Agenda

- Approval of Minutes from the April 15, 2015 Meeting (VOTE)
- Presentation on CHART Phase 1 Report
- Update on CHART Phase 2 Implementation Planning
- Discussion of CHART Provider Engagement Plan
- Presentation on the Impacts of Health Care Reform on Massachusetts Safety Net Hospitals
- Schedule of Next Committee Meeting
Vote: Approving Minutes

Motion: That the Community Health Care Investment and Consumer Involvement Committee hereby approves the minutes of the Committee meeting held on April 15, 2015 as presented.
Agenda

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CHART Phase 1: $9.2M

2,334 Hospital employees trained
400+ Hours of direct technical assistance to awardees
27 HOSPITALS | 260 UNITS
Primed for transformation

90% of respondents believed that CHART Phase 1 moved their organization along the path to system transformation

316 Community partnerships formed or enhanced by awardees
167,000+ Patients impacted by Phase 1 initiatives

Rapid-Cycle Pilots
Capability and Capacity Building
Planning for Improvement

- Reducing Readmissions and Improving Transitions to Post-Acute Care
- Health Information Technology and Health Information Exchange
- Process Improvement
- Reducing ED Utilization
- Integrating Behavioral Health

PHASE ONE
CHART Phase 1 Report

Key Report Sections

1. Introduction to the CHART Investment Program
   - CHART Overview
   - Topline Impacts

2. CHART Program Goals and Theory of Change

3. HPC Investment Approach: Building a Foundation for Transformation

4. The CHART Hospital Engagement Model
   - High intensity partnership

5. Overview of Investment Priorities
   - Reducing Readmissions
   - Reducing Unnecessary Emergency Department Use
   - Enhancing Behavioral Health Care
   - Building Technology Foundations

6. Key Lessons Learned from Phase 1 Initiatives

7. Moving Into Phase 2: Applying Lessons to Enhance CHART

Overview of Phase 1 investments, impacts, lessons & implications
CHART Phase 1 investments primed 27 hospitals for system transformation

<table>
<thead>
<tr>
<th>Hospital Location</th>
<th>Phase 1 Awardee</th>
<th>Amount Awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Adams Regional Hospital</td>
<td><strong>19.5%</strong></td>
<td>$1,290,400</td>
</tr>
<tr>
<td>Baystate Franklin Medical Center</td>
<td><strong>30.7%</strong></td>
<td>$1,799,635</td>
</tr>
<tr>
<td>Holyoke Medical Center</td>
<td><strong>12.9%</strong></td>
<td>$1,867,575</td>
</tr>
<tr>
<td>North Adams Regional Hospital</td>
<td><strong>18.1%</strong></td>
<td>$1,939,510</td>
</tr>
<tr>
<td>Southcoast Hospitals Group - Tobey Hospital</td>
<td><strong>18.8%</strong></td>
<td>$3,058,522</td>
</tr>
</tbody>
</table>

Coordinate System: GCS North American 1983
CHART Phase 1 investments trained over 2,300 hospital employees

**CHART hospitals promoted staff development through trainings with a variety of areas of focus**

- Training on new technology
- Training on new protocols
- Process improvement training

**Approximate Number of Staff Engaged**

<table>
<thead>
<tr>
<th>Area</th>
<th>Number of Staff Engaged</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training on new technology</td>
<td>1500</td>
</tr>
<tr>
<td>Training on new protocols</td>
<td>1100</td>
</tr>
<tr>
<td>Process improvement training</td>
<td>2000</td>
</tr>
</tbody>
</table>

153 ED staff across the Hallmark hospitals adopted a new care protocol for back pain management to reduce opioid prescribing by 26% at Melrose-Wakefield and 43% at Lawrence Memorial, and increase PMP use from 1.5% to 60%

Mercy Medical Center trained 70 staff and executed more than 70 Lean improvement projects in five departments including team communication for care transitions and inpatient delay reduction

*Individual staff training numbers were reported by each hospital to the HPC in Phase 1 Final Reports.*
CHART hospitals formed or enhanced more than 315 partnerships with medical practices, behavioral health providers, and community resources.
CHART Program delivered 450 hours of direct technical assistance

