MASSACHUSETTS
HEALTH POLICY COMMISSION

Care Delivery and Payment System Transformation

February 1, 2017

MASSACHUSETTS
HEALTH POLICY COMMISSION

AGENDA

- **Call to Order**
- Approval of Minutes
- PCMH PRIME Update
- ACO Certification Operational Update
- Discussion of ACO Technical Assistance Strategy
- HPC Pilot on Pharmacological Treatment for Opioid Use Disorder in the Emergency Department
- Registration of Provider Organizations Update
- Schedule of Next Meeting

MASSACHUSETTS
HEALTH POLICY COMMISSION

AGENDA

- Call to Order
- **Approval of Minutes**
- PCMH PRIME Update
- ACO Certification Operational Update
- Discussion of ACO Technical Assistance Strategy
- HPC Pilot on Pharmacological Treatment for Opioid Use Disorder in the Emergency Department
- Registration of Provider Organizations Update
- Schedule of Next Meeting

MASSACHUSETTS
HEALTH POLICY COMMISSION

VOTE: Approving Minutes

MOTION: That the Committee hereby approves the minutes of the joint QIPP/CDPST meeting held on November 30, 2016, as presented.

MASSACHUSETTS
HEALTH POLICY COMMISSION

AGENDA

- Call to Order
- Approval of Minutes
- **PCMH PRIME Update**
- ACO Certification Operational Update
- Discussion of ACO Technical Assistance Strategy
- HPC Pilot on Pharmacological Treatment for Opioid Use Disorder in the Emergency Department
- Registration of Provider Organizations Update
- Schedule of Next Meeting

Practices Participating in PCMH PRIME

28 practices
are PCMH PRIME Certified

Newly certified practices include:

Acton Medical Associates

Family Health Center of Worcester

Fenway Health

38 practices

are on the **Pathway to PCMH PRIME**

3 practices

are working toward NCQA PCMH Recognition and PCMH PRIME Certification concurrently

69 Total Practices Participating

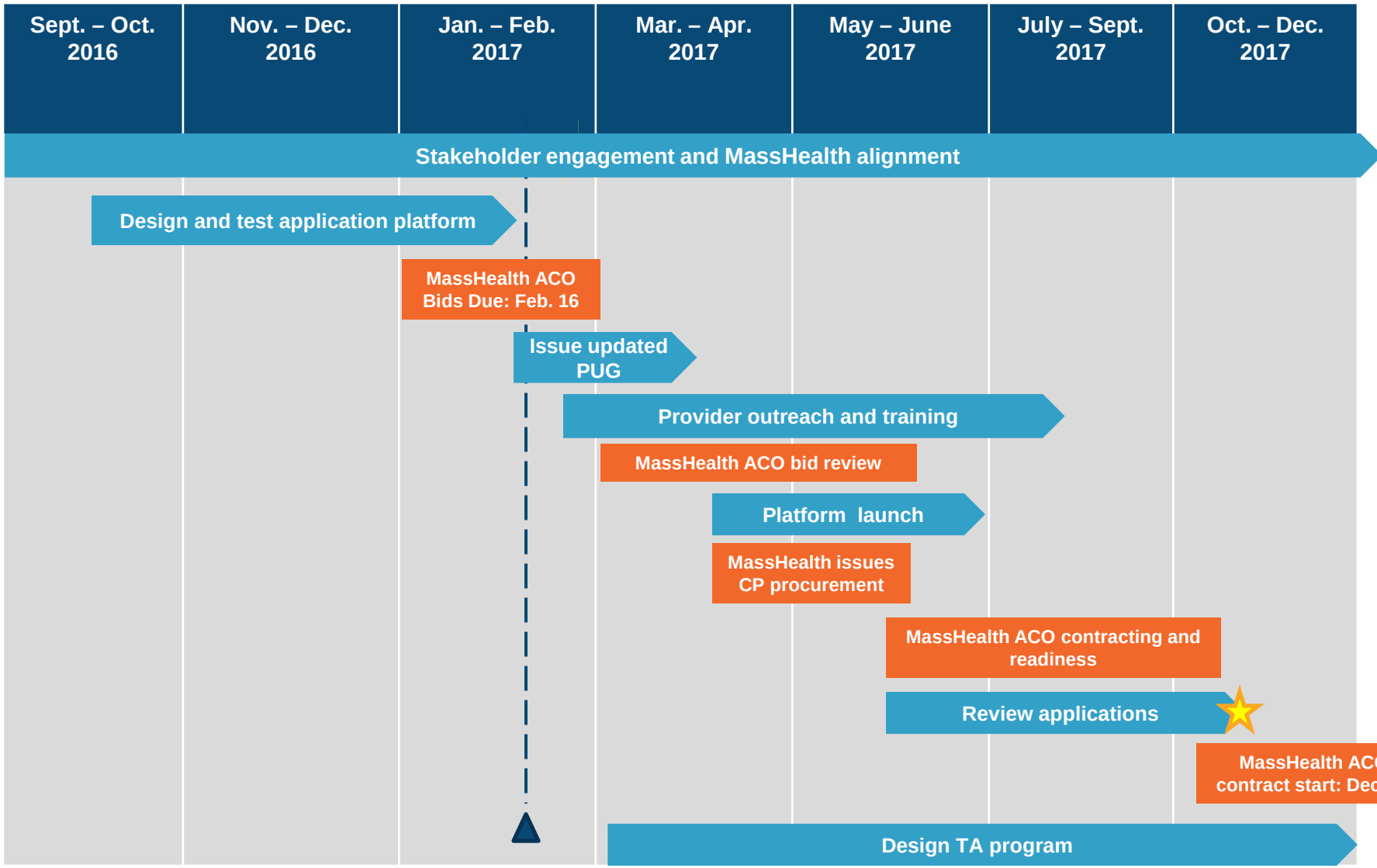
HPC

MASSACHUSETTS
HEALTH POLICY COMMISSION

AGENDA

- Call to Order
- Approval of Minutes
- PCMH PRIME Update
- **ACO Certification Operational Update**
- Discussion of ACO Technical Assistance Strategy
- HPC Pilot on Pharmacological Treatment for Opioid Use Disorder in the Emergency Department
- Registration of Provider Organizations Update
- Schedule of Next Meeting

ACO Certification Timeline



Expected deadline for MassHealth ACOs to be HPC certified: Oct. 1

DPH DoN Regulations and HPC ACO Certification

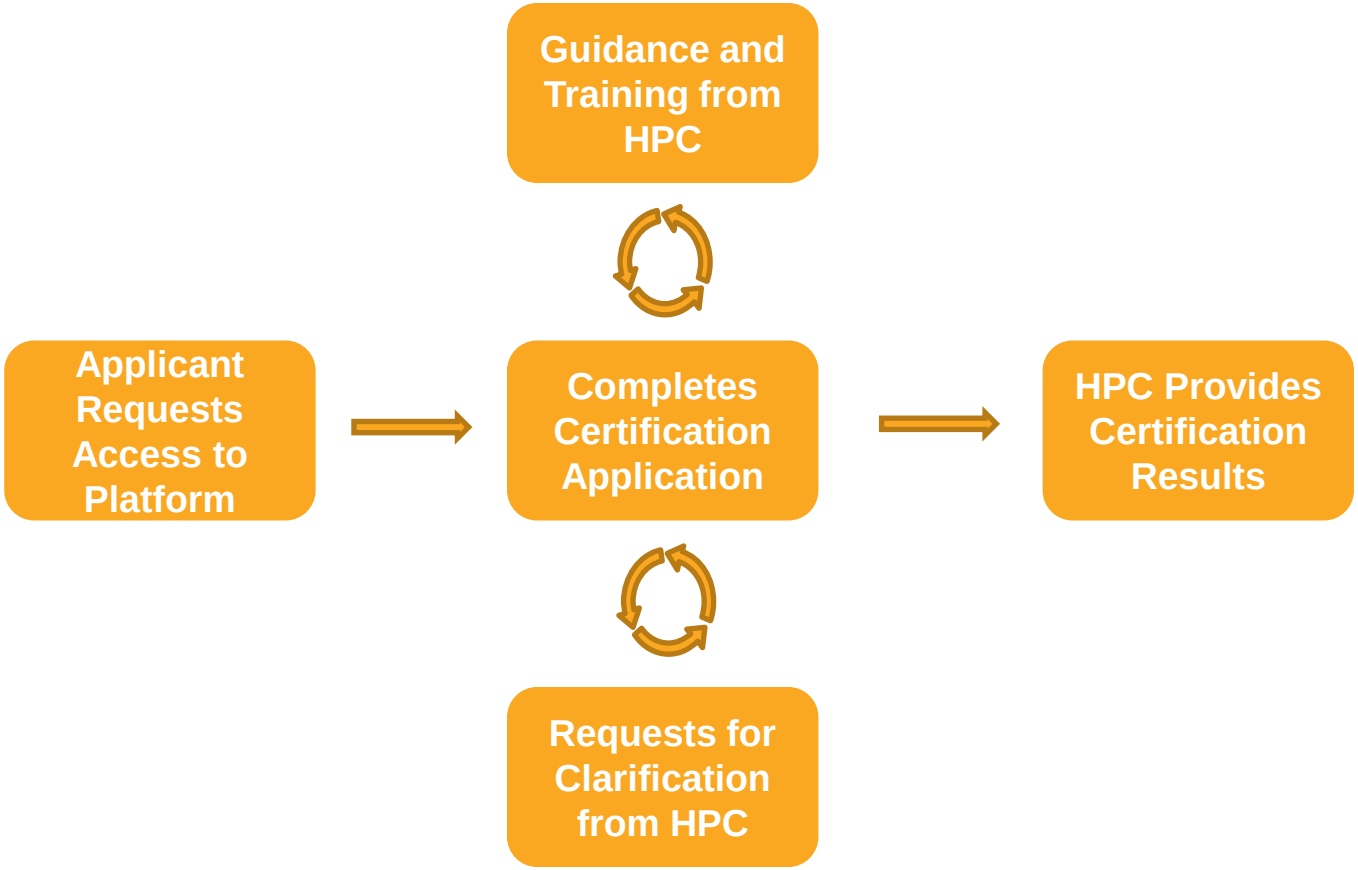
New Determination of Need (DON) regulations issued by DPH align with HPC's ACO certification:

