Goetz R, Nunes E, Gully R, Quitkin F: The cholinergic induction test in atypical depression - A pilot study. Sleep Research 17, 1988.

Robinson D, Bailine S, Lieberman J: Dysphoria associated with methylphenidate infusions. American Journal of Psychiatry 145:1321-1322, 1988.

Glick ID, Schooler NR, Severe J, Weiden P, Robinson D: Depressive symtpomatology, negative symptoms and extrapyramidal symptoms (EPMS) in acute treatment response and short term outcome. Schizophrenia Research 2: 204, 1989.

Wager S, Robinson D, Goetz R, Nunes N, Gully R, Quitkin F: Cholinergic REM sleep induction in atypical depression. Biological Psychiatry 27:441-446, 1990.

Walsleben J, Robinson D, Lemus C, Hackshaw R, Norman R, Alvir J: Polysomnographic aspects of obsessive-compulsive disorder. Sleep Research 19: 177, 1990.

Robinson D, Mayerhoff D, Alvir J, Lieberman J: Mood responses of remitted schizophrenics to methylphenidate infusion. Psychopharmacology 105:247-252,1991.

Lemus CZ, Robinson D, Kronig M, Cole K, Lieberman JA: Behavioral responses to a dopaminergic challenge in obsessive-compulsive disorder. Journal of Anxiety Disorders 5: 369-373, 1991.

Levy DL, Smith M, Robinson, D, Jody D, Lerner G, Alvir J, Geisler SH, Szymanski SR, Gonzalez A, Mayerhoff Dl, Lieberman JA, Mendell NR: Methylphenidate increases thought disorder in recent onset schizophrenics, but not in normal controls. Biological Psychiatry 34: 507-514, 1993.

Robinson D, Woerner M, Koreen AR, Siris SG, Chakos M, Alvir J, Mayerhoff D, Lieberman J: First-Episode schizophrenia and depression - Reply (Letter). American Journal of Psychiatry 152: 476-477, 1995.

Robinson D, Wu Houwei, Munne R, Ashtari M, Lerner G, Koreen A, Cole K, Bogerts B: Reduced caudate nucleus volume in obsessive-compulsive disorder. Archives of General Psychiatry 52: 393-398, 1995.

Greist JH, Jenike MA, Robinson D, Rasmussen SA: Efficacy of fluvoxamine in obsessive-compulsive disorder: results of a multicentre, double blind, placebo-controlled trial. European Journal of Clinical Research 7: 195-204, 1995.

Robinson D, Woerner M, Pollack S, Lerner G: Subject Selection biases in clinical trials: Data from a multicenter schizophrenia treatment study. Journal of Clinical Psychopharmacology 16: 170-176, 1996.

Strakowski SM, Flaum M, Amador X, Bracha HS, Pandurangi AK, Robinson D, Tohen M: Racial differences in the diagnosis of psychosis. Schizophrenia Research 21: 117-124, 1996.

Lieberman JA, Sheitman B, Chakos M, Robinson D, Schooler NR, Keith S: The development of treatment resistance in patients with schizophrenia: A clinical and pathophysiologic perspective. Journal of Clinical Psychopharmacology 18: 20S-24S, 1998.

Robinson D, Walsleben J, Pollack S, Lerner G: Nocturnal polysomnography in obsessive-compulsive disorder. Psychiatry Research 80: 257-263, 1998.

Robinson D, Woerner M, Alvir J Ma J, Bilder R, Goldman R, Geisler S, Koreen A, Sheitman B, Chakos M, Mayerhoff D, Lieberman JA: Predictors of relapse following response from a first episode of schizophrenia or schizoaffective disorder. Archives of General Psychiatry 56: 241-247, 1999.

Robinson D, Woerner M, Alvir J Ma J, Geisler S, Koreen A, Sheitman B, Chakos M, Mayerhoff D, Bilder R, Goldman R, Lieberman JA: Predictors of treatment response from a first episode of schizophrenia or schizoaffective disorder. American Journal of Psychiatry 156: 544-549, 1999.

Kronig MH, Apter J, Asnis G, Bystritsky A, Curtis G, Ferguson J, Landbloom R, Munjack D, Riesenberg R, Robinson D, Roy-Byrne P, Phillips K, Du Pont IJ: Placebo-controlled, multicenter study of sertraline treatment for obsessive-compulsive disorder. Journal of Clinical Psychopharmacology 19: 172-176, 1999.

