

2023 2nd Quarter Meeting
June 1, 2023

Valerie Bica BSN, RN Amy Bush BS, RN, MJ, CCDS, CCS Jeff Morris BSN, RN, CCDS, CCS

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WELCOME

**To Our
Q2 2023
Meeting!**

OUR GOAL
We are a group of pediatric CDI specialists who want to expand our knowledge, network, and share information!

Want to Ask the Group a Question?
Email Valerie, Amy or Jeff and we will post to the members and share with the group!

- Valerie.Bica@Nemours.org
- Bush-amy@cooperhealth.edu
- Jeff.Morris@nyulangone.edu



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326 Nationwide Members!

That's 38 new members this quarter!!

*Are You Interacting with A CDS from
Another Pediatric Hospital?*

PLEASE ASK THEM TO JOIN US!

Send Us Their Contact Info So We Can Invite!



**We are small but FIERCE
...and GROWING**

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**SAVE
THE DATES!**

OUR NEXT MEETINGS

- ✓ September 7th, 2023
- ✓ December 7th, 2023

Sharing Knowledge is ESSENTIAL! Let Us Know If You Or Someone You Know Can Present!



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Our Initiatives

Be An apdis Superpower!

- ✓ Webex call between quarterly meetings- 7/13 @3pm EST
- ✓ Suggest Interesting Topics
- ✓ Suggest Speakers –We Love Diversity of Topics
- ✓ Reach out to Other Local Chapters for CDSs to Join Us
- ✓ JOIN ACDIS! It is a  of Resources

Once you have joined, please complete the local chapter roster to receive BENEFITS! The roster is located on the main ACDIS site under networking and local chapters.

Local chapter members **RECEIVE A DISCOUNT FROM THE ACDIS CONFERENCE** if listed on the ACDIS roster and signed up as a group of 5 attendees. You also **RECEIVE A DISCOUNT ON NATIONAL MEMBERSHIP FEES!**



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- You are all muted when you sign on.
- Use the chat box for questions and we will open up a discussion after the presentation, time permitting.
- Chat to let us know if you are having technical issues.
- Please allow 1-2 weeks for the receipt of your ACDIS CEU

WE LOVE VOLUNTEERS!
Let us know if you are interested in making  apdis GREATER!

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Introducing our Guest Speakers:

**“Inpatient Pediatric APR-DRG CDI Benchmarking;
A Children’s Hospital Association perspective”**

- Amber Davidson, RHIA, CCS, CCS-P
- James Kennedy, MD

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Amber Davidson, RHIA, CCS, CCS-P Manager Health Information Data

Amber has over 30 years' experience with coding, revenue integrity, auditing, compliance, data analytics and health information. In her role with Children's Hospital Association, she is the subject matter expert for coding classification and grouping systems including ICD-10-CM, ICD-10-PCS, MS-DRGs and APR-DRGs. She helps maintain the PHIS data base for all regulatory & coding updates, oversees the PHIS data submission processes and assists CHA members with their coding and DRG related research requests. She also facilitates CHA's popular Coding Roundtable and CDI Hot Topic calls.



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James Kennedy, MD jkennedy@cdimd.com / 615-479-7021

Dr. Kennedy is the founder and President of CDIMD, a Nashville-based physician and facility advisory and consulting firm that advocates ICD-10-pertinent clinical documentation and coding integrity essential to healthcare revenue cycles and quality measurement. As a coding and clinical documentation integrity (CDI) expert with over 20 years of experience and as a frequent speaker to medical staff, Health Information Management (HIM) and CDI associations, Dr. Kennedy is nationally recognized for his subject matter expertise, communication skills, and problem-solving approach.

Dr. Kennedy is a native of Oak Ridge, Tennessee and a graduate of the University of Tennessee, Memphis, where he trained and was board-certified in Internal Medicine. He practiced as a general internist for fifteen years in Franklin, Tennessee as a solo practitioner, in private multispecialty groups and ultimately with Vanderbilt Health Services and also served as the chairman of the 911 board and as the medical examiner for Williamson county, Tennessee. His interests include media (radio and print), politics, and public service.




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Goals

- Orient the audience to algorithms and available benchmark ICD-10-CM/PCS-based pediatric performance, such as
 - KID Database
 - Various state databases (e.g., Texas, Maryland, etc.) and software (e.g., 3M APR-DRG CGS)
 - Children's Hospital Association (CHA) data products with an emphasis on CHA's Pediatric Health Information System (PHIS) and Inpatient Essentials (IE or PHIS-lite)
- Provide an overview of the 3M APR-DRG system with an emphasis on
 - Base DRGs, Severity of illness (SOI), Risk of mortality (ROM), and Relative Weights (RWs)
 - Applicability to pediatric inpatient reimbursement
- Demonstration of CHA's PHIS and IE CDI-pertinent analytics
 - Standard reports capabilities
 - Ad-hoc report capabilities
- Review communication strategies in using data that promotes positive change.



While the authors endeavor to accurately portray this subject matter, this entire lecture represents their own personal opinions and may not necessarily represent that of CHA
3M APR-DRGs are copyrighted by 3M; our intent is to showcase their methods with "fair use"



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What Is CDI (CDCI) CDIMD Definition

- Clinical documentation (and coding) **integrity** (CDI or CDCI) is the **policies, procedures, technology, people, and efforts** that promote legible, clear, consistent, complete, precise, non-conflicting, and reliable provider documentation essential to the **final** assignment of **accurate** and **clinically congruent** HIPAA-associated transaction set codes (e.g., CPT, ICD-10-CM, ICD-10-PCS) and their submission to all accepting entities.
- **The ICD-10-CM Official Guidelines for Coding and Reporting promote CDI by stating:**
 - A **joint effort** between the healthcare provider and the coder is essential to achieve complete and accurate documentation, code assignment, and reporting of diagnoses and procedures.
 - The importance of **consistent, complete documentation** in the medical record cannot be overemphasized. Without such documentation accurate coding cannot be achieved.



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HIPAA Transaction Sets

Focus of our work will be ICD-10-CM/PCS; knowing some CPT may help with physician engagement

<https://www.cms.gov/Regulations-and-Guidance/Administrative-Simplification/Transactions/TransactionsOverview>

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CDI Foundations Servant Leadership – Managing the Relationship

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graph TD; P[Physician] <--> CP[Coding Professional]; P <--> CT[CDI team]; CP <--> CT;
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Physician


Coding Professional

CDI team


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CDI Foundations Team Composition

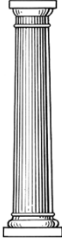


- **Providers**
 - Primary agents for condition or treatment definition, diagnosis, description and documentation

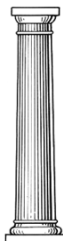


- **Coders**
 - ICD-10-CM/PCS content experts and final arbiters on what codes are submitted
 - Usually tasked with post-discharge (retrospective) query


- **Concurrent/Clinical Documentation Specialists (CDS)**
 - Nurses, coders or others who manage and negotiate CDI principles with physicians
 - Proactive, concurrent, and reactive workflows
- **Compliance officer**
 - Ensures that the process withstands retrospective scrutiny
- **Medical informatics**
 - Incorporates ICD-10-CM/PCS or CPT terminology into paper or electronic health record (EHR)



- **Service line directors (e.g., CV, orthopaedic, trauma, obstetrics)**
 - Negotiates terminology and documentation structure that systemizes clinical information capture with providers, coders, and CDI team
- **Ancillaries, such as**
 - Dietitians
 - Wound care
 - Respiratory therapy
 - Physical therapy
 - Antibiotic stewardship/clinical pharmacy
- **Others (e.g., subject matter experts)**




Physician advisors and C-suite are active supporters and champions
Data analytics helps “keep score”




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CDI Sensitive Metrics Affecting Pediatrics




- **MS-DRG revenue metrics**
 - Medicine Case Mix
 - MCC/CC rates are supportive
 - Surgery Service Line MCC rate and CC rate
 - Case mix cannot be used since primarily **driven by the procedure**
- **APR-DRG inpatient revenue metrics**
 - Medicine CMI within service lines
 - APR-DRG SOI is supportive
 - Surgery SOI
 - While CMI is important, the nature and volume of various surgeries can impact this

NOTE: APR-DRGs also affect the 3M Potentially Preventable Complications and Readmission Measures (view under the quality metrics)


How do we know if we have CDI risk or opportunities with any of these models?