<table>
<thead>
<tr>
<th>Monthly Calls</th>
<th>CHART program staff conducted calls with all hospitals for project updates, technical assistance, and setting expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Visits</td>
<td>CHART program staff conducted site visits at all awardee hospitals</td>
</tr>
<tr>
<td>Safe and Reliable</td>
<td>Safe and Reliable visited each hospital to assess the culture of the hospital and helped hospitals increase response rates to culture surveys</td>
</tr>
<tr>
<td>Learning Session</td>
<td>All CHART hospitals were invited to a learning session about reducing avoidable hospital utilization</td>
</tr>
<tr>
<td>Leadership Summit</td>
<td>CHART hospital leadership gathered to view new HPC analyses on hospital performance and discuss the imperative for transformation</td>
</tr>
<tr>
<td>Mass HIway and MeHI</td>
<td>MeHI offered TA on the monthly calls for 6 hospitals doing large technical projects</td>
</tr>
</tbody>
</table>

**Ninety-two percent** of Phase 1 Feedback survey respondents believed that CHART Phase 1 moved their organization along the path to system transformation
CHART Phase 1 spending by pathway and category

- Rapid-Cycle Pilots: 31.5%
- Capability and Capacity Building: 59.2%
- Planning: 9.3%

Note: Dollars spent by CHART do not reflect in-kind funding for initiatives from CHART hospitals; excludes North Adams Regional Hospital.
Investment priorities – reducing readmissions

**Significance**

In FY15, CMS will penalize 55 MA hospitals for higher-than-expected readmission rates.

The HPC estimates wasteful spending on readmissions at about $700 million annually.

**Additional Highlighted Hospitals**

- Beth Israel Deaconess - Plymouth
- Beverly Hospital
- Lawrence General Hospital
- Milford Regional Medical Center
- Southcoast - Charlton Memorial Hospital
- Southcoast - Tobey Hospital
- Winchester Hospital

**Spotlight – Addison Gilbert Hospital**

Received $294,000 CHART Phase 1 Grant

Utilized funding to test implementation of a High Risk Intervention Team (HRIT)

HRIT provided patient education, medication management, and discharge planning to complex patients; reduced readmissions by Addison Gilbert worked heavily with community partners such as The Healthy Gloucester Collaborative

**Hospital-wide 30 day readmission rate**

- March: 19.08
- April: 14.97
- May: 13.16
- June: 19.39
- July: 17.65
- August: 15.83
- September: 16.48
- October: 8.77
Investment priorities – reducing unnecessary ED utilization

**Significance**

MA ranks 20th in the U.S. for highest rate of ED visits per 1,000 residents

The HPC found that almost half of ED visits in 2012 were avoidable

**Additional Highlighted Hospitals**

- Athol Memorial Hospital
- Beth Israel Deaconess - Needham
- Heywood Hospital

**Spotlight – HealthAlliance Hospital**

Utilized CHART Phase 1 funds to develop a six-month ED Navigator Care Coordination Model for patients with serious mental illness to reduce ED length of stay with promising early indications

Intervention aimed at connecting all patients with a BH condition to a PCP, as well as increasing community collaboration for cross-continuum care

Partnered heavily with community organizations, such as local public schools and providers

**Length of stay for ED BH visits**

- April 2014: 283 minutes
- May 2014: 247 minutes
- June 2014: 284 minutes
- July 2014: 223 minutes
- August 2014: 230 minutes
- September 2014: 255 minutes
Investment priorities – enhancing behavioral health care

**Significance**

Nearly 428,000 adults in MA struggle with a behavioral health condition

The number of opioid deaths increased 90% from 2000 to an average of 10.1 deaths per 100,000 residents in 2012

**Additional Highlighted Hospitals**

Athol Memorial Hospital  
Heywood Hospital  
Southcoast - St. Luke’s Hospital

**Spotlight – Hallmark Health System**

Developed standardized clinical-practice guidelines for patients with lower back pain in EDs at member hospitals (Lawrence Memorial and Melrose-Wakefield)

Based guidelines upon extensive review of 1,100 patient medical records. Guidelines required providers to document reasons for imaging and opioid prescription

Created weekly provider and program dashboard to measure adherence to guidelines

---

**Opioid prescription rates**

- Lawrence Memorial Hospital: Baseline 10%, Period of Performance 20%
- Melrose-Wakefield Hospital: Baseline 15%, Period of Performance 25%
Investment priorities – building technology foundations

Significance

Health information technology (HIT) initiatives are a means to collect, share, and analyze patient data to achieve high-quality, low-cost outcomes.

