



MA Center for Health Information & Analysis

Case Mix User Workgroup

May 24, 2016

Agenda



- Announcements:
 - [Slides from Previous Workgroups Now Posted](#)
 - [FY2015 Release Information](#)
 - [Overview of Revised Application Forms](#)
- Presentation: Acute Hospital Profiles – CHIA’s Health Analytics & Finance Team
- Q&A

User Group Slides Posted



[
<http://www.chiamass.gov/ma-apcd-and-case-mix-user-workgroup-information/>]

- Based on feedback, grouped by topic and not date of meeting
- Three categories:
 - ✓ Application Questions (“When do fees need to be paid?”)
 - ✓ Questions from Users – one PDF containing multiple questions (mostly short questions/answers with 1 or 2 slides each)
 - ✓ Tutorials – PDFs for each tutorial – hyperlink on the website will say what each tutorial is (Example: “How to Count Patients Admitted from the Emergency Dept. in the HDD file”)

Case Mix FY15 Release



- We are accepting applications for FY15 Case Mix data NOW
- Inpatient Data is scheduled to be ready for release on 6/30
 - Outpatient Observation ready in August
 - Emergency Department ready in September
- Apply for all files now and we will fulfill them as they become available.
- FY15 Case Mix data in LDS format
- FY04-FY14 available in old “Levels” format (can request on the same application form)
- FY15 Release Documentation will be posted next month

Case Mix Limited Dataset (LDS)



- Goal: Protect patient privacy
- Starting with FY2015
 - Applies to non-government users only; government users may request additional elements
 - Revised application form is available now
- Changes are not retroactive to prior years of data
- DUAs and Data Management Plans are still required
- No changes in fees

CHIA Methodology



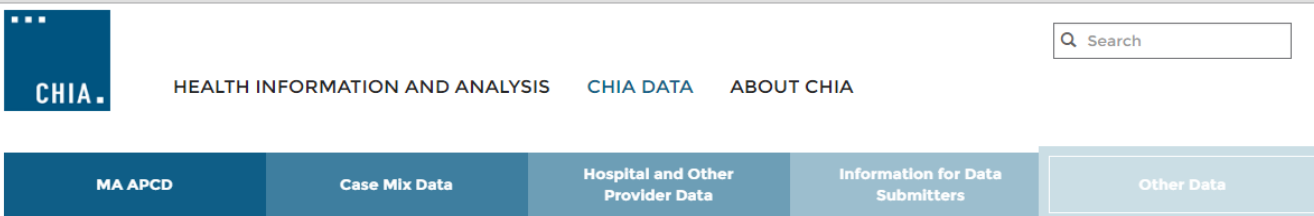
- Determined what must be excluded, including HIPAA-defined direct identifiers
- Investigated elements that potentially should be excluded due to patient privacy concerns (example: free text fields)
- Exclude certain quasi-identifiers, which make individuals unique in the population and thus could possibly be used for indirect re-identification
- Ended up with a “Core” LDS available to all applicants and offer “buy-up” options for date granularity, geographic granularity, and physician ID#

Revised Application Forms



Posted here:

<http://www.chiamass.gov/case-mix-application-documents/>



[CHIA Data](#) » [Case Mix Application Documents](#)

Case Mix Application Documents

Case Mix Fee Schedule Update

- [Administrative Bulletin 15-07: 957 CMR 5:00: Health Care Claims, Case Mix and Charge Data Release Procedures \(PDF\) | Word \(Effective June 1, 2015\)](#)

Application Materials for Government Entities Requesting Case Mix Data:

- [Case Mix Application Form – Government Entities \(PDF\) | Word](#)
- [Governmental Entity Data Use Agreement \(PDF\) | Word](#)

Application Materials for Non-Government Entities Requesting Case Mix Data:

- [Fee Remittance or Fee Waiver Request Form \(PDF\) | Word](#)
- [Case Mix Request Form: Non-Government \(PDF\) | Word](#)
- [Data Management Plan with Minimum Security Requirements \(PDF\) | Word](#)
- [Data Use Agreement \(PDF\) | Word](#)

PLEASE NOTE: [Important Information for Non-Governmental Requests for APCD and Case Mix Data \(PDF\) | Word](#)

Note: APCD application documents are located [here](#).

