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**Impact of A.I. and CDI Workflow Approaches to
Benefit Provider Reputation Through Real-Time
Capture of Patient Quality Outcomes**

ACDIS Virtual Meeting
February 2022

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2. Physician Reputation
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Over 40% of millennials look for healthcare online

There are over 100 Social media sites that people access and talk about things

53% of providers looked at physician review websites, likely to understand their patients' experiences and to improve their practices.-[Journal of General Internal Medicine](#)



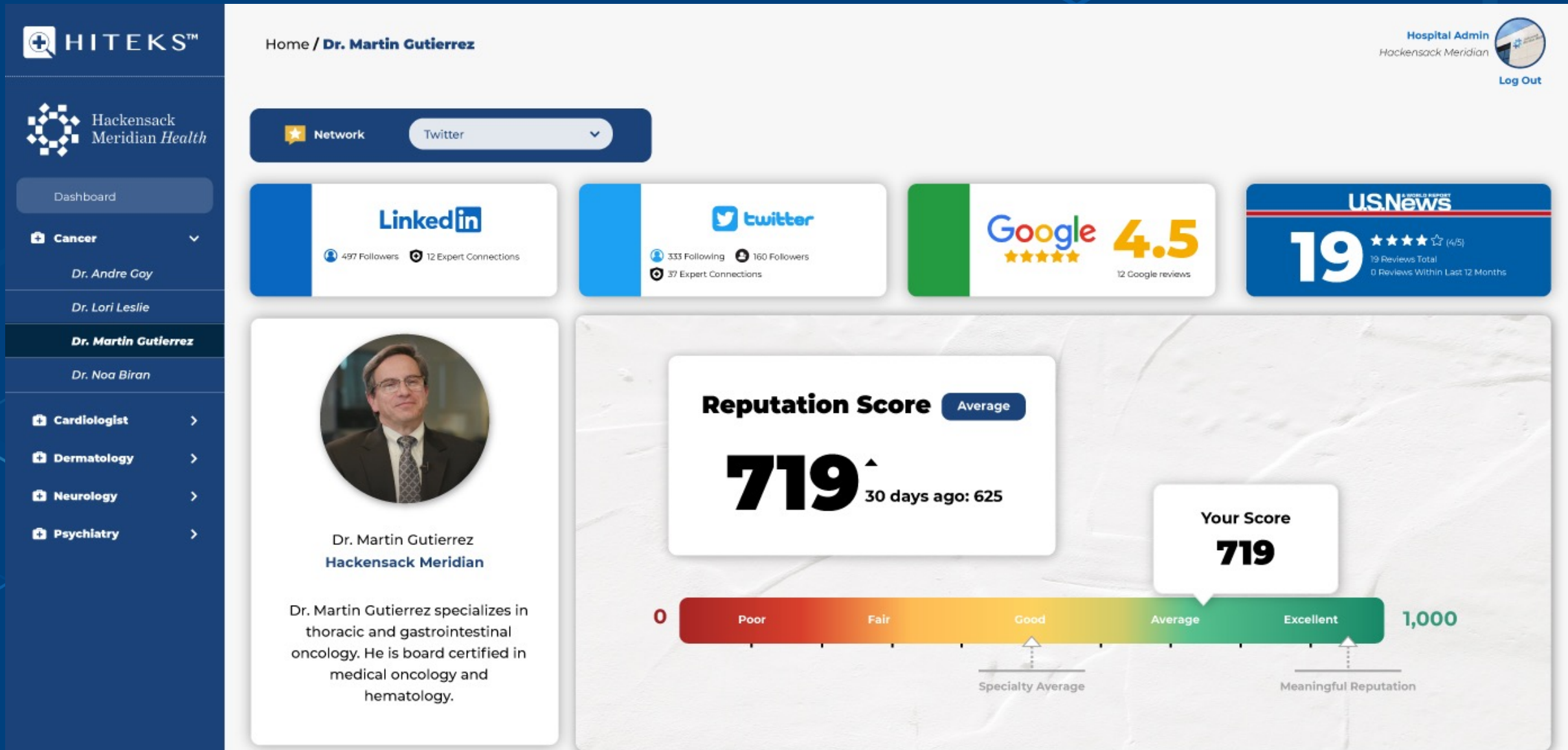
Perceptions are built over 80 % trust online

New Doctor search Starts on-line via social media and friends and Family Coworkers 77 Percent

Nearly (47%) would go out-of-network for a doctor who has similar qualifications to an in-network doctor but has more favorable reviews.- Software Advice

The World is Social, Especially Healthcare

Provider Reputation: Social & Data Components





- The primary outcomes measure in the 12 data-driven rankings is 30-day patient survival (i.e., how many patients are alive at 30 days after inpatient hospital admission).
 - Like the volume indicator, the mortality measure is derived from Medicare Standard Analytic File (SAF) data, *so only patients receiving care under traditional Medicare and 65 years of age or older were included.*
- For each hospital and specialty, U.S. News computed an adjusted mortality rate based for the group of DRGs for specialty

Along with D/C status to home, 30-day mortality comprises 37.5% of the overall score