Schulz S, Thompson P, Marc J, Ninan P, Robinson D, Weiden P, Yadalam K, Glick I, Odbert C: Lithium augmentation fails to reduce symptoms in poorly responsive schizophrenic outpatients. Journal of Clinical Psychiatry 60:366-372, 1999.

Bilder RM, Wu H, Bogerts B, Ashtari M, Robinson D, Woerner M, Lieberman JA, DeGreef G: Cerebral volume asymmetries in schizophrenia and mood disorders: A quantitative magnetic resonance imaging study. International Journal of Psychophysiology 34:197-205, 1999.

Szeszko PR, Robinson D, Alvir JMaJ, Bilder RM, Lencz T, Ashtari M, Wu H, Bogerts B:

Orbital frontal cortex and amygdala volume reductions in obsessive-compulsive disorder. Archives of General Psychiatry 56:913-919, 1999.

Robinson D: Should the APA guideline for duration of maintenance treatment of first-episode schizophrenia be changed? Journal of Psychotic Disorders: Reviews & Commentaries 3: 3 &15, 1999.

Saltz BL, Woerner MG, Robinson DG, Kane JM: Side effects of antipsychotic drugs Avoiding and minimizing their impact in elderly patients. Postgraduate Medicine 107:169-178, 2000.

Bilder RM, Goldman RS, Robinson D, Reiter G, Bell L, Bates JA, Pappadopulos E, Willson DF, Alvir JMaJ, Woerner M, Geisler S, Kane JM, Lieberman JA: Neuropsychology of first episode psychosis: Initial characterization and clinical correlates. American Journal of Psychiatry 157: 549-559, 2000.

Robinson D, Woerner MG, Schooler N: Intervention Research in Psychosis: Issues Related to Clinical Assessment. Schizophrenia Bulletin 26: 551-556, 2000.

Lieberman J, Chakos M, Wu H, Alvir J, Hoffman E, Robinson D, Bilder R: Longitudinal study of brain morphology in first episode schizophrenia. Biological Psychiatry 49: 487-499, 2001.

Sevy S, Robinson DG, Holloway S, Alvir JM, Woerner MG, Bilder R, Goldman R, Lieberman J, Kane J. Correlates of substance misuse in patients with first-episode schizophrenia and schizoaffective disorder. Acta Psychiatrica Scandinaavica 104: 367-374, 2001.

Strous RD, Pollack S, Robinson D, Sheitman B, Lieberman JA. Seasonal admission patterns in first episode psychosis, chronic schizophrenia and non-schizophrenic psychoses. Journal of Nervous and Mental Disease 189: 642-4, 2001.

Robinson D. Treatment of the initial phase of schizophrenia. Masters in Psychiatry Winter 2001.

Koran LM, Hackett E, Rubin A, Wolkow R, Robinson D. Efficacy of sertraline in the long-term treatment of obsessive-compulsive disorder. American Journal of Psychiatry 159: 88-95, 2002.

Goldstein RZ, Giovannetti T, Schullery M, Zuffante PA, Lieberman JA, Robinson DG, Barr WB, Bilder RM. Neurocognitive correlates of response to treatment in formal thought disorder in patients with first-episode schizophrenia. Neuropsychiatry, Neuropsychology, and Behavioral Neurology 15: 88–98, 2002.

Malhotra AK, Bates JA, Jaeger J, Petrides G, Robinson DG, Bilder RM, Nassauer KW. No evidence for phenotypic variation between probands in case-control versus family-based association studies of schizophrenia. American Journal of Medical Genetics (Neuropsychiatric Genetics) 114:509-511, 2002.

Robinson DG, Woerner MG, Alvir JMaJ, Bilder RM, Hinrichsen GA, Lieberman JA. Predictors of medication discontinuation by patients with first episode schizophrenia and schizoaffective disorder. Schizophrenia Research 57: 209-219, 2002.

Gunduz H, Wu H, Ashtari M, Bogerts B, Crandall D, Robinson DG, Alvir J, Lieberman J, Kane J, Bilder R. Basal ganglia volumes in first-episode schizophrenia and healthy comparison subjects. Biological Psychiatry. 51: 801-808, 2002.