Revised Data Management Plan

CHIA.

Posted here:

<http://www.chiamass.gov/assets/Uploads/data-apps/Data-Management-Plan-for-Non-Government-Entities.docx>

Commonwealth of Massachusetts
Center for Health Information & Analysis (CHIA)
Data Management Plan for Non-Government Entities

DATA MANAGEMENT PLAN

Any Applicants, contractors, or agents receiving CHIA data that includes Protected Health Information ("PHI" as defined under the Health Information and Portability Act [HIPAA] and its implementing regulations) as well as additional elements that may be used to identify an individual (the "Data") must complete and execute this Data Management Plan. The Data Management Plan(s) will be incorporated within the [Data Use Agreement](#) that must be executed prior to receipt of the Data. You may wish to refer to the Data Use Agreement as you complete this Data Management Plan. This Data Management Plan should be completed by the Chief Information Security Officer, Chief Privacy Officer, legal counsel or another officer of the organization with sufficient knowledge of the organization's data privacy and security practices and who has authority to bind the organization.

NOTE: This Data Management Plan is confidential and will not become a part of the public record.

I. GENERAL INFORMATION

Project Title: <small>(should appear the same as on the Data Application)</small>	
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II. CERTIFICATIONS

Applicant certifies and agrees as follows:

- The Data will be **encrypted at rest with at least AES-256 standard or stronger.**
- The Data will be **encrypted in transit consistent with the approved method described in this Data Management plan at section IV.3-b.**
- Anti-virus software or service is active on any server or endpoint containing the Data
- The Organization is in full compliance with the privacy and security requirements of HIPAA
- The Organization has policies and procedures in place to address:
 - The sharing, transmission and distribution of PHI
 - The physical removal, transport and transmission of PHI
 - The physical possession and storage of PHI
 - The training of all staff who will access PHI on the requirements of HIPAA
 - The destruction of PHI upon the completion of its use.
 - Confidentiality agreements with all individuals, including contractors, who will access PHI
 - Business Associate Agreements with all non- employees who will access PHI

III. RESPONSIBLE PARTIES

Please identify the following individuals within your organization:

1. The individual responsible for organizing, storing and archiving the Data. This individual is the Custodian of the CHIA



QUESTIONS?

ACUTE HOSPITAL PROFILES

HEALTH ANALYTICS AND FINANCE (HAF)

Case Mix User Workgroup | May 2016



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Acute Hospital Profiles



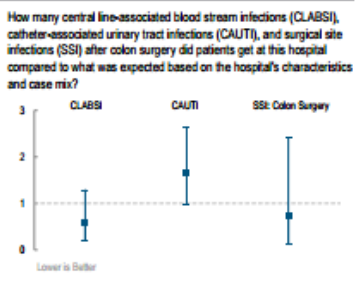
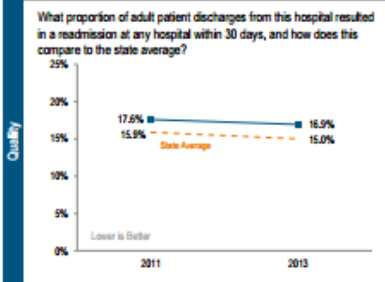
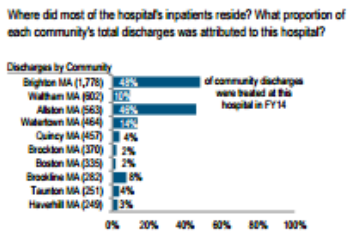
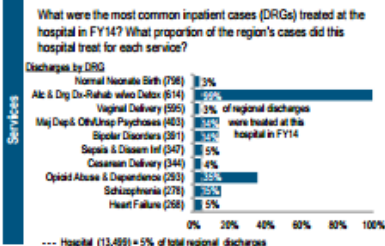
STEWARD ST. ELIZABETH'S MEDICAL CENTER

2014 Hospital Profile

Brighton, MA
Teaching Hospital
Metro Boston

Steward St. Elizabeth's Medical Center is a large, for-profit teaching hospital located in the Metro Boston region. Steward St. Elizabeth's is a member of Steward Health Care System, and it also qualifies as a Disproportionate Share Hospital (DSH). Outpatient revenue at the hospital decreased 53.9% between FY10 and FY14, compared to a median 14.7% increase in its cohort. St. Elizabeth's was profitable three of the five years in the FY10 to FY14 period, and had a total margin of 5.5% in FY14, compared to a median of 8.2% among cohort hospitals.