USNWR Best Hospital Rankings

Best Hospitals 2020-21: Cancer		U.S. News Specialty Score	30-day survival	Discharging patients to home	Patient experience	Number of patients	Nurse staffing	ICU Specialists	Advanced technologies	Patient services	Recognized as Nurse Magnet hospital	NCI-designated cancer center	Accredited by FACT	Expert opinion	Current AHA responder
Rank	Hospital														
1	University of Texas MD Anderson Cancer Center, Houston	100.0	5	5	5	11,321	1.8	Yes	8	8	1	Yes	2	42.9	Yes
2	Memorial Sloan Kettering Cancer Center, New York	82.7	5	5	5	6,241	2.2	Yes	8	8	1	Yes	2	41.7	Yes
3	Mayo Clinic, Rochester, Minn.	77.0	5	5	5	4,108	2.7	Yes	8	8	1	Yes	2	17.5	Yes
4	Johns Hopkins Hospital, Baltimore	73.1	5	5	5	2,415	2.2	Yes	8	8	1	Yes	2	15.1	Yes
5	Cleveland Clinic	72.8	5	5	5	2,972	2.3	Yes	8	8	1	Yes	2	7.0	Yes
6	Dana-Farber/Brigham and Women's Cancer Center, Boston	72.3	5	5	5	4,004	2.2	Yes	8	8	1	Yes	2	22.9	Yes
7	Cedars-Sinai Medical Center, Los Angeles	70.1	5	5	4	2,096	2.7	Yes	8	8	1	No	2	1.2	Yes
8	Northwestern Memorial Hospital, Chicago	69.1	5	5	4	2,306	1.9	Yes	8	8	1	Yes	2	2.0	Yes
9	Seattle Cancer Care Alliance/University of Washington Medical Center	66.9	5	5	5	1,838	2.2	Yes	8	8	1	Yes	2	6.4	Yes
10	UCSF Medical Center, San Francisco	64.9	5	5	5	2,269	2.6	Yes	8	8	1	Yes	2	3.8	Yes
11	H. Lee Moffitt Cancer Center and Research Institute, Tampa	64.5	5	5	5	2,530	1.3	Yes	8	7	1	Yes	2	6.8	Yes
11	Siteman Cancer Center, Saint Louis	64.5	5	5	3	3,946	2.4	Yes	8	8	1	Yes	2	3.6	Yes
13	UCLA Medical Center, Los Angeles	63.8	5	5	5	1,894	3.2	Yes	8	8	1	Yes	2	4.7	Yes
14	Roswell Park Comprehensive Cancer Center, Buffalo	63.7	5	5	5	1,401	1.8	Yes	8	8	0	Yes	2	2.4	Yes
15	City of Hope Helford Clinical Research Hospital, Duarte, Calif.	63.5	5	5	5	3,230	2.4	Yes	8	8	0	Yes	2	5.0	Yes
15	UPMC Presbyterian Shadyside, Pittsburgh	63.5	5	5	4	4,065	2.2	Yes	8	8	1	Yes	2	4.0	Yes
17	Houston Methodist Hospital	63.2	5	5	4	1,740	2.0	Yes	8	8	1	No	2	0.3	Yes
18	Massachusetts General Hospital, Boston	63.0	5	5	5	3,631	2.4	Yes	8	8	1	Yes	2	10.0	Yes
19	NYU Langone Hospitals, New York, N.Y.	62.3	5	5	3	1,913	2.5	Yes	8	8	1	Yes	2	2.7	Yes
20	New York-Presbyterian Hospital-Columbia and Cornell, N.Y.	62.2	5	5	4	5,518	2.9	Yes	8	8	1	Yes	2	3.1	Yes
21	Hospitals of the University of Pennsylvania-Penn Presbyterian, Philadelphia	62.1	5	5	4	3,408	2.6	Yes	8	8	1	Yes	2	5.4	Yes
21	Stanford Health Care-Stanford Hospital, Palo Alto, Calif.	62.1	5	5	4	2,249	2.7	Yes	8	8	1	Yes	2	5.5	Yes
23	Mayo Clinic-Phoenix	61.4	5	5	5	1,467	3.1	Yes	8	8	1	Yes	2	2.3	Yes
24	University of Chicago Medical Center	60.0	5	5	4	2,133	2.3	Yes	8	8	1	Yes	2	3.2	Yes
25	University of Alabama at Birmingham Hospital	59.8	5	5	4	2,199	2.1	Yes	8	8	1	Yes	2	0.7	Yes
26	USC Norris Cancer Hospital-Keck Medical Center of USC, Los Angeles	59.7	5	5	4	1,192	3.2	Yes	8	8	1	Yes	2	1.1	Yes
27	Dan L Duncan Comprehensive Cancer Ctr. at Baylor St. Luke's Med. Ctr., Houston	59.4	5	5	3	816	1.8	Yes	7	8	1	Yes	0	0.3	Yes
28	Jefferson Health-Thomas Jefferson University Hospitals, Philadelphia	59.0	5	5	3	1,918	2.2	Yes	8	8	1	Yes	2	1.2	Yes
29	University of Kentucky Albert B. Chandler Hospital, Lexington	58.4	5	5	4	1,306	1.9	Yes	8	8	1	Yes	2	1.1	Yes
30	Ohio State University James Cancer Hospital, Columbus	58.3	5	5	5	3,897	2.2	Yes	8	7	1	Yes	2	4.7	Yes
31	Beth Israel Deaconess Medical Center, Boston	58.0	5	5	4	1,909	1.4	Yes	8	8	0	Yes	2	2.8	Yes
32	UT Southwestern Medical Center, Dallas	57.8	5	5	4	1,781	2.0	Yes	8	8	1	Yes	2	1.4	Yes
33	UF Health Shands Hospital, Gainesville, Fla.	57.6	5	5	4	1,717	2.0	Yes	8	8	1	No	2	1.3	Yes
34	Nebraska Medicine-Nebraska Medical Center, Omaha	57.5	5	5	4	1,165	2.0	Yes	8	8	1	Yes	2	0.5	Yes
35	University of Maryland Medical Center, Baltimore	57.0	5	5	3	1,007	2.8	Yes	8	8	1	Yes	2	0.8	Yes
36	UC Davis Medical Center, Sacramento, Calif.	56.9	5	5	4	1,454	2.6	Yes	8	8	1	Yes	2	0.9	Yes
37	University Hospitals Seidman Cancer Center, Cleveland	56.7	5	4	3	1,933	2.5	Yes	8	8	1	Yes	2	0.6	Yes
38	University of Michigan Hospitals-Michigan Medicine, Ann Arbor	56.1	5	5	5	2,626	2.8	Yes	8	8	1	Yes	2	3.4	Yes
39	MUSC Health-University Medical Center, Charleston, S.C.	55.4	5	5	4	1,431	2.0	Yes	8	8	1	Yes	2	0.5	Yes
40	Emory University Hospital, Atlanta	55.1	5	5	4	2,118	2.2	Yes	8	8	1	Yes	2	1.8	Yes
41	Duke University Hospital, Durham, N.C.	54.7	5	5	4	2,712	2.1	Yes	8	8	1	Yes	2	5.0	Yes
41	Huntsman Cancer Institute at the University of Utah, Salt Lake City	54.7	5	5	5	1,188	2.2	Yes	8	8	0	Yes	2	0.9	Yes
41	University of Iowa Hospitals and Clinics, Iowa City	54.7	5	5	3	1,777	1.9	Yes	8	8	1	Yes	2	0.7	Yes
44	UCHealth University of Colorado Hospital, Aurora	54.0	5	5	4	1,488	2.0	Yes	8	8	1	Yes	2	1.4	Yes
45	Mayo Clinic-Jacksonville, Fla.	53.3	5	5	5	1,115	2.9	Yes	8	8	1	Yes	2	2.3	Yes
46	Montefiore Medical Center, Bronx, N.Y.	53.1	5	5	2	2,695	2.4	Yes	8	8	0	Yes	2	0.4	Yes
47	UC San Diego Health-Moores Cancer Center	52.8	5	5	4	1,226	2.0	Yes	8	8	1	Yes	2	1.7	Yes
48	Rush University Medical Center, Chicago	52.5	5	5	4	1,625	2.1	Yes	8	8	1	No	2	0.4	Yes
49	Mount Sinai Hospital, New York	52.1	5	5	3	2,468	2.2	Yes	8	8	1	Yes	2	1.1	Yes
50	Levine Cancer Institute, Charlotte, N.C.	51.8	5	5	3	2,051	1.8	Yes	8	8	1	No	2	1.4	Yes