Lencz T, Bilder RM, Turkel E, Goldman RS, Robinson D, Kane JM, Lieberman JA. Impairments in perceptual competency and maintenance on a visual delayed match-to-sample test in first-episode schizophrenia. Archives of General Psychiatry 60: 238-243, 2003.

Woerner MG, Robinson DG, Alvir JMaJ, Sheitman BB, Lieberman JA, Kane M: Clozapine as a first treatment for schizophrenia. American Journal of Psychiatry 160:1514–1516, 2003.

Szeszko, PR, Goldberg E, Gunduz-Bruce H, Ashtari M, Robinson D, Malhotra AK, Lencz T, Bates J, Crandall DT, Kane JM, Bilder RM: Smaller anterior hippocampal formation volume in antipsychotic-naive patients with first-episode schizophrenia. American Journal of Psychiatry 160: 2190-2197, 2003.

Szeszko PR, Bates J, Robinson D, Kane J, Bilder RM. Investigation of unirhinal olfactory identification in antipsychotic-free patients experiencing a first-episode of schizophrenia. Schizophrenia Research, 67: 219-225, 2004.

Robinson DG, Woerner MG, McMeniman M, Mendelowitz A, Bilder RM: Symptomatic and functional recovery from a first episode of schizophrenia or schizoaffective disorder. American Journal of Psychiatry 161: 473-479, 2004.

Narr KL, Bilder RM, Kim S, Thompson PM, Szeszko P, Robinson D, Luders E, Toga AW: Abnormal gyral complexity in first-episode schizophrenia. Biological Psychiatry 55: 859-867, 2004.

Saltz BL, Robinson DG, Woerner MG: Recognizing and managing antipsychotic drug treatment side effects in the elderly. Primary Care Companion Journal of Clinical Psychiatry 6 [supplement 2]: 14-19, 2004.

Strous RD, Alvir JMaJ, Robinson D, Gal G, Sheitman B, Chakos M, Lieberman JA: Premorbid function in schizophrenia: relation to baseline symptoms, treatment response and medication side effects. Schizophrenia Bulletin, 30: 265-278, 2004.

Narr KL, Thompson PM, Szeszko P, Robinson D, Jang S, Woods RP, Kim S, Hayashi KM, Asunction D, Toga AW, Bilder RM: Regional specificity of hippocampal volume reductions in first-episode schizophrenia. NeuroImage, 21: 1563-1575, 2004.

Szeszko PR, Ardekani BA, Ashtari M, Kumra S, Robinson DG, Sevy S, Gunduz-Bruce H,

Malhotra AK, Kane JM, Bilder RM, Lim KO: White matter abnormalities in first-episode schizophrenia or schizoaffective disorder: a diffusion tensor imaging study. American Journal of Psychiatry. 162: 602-605, 2005.

Narr KL, Toga AW, Szeszko P, Thompson PM, Woods RP, Robinson D, Sevy S, Wang YP, Schrock K, Bilder RM: Cortical thinning in cingulate and occipital cortices in first episode schizophrenia. Biological Psychiatry, 58: 32-40, 2005.

Narr KL, Bilder RM, Toga AW, Woods RP, Rex DE, Szeszko PR, Robinson D, Sevy S, Gunduz-Bruce H, Wang YP, DeLuca H, Thompson PM. Mapping cortical thickness and gray matter concentration in first episode schizophrenia. Cerebral Cortex, 15: 708-719, 2005

Szeszko PR, Ardekani BA, Ashtari M, Malhotra AK, Robinson DG, Bilder RM, Lim KO. White matter abnormalities in obsessive-compulsive disorder: a diffusion tensor imaging study. Archives of General Psychiatry, 62: 782-90, 2005.

Robinson DG, Woerner MG, Delman HM, Kane JM. Pharmacological treatments for first-episode schizophrenia. Schizophrenia Bulletin, 31: 705-722, 2005.

Miller R, Caponi JM, Sevy S, Robinson D: The insight-adherence-abstinence triad: an integrated treatment focus for cannabis-using first-episode schizophrenia patients. Bulletin of the Menninger Clinic, 69: 220-236, 2005.

Gunduz-Bruce H, McMeniman M, Robinson DG, Woerner MG, Kane JM, Schooler NR, Lieberman JA. Duration of untreated psychosis and time to treatment response for delusions and hallucinations. American Journal of Psychiatry, 162: 1966-1969, 2005.