Overview / Size		Payer Mix	
Hospital System Affiliation:	Steward Health Care System	Public Payer Mix:	65.4% (DSH* Hospital)
Change in Ownership (FY10-FY14):	Steward Health Care - 2010	CY14 Commercial Payer Price Level:	58th Percentile
Total Staffed Beds:	262, among the larger acute hospitals	Top 3 Commercial Payers:	Blue Cross Blue Shield of Massachusetts Tufts Associated Health Maintenance Org. Harvard Pilgrim Health Care
% Occupancy:	68.5%, < cohort avg. (73%)		
Special Public Funding:	ICB*		
Trauma Center Designation:	Not Applicable		
Case Mix Index:	1.11, > cohort avg. (0.99); > statewide (1.00)		
Financial		Utilization	
Adjusted ⁷ Cost per Discharge:	\$11,147	Inpatient Discharges in FY14:	13,499
Inpatient NPSR per CMAD:	\$12,949	Change FY13-FY14:	3.4%
Change FY13-FY14:	1.5%	Emergency Department Visits in FY14:	31,105
Inpatient/Outpatient Revenue in FY14:	50%/50%	Change FY13-FY14:	-4.9%
Outpatient Revenue in FY14:	\$105,167,937	Outpatient Visits in FY14:	193,013
Change FY13-FY14:	-6.4%	Change FY13-FY14:	20.5%
Total Revenue in FY14:	\$312,328,863		
Total Surplus (Loss) in FY14:	\$17,055,211		
		Quality	
		Readmission Rate in FY13:	16.9%
		Change FY11-FY13 (percentage points):	-0.7%
		Early Elective Deliveries Rate (Jan 2014-Jun 2015):	0.9%



For descriptions of the metrics, please see the technical appendix.

- Uses various CHIA data resources to “profile” each acute hospital (n= 65)
- Utilization, services, quality, revenue trends and financial performance are all included
- Published annually

Acute Hospital Profiles: Case Mix uses

- Case Mix data was aggregated at the organization level
 - **Case Mix Index (CMI) and Case Mix Adjusted Discharges (CMAD)**
 - **Readmissions**
 - **Top DRGs:** Most frequently seen inpatient cases
 - **Top Communities:** Where a hospital draws its patients
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Acute Hospital Profiles: Case Mix uses



- CMI – APR DRG v.30; MA specific weights
 - CMADs – Multiplied CMI to the hospital's discharges as reported in their hospital cost report.
 - Gives an idea of “apples to apples” discharges
 - Cost report discharges used for consistency
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Acute Hospital Profiles: Case Mix uses

Most Frequent DRGs

IdOrgHosp	aprdrg30	Hospital	DRG_Hosp_Discharges	drg_rank	Regions_Discharges	DRG_Regions_Discharges	Hosp_Discharges	PercentofRegion	Abbreviated_Description
1	640	Anna Jaques Hospital	682	1	138663	11107	7594	0.0614027	Neonate birthwt >2499g, normal newborn or neonate w other problem
1	753	Anna Jaques Hospital	538	2	138663	2914	7594	0.1846259	Bipolar disorders
1	560	Anna Jaques Hospital	507	3	138663	7770	7594	0.065251	Vaginal delivery
1	751	Anna Jaques Hospital	460	4	138663	2236	7594	0.2057245	Major depressive disorders & other/unspecified psychoses
1	139	Anna Jaques Hospital	289	5	138663	3999	7594	0.0722681	Other pneumonia
1	140	Anna Jaques Hospital	268	6	138663	3487	7594	0.0768569	Chronic obstructive pulmonary disease
1	540	Anna Jaques Hospital	209	7	138663	3978	7594	0.052539	Cesarean delivery

- Used SAS to pull DRG codes with highest number of discharges at each hospital, ranked in ascending order
- Also tallied percentage of region each DRG represented
- Total hospital discharges compared to region total