- The Best Hospitals specialty rankings assess hospital performance in 16 specialties or specialty areas, from Cancer to Urology.
 - In 12 of these, whether and how high a hospital is ranked is determined by an extensive data-driven analysis combining performance measures in three primary dimensions of healthcare: structure, process, and outcomes. These specialties are:

• Cancer	• Neurology & Neurosurgery
• Cardiology & Heart Surgery	• Ophthalmology
• Diabetes & Endocrinology	• Orthopedics
• Ear, Nose & Throat	• Pulmonology & Lung Surgery
• Gastroenterology & GI Surgery	• Psychiatry
• Geriatrics	• Rehabilitation
• Gynecology	• Rheumatology
• Nephrology	• Urology

Risk Adjustment

- What can health systems control?
 - Accurate ICD-10-CM-PCS documentation, coding and sequencing
 - Awareness of Elixhauser model
 - Admission nature and source and discharge status reporting accuracy

Risk-adjustment variables	Description
Patient age at admission	Patient age as a linear variable
DRG roll-up	Rolled up DRG groups that includes the variations w MCC, w CC, and w/o CC/MCC for medical and surgical treatment covered by the project (as shown in the tables in Appendix C).
Sex	Male or female
Year of hospital admission	Quality of care tends to improve over time. This means the risk of adverse outcomes is less year to year. For that reason, year of admission is included as a risk factor.
Elixhauser comorbidities	We controlled for the comorbidities identified by Elixhauser et al as being predictive of mortality.
Medicare status code	The reason or reasons why the patient is eligible for Medicare: age, or age plus end-stage renal failure. This is a proxy for comorbidities.
Socioeconomic status	Patients with lower incomes are typically sicker when they arrive at the hospital and may face more challenges in obtaining or managing their care after they are discharged. This can affect their risk of death, readmission and complications. When hospitals differ by the socioeconomic status of their patients, this can create bias in comparing outcomes. Our risk models include "dual eligibility" as a measure of socioeconomic background. Patients who are eligible for both Medicare and Medicaid are treated as a separate risk group.
Source of admission.	In the discharge to home outcome measure, we controlled for whether a patient came from a skilled nursing facility.

US News and World Report Cancer Service Line – Elixhauser Capture

Hospital Name	City	ST	CHRT	DC Vol	CM Capture Avg	Cases ≥ 4 CM Avg	Elix Mort Score Avg
NEW YORK-PRESBYTERIAN BROOKLYN METHODIST HOSPITAL	Brooklyn	NY	01	401	4.84	73.31%	24.44
NEW YORK-PRESBYTERIAN HOSPITAL	New York	NY	01	1,580	4.02	58.35%	22.59
STATEN ISLAND UNIVERSITY HOSPITAL	Staten Island	NY	01	418	4.05	58.13%	21.58
NORTH SHORE UNIVERSITY HOSPITAL	Manhasset	NY	01	673	3.71	51.56%	21.27
KALEIDA HEALTH	Buffalo	NY	01	465	4.09	59.56%	20.68
BAYSTATE MEDICAL CENTER	Springfield	MA	01	408	4.20	61.02%	20.45
NYU LANGONE HOSPITALS	New York	NY	01	995	3.85	55.67%	19.78
MONTEFIORE MEDICAL CENTER	Bronx	NY	01	881	4.35	62.65%	19.73
BRIGHAM AND WOMEN'S HOSPITAL	Boston	MA	01	1,120	3.46	45.17%	19.57
ALBANY MEDICAL CENTER HOSPITAL	Albany	NY	01	428	3.73	48.36%	19.31
MOUNT SINAI HOSPITAL	New York	NY	01	820	3.64	48.17%	19.04
RHODE ISLAND HOSPITAL	Providence	RI	01	415	3.89	52.04%	18.97
BETH ISRAEL DEACONESS MEDICAL CENTER	Boston	MA	01	666	3.69	49.09%	18.58
HARTFORD HOSPITAL	Hartford	CT	01	451	3.88	52.99%	17.80
UNIVERSITY HOSPITAL S U N Y HEALTH SCIENCE CENTER	Syracuse	NY	01	467	3.66	48.82%	16.68
STRONG MEMORIAL HOSPITAL	Rochester	NY	01	614	3.38	43.81%	16.56
LONG ISLAND JEWISH MEDICAL CENTER	New Hyde Park	NY	01	791	3.38	43.99%	16.45
YALE-NEW HAVEN HOSPITAL	New Haven	CT	01	1,018	3.83	53.83%	16.20
MASSACHUSETTS GENERAL HOSPITAL	Boston	MA	01	1,125	3.62	48.08%	15.73