89% of MA physicians and acute-care hospitals in MA utilize HIT, ranking the state among the highest in the nation.

Hospitals to Highlight

Anna Jaques Hospital
Baystate Franklin Medical Center
Holyoke Medical Center
Lowell General Hospital
Noble Hospital
Signature Healthcare Brockton Hospital

Spotlight – Baystate Mary Lane Hospital

Developed telemedicine programs in outpatient neurology, inpatient speech, inpatient and outpatient cardiology, and outpatient BH to increase patient access to specialty providers.

Reduced overall patient waiting time for appointments to less than 20 days, versus over 80 days on average for in-person appointment.

The wait time for the third next available appointment at BML went from 90 – 113 days for an in-person consult for neurology to 5 – 9 days for a telemedicine consult.
CHART Phase 1 provided value to awardees, and hospitals self-evaluated as being generally successful.

Anonymous end of phase survey provided key insights into CHART’s benefits and their own perspective of performance.

Hospital respondents self-reported their belief that CHART Phase 1 moved their organization along the path to system transformation.

Hospital respondents self-rated their performance on Phase 1 initiatives.

**(Chart 1)**

- **Percent of respondents**
  - **Strongly agree**: 42%
  - **Agree**: 48%
  - **Undecided**: 10%
  - **Strongly disagree**: 0%

**(Chart 2)**

- **Percent of respondents**
  - **Very successful**: 50%
  - **Moderately successful**: 40%
  - **Unsuccessful**: 8%
  - **Of little success**: 2%
  - **No responses**: 0%

Directly informed Phase 2
CHART Phase 1 provided value to awardees

Hospitals generally found TA to be valuable, with variation between provider engagement activities

Percent of hospital respondents who found TA types valuable:

- Collaborative Health Strategies (n=18): 94%
- Leadership Summit (n=39): 92%
- CHART Data Book (n=35): 89%
- July Learning Session (n=23): 83%
- HPC Site Visit (n=40): 83%
- Safe and Reliable Culture Survey (n=32): 81%
- Safe and Reliable Site Visit (n=38): 76%
- Monthly Calls (n=36): 75%
- MeHI on monthly calls (n=14): 50%

Directly informed Phase 2
### Key Lessons

1. The composition of transformation teams is important
2. Process improvement is key to improving overall efficiency
3. Leadership and management must engage throughout the lifecycle of initiatives
4. Technology can lay the foundation for transformation
5. Data analysis is essential to measure performance and drive improvement
6. Community partnerships are challenging to build, but are essential to success in value-based health care
7. Sustaining low-cost options for acute care is critical for maintaining a value-based system
Implications for Phase 2

Focus funding and attention on key priorities

Engage deeply in program design

Continue to provide enhanced technical assistance

Require and facilitate data collection, measurement, and overall hospital reporting

Support cross-functional composition of transformation teams

Implementation Planning
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CHART Phase 2 Implementation Planning by the numbers*

- 5 Regional Convenings
- 27 Site visits
- 25+ Expert advisor and HPC staff intensive working meetings with hospitals
- 550+ Hours of coaching calls

*Updated June 2, 2015
Implementation Plan Status Update by Hospital

CHART Phase 2 Hospitals

LAUNCH

- Milestones, Deliverables, Payment Schedule
- Budget
- Metrics, Improvement Plan, Enabling Tech
- Service model, Community Partners, Staffing
- Aim, Baseline, Driver Diagram
- Target population

Health Policy Commission | 22
Fragmented service delivery leads to recurrent mis-utilization and poor outcomes.

