

# flourish

CDI IN BLOOM | **acdis 2023**

**MAY 8–11, 2023**



## Engaging Physicians Proactively With AI-Powered CAPD and Improving Documentation Integrity With AI-Powered CDI Tools

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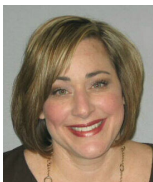
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**hpro**

**acdis**

### Presented By



**Tami L. McMasters-Gomez, MHL, BS-HIM, CCDS, CDIP**, is the director of coding and CDI services at the University of California Medical Center at Davis based in Sacramento, California. She has more than 30 years of experience in HIM, starting her career as a file clerk in the medical records department of a small rural hospital. McMasters-Gomez has worked in a variety of roles, including coder, auditor, supervisor, manager, and director. She is a member of the 2022/2023 ACDIS Leadership Council and the inaugural ACDIS Outpatient Leadership Council Mastermind. She is also an AHIMA-certified ICD-10-CM/PCS trainer.

**UC DAVIS  
HEALTH**

*ACDIS 2021 Award for Most Diverse CDI Program in the Nation – UC Davis  
ACDIS 2022 CDI Professional Achievement Award – ACDIS*



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## Presented By



**Penny M. Jefferson, MSN, RN, CCDS, CDIS, CCS, CRC, CDIP, CHDA, CRCR**, is a CDI manager at UC Davis Medical Center in Sacramento, California. She entered the CDI field in 2012 at a Level I trauma center in Denver, Colorado. In 2019, she joined the CDI team at Mayo Clinic in Phoenix as a concurrent CDI reviewer. In 2020, she transitioned to supervisor of CDI at the Mayo Clinic in Rochester, Minnesota. She has been with UC Davis Health since 2022.



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## Who We Are:

### A Few Highlights About the UC Davis Health Medical Center

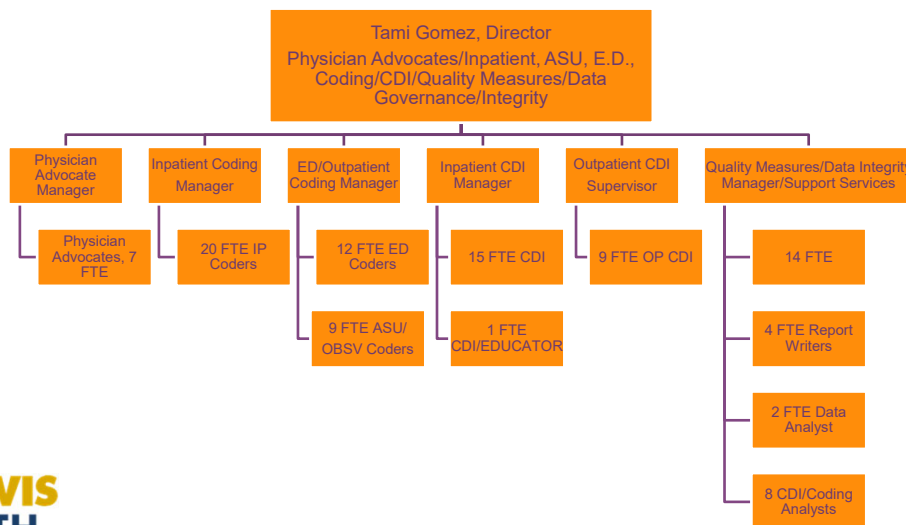


- 625 bed multispecialty AMC
- New California Tower being built (75 additional beds)
- New state of the art Community Surgery center
- Expansion of Ambulatory Operations
- Serves 33 counties, covering a 65,000 square-mile-area north to the Oregon border and east to Nevada
- “Most Wired” hospitals by U.S News & World Report
- Ranked Sacramento's top hospital by U.S. News & World Report, and among nation's best in 15 medical specialties
- Recognized as Best Hospital 7 years in a row in the greater Sacramento area
- 16 inpatient CDI and 10 outpatient CDI (CDI program started in 2008)



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## Organizational Chart: Health Information Management



## Disclosure

We do NOT have any affiliation with the following companies that may be mentioned during this presentation:

- Microsoft Office (Word, Excel, Outlook, Access, Teams, OneNote, Visio, PowerPoint, Edge, or SharePoint)
- Tableau
- SAP Business Objects
- Cold Fusion™
- Google Chrome™ (or any other Google™ products)
- Mozilla Firefox
- Greenshot
- 3M –mModal (3M/360, HCC Collaborate, HCC Engage)
- Optum
- Vizient

## What We Will Cover:

1. Engaging physicians proactively with AI powered CAPD
2. Using data to provide feedback
3. Physician advocate/trainer interaction with providers
4. Understanding the impact automation has on KPIs
5. Improving CDI with AI powered tools
6. Automation of initial reviews for IP CDI
7. Leveraging CDI applications (prioritization/evidence sheets)

## Learning Outcomes

- At the completion of this educational activity, the learner will be able to:
  - Construct an action plan to engage physicians proactively with AI powered CAPD
  - Give examples of using data to provide feedback
  - Describe the impact automation has on KPIs