- **3M EAPGs**
 - Used by some payers (e.g., DC Medicaid, Alabama BCBS) to influence outpatient reimbursement
 - Some EAPG venues (e.g., emergency department) influenced by ICD-10-CM codes
- **Quality metrics**
 - **AHRQ Pediatric Quality Indicators (PDIs)**
 - Observed events risk adjusted using Elixhauser
 - 3M Potentially Preventable Complications (in some states, such as Texas, Maryland, New York, Florida)
 - 3M Potentially Preventable Readmission Measures (similar states plus Oklahoma)
 - Complex Chronic Conditions (CCC)
 - Feudtner, C., Feinstein, J.A., Zhong, W. et al. Pediatric complex chronic conditions classification system version 2: updated for ICD-10 and complex medical technology dependence and transplantation. BMC Pediatr 14, 199 (2014). <https://doi.org/10.1186/1471-2431-14-199>
- **Health plan funding**
 - CMS HCCs (Medicare Advantage)
 - HHS HCCs (“Obamacare” plans)
 - CDPS (Medicaid Managed Care)
 - Others




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FY2021 Medicine MS-DRG Inpatient Admissions Children's Hospitals (w/o ESRD and COVID)

MedPAR#	Hospital Name	City	ST	Overall Vol	Med CMI X VT	Med MCC%	Med CC%	Med WO%
363305	NATIONWIDE CHILDREN'S HOSPITAL	Columbus	OH	104	1.485	56.5%	29.0%	14.5%
043300	ARKANSAS CHILDREN'S HOSPITAL	Little Rock	AR	93	1.365	38.3%	21.3%	40.4%
263301	ST LOUIS CHILDRENS HOSPITAL	Saint Louis	MO	73	1.271	40.0%	40.0%	20.0%
453300	COOK CHILDRENS MEDICAL CENTER	Fort Worth	TX	85	1.241	51.0%	34.7%	48.6%
393302	UPMC CHILDREN'S HOSPITAL OF PITTSBURGH	Pittsburgh	PA	75	1.208	45.8%	22.9%	31.3%
363300	CINCINNATI CHILDREN'S HOSPITAL MEDICAL CENTER	Cincinnati	OH	123	1.187	36.0%	32.6%	31.5%
113300	CHILDREN'S HEALTHCARE OF ATLANTA AT EGLESTON	Atlanta	GA	90	1.148	23.1%	50.8%	26.2%
223302	BOSTON CHILDREN'S HOSPITAL	Boston	MA	179	1.144	45.2%	25.0%	29.8%
453304	TEXAS CHILDRENS HOSP	Houston	TX	102	1.088	28.6%	42.9%	28.6%
033302	PHOENIX CHILDREN'S HOSPITAL	Phoenix	AZ	93	1.079	20.5%	41.1%	38.4%
193300	CHILDRENS HOSPITAL	New Orleans	LA	82	1.070	24.5%	47.2%	28.3%
503300	SEATTLE CHILDREN'S HOSPITAL	Seattle	WA	111	1.056	23.6%	44.4%	31.9%
263302	CHILDRENS MERCY HOSPITAL	Kansas City	MO	72	1.034	18.9%	39.6%	41.5%
013301	USA HEALTH CHILDREN'S & WOMEN'S HOSPITAL	Mobile	AL	184	1.029	19.0%	24.1%	57.0%
393303	CHILDREN'S HOSPITAL OF PHILADELPHIA	Philadelphia	PA	96	0.990	9.2%	29.2%	61.5%


Courtesy – Dr. Kennedy – CDIMDTracker – <https://www.cdimdtracker.com>




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The Best is the AHRQ KID However, the Data is Somewhat Old

- The Kids' Inpatient Database (KID) is part of the Healthcare Cost and Utilization Project (HCUP), sponsored by the Agency for Healthcare Research and Quality (AHRQ).
- The KID is the largest publicly available all-payer pediatric inpatient care database in the United States, yielding national estimates of hospital inpatient stays by children.
- The KID is a sample of pediatric discharges from all community, non-rehabilitation hospitals in States participating in HCUP. The target universe includes pediatric discharges from community, non-rehabilitation hospitals in the United States. Pediatric discharges are defined as all discharges where the patient was age 20 or less at admission.


KID IS UPDATED ONLY EVERY 3 YEARS – LAST VERSION AVAILABLE IS 2019
HCUP DATA CANNOT BE PUBLISHED BY COMPANIES LIKE CHA OR CDIMD

<https://hcup-us.ahrq.gov/kidoverview.jsp#data>

Diagnosis	DRG	DRG in use on discharge date
Related Group (DRG)	DRG_NoPOA	DRG in use on discharge date, calculated without Present On Admission (POA) indicators
	DRGVER	Groupier version in use on discharge date

Table 3. Data Elements in the 2019 KID Disease Severity Measures Files
For prior years, refer to the [KID Description of Data Elements](#) page on the HCUP-US Web site or to previous versions of the KID Introduction.


Type of Data Element	HCUP Name	Coding Notes
All Patient Refined DRG (3M)	APDRG	All Patient Refined DRG
	APDRG_Risk_Mortality	All Patient Refined DRG: Risk of Mortality Subclass
	APDRG_Severity	All Patient Refined DRG: Severity of Illness Subclass




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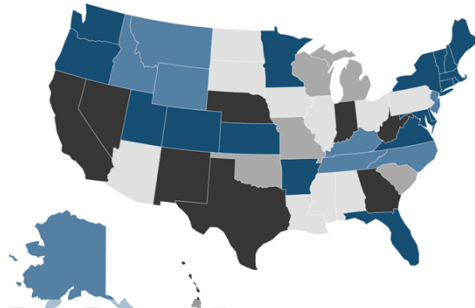
Getting Comparative Children’s Hospital Data Is Difficult



- Medicare data
 - MedPAR – once a year (includes Medicare Advantage)
 - Standard Analytic File – quarterly (no Medicare Advantage)
- Other Insurers data (including Medicaid)
 - Can be procured from individual states from their All-Payer Claims Databases
 - Most will have the MS-DRG; however, few will have APR-DRGs which must then be regrouped using 3M’s Core Grouping Software
 - All require analytic staff to process the information
- Others, such as 3M, IBM Watson, or others (other than CHA), may have regrouped data we can use


Interactive State Report Map

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■ Existing
 ■ In Implementation
 ■ Strong Interest
■ Existing with Voluntary Submission
 ■ Existing Voluntary Effort
■ No Current Activity


<https://www.apcdouncil.org/state/map>




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That Said, There Is Some Data Out There California HCAI Data – All Payers