Patients with complex needs struggle to access siloed treatment.

Housing
Transport.
Incarceration

Medical complexity
Chronic conditions
Acute conditions
Substance use disorders
Mental health conditions

Social complexity

Behavioral health complexity

Acute Hospital Inpatient
ED
Community BH
Primary Care
Community Partners
Post-Acute Care
Community Based Services
Hospital Based Services
CHART Care Teams: Coordinated patient care with high intensity services that leverage innovative technology

CHART funding & capacity-building promote integrated BH care that is:
- Patient-centered
- Coordinated
- Efficient
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Provider engagement and support

Percent of respondents who agreed or strongly agreed that it would be helpful for the HPC to facilitate:

- A virtual learning community (a list serv/a bulletin board) (n=42) 69%
- Data analyses (n=42) 79%
- Large scale trainings (Lean, BH integration clinical models) (n=42) 67%
- Interactive peer virtual learning sessions (n=42) 62%
- Cohort-wide leadership engagement opportunities (n=41) 74%
- Regional learning opportunities (n=43) 85%
- HPC staff supports (n=42) 81%
- Direct access to subject matter experts (n=43) 91%
Modes for technical assistance and provider engagement

**Direct Hospital Engagement**
- Responsive & Ad hoc
- Responsive Intervention
- Opportunity*
- Phone Call
- Site Visit
- Data Led PDSA

**Routine Maintenance**
- Virtual**
- Collaborative Learning & Celebration
- Direct Training
- Symposia

**Cohort Engagement and Spread**
- Position-based Affinity Groups
- Leadership Engagement
- Topical Cohorts
- Regional Cohorts
- ~Semi-Annual
- Topic-specific Large Scale Trainings (open to broader cohort; coordinated with PCMH/ACO)

*Opportunities e.g., publication opportunities, pivot points for significant adaptation or enhancement, evolution of the scope and scale of interventions

**Virtual:** Passive (content delivered to hospitals) or Active (facilitated)
Provider engagement intensity will be stratified across the cohort based upon opportunity for maximal benefit from engagement.

- **Focused – higher intensity – supports to ensure sufficient performance (e.g., deployment of a team of technical advisors with management and subject matter expertise)**

- **Targeted engagement of subject matter experts or HPC program officers to support leading edge hospitals (e.g., scaling initiatives, supporting publication or dissemination, etc.)**

- **Routine provider engagement activities**
Technical assistance approaches

HPC will hold two statewide meetings in CHART 2

- **Fall 2015 Launch Meeting**: Initial meeting focusing on content and peer sharing will kick-off the performance phase of the program
- **Spring 2016 Interim Meeting** (open to public): Interim statewide meeting will be held focused on highlighting success, challenges, and best practices on individual, hospital-specific, and regional levels.

Regional convenings will be a cornerstone of peer learning

- Peer-peer learning; discussion of local success and operational factors associated with effective implementation
- Discussion of local partnerships and community-based organization engagement
- Linkage with models and programs tied to CHART initiatives that are effective elsewhere
- Some regional meetings will be segmented into affinity groups (e.g., clinical leadership, operational leadership, frontline staff, community partners, etc.)
Technical assistance approaches

State-wide meetings  Regional convenings  Site visits  Training opportunities  Calls with staff and TA experts  Leadership engagement

Site visits will be a key opportunity for executive engagement

• At a minimum, staff will conduct site visits at each Phase 2 CHART hospital biannually. Visits will generally include:
  • A meeting with the executive team to review progress and overall project implementation (data dashboard review).
  • Discussions with implementation teams on tests of change, implementation barriers, appropriate adaptation and overall project progress.

CHART hospitals with insufficient progress will likely require additional site visits and other touch points. Higher performing hospitals may also have increased touch points to harvest successful practices, stimulate activity at other hospitals and to build momentum in the entire group.