Ninan PT, Koran LM, Kiev A, Davidson JRT, Rasmussen SA, Zajecka J, Robinson DG, Crits-Christoph P, Mandel FS, Austin C. High dose sertraline strategy for non-responders to acute treatment for obsessive-compulsive disorder: A multicenter double-blind trial. Journal of Clinical Psychiatry, 67: 15-22, 2006.

Bilder RM, Reiter G, Bates J, Lencz T, Szeszko P, Goldman RS, Robinson D, Lieberman JA, Kane JM. Cognitive development in schizophrenia: follow-back from the first episode. Journal of Clinical and Experimental Neuropsychology, 28: 270-282, 2006.

Lencz T, Robinson DG, Xu K, Ekholm J, Sevy S, Gunduz-Bruce H, Woemer MG, Kane JM, Goldman D, Malhotra A. DRD2 promoter region variation as a predictor of sustained response to antipsychotic medication in first-episode schizophrenia patients. American Journal of Psychiatry, 163: 529-531, 2006.

Narr KL, Bilder RM, Woods RP, Thompson PM, Szeszko P, Robinson D, Ballmaier M, Messenger B, Wang Y, Toga AW. Regional specificity of cerebrospinal fluid abnormalities in first episode schizophrenia. Psychiatry Research. 14: 21-33, 2006.

Robinson DG, Woerner MG, Napolitano B, Patel RC, Sevy SM, Gunduz-Bruce H, Soto-Perello JM, Mendelowitz A, Khadivi A, Miller R, McCormack J, Lorell BS, Lesser ML, Schooler NR, Kane JM: Comparison of olanzapine and risperidone treatment for first episode schizophrenia: Four month outcomes. American Journal of Psychiatry, 163:2096-2102, 2006.

Narr KL, Bilder RM, Luders E, Thompson PM, Woods RP, Robinson D, Szeszko PR, Dimtcheva T, Gurbani M, Toga AW: Assymetries of cortical shape: Effects of handedness, sex and schizophrenia. Neuorimage, 34: 939-948, 2007.

Narr KL, Woods RP, Thompson PM, Szeszko P, Robinson D, Dimtcheva T, Gurbani M, Toga AW, Bilder RM: Relationships between IQ and regional cortical gray matter thickness in healthy adults. Cerebral Cortex, 9:2163-2171, 2007.

Szeszko PR, Robinson DG, Sevy S, Kumra S, Rupp CI, Betensky JD, Lencz T, Ashtari M, Kane JM, Malhotra AK, Gunduz-Bruce H, Napolitano B, Bilder RM: Anterior cingulate grey-matter deficits and cannabis use in first-episode schizophrenia. British Journal of Psychiatry, 190:230-236, 2007.

Gunduz-Bruce H, Narr KL, Gueorguieva R, Toga AW, Szeszko PR, Ashtari M, Robinson DG, Sevy S, Kane JM, Bilder RM. CSF sub-compartments in relation to plasma osmolality in healthy controls and in patients with first episode schizophrenia. Psychiatry Research, 155:57-66, 2007.

Gunduz-Bruce H, Szeszko PR, Gueorguieva R, Ashtari M, Robinson DG, Kane JM, Bilder RM. Cortisol levels in relation to hippocampal sub-regions in subjects with first episode schizophrenia. Schizophrenia Research, 94:281-287, 2007.

Battaglia J, Robinson DG, Citrome L: The Treatment of Acute Agitation in Schizophrenia. CNS Spectrums 12(8 Suppl 11):1-16, 2007.

Goldberg TE, Goldman RS, Burdick KE, Malhotra AK, Lencz T, Patel RC, Woerner MG, Schooler NR, Kane JM, Robinson DG: Cognitive improvement after treatment with second generation antipsychotic medications in first episode schizophrenia: Is it a practice effect? Archives of General Psychiatry, 64:1115-1122, 2007.

Moore, TA, Buchanan, RW, Buckley, PF, Chiles, JA, Conley, RR, Crismon, ML, Essock SM, Finnerty M, Marder SR, Miller D, McEvoy JP, Robinson DG, Schooler NR, Shon SP, Stroup TS, Miller AL: The Texas Medication Algorithm Project antipsychotic algorithm for schizophrenia: 2006 update. The Journal of Clinical Psychiatry, 68: 1751-1762, 2007.