Hospital	793	794	% of 793
	FULL TERM NEONATE WITH MAJOR PROBLEMS	NEONATE WITH OTHER SIGNIFICANT PROBLEMS	
CHILDREN'S HOSPITAL AT MISSION	70	60	53.85%
CHILDREN'S HOSPITAL OF LOS ANGELES	212	196	51.96%
CHILDREN'S HOSPITAL OF ORANGE COUNTY	350	1046	25.07%
LOMA LINDA UNIVERSITY CHILDREN'S HOSPITAL	441	2002	18.05%
LUCILE PACKARD CHILDREN'S HOSPITAL STANFORD	413	2010	17.04%
MEMORIALCARE MILLER CHILDREN'S & WOMEN'S HOSPITAL LONG BEACH	553	517	51.68%
RADY CHILDREN'S HOSPITAL - SAN DIEGO	591	80	88.08%
UCSF BENIOFF CHILDREN'S HOSPITAL OAKLAND	168	189	47.06%

<https://data.chhs.ca.gov/dataset/top-25-ms-drgs-individual-hospital-pivot-profile>

California Hospitals and Health Departments can now request Limited Data through the online HCAI request portal that does differentiate the payers; however, it is grouped only to MS-DRGs, not APR-DRGs

<https://datarequest.hcai.ca.gov/csm>



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Texas Healthcare Learning Collaborative

HOME MEASURES PPE DASHBOARDS RESOURCES HELP

Potentially Preventable Complications Hospital Level

Select a Year: SFY 2020

View: Reliable Rates Only

Reporting Period: SFY 2020 Effective Date: SFY 2022

Hospitals by A/E Ratios for state fiscal year 2020

Provider	Applicable Volume	Actual PPC Counts	Actual PPC Weights	Expected PPC Weights	Actual-to-Expected Ratio	Reimbursement Reduction
CHILDRENS MEDICAL CENTER OF DALLAS-CHILDRENS MEDICAL CENTER	5,908	29	52.53	91.26	0.58	0.00%
COOK CHILDRENS MEDICAL CENTER-	5,711	21	39.72	68.28	0.58	0.00%
METHODISTS CHILDRENS HOSPITAL-COVENANT CHILDRENS HOSPITAL	3,316	8	10.82	16.29	0.66	0.00%
DRISCOLL CHILDRENS HOSPITAL	2,201	14	32.2	37.71	0.85	0.00%
TEXAS CHILDRENS HOSPITAL	18,334	166	234.58	200.36	1.17	-2.00%
SETON HEALTHCARE-DELL CHILDRENS MEDICAL CENTER OF CENTRAL TEXAS	3,631	36	84.34	65.82	1.28	-2.50%
CHRISTUS SANTA ROSA HEALTH CARE CORPORATION-CHILDRENS HOSPITAL OF SAN ANTONIO	3,873	45	68.37	34.35	1.99	-2.50%

<https://thlportal.com/ppe/ppc-hospital-performance>

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Potential Solution CHA's PHIS / Inpatient Essentials Analytics

- The Pediatric Health Information System® (PHIS) is a comparative database with clinical and resource utilization data for inpatient, ambulatory surgery, emergency department (ED) and observation unit encounters for more than 49 children's hospitals. The PHIS database supports a wide range of improvement activities, including:
 - Clinical effectiveness
 - Resource utilization
 - Care guideline development
 - Readmission analysis
 - Antimicrobial stewardship
 - Physician profiling (OPPE) and more.
- Data from PHIS is useful in identifying areas to improve clinical care, enhance financial outcomes, improve clinical documentation and perform research.


Features

- Data: Patient abstract, diagnoses, procedures, billed transactions and utilization
- 3M APR-DRG and AHRQ
- Patient types: Inpatient, observation, ambulatory surgery and ED
- Transparency: Unblinded hospital ID with ability to blind local competitors


<https://tinyurl.com/CHAPHIS>

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**CHA's PHIS and IE Algorithms
APR-DRGs**



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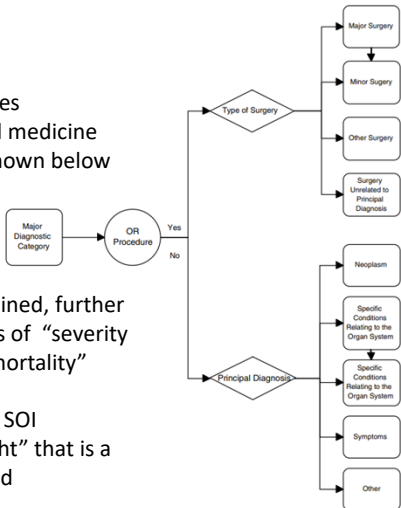
Developed by 3M HIS in conjunction with the National Association of Children's Hospitals and Related Institutions (NACHRI), now part of CHA


3M™ All Patient Refined Diagnosis Related Groups (APR DRG)

Methodology Overview

https://apps.3mhis.com/docs/Groups/All_Patient_Refined_DRG/Methodology_overview_GRP041/grp041_aprdrg_meth_overview.pdf

- 25 Major Diagnostic Categories
 - Divided into surgery and medicine
 - Further subdivided as shown below
- Once the DRG base is ascertained, further subdivided into four (4) levels of “severity of illness” (SOI) and “risk of mortality” (ROM)
- The base DRG along with the SOI translated to a “relative weight” that is a measure of predicted cost and reimbursement







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PHIS's Emphasis – APR-DRGs



APR DRG	SOI SUBCLASS	DRG Description	Weights	CODE	Title	MS-DRG	SOI Impact	ROM Impact
160	1	MAJOR CARDIOTHORACIC REPAIR OF HEART ANOMALY	2.5697	J13	Pneumonia due to Streptococcus pneumoniae	MCC	2	2
160	2		3.3334	J14	Pneumonia due to Hemophilus influenzae	MCC	3	2
160	3		5.4639	J150	Pneumonia due to Klebsiella pneumoniae	MCC	3	2
160	4		11.9633	J151	Pneumonia due to Pseudomonas	MCC	3	2
161	1	IMPLANTABLE HEART ASSIST SYSTEMS	11.6399	J1520	Pneumonia due to staphylococcus, unspecified	MCC	3	2
161	2		12.2555	J15211	Pneumonia due to Methicillin susceptible Staphylococcus aureus	MCC	3	2
161	3		15.0781	J15212	Pneumonia due to Methicillin resistant Staphylococcus aureus	MCC	3	2
161	4		22.0433	J1529	Pneumonia due to other staphylococcus	MCC	3	2
162	1	CARDIAC VALVE PROCEDURES WITH AMI OR COMPLEX PRINCIPAL DIAGNOSIS	3.6230	J153	Pneumonia due to streptococcus, group B	MCC	2	2
162	2		4.3303	J154	Pneumonia due to other streptococci	MCC	2	2
162	3		5.7252	J155	Pneumonia due to Escherichia coli	MCC	3	2
162	4		8.9331	J156	Pneumonia due to other Gram-negative bacteria	MCC	3	2
				J157	Pneumonia due to Mycoplasma pneumoniae	MCC	2	2
				J158	Pneumonia due to other specified bacteria	MCC	2	2
				J159	Unspecified bacterial pneumonia	MCC	2	2
				J160	Chlamydial pneumonia	MCC	2	1
				J168	Pneumonia due to other specified infectious organisms	MCC	2	2
				J17	Pneumonia in diseases classified elsewhere	MCC	2	2
				J180	Bronchopneumonia, unspecified organism	MCC	2	2
				J181	Lobar pneumonia, unspecified organism	MCC	2	2
				J182	Hypostatic pneumonia, unspecified organism	CC	2	2
				J188	Other pneumonia, unspecified organism	MCC	2	2
				J189	Pneumonia, unspecified organism	MCC	2	2

As a general rule of thumb


- To get a “2”, one needs only one “2” or “3”
- To get a “3”, one needs two “3”s or one “3” and two or three “2”s
- To get a “4”, one needs two “4”s or one “4” and two “3”s




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How PHIS Promotes Positive Change APR-DRG SOI Average