HPC-certified ACOs can apply for new construction of freestanding ASCs and new ambulatory surgery capacity on hospital campuses

Should an HPC-certified ACO seek to establish new ASC capacity within the primary service area of an independent community hospital, the ACO must either obtain a letter of support from the independent community hospital, or engage in a joint venture/affiliation with that hospital

ACO Certification Application Platform Overview

- Secure, web-based system for applicants to submit an application to the HPC for ACO Certification
- Enables HPC review and certification decision process
- Provides for communication between applicants and the HPC (e.g. content questions, technical issues, certification decision)



Application Platform Development Activities

Define Functional Specifications

Completed December 2016

- Worked cooperatively with MassIT contractor DataBank to define detailed specifications for platform

Solution Development and Configuration

Completed end of January 2017

- Development and configuration by DataBank, based on functional specifications

HPC Testing

February 2017

- Two rounds of User Acceptance Testing (UAT) performed by HPC staff
- Revisions to the platform based on results
- Engage stakeholders regarding application requirements (PUG) and Beta launch opportunity

Beta Launch

March 2017

- Work with a small number of ACOs to go through platform training and full certification process, and receive their feedback
- Refine the platform based on Beta experience

Full Launch

Summer 2017

- Open the platform to all ACOs seeking certification
- Review applications and issue certifications as appropriate

HPC

Beta Launch Goals and Projected Timeline

- Enable small number of applicants to volunteer to ***test the platform and, if approved, receive certification,*** well before MassHealth deadline and effective until 1/1/2020
- Verify that the platform functions as expected, meets needs of applicants and the HPC
- Hear feedback from applicants on usability, workflow, look and feel, and any ways to improve the user experience
- Learn what kinds of training and support applicants need to use the platform effectively

ACO Certification Beta Launch - Estimated Dates

	2017																									
Activity	**Feb**				**Mar**				**Apr**				**May**					**Jun**				**Jul**				
Date -->	2/6	2/13	2/20	2/27	3/6	3/13	3/20	3/27	4/3	4/10	4/17	4/24	5/1	5/8	5/15	5/22	5/29	6/5	6/12	6/19	6/26	7/2	7/9	7/16	7/23	7/30
Intoduction to Beta Launch Program																										
Platform Demonstration																										
Beta Launch Period					6 Weeks																					
HPC Certification Application Review													Up to 60 Days													
Platform Open to all ACOs																										

Information Submitted per the Application Requirements and Platform User Guide (PUG)

Assessment Criteria

AC-1: Governance Structure
AC-2: Patient/Consumer Representation
AC-3: Performance Improvement Activities
AC-4: Quality-based Risk Contract(s)
AC-5: Population Health Management Programs
AC-6: Cross-continuum Care

Text answers and uploaded documents

Applicant Information, including

- Applicant name (legal and d/b/a)
- Tax Identification Number (TIN)
- Contact information

Responses to Supplemental Information Questions - example

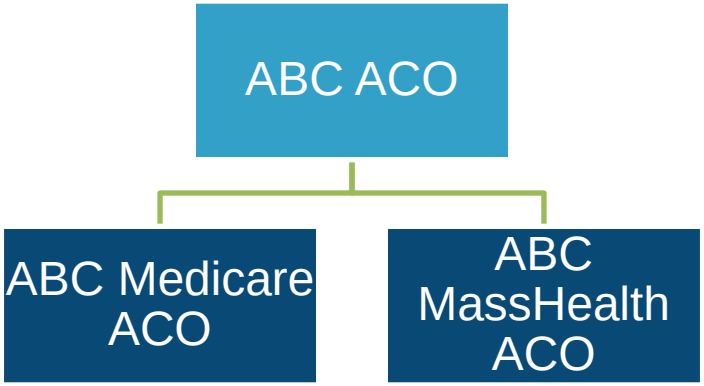
- Does your ACO currently include NCQA Recognized Patient-Centered Medical Home (PCMH) practices?
  - o Yes
  - o No
  - ➢ If Yes, fill in % of practices with NCQA PCMH Recognition
- Does your ACO currently include practices with PCMH recognition through another org? (check all that apply, and fill in %)
  - ❑ Joint Commission
  - ❑ URAC
  - ❑ AAAHC
  - ❑ Other ____

Definition of the Applicant for Certification

The health care provider or provider organization applying for certification (the Applicant) must have **common ownership or control of any and all corporately affiliated contracting entities that enter into risk contracts on behalf of one or more health care providers (Component ACOs).**

If all criteria are met, the HPC will **certify the Applicant, inclusive of its Component ACOs.**

Example:



- ABC ACO holds an risk-based contract with a commercial payer.
- ABC also owns a Medicare ACO, which contracts directly with Medicare and is governed by its own Board.
- ABC is creating a new ACO to contract with MassHealth; it will also be owned and operated by the parent ABC ACO.
- ABC ACO is the Applicant for certification.
- If ABC ACO meets all requirements, ABC ACO will be Certified, inclusive of its commercial, Medicare and MassHealth ACOs.

Confidentiality for ACO Certification Materials

Nonpublic clinical, financial, strategic or operational documents or information submitted to the HPC in connection with ACO certification have confidentiality protections pursuant to M.G.L. c.6, sec. 2A. The HPC may make the information public in de-identified summary form, or when the commission believes that disclosure is in the public interest.

Information for Public Reporting

Applicant name, contact info
Component ACO(s) name, contact info

AC-2: Position of patient/consumer rep within the governance structure;
Description of patient and family advisory committee(s);
Public narrative demonstrating ways the governance structure seeks to be responsive to patient population needs.

AC-4: Name(s) of payer(s) with which Applicant and Component ACOs have quality-based risk contract(s)

Information for Public Reporting *If the Applicant Consents*

Portions and/or summaries of responses to all other AC and SI questions

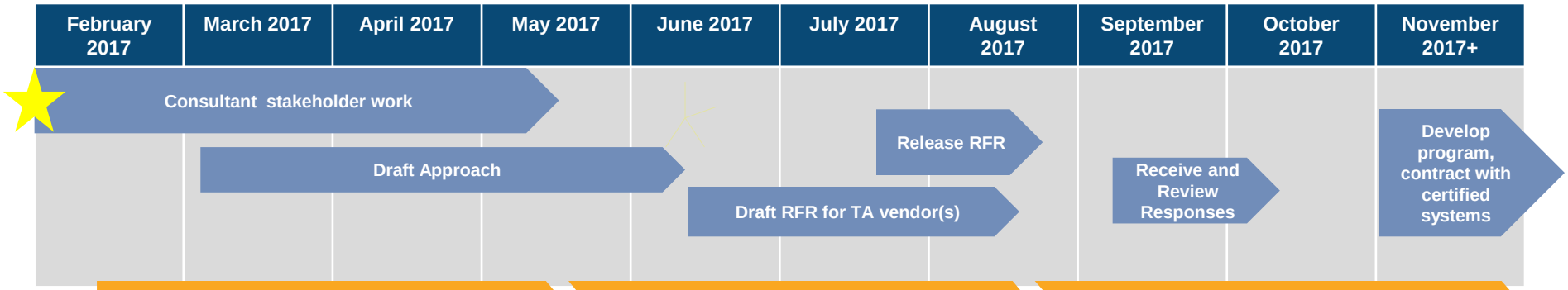
MASSACHUSETTS
HEALTH POLICY COMMISSION

AGENDA

- Call to Order
- Approval of Minutes
- PCMH PRIME Update
- ACO Certification Operational Update
- **Discussion of ACO Technical Assistance Strategy**
- HPC Pilot on Pharmacological Treatment for Opioid Use Disorder in the Emergency Department
- Registration of Provider Organizations Update
- Schedule of Next Meeting

ACO TA timeline and next steps

The HPC has selected Bailit Health to make a strategic recommendation about how to best structure technical assistance for ACOs



Goal Setting and Design

Activities

- ☐ Meet with subject matter experts and stakeholders on program design considerations
- ☐ Align with other TA efforts at state and federal levels
- ☐ Decide on TA framework, present to CDPST (June 2017)

Output

- Program Goals
- Current Landscape

Vendor Procurement

Activities

- ☐ Draft RFR
- ☐ Release RFR
- ☐ Receive and review proposals
- ☐ Selection of contractor

Output

- RFR development
- Proposal process
- Vendor selection

Implementation

Activities

- ☐ Finalize program design, measurable goals, and contract requirements with vendor'(s)
- ☐ Begin TA program
- ☐ Support program implementation as needed and monitor performance

Output

- Operational planning
- Program monitoring

MassHealth's DSRIP will fund technical assistance to support provider advancement in seven areas

1. **Education**

   (e.g., governance requirements, network development, care coordination, quality and financial management analytics)

2. **Performance management**

   (e.g., performance improvement on patient outcomes and other quality metrics)

3. **Financial**

   (e.g., education and readiness assessments on financial business process changes, patient attribution, budgeting, and practice management systems)

4. **Culturally competent care**

   (e.g., to improve care of racial, ethnic, and language minorities, LGBTQ members, and members with physical, intellectual, and developmental disabilities)

5. **Actuarial**

   (e.g., consulting to support participation in payment models)