Acute Hospital Profiles: Case Mix uses

Top Communities

IdOrgHosp	primary_city	hosp_city_Discharges	TownandState	Tot_Hosp_Discharges	zip_rank	zip_Discharges	hosp_city_Pct	Zip_hosp_pct
1	Newburyport	1315	NewburyportMA	7594	1	2040	0.173163	0.6446078
1	Amesbury	1295	AmesburyMA	7594	2	2049	0.1705294	0.6320156
1	Haverhill	1035	HaverhillMA	7594	3	8569	0.1362918	0.1207842
1	Salisbury	756	SalisburyMA	7594	4	1191	0.0995523	0.6347607
1	Merrimac	319	MerrimacMA	7594	5	686	0.0420068	0.4650146

- Cross-walked zip codes to community names using U.S. Postal Service data
 - Calculated what percentage of the hospital's discharges came from each community
 - Also looked at what percentage of each community were discharged from each acute hospital
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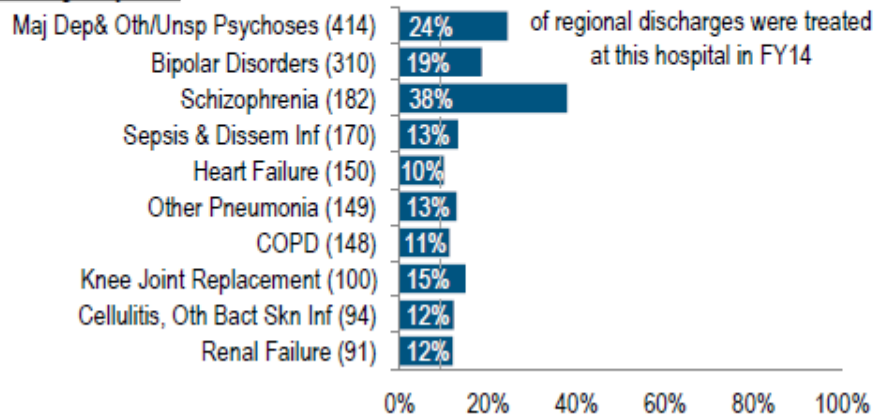
Challenges:

- Discrepancies between Case Mix and other data sources
 - Varying DRG code use
 - e.g., Athol had 100% of Central MA's rehab discharges
 - Hospital Mergers
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Questions?

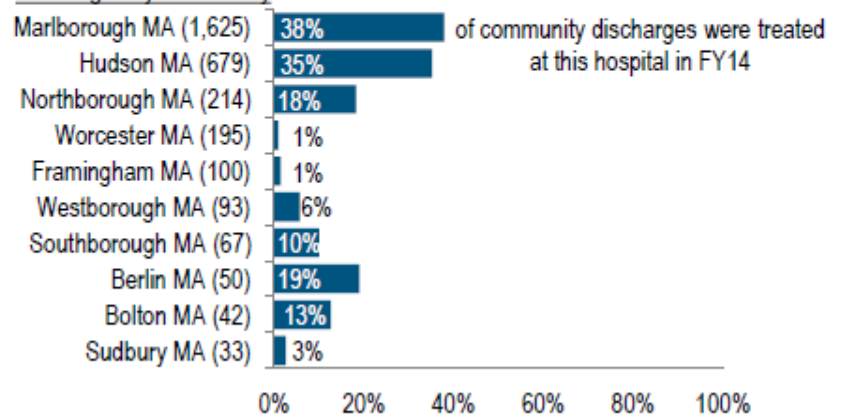
What were the most common inpatient cases (DRGs) treated at the hospital in FY14? What proportion of the region's cases did this hospital treat for each service?

Discharges by DRG



Where did most of the hospital's inpatients reside? What proportion of each community's total discharges was attributed to this hospital?

Discharges by Community



Questions?



- Questions related to APCD :
(apcd.data@state.ma.us)
- Questions related to Case Mix:
(casemix.data@state.ma.us)

REMINDER: Please include your **IRBNet ID#**, if you currently have a project using CHIA data

Call for Topics and Presenters



If there is a **TOPIC** that you would like to see discussed at an MA APCD or Case Mix workgroup, contact Adam Tapply [adam.tapply@state.ma.us]

If you are interested in **PRESENTING** at an MA APCD or Case Mix workgroup, contact Adam Tapply [adam.tapply@state.ma.us]

You can present remotely from your own office, or in-person at CHIA.