

COMMONWEALTH OF MASSACHUSETTS
HEALTH POLICY COMMISSION

CHART Phase 2:
Implementation Plan
UMass Marlborough Hospital

HPC approval date: September 21, 2015

Last modified: May, 25, 2016

Version: 2



Introduction

This Implementation Plan details the scope and budget for UMass Marlborough Hospital's ("Contractor") Award in Phase 2 of the Health Policy Commission's (HPC) Community Hospital Acceleration, Revitalization, and Transformation (CHART) Investment Program. The Implementation Plan is incorporated by reference into and is subject to the requirements of the Phase 2 Award Contract, including the Phase 2 Terms & Conditions.

Many capitalized terms appearing in the Implementation Plan are defined in the Phase 2 Terms & Conditions or the Phase 2 Request for Proposals (RFP). In addition to capitalized terms, the Implementation Plan may include other acronyms and/or abbreviations whose meaning is understood by Contractor and the HPC in the context of the Implementation Plan. If there is disagreement concerning the meaning of a term, acronym, or abbreviation, the HPC's interpretation shall govern.



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Key personnel

Name	Title	CHART Phase 2 Role
Steve Roach	President and Chief Executive Officer	Executive Sponsor
Joan Davis	Vice President Quality, Patient Safety and Regulatory	Clinical and Operational Investment Director
Lori Granger	Performance Improvement Director	Co-Project Manager
Irene Hadley	Interim Director, Case Management	Co-Project Manager
Steven McCue	Chief Financial Officer	Financial Designee

Definition

- Patients with a personal history of high utilization, * as identified by one or more of the following:
 - 4 or more hospital discharges in the prior 12 months
 - 10 or more ED visits and/or 5 or more BH ED visits (ICD-9 290-319) in prior 12 months

Quantification

- Inpatient HU: 454 discharges per year (91 patients)
- ED HU: 1,607 ED visits per year (143 patients)

* Target population definition includes all payers and ages 18+; excluding OB, deaths, transfers to acute inpatient, and discharge to acute rehab. Excludes patients and/or visits with “Tobacco Use Only” (305.1) as the only BH diagnosis

Aim Statement

Primary Aim Statement

Reduce 30-day readmissions by 15% for patients with 4+ discharges in the prior 12 months or patients with 10+ ED visits and/or 5+ BH ED visits in the prior 12 months by the end of the 24 month Measurement Period.

Secondary Aim Statement*

Reduce 30-day ED revisits by 20% for patients with 4+ discharges in the prior 12 months or patients with 10+ ED visits and/or 5+ BH ED visits in the prior 12 months by the end of the 24 month Measurement Period.

Baseline performance – Readmission reduction

		Oct 13	Nov 13	Dec 13	Jan 14	Feb 14	Mar14	Apr 14	May 14	Jun 14	Jul 14	Aug 14	Sep14	Annual Total	Avg.
Hospital-Wide	Discharges	238	296	266	332	270	313	297	322	288	314	326	311	3573	298
	Readmits	5	30	27	34	29	30	32	33	33	35	36	40	364	30
	Rate (%)	2%	10%	10%	10%	11%	10%	11%	10%	11%	11%	11%	13%	10%	10%
Target Pop	Discharges	23	40	33	43	39	46	44	35	33	41	36	41	454	38
	Readmits	4	14	9	17	18	16	19	18	14	12	14	18	173	14
	Rate (%)	17%	35%	27%	40%	46%	35%	43%	51%	42%	29%	39%	44%	38%	37%

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Baseline performance – ED utilization reduction

		Oct 13	Nov 13	Dec 13	Jan 14	Feb 14	Mar14	Apr 14	May 14	Jun 14	Jul 14	Aug 14	Sep14	Annual Total	Avg.
All	ED visits	2052	1881	2002	2076	1926	2164	2163	2243	2179	2278	2215	2158	25337	2111
	ED revisits	218	295	296	300	272	352	372	339	340	357	373	342	3856	321
	Revisit rate	11%	16%	15%	14%	14%	16%	17%	15%	16%	16%	17%	16%	15%	15%
Target Pop	ED visits	111	115	125	124	96	137	151	132	154	169	146	147	1607	134
	ED Revisits	45	79	78	75	66	80	95	81	105	110	94	100	1008	84
	Revisit rate	41%	69%	62%	60%	69%	58%	63%	61%	68%	65%	64%	68%	63%	62%