Metastatic to Solid Cancer Ratio

Cancer Service Line – METS/SOLID CA Ratio

Hospital Name	City	ST	CHRT	CANCER_METS	CANCER_SOLID	Mets/Solid Ratio
STATEN ISLAND UNIVERSITY HOSPITAL	Staten Island	NY	01	40.19%	8.37%	4.80
KALEIDA HEALTH	Buffalo	NY	01	37.41%	8.17%	4.58
BAYSTATE MEDICAL CENTER	Springfield	MA	01	37.74%	8.33%	4.53
BETH ISRAEL DEACONESS MEDICAL CENTER	Boston	MA	01	32.73%	7.50%	4.36
STRONG MEMORIAL HOSPITAL	Rochester	NY	01	28.99%	7.00%	4.14
NYU LANGONE HOSPITALS	New York	NY	01	35.37%	8.94%	3.96
UNIVERSITY HOSPITAL S U N Y HEALTH SCIENCE CENTER	Syracuse	NY	01	39.40%	10.06%	3.92
MONTEFIORE MEDICAL CENTER	Bronx	NY	01	35.18%	9.53%	3.69
LONG ISLAND JEWISH MEDICAL CENTER	New Hyde Park	NY	01	29.70%	8.34%	3.56
MOUNT SINAI HOSPITAL	New York	NY	01	25.97%	7.80%	3.33
BRIGHAM AND WOMEN'S HOSPITAL	Boston	MA	01	35.44%	10.71%	3.31
NORTH SHORE UNIVERSITY HOSPITAL	Manhasset	NY	01	28.38%	8.61%	3.30
NEW YORK-PRESBYTERIAN HOSPITAL	New York	NY	01	31.20%	9.55%	3.27
NEW YORK-PRESBYTERIAN BROOKLYN METHODIST HOSPITAL	Brooklyn	NY	01	35.41%	11.47%	3.09
ALBANY MEDICAL CENTER HOSPITAL	Albany	NY	01	26.63%	8.87%	3.00
HARTFORD HOSPITAL	Hartford	CT	01	32.15%	10.86%	2.96
YALE-NEW HAVEN HOSPITAL	New Haven	CT	01	27.89%	9.62%	2.90
RHODE ISLAND HOSPITAL	Providence	RI	01	26.50%	10.60%	2.50
MASSACHUSETTS GENERAL HOSPITAL	Boston	MA	01	29.06%	11.91%	2.44

“Other” Neurology – Very High Weighted Cancer Service Line

Hospital Name	City	ST	CHRT	NEURO_OTH	NEURO_OTH - 20th	NEURO_OTH - 50th	NEURO_OTH - 80th
RHODE ISLAND HOSPITAL	Providence	RI	01	21.68%	7.74%	11.11%	15.55%
ALBANY MEDICAL CENTER HOSPITAL	Albany	NY	01	21.49%	7.74%	11.11%	15.55%
KALEIDA HEALTH	Buffalo	NY	01	18.27%	7.74%	11.11%	15.55%
BAYSTATE MEDICAL CENTER	Springfield	MA	01	16.17%	7.74%	11.11%	15.55%
NEW YORK-PRESBYTERIAN BROOKLYN METHODIST HOSPITAL	Brooklyn	NY	01	13.46%	7.74%	11.11%	15.55%
STATEN ISLAND UNIVERSITY HOSPITAL	Staten Island	NY	01	12.91%	7.74%	11.11%	15.55%
UNIVERSITY HOSPITAL S U N Y HEALTH SCIENCE CENTER	Syracuse	NY	01	12.41%	7.74%	11.11%	15.55%
NYU LANGONE HOSPITALS	New York	NY	01	12.26%	7.74%	11.11%	15.55%
HARTFORD HOSPITAL	Hartford	CT	01	12.19%	7.74%	11.11%	15.55%
STRONG MEMORIAL HOSPITAL	Rochester	NY	01	11.88%	7.74%	11.11%	15.55%
NORTH SHORE UNIVERSITY HOSPITAL	Manhasset	NY	01	11.58%	7.74%	11.11%	15.55%
BRIGHAM AND WOMEN'S HOSPITAL	Boston	MA	01	11.51%	7.74%	11.11%	15.55%
MONTEFIORE MEDICAL CENTER	Bronx	NY	01	10.89%	7.74%	11.11%	15.55%
YALE-NEW HAVEN HOSPITAL	New Haven	CT	01	10.21%	7.74%	11.11%	15.55%
MOUNT SINAI HOSPITAL	New York	NY	01	10.00%	7.74%	11.11%	15.55%
MASSACHUSETTS GENERAL HOSPITAL	Boston	MA	01	9.95%	7.74%	11.11%	15.55%
BETH ISRAEL DEACONESS MEDICAL CENTER	Boston	MA	01	9.45%	7.74%	11.11%	15.55%
NEW YORK-PRESBYTERIAN HOSPITAL	New York	NY	01	9.17%	7.74%	11.11%	15.55%
LONG ISLAND JEWISH MEDICAL CENTER	New Hyde Park	NY	01	8.59%	7.74%	11.11%	15.55%

Weight Loss – High Weighted Cancer Service Line

Hospital Name	City	ST	CHRT	WGHTLOSS	WGHTLOSS - 20th	WGHTLOSS - 50th	WGHTLOSS - 80th
NEW YORK-PRESBYTERIAN BROOKLYN METHODIST HOSPITAL	Brooklyn	NY	01	51.37%	17.19%	24.05%	33.07%
NEW YORK-PRESBYTERIAN HOSPITAL	New York	NY	01	44.05%	17.19%	24.05%	33.07%
MOUNT SINAI HOSPITAL	New York	NY	01	37.19%	17.19%	24.05%	33.07%
NORTH SHORE UNIVERSITY HOSPITAL	Manhasset	NY	01	30.60%	17.19%	24.05%	33.07%
LONG ISLAND JEWISH MEDICAL CENTER	New Hyde Park	NY	01	29.96%	17.19%	24.05%	33.07%
NYU LANGONE HOSPITALS	New York	NY	01	28.84%	17.19%	24.05%	33.07%
BRIGHAM AND WOMEN'S HOSPITAL	Boston	MA	01	25.98%	17.19%	24.05%	33.07%
MONTEFIORE MEDICAL CENTER	Bronx	NY	01	23.83%	17.19%	24.05%	33.07%
STATEN ISLAND UNIVERSITY HOSPITAL	Staten Island	NY	01	23.68%	17.19%	24.05%	33.07%
BETH ISRAEL DEACONESS MEDICAL CENTER	Boston	MA	01	21.02%	17.19%	24.05%	33.07%
HARTFORD HOSPITAL	Hartford	CT	01	19.29%	17.19%	24.05%	33.07%
ALBANY MEDICAL CENTER HOSPITAL	Albany	NY	01	18.92%	17.19%	24.05%	33.07%
YALE-NEW HAVEN HOSPITAL	New Haven	CT	01	18.86%	17.19%	24.05%	33.07%
STRONG MEMORIAL HOSPITAL	Rochester	NY	01	18.72%	17.19%	24.05%	33.07%
BAYSTATE MEDICAL CENTER	Springfield	MA	01	18.62%	17.19%	24.05%	33.07%
MASSACHUSETTS GENERAL HOSPITAL	Boston	MA	01	18.57%	17.19%	24.05%	33.07%
KALEIDA HEALTH	Buffalo	NY	01	18.49%	17.19%	24.05%	33.07%
RHODE ISLAND HOSPITAL	Providence	RI	01	18.07%	17.19%	24.05%	33.07%
UNIVERSITY HOSPITAL S U N Y HEALTH SCIENCE CENTER	Syracuse	NY	01	12.41%	17.19%	24.05%	33.07%

