

COMMONWEALTH OF MASSACHUSETTS  
HEALTH POLICY COMMISSION

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CHART Phase 2:  
Implementation Plan  
Lowell General Hospital

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Version: 2



# Introduction

This Implementation Plan details the scope and budget for Lowell General 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

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Name	Title	CHART Phase 2 Role
Normand Deschene	Chief Executive Officer	Executive Sponsor
Joseph White	President	Executive Sponsor
Cecelia Lynch	Vice President Patient Care Services and Chief Nursing Officer	Clinical Investment Director
Emily Young	Director Healthcare Operations	Operational Investment Director
Nicole Starrett	Project Manager	Project Manager
Susan Green	Chief Financial Officer	Financial Designee

# Target population

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## Definition\*

- All high utilizers\*\*

## Quantification

- 2,200 visits per year; 427 patients

\*Target population definition includes all payers and ages 18+; excluding OB, deaths, transfers to acute inpatient care, and discharge to acute rehab.

\*\*Patients with 4 or more inpatient hospitalizations in the previous 12 months. For the purposes of this Implementation Plan, the target population qualifying event is defined as the inpatient hospital encounter in which a patient is identified as being a high utilizer, which could be the 4<sup>th</sup> hospitalization in the 12 month period or a subsequent inpatient hospitalization . Subsequent to being identified as a high utilizer, a patient is counted in the target population throughout this initiative, whether or not that patient had 4 or more inpatient hospitalizations in the 12 months preceding a given acute encounter subsequent to the index event.

# Aim Statement

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## Primary Aim Statement

Reduce 30-day readmissions\* by 20% for patients with  $\geq 4$  inpatient discharges in the previous 12 months\*\* by the end of the 24 month Measurement Period.

## Secondary Aim Statement\*\*\*

Reduce 30-day ED revisits by 10% for patients with  $\geq 4$  inpatient discharges in the previous 12 months\*\* by the end of the 24 month Measurement Period

\*For the purposes of this Implementation Plan, “readmissions” refers to a return to an inpatient hospital setting, excluding observation stays

\*\*12 months prior to the index event

\*\*\*Your secondary aim statement is a performance measure only and is not tied to Achievement Payment.

# Baseline performance

		Oct 13	Nov 13	Dec 13	Jan 14	Feb 14	Mar 14	Apr 14	May 14	Jun 14	Jul 14	Aug 14	Sep 14	Total	Avg.
Hospital-Wide	Readmits	210	182	219	194	188	202	186	176	187	165	183	153	2245	210
	Discharges	1352	1264	1305	1365	1239	1264	1277	1257	1307	1186	1204	1186	15206	1352
	Rate (%)	16%	14%	17%	14%	15%	16%	15%	14%	14%	14%	15%	13%	15%	16%
Target Pop	Readmits	65	73	94	77	82	96	92	78	85	64	59	25	890	74
	Discharges	160	164	203	179	206	203	200	188	194	191	166	145	2199	183
	Rate (%)	41%	45%	46%	43%	40%	47%	46%	41%	44%	34%	36%	17%	40%	40%

# Estimated monthly impact

	Current Expected Served	Current Expected Events	New Expected Avoided Events	New Expected Events
30-day readmissions*	183 discharges/month	Given an average readmission rate of 41%, we expect 75 readmissions per month	Given the goal of 20% reduction of readmissions, we expect 15 avoided readmissions per month	60 readmissions per month

# Driver Diagram

Reduce 30-day readmissions by 20% for patients with  $\geq 4$  inpatient discharges in the previous 12 months by the end of the 24 month Measurement Period.

Enhance hospital-based services

Engage ED, inpatient Palliative Care staff and Hospital Medicine Clinicians in Practice Change (multi-disciplinary plans, ED based diversion)

Clinical nurse lead (RN) to mobilize comprehensive multidisciplinary team evaluation

Provide robust cross-setting enhanced care & collaboration

Create, implement, and monitor individual care plans

Engage ED clinicians in practice change (treat and return, IMPs, alert to HRMT for HU)

Social Work / Community Health Worker

Leverage technologies to improve cross-setting care

Utilize technology to enable real-time identification and tracking of patient in target population

Repository for accessible individual care plans

Automated process and outcomes measurement to drive improvement

Implement care transition software to share IMPs with cross-setting teams

\*Target population definition includes all payers and aged 18+; excluding OB, deaths, transfers to acute inpatient, and discharge to acute rehab.