Row Labels	Hosp #1	Hosp #2	Hosp #3	Hosp #4
Ratio of Complex to Simple Pneumonia	12.8%	17.9%	23.1%	12.6%
Ratio of Sepsis to All Pneumonias	28.2%	19.6%	10.7%	10.6%
DRG 693 - Admission for Chemotherapy	2.09	2.74	2.05	2.15
DRG 138 - Bronchiolitis & RSV Pneumonia	1.85	2.02	1.58	1.62
DRG 131 - Cystic Fibrosis & Pulmonary Disease	2.89	2.76	2.36	2.64
DRG 132 - BPD & Pulmonary Diseases	3.04	2.86	2.70	2.81
DRG 141 - Asthma	1.67	1.93	1.53	1.42
DRG 160 - Major CT Repair of Cong. Abnl	3.49	3.37	3.07	3.10
DRG 3 - Bone Marrow Transplant	NA	3.54	2.61	2.10
DRG 21 - Craniotomy w/o Trauma	2.42	2.47	2.13	2.27
DRG 420 - Diabetes	1.85	1.93	1.78	1.69
DRG 53 - Seizures	2.46	2.23	2.16	2.23




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How PHIS Promotes Change Service Line Comparisons

TF	Hospital City	Cardiology - Invasive						Cardiology - Open Heart Surgery					
		Cases	ALOS	Avg SOI	CMI	SOI Rank	CMI Rank	Cases	ALOS	Avg SOI	CMI	SOI Rank	CMI Rank
FY14	City 1	73	5.9	2.60	2.382	5	26	260	13.5	3.32	6.908	3	3
FY15	City 1	70	9.8	2.64	2.425	5	24	243	12.9	3.20	6.502	5	5
FY16	City 1	49	13.9	2.59	3.345	13	5	262	14.7	3.23	6.389	7	7
FY17 Q1	City 1	10	3.8	2.20	3.482	31	7	28	18.2	3.36	6.476	6	5
FY14	City 2	84	13.7	2.76	4.249	3	3	426	12.0	2.87	5.518	11	11
FY15	City 2	102	14.5	3.10	3.986	1	2	436	11.7	3.00	5.944	11	11
FY16	City 2	82	17.4	2.87	4.586	1	1	479	13.9	2.96	5.625	18	15
FY17 Q1	City 2	24	20.1	3.00	5.545	3	1	113	10.1	2.73	5.080	27	27


- Note that City #2 has a high invasive cardiology SOI while having a relatively low Cardiology open-heart surgery SOI
- One can also trend CDI performance and determine compliance risk if one's CDI performance exceeds a threshold, such as over the 90th percentile




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Two Types Of CHA Data Programs




Pediatric Health Information System (PHIS)

- Unblinded data set with reciprocity rules for certain markets
- Clinical Insight Report Series
- Business Objects BI:
 - Report cards, over 100+ standard reports, antibiotic stewardship, low value care, AHRQ PDIs, etc.
- Adhoc reporting capabilities
- Used often for Health Services Research

Inpatient Essentials (IE)


- PHIS “Lite”
- Blinded, aggregated data
- Two sets of reporting tools:
 - Clinical Insight Report Series (CIRS) (Tableau based reports)
 - Executive Insight Report Series (Business Objects BI tool)




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PHIS & IE Participants



- PHIS ●
- Inpatient Essentials + ○
- Multiple campuses *



Chicago-Oak Lawn *

Ann Arbor

Omaha

Akron *

Kansas City *

Cleveland-Rainbow

Minneapolis *

St Paul +

Columbus

Milwaukee

Cincinnati *

Dayton

Chicago-Lurie

Indianapolis

Chicago-Corner

Pittsburgh

Hershey +

Boston

Hartford

Yale New Haven

Baltimore Johns Hopkins +

New York Morgan Stanley/Komansky*

New York – Montefiore

New York – Cohen +

Philadelphia

Philadelphia St. Christopher’s +

Wilmington Nemours +

Washington, DC

Norfolk

Charlotte

Chapel Hill +

Charleston

Atlanta *

Orlando Arnold Palmer +

Orlando Nemours +

Orlando Florida Hospital +

Pensacola +

Tampa Shriners +* (sites across US)

Tampa St Joseph +*

St. Petersburg

Fort Myers +

Jacksonville Wolfson +

Hollywood +

Miami

Salt Lake City

Aurora *

Oakland

San Francisco +

Palo Alto

Long Beach

Madera

Los Angeles

Los Angeles Mattel +

Orange County

San Diego

Loma Linda

Oklahoma City +

Austin

Dallas *

Fort Worth

Houston-Hermann

Houston *

Temple +

St. Louis

Des Moines +


Louisville

Little Rock


Memphis

Nashville

Birmingham




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Clinical Insights Report Series Reports



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Clinical Insights Report Series (CIRS)

- CHA rolled out Fall 2022
- Tableau based, interactive reports
- Easy to use
- Variety of reports for many audiences

Clinical Insights Reports

Reports display key hospital metrics for analysis using clinical population focus.

EXECUTIVE REPORTS —

High-level summary reports for quick insights which provide access to comparison reports.

- Key Opportunities
- Metric Summary
- Hospital Comparison
- Campus Comparison

COMPARISON REPORTS —

Compare service lines and APR-DRGs across metrics.

- Service Line Comparison
- CMI Comparison
- Excess Days and ALOS O/E
- Readmissions
- CMI-Adj ALOS Comparison
- Clinical Documentation Improvement

FOCUSED REPORTS —

Compare across various qualitative indicators for more detailed insights.

- Service Line Profile
- Excess Days Patient Profile
- Readmissions Patient Profile
- CMI-Adj ALOS Patient Profile
- CDI: Diagnosis and Procedure

EXPLORATORY & METRIC REPORTS —


Custom reports to provide exploration and export of key metrics.


- Exploratory Analytics
- Key Metric Export
- Key Metric Encounter Export

DETAIL REPORTS —


Patient report typically accessed through drilldowns.

- Encounter Details





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Purpose of CIRS Reports for Coding and CDI




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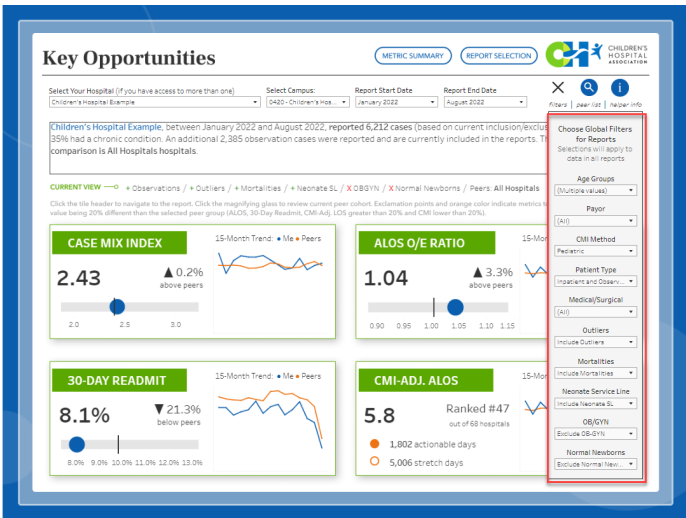
Understand your Data
Understand your Populations
Understand your Hospital
Know Your "Score"

- Validates what you know anecdotally
- Answers the question, "How does my hospital compare to other children's hospitals?"
 - CIRS reports pull together data from 72 children's hospitals across the nation for benchmarking
- Outlines clinical areas to focus CDI efforts for provider education and CDI work
- Assesses nonspecific code use
- Assesses CDI and coding integrity projects
 - Pre- and post-implementation
- Shows providers their pertinent CDI metrics for their service lines
- Finds variations in coding between your hospital and peers


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Filters in CIRS Reports



Global Filters apply to data in all reports

- Age groups
- Payor groups
- CMI Method
- Patient Type
- Medical/Surgical
- Include/Exclude:
 - Outliers
 - Mortalities
 - Neonate Service Line
 - OB/GYN
 - Normal Newborns

Choose Global Filters for Reports
Selections will apply to data in all reports

Age Groups
(Multiple values)

Payor
(All)

CMI Method
Pediatric

Patient Type
Inpatient and Observ...