6. **Legal**

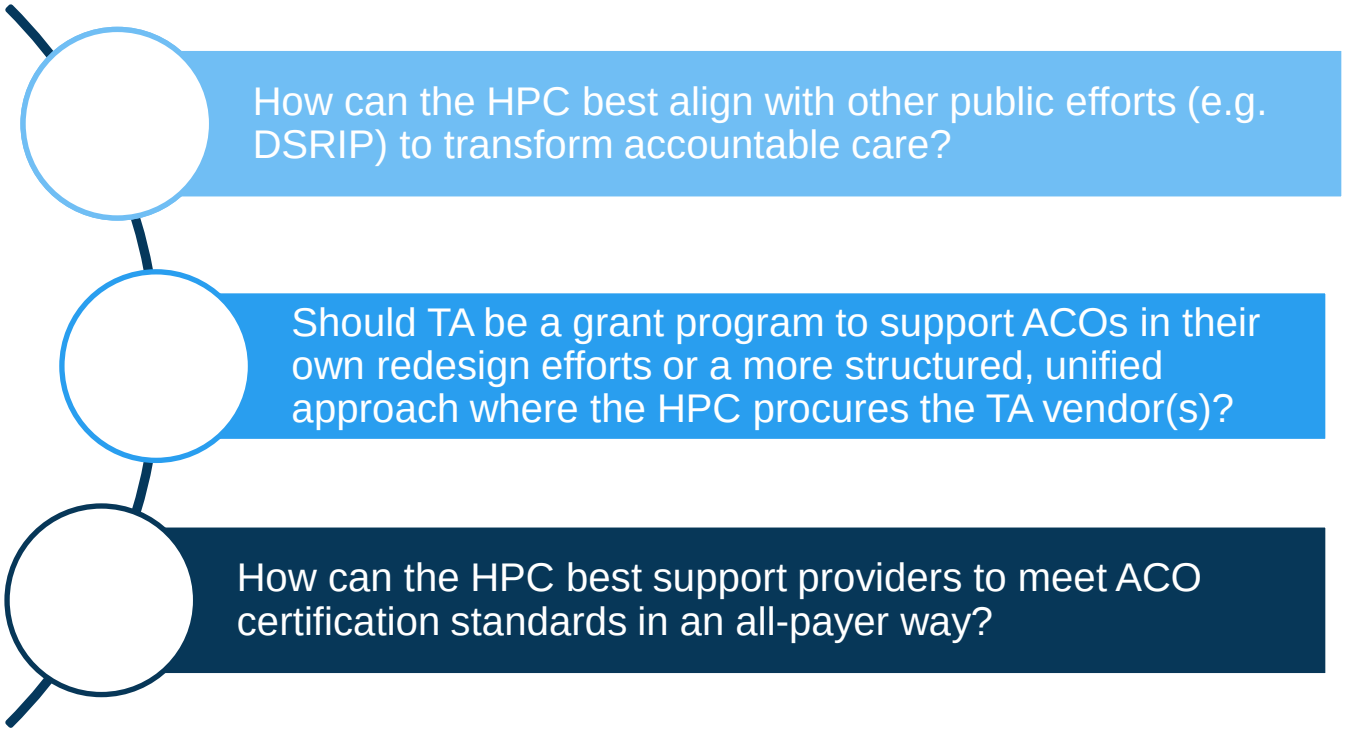
   (e.g., contracting between ACOs and CPs)

7. **HIT**

   (e.g., technology investment and workflow adjustments)

Questions for Discussion

Key Considerations



MASSACHUSETTS
HEALTH POLICY COMMISSION

AGENDA

- Call to Order
- Approval of Minutes
- PCMH PRIME Update
- ACO Certification Operational Update
- Discussion of ACO Technical Assistance Strategy
- **HPC Pilot on Pharmacological Treatment for Opioid Use Disorder in the Emergency Department**
- Registration of Provider Organizations Update
- Schedule of Next Meeting

FY17 budget directs the HPC to implement a pilot program for initiating pharmacologic treatment of OUD in the ED

Summary of HPC mandate in FY17 budget*

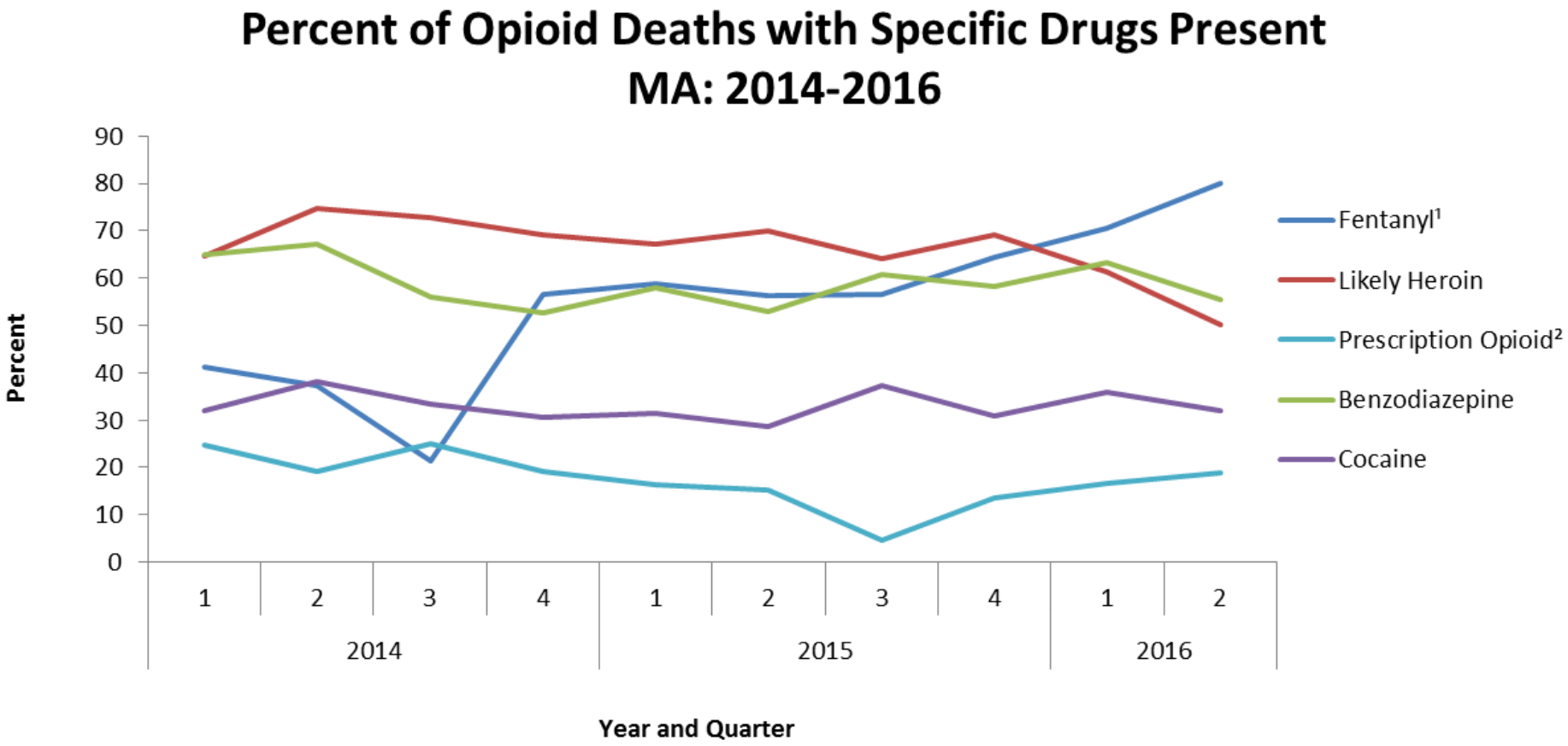
1. The HPC (in consultation with DPH) shall implement a **2-year pilot grant program** to further test a model of **emergency department (ED) initiated pharmacologic treatment** of substance use disorder for patients who present in the emergency setting with **symptoms of an overdose or after being administered naloxone**

2. Grantees shall provide **referrals to outpatient follow up treatment** with the goals of increasing rates of engagement and retention in evidence-based pharmacologic care (including behavioral health services)

3. The HPC may direct up to **$3,000,000** from its Distressed Hospital Trust Fund to implement the program at **no more than 3 sites**, to be selected through a **competitive process**

**See appendix for statutory language*

Empirical basis for initiative: risk of death is at all time high; engagement in treatment is acutely urgent

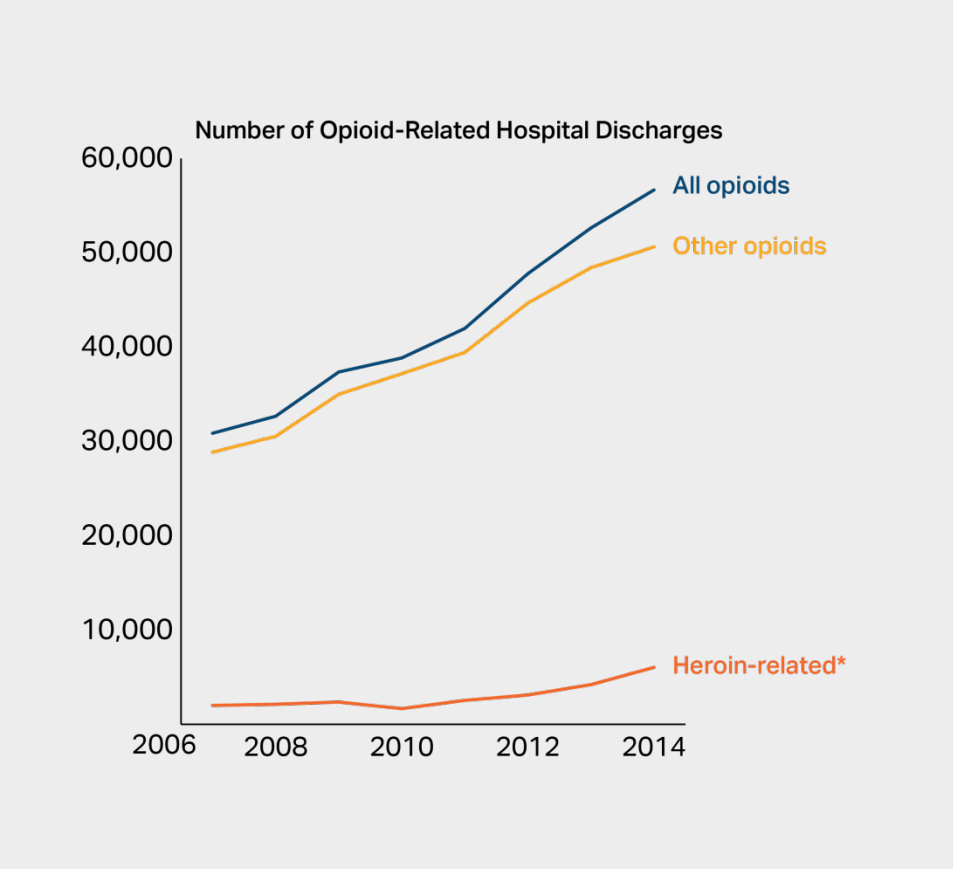


Source: Massachusetts Department of Public Health, November 2016

[1] Most likely illicitly produced and sold, not prescription fentanyl

[2] Prescription opioids include: hydrocodone, hydromorphone, oxycodone, oxymorphone, and tramadol