# Service model

## Narrative description

Lowell General Hospital (LGH) will hire additional staff and leverage existing partnerships with resources in the community to provide care coordination, disease management and palliative care services for approximately 400-500 patients with personal history of recurrent utilization, who represent at least 2200 discharges in 2014.

LGH will design and build a care transitions program to support the needs of its high utilizer patients. LGH will leverage existing relationships with Circle Home, a home health agency owned by LGH's parent company Circle Health, Inc., LGH's EMS providers, and LGH's network of preferred SNFs and PHO providers. Services provided by LGH existing and new staff will include care transition coaching, case finding, patient engagement and follow-up, coordination of logistical needs, whole person needs, in home supports, home safety evaluation, medication review and reconciliation, education, advocacy, navigating, peer support, linkage to community services, and physician follow up.

Depending on the service and needs of the individual, services may be provided anywhere from a one-time consultation to multiple times per week for up to 90 days.

# Service worksheet

## Service Delivered

- X Care transition coaching
- X Case finding
- X Engagement
- X Follow up
- X Transportation\*
- X Meals\*
- X Housing\*
- X In home supports
- X Home safety evaluation
- X Logistical needs
- X Whole person needs assessment
- X Medication review, reconciliation, & delivery
- X Education
- X Advocacy
- X Navigating
- X Peer support
  - Motivational interviewing
- X Linkage to community services
- X Physician follow up

## Personnel Type

- X Hospital-based nurse
- X Hospital-based social worker
- X Hospital-based NP/APRN
- X Community-based nurse
- X Community-based social worker
  - Community-based pharmacist
- X Community-based coach
- X Community agency
- X Physician
- X Palliative care
- X Skilled nursing facility
- X Home health agency

## Service Availability

- X Mon. – Fri.

## Service mix (1 of 2)

Service	By Whom	How Often	For How Long
Transition of care coordination	RN/SW	As needed (1-5x/week)	Up to 90 days as clinically indicated
Skilled Nursing	Circle Home	2x/week, as clinically indicated	Up to 90 days as clinically indicated
Home health services	Circle Home	3x/week, as clinically indicated	Up to 90 days as clinically indicated
Home safety inspection	Complex Care Team or Circle Home	1x	1x
Medical Services	MDs	As clinically indicated	Ongoing
Prescription review & monitoring	Pharmacist	Initial review then monthly	Ongoing
Palliative inpatient care	Pall Care Team	1-2 visits, as clinically indicated	Initial
Palliative outpatient care	Pall Care Team	1-2x/week, as clinically indicated	Up to 90 days as clinically indicated
Non-medical transport, check-in	Community health worker	1-3x/week	Up to 90 days as clinically indicated

## Service mix (2 of 2)

# FTE/units of service hired at my organization	Geriatric NP	1.0
	Medical Home Medical Director	0.2
	SW/Care Navigators	2.0
	Community Health Worker	1.0
	Admin Support	0.5
	RN Program Manager Lead	0.75
	Pharmacist	0.2
	Pall Care MD	0.2
	Pall Care NP	1.0
	Pall Care SW	1.0
<b>Total # FTE/units of service hired at my organization</b>	<b>TOTAL</b>	<b>7.85 FTE</b>

## List of service providers/community agencies

Type of Service Provider	Community Agency Name	New or Existing Relationship
Community Health Worker	PHO staff	New
Home health care	Circle Home	Existing
Home safety inspections	Community Health Worker or Circle Home	New/Existing
Skilled Nursing	Preferred SNF Network	Existing
Medical services	Physicians	Existing
Palliative Care	LGH inpatient	Existing
Palliative Care	LGH outpatient	New
Hospice	Circle Home, Merrimack Valley Hospice	Existing
Infusion Therapy	New England Life Care	Existing

# Summary of services

## Clinical service and staffing mix

Lowell General will identify any adult (18+) patient who, upon the date of admission, has had four or more inpatient admissions in the past 12 months, excluding OB, observation stays, deaths and transfers to acute facilities. Patients who meet this criteria will be enrolled into the Medical Home program.

The Complex Care Team (CCT) will be notified of the patient's admission and will deploy a CCT member to contact the patient during their inpatient stay to introduce the program and obtain consent for medical home outreach. The CCT will create a high utilizer registry of patients who have had 4 or more inpatient hospitalizations in the past 12 months. If an enrolled patient presents in the ED, a flag on the patient's record will appear alerting ED staff of critical information about the patient and their participation in the Medical Home program. The CCT will be alerted through an automated alert that is activated upon the patient's registration in the ED, and a team member will intervene when appropriate. The Complex Care Team is staffed Monday-Friday by a medical director, a RN manger, a geriatric NP, 2 social workers, and 2 community health workers (1 CHART-funded). In addition, the CCT works closely with the palliative care team, which consists of a medical director, a palliative care NP and social worker. The teams collaborate to provide a seamless transition from the inpatient to outpatient setting and to ensure the whole-person needs of the patient are met in an effort to prevent future avoidable admissions and improve the patient's quality of life.