Medical/Surgical
(All)


Outliers
Include Outliers

Mortalities
Include Mortalities

Neonate Service Line
Include Neonate SL

OB/GYN
Exclude OB-GYN

Normal Newborns
Exclude Normal New...


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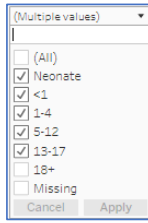
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Select Global Filter Options & Tips

Age Groups

For patients 0-17, select groups shown.

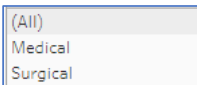
- To assess your Neonate population in all service lines, select only Neonate age group.



Medical/Surgical

If you only want to see surgical cases for a service line, set this filter to "Surgical" only.

- Neurosurgery – set filter to "Surgical" & assess Neurology Service Line

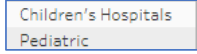


CMI Methodology

Two CHA CMI Frames:

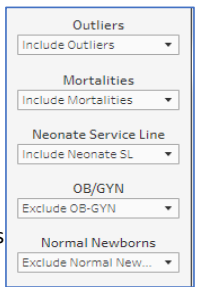
- CHA Children's Hospitals
- CHA Pediatric


- Both developed by CHA using HCUP KID data set



Include/Exclude Options

- Outliers
- Mortalities
- Neonate Service Line
- OB/GYN
- Planned Readmissions/Chemo Visits




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Metrics of Interest in Reports

- Case Mix Index (CMI)
 - Only APR-DRG driven
- Length of Stay (LOS) Observed to Expected (O/E)
- Excess Days
- Average volume of diagnosis codes per case
- MS-DRG MCC and CC percentages
 - APR-DRG SOI and ROM averages currently not available but can be calculated using raw data
- Complex Chronic Conditions (CCCs) percentage that is assigned
- Diagnoses and procedures assigned by SOI for an APR-DRG

*CMI, LOS O/E and Excess Days can be assessed at Hospital, Service Line and APR-DRG levels

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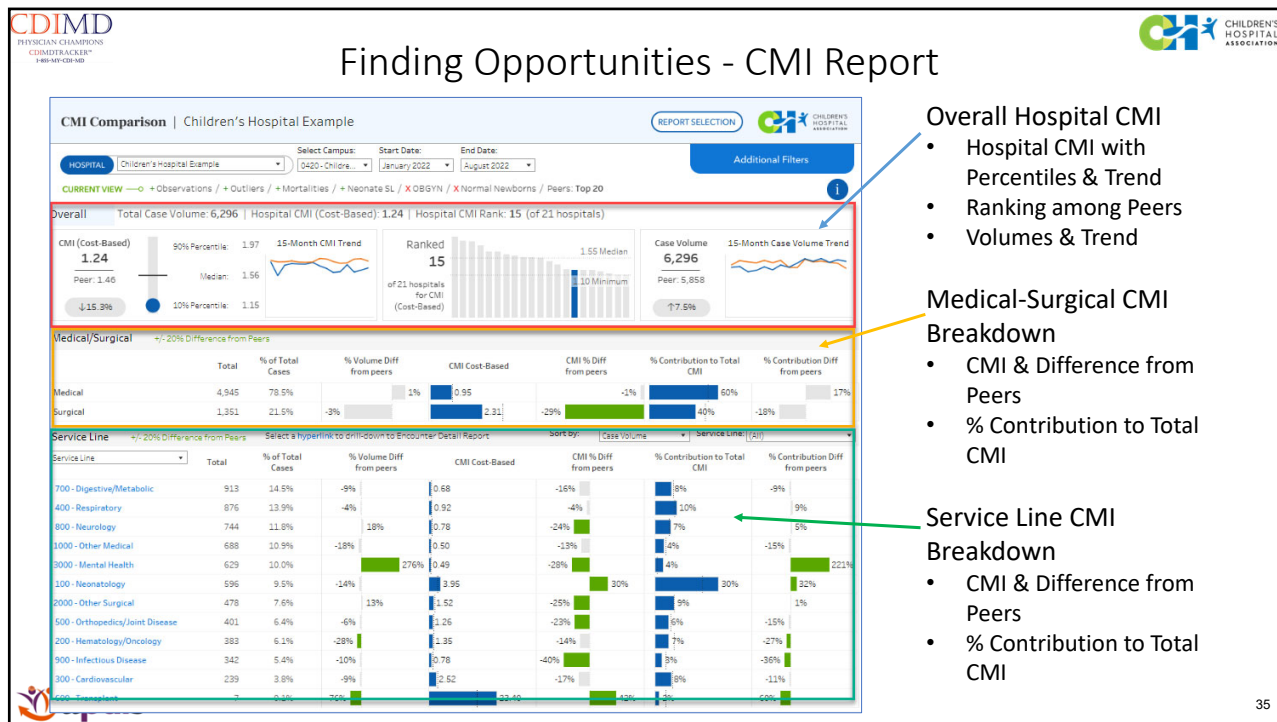
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DEMO

