Implementing Evidence-Based Health Promotion in Mental Health Settings: InSHAPE for Adults with Serious Mental Illness and Obesity

An Implementation Project from the Dartmouth CDC Health Promotion Research Center

Funded by Support from NIMH R01MH102325
The Dartmouth-National Council Team

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Project Funded by NIMH Grant R01MH102325
Overview of Informational Webinar

• Rationale for health promotion
• InSHAPE® health promotion program
• InSHAPE ® implementation project
  – The opportunity
  – Benefits of participation
  – Implementation design and expectations
  – Application, timeline, important dates

• Q & A session
How we got here……..
An “Epidemic” of Early Mortality: Mean Years of Potential Life Lost

<table>
<thead>
<tr>
<th>Year</th>
<th>AZ</th>
<th>MO</th>
<th>OK</th>
<th>RI</th>
<th>TX</th>
<th>UT</th>
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<td>1997</td>
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<tr>
<td>1998</td>
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<td>27.9</td>
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<td>24.9</td>
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</tbody>
</table>

Compared with the general population, persons with major mental illness lose 25-30 years of normal life expectancy

Colton CW, Manderscheid RW. Prev Chronic Dis [serial online] 2006 Apr [date cited]. Available at: URL:http://www.cdc.gov/pcd/issues/2006/apr/05_0180.htm
Cardiovascular Disease Is Primary Cause of Death in Persons with Mental Illness*

Colton CW, Manderscheid RW. Prev Chronic Dis [serial online] 2006 Apr [date cited]. Available at URL: http://www.cdc.gov/pcd/issues/2006/apr/05_0180.htm
• 203 studies including 29 countries over six continents

• mental health disorders 2.22 times higher mortality risk compared to general population or people w/o mental illness.

• average of 10 years of potential life lost

• Medical causes 2/3 (67.3%) of deaths, 17.5% “unnatural causes; remaining unknown.
## Cardiovascular Disease (CVD) Risk Factors and Major Mental Illness

<table>
<thead>
<tr>
<th>Modifiable Risk Factors</th>
<th>Prevalence Compared to General Population</th>
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<tbody>
<tr>
<td>Abdominal Obesity</td>
<td>4.4 X</td>
</tr>
<tr>
<td>Smoking</td>
<td>3-4X</td>
</tr>
<tr>
<td>Diabetes</td>
<td>2X</td>
</tr>
<tr>
<td>Hypertension</td>
<td>1.4 X</td>
</tr>
<tr>
<td>Metabolic Syndrome</td>
<td>2.4X</td>
</tr>
<tr>
<td>Hyperlipidemia</td>
<td>2.7X</td>
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</table>

**Vancamfort et al., 2013: Meta-analysis of 136 studies**
The National “10 By 10” National Campaign

AIM: To Increase the Life Expectancy of People with Mental Illness by 10 Years in 10 Years

SAMHSA, HRSA, CDC, Healthy People 2020, and Numerous Organizations and Advocacy Groups
Determinants of Health (World Health Organization)

Lifestyle 5X Health Care

- Lifestyle: 51%
  - Smoking
  - Obesity
  - Stress
  - Nutrition
  - Blood pressure
  - Alcohol
  - Drug use

- Environment: 19%

- Human Biology: 20%

- Health Care: 10%
The InSHAPE® Program
The InSHAPE Program

Participants spend time each week with personal mentors exercising and working on nutrition plans.

Mentors help participants to track their progress, set goals, and stay motivated.
InSHAPE: Major Components

- Health Mentors (certified personal trainers)
- Individualized InSHAPE Plans
- Access to local fitness facilities
- Individual and group nutrition education
- Smoking cessation referrals
- Engagement of community partners
Who is the Target Population for InSHAPE?

Overweight (BMI$\geq 25$) adults age 18 and older with serious mental illness (i.e., Bipolar Disorder, Major Depression, Schizophrenia, and Schizoaffective Disorder)
InSHAPE Philosophy, Values, and Beliefs

InSHAPE is about Recovery and Inclusion

– Self-Determination and Self-Direction (individuals create their InSHAPE Plan, take responsibility for their life plan, and build a life in their community)

– Contributes to overall health

– Build toward citizenship

– All activities occur in the community

– Community becomes engaged with participants
InSHAPE

(Individualized Self Health Action Plan for Empowerment)

An Evidence-Based Practice
1st RCT (n=133) : At 12 months: **49%** in intervention group achieved clinically significant cardiovascular risk reduction: either increased fitness (>50 m on 6 minute walk test) or weight loss (5% or greater)
2nd RCT Boston, Mass (n=210; half underserved minorities) 51% achieved clinically significant cardiovascular risk reduction:

Either clinically significant increased fitness (>50 m on six minute walk test) or weight loss (5% or greater)
InSHAPE
From Community Need, to Research, to Implementation

Community Development
- Identification of Need, Community Coalition
- Development of InSHAPE Model (2002)

Effectiveness Research
- Effectiveness RCT Studies (CDC, NIMH) (2006-2012)

Implementation Research
- Statewide Implementation and Evaluation (2009-2014); Statewide Medicaid Incentives Grant (2011-2016)
Research Review of Health Promotion Programs for People with Serious Mental Illness

The SAMHSA-HRSA Center for Integrated Health Solutions engaged the Dartmouth Health Promotion Research Team, under the leadership of Stephen Bartels, MD, MS, to conduct a comprehensive, systematic review of published research literature addressing non-pharmacological lifestyle interventions aimed at reducing obesity and improving fitness for people with serious mental illness who are at risk of myriad chronic conditions and premature death.

Summary of Findings

Current research demonstrates that lifestyle interventions inconsistently achieve clinically significant weight loss for overweight individuals with serious mental illness. When successful, these interventions result in clinically significant weight loss for only a minority of participants. To date, it is unknown why some individuals participating in lifestyle interventions achieve significant weight loss, and others do not. However, some program characteristics (e.g., program duration and design) seem to facilitate greater success than others do. It is important to note that improving cardiorespiratory fitness has substantial health benefits, independent of weight loss.
We Know What Works

Intensive, manualized programs that combine coached physical activity and support for dietary change lasting 9 months or more.
The Problem

We know what works………

But we don’t know how to get it done

“The Evidence to Implementation Gap”
InSHAPE Implementation Project

Q: What is the best approach to implementing evidence-based health promotion in mental health delivery settings?

Learning Collaborative or Individual Technical Assistance?

Outcomes:

Organization-level (organizational change, reach)
Provider-level (model fidelity)
Person-level (weight loss and cardiovascular fitness)
What Can We Learn Together?

How do I reach the targeted population?

How do I know my intervention is effective?

How do I develop organizational support to deliver my intervention?

How do I ensure the intervention is delivered properly?

How do I incorporate the intervention so it is delivered over the long-term?
Major Benefits of Participation

• Training in InSHAPE program
  – Airfare, lodging, meals, and training costs covered for 1 full-time Health Mentor
  – Training in New Hampshire
  – Sites may send additional Health Mentors at their expense

• Reimbursement for costs related to personal trainer certification for Health Mentor
  – Course, books, fees, and exam through local or online AAFA, NASM, ACE, or ACSM chapter

• Ongoing implementation support by experts in health promotion and implementation research
Additional Implementation Benefits

• An iPad to assist the Health Mentor(s) in tracking participant progress and program outcomes

• $2,500 annual stipend to each organization to offset administrative costs associated with data requests
Benefits: Innovative Programming

• Free training for an evidence-based, research practice that directly addresses the life expectancy gap disparity of persons experiencing the most serious mental illnesses

• Leadership in innovation enhancing potential for fund raising, local grants, and productive partnerships with community and state organizations

• Enhancing position for future funding opportunities in healthcare prevention and integration through the Affordable Care Act (e.g. 1915i, health homes, etc.)

• Enhanced agency visibility, community engagement, and relationships through new partnerships
InSHAPE Implementation Project: Implementation Design and Expectations

48 selected mental health organizations:
Three phases of 16 organizations for two years of participation each

Randomized

Individual Technical Assistance
- Individual phone-based technical assistance calls at scheduled times during participation and also offered as needed

Virtual Learning Collaborative
- One face-to-face daylong kick-off meeting
- Monthly web-based learning collaborative and educational sessions

NIMH R01MH102325, PI: Bartels
InSHAPE Training and Individual Technical Assistance

The Technical Assistance group will:

• Send selected Health Mentor to our site in NH to obtain InSHAPE training

• Participate for 18 months:
  – Calls are scheduled at month 1 of program implementation, at month 2, at month 8, and at month 14
  – Calls are also offered as needed for up to 18 months from start of implementation
InSHAPE Training and Learning Collaborative

The Learning Collaborative group will:

- Send selected Health Mentor to our site in NH to obtain InSHAPE training

- Send your organization’s InSHAPE team to a in-person 1-day kick-off event in NH (travel and lodging to be covered by the participant organization)

- Participate in 18 months of a monthly virtual Learning Collaborative in which participants will:
  - Share and post virtually monthly progress toward identified benchmarks with other learning collaborative members
  - Discuss successes and challenges
  - Share strategies for problem solving
## Side-by-side Group Comparison of Participation