Services provided by the medical home include but are not limited to:

- Augmenting hospital-based team with comprehensive d/c planning
- Screening for palliative care services
- Developing individual care plan to address comprehensive whole person needs
- Evaluating service needs while in the hospital
- Conducting initial home evaluations
- Conducting in-home needs assessments
- Ensuring medications are filled
- Developing palliative care plans, if indicated
- Conducting home visits as needed
- Monitoring services provided and assessing ongoing needs
- Providing notification to providers of patients' enrollment in Medical Home
- Providing ongoing cross-setting care coordination

# Cohort-wide standard measures – Hospital utilization

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

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

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		
15. Total number of unique patients with primary BH diagnosis		
16. Total number of ED visits, any BH diagnosis		
17. Total number of unique patients with any BH diagnosis		
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		
20. Total number of 30-day revisits (ED to ED), any BH diagnosis		
21. ED revisit rate	x	x
22. ED BH revisit rate (primary BH diagnosis only)		
23. ED BH revisit rate (any BH diagnosis)		
24a. Median ED LOS (time from arrival to departure, in minutes)		
24b. Min ED LOS (time from arrival to departure, in minutes)		
24c. Max ED LOS (time from arrival to departure, in minutes)		
25a. Median ED LOS (time from arrival to departure, in minutes), primary BH diagnosis		
25b. Min ED LOS (time from arrival to departure, in minutes), primary BH diagnosis		
25c. Max ED LOS (time from arrival to departure, in minutes), primary BH diagnosis		
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)		
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)		
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)		

Abrid

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 – Service delivery

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 Definition	Numerator	Denominator
Patient has completed MOLST form	# target pop w/ MOLST on file	# patients in target population
Plan of Care created	# of patients with Plan of Care created	# patients in target population
Plan of Care shared with established providers (s)	# of patients whose Plan of Care was shared with provider(s)	# patients in target population
Prescription medication optimization intervention	# patients w/ Rx optimization intervention	# patients in target population
CCT visits patient in hospital while inpatient	# patients visited while inpatient	total # of inpatient hospitalizations for target pop (including index event)
Palliative care referrals	# patients referred to palliative care	# patients in target population
Weekly utilization review meetings with CCT members	# of meetings held	Weeks/month
Coordinated treatment plan with behavioral health team	# of overlap patients whose treatment plan was shared with behavioral health team	# patients in overlap population

# Continuous improvement plan (1 of 2)

<p><b>1. How will the team share data?</b></p>	<p>Data will be reviewed using existing utilization review forums. In addition, Medical Home team will monitor utilization data on a daily basis to identify medical team.</p>
<p><b>2. How frequently will you (PM, Investment Director) look at the data (e.g., weekly)?</b></p>	<p>LGH currently reviews data on a daily, weekly and monthly basis. The Performance Improvement, Care Management and Informatics and Analytics teams all monitor data to identify trends, outliers, and identify opportunities for proactive intervention for medically necessary services or cost-effective alternatives.</p>
<p><b>3. How often will your executive team (VPs, C-suite) review CHART project reporting (e.g., monthly)?</b></p>	<p>CHART data review will become a standing agenda item monthly</p>
<p><b>4. How often will your front line CHART staff (SW, care team) review reporting (e.g., weekly)?</b></p>	<p>The Complex Care Team will review data weekly and monthly as part of a standing team meeting and individual members of the team (Navigators and NPs) will review daily.</p>
<p><b>5. How often will your community partners review data (e.g., weekly, monthly)?</b></p>	<p>CCT will review with Circle Home and Preferred SNF providers monthly initially and if monthly monitoring becomes unnecessary, the data will be reviewed quarterly.</p>
<p><b>6. Which community partners will look at CHART data (specific providers and agencies)?</b></p>	<p>CHW, preferred SNF providers, Circle Home, and others as indicated.</p>
<p><b>7. Will the quality committee of your board review CHART reporting (e.g., quarterly)?</b></p>	<p>The Patient Care Assessment Committee, which report to the Hospital and PHO Boards will review CHART reporting on a quarterly basis. In addition the PHO BOD will review at least quarterly.</p>

