Social Determinants of Health (SDH) Coordinated Care Hub for Homeless Adults

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Joint meeting of the Cost Trends and Market Performance (CTMP) and Community Health Care Investment and Consumer Involvement (CHICI) Committees

50 Milk Street, Boston, Massachusetts

July 5, 2017

BHCHP Mission

Since 1985, our mission has remained the same: to provide or assure access to the highest quality health care for all homeless men, women, and children in the greater Boston area.

Understanding our Patient Population

I. BHCHP patients are complex:

- 68% mental illness
- 60% substance use disorders (SUD)
- 48% co-occurring mental illness & SUD
- High prevalence of medical illnesses, e.g. HCV (23%) & HIV (6%)
- High prevalence of chronic illnesses, e.g. 37% hypertension, 26% COPD or asthma, &18% diabetes mellitus
- Disease burden = DxCG score of 3.8

II. BHCHP patients are costly:

- $2036 PMPM vs. $568 for all MassHealth members
- > 1/3 had 6 or more ED visits/yr; 1/5 had 3 or more hospitalizations
- 10% population accounted ~50% total expenditures

Bharel, M., et al., Health care utilization patterns of homeless individuals in Boston: preparing for Medicaid expansion under the Affordable Care Act. Am J Public Health, 2013. ***103 Suppl 2****: p. S311-7*

SDH Consortium

- Boston Health Care for the Homeless Program
- Bay Cove Human Services
- Boston Public Health Commission
- Boston Rescue Mission
- Casa Esperanza
- Massachusetts Housing and Shelter Alliance
- New England Center and Home for Veterans
- Pine Street Inn
- St. Francis House
- Victory Programs

- History of collaboration
- MassHealth ICB grant enabled Organized Health Care Arrangement (OHCA)
  - Legal agreement that binds our organizations and enables sharing limited amounts of Protected Health Information (PHI)
  - Established formal governance procedures
  - Enabled link to City of Boston's Continuum of Care
  - Positioned us to leverage partnerships to bid on proposals:
    1. HPC HCII grant
    2. MassHealth BH Community Partners

Targeted Cost Challenge Investments Awardee Highlight:
Boston Health Care for the Homeless Program

Challenge Area	HPC Funding
Social Determinants of Health	$750,000

Partners

- Bay Cove Human Services
- Boston Public Health Commission
- Boston Rescue Mission
- Casa Esperanza
- Massachusetts Housing and Shelter Alliance
- The New England Center and Home for Veterans
- Pine Street Inn
- St. Francis House
- Victory Programs

Total Initiative Cost	Estimated Savings
$919,085	$1,496,000

Target Population

Highest cost MassHealth patients with high ED utilization (> 6 visits) and/or hospital utilization (> 2 admissions) in the most recent 6 months

Primary Aim

Reduce total number of emergency department visits and hospitalizations by 20%

Service Model

BHCHP will serve as a hub for a team of primary, acute, and specialty medical providers along with shelters and advocacy organizations to identify patients, track utilization, and provide intensive care coordination for patients whose needs span many types of services and providers

Evidence Base

- Yamhill Community Care Organization's Community Hub, Oregon
- Veteran's Health Administration's Homeless Patient Aligned Care Team Program

Source: Health Policy Commission Board Meeting, July 27, 2016

Funding streams

$750K/2 years Massachusetts HPC HCII

- $325 PMPM/18 months BHCHP pass through to partner organizations based on 15:1 caseloads
- $10,000/2 years to partner organizations for administrative support
- $213,000/2 years BHCHP administrative support including director, RN navigator, data analyst, training, data platform, etc.

HEALTH POLICY COMMISSION (HPC) GRANT OVERVIEW

Grant Objective: Coordinate care across 10 agencies to better serve people experiencing homelessness, improving their access to services that address the social determinants of health and reducing their avoidable ED and hospital utilization by 20%.

Timeline: 2-year grant: Planning Phase begins mid-December 2016. Implementation Phase begins June 2017.

Target Population: To start, 60 homeless individuals with high costs/ high health care utilization.