Empirical basis for initiative: growing rates of opioid use disorder is having marked impact on hospital utilization



Rate of Change of Opioid-Related Hospital Discharges

Years	Heroin-related	Other opioids
2007-2008	6%	6%
2008-2009	11%	15%
2009-2010	-29%	6%
2010-2011	52%	6%
2011-2012	23%	13%
2012-2013	35%	8%
2013-2014	43%	5%

201%

increase in heroin-related hospital discharges between 2007 and 2014

Source: HPC Analysis—CHIA, Hospital Inpatient Discharge Database, Outpatient Observation Database, and Emergency Department Database, 2007-2014

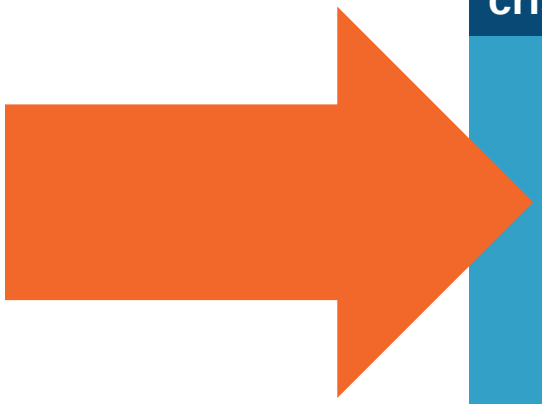
Note: Hospital discharges include ED discharges, inpatient discharges, and observation stay discharges. **The remainder of analyses do not include observation stay discharges.**

** This analysis is based on ICD-9 codes. As with all analyses dependent on ICD-9 codes, provider coding may not always accurately reflect the patient's clinical condition. In particular, heroin-related codes are considered specific, but not necessarily sensitive. For example, some hospitals may only use heroin-related codes for cases of poisoning/overdose. As result, some heroin abuse/dependence is likely captured in the "other opioids" category. Furthermore, some non-heroin opioid cases are likely captured in the "heroin-related" category. Patients with both a "heroin-related" and "other opioid" discharge code were included in the "all opioids" category, as well as in the "heroin-related" and "other opioid" categories. For example, a patient with a heroin overdose and a non-heroin overdose would be counted once in the "heroin -related" category and once in the "other opioid" category. However, a patient with multiple diagnoses for the same sub-category (e.g., both a heroin overdose and heroin poisoning), would not be counted more than once in either the "heroin-related" or "other opioid" category.*

HPC refined analyses conducted on the impact of the opioid epidemic on the health care system to inform pilot design.

Original analyses were conducted as a part of its report on *Opioid Use Disorder in Massachusetts*.

- Opioid-related hospital discharges (ED visits and inpatient admissions, primary *or* secondary code)
- Impact on communities (discharges mapped by HPC region)
- Impact on populations (admissions stratified by income, gender, and age)
- Impact on exposed infants (Neonatal Abstinence Syndrome)



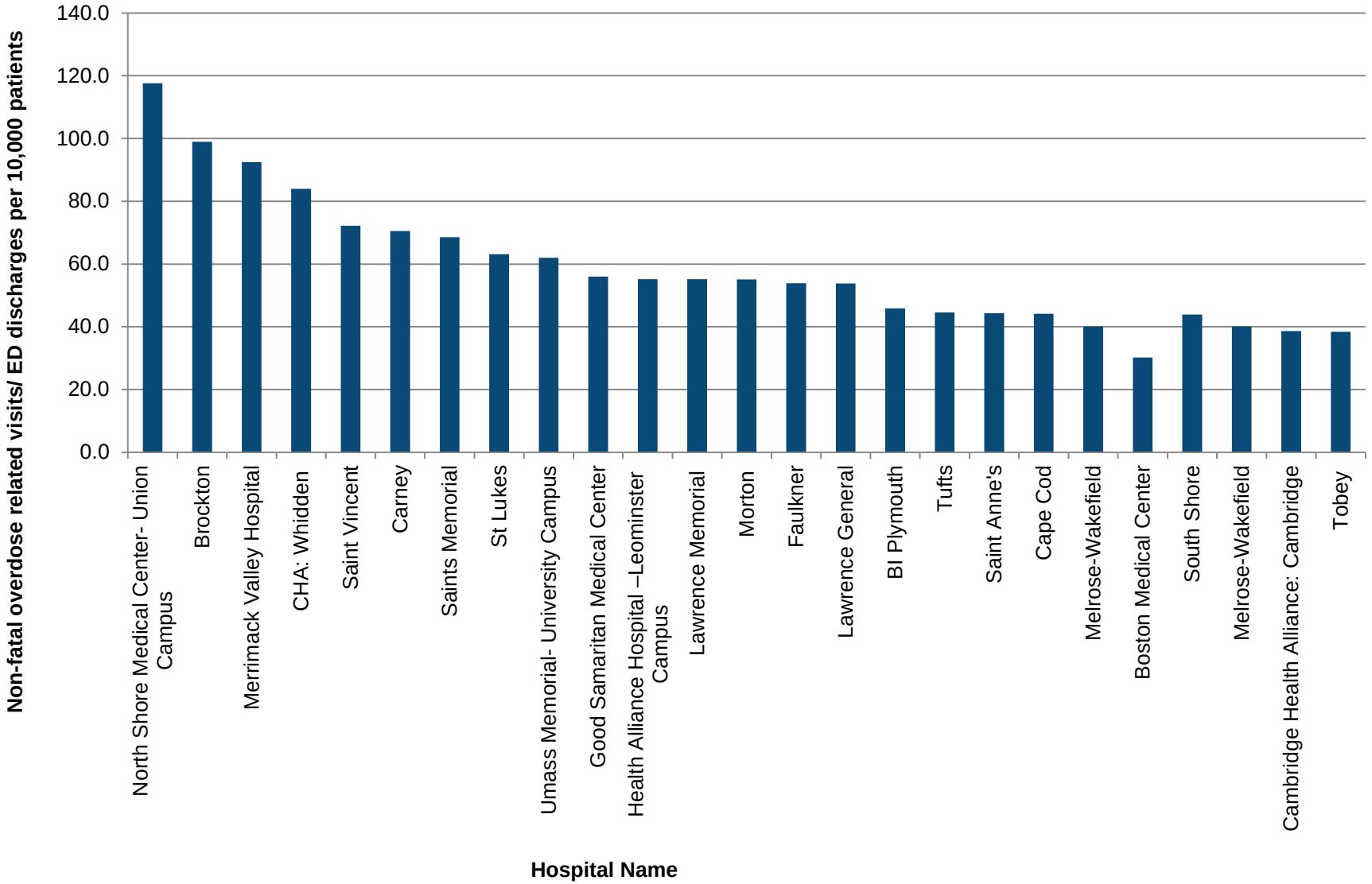
Refined analyses further pinpoint burden EDs face, as well as potential of EDs to mitigate public health crisis in local communities.

- Nonfatal opioid overdoses
- ED visit with primary code of opioid or heroin dependence
- ED visit with any opioid-related primary code