Trainings will bolster skills of front-line staff, managers, and leadership

• HPC anticipates hosting 2-3 trainings annually. All trainings will be in-person but will be recorded and made available on the CHART program website. Trainings available to CHART hospitals and PCMH or ACO certified entities / those pursuing certification.
• HPC will seek to partner with other organizations in the market
Technical assistance approaches

HPC will continue frequent virtual contact with multiple purposes

- **Performance Management Calls:** Approximately monthly performance management calls led by Program Officer(s) to review activities and progress and discuss methods to overcome barriers. Semi-structured to review operational data, payment and other reporting issues.
- **Coaching Calls:** Approximately monthly expert coaching calls with Program Officer(s) and Senior Advisors (content experts) to review activities and progress and discuss methods to overcome barriers.

HPC will seek opportunities to engage current and emerging leaders

- **Current leadership** engagement activities would focus on the C-Suite and assumes more interaction and dialogue among the leaders (with networking for the CEOs, CMOs, CNOs, CFOs, and COOs). These activities would create an environment where current senior leaders engage more deeply on healthcare transformation as it applies to CHART.
- **Emerging leader** activities to take mid-level, business line and other thought leaders and provides a structured curriculum that heavily links to the CHART project activities at each organization. Focused on building leadership capability and to sustain momentum after the current investments expire.
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Evaluating the Impact of Chapter 58 on Safety Net and Community Hospitals

AMY LISCHKO, DSC
KEN CHUI, PHD
Organization

- Background
- Literature
- Gaps to fill and Research questions
- Methodology
- Results
- Questions/discussion
Chapter 58 included redirection of safety net dollars from institutions to subsidies for low-income residents. Initially, the gains in insurance coverage were in both commercial and public insurance, with significant drops in uninsured rates from 9.8 percent in 2004 to 3.4 percent in 2011. Since 2008 recession, commercial gains in coverage have yielded to enrollment in Massachusetts public programs which have grown significantly to 1,615,638 people in December 2014. Shifts in coverage since reform could have implications for hospitals both because people now have insurance and therefore more choice and because public payers pay less for care than commercial payers.
Literature

- Bazzoli, G and Clement J, The experience of Massachusetts hospitals as statewide health insurance reform was implemented, *Journal of Health Care for the Poor and Underserved*, 2014
  - Studied 2004-2010
  - Major safety net hospitals had some initial easing of burden but financial status weakened through 2010

  - Studied pre (2006) and post (2009) reform
  - Assessed changes in mean inpatient and outpatient volume, revenue and operating margins at SNH compared to NSNH, found safety net hospitals performance declined post reform

  - 2005-2009
  - Used mixed-model approach administrative data, case study interviews and telephone survey, care in CHCs increased, non-emergency ambulatory care visits grew twice as fast at SNH than at NSNH, most safety net patients reported using these facilities because they were convenient and affordable
Gaps to fill and Research questions

- **Gaps to fill**
  - Bring data analysis up to present
  - Conduct analysis by community and safety net status
  - Look specifically at factors that predict hospital performance

- **Research questions**
  - What was the impact of the reform on non-teaching, community-based acute care hospitals?
  - What was the impact of the reform on hospitals that serve a disproportionate share of low-income patients?
  - What factors are related to overall hospital performance?
Methodology

- **Safety-net hospital definition:** Minimum of 63 percent of gross patient service revenue from Medicaid, Medicare, other governmental payers, and free care
- **Teaching hospital:** Medicare Payment Advisory Commission, definition of at least 25 full-time equivalent medical school residents per one hundred inpatient beds
- **Exclusions:** 3 “specialty” hospitals: Children’s Hospital, Massachusetts Eye and Ear, and Dana-Farber Cancer Institute, and Boston Medical Center and Cambridge Health Alliance because of their “special” financing arrangements with the State
- **Model:** Difference-in-difference approach with pre-reform years (2005 and 2006) and post reform years (2007-2013)
- **Outcome variables:** inpatient utilization, inpatient net patient service revenue (NPSR), inpatient NPSR per discharge, outpatient visits, outpatient NPSR, outpatient NPSR per visit, occupancy rate, and total operating margin
- **Control variables:** median household income in hospital’s zip code, number of beds, patient revenue by source, profit status, presence of unions (SEIU and MNA) and number of staffed beds
Results: Descriptive