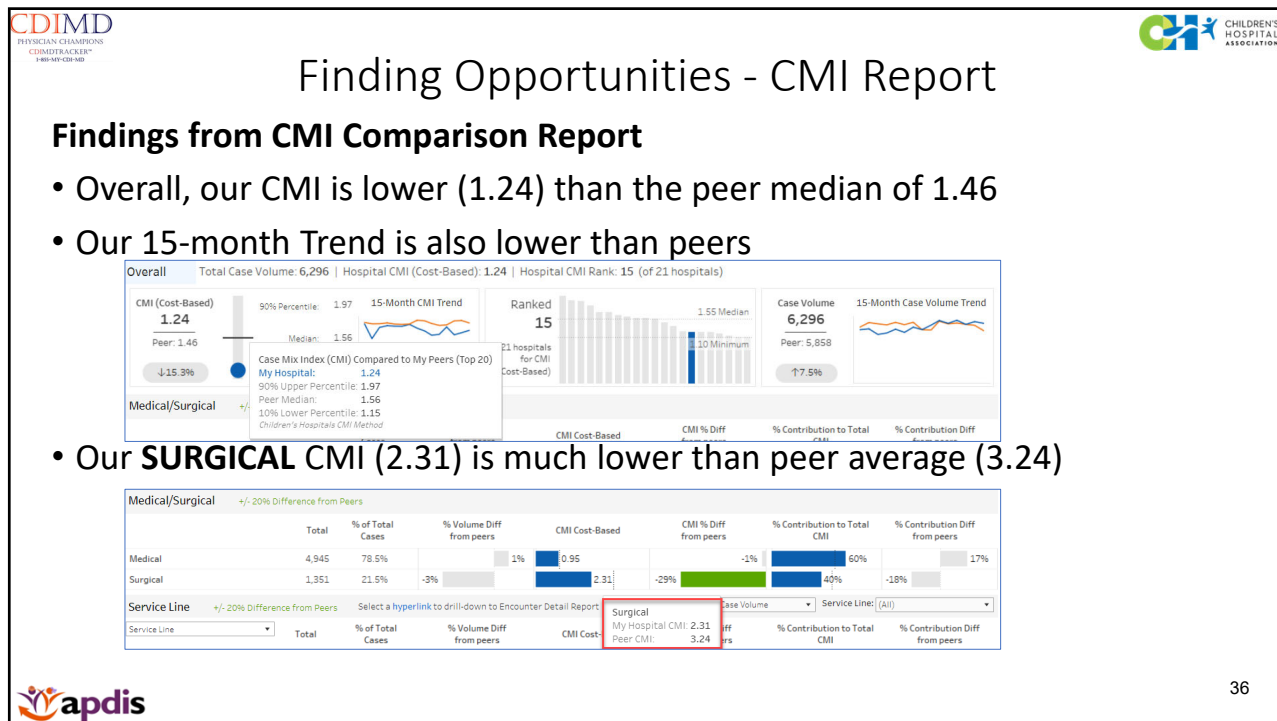
CIRS Report Series

Champions for Children's Health

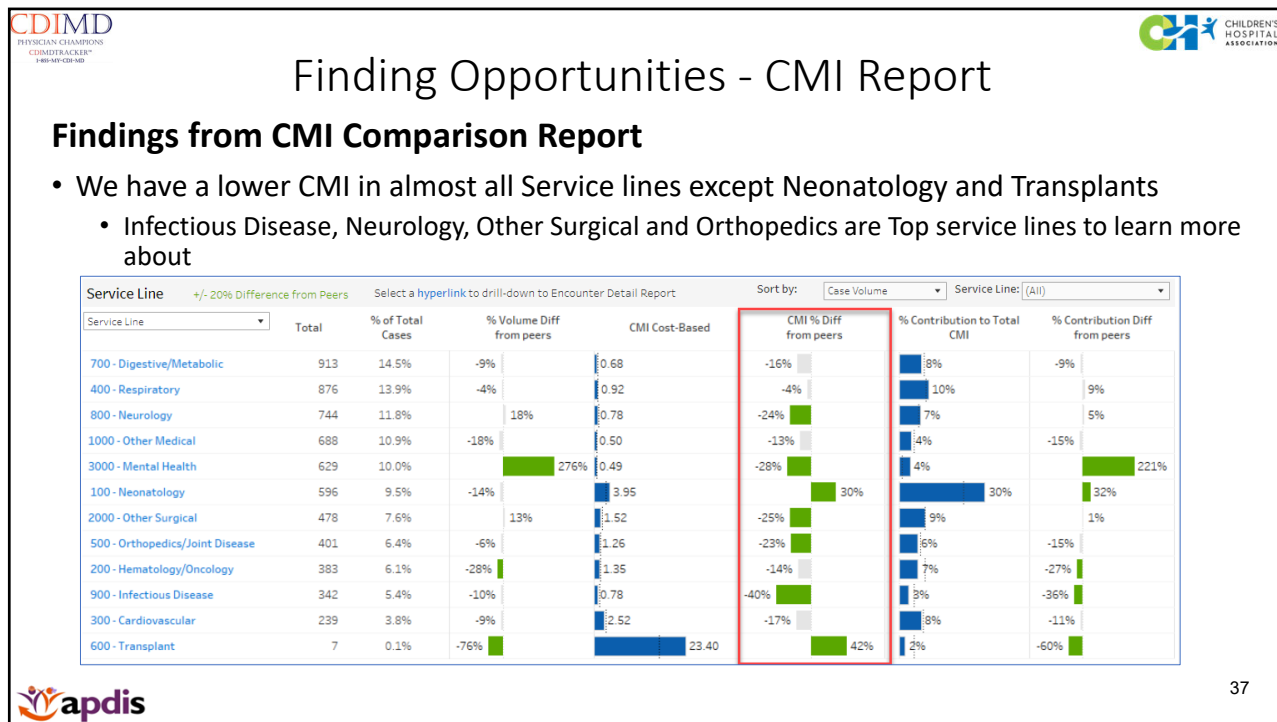
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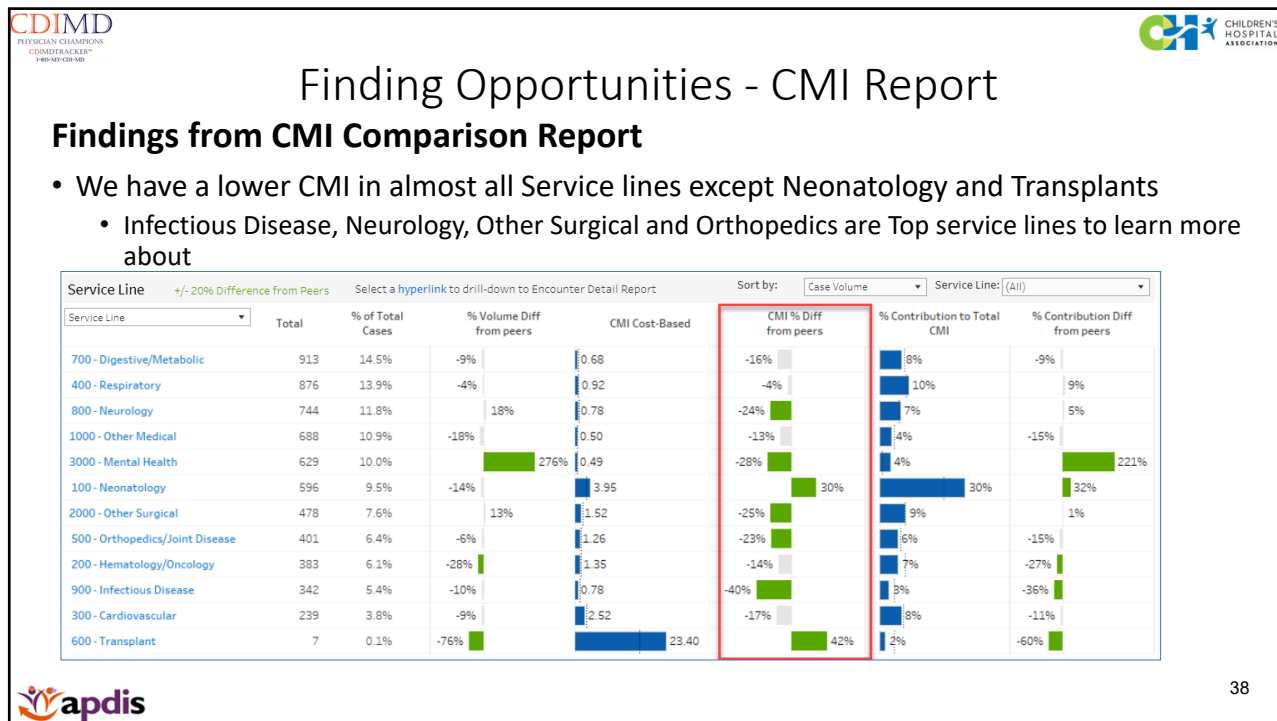
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Finding Opportunities - CMI Report


Findings from CMI Comparison Report

Neurology looks like a target area for improvement – let's learn more about a high volume DRG with a lower CMI than peers



- APRDRG 53 Seizure**

53 - Seizure
 My Hospital CMI: 0.47
 Peer CMI: 0.55

APR-DRG	Total	% of Total Cases	% Volume Diff from peers	CMI Cost-Based	CMI % Diff from peers	% Contribution to Total CMI	% Contribution Diff from peers
53 - Seizure	397	53.4%	6%	0.47	-14%	32%	21%
58 - Nerv syst disorder NEC	139	18.7%	67%	0.73	-10%	17%	100%
21 - Craniotomy X for trauma	42	5.6%	-42%	3.77	12%	27%	-14%
55 - Head trauma w coma/hemor	35	4.7%	29%	0.57	-9%	3%	56%
57 - Cl sk fx/IC inj, no coma	29	3.9%	8%	0.40	-16%	2%	21%
54 - Migraine & oth headache	27	3.6%	-16%	0.40	-6%	2%	4%