## Inpatient/Outpatient CDI

Strategies to engage physicians and improve KPI's (Key Performance Indicators)

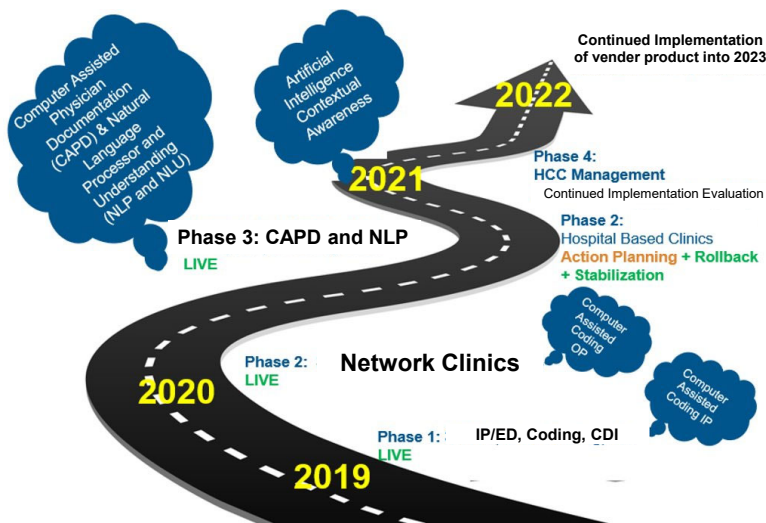
## Artificial Intelligence (AI) and CDI

- AI-powered tools:
  - Provide real-time insights for physicians and CDI
  - Aids in prioritization
  - Aids in managing workflows
  - Aids in the capture of risk model diagnosis (example: Elixhauser and Vizion diagnostic variables)

## Journey to AI Operation with Implementation of Vendor Product

### Key Customers Served

- Providers
- Inpatient and ED coders
- Outpatient coders
- CDI
- Quality Improvement Team
- Compliance
- Billing Offices



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## Physician Benefits of AI

Care and documentation gaps are closed before the note is saved in the electronic health record (EHR) with the implementation of in-workflow nudges powered by advanced AI

Retrospective queries can be minimized through the proactive clinical awareness delivered through the EHR real-time

Concurrent clinical summaries of information for providers reduces rework

Administrative burden and burnout is reduced

Increase time to care for patients

## HIM Physician Advocates

**Part of our team includes HIM physician advocates who are experts in specific EHR applications used by physicians**

- Custom documentation template build
- Order preference list build
- Smart tools
- CAPD
- Support applications – access/training/support
- Remote user support and on-demand training

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## HIM Physician Advocate Program



**GOAL:** Make physician training an ongoing process starting day 1, continual support and refresher training at flexible intervals to accommodate physician schedules.



**BENEFIT:** Ongoing training enables physicians to be more proficient in clinical documentation and effective in their job. Great clinical documentation equals better coding, billing, and reporting!



**Physician Training Includes**

All Clinical provider facing EHR Applications  
Application Training  
Technical Support  
Physician Efficiency and Functionality

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## HIM Physician Advocates Supports CDI

### Clinical Documentation Content Training

- Inpatient CDI (Build and support query templates)
- Outpatient coding (Build and support query templates)
- CAPD (Computer Assisted Physician Documentation)
- Special projects as time allowed

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## Phase 1: Creating Partnerships in Product Rollout

- Partner with clinic managers, and physicians
- Attend physician staff meetings to socialize the project
- Pilot and validate before any go live
- Explore virtual options to meet the physician needs
- When educating provider's, limit presentation time to 15 minutes

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## Phase 2: Engage Physicians By Providing Resources

- Tip Sheets
- Training videos
- One on one education
- Physician Champions (peer-to-peer education)
- EMR newsletters catered to our physicians

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## Phase 3: Fostering Continuous Partnerships

- Identify key stakeholders and design workflows for automatization
- Use **data** for continuous process improvement
- Leverage data to facilitate engagement
- Engage vendor for partnership on product development
- Be open and flexible to change!

Data May Change, Workflow May Change, but Keep Working the Plan, and Success Will Happen!

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## Provider Nudge

- Requires a rule
  - Clinical evidence and documentation we want the AI powered tool to calculate before firing
- A nudge links laboratory data and/or documentation to a diagnosis
- Requests specificity to diagnoses, or suggests a missing clinical condition

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## Nudge Example

Clinician note says “sodium is 128”

The program fires a “nudge” for clinical diagnosis as it relates to clinical evidence:

- *Evidence of hyponatremia (sodium levels <130 mEq/L) without explicit mention. (24001)*
- **And**
- **Physician message: (populates in notification window)**
- *We have identified electrolyte imbalances. If appropriate, please document the associated diagnosis.*

Clinician can replace “sodium 128” to now include the diagnosis “hyponatremia”

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## CAPD and Nudge Clinical Criteria Evaluation

- Focus on clinical conditions/procedure
- Always review data
- Provide an overview of all nudges, rules and physician messages