See appendix for methods

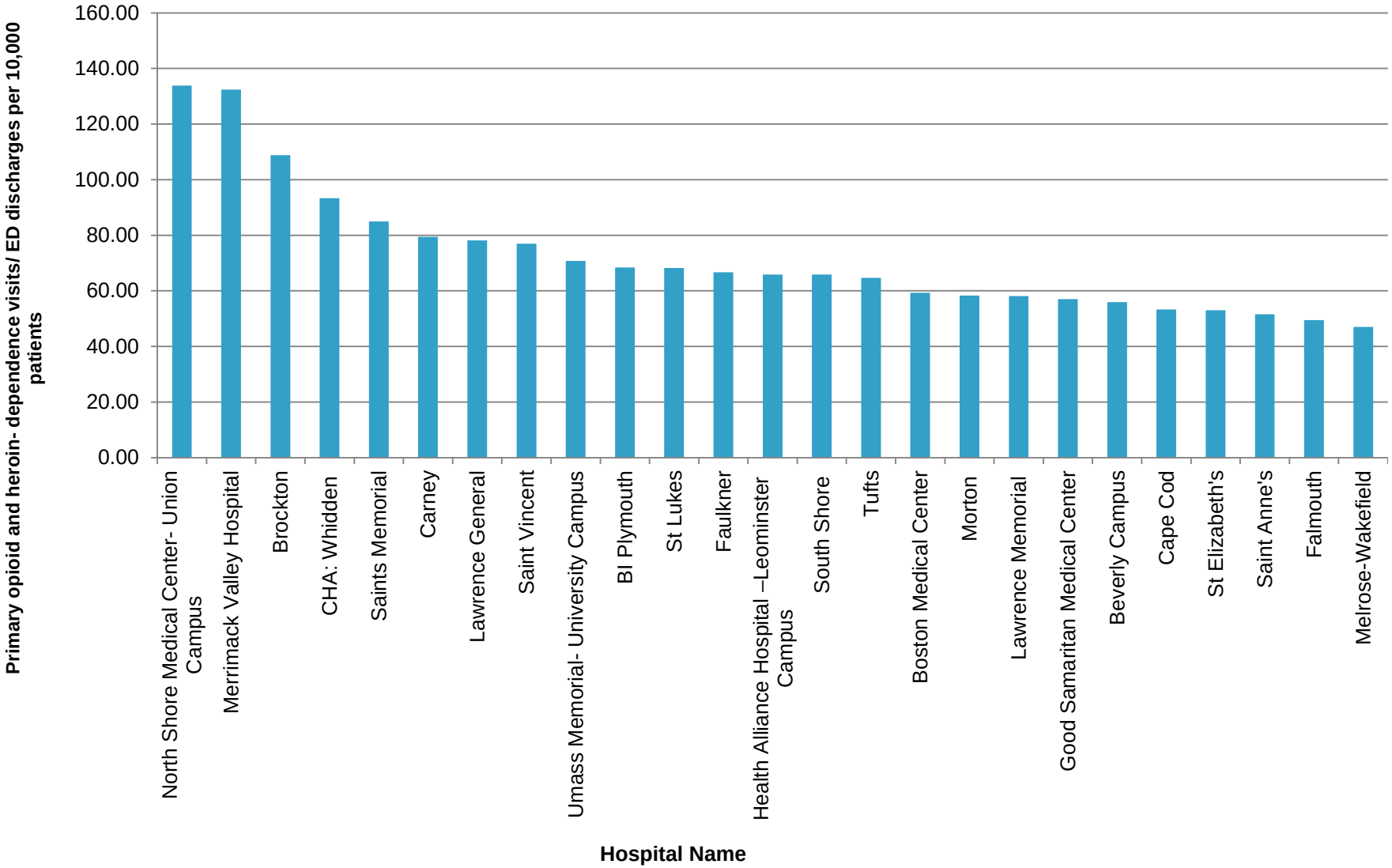
HPC

Massachusetts EDs with highest rates of non-fatal overdose related visits in 2015



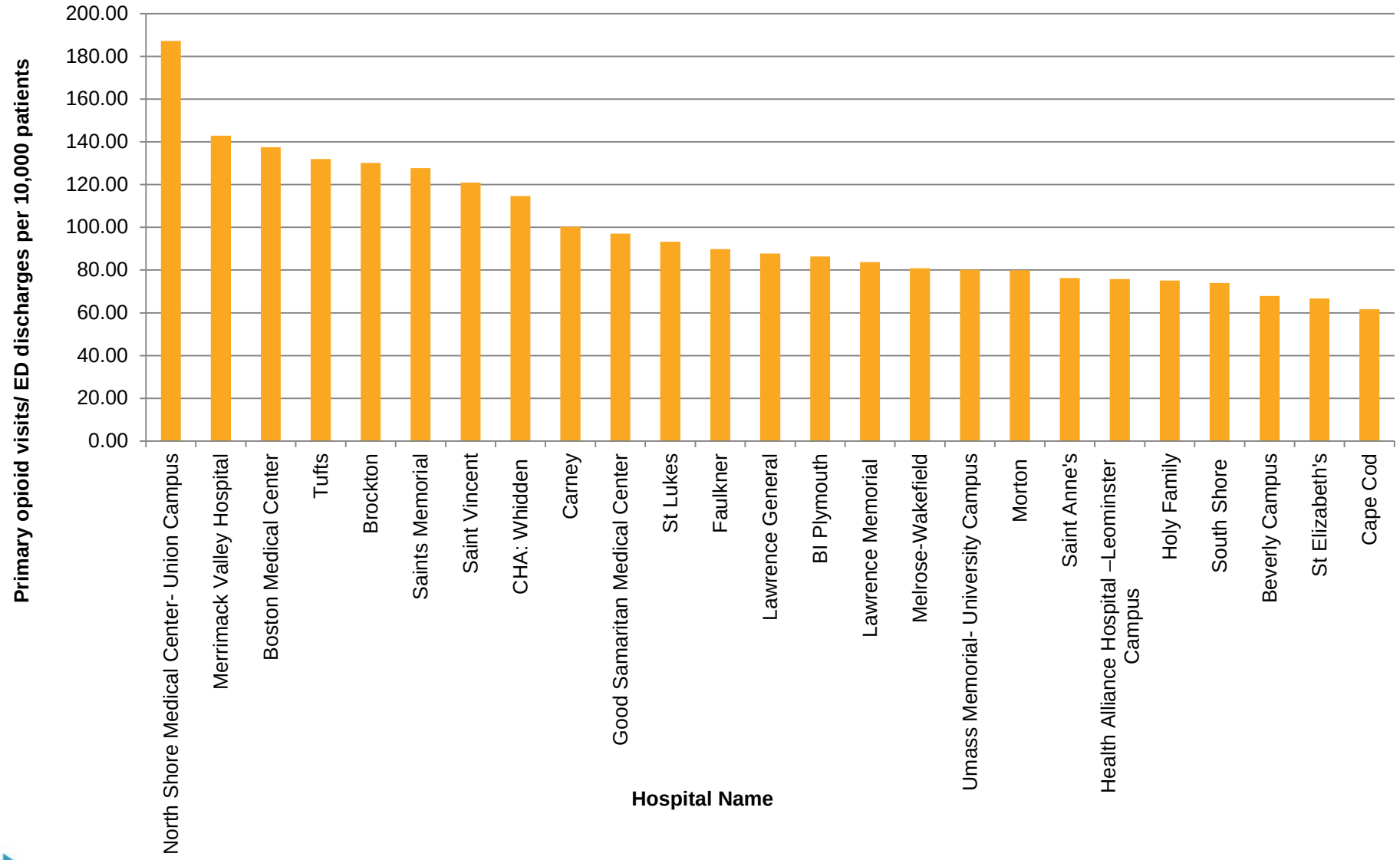
See appendix for all hospitals & methodology

Massachusetts EDs with highest rates of visits with primary code of opioid or heroin dependence in 2015



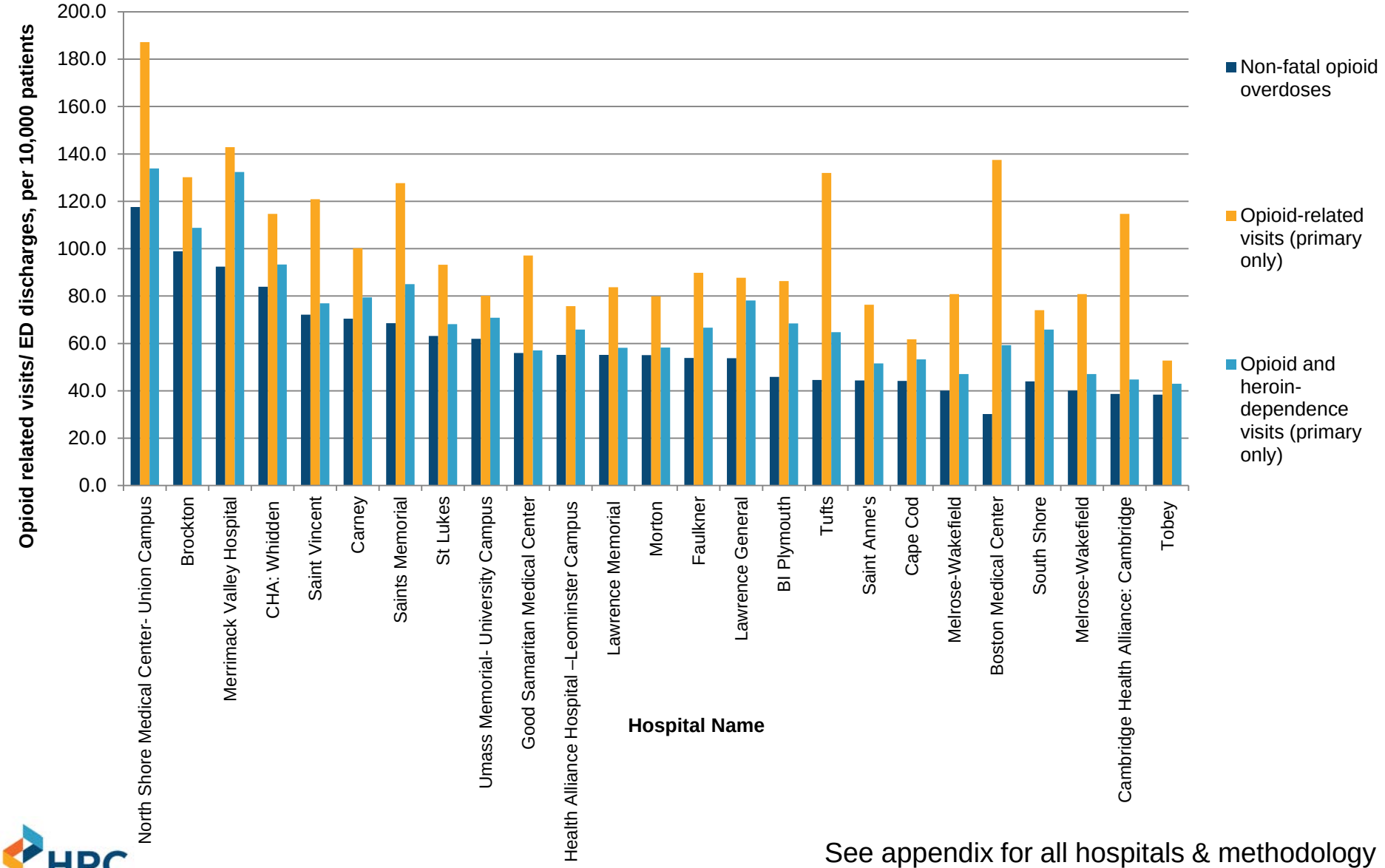
See appendix for all hospitals & methodology