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Finding Opportunities - CDI Comparison Report

CDI Comparison Report:

Learn More about Service Line and Selected DRGs

- CMI
- Avg. # DX codes per case
- % of Complex Chronic Conditions
- % of MCCs and CCs assigned
- ALOS

Clinical Documentation Improvement | Children's Hospital Example

HOSPITAL: Children's Hospital Example | Select Campus: [Childs - Childs] | Start Date: [January 2022] | End Date: [August 2022]

Overall | Total Case Volume: 6,296 | Reporting Peer Hospitals: 20 | Hospital Case Mix Index (CMI): 1.24 | 10th Percentile: 1.15 | Median: 1.56 | 90th Percentile: 1.97

CMI (Cost-Based) ↓15.3%

1.24

Peer: 1.45

Diagnosis Codes / Case ↓20.1%

6.9

Peer: 8.6

% CCC ↓24.3%

35.3%

Peer: 46.6%


800 - Neurology | % Complication & Comorbidity
 My Hospital: 55.5%
 10% Lower Percentile: 63.3%
 Peer Median: 68.5%
 90% Upper Percentile: 77.8%

Service Line	Total	% of Total	Peer % of Total	CMI Cost-Based	Dx Codes per Case	% CCC	% MCC	% CC	ALOS
700 - Digestive/Metabolic	913	14.5%	15.9%						
400 - Respiratory	876	13.9%	14.5%						
800 - Neurology	744	11.8%	10.0%						
1000 - Other Medical	688	10.9%	13.3%						
3000 - Mental Health	629	10.0%	2.7%						
100 - Neonatology	596	9.5%	11.0%						

800 - Neurology | Diagnosis Codes per Case
 My Hospital: 5.4
 10% Lower Percentile: 5.7
 Peer Median: 7.6
 90% Upper Percentile: 10.4



800 - Neurology | % Complex Chronic Conditions
 My Hospital: 34.4%
 10% Lower Percentile: 41.8%
 Peer Median: 53.9%
 90% Upper Percentile: 68.5%

800 - Neurology | % Major Complication & Comorbidity (MCC)
 My Hospital: 21.4%
 10% Lower Percentile: 21.2%
 Peer Median: 30.2%
 90% Upper Percentile: 36.0%


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Finding Opportunities – CDI: Dx & PX Report

CDI: Diagnosis and Procedure | Children's Hospital Example

HOSPITAL: Children's Hospital Example | Select Campus: 0420-Childre... | Start Date: January 2022 | End Date: August 2022

CURRENT VIEW: Observations / Outliers / Mortalities / Neonate SL / X OBGYN / Normal Newborns / Peers: Top 20

Overall | Total Case Volume: 6,296 | Reporting Peer Hospitals: 20 | Hospital Case Mix Index (CMI): 1.24 | 10th Percentile: 1.15 | Median: 1.56 | 90th Percentile: 1.97

Selected APR-DRG: 53 - Seizure | Select an APR-DRG (for all data below): 53 - Seizure | Severity of Illness (for tiles below only): All

Case Mix Index: 0.47
Peer: 0.55

↓13.9%

Diagnosis Codes / Case: 4.5
Peer: 6.2

↓27.0%

% CCC: 31.5%
Peer: 43.4%

↓27.4%

% Major CC Cases: 11.6%
Peer: 19.7%

↓41.2%

% CC Cases: 54.7%
Peer: 68.5%

↓20.2%

Choose a Metric for the Table: Principal Diagnosis | Chart Sort: Case Volume | Click icon to download diagnoses/procedures for selected APR-DRG for code usage analysis

Principal Diagnosis for Selected APR-DRG: 53 - Seizure
Total Case Volume: 397

Case Volume Rank (My Hospital)	Case Volume (My Hospital)	% of Cases	Peer % of Cases	CMI Cost-Based (My Hospital)	CMI Cost-Based (peer)	Severity Level 1 (target)	Severity Level 1 (peer)	Severity Level 2 (target)	Severity Level 2 (peer)	Severity Level 3 (target)	Severity Level 3 (peer)	Severity Level 4 (target)	Severity Level 4 (peer)
6	21	5.3%	5.8%	0.72	0.78	23.8%	21.8%	23.8%	22.4%	33.3%	32.1%	19.0%	23.8%
7	17	4.3%	5.2%	0.40	0.43	58.8%	52.6%	29.4%	30.7%	11.8%	15.4%		1.3%



Learn about the Selected DRG in Depth by Combined SOI or each SOI Level

- CMI
- # DX Codes per case
- % Complex Chronic Conditions (CCC)
- % MCC
- % CC

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Finding Opportunities – CDI: Dx & PX Report

Choose a Metric for the Table: Principal Diagnosis | Chart Sort: Case Volume | Click icon to download diagnoses/procedures for selected APR-DRG for code usage analysis

Principal Diagnosis for Selected APR-DRG: 53 - Seizure
Total Case Volume: 397

	Case Volume Rank (My Hospital)	Case Volume (My Hospital)	% of Cases	Peer % of Cases	CMI Cost-Based (My Hospital)	CMI Cost-Based (peer)	Severity Level 1 (target)	Severity Level 1 (peer)	Severity Level 2 (target)	Severity Level 2 (peer)	Severity Level 3 (target)	Severity Level 3 (peer)	Severity Level 4 (target)	Severity Level 4 (peer)
G40909 - Epilepsy, unsp, no intractable, without status epilep...	1	92	23.2%	12.8%	0.43	0.47	52.2%	39.4%	33.7%	38.6%	12.0%	18.5%	2.2%	3.6%
R569 - Unspecified convulsion...	2	69	17.4%	18.9%	0.43	0.43	50.7%	54.9%	34.4%	30.5%	13.0%	12.4%	1.4%	2.2%
G40409 - Oth generalized epilepsy, not intractable, w/o stat epi	3	53	13.4%	6.1%	0.35	0.41	27.9%	44.7%	28.3%	36.7%	3.8%	15.8%		2.8%
G40109 - Local-rel symptc epi w simp prt seiz,not ntrct, w/o stat epi	4	46	11.3%	9.3%	0.39	0.45	57.8%	37.3%	31.8%	41.1%	4.4%	14.1%		2.7%
G40919 - Epilepsy, unsp, intractable, without status epilep...	5	33	8.3%	3.6%	0.64	0.66					97.0%	95.3%	3.0%	4.7%
G40901 - Epilepsy, unsp, not intractable, with status epilepticus	6	21	5.3%	5.8%	0.72	0.78	23.8%	21.8%	23.8%	22.4%	33.3%	32.1%	19.0%	23.8%
R5601 - Co... convulsion	7	17	4.3%	5.2%	0.40	0.43	58.8%	52.6%	29.4%	30.7%	11.8%	15.4%		1.3%

Choose a Metric for the Table: Principal Diagnosis | Principal Procedure | Secondary Diagnosis | Secondary Procedure

Bottom section provides all codes assigned for this DRG selected for PDx, secondary Dx, PPx and secondary procedures. *Best Option – Click Icon to pull report from PHIS in Excel format.