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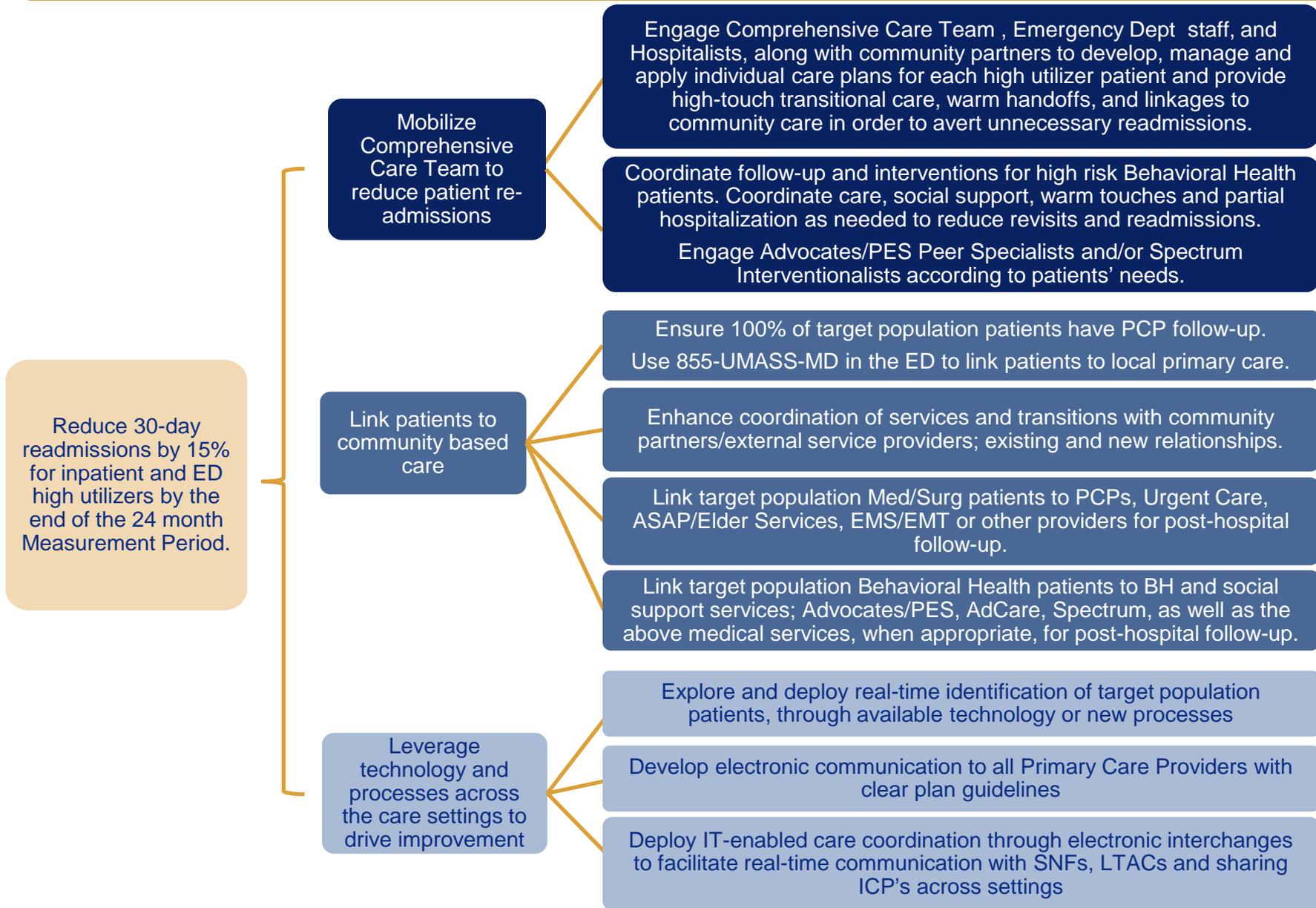
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Estimated monthly impact

	Current Expected Served	Current Expected	New Expected Avoided Events	New Expected Events
Inpatient HU	38	14	3	$14 - 3 = 11$
ED HU	134	84	17	$84 - 17 = 67$

Driver Diagram

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* Target population: ED HU: 10 or more ED visits in prior 12 months and/or 5 or more Behavioral Health ED visits | Inpatient HU: 4 or more hospitalizations in prior 12 months

Service model (1 of 2)

Narrative description

Develop a Comprehensive Care Team (CCT) composed of Nurse Case Managers (for ED & Inpatient), ED Nurse Practitioners, Med/Surg Internal Coach (LPN), Licensed Clinical Social Worker, Mental Health Counselor/Coach, and Pharmacists, along with current ED Physicians and Hospitalists, and in cooperation with Community Health Workers/Community Liaisons. This team, lead by the ED Nurse Case Manager and the Licensed Clinical Social Worker, will be responsible for creating, updating and applying individual care plans (ICPs) for high utilizer patients and coordinating linkages to care outside of the hospital setting to prevent avoidable readmissions.

Engage ED Team (Physician & Nurse Practitioners who provide medical clearance for HU patients) and Hospitalists in new care model to address gaps in care with robust wrap-around services and to follow up as patients transition from emergency care to inpatient care then to post-acute/home. Fund and provide taxi vouchers for patient transportation to external service providers when warranted. Amount = \$15,000.

Develop, access, and use multidisciplinary individualized care plans (ICPs) with goals of care developed with patient/family; including pain contracts, medication reconciliation and optimization. The CCT will be responsible for coordinating ICPs across all providers – primary, specialty, BH, home care, SNF. Follow up phone contact with discharged HU patients will be daily, weekly phone contact to review ICP; review and update as needed for up to 31 days.

Call-backs and follow-up with patients will be coordinated by the Nurse Case Manager who initiated the discharge plan, and s/he will determine appropriate next steps and coordinate with community health workers and/or CCT members, as appropriate and available.