Financial Condition and Utilization Statistics for Massachusetts Acute Care Safety Net and Non-Safety Net Hospitals before Reform (2005)

<table>
<thead>
<tr>
<th>Variable</th>
<th>NSNH Mean</th>
<th>NSNH SE</th>
<th>SNH Mean</th>
<th>SNH SE</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Operating Margin</td>
<td>1.86</td>
<td>0.61</td>
<td>-0.40</td>
<td>0.91</td>
<td>0.015*</td>
</tr>
<tr>
<td># Inpatient Discharges</td>
<td>13,442</td>
<td>1,871</td>
<td>11,441</td>
<td>2,639</td>
<td>0.669</td>
</tr>
<tr>
<td>Inpatient NPSR Mil $</td>
<td>117</td>
<td>26</td>
<td>77</td>
<td>18</td>
<td>0.789</td>
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<tr>
<td>Inpatient NPSR/discharge</td>
<td>6,485</td>
<td>459</td>
<td>6,588</td>
<td>396</td>
<td>0.094</td>
</tr>
<tr>
<td># Outpatient Visits</td>
<td>200,032</td>
<td>34,695</td>
<td>177,747</td>
<td>57,887</td>
<td>0.817</td>
</tr>
<tr>
<td>Outpatient NPSR Mil. $</td>
<td>112</td>
<td>18</td>
<td>76</td>
<td>18</td>
<td>0.206</td>
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<tr>
<td>Outpatient NPSR/visit</td>
<td>704</td>
<td>48</td>
<td>543</td>
<td>90</td>
<td>0.084</td>
</tr>
<tr>
<td>% NPSR Government</td>
<td>46.95</td>
<td>1.17</td>
<td>63.33</td>
<td>1.70</td>
<td>&lt;0.001*</td>
</tr>
<tr>
<td>% NPSR Commercial</td>
<td>46.91</td>
<td>1.31</td>
<td>28.47</td>
<td>1.96</td>
<td>0.000*</td>
</tr>
<tr>
<td># Staffed Beds</td>
<td>233</td>
<td>31</td>
<td>231</td>
<td>54</td>
<td>0.817</td>
</tr>
<tr>
<td>Occupancy Rate</td>
<td>61.66</td>
<td>2.04</td>
<td>65.44</td>
<td>3.54</td>
<td>0.254</td>
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</tbody>
</table>
Results: Descriptive

Characteristics of Massachusetts Acute Care Teaching and Community Safety Net and Non-Safety Net Hospitals, Before and After Reform

<table>
<thead>
<tr>
<th></th>
<th>NSNH Teaching</th>
<th>NSNH Community</th>
<th>SNH Teaching</th>
<th>SNH Community</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
<td>Pre</td>
<td>Post</td>
</tr>
<tr>
<td>Average # Hospitals</td>
<td>12.0</td>
<td>9.0</td>
<td>33.0</td>
<td>25.3</td>
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<tr>
<td>Operating Margin</td>
<td>3.78</td>
<td>3.62</td>
<td>1.58</td>
<td>1.00</td>
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<tr>
<td># IP Discharges</td>
<td>27,436</td>
<td>29,570</td>
<td>8,540</td>
<td>8,805</td>
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<tr>
<td>IP NPSR/Dis. $</td>
<td>10,591</td>
<td>13,843</td>
<td>5,205</td>
<td>6,641</td>
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<tr>
<td># OP Visits</td>
<td>455,006</td>
<td>511,960</td>
<td>110,599</td>
<td>117,368</td>
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<tr>
<td>OP NPSR/Visit $</td>
<td>672</td>
<td>857</td>
<td>767</td>
<td>915</td>
</tr>
<tr>
<td># Staffed Beds</td>
<td>464</td>
<td>485</td>
<td>155</td>
<td>150</td>
</tr>
<tr>
<td>Occupancy (%)</td>
<td>72.7</td>
<td>73.5</td>
<td>57.2</td>
<td>54.9</td>
</tr>
</tbody>
</table>
Results: Descriptive