Social Determinants of Health Coordinated Care Hub

for people experiencing homelessness

Supports for You as You Support Your Highest-Risk Clients

1 DEDICATED RESOURCES

15:1 client-to-staff ratio

- Recognizes challenge of engaging highest-risk clients
- Ensures that engagement can be focused and consistent over time
- Special program requiring client consent for participation

2 SHARED INFORMATION TECHNOLOGY

so you can contact & communicate with other agencies more easily

shared care management platform (ETO)

3 SHARED CARE PLANS

so your client's goals are created by him or her – and being supported by all of us

4 CONNECTION TO PRIMARY CARE

You'll know your client's health care team, and they'll know you

- Regular communication with doctor/nurses
- Joint training and case conferencing

5 DATA TO HELP YOU UNDERSTAND YOUR CLIENT'S NEEDS & SERVICE USE

Information from Medicaid claims, health record & other social service agencies

- Data about how to improve client's connection to care (e.g., when due for cancer screenings)
- Data about recent hospitalizations/ED visits
- Data about care management & housing from HMIS

6 SUPPORT FROM HUB LEADERSHIP TEAM

Meets regularly to troubleshoot and strategize about progress and "pain points"

- Dashboard reviewed monthly so we've got all eyes on goal
- May be able to prioritize housing, services, or other resources

Bay Cove Human Services | Boston Health Care for the Homeless Program | Boston Public Health Commission | Boston Rescue Mission | Casa Esperanza | Massachusetts Housing and Shelter Alliance | New England Center for Homeless Veterans | Pine Street Inn | St. Francis House | victory programs

1. DEDICATED RESOURCES

- 15:1 client-to-staff ratio
  - Recognizes the intensity of engaging highest risk clients
  - Need for face to face vs. telephonic engagement
  - Increased expectations for documentation and coordination with primary care teams
- Assignment to SDH organization based on existing robust relationships
- Client consent for participation

2. SHARED INFORMATION TECHNOLOGY

- City of Boston Department of Neighborhood Development (DND) Platform hosts Homeless Management Information System (HMIS) data warehouse
- City enabled development of separate “Window” to warehouse to combine HMIS data with limited PHI supplied by BHCHP electronic health record for Consortium members only
- Data (HMIS & PHI) refreshed daily
- ETO (Efforts to Outcomes) care management software supplied by City to all Consortium members
  - Also includes Arizona Self Sufficiency Matrix (ASSM) assessment

Arizona Self Sufficiency Matrix

Self-Sufficiency Matrix Participant Name ______________________ DOB __/__/____ Assessment Date __/__/____ Initial Interim Exit

(If using ServicePoint) Program Name _______________________ HMIS ID ____________