Deploy Comprehensive Care Team members (above) to be notified when HU presents in ED to collaborate with ED staff; participate in daily rounds at bedside, assess for palliative care; participate in the development/updating of ICP; coordinate with post-acute providers, and conduct in-home/in-SNF/in-Rehab follow-up and visits for the post-acute period and/or post-ED visit to ensure whole person needs are met.

Implement Enhanced Discharge Planning process utilizing 8 P's (BOOST) or other relevant tools for high risk components for target population patients; daily team huddle led by the Nurse Care Manager(s) and LCSW between CCT and community liaisons (Coleman Coaches, Bouvier Pharmacist and Paramedics once EMS waiver is lifted); follow-up appointments to be scheduled prior to discharge; develop discharge tool with red flags/triggers for high risk discharges. Fund and provide medications (or med vouchers) for patients being discharged who cannot afford prescribed medications. Amount = \$30,000.

Service model (2 of 2)

Narrative description cont.

Utilize Comprehensive Care Team in post-acute settings to respond to clinical changes, conduct iterative reassessment of psychosocial needs; address polypharmacy and medication optimization; and provide patient navigation assistance. Members of the CCT follow up with HU discharged patients in a variety of ways: Initial EMS wellness check(s) of the patient at home; home visits by Coleman Coaches will be used to identify needs that can be implemented by Elder Services, and Community Pharmacy support to target medication compliance. The Med/Surg Internal Coach may also be deployed to the patients' post acute setting to coordinate need for further resources and the update of the ICP with the Nurse Case Managers.

Engage and Collaborate with high volume SNFs to develop and implement a Treat & Return process for SNF patients and implement/optimize use of INTERACT tools and/or other assessment tools. Collaborate to review mutual readmissions using these tools on day 1 or 2 of readmission to identify opportunities for improvement. Meet as needed with SNF/Rehabs to review data and plan improvements. Consider physician-to-physician warm handoff for high risk patients.

Utilize Pharmacists to perform medication reconciliation on admission and discharge. Educate and follow up with high risk patients. Work with community pharmacies (Bouvier, CVS, Walgreens) to deliver medications prior to discharge, where possible, on high risk patients.

Coordinate Warm Handoffs to Elder Services (e.g., BayPath/Coleman Coaches) and/or Home Care Providers **within 24 hours** to better manage and coach medical patients within our HU populations. Collaborate with community and outpatient resources and providers to determine and execute better patient care strategies. **Maintain contact with patients for 30 days or more.**

LCSW will coordinate follow-up and interventions for high risk BH patients, to include care components, social support, warm touches and partial hospitalization as needed to reduce ED revisits and readmissions. Engage Mental Health Counselor as needed for coverage and support. Meet with all readmitted patients who have a behavioral health diagnosis before their discharge from the hospital, and join in team meetings regarding patient treatment plans. Engage community partners – Advocates Peer Specialists, Spectrum Interventionalists, etc. – to provide patient support and to assist with group home patients and others.

Service worksheet

Service Delivered

- **Care transition coaching** X
- **Case finding** X
- Behavioral health counseling X
- Engagement
- **Follow up** X
- Transportation
- Meals
- Housing
- **In home supports** X
- **Home safety evaluation** X
 - *Later, to be formalized*
- Logistical needs
- Whole person needs X assessment
- **Medication review, reconciliation, & delivery** X
- Education X
- **Advocacy** X
- **Navigating** *(to be developed)* X
- Peer support
- Crisis intervention X
- Detox
- Motivational interviewing
- **Linkage to community services** X
- Physician follow up X
- **Adult Day Health** X
- Other: **BH Screening** X
- Other: **Post-D/C EMS Visits** X
- Other: _____

Personnel Type

- Hospital-based nurse
- Hospital-based social worker *(see below)* X
- **Hospital-based pharmacist** X
- **Hospital-based NP/APRN** X
- Hospital-based behavioral health worker
- Hospital based psychiatrist
- Community-based nurse
- Community-based social worker
- Community-based pharmacist
- Community-based behavioral health worker
- Community-based psychiatrist
- Community-based advocate
- Community-based **coaches** X
- Community-based peer **specialists** X
- Community-based **interventionalists** X
- Community agency
- Physician
- Palliative care X *(historically, by local PCPs)*
- **EMS (to be determined/DPH)** X
- **Skilled nursing facility** X
- **Home health agency** X
- Other: **Volunteers for Call-Backs** X
- Other: **ED-based Case Manager with Social Work skill set** X
- Other: **Flex Social Worker in Psych** X
- Other: _____

Service Availability

- **Mon. – Fri.** X
- **Weekends** X *partial*
- 7days
- Holidays
- **Days** X
- **Evenings** X *partial*
- Nights
- Off-Shift
- Hours _____

Service mix (1 of 3)