Models That CDI Programs Address Inpatient Facility

- CMS Inpatient Quality Reporting outcome measures that include:
 - **CMS PSI 04** – CMS Death Rate among Surgical Inpatients with Serious Treatable Complications.
 - **CMS Hybrid Hospital-Wide All-Cause Risk Standardized Mortality (Hybrid HWM)**
 - **Mortality Measure**
 - Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate Following Acute Ischemic Stroke
 - Hospital Hybrid Hospital-wide Mortality (added with the FY2022 IPPS rule)
 - **Payment Measures**
 - Hospital-Level, Risk-Standardized Payment Associated with a 30-Day Episode-of-Care for Acute Myocardial Infarction (AMI)
 - Hospital-Level, Risk-Standardized Payment Associated with a 30-Day Episode-of-Care For Heart Failure (HF)
 - Hospital-Level, Risk-Standardized Payment Associated with a 30-day Episode-of-Care For Pneumonia
 - Hospital-Level, Risk-Standardized Payment Associated with an Episode-of-Care for Primary Elective Total Hip Arthroplasty and/or Total Knee Arthroplasty
- **Readmission and Excess Days in Acute Care (EDAC) Measures**
 - Excess Days in Acute Care after Hospitalization for Acute Myocardial Infarction
 - Excess Days in Acute Care after Hospitalization for Heart Failure
 - Excess Days in Acute Care after Hospitalization for Pneumonia
- CMS Value-Based Purchasing measures that include:
 - MORT-30-AMI Acute Myocardial Infarction 30-Day Mortality
 - MORT-30-CABG Coronary Artery Bypass Graft Surgery 30-Day Mortality
 - MORT-30-COPD Chronic Obstructive Pulmonary Disease 30-Day Mortality 0
 - MORT-30-HF Heart Failure 30-Day Mortality
 - MORT-30-PN Pneumonia 30-Day Mortality
 - Medicare Spending Per Beneficiary
- CMS Hospital Acquired Conditions
 - CMS Patient Safety and Adverse Events Composite (CMS PSI 90)
 - NOTE: CMS HACs affecting MS-DRG assignment differs from the quality measure

What are the 38 Elixhauser Comorbidities?

1. AIDS
2. Alcohol Abuse
3. Deficiency Anemias
4. Autoimmune conditions
5. Chronic Blood Loss Anemia
6. Leukemia
7. Lymphoma
8. Cancer Mets
9. Solid Tumor, in situ, no Mets
10. Solid tumor, malignant, no Mets
11. Cerebrovascular Disease
12. Coagulopathy
13. Dementia
14. Depression
15. Diabetes with chronic complications
16. Diabetes Without Chronic complications
17. Drug Abuse
18. Heart Failure
19. HTN, Complicated
20. HTN, Uncomplicated
21. Liver Disease, Mild
22. Liver disease, mod to severe
23. Chronic Pulmonary Disease
24. Neurological movement disorders
25. Encephalopathy, Cerebral Edema, MS
26. Seizures and Epilepsy
27. Obesity
28. Paralysis
29. PVD
30. Psychoses
31. Pulmonary circulation Disease
32. Renal Failure moderate
33. Renal Failure severe
34. Hypothyroidism
35. Other thyroid d/o
36. Peptic ulcer w/bleeding
37. Valvular disease
38. Weight Loss

Where Should One Capture These? MS & APR-DRG, HCC, Elixhauser

- | | |
|--|---|
| 1. Outpatient care in the visit note | CAPD |
| 2. Pre-visit charting | HCC Notes + Problem List + Risk Coder Automation |
| 3. Emergency Department | |
| 4. Inpatient Admission | CAPD within EHR at POC |
| 5. Pre-Procedure Surgeon and Anesthesia Note | |
| 6. SNF/Long term care documentation | |

Wellforce's Pre-charter tool identifies an additional 58% of and 2.97 on average per patient of additional HCC Problems which are used in risk adjustment models and directly impact reimbursement under the Risk Adjustment Factor (RAF Score) Methods

Using A.I.

03.01.21, V111

Jan-11-2022

Jan-12-2022

Queried

AT

=

582 Encounters

N	CV	Gender	Age	PT	PC	AT	Admitted	Name	Analyzed	Acid	HF	ARF	Afib	ANM	AS	BwOb	BrainH	CerEd	CHF	CKD	CO	CP	DVT	DMH	DKA	DH	EN	ESRD	Hca	HK	HN	HTN	HpoCa	HpoK	HpoM	HpoN	MAL	MO	OB	Panc	SHK	PN	UDM	UR	
3	111	F	73.0	I	X		Dec-15-2021	GR...	11 11:03																																				
4	111	M	50.4	I	X		Jan-01-2022	BRY...	11 11:02																																				
5	111	M	66.9	I	X		Jan-10-2022	TAY...	11 11:02																																				
6	111	F	73.2	I	X		Jan-03-2022	GA...	11 11:02																																				
7	111	M	79.0	I	U		Jan-04-2022	BO...	11 11:02																																				
8	111	M	54.4	I	X		Jan-08-2022	THI...	11 11:02																																				
9	111	M	65.1	I	X		Jan-10-2022	SN...	11 11:01																																				
10	111	M	66.1	I	X		Dec-14-2021	LE, ...	11 11:00																																				
11	111	F	63.2	I	X		Jan-09-2022	BEN...	11 11:00																																				
12	111	M	42.8	I	X		Jan-10-2022	SUT...	11 11:00																																				
13	111	M	27.3	I	X		Jan-10-2022	CA...	11 11:00																																				
14	111	F	150.0	I	X		Jan-10-2022	UN...	11 10:58																																				
15	111	M	61.0	I	X		Jan-04-2022	LEW...	11 10:58																																				
16	111	M	47.2	I	X		Jan-10-2022	HA...	11 10:58																																				
17	111	M	32.6	I	X		Jan-10-2022	FRA...	11 10:57																																				
18	111	M	78.4	I	X		Jan-10-2022	JOR...	11 10:53																																				
19	111	F	41.6	I	X		Jan-09-2022	ALB...	11 10:53																																				
20	111	F	31.2	I	X		Jan-08-2022	LEW...	11 10:52																																				
21	111	M	52.9	I	X		Jan-08-2022	CA...	11 10:52																																				
22	111	F	66.5	I	X		Jan-07-2022	CA...	11 10:51																																				
23	111	M	68.5	I	X		Dec-23-2021	RO...	11 10:51																																				
24	111	M	81.3	I	X		Jan-10-2022	EVA...	11 10:51																																				
25	111	F	85.7	I	X		Dec-31-2021	VA...	11 10:50																																				
26	111	F	32.9	I	X		Dec-04-2021	BRI...	11 10:49																																				
27	111	F	83.5	I	X		Jan-10-2022	ROS...	11 10:48																																				
28	111	M	23.1	I	X		Jan-01-2022	DA...	11 10:48																																				
29	111	F	92.4	I	X		Jan-10-2022	ROS...	11 10:48																																				
30	111	M	77.1	I	U		Jan-05-2022	GRI...	11 10:47																																				
31	111	F	67.5	I	X		Jan-10-2022	TOL...	11 10:45																																				
32	111	F	48.0	I	X		Jan-08-2022	WIN...	11 10:44																																				
33	111	M	85.7	I	X		Jan-08-2022	WIL...	11 10:40																																				
34	111	F	76.5	I	R		Jan-06-2022	HIL...	11 10:40																																				
35	111	M	88.3	I	X		Jan-08-2022	RIC...	11 10:36																																				
36	111	M	71.1	I	X		Dec-23-2021	BO...	11 10:35																																				
37	111	M	62.4	I	U		Jan-06-2022	KEL...	11 10:29																																				
38	111	M	48.2	I	X		Dec-31-2021	SUL...	11 10:27																																				