Box-Plot of Total Operating Margin, by Hospital Group, 2005-2013
Results: Descriptive

Box-Plot of Occupancy Rate, by Hospital Group, 2005-2013

Graphs by SNH status by teaching status
## Results: Primary Analysis

Changes in Patient Volume, Revenue, and Total Operating Margins in Safety Net and Non-Safety Net Hospitals, FY 2005-FY2013

<table>
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<th>Variable</th>
<th>Unadjusted</th>
<th>Adjusted</th>
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<tbody>
<tr>
<td></td>
<td>Coefficient</td>
<td>SE</td>
</tr>
<tr>
<td>Operating Margin</td>
<td>0.0014</td>
<td>0.001</td>
</tr>
<tr>
<td># IP Discharges</td>
<td>-155.5278</td>
<td>37.030</td>
</tr>
<tr>
<td>IP NPSR/Discharge $</td>
<td>-84.1798</td>
<td>36.302</td>
</tr>
<tr>
<td>Occupancy Rate %</td>
<td>-0.01092</td>
<td>0.002</td>
</tr>
<tr>
<td># OP Visits</td>
<td>-496.1575</td>
<td>1053.791</td>
</tr>
<tr>
<td>OP NPSR/Visit</td>
<td>-22.2206</td>
<td>5.443</td>
</tr>
</tbody>
</table>

Notes: Mixed-effects model, adjusted for hospital as random intercepts. Unadjusted models have year, DSH status, and year by DSH interaction as independent variables. Adjusted models further control for teaching status, for-profit status, union presence, number of beds, and 2008-2012 overall median household income in the nearest zip code.

* = Statistically significant at p<0.05
What factors matter?

Comparison between hospitals below 20th percentile and hospitals above 20th percentile

<table>
<thead>
<tr>
<th>Variable</th>
<th>( \geq 20^{th} )</th>
<th>(&lt; 20^{th} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>With Union, in 2005</td>
<td>29.8%</td>
<td>50.0%</td>
</tr>
<tr>
<td>Community Hospital</td>
<td>72.3%</td>
<td>91.7%</td>
</tr>
<tr>
<td>Safety-Net Hospital, in 2005</td>
<td>21.3%</td>
<td>41.7%</td>
</tr>
<tr>
<td>% NPSR from Government, 9 yr. avg.</td>
<td>59.5%</td>
<td>63.0%</td>
</tr>
<tr>
<td>% NPSR from Commercial, 9 yr. avg.</td>
<td>43.7%</td>
<td>38.9%</td>
</tr>
<tr>
<td>Median Household Income in Hospital Zip Code</td>
<td>82,179</td>
<td>74,869</td>
</tr>
</tbody>
</table>
Discussion

- Medicaid coverage has doubled since reform putting pressure on hospitals with high Medicaid occupancy.
- In fewer than 10 years, the number of MA hospitals that became Disproportionate Share Hospitals (DSH) increased from 17 to 34, with the majority of change occurring at the community level.
- Community hospitals are performing worse post reform than pre-reform, and compared to teaching hospitals.
- Community DSH hospitals have fared the worst.
- The DSH results concur with at least one other academic study (Mohan).
- Several community hospitals have recently closed their doors providing fewer affordable options to residents of the Commonwealth.
- There is a lot of variability in hospital performance both before and after reform partially explained by community hospital status, union presence, affluence of community, long-term safety net status, and payer mix.
Limitations/Questions?

- Could only study factors for which we had data
- The variability in performance makes situation look less dire
- Need better understanding of why utilization patterns are shifting away from community hospitals
- May be important to assess the affect of competition from nearby satellites from larger Boston hospitals on community hospital utilization and financial status
Agenda

- Approval of Minutes from the April 15, 2015 Meeting (VOTE)
- Presentation on CHART Phase 1 Report
- Update on CHART Phase 2 Implementation Planning
- Discussion of CHART Provider Engagement Plan
- Presentation on the Impacts of Health Care Reform on Massachusetts Safety Net Hospitals

- Schedule of Next Committee Meeting