Non-Clinical FTEs supporting CHART Patients

Role	Organization	CHART-Funded FTEs	Responsibilities
Executive Sponsor (Steve Roach, Pres/CEO)	Marlborough Hospital	0.0	<ul style="list-style-type: none"> — Overall oversight. Funded by UMass Memorial Health Care — Community liaison
Investment Director (Joan Davis, VP Quality, Patient Safety and Regulatory)	Marlborough Hospital	0.0	<ul style="list-style-type: none"> — CHART Investment Director. Funded by UMass Memorial-Marlborough Hospital — Clinical & Operational oversight for implementing CHART 2 initiatives
CHART Project Manager (Lori Granger, Dir PI)	Marlborough Hospital	0.4	<ul style="list-style-type: none"> — Project management, oversight, analysis, process improvement, documentation, HPC deck revision — Coordinate efforts and reporting with HPC. Existing position; Director of Performance Improvement
Clinical Data & Reports Analyst	Marlborough Hospital	0.5	<ul style="list-style-type: none"> — New position, to be shared with Quality department; PI Data Analyst — Analyze data and reports from applications supporting CHART patients
		0.9	
Total Non-Clinical FTEs funded by CHART = .09			

Service mix (1 of 3)

Clinical FTEs supporting CHART Patients

Role	Organization	CHART-Funded FTEs	Responsibilities
CHART Clinical Program Manager (Irene Hadley)	Marlborough Hospital	0.35	<ul style="list-style-type: none"> — Clinical program lead. Existing position; Director of Care Coordination, Patient Experience Officer. — Coordinate overall approach and track performance, along with CHART Project Manager. — Coordinate care across community settings as well as outreach to local SNFs.
ED Nurse Practitioner	Marlborough Hospital	0.4	<ul style="list-style-type: none"> — New position; already hired and working to assess and triage high utilizer patients. — Provide medical clearance of HU patients through warm handoff with the CCT for appropriate management of the patient. Help determine M/S, BH or combination path for care management. — Provide consultation to ED staff, Case Managers and community support teams. — Provide care diversion by redirecting readmits back to SNF/Home Care.
<p>Nurse Case Manager</p> <p>This is the lead role on the CCT for patients who have Med/Surg needs. This role comprises functions in <i>both</i> the ED and Inpatient areas.</p>	Marlborough Hospital	1.0	<ul style="list-style-type: none"> — New position in ED; already hired and working to identify high utilizer patients using PulseCheck & Soarian information. Identify readmissions as well as those patients previously identified as meeting the high risk criteria for admissions to the hospital or frequent ED visits. — Work directly with the ED NP assigned to screen these patients for medical and behavioral needs, determine HU/CHART status (≥ 10 ED visits or ≥ 5 BH ED visits or ≥ 4 admissions), and initiate the individual patient care plans. Ensure Advocates/PES is involved for behavioral health patients. — Explore with the patient the events that brought the patient back to the ED in a series of questions designed to determine areas to improve services. — Work with entire CCT to determine the alternatives for each patient and next steps for warm handoffs to providers and/or community partners for follow-up and to avert readmissions. — Determine length of involvement in program and establish review dates.
Med/Surg Internal Coach (LPN-level)	Marlborough Hospital	0.6	<ul style="list-style-type: none"> — New position < 1 FTE; LPN-level nurse to coordinate follow-up care for Med/Surg high utilizers, and for patients who might not qualify for VNA, Elder Care, or other established community services. This role's activities are coordinated by the Nurse Case Manager. This role provides the warm handoff to community partners and the follow-up for medical patients who may not have adequate community services. Tasks may include in-home visits and assessments where needed, and this role will act as the community health worker when that service is not otherwise available.

Service mix (1 of 3)

Clinical FTEs supporting CHART Patients (cont'd)