## Continuous improvement plan (2 of 2)

8. Who will collect measures and produce reporting for Cohort-wide and program specific measure (e.g., Data Analyst, PM, ID)?	<b>Cohort wide</b>	<b>Program specific</b>
	The PHO informatics and analytics team will produce the reports	PHO informatics and analytics team
9. What is your approximate level of effort to collect these metrics?	<b>Cohort wide</b>	<b>Program specific</b>
	40 hours of development	TBD
10. How will you ensure that you are able to collect both your program specific and the cohort-wide measures?	We are working with IT and reviewing various vendors to identify an enabling technology solution. IT and PHO analytic team developed backup database.	
11. How will you know when to make a change in your service model or operational tactics?	If we are not meeting our benchmarks or targets, we will conduct a gap analysis to determine the reason for not meeting our benchmarks and develop a plan to address the issue(s) identified. We will continue to monitor for successful implementation with a monthly review of measures and service delivery as well as qualitative and quantitative analysis.	

# Enabling Technologies plan

Functionality	User	Vendor	Cost
Flag and automated notification on EMR	ED staff/Complex Care Team	Cerner (both inpt and ED EMR)	Lowell General Hospital will fund
Care management module to house care plan and track progress and milestones	Complex Care Team, ED/inpatient staff	Athena Health Note: developed an in-house solution with the intent to move to cloud-based Athena solution pending implementation of ADT feed and vendor response to business specifications.	Lowell General Hospital will fund
Data analytics	PHO Informatics and analytic teams (will be payor blind)	Cerner and Athena Health	Lowell General Hospital will fund

# Enabling Technologies plan – Q&A

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- **How are you going to identify target population patients in real-time?**
  - Target population patients' EMR will have a flag that appears when accessed by ED staff. An automated alert will be sent to CCT. A CCT member will initiate contact with the patient during their inpatient stay to introduce the medical home.
- **How will you measure what services were delivered by what staff?**
  - We will develop a dashboard in the care management module that will capture the necessary data.
- **How will you measure outcome measures monthly?**
  - Monthly dashboard reports from Cerner and Athena Health, but PHO staff and home grown solution while waiting for Cerner/Athena solution.
- **What tool/platform will you use to facilitate cross-setting and multi-disciplinary coordination of care?**
  - Athena Health's care management module, but home grown solution while waiting for Athena solution.
- **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?**
  - An automatic powerform will pop-up on patient's record when accessed by hospital personnel. The powerform will include all critical information relevant to the patient's condition and care by the CCT as well as alert the reader to the patient's participation in the medical home.
- **Do you have a method for identifying what clinical services your target population accesses?**
  - Daily admit/discharge reports will be utilized to track patient activity, in addition to care plan activities.

## Other essential investments

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# Key dates

Key milestone	Date
Launch date (beginning of your 24 month Measurement Period)	11/1/15
Post jobs	Complete
Develop business specifications for medical home	Complete
Hospital EMR implemented medical home patient alert with key patient information functionality	Complete
Enabling Technologies – Powerform, explorer reports, access database go-live	11/2/15
First patient seen	11/1/15
MD education, PCP, ED, Hospital staff	11/1/15
First test report of services, measures	11/30/15
New hires made	12/31/15
Outpatient palliative care clinic opens	1/1/16
Readmissions reduction initiatives support 100% of planned patient capacity	1/31/16
Trainings complete	2/1/16
Geriatric NP initiates rounding in SNFs	2/1/16
Initiate quarterly program review	Q1 2016

# Community partners/subcontractors

Name	Business Address	Website	Contact Name	Contact Title	Contact Phone Number	Contact Email Address
Cerner	295 Varnum Ave Lowell, MA	<a href="http://www.cerner.com">www.cerner.com</a>	Amy Quinn	Application Architect	978-788-7048	<a href="mailto:aguinn@cerner.com">aguinn@cerner.com</a>
Athenahealth	311 Arsenal St, Watertown, MA	<a href="http://www.athenahealth.com">www.athenahealth.com</a>	Jessica Beauregard	Senior Manager, Clients Solutions	617-402-8125	<a href="mailto:jbeauregard@athenahealth.com">jbeauregard@athenahealth.com</a>
Circle Home	847 Rogers St. Lowell, MA	<a href="http://www.circlehomehealth.org">www.circlehomehealth.org</a>	Rachel Chaddock	Executive Director	978-805-2651	<a href="mailto:Rachel.Chaddock@circlehomehealth.org">Rachel.Chaddock@circlehomehealth.org</a>