Szeszko, PR, Robinson, DG, Ashtari M, Vogel J, Betnesky j, Sevy S, Ardekani BA, Lencz T, Malhotra AK, McCormack J, Miller R, Lim KO, Gunduz-Bruce H, Kane JM, Bilder RM: Clinical and neuropsychological correlates of white matter abnormalities in recent onset schizophrenia. Neuropsychopharmacology: Official Publication of the American College of Neuropsychopharmacology, 33: 976-984, 2008.

Burdick, KE, Robinson, DG, Malhotra, AK, Szeszko, PR: Neurocognitive profile analysis in obsessive-compulsive disorder. Journal of the International Neuropsychological Society: JINS, 14: 640-645, 2008

Betensky, J.D, Robinson, D.G, Gunduz-Bruce, H, Sevy, S, Lencz, T, Kane, JM., Malhotra AK, Miller R, McCormack J, Bilder RM, Szeszko PR: Patterns of stress in schizophrenia. Psychiatry Research, 160: 38-46, 2008.

Szeszko, PR, Hodgkinson, C A, Robinson DG, Derosse P, Bilder RM, Lencz T, Burdick KE, Napolitano B, Betensky JD, Kane JM, Goldman D, Malhotra AK: DISC1 is associated with prefrontal cortical gray matter and positive symptoms in schizophrenia. Biological Psychology, 7: 103-110, 2008.

Christian CJ, Lencz T, Robinson DG, Burdick KE, Ashtari M, Malhotra AK, Betensky JD, Szeszko PR. Gray matter structural alterations in obsessive-compulsive disorder: relationship to neuropsychological functions. Psychiatry Research, 164: 123-131, 2008.

Coscia, DM, Narr, KL, Robinson, DG, Hamilton, LS, Sevy, S, Burdick, KE, Gunduz-Bruce H, McCormack J, Bilder RM, Szeszko, PR: Volumetric and shape analysis of the thalamus in first-episode schizophrenia. Human Brain Mapping, 30: 1236-1245, 2009.

Goldberg TE, Burdick KE, McCormack J, Napolitano B, Patel RC, Sevy SM, Goldman R, Lencz T, Malhotra AK, Kane JM, Robinson DG: Lack of an inverse relationship between duration of untreated psychosis and cognitive function in first episode schizophrenia. Schizophrenia Research, 107: 262-266, 2009. PubMed PMID: 19042105

Miller R, Ream G, McCormack J, Gunduz-Bruce H, Sevy S, Robinson D: A prospective study of cannabis use as a risk factor for non-adherence and treatment dropout in first-episode schizophrenia. Schizophrenia Research, 113: 138-144, 2009. PubMed Central PMCID: PMC2726744.

Narr KL, Szeszko PR, Lencz T, Woods RP, Hamilton LS, Phillips O, Robinson D, Burdick KE, Derosse P, Kucherlapati R, Thompson PM, Toga AW, Malhotra AK, Bilder RM: DTNBP1 is associated with imaging phenotypes in schizophrenia. Human Brain Mapping, 30: 3783-3794, 2009. PubMed PMID: 19449336

Velligan DI, Weiden PJ, Sajatovic M, Scott J, Carpenter D, Ross R, Docherty JP; Expert Concensus Panel on Adherence problems in Serious and Persistent Mental Illness. The expert consensus guideline series: adherence problems in patients with serious and persistent mental illness. Journal of Clinical Psychiatry, 70 Suppl 4: 1-46., 2009. PubMed PMID: 19686636

Goldberg TE, Keefe RS, Goldman RS, Robinson DG, Harvey PD: Circumstances under which practice does not make perfect: a review of the practice effect literature in schizophrenia and its relevance to clinical treatment studies.

Neuropsychopharmacology. 35:1053-62, 2010 PubMed PMID:20090669.

Sevy S, Robinson DG, Napolitano B, Patel RC, Gunduz-Bruce H, Miller R, McCormack J, Lorell BS, Kane J. Are cannabis use disorders associated with an earlier age at onset of psychosis? A study in first episode schizophrenia. Schizophrenia Research, 120: 101-107, 2010 PMID: 20471224

Robinson, D: First-episode schizophrenia. CNS Spectrums, 15: 4-7, 2010 PMID: 21141653.

