

2016 ANNUAL REPORT
EVANS CENTER FOR IMPLEMENTATION
AND IMPROVEMENT SCIENCES



*Boston University Department of Medicine
Evans Center for Implementation and Improvement Sciences*

CENTER OVERVIEW

The Boston University Department of Medicine Center for Implementation and Improvement Sciences (CIIS) is a methodological hub for the scientific evaluation of efforts to improve healthcare delivery that integrates key components of implementation and improvement sciences with a focus on care within safety net systems, especially including Boston Medical Center (BMC).

WHAT ARE IMPLEMENTATION AND IMPROVEMENT SCIENCES?

Implementation science seeks to understand the process of evidence uptake into clinical practice. Did people perform the new endeavor? Why or why not?

Improvement science seeks to rigorously measure outcomes of efforts to improve healthcare delivery. Did the new endeavor measurably improve desirable outcomes?

Combining implementation and improvement sciences allows CIIS to assist in the development and rigorous evaluation of endeavors that seek to **improve the quality of healthcare**, particularly related to care for the underserved. CIIS serves as a conduit to the free flow of ideas between clinicians, administrators and health services researchers in the Boston University community and beyond to facilitate improvement in care that not only measures internal program adherence, but also produces inferential and generalizable evaluations of healthcare delivery.

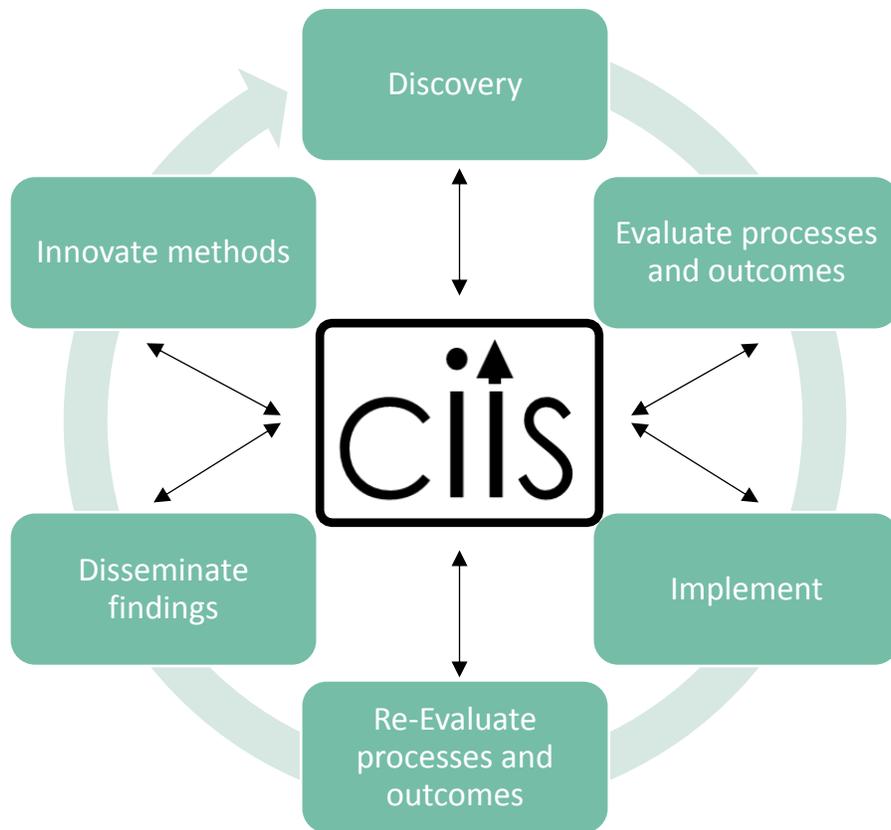
SPECIFIC OBJECTIVES OF THE CENTER

1. **Guide, support, and innovate** design of projects that rigorously evaluate the effectiveness of efforts to implement healthcare system change.
2. **Identify** factors and strategies that **accelerate** the adoption and **promote sustainability** of effective healthcare interventions in safety net systems.
3. **Educate** faculty and trainees in implementation and improvement sciences.

CENTER ORGANIZATION

The Center combines the complementary leadership skills of Mari-Lynn Drainoni, PhD, MEd and Allan J. Walkey, MD, MSc. Dr. Drainoni provides expertise in qualitative methods and implementation science and takes primary responsibility for the planning of qualitative data collection, and leading the education component of CIIS, including the development of an initial seminar series. She coordinates activities and conducts outreach to the School of Public Health and the VA. Dr. Walkey provides expertise in quantitative methods and study design to evaluate

improvement in healthcare delivery and takes primary responsibility for managing the relationship with the Clinical and Translational Science Institute (CTSI) and the Clinical Data Warehouse (CDW), coordinating pilot grant reviews, identifying quantitative data analysis expertise, and coordinating activities and conducting outreach within BMC and BUSM. In addition, CIIS has hired Caitlin Allen, MPH, as the Assistant Research Director. She brings experience in implementation research with specific focus on the implementation of new health care workforces (e.g., patient navigators and community health workers), as well as a mixed methods research background, and strong program management skills. Ms. Allen provides quantitative and qualitative assistance to achieve generalizable insights from implementation and improvement projects, as well as overseeing the day-to-day management of the Center.