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CDI: Dx & PX Report – Secondary Dx Tab

Dx Code (ICD)	Dx Title (ICD)	MCC or CC Condition Fl.	Case Volume (My Hospita	% of Cases	Peer % of Cases	CMI Cost Based (My Hospita	CMI Cost Based (Peer)	Severity Level 1 (Target)	Severity Level 1 (Peer)	Severity Level 2 (Target)	Severity Level 2 (Peer)	Severity Level 3 (Target)	Severity Level 3 (Peer)	Severity Level 4 (Target)	Severity Level 4 (Peer)
E8339	Other Disorders Of Phosphorus Metabolism		0	0.0%	0.5%		1.23				16.1%		25.8%		58.1%
E8341	Hypertriglyceridemia		0	0.0%	0.0%		1.74								100.0%
E8342	Hypomagnesemia		1	0.3%	0.2%	0.40	1.19			100.0%	15.4%		30.8%	0.0%	53.8%
E8350	Unspecified Disorder Of Calcium Metabolism		0	0.0%	0.0%		1.74								100.0%
E8351	Hypocalcemia		1	0.3%	0.5%	1.74	0.65			0.0%	39.3%		50.0%	100.0%	10.7%
E8352	Hypercalcemia		0	0.0%	0.2%		0.87				58.3%		8.3%		33.3%
E8359	Other Disorders Of Calcium Metabolism		0	0.0%	0.0%		1.74								100.0%
E849	Cystic Fibrosis, Unspecified	CC	0	0.0%	0.0%	0.40	0.40			100.0%	100.0%				100.0%
E880	Dehydration		2	0.5%	2.9%	0.40	0.67	0.0%	22.2%	100.0%	29.0%		33.0%	0.0%	15.9%
E881	Hypolemia		0	0.0%	0.0%		1.74								100.0%
E889	Volume Depletion, Unspecified		0	0.0%	0.0%		0.51				50.0%		50.0%		100.0%
E870	Hyperosmolality And Hyponatremia	CC	0	0.0%	0.4%		1.41				9.1%		18.2%		72.7%
E871	Hypo-osmolality And Hyponatremia	CC	16	4.1%	1.8%	0.55	0.79			62.5%	42.9%	31.3%	33.3%	6.3%	23.8%
E872	Acidosis	CC	11	2.8%	3.1%	0.74	0.85			36.4%	31.6%	45.5%	40.6%	18.2%	27.8%
E873	Alkalosis	CC	0	0.0%	0.1%		1.17						50.0%		50.0%
E874	Mixed Disorder Of Acid-base Balance	CC	0	0.0%	0.4%		1.57				12.5%		29.3%	0.0%	87.5%
E875	Hyperkalemia		5	1.3%	0.7%	0.53	0.79			40.0%	46.3%	60.0%	29.3%	0.0%	24.4%
E879	Hypokalemia		2	0.5%	1.1%	1.07	1.05	0.0%	6.3%	50.0%	18.8%		31.3%	50.0%	43.8%
E8770	Fluid Overload, Unspecified		1	0.3%	0.2%	1.74	1.58						14.3%	100.0%	85.7%
E878	On Disorders Of Electrolyte And Fluid Balance, Nec		3	0.8%	0.6%	0.85	1.03				66.7%		30.3%	27.3%	42.4%
E8801	Alpha-1-antitrypsin Deficiency		0	0.0%	0.0%		0.40						100.0%		100.0%
E8809	On Disorders Of Plasma-protein Metabolism, Nec		1	0.3%	0.2%	0.40	1.49			100.0%	0.0%	0.0%	22.2%	0.0%	77.8%
E882	Lipomatosis, Not Elsewhere Classified		0	0.0%	0.0%		0.40								100.0%
E8940	Mitochondrial Metabolism Disorder, Unspecified	CC	0	0.0%	0.3%		0.94				5.0%		65.0%		30.0%
E8841	Melias Syndrome	CC	2	0.5%	0.1%	0.51	1.26			50.0%	0.0%	50.0%	33.3%	0.0%	66.7%
E8849	Other Mitochondrial Metabolism Disorders	CC	0	0.0%	0.1%		1.35				20.0%		20.0%		60.0%
E8881	Metabolic Syndrome		0	0.0%	0.1%		1.46								75.0%
E8889	Other Specified Metabolic Disorders		1	0.3%	0.2%	0.61	0.81			0.0%					20.0%
E889	Metabolic Disorder, Unspecified		0	0.0%	0.1%		0.84								25.0%
F05	Delirium Due To Known Physiological Condition	CC	0	0.0%	0.1%		0.98								40.0%
F064	Anxiety Disorder Due To Known Physiological Condition		0	0.0%	0.0%		1.17								50.0%
F0781	Postconcussional Syndrome		0	0.0%	0.0%		0.51								100.0%
F09	Unsp Mental Disorder Due To Known Physiological Condition		0	0.0%	0.1%		0.84								25.0%
F1010	Alcohol Abuse, Uncomplicated		0	0.0%	0.0%		0.40								100.0%
F1123	Opioid Dependence With Withdrawal	CC	0	0.0%	0.0%		1.74								100.0%
F1210	Cannabis Abuse, Uncomplicated		0	0.0%	0.1%		0.51				50.0%		50.0%		100.0%

Sorted by ICD Code A-Z – allows view of codes for similar types of conditions

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Review Findings from CDI: Dx & PX Report

- Large % of cases assigned an Unspecified Seizure Disorder code as the Principal Dx that is Not-Intractable, without Status Epilepticus, or Unspecified Convulsion code
- PDxs for SOI level 3-4 cases are predominately cases with Intractable seizures, Status Epilepticus or both documented
- Conditions assigned by peers more frequently in SOI level 3-4 cases:
 - Infectious conditions: sepsis, encephalitis, hepatitis
 - Malignancies: brain cancer, lymphomas, leukemias
 - Anemias, Immunodeficiencies, and other metabolic disorders
 - Electrolyte disorders & Malnutrition
 - Cardiomyopathy and heart/cerebrovascular conditions
 - Pneumonia & Respiratory failure
 - Perinatal & Congenital conditions
 - Adverse effects of medications
 - Child abuse

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Other Reports in PHIS

- **Comparative Analysis**

Title ^
Comparative Analysis - APR-DRG V7
Comparative Analysis - MS-DRG V6
Comparative Analysis - Principal Diagnosis V8
Comparative Analysis - Principal Procedure V8
Comparative Analysis - Service Line V7
- **Case Mix Index Comparison**

Case Mix Index Comparison - APR-DRG V2
Case Mix Index Comparison - MS-DRG V2
Case Mix Index Comparison - Principal Diagnosis V2
Case Mix Index Comparison - Principal Procedure V2
- **ICD Diagnosis & Procedure Code Comparison**

ICD Diagnosis & Procedure Code Comparison - APR-DRG V4
ICD Diagnosis & Procedure Code Comparison - MS-DRG V4
ICD Diagnosis & Procedure Code Comparison - Prin or Sec Dx V3
ICD Diagnosis & Procedure Code Comparison - Principal Diagnosis V4
ICD Diagnosis & Procedure Code Comparison - Principal Procedure V4
- **AHRQ PDI Report Cards**

AHRQ Accidental Puncture or Laceration V6
AHRQ Central Venous Catheter-Related Bloodstream Infections V6
AHRQ Iatrogenic Pneumothorax V6
AHRQ Neonatal Blood Stream Infection V6
AHRQ Postoperative Hemorrhage or Hematoma V6
AHRQ Postoperative Respiratory Failure V6
AHRQ Postoperative Sepsis V6

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Summary and Next Steps

- “Know Your Score”
- Data can advocate positive change
- PHIS is the **ONLY** CHA-sanctioned database measuring children’s hospital performance
- Used correctly, PHIS can help you take your program from good to great
- Want to get PHIS or Inpatient Essentials?
- Want to enhance your use of what you’ve already licensed?
 - Call Amber Davidson at 913-981-4140 or write her at amber.Davidson@childrenshospitals.org

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THANK YOU SO MUCH
FOR YOUR ATTENTION!

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