Domain	1	2	3	4	5	Score	Participant goal? (✓)
Housing	Homeless or threatened with eviction.	In transitional, temporary or substandard housing; and/or current rent/mortgage payment is unaffordable (over 30% of income).	In stable housing that is safe but only marginally adequate.	Household is in safe, adequate subsidized housing.	Household is safe, adequate, unsubsidized housing.		
Employment	No job.	Temporary, part-time or seasonal; inadequate pay, no benefits.	Employed full time; inadequate pay; few or no benefits.	Employed full time with adequate pay and benefits.	Maintains permanent employment with adequate income and benefits.		
Income	No income.	Inadequate income and/or spontaneous or inappropriate spending.	Can meet basic needs with subsidy; appropriate spending.	Can meet basic needs and manage debt without assistance.	Income is sufficient, well managed; has discretionary income and is able to save.		
Food	No food or means to prepare it. Relies to a significant degree on other sources of free or low-cost food.	Household is on food stamps.	Can meet basic food needs, but requires occasional assistance.	Can meet basic food needs without assistance.	Can choose to purchase any food household desires.		
Child Care	Needs childcare, but none is available/accessible and/or child is not eligible.	Childcare is unreliable or unaffordable, inadequate supervision is a problem for childcare that is available.	Affordable subsidized childcare is available, but limited.	Reliable, affordable childcare is available, no need for subsidies.	Able to select quality childcare of choice.		
Children's Education	One or more school-aged children not enrolled in school.	One or more school-aged children enrolled in school, but not attending classes.	Enrolled in school, but one or more children only occasionally attending classes.	Enrolled in school and attending classes most of the time.	All school-aged children enrolled and attending on a regular basis.		
Adult Education	Literacy problems and/or no high school diploma/GED are serious barriers to employment.	Enrolled in literacy and/or GED program and/or has sufficient command of English to where language is not a barrier to employment.	Has high school diploma/GED.	Needs additional education/training to improve employment situation and/or to resolve literacy problems to where they are able to function effectively in society.	Has completed education/training needed to become employable. No literacy problems.		
Health Care Coverage	No medical coverage with immediate need.	No medical coverage and great difficulty accessing medical care when needed. Some household members may be in poor health.	Some members (e.g. Children) have medical coverage.	All members can get medical care when needed, but may strain budget.	All members are covered by affordable, adequate health insurance.		
Life Skills	Unable to meet basic needs such as hygiene, food, activities of daily living.	Can meet a few but not all needs of daily living without assistance.	Can meet most but not all daily living needs without assistance.	Able to meet all basic needs of daily living without assistance.	Able to provide beyond basic needs of daily living for self and family.		
Family /Social Relations	Lack of necessary support form family or friends; abuse (DV, child) is present or there is child neglect.	Family/friends may be supportive, but lack ability or resources to help; family members do not relate well with one another; potential for abuse or neglect.	Some support from family/friends; family members acknowledge and seek to change negative behaviors; are learning to communicate and support.	Strong support from family or friends. Household members support each other's efforts.	Has healthy/expanding support network; household is stable and communication is consistently open.		

Domain	1	2	3	4	5	Score	Participant goal? (✓)
Mobility	No access to transportation, public or private; may have car that is inoperable.	Transportation is available, but unreliable, unpredictable, unaffordable; may have care but no insurance, license, etc.	Transportation is available and reliable, but limited and/or inconvenient; drivers are licensed and minimally insured.	Transportation is generally accessible to meet basic travel needs.	Transportation is readily available and affordable; car is adequately insured.		
Community Involvement	Not applicable due to crisis situation; in "survival" mode.	Socially isolated and/or no social skills and/or lacks motivation to become involved.	Lacks knowledge of ways to become involved.	Some community involvement (advisory group, support group), but has barriers such as transportation, childcare issues.	Actively involved in community.		
Parenting Skills	There are safety concerns regarding parenting skills.	Parenting skills are minimal.	Parenting skills are apparent but not adequate.	Parenting skills are adequate.	Parenting skills are well developed.		
Legal	Current outstanding tickets or warrants.	Current charges/trial pending, noncompliance with probation/parole.	Fully compliant with probation/parole terms.	Has successfully completed probation/parole within past 12 months, no new charges filed.	No active criminal justice involvement in more that 12 months and/or no felony criminal history.		
Mental Health	Danger to self or others; recurring suicidal ideation; experiencing severe difficulty in day-to-day life due to psychological problems.	Recurrent mental health symptoms that may affect behavior, but not a danger to self/others; persistent problems with functioning due to mental health symptoms.	Mild symptoms may be present but are transient; only moderate difficulty in functioning due to mental health problems.	Minimal symptoms that are expectable responses to life stressors; only slight impairment in functioning.	Symptoms are absent or rare; good or superior functioning in wide range of activities; no more than every day problems or concerns.		
Substance Abuse	Meets criteria for severe abuse/dependence; resulting problems so severe that institutional living or hospitalization may be necessary.	Meets criteria for dependence; preoccupation with use and/or obtaining drugs/alcohol; withdrawal or withdrawal avoidance behaviors evident; use results in avoidance or neglect of essential life activities.	Use within last 6 months; evidence of persistent or recurrent social, occupational, emotional or physical problems related to use (such as disruptive behavior or housing problems); problems have persisted for at least one month.	Client has used during last 6 months, but no evidence of persistent or recurrent social, occupational, emotional, or physical problems related to use; no evidence of recurrent dangerous use.	No drug use/alcohol abuse in last 6 months.		
Safety	Home or residence is not safe; immediate level of lethality is extremely high; possible CPS involvement.	Safety is threatened/temporary protection is available; level of lethality is high.	Current level of safety is minimally adequate; ongoing safety planning is essential.	Environment is safe, however, future of such is uncertain; safety planning is important.	Environment is apparently safe and stable.		
Disabilities	In crisis – acute or chronic symptoms affecting housing, employment, social interactions, etc.	Vulnerable – sometimes or periodically has acute or chronic symptoms affecting housing, employment, social interactions, etc.	Safe – rarely has acute or chronic symptoms affecting housing, employment, social interactions, etc.	Building Capacity – asymptomatic – condition controlled by services or medication	Thriving – no identified disability.		
Other: (Optional)	In Crisis	Vulnerable	Safe	Building Capacity	Empowered		