Lencz, T., Robinson, D. G., Napolitano, B., Sevy, S., Kane, J. M., Goldman, D., & Malhotra, A. K: DRD2 promoter region variation predicts antipsychotic-induced weight gain in first episode schizophrenia. Pharmacogenetics and Genomics, 20: 569-572, 2010 PMID: 20664489

Kreyenbuhl J, Buchanan RW, Dickerson FB, Dixon LB. The schizophrenia patient outcomes research team (PORT): updated treatment recommendations 2009. Schizophrenia Bulletin;36:94–103, 2010.

Ardekani BA, Tabesh A, Sevy S, Robinson DG, Bilder RM, Szeszko PR: Diffusion tensor imaging reliably differentiates patients with schizophrenia from healthy volunteers. Human Brain Mapping, 32: 1-9, 2011 PMID: 20205252

Gallego JA, Robinson DG, Sevy SM, Napolitano B, McCormack J, Lesser ML, Kane, JM: Time to Treatment Response in First-Episode Schizophrenia: Should Acute Treatment Trials Last Several Months? Journal of Clinical Psychiatry, 72: 1691-1696, 2011.

Sevy S, Robinson DG, Sunday S, Napolitano B, Miller R, McCormack J, Kane J: Olanzapine vs. risperidone in patients with first-episode schizophrenia and a lifetime history of cannabis use disorders: 16-week clinical and substance use outcomes. Psychiatry Research, 188:310–4, 2011.

Robinson DG: Medication adherence and relapse in recent-onset psychosis. American Journal of Psychiatry, 168: 240-242, 2011 PMID: 21368304

Szeszko, P. R., Narr, K. L., Phillips, O. R., McCormack, J., Sevy, S., Gunduz-Bruce, H., Kane, J. M, Bilder RM, Robinson DG: Magnetic Resonance Imaging Predictors of Treatment Response in First-Episode Schizophrenia. Schizophrenia Bulletin, 38: 569-578, 2012.

Kane JM, Cornblatt B, Correll CU, Goldberg T, Lencz T, Malhotra AK, Robinson D, Szeszko PI: The field of schizophrenia: strengths, weaknesses, opportunities, and threats. Schizophrenia Bulletin 38:1–4, 2012.

Zhang J-P, Gallego JA, Robinson DG, Malhotra AK, Kane JM, Correll CU. Efficacy and safety of individual second-generation vs. first-generation antipsychotics in first-episode psychosis: a systematic review and meta-analysis. International Journal of Neuropsychopharmacology,16: 1205-1218, 2012.

Gruner P, Christian C, Robinson DG, Sevy S, Gunduz-Bruce H, Napolitano B, et al. Pituitary volume in first-episode schizophrenia. Psychiatry Research Neuroimaging, 203: 100-102, 2012.

Anderson D, Ardekani BA, Burdick KE, Robinson DG, John M, Malhotra AK, et al. Overlapping and distinct gray and white matter abnormalities in schizophrenia and bipolar I disorder. Bipolar Disorder, 15: 680-693, 2013

Correll CU, Robinson DG, Schooler NR, Brunette MF, Mueser KT, Rosenheck RA, et al. Cardiometabolic Risk in Patients With First-Episode Schizophrenia Spectrum Disorders: Baseline Results From the RAISE-ETP Study. JAMA Psychiatry. 2014 Dec 1;71(12):1350–63.

Ikuta T, Robinson DG, Gallego JA, Peters BD, Gruner P, Kane J, et al. Subcortical modulation of attentional control by second-generation antipsychotics in first-episode psychosis. Psychiatry Res. 2014 Feb 28;221(2):127–34.

Szeszko PR, Robinson DG, Ikuta T, Peters BD, Gallego JA, Kane J, et al. White matter changes associated with antipsychotic treatment in first-episode psychosis. Neuropsychopharmacol Off Publ Am Coll Neuropsychopharmacol. 2014 May;39(6):1324–31.

Sarpal DK, Robinson DG, Lencz T, Argyelan M, Ikuta T, Karlsgodt K, Gallego JA, Kane JM, Szeszko PR, Malhotra AK: Antipsychotic treatment and functional connectivity of the striatum in first-episode schizophrenia. JAMA Psychiatry. 72(1):5-13, 2015.