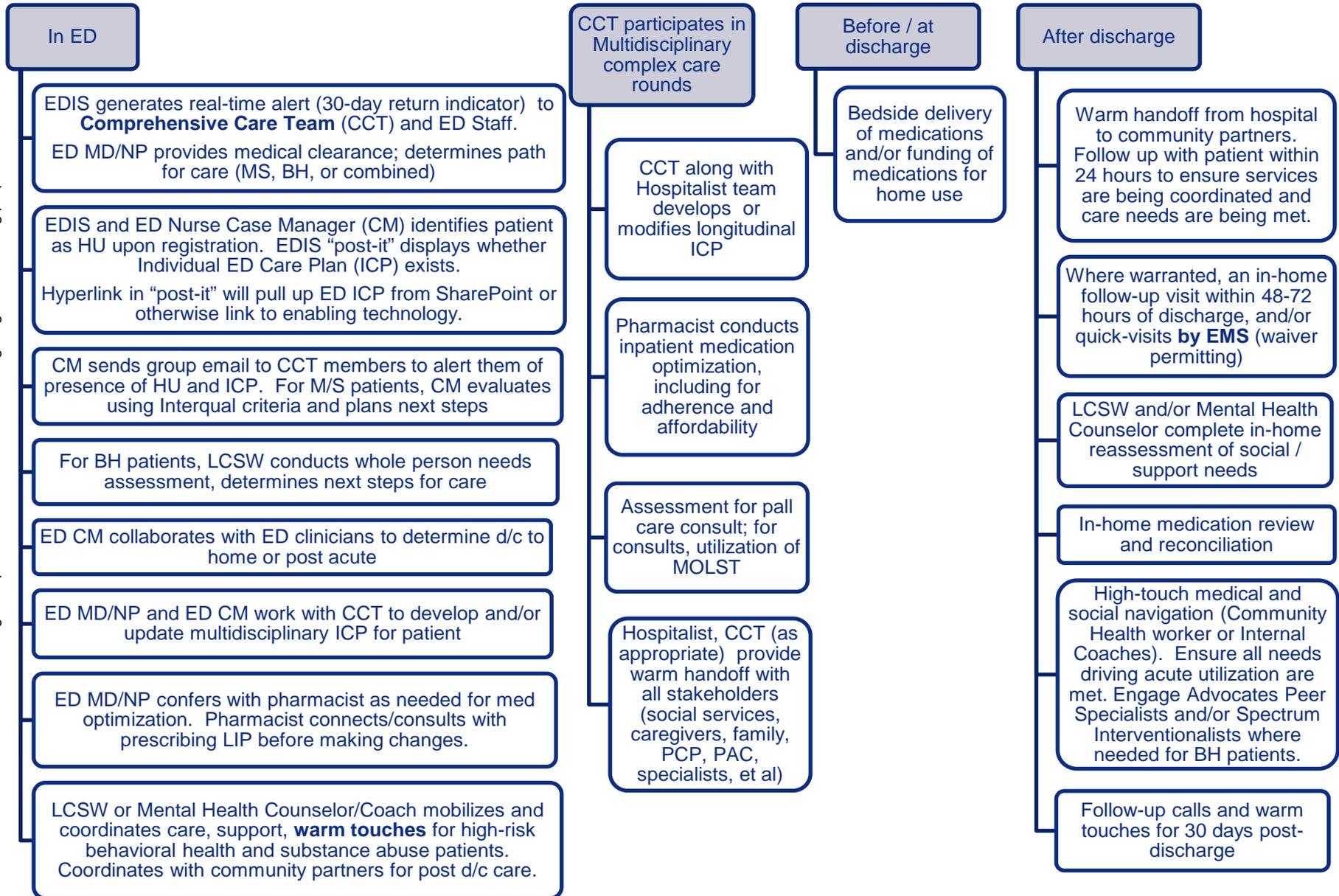
Role	Organization	CHART-Funded FTEs	Responsibilities
Licensed Clinical Social Worker This is the lead role on the CCT for patients who have BH needs.	Marlborough Hospital	0.6	<ul style="list-style-type: none"> — Whole person BioPsychSocial assessment to determine needs, i.e. psychiatric services; medication access; housing options if any; community resources and supports. — Determine current barriers to access. — In collaboration with the patient and the CCT, develop Individual Care Plan for patient. — Coordinate with community partners for follow up i.e. BH appts; connection with support groups; treatment referrals; community coaching; medication support. — Determine need for Advocates Peer Specialists and /or Spectrum Interventionalists to provide follow-up care for BH and SUD patients. Determine length of involvement in program, establish review dates. — New position, to be shared with Psychiatric Services/Behavioral Health department.
Mental Health Counselor; Internal Coach	Marlborough Hospital	0.4	<ul style="list-style-type: none"> — BS-level Coach & Community Liaison who provides many of the above services and manages the follow-up for patients who do not qualify for community services/providers to manage their needs, e.g. patients in group homes or those who do not qualify for DMH services. This role and its support are coordinated by the LCSW. New position, to be shared with Psychiatric Services/Behavioral Health Dept.
Pharmacist	Marlborough Hospital	0.2	<ul style="list-style-type: none"> — Assess discharge medications and scripts, ensuring lowest cost options are utilized to improve medication adherence. — In collaboration with the Case Manager and community pharmacies, encourage patients to be compliant with meds and agree to have meds delivered by community pharmacy. — Consult with Hospitalists/Case Management on treatment options and provide patient education and follow-up. Existing position; 20% allocated for CHART support.
		3.55	
Total Clinical FTEs funded by CHART = 3.55			
Total Non-Clinical & Clinical FTEs for CHART = 4.45			

List of service providers/community agencies

Type of Service Provider	Community Agency Name	New or Existing Relationship
Ex: Behavioral Health	ABC Mental Health Center	New
Substance Abuse Disorders	Spectrum (can provide <u>Interventionalists</u> , depends on need)	Existing, <u>New</u>
Alcohol Treatment	AdCare (referral site)	Existing
Psych / Behavioral Health	Advocates / Psych Emergency Services (PES)	Existing
Home Health Services	VNA (referrals) , Nizhoni, Metrowest HomeCare	Existing
Pharmacy	Bouvier Pharmacy & Home Medical Solutions	Existing
Pharmacy	Local: Walgreens, CVS, etc.	Existing
SNF / Rehab / LTAC	Marlborough Hills, Beaumont, Leonard Norse, Whittier, other	Existing
Elder Services, <u>Coaches for high-risk patients</u>	BayPath Elder Services, Worcester Elder Services	Existing <u>New</u>
Emergency Medical Services (EMS) <i>Future activity DPH hold</i>	Existing / New
Adult Day Health	Aging Well – Marlborough	New
Prescription Drug Assistance	Metro West Meds & Home Care	New

Summary of services

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Cohort-wide standard measures – Hospital utilization measures

Data elements	All	Target Population
1. Total Discharges from Inpatient Status (“IN”)	X	X
2. Total Discharges from Observation Status (“OBS”)	X	X
3. SUM: Total Discharges from IN or OBS (“ANY BED”)	X	X
4. Total Number of Unique Patients Discharged from “IN”	X	X
5. Total Number of Unique Patients Discharged from “OBS”	X	X
6. Total Number of Unique Patients Discharged from “ANY BED”	X	X
7. Total number of 30-day Readmissions (“IN” to “IN”)	X	X
8. Total number of 30-day Returns (“ANY BED” to “ANY BED”)	X	X
9. Total number of 30-day Returns to ED from “ANY BED”	X	X
10. Readmission rate (“IN readmissions” divided by “IN”)	X	X
11. Return rate (ANY 30-day Returns divided by “ANY BED”)	X	X

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Standard exclusions: <18, OB (DRG 765-782), discharged deceased or transfer to acute hospital

Note: Data elements that do not have a population selected are not required for measurement. Not all measures are required for all hospitals.

Cohort-wide standard measures – ED utilization measures

Data Elements	All	Target Population
12. Total number of ED visits	x	x
13. Total number of unique ED patients	x	x
14. Total number of ED visits, primary BH diagnosis	x	x
15. Total number of unique patients with primary BH diagnosis	x	x
16. Total number of ED visits, any BH diagnosis	x	x
17. Total number of unique patients with any BH diagnosis	x	x
18. Total number of 30-day ED revisits (ED to ED)	x	x
19. Total number of 30-day revisits (ED to ED), primary BH diagnosis	x	x
20. Total number of 30-day revisits (ED to ED), any BH diagnosis	x	x
21. ED revisit rate	x	x
22. ED BH revisit rate (primary BH diagnosis only)	x	x
23. ED BH revisit rate (any BH diagnosis)	x	x
24a. Median ED LOS (time from arrival to departure, in minutes)	x	x
24b. Min ED LOS (time from arrival to departure, in minutes)	x	x
24c. Max ED LOS (time from arrival to departure, in minutes)	x	x
25a. Median ED LOS (time from arrival to departure, in minutes), primary BH diagnosis	x	
25b. Min ED LOS (time from arrival to departure, in minutes), primary BH diagnosis	x	
25c. Max ED LOS (time from arrival to departure, in minutes), primary BH diagnosis	x	
26a. Median ED LOS for ED boarders per DPH boarder definition (patients with a primary behavioral health diagnosis who remain in the ED for 12 or more hours from ED arrival to ED departure)	x	
26b. Min ED LOS for ED boarders per DPH boarder definition (patients with a primary behavioral health diagnosis who remain in the ED for 12 or more hours from ED arrival to ED departure)	x	
26c. Max ED LOS for ED boarders per DPH boarder definition (patients with a primary behavioral health diagnosis who remain in the ED for 12 or more hours from ED arrival to ED departure)	x	

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Note: Data elements that do not have a population selected are not required for measurement. Not all measures are required for all hospitals.

Cohort-wide standard measures – Service delivery measures

Data elements	Target Population
27. Total number of unique patients in the target population	X
28. Number of acute encounters for target population patients	X
29. For acute encounters in measure #28, number of these with any CHART service provided after discharge and within 48 hours	X
30. Total number of contacts for the target population	X
31. Average number of contacts per patient served	X
32a. Min number of contacts for patients served	X
32b. Max number of contacts for patients served	X
33. Number of units of service provided by service modality (including, e.g., phone call, virtual interaction, face to face in office, face to face in home, etc.)	X
34. Number of units of service provided, by service types (e.g., care coordination, medication optimization, clinical care, counseling, needs assessment, etc.)	X
35. Number of units of service provided, by role type (NP, LICSW, Pharmacist, Community Health Worker, Peer)	X
36. Average time (days, months) enrolled in CHART program per patient	X
37. Range time (days, months) enrolled in CHART program per patient	X
38. Proportion of target population patients with care plan	X

Standard exclusions: <18, OB (DRG 765-782), discharged deceased or transfer to acute hospital

Note: Data elements that do not have a population selected are not required for measurement. Not all measures are required for all hospitals.

Cohort-wide standard measures – Payer mix

Data elements	Medicare	Medicaid	Commercial
39. Count of patients in the Target Population	x	x	x

Program-specific measures – High utilizer

Measure ID	Measure Description
H001	Number of TP patients identified for whom there is a full six months of time passed following CHART eligibility
H002	Total discharges for 6 months before CHART eligibility
H003	Total 30-day readmissions for 6 months before CHART eligibility
H004	Total ED visits for 6 months before CHART eligibility
H005	Total 30-day ED revisits for 6 months before CHART eligibility
H006	Total discharges for 6 months starting on and inclusive of the date of CHART eligibility
H007	Total 30-day readmissions for 6 months starting on and inclusive of the date of CHART eligibility
H008	Total ED visits for 6 months starting on and inclusive of the date of CHART eligibility
H009	Total 30-day ED revisits for 6 months starting on and inclusive of the date of CHART eligibility
H010	Total months following CHART eligibility without exit event

Program-specific measures

Updated Measure List	Numerator	Denominator
Total Discharges to SNF	Number of inpatient discharges that were discharged to a skilled nursing facility	N/A
Total Discharges to Home Health	Number of inpatient discharges that were discharged to home health	N/A
Total Discharges to Home	Number of inpatient discharges that were discharged to home	N/A
Total number of primary BH ED visits discharged home	Number of ED visits with a primary diagnosis of BH, that were discharged to home	N/A
Total number of primary BH ED visits admit to med/surg	Number of ED visits with a primary diagnosis of BH, that were admitted to med/surg	N/A
Total number of primary BH ED visits admit/transfer to psych unit	Number of ED visits with a primary diagnosis of BH, that were admitted/transferred to psych unit	N/A
Total number of any BH ED visit discharged to home	Number of ED visits with any diagnosis of BH, that were discharged to home	N/A
Total number of any BH ED visit admit to med/surg	Number of ED visits with any diagnosis of BH, that were discharged admitted to med/surg	N/A
Total number of any BH ED visit admit/transfer to psych unit	Number of ED visits with any diagnosis of BH, that were admitted/transferred to psych unit	N/A

Continuous improvement plan (1/2)

<p>1. How will the team share data? Describe.</p>	<p>We will approach this from a PDSA – Plan, Do, Study, Act – continuous improvement perspective and employ FMEA – Failure Modes & Effects Analysis.</p> <p>Our <u>Plan</u> has been proposed on prior pages, with finer details to come as we prepare to implement (<u>Do</u>). The project manager and program manager will <u>Study</u> the results, as technology and data allow, to determine how best to <u>Act</u>. All results will be shared with the team.</p> <p>We will employ FMEA to determine what could possibly go wrong at each stage of change, and we will do our best to mitigate the failure modes.</p>
<p>2. How frequently will you (PM, Investment Director) look at the data (e.g., weekly)? Describe.</p>	<p>Weekly in the beginning to be sure we fully understand what is happening. Once we believe we have a solid understanding, we will move to less frequent data review but no less than monthly.</p>
<p>3. How often will your executive team (VPs, C-suite) review CHART project reporting (e.g., monthly)? Describe.</p>	<p>The project manager will prepare information for the SMT to review on a monthly basis.</p>
<p>4. How often will your front line CHART staff (SW, care team) review reporting (e.g., weekly)? Describe.</p>	<p>Daily in some case, weekly in others</p>
<p>5. How often will your community partners review data (e.g., weekly, monthly)? Describe.</p>	<p>Monthly or perhaps biweekly in the beginning</p>
<p>6. Which community partners will look at CHART data (specific providers and agencies)? Describe.</p>	<p>SNFs, VNAs, Elder Services; utilizing Netsmart CareManager following implementation or by manual sharing of information.</p>
<p>7. Will the quality committee of your board review CHART reporting (e.g., quarterly)? Describe.</p>	<p>To be reviewed by the Utilization Review Committee (URC) and/or Medical Staff Quality Assurance (MSQA); monthly or quarterly as allowed.</p> <p>Will also be reviewed by our Patient Care Assessment Committee (PCAC) and by our Board of Trustees; monthly or quarterly as allowed.</p>

Continuous improvement plan (2/2)

<p>8. Who will collect measures and produce reporting for Cohort-wide and program specific measure (e.g., Data Analyst, PM, ID)? Describe.</p>	<p>Cohort-Wide</p>	<p>Program specific</p>
	<p>A UMMHC IS/IT/Financial Analyst will assist with the data extract from Soarian. The clinical data analyst and/or project manager will get involved as needed.</p>	<p>The clinical data analyst and/or project manager will collect manual data in the beginning and pull data from Netsmart CareManager after implementation.</p>
<p>9. What is your approximate level of effort to collect these metrics? Describe.</p>	<p>Cohort-Wide</p>	<p>Program specific</p>
	<p>Standardized reports are being finalized. Data will be quick to pull, but will take time to analyze; assumption is 1-2 hours per month.</p>	<p>Manual: 8 hours per week. After implementing enabling technology, estimate of 2 hours per week; TBD.</p>
<p>10. How will you ensure that you are able to collect both your program specific and the cohort-wide measures? Describe.</p>	<p>We have confirmed our ability to obtain the cohort-wide measures through UMMHC IS/IT/Financial support. We have been told by Netsmart that the measures are straightforward to pull from the CareManager system and create needed reports.</p>	
<p>11. How will you know when to make a change in your service model or operational tactics? Describe.</p>	<p>From question 1 on slide 21: We will approach this from a PDSA – Plan, Do, Study, Act – continuous improvement perspective and employ FMEA – Failure Modes & Effects Analysis. Our <u>Plan</u> has been proposed on prior pages, with finer details to come as we prepare to implement (<u>Do</u>). The project manager and clinical program manager will <u>Study</u> the results, as technology and data allow, to determine how best to <u>Act</u>. We will employ FMEA to determine what could possibly go wrong at each stage of change, and do our best to mitigate the failure modes.</p>	
<p>12. Other details:</p>	<p>Continually evaluate for disconnects and gaps. What patients are falling through the gaps due to staff coverage? What details are falling through the gaps that we didn't plan for? Seek details from external service providers for ways we can improve.</p>	

Enabling Technologies plan

Functionality (not the name of the vendor or software, but rather the functionality you intend to provide, to drive the Aim for your Target Population)	User (e.g., hospital staff, high risk care team staff, community partner staff, other)	Proposed Vendor (names)	Cost, if known, with description of what cost includes
Real-time alerts on target populations	Comprehensive Care Team, ED staff	Picis/PulseCheck EDIS provides a partial solution, as does our Soarian high utilizer tool. Netsmart will provide alerts once the interface has been built	Netsmart CareManager has been priced for us at \$134,625; with \$117,225 in Year 1 and \$17,400 recurring in Year 2.
Presence of individual care plans; ED & Longitudinal	Comprehensive Care Team, ED staff, Inpatient staff, Community Partners	Internally, begin by using SharePoint. Use Netsmart CareManager following implementation.	See above
Cross-setting coordination platform	Comprehensive Care Team, Community Partners	Exploring vendors; above.	See above
ADT functionality across settings (Admission-Discharge-transfer)	Comprehensive Care Team, Inpatient staff, Community Partners	Soarian High Utilizer tool provides a partial solution. Later, Netsmart CareManager.	See above
Management reporting	Comprehensive Care Team, Project & Program Managers, Hospital & Committee Leaders, Community Partners	Soarian for standard measures. Netsmart CareManager for program measures, following implementation.	See above
IT/ED Reg Resource	UMass Memorial Healthcare System	IT support to implement enabling technologies.	\$20,000

Enabling Technologies Q&A

1. How are you going to identify target population patients in real-time?
 - EDIS/PulseCheck has a 30-day return indicator to alert us while the patient is in the ED
 - High Utilizer/Soarian report shows next day admissions with list of prior admissions and ED visits within 12 months. This will alert us to their prior utilization.
2. How will you measure what services were delivered by what staff?
 - Netsmart
3. How will you measure outcome measures monthly?
 - Using Soarian extract, report.
4. What tool/platform will you use to facilitate cross-setting and multi-disciplinary coordination of care?
 - Netsmart CareManager.
5. Where will individual care plans reside, and what is the plan for making them available on a need-to-know basis 24/7 in the ED, hospital, and ambulatory settings?
 - Within Netsmart CareManager. If timing is an issue, we will begin developing the care plans manually, and store them on the CHART project SharePoint site.
6. Do you have a method for identifying what clinical services your target population accesses? (e.g. ADT notification when ED visits, admissions, discharges from the hospital occur, and/or admissions/discharges from SNF, home health care, visits in the ambulatory setting, attendance at intensive outpatient treatment, etc.)
 - See number 1 above. Netsmart CareManager also provides some of this capability. Potential to use Patient Ping which is in process at the UMass Memorial system.

Other essential investments

Other Investment – Describe	Budget Required
Medications, Delivery for discharged patients who cannot afford their medications.	\$30,000
Transportation for vouchers to patients needing taxi service to providers located outside the Marlborough area.	\$15,000

Key dates

Key milestone	Date
Ramp up date when we will have 50% (half) of what we will need to support the CHART program	September 1, 2015
Post jobs (3 positions)	September 10, 2015
Trainings completed for manual methods of patient identification, data capture and care plan development (the process will be manual until enabling technology is installed)	October 1, 2015
CHART Program Launch date (beginning of your 24 month Measurement Period)	October 1, 2015
First patient seen	October 1, 2015
Ramp up date when we will have 100% (all) of what we will need to support the CHART program	December 4, 2015
First test report of services, measures	December 15, 2015
Enabling technology – testing initiated	TBD, pending support from UMMHC IT Committee
Enabling technology – go-live	
Trainings completed for enabling technology	

Community partners/subcontractors

Name	Business Address	Website	Contact Name	Contact Title	Contact Phone Number	Contact Email Address
IT/ED Reg Resources	UMass Memorial Health Care	www.umassmemorialhealthcare.org/	Dan Sullivan	Director of IT		Daniel.Sullivan@umassmemorial.org
Bouvier Pharmacy	515 Lincoln St Marlborough, MA 01752	bouverierpharmacy.com/	Cheryl Burgess, RRT	Registered Respiratory Therapist	508-485-0461 508-963-1428	www.bouverierpharmacy.com
Marlboro City Taxi	19 Ruth Dr., Marlborough, MA 01752	www.marlbocitytaxi.com	Dispatch	Contact Main Number for Assistance	508-485-5599	marlbocitytaxi.com
Sunshine Taxi	3 Felton Street, Hudson, MA 01749	www.sunshine-taxi.com	Dispatch	Contact Main Number for Assistance	978-567-9149	SunshineTaxi@hotmail.com
Advocates/PES	Marlborough Hospital, 157 Union Street Marlborough, MA 01752	Advocates.org	Alison Johnson	Manager of Marlborough Hospital Psychiatric Emergency Services (PES)	508-309-9891	AJohnso@advocates.org
Advocates Peer Support	1880 Worcester Rd Framingham, MA	Advocates.org	Keith Scott	Director of Peer Support & Recovery	508-259-1080	KScott@advocates.org
EMS / Ambulance Resources	Community EMS-401 Cedar Hill RD, Marlborough, MA 01752	www.community-ems.com	Don Charest	Chief Operating Officer	508-485-4544	
Netsmart (enabling technology vendor)	1 Penn Plaza, Suite 1700 New York, NY 10119	www.ntst.com/	Lori Nicolosi	Client Development Executive	913-272-2630	LNicolosi@ntst.com

Abridged Implementation Plan – Not for budgeting or contracting purposes

UMass Marlborough Hospital – Version 2