https://aspe.hhs.gov/report/toward-understanding-homelessness-2007-national-symposium-homelessness-research-accountability-cost-effectiveness-and-program-performance-progress-1998/case-study-arizona-evaluation-project

3. SHARED CARE PLANS

- Shared data platform hosts Integrated Care Plan (ICP)
- Live document edited by all members of care team
- Includes housing, medical, behavioral health, social goals approved by patient
- ICP goals developed during case conferences
- Expanded team effort to approach patient goals informed by patient priorities

BOSTON DND WAREHOUSE

[STAGING]

ENDING VETERAN & CHRONIC HOMELESSNESS IN BOSTON

« Front Door Triage Search

Collaborative Care Plan for Harlean Adriance

Basic Info & Programs | Health | Care Plan

Print Care Plan

Care Plan Dates

No Self-Sufficiency Assessment on file

SDH ENROLL DATE	BASELINE DUE	FINAL DUE
Jun 16, 2017	Jun 23, 2017	

FIRST MEETING WITH SDH CM	BASELINE COMPLETED	FINAL COMPLETED
Jun 26, 2017		

UPDATE DATES

Team Members

Team Goals

+ ADD GOAL

Obtain housing

Last Modified: **Jun 25, 2017 by Robert Hass**

Control blood sugar

Last Modified: **Jun 25, 2017 by Robert Hass**

Self Management

Last Modified: **Jun 25, 2017 by Robert Hass**

Appointments

EXAMPLE ONLY – NOT ACTUAL PATIENT DATA

Upcoming Appointments

Date	Department	Type	Doctor	SA
Jul 26, 2017 4:40 pm	BHC MCINNIS HOUSE	Appointment	GREGSON, DAVID G	bhc

Past Appointments

Date	Department	Type	Doctor	SA
May 10, 2017 3:20 pm	BHC MCINNIS HOUSE	Appointment	GREGSON, DAVID G	bhc

Problems

Onset Date	Last Assessed	Problem	Comment	ICD10 List
May 4, 2017	May 2, 2017	Schizoaffective disorder, bipolar type (HCC)	R/o personality d/o	F25.0
Apr 28, 2017	Apr 28, 2017	Substance abuse		F19.10
Apr 28, 2017	Apr 28, 2017	Mood disorder (HCC)		F39
Apr 28, 2017	Apr 28, 2017	Homeless		Z59.0
Apr 28, 2017	Apr 28, 2017	Routine health maintenance		Z00.00
Apr 28, 2017	Apr 28, 2017	Sunburn of first degree		L55.0
Apr 1, 2017	Apr 28, 2017	Cellulitis of multiple sites of hand and fingers		L03.119, L03.019

Medications

Start Date	Ordered Date	Medication	Instructions
	May 5, 2017	simethicone (MYLICON) 80 mg chewable tablet	Chew one tablet after each meal and at bedtime as needed for bloating or gas
	May 5, 2017	aluminum & magnesium hydroxide-simethicone (MAALOX ADVANCED) 200-200-20 mg/5 mL suspension	Take 30 mL by mouth 3 (three) times daily as needed for indigestion
	May 4, 2017	medroxyPROGESTERone (DEPO-PROVERA) 150 mg/mL injection	Inject 150 mg into the muscle every 3 (three) months Give injection 5/4/2017.
	May 4, 2017	calcium carbonate (OS-CAL) 500 mg calcium (1,250 mg) tablet	Take 500 mg by mouth 2 (two) times daily