Argyelan M, Gallego JA, Robinson DG, Ikuta T, Sarpal D, John M, Kingsley PB, Kane J, Malhotra AK, Szeszko PR: Abnormal Resting State fMRI Activity Predicts Processing Speed Deficits in First-Episode Psychosis. Neuropsychopharmacology, in press.

Addington, J, Heinssen, RK, Robinson, DG, Schooler, NR, Marcy, P, Brunette, MF, Correll, CU, Estroff, S, Mueser, KT, Penn, D, Robinson, JA, Rosenheck, RA, Azrin, ST, Goldstein, AB, Severe, J, Kane, JM: Duration of Untreated Psychosis in Community Treatment Settings in the United States. Psychiatr. Serv. 66: 753–756, 2015.

Kane, JM, Schooler, NR, Marcy, P, Correll, CU, Brunette, MF, Mueser, KT, Rosenheck, RA, Addington, J, Estroff, SE, Robinson, J, Penn, DL, Robinson, DG: The RAISE early treatment program for first-episode psychosis: background, rationale, and study design. J. Clin. Psychiatry 76: 240–246 2015.

Mueser, KT, Penn, DL, Addington, J, Brunette, MF, Gingerich, S, Glynn, SM, Lynde, DW, Gottlieb, JD, Meyer-Kalos, P, McGurk, SR, Cather, C, Saade, S, Robinson, DG, Schooler, NR, Rosenheck, RA, Kane, JM: The NAVIGATE Program for First-Episode Psychosis: Rationale, Overview, and Description of Psychosocial Components. Psychiatr. Serv. 66: 680–690, 2015.

Robinson, DG, Schooler, NR, John, M, Correll, CU, Marcy, P, Addington, J, Brunette, MF, Estroff, SE, Mueser, KT, Penn, D, Robinson, J, Rosenheck, RA, Severe, J,

Goldstein, A, Azrin, S, Heinssen, R, Kane, JM: Prescription practices in the treatment of first-episode schizophrenia spectrum disorders: data from the national RAISE-ETP study. Am. J. Psychiatry 172: 237–248, 2015.

Robinson, DG, Schooler, NR, Kane, JM: Response to Saraga. Am. J. Psychiatry 172: 588, 2015.

BOOKS, CHAPTERS IN BOOKS AND REVIEW ARTICLES

Robinson D, Jody D, Lieberman, J: "Provocative Tests with Methylphenidate in Schizophrenia and Schizophrenia Spectrum Disorders" in Greenhill L, Osman B (eds) Ritalin: Theory and Patient Management, Mary Ann Liebert, New York, NY, 1991.

Flaum M, Amador X, Gorman J, Bracha HS, Edell W, McGlashan T, Pandurangi A, Kendler K, Robinson D, Lieberman J, Ontiveros A, Tohen M, McGorry P, Tyrrell G, Arndt S, Andreasen N: "DSM-IV Field Trial for Schizophrenia and Other Psychotic Disorders" in Widiger TA, Frances AJ, Pincus HA, Ross R, First MB, Davis W, Kline M (eds) <u>DSM-IV Sourcebook Volume 4</u>, American Psychiatric Association, Washington DC, 1998.

Goldman RS, Robinson D, Grube B, Hanks R, Putnam K, Walder D, Kane J: "General Psychiatric Symptom Measures" in First MB (ed) <u>Handbook of Psychiatric Measures and Outcome</u>, American Psychiatric Press, Washington, D.C, 2000.

Robinson D: "Treatment of Schizophrenia at the First Episode" in Harvey P, Sharma T (eds) The Early Course of Schizophrenia: Schizophrenia in the Premorbid Period, Oxford University Press, Oxford, UK, 2006.

Delman HM, Robinson DG, Kimmelblatt CA, McCormack J: "General Psychiatric Symptom Measures" in Rush AJ, First MB, Blacker D (eds) <u>Handbook of Psychiatric Measures</u> Second Edition, American Psychiatric Publishing, Washington, DC, 2008.

Mary Hitchcock Memorial Hospital

Key Personnel

Name	Job Title	Salary	% Paid from	Amount Paid from
			this Contract	this Contract
Jamie Fairstone	Education Coordinator	\$40,000	5%	\$2,000
William Keller, MD	Director, First Episode	\$224,995	2.5%	\$5,625
	Service			