CIIS: Helping turn the wheels of quality

2016 CENTER OBJECTIVES

ACADEMIC YEAR 2016 OBJECTIVES, STRATEGIES, AND ACCOMPLISHMENTS

Created in November, 2015, the Center has begun to establish itself as a methodological hub for the scientific evaluation of efforts to improve healthcare delivery with both internal and external partners. The Center's focus on safety net systems makes it especially unique among Centers of this kind throughout the nation. The table below outlines the Center's objectives, strategies, and accomplishments from 2016. A few specific programmatic highlights are also included.

IMPLEMENTING A MEMORY DISORDERS CLINIC

This study is a formative evaluation of the Memory Disorders clinic that is being implemented at BMC. This study is designed to understand how the clinic is being implemented to ensure that services, including provider time, are used most efficiently, and that the new clinic's services are useful for all populations, including non-English speakers. Referring providers, patients, caregivers, and interpreters will be surveyed and/or interviewed to better understand their satisfaction with the implementation of the Memory Disorders clinic and any recommendations they may have for improving the clinic's work. The Center's work includes consultation with the Memory Disorder clinic physicians and staff to develop methods for quality improvement, submitting an IRB, and carrying out patient, caregiver, and provider surveys, and provider and interpreter interviews.

DEVELOPING A COMMUNITY AT BUMC AND ESTABLISHING LOCAL PARTNERSHIPS

The Center has established a series of Implementation in Progress meetings that began in June, 2016. These monthly lunchtime meetings allow researchers to come together and discuss issues in implementation and improvement sciences. It also allows CIIS to build a strong community of researchers focused on implementation and improvement sciences. In addition, the Center has begun to develop external partnerships and is forming a Boston-based Community of Practice that is focused on advancing the field of implementation and improvement sciences by sharing best practices and building new methods.

Objective 1: Guide, support, and innovate design of projects that rigorously evaluate the effectiveness of efforts to implement healthcare system change

Strategies	AY16 Accomplishments
<p>Strategy 1.1: Establish clear pathways within IRB to ensure ethical evaluation of healthcare delivery and procedures to support acceleration of approvals for comparative effectiveness research and implementation research project</p>	<ul style="list-style-type: none"> • Established relationship with Clinical Research Resource Office to guide IRB approval process • Submitted first two CIIS IRB protocols
<p>Strategy 1.2: Work with CTSI and other key partners at BUMC to coordinate and integrate efforts, including identification of implementation and improvement sciences as a relevant CTSI activity</p>	<ul style="list-style-type: none"> • CIIS now participates in CTSI pilot grant process • CIIS is leading CTSI study on unsupervised implementation of ‘pain as fifth vital sign’ as contributor to opiate epidemic
<p>Strategy 1.3: Identify quality improvement initiatives within BMC that will benefit from a rigorous theoretical framework and study design that can be used as “pilot” projects to test the BU CIIS model</p>	<ul style="list-style-type: none"> • Memory Disorders clinic evaluation • Readmission risk reduction • Full pilot program beginning June 1, 2016 with awards announced in August 2016 • Developed a system for assessing projects that request assistance from CIIS

Objective 2: Identify factors and strategies that accelerate the adoption and promote sustainability of effective healthcare interventions in safety net systems

Strategies	AY16 Accomplishments
<p>Strategy 2.1: Develop novel approaches to the integration of improvement and implementation science</p>	<ul style="list-style-type: none"> • Testing Regression Discontinuity Design (RDD) as implementation and improvement evaluation strategy • Part of local “community of practice” alongside Boston-area implementation and improvement scientists • Numerous grant submissions, consultations, and active projects
<p>Strategy 2.2: Develop algorithms within the BUMC Data Warehouse and the BU Department of Medicine Quality and Safety offices to facilitate extraction of valid clinical data to evaluate processes and outcomes of care at BMC</p>	<ul style="list-style-type: none"> • Met with Senior Vice President for Quality, Safety and Technology and Chief Quality Officer • Met with Associate Chief Quality Officer at BMC • Met with Data Warehouse
<p>Strategy 2.3: Develop plan to expedite collection of high-quality qualitative data to support evaluation of implementation strategies</p>	<ul style="list-style-type: none"> • Designed a process for project submissions and approval
<p>Strategy 2.4: Initiate first projects designed to accelerate adoption of effective healthcare interventions</p>	<ul style="list-style-type: none"> • First projects initiated including six active projects and consultations • Nine manuscripts published and five under review for CIIS related projects • Pilot program launched on June 1, 2016

Objective 3: Educate faculty and trainees in Implementation and Improvement Sciences

Strategies	AY16 Accomplishments
Strategy 3.1: Promote CIIS within BUMC and BU community	<ul style="list-style-type: none">• Established monthly Implementation in Progress Meetings – hosted first meeting in June with 45 attendees• Coordinating poster session for 2016 Evans Days and implementation and improvement sciences award• Website and social media development resulting in 1,759 page views, and 2,485 twitter impressions in June
Strategy 3.2: Create a research network and intellectual home to coordinate and leverage the existing talent pool in implementation, improvement, effectiveness sciences within BU Community	<ul style="list-style-type: none">• Discussion with Boston implementation and improvement centers regarding consortia and seminars initiated• Implementation science course at BUSPH offered each fall• 14 presentations completed at internal and external venues

LOOKING AHEAD: 2017 AND BEYOND

After a successful first year, we are excited about the future of CIIS. We look forward to the opportunity to continue to build partnerships with internal and external investigators and create a vibrant implementation and improvement sciences community. In the coming year we will see the first round of CIIS pilot grants, continue to host Implementation in Progress meetings, bring speakers to campus, and work alongside researchers to magnify their implementation and improvement work.