4. CONNECTION TO PRIMARY CARE

- Integrating BHCHP patient centered medical home (PCMH) teams with community service providers
- Contact info for members of the integrated care teams
- Weekly calls with BHCHP RN Navigator and SDH case managers
- Joint training and patient case conferences
- Updates to Integrated Care Plan result in notifications between team members

5. DATA TO UNDERSTAND PATIENT'S NEEDS, SERVICE USE, POP HEALTH

- Shared data platform with Integrated Care Plan, dashboard—patient-, case manager-, site-, pop health-level
- Shared limited amount of PHI (med list, problem list, upcoming appts, etc.) with partner organizations—giving SDH case managers info to enhance care
- Shared care management software (Efforts to Outcomes (ETO))—reducing case management redundancy
- Notifications to Integrated Care Teams: real time communication
- HMIS to locate where patients are sleeping, establish service baseline
- Tracking systems: ASSM, engagement touches, HMIS, etc.
- Hospital-based RNs to review daily census data to facilitate transitions, notify teams
- Epic EHR in widespread use
- Documentation standards

Key Performance Indicators: SDH Coordinated Care Hub

Health Care Utilization Metrics

- % change in total # ED visits
- % change in total # hospital admissions
- % change in hospital all-cause readmissions
- % change in average time to readmission

Health Care Quality Metrics

- High blood pressure control
- Comprehensive diabetes care: A1c control
- Comprehensive diabetes care: blood pressure control
- Screening for clinical depression & follow-up
- Members with current opioid addiction who were counseled regarding psychosocial AND pharmacologic treatment options
- Screening for breast cancer, cervical cancer, and colorectoral cancer (for relevant patient groups)

Social Determinants of Health Metrics

- Improvement in housing status
- SDH service access measure
- Initiation of alcohol/other drug treatment
- Engagement in alcohol/other drug treatment
- Improvement in patient self-sufficiency scores

Process Metrics

- # case conferences completed
- % target population enrolled in initiative
- % patients that meet within 72 hours of enrollment with case manager
- % patients that have PCMH appointment within 1 week post hospital discharge
- # of weekly engagement touches
- Patient retention rate
- % of enrolled patients who have a care plan uploaded to portal within 60 days of enrollment

For further detail with data specifications, see HPC grant contract.

6. SUPPORT FROM CONSORTIUM LEADERSHIP TEAM

- Standing monthly meetings to troubleshoot and strategize about progress and "pain points"
- Dashboard (TBD) reviewed monthly
- May be able to prioritize housing, services, or other resources

Implementation successes

- OHCA signed, BAA with City of Boston executed
- Two managed care plans (BMCHP, Tufts HP) are sharing patient data
- Joint Training Orientation June 7, 2017
- Enrollment began June 8, 2017
- Payments to partners for CM/participation began June 2017
- Weekly case conferencing began June 9
- Shared data platform phase in
- Consumer Advisory Board launched
- Harvard School of Public Health Agents of Change
- BUSPH Texting Study
- MassHealth BH Community Partners RFR submitted. Full consortium on board

Implementation challenges

- 3 Partners declined to provide CM (for now)
- As always, finding patients—currently refreshing target patient list to update February 2017 data
- Hiring staff
  - Full time navigator vs. part time
  - CM: hiring and reassigning
- Communication with partner Case Managers
- Shared data platform phase in
- Different instances of ETO—some need to use paper forms for now
- Additional costs (legal, translation, CAB incentives)

It takes a village and more but the potential to improve care delivery for our patients is exciting

- Complex, high costs chronically ill homeless men and women require integrated systems
- Rethink the ways we work both within and outside our walls
- Leverage what's out there
- Measure what we do to justify the need for existing and new resources and services
- 60 to 1000 in a year building on the lessons learned in this pilot if selected as MassHealth BH CP.
- Advancing our relevance in complex, dynamic health systems
- Thank you HPC!

For more information:

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