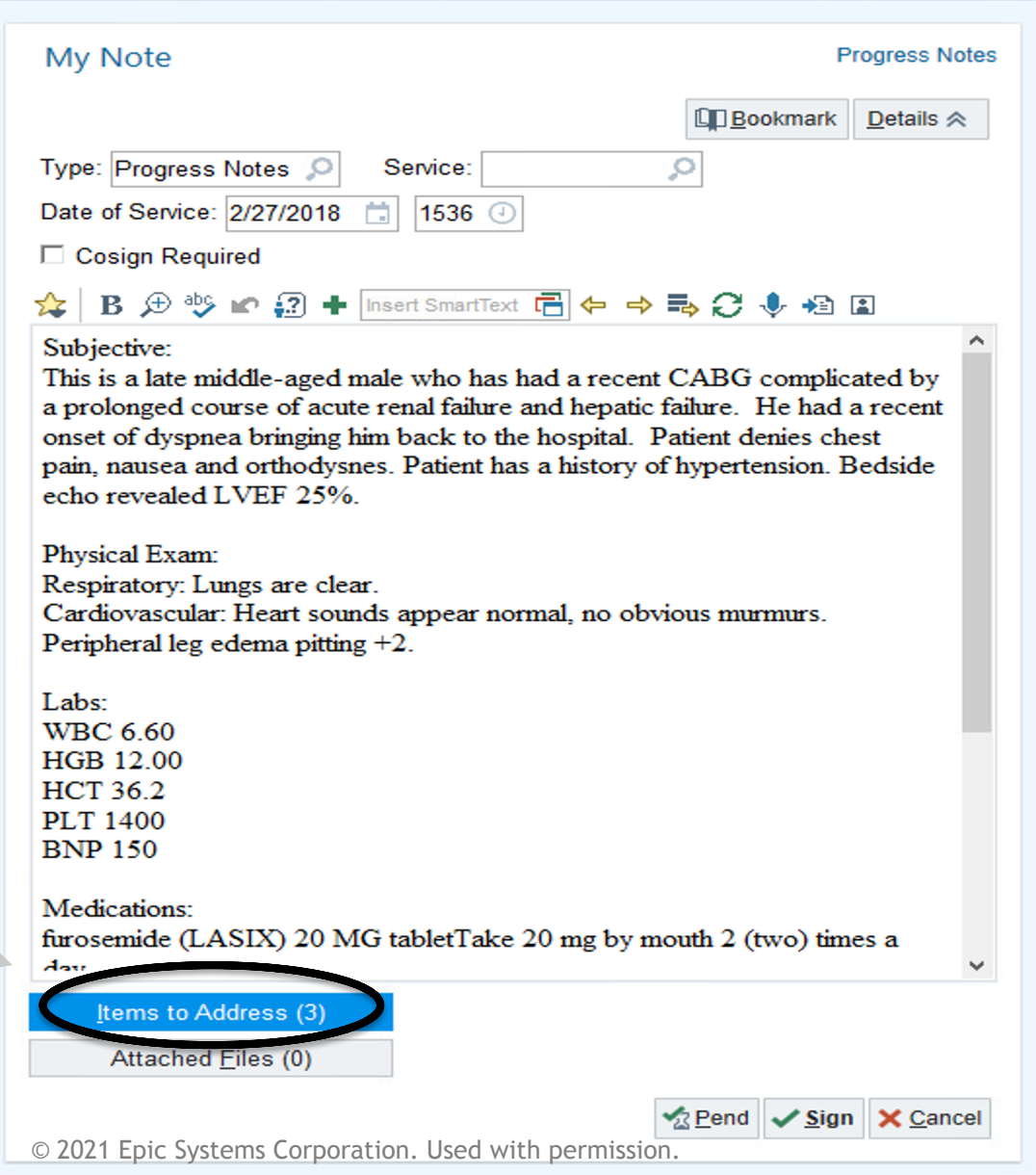
Sample Physicians Report: Weekly Report or Dashboard



Physician	Query Type(s) Involved	Patient Accounts	# Completed by NoteReader CDI	# Completed by Subsequent Doc	DRG Shifts (Prior to D/C)	Elixhauser Quality Diagnoses
Jon Morris	CHF, HypoK, Obesity, Burn, CKD	453256, 542599, 907769	2	1	3	2
Maggie Noel	Afib, HypoN, DMH, Mets, ESRD	766534, 665435, 345300	1	3	2	1
Jordan Dale	DKA, HyperK, AS, PN	345334, 098848	2	0	2	2
Suraj Battaraga	HTN, Anemia, MAL, CerED Panc	943452	0	3	2	2

Inpatient Workflow for Providers

- **Supports physician compliance with documentation**
 - Available at convenient points in clinical workflows
 - Provider types, dictates or transcribes
- **Query appears 1 second after pended or signed note**
 - Only author for pended notes
 - All providers for signed notes
- Notification in “Items to Address”



My Note Progress Notes

Bookmark Details ^

Type: Progress Notes Service:

Date of Service: 2/27/2018 1536

☐ Cosign Required

★ B abc ↶ ? + Insert SmartText ↷ ↶ ↷ ↺ ↻ 🔊 📎 👤

Subjective:
This is a late middle-aged male who has had a recent CABG complicated by a prolonged course of acute renal failure and hepatic failure. He had a recent onset of dyspnea bringing him back to the hospital. Patient denies chest pain, nausea and orthodysnes. Patient has a history of hypertension. Bedside echo revealed LVEF 25%.