<table>
<thead>
<tr>
<th>Organizations assigned to <em>Learning Collaborative</em></th>
<th>Organizations assigned to <em>Technical Assistance</em></th>
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<tbody>
<tr>
<td>Project Welcome/Orientation Webinar</td>
<td>Project Welcome/Orientation Webinar</td>
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<tr>
<td>All About InSHAPE and CourseSites Webinar</td>
<td>All About InSHAPE and CourseSites Webinar</td>
</tr>
<tr>
<td>InSHAPE Training for Supervisors Webinar</td>
<td>InSHAPE Training for Supervisors Webinar</td>
</tr>
<tr>
<td>Data Collection Webinar</td>
<td>Data Collection Webinar</td>
</tr>
<tr>
<td>4-Day InSHAPE Training for Health Mentor</td>
<td>4-Day InSHAPE Training for Health Mentor</td>
</tr>
<tr>
<td>Learning Collaborative In-person Kickoff Involving InSHAPE Team</td>
<td>Scheduled technical assistance calls 1 month, 2 months, 8 months, and 14 months into implementation. Calls also offered as needed for up to 18 months</td>
</tr>
<tr>
<td>18 Months of Monthly Virtual Learning Collaborative Sessions</td>
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</table>
Participation Over 24 Months

April 2017

Individual Technical Assistance (18 months)

Learning Collaborative (18 months)

Ongoing engagement with research team (until 24 months)

March 2019
All organizations should be willing to be assigned to either an Individual Technical Assistance Group or a Learning Collaborative Group.
Expectations: Key Requirements

Hire or designate at least one full-time (35-40 hrs/wk) Health Mentor who is allocated solely to the InSHAPE program
Participation Also Requires

1) Establishing an implementation team that participates for 18 months in either individual technical assistance calls or learning collaborative.

Who must be a part of your implementation team?

1. Full-time Health Mentor dedicated solely to InSHAPE program

2. Designated InSHAPE supervisor, who has a minimum of 8 hours a week dedicated to the program

3. Identified administrative/clinical director under which InSHAPE is housed, who is someone who has the authority to make key decisions about the program

4. Executive level leadership
Participation Also Requires

1) Establishing an implementation team that participates for 18 months in either individual technical assistance calls or learning collaborative.

2) Facilitating access to fitness facilities and/or other opportunities for exercise, as well as access to nutrition education.

3) Reporting regularly scheduled participant and organizational data for 24 months.

4) Signing and returning an intellectual property agreement.

5) If assigned to the Learning Collaborative group, sending implementation team to in-person 1-day kickoff event in NH.
Site Selection

Sites will be selected for each phase to achieve an optimal mix of the following:

- Organizational readiness
- Geographic distribution
- Diversity of patient population
- Organizational size
- Urban vs. rural
For More Information, and to Apply

• Deadline to apply to this round: Friday, June 24 by 5 p.m. ET

• To learn more about InSHAPE® (videos, testimonials, components), this project, FAQs, the application, etc please visit our webpage on the National Council for Behavioral Health website: http://www.thenationalcouncil.org/training-courses/dartmouths-shape-implementation-study/
THANK YOU!

More Questions?

Please contact Allison Kinney at Dartmouth (Allison.R.Kinney@Dartmouth.edu)

OR

Nina Marshall at the National Council (NinaM@TheNationalCouncil.org)
Q & A Session

Deadline to apply to this round: Friday, June 24 by 5 p.m. ET. Send application to Allison.R.Kinney@Dartmouth.edu

RFA and application found here: http://www.thenationalcouncil.org/training-courses/dartmouths-shape-implementation-study/
What are the qualifications of a Health Mentor?

The Health Mentor is a certified personal trainer who also receives the 4-day InSHAPE training provided by the Dartmouth team. A background in mental health can be helpful but is not required. Training or degrees in nutrition are also very valuable.
When does the Health Mentor need to be a certified trainer?

The Health Mentor has to pass the certification exam before working with participants in a gym or creating an exercise programs for participants.
How does an organization pay for a Health Mentor?

Agencies who have implemented the InSHAPE program have used a variety of funding mechanisms. Health Mentors provide a legitimate functional support service, and (depending on state) may be able to be supported in part or in full through Medicaid. Provisions under the Accountable Care Act (e.g., specialty health homes, 1915i) and Medicaid waivers also provide support for wellness coaching.

Additional resources have included funding through MCOs, reallocation of staff, foundations, and inclusion of the program under grant funded projects.
Who supervises the Health Mentor?

The Dartmouth team will provide phone-based supervision every other week for 6 months after the 4-day InSHAPE training. The Health Mentor should also have a supervisor in the organization who can meet with him/her on a regular basis.
What is the difference between an administrative/clinical director and InSHAPE supervisor?