Massachusetts EDs with highest rates of visits with any opioid related primary code in 2015



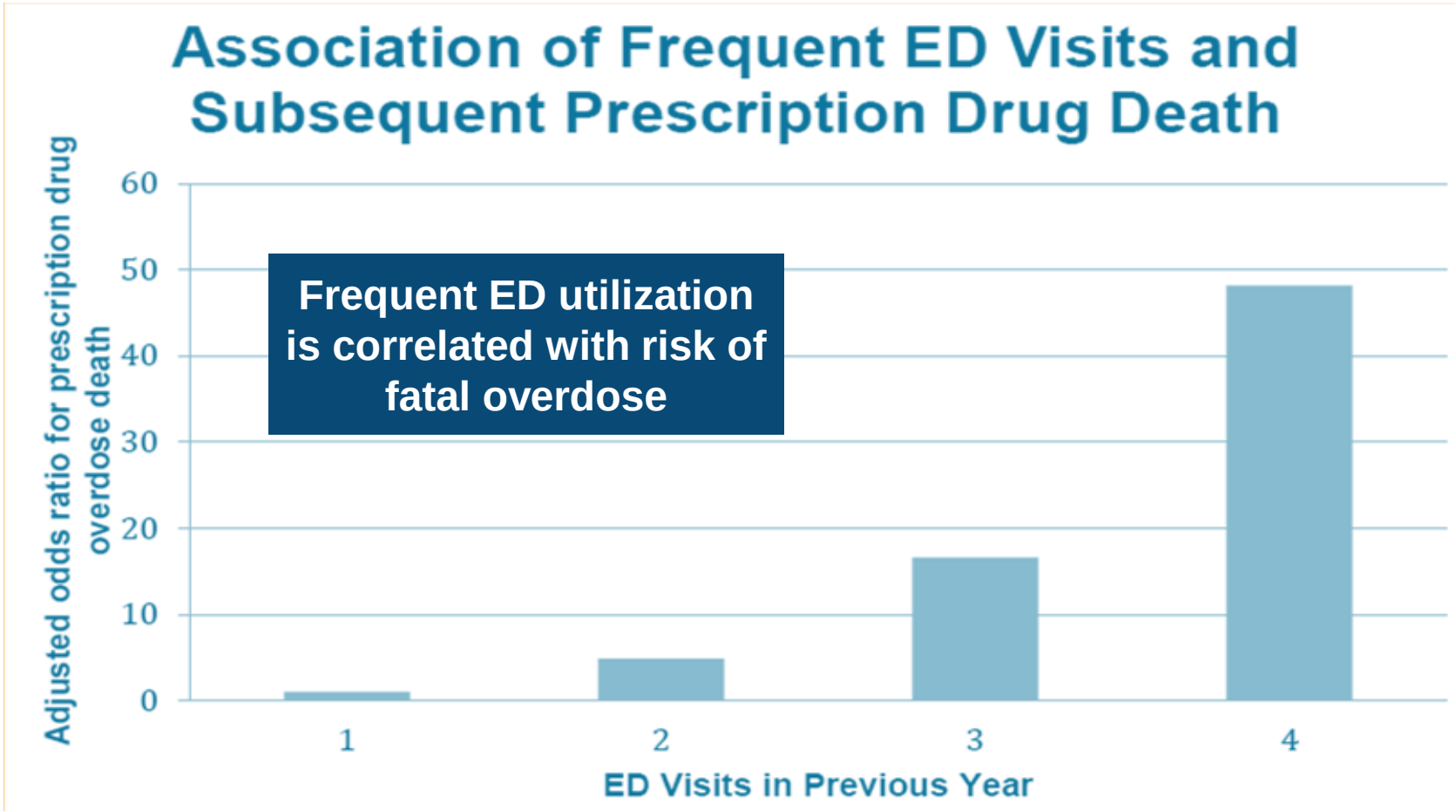
See appendix for all hospitals & methodology

Massachusetts EDs with highest rates of visits with highest rates of any opioid related primary diagnosis (overdose, dependence, or otherwise)



See appendix for all hospitals & methodology

Empirical basis for initiative: There is an opportunity to engage high-risk and hard to reach patients in the ED setting



Joanne E. Brady et al., "Emergency Department Utilization and Subsequent Prescription Drug Overdose Death," *Annals of Epidemiology* 25, no. 8 (August 2015): 613-19.e2, doi:10.1016/j.annepidem.2015.03.018; Joseph Logan et al., "Opioid Prescribing in Emergency Departments: The Prevalence of Potentially Inappropriate Prescribing and Misuse," *Medical Care* 51, no. 8 (2013): 646-53, doi:10.1097/MLR.0b013e318293c2c0; Kohei Hasegawa et al., "Epidemiology of Emergency Department Visits for Opioid Overdose: A Population-Based Study," *Mayo Clinic Proceedings* 89, no. 4 (2014): 462-71, doi:10.1016/j.mayocp.2013.12.008.

HPC

Evidence base for initiation of pharmacologic treatment in the ED

Randomized clinical trial at Yale New Haven Hospital compared patients who were initiated on buprenorphine/naloxone treatment prior to discharge, compared to patients simply referred to treatment.

Patients initiated on buprenorphine/naloxone were:

1. Significantly more likely to **engage in follow up treatment** and **abstain from using illicit drugs**
2. Significantly **less likely to require inpatient treatment**

D'Onofrio, G., O'Connor, P. G., Pantalon, M. V., Chawarski, M. C., Busch, S. H., Owens, P. H., ... & Fiellin, D. A. (2015). Emergency department–initiated buprenorphine/naloxone treatment for opioid dependence: a randomized clinical trial. JAMA, 313(16), 1636-1644.

Criteria for awards/review of applications for preliminary discussion

Hospital applicants should demonstrate relationships with:

- **Pharmacy** that reliably stocks buprenorphine
- **Outpatient provider(s) with adequate capacity** to accept anticipated referral volume* within 72 hours
- Staff who can provide **brief counseling** and **navigation support** from ED to outpatient provider

Competitive applicants likely will:

- Have a **well-staffed ED**
- Demonstrate capacity to **secure an outpatient appointment** for patients prior to ED discharge
- Demonstrate plan to secure **buprenorphine prescribing waivers** for majority or all of eligible ED providers
- Demonstrate plan to **guarantee access to "bridge prescribers"** and minimize wait time for patients to enter into **comprehensive treatment programs** (e.g., counseling, peer support)

HPC

*see appendix for ED volume related to opioid use disorder

MASSACHUSETTS
HEALTH POLICY COMMISSION

AGENDA

- Call to Order
- Approval of Minutes
- PCMH PRIME Update
- ACO Certification Operational Update
- Discussion of ACO Technical Assistance Strategy
- HPC Pilot on Pharmacological Treatment for Opioid Use Disorder in the Emergency Department
- **Registration of Provider Organizations Update**
- Schedule of Next Meeting

MA-RPO Program Public Comment Period

Data Submission Manual

The MA-RPO Program released the proposed 2017 DSM, which contains the data elements and submission instructions for the 2017 filing, for public comment in November.

CHIA's Regulation

CHIA also released its proposed regulation 957 CMR 11.00, *Registered Provider Organizations Reporting Requirements* for public comment during this time.

Comments were due in December for both the DSM and CHIA's regulation.

2017 Filing Overview

Data submitted in Initial Registration **will be prepopulated** in the online submission platform. Provider Organizations will **review and update** this information.

New Information	Updates to Existing Information
Standardized Financial Statements APM Revenue Provider-to-Provider Discounts	Minor updates to existing files based on Provider Organization feedback and data user needs (e.g., removing EINs from the physician roster and adding a reporting threshold for contracting affiliate physician practices)

Financial Statements

Pursuant to M.G.L. c. 12C, § 9(b)(4)

Description

- The MA-RPO Program proposes to collect standardized summary financial statement information including a Balance Sheet, Statement of Operations, and Statement of Cash Flow.
- Hospitals currently submit similar financial performance data to CHIA; they will therefore not have to submit any additional financial statements.

Value

- Allows users to understand the financial performance of the system and the financial performance of hospitals in the context of the system.
- Allows users to better compare performance across physician groups and systems. This comparison is difficult to perform without standardized reporting formats.

Alternative Payment Method (APM) Data

Pursuant to M.G.L. c. 12C, § 9(b)(5)

Description

- The MA-RPO Program proposes to collect information on APM contract establishment and participation with various payers or payer categories and corresponding revenue.
- Revenue collection modeled after Pre-Filed Testimony (AGO Exhibit 1) for the annual Cost Trends Hearing; organizations will report on revenue for services provided in 2015.

Value

- Provides detailed payer-mix information for Provider Organizations' physician groups, including by payer type (e.g., government, commercial) and by payment type (e.g., FFS, global budget).
- Complements payer-reported APM data collected by CHIA.

Provider-to-Provider Discount Arrangements

Pursuant to M.G.L. c. 12C, § 9(b)(4)

Description

- The MA-RPO Program proposes to collect information on provider-to-provider discount arrangements through its existing Clinical Affiliations file

Value

- Information on new discount arrangements is submitted through the material change notice process; this will enhance understanding of discount arrangements existing in the market that pre-dated the material change notice process

Public Comment

The MA-RPO Program received written comments from 6 organizations during the comment period. Program staff would like to extend sincere thanks to the individuals and organizations that have provided feedback and insight on the proposed requirements.

Beth Israel Deaconess | CARE ORGANIZATION

Atrius Health

BOSTON HEALTH CARE *for the* HOMELESS PROGRAM

MHQP
MASSACHUSETTS HEALTH QUALITY PARTNERS
trusted information. quality insights.