Physical Exam:
Respiratory: Lungs are clear.
Cardiovascular: Heart sounds appear normal, no obvious murmurs.
Peripheral leg edema pitting +2.

Labs:
WBC 6.60
HGB 12.00
HCT 36.2
PLT 1400
BNP 150

Medications:
furosemide (LASIX) 20 MG tabletTake 20 mg by mouth 2 (two) times a day

Items to Address (3)

Attached Files (0)

🟢 Pend 🟢 Sign 🔴 Cancel

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Provider CDI Query “To-Do” Workflow in the EHR

The screenshot displays the EHR interface for the Provider CDI Query “To-Do” workflow. The top navigation bar includes tabs for Patient Summary, Handoff, and To Do (highlighted). The main content area is divided into two sections: a list of queries on the left and a detailed view of a selected query on the right.

Query List (Left):

- Query 1: Dale, Jordan, MD, Progress Notes, Date of Service: 05/31 8:43 AM, Signed.
- Query 2: Dale, Jordan, MD, H&P, Date of Service: 05/31 8:43 AM, Signed.

Query Details (Right):

Query Title: NoteReader CDI Queries (2)

Based on the clinical presentation, please clarify the type of the condition:

Which is based on the following information in encounter notes:

- Chronic congestive heart failure (disorder)
- * Echocardiography (procedure)
- * Congestive heart failure (disorder)
- * Dyspnea (finding)
- * Brain natriuretic peptide measurement (procedure)
- * Furosemide (substance)
- * Generalized ischemic myocardial dysfunction (disorder)
- * Myocardial infarction (disorder)
- * Chronic congestive heart failure (disorder)
- * Hypertensive disorder, systemic arterial (disorder)

Respond

Please clarify the patient's weight status, if applicable.

Which is based on the following information in encounter notes:

- Body mass index (observable entity)

Respond

Query Details (Main View):

Header: Dale, Jordan, MD, Progress Notes, Date of Service: 5/31/2018 8:43 AM, Signed, ADS Team A - Internal Medicine

Signed: History of Present Illness:

Patient is a 53 y.o. male with PMH of HTN, CHF who was sent in by his PMD after patient presented at his clinic due to worsening dyspnea. Patient having SOB for 2 weeks. No chest pain. He denies any nausea, vomiting, diaphoresis, orthopnea or lower extremity edema. Echo being done at bedside revealed LVEF 25%.

Past Medical History:

- Congestive heart failure
- Hypertension
- MI (myocardial infarction)

Current Facility-Administered Medications:

- * aspirin EC tablet 81 mg, 81 mg, Oral, Daily
- * enoxaparin (LOVENOX) syringe 40 mg,
- * furosemide (LASIX) injection 20 mg, 20 mg, Intravenous, BID

Workflow for Providers:

Query evidence right next to their note in EHR

1. Query → Please clarify the patient's heart failure acuity and type, if applicable.

2. Suggested text to insert →

- + Acute systolic heart failure
- + Acute diastolic heart failure
- + Acute combined systolic and diastolic heart failure
- + Acute on chronic systolic heart failure
- + Acute on chronic diastolic heart failure
- + Acute on chronic combined systolic and diastolic heart failure

3. Feedback →

Other options:

- [Agree \(I have updated the note text accordingly\)](#)
- [Reject query \(for all users\)](#)
- [Clinically undetermined](#)
- [Ask me later](#)
- [Someone else should address this](#)

4. Evidence →

Why am I seeing this?

- Echocardiography (procedure)**
 - Progress Notes Joshua Smith, MD Today 1513
 - H&P Joshua Smith, MD Yesterday 0920
- Congestive heart failure (disorder)**
- Dyspnea (finding)**
- Brain natriuretic peptide measurement (procedure)**
- Furosemide (substance)**
- 2+ pitting edema (finding)**
- Acute congestive heart failure (disorder)**

My Note **Infobutton** **Progress Notes**

Type: Service:

Date of Service:

☐ Cosign Required

★ B abc ↻ ? + Insert SmartText ↵ ⬅ ➡ ⌂ 🔍

Subjective:
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HCT 36.2
PLT 1400
BNP 150