The director is a senior management person who is able to make key decisions about the program, has a direct line to the executive level (or is the executive level) of the organization, and has authority. The director could be the same person as the supervisor depending on where the program is “situated” in your organization, but not necessarily. For example, you may have a Community Support Program (CSP) Director who is in charge of the overall InSHAPE program at your organization, but this is certainly not a full-time role. This person may supervise the InSHAPE supervisor, who is a more junior-level staff person in charge of Health Mentor supervision, participant enrollment, developing community partnerships, day-to-day program tasks, et cetera.
How long does a participant work with the Health Mentor?

This may vary by individual, but in general, one year of engagement with the Health Mentor is recommended for most participants. From the start of the program, the Health Mentor also encourages participants to engage in group-based exercise and physical activities. The goal of the program is to assist the individual in establishing a healthy lifestyle and to support long-term engagement in independent physical activity and healthy nutrition, often including group or peer supported activities.
With 30 people on a case load, what does the program entail for frequency of contact and intensity of services provided for the 30 individuals weekly?

The Health Mentor is expected to have a 1-hour one-on-one in-person session with each person on their caseload. During these sessions, Health Mentors spend half the time helping participants engage in exercise, and half of the time talking about nutrition. During these sessions, the Health Mentor also checks in about weekly health goals the participant set for him/herself, new goal plans, and troubleshoots progress. We have found 30 participants to be a feasible initial caseload, with larger caseloads possible after early enrollees have established a routine and do not require as much 1:1 support. 30 participants may seem like a lot, but it has been our experience that not all 30 are able to make it to appointments with the Health Mentor every week.
It appears a large portion of the program does focus on physical fitness. What sort of nutrition education is provided?

The 4-day InSHAPE training trains Health Mentors to spend 50% of their time discussing exercise, and 50% of their time reviewing nutrition. The Health Mentors undergo 1 day of basic nutrition education with a registered dietician in order to prepare them for this role, and ongoing bi-weekly Health Mentor supervision with our Dartmouth team includes consultation with a registered dietician. We also have an InSHAPE nutrition website with a wealth of nutrition resources that all Health Mentors can access. The exercise piece is often emphasized in InSHAPE because we’ve found that it excites people, gets them into the program, and gets them motivated to start. However, we also encourage the use of local nutrition resources, like a local cooperative extension serving at-risk populations, local grocery stores that offer tours or workshops, nutrition classes, et cetera. Having these resources on hand is also good for more specific questions that might come up for the participant that are outside of the Health Mentors knowledge in nutrition. It is important to offer a balance of nutrition and exercise, since both components are essential to improving physical health.
Do we have to have a gym?

We highly recommend facilitating access to fitness activities that are available, typically a gym. Each site will need to work with the resources in their community; these may include local public or private fitness facilities, a town or city recreation center, local health facility, or local schools and universities. In addition to providing a safe and available setting for exercise, a fitness facility provides the opportunity for inclusion in group exercise. At the same time, outdoor exercise is encouraged, depending on participant preference and local setting.
How does my organization get discounted gym memberships?

Organizations that have implemented InSHAPE have used community partnerships committed to the health of the local community to acquire discounted bulk memberships at local YMCA or other fitness facilities. Some gyms already have sliding fee or scholarship programs.
What data will be collected?

**Participant Level:** Weekly, Health Mentors will collect participants’ weight and progress on goals on an iPad provided by the study. Every 3 months, Health Mentors will also collect participant self-reported information on dietary and exercise behaviors, a 6-minute walk test, weight, waist circumference, and blood pressure.

**Organization Level:** Dartmouth will assess program implementation and fidelity via phone-based interviews and online surveys just after implementation start-up and at 12-month and 24-month follow-up.
Will we need to go through an Institutional Review Board (IRB) process to participate? Will the Dartmouth team be completing that IRB application? Will you need someone designated as Principal Investigator at each site?

Individual sites may or may not need to get approval from their own IRBs, and they should look into this. Dartmouth has already received approval from the Dartmouth College IRB to conduct this research study. We received a waiver of consent since all data collected will be de-identified. There is only one Principal Investigator—Stephen Bartels, MD, MS of Dartmouth. The Dartmouth team will not complete IRB applications for organizations’ IRBs; however, we are happy to assist in this process with the appropriate documents, language, and consultation. Approval from the IRB must occur prior to January 2017.
Will the project share data with the sites in the study?

Organizations will have access to their program-level data having to do with InSHAPE implementation and fidelity after the study has concluded. InSHAPE participants will be able to regularly access their individual physical assessment data collected by the Health Mentor, i.e., weekly weight and health goals, quarterly 6-minute walk test distance, heart rate, blood pressure, and waist circumference.
When will we know what group we are assigned to, and when will we know the dates for the InSHAPE training, LC kickoff, monthly Individual Technical Assistance calls and monthly Learning Collaborative?

Sites will learn these dates in October 2016.