PARTNERS HEALTHCARE

STURDY MEMORIAL HOSPITAL

Summary of Comments

Organizations supported the following updates to the 2017 filing requirements:

- Aligning with CHIA to develop and administer a single MA-RPO Program
- Removing the requirement to provide physician roster Employer Identification Numbers and instead collect physician license numbers
- Removing the requirement to submit off-cycle updates; organizations will submit updated information in the following year's filing
- Reporting relationships that are in place as of a certain date (e.g., 1/1/2017), rather than reporting relationships that are accurate as of the date of filing
- Adding a reporting threshold to the Contracting Affiliations file that only requires a Provider Organization to report physician practices that include five or more physicians

Summary of Comments (Cont.)

Program staff has made the following changes to requirements:

- Added further guidance to the APM and Other Revenue file to address areas of confusion
- Technical edits to improve wording and add an applicable answer option to a question on provider-to-provider discount arrangements
- Clarified that Provider Organizations have the option to report contracting affiliates with fewer than 5 physicians

Program staff recommends no change to the following requirements:

- The eligibility criteria for abbreviated filings

Timing and Resources

- The MA-RPO program anticipates that the 2017 filing will be due on **July 31, 2017**
  - Stakeholders indicated a preference for annual filing materials to be due in the spring or summer
- Provider Organizations can use MA-RPO issued Microsoft Excel templates to complete new requirements
- Staff will host **group training sessions** throughout the state as well as **one-on-one meetings** with individual Provider Organizations
- The MA-RPO Program also anticipates releasing **Frequently Asked Questions** and additional guidance throughout the filing process

Next Steps

Anticipated 2017 Filing Timeline						
	February	March	April	May	June	July
Release Final DSM and any filing templates						
Online submission platform development with CHIA						
Training sessions and prep work with Provider Organizations						
One-on-one meetings						
Online submission platform open						
2017 filing materials due						★
*Dates are approximate.						

Contact Us

- The MA-RPO Program anticipates releasing the final DSM in the coming weeks.
- The DSM will be posted on the HPC's website and e-mailed to everyone on the program's listserv.
- Interested parties are welcome to reach out to staff at HPC-RPO@state.ma.us to learn more about the MA-RPO program!

MASSACHUSETTS
HEALTH POLICY COMMISSION

AGENDA

- Call to Order
- Approval of Minutes
- PCMH PRIME Update
- ACO Certification Operational Update
- Discussion of ACO Technical Assistance Strategy
- HPC Pilot on Pharmacological Treatment for Opioid Use Disorder in the Emergency Department
- Registration of Provider Organizations Update
- **Schedule of Next Meeting**

MASSACHUSETTS
HEALTH POLICY COMMISSION

Appendix

Key definitions and methods used in HPC analyses

Methods

To assess the impact of the opioid epidemic on the Massachusetts health care system, HPC examined the number of **opioid-related hospital discharges**.

To assess the availability of pharmacologic treatment, an evidence-based protocol that combines medication with behavioral therapies to treat individuals with opioid use disorder, the HPC examined the **location**, **geographic region**, and **patient travel distances** for all three types of pharmacologic treatment. For the purposes of this analysis, **pharmacologic treatment** includes outpatient methadone clinics, buprenorphine prescribers, and naltrexone providers.*

Definitions

Hospital discharges

Includes **inpatient discharges and emergency department visits**

- Some analyses include only **inpatient discharges** (e.g., stratification by gender, age, and income)

Opioid-related

Hospital discharges with a primary or secondary diagnosis related to abuse and/or misuse of prescription opioids and/or heroin**

- This set of diagnoses is broader than the set used to calculate DPH's previously published estimates of deaths averted (see appendix for ICD-9 codes used in each analysis)

Geographic regions

The HPC's standard regions, described in the HPC's Cost Trends Report***

Note: *Methadone data as of 11/20/2015; Buprenorphine data as of 11/5/2015; Naltrexone data received on 8/20/2015 - Naltrexone data only includes those providers who prescribed Vivitrol for 10 or more patients between July 2014 and June 2015

**Analysis adapted from AHRQ H-CUP methodology. See appendix for comparison of codes

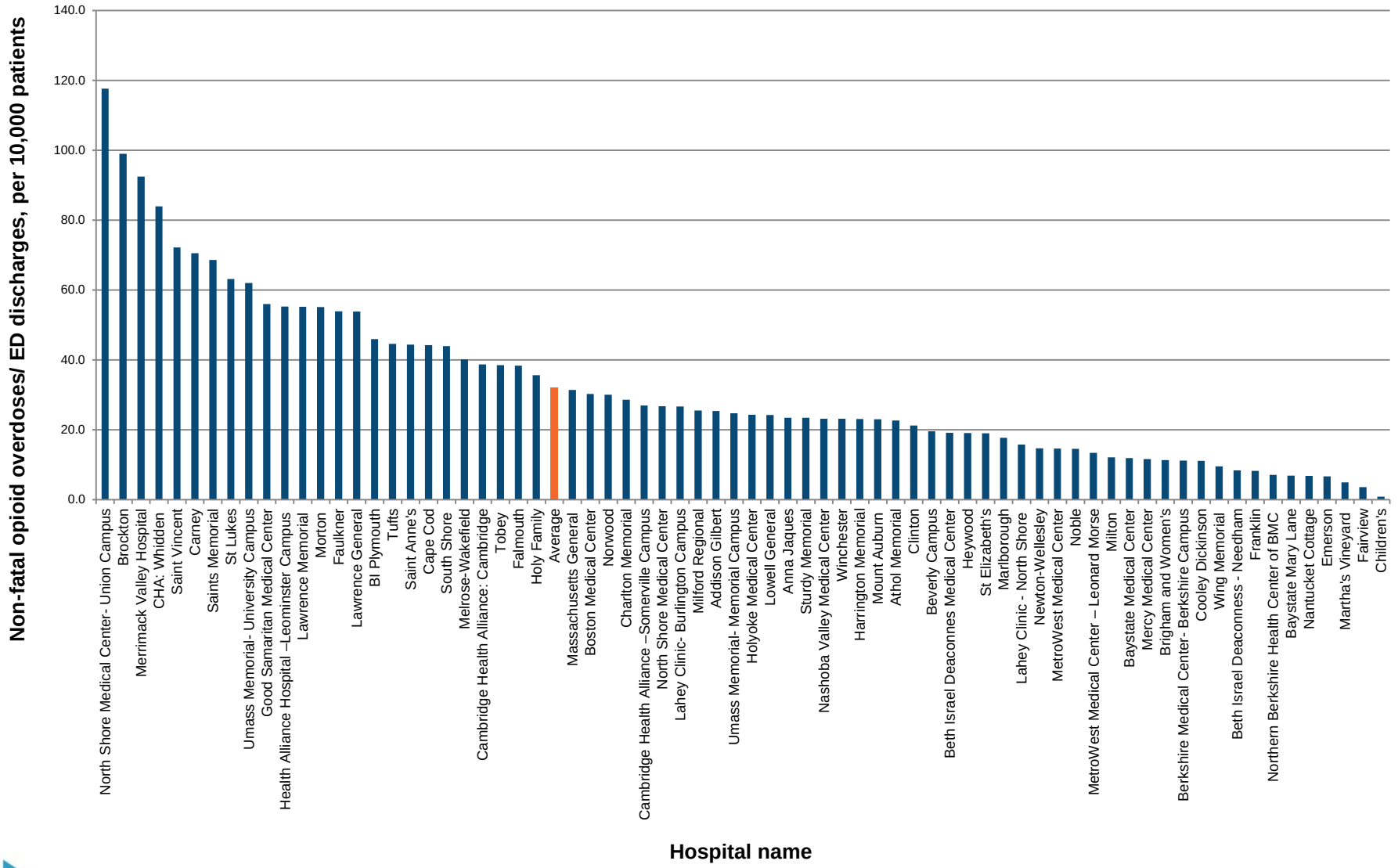
***For more information on the HPC's regions, please see http://www.mass.gov/anf/docs/hpc/2013-cost-trends-report-technical-appendix-b3-regions-of-massachusetts.pdf

HPC

Statutory authority for pilot on initiation of pharmacologic treatment of OUD in the ED: section 178 of Ch. 133 of the acts of 2016

The **health policy commission**, in **consultation with the department of public health**, shall implement a **2-year pilot program** to further **test a model of emergency department initiated medication-assisted treatment**, including but not limited to buprenorphine and naltrexone, for individuals suffering from substance use disorder. The program shall include referral to and connection with outpatient medication assisted treatment with the **goals of increasing rates of engagement and retention in evidence-based treatment.** The commission shall implement the program at no more than **3 sites in the commonwealth**, to be selected by the commission through a competitive process. Applicants shall demonstrate community need and the capacity to implement the integrated model aimed at providing care for individuals with substance use disorder who **present in the emergency setting** with symptoms of an overdose or after being administered naloxone. The commission shall consider evidence-based practices from successful programs implemented nationally in the development of the program. The commission may direct not more than **$3,000,000 from the Distressed Hospital Trust Fund** established in section 2GGGG of chapter 29 of the General Laws to fund the implementation of the program. The commission shall report to the joint committee on mental health and substance abuse and the house and senate committees on ways and means not later than 12 months following completion of the program on the results of the program, including effectiveness, efficiency and sustainability.

Non-fatal opioid overdoses by Massachusetts hospital



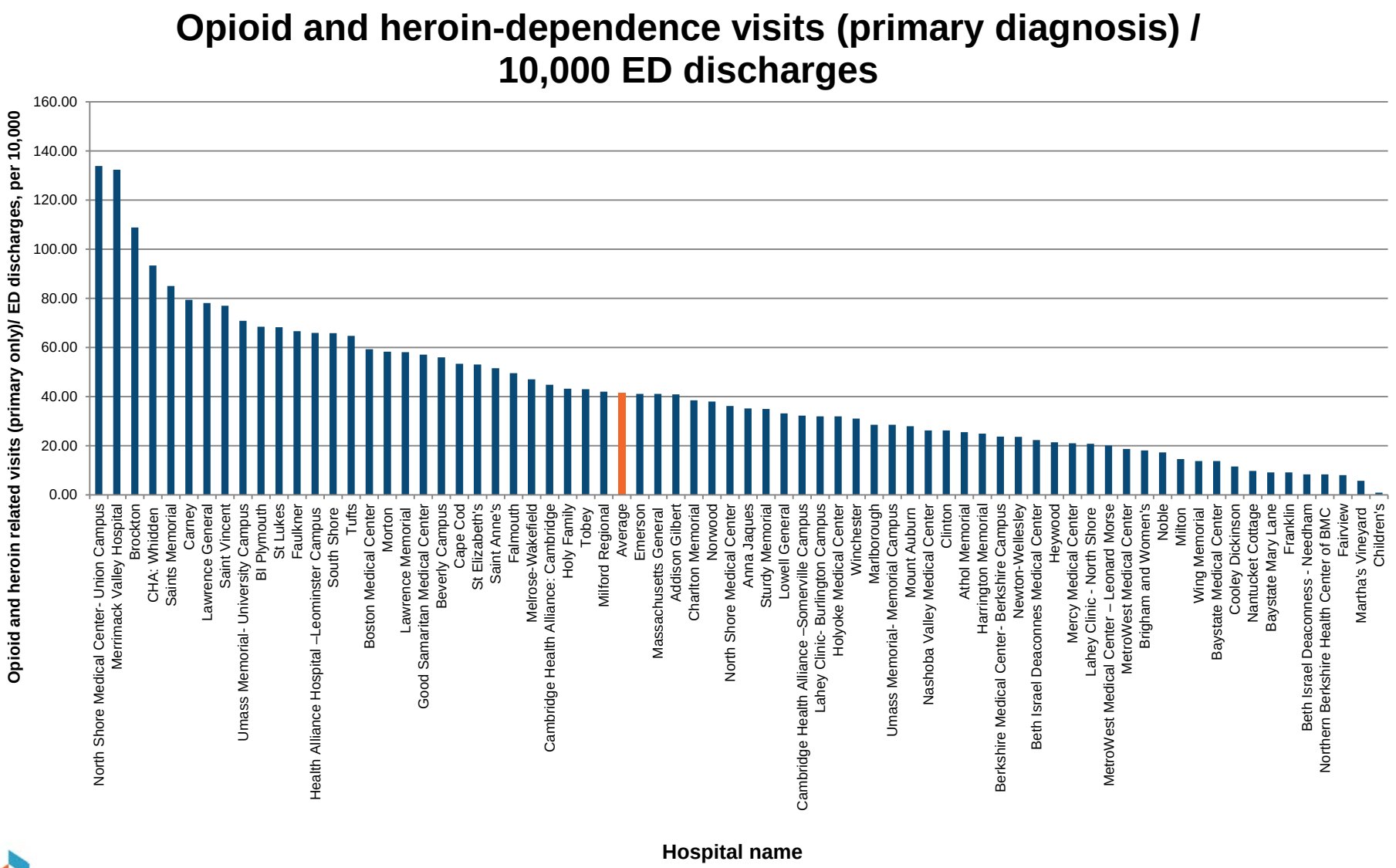
ICD 9 codes used to define non-fatal opioid overdoses

Category	Diagnoses included	Diagnoses
Non-fatal opioid overdoses*	965	Opium poisoning
	965.01	Heroin poisoning
	965.09	Poisoning by other opiates & related narcotics
	E850.2	Accidental poisoning by other opiates & related narcotics

*Methodology used by the Massachusetts Department of Public Health in "An Assessment of Opioid-Related Deaths in Massachusetts (2013-2014), published September 2016.

HPC

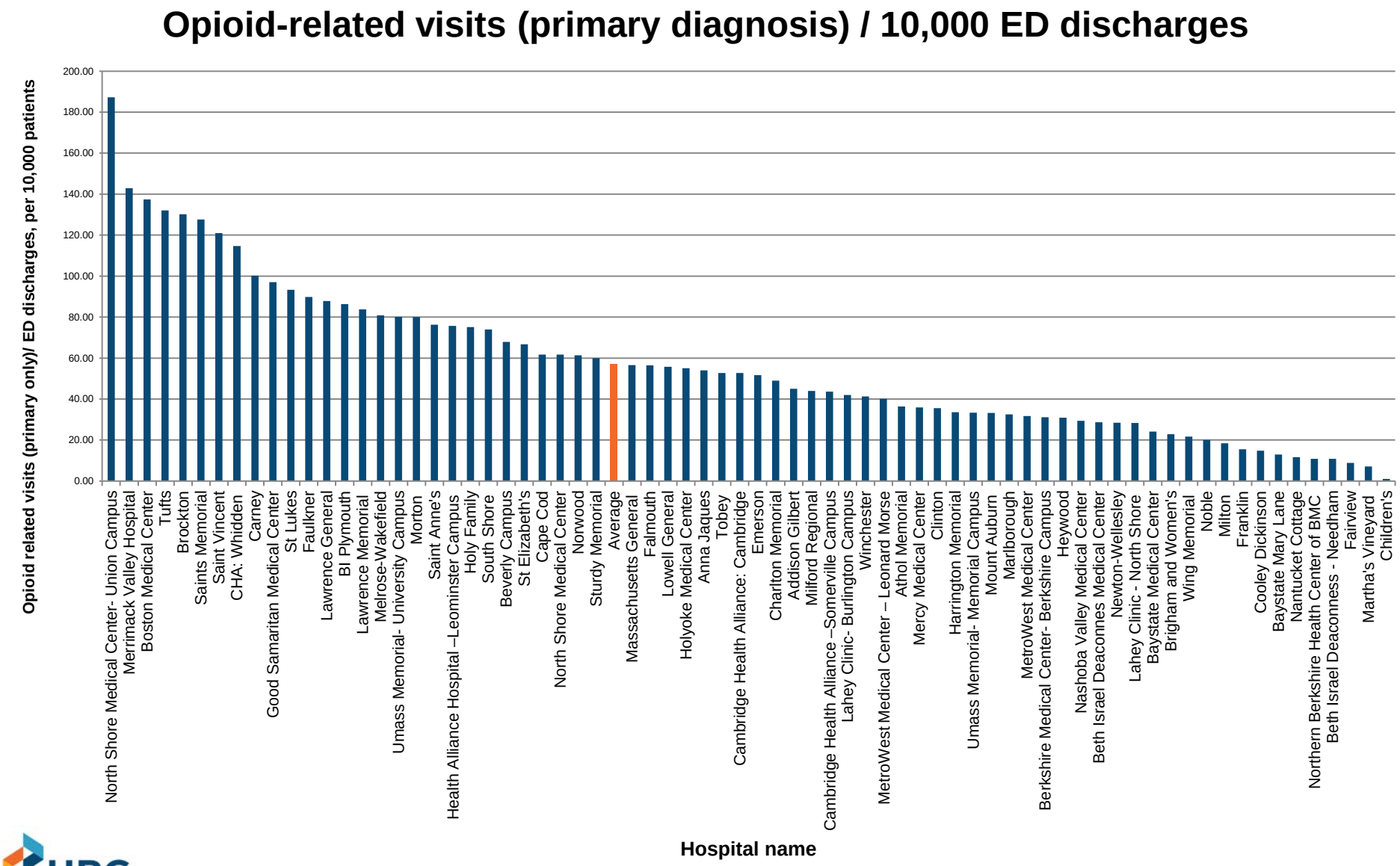
Opioid and heroin dependence visits by Massachusetts hospital



ICD-9 codes used to define opioid and heroin dependence

Category	Diagnoses included	Diagnoses
Opioid dependence ED visits (primary diagnosis only)	304.00-304.03	Opioid dependence
	965.09	Poisoning by heroin
	965.00	Opium poisoning
	E935.0	Heroin causing adverse effects
	304.7	Other opioid dependence – unspecified
	304.71	Other opioid dependence – continuous
	304.72	Other opioid dependence – episodic
	304.73	Opioid other dependence – in readmission

Opioid-related visits by Massachusetts hospital



ICD-9 codes used to define opioid related visits

Category	Diagnoses included	Diagnoses
Opioid related ED visits (primary diagnosis only)*	304	OPIOID DEPENDENCE-UNSPECIFIED
	304.01	OPIOID DEPENDENCE-CONTINUOUS
	304.02	OPIOID DEPENDENCE-EPISODIC
	304.03	OPIOID DEPENDENCE, IN REMISSION
	304.7	OPIOID OTHER DEP-UNSPECIFIED
	304.71	OPIOID OTHER DEP-CONTINUOUS
	304.72	OPIOID OTHER DEP-EPISODIC
	304.73	OPIOID OTHER DEP-IN REMISSION
	305.5	OPIOID ABUSE-UNSPECIFIED
	305.51	OPIOID ABUSE-CONTINUOUS
	305.52	OPIOID ABUSE-EPISODIC
	305.53	OPIOID ABUSE-IN REMISSION
	965	OPIUM POISONING
	965.01	HEROIN POISONING
	965.09	POISONING BY OTHER OPIATES AND RELATED NARCOTICS
	E850.0	ACCIDENTAL POISONING BY HEROIN
	E850.2	ACCIDENTAL POISONING BY OTHER OPIATES AND RELATED NARCOTICS
	E935.0	ADVERSE EFFECTS OF HEROIN
	E935.2	OTHER OPIATES AND RELATED NARCOTICS CAUSING ADVERSE EFFECTS IN THERAPEUTIC USE

*Methodology based on AHRQ H-CUP methodology. See http://www.ncbi.nlm.nih.gov/books/NBK246983/