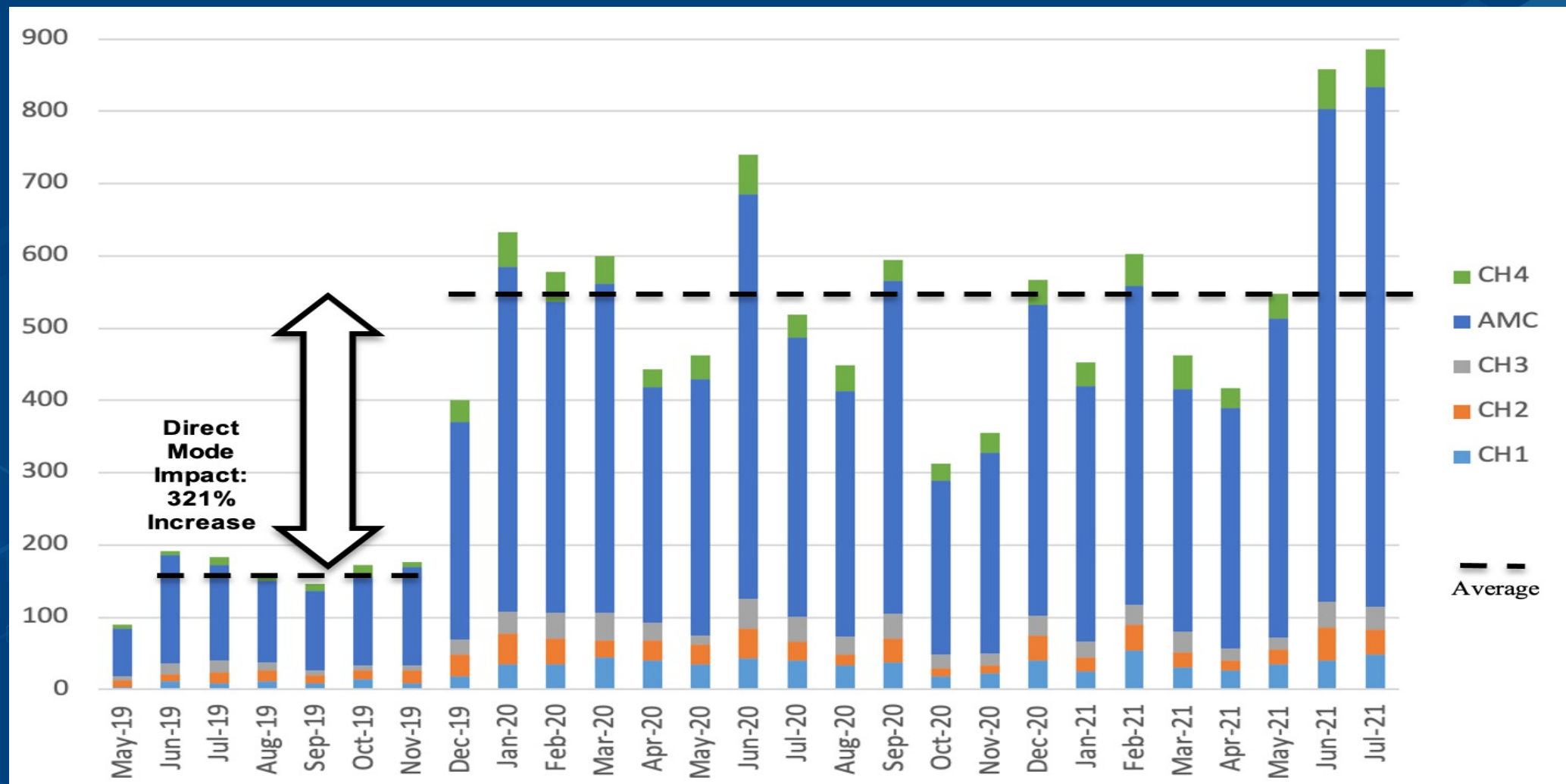
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furosemide (LASIX) 20 MG tabletTake 20 mg by mouth 2 (two) times a day

Items to Address (3)

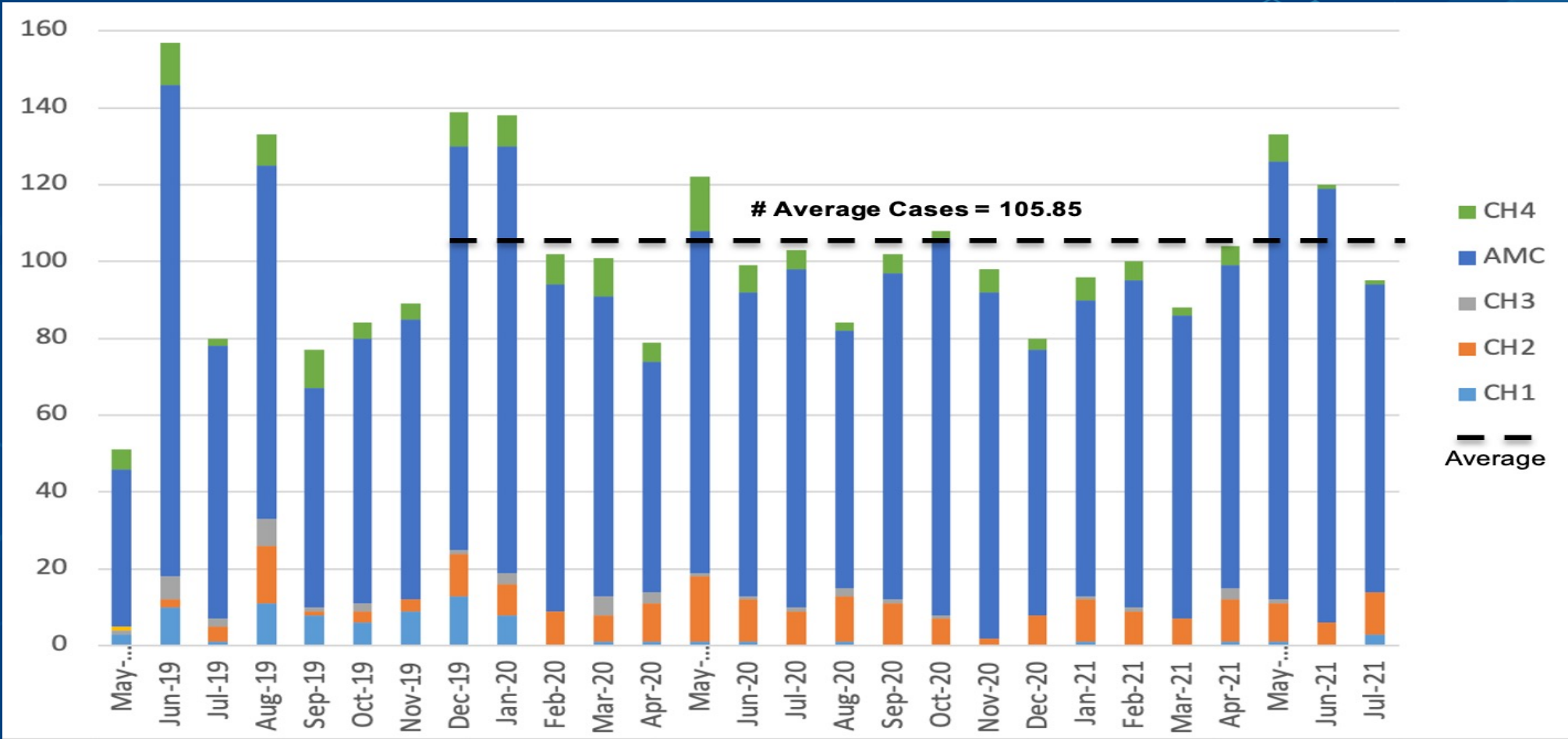
Attached Files (0)

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CDI Cases Satisfied after Direct Mode CAPD



Physician Real-Time Response Rate to Queries in Preferred Screen : 20%



Data-Driven Decision-Making

2 years into the pandemic, it's clear that the ability to make quick decisions based on high-quality data has become essential for business success

Develop a Long-term Data and A.I. Strategy

Succeed in doing mundane tasks efficiently and accurately:
Automated Queries
HCC Capture
Quality Documentation

*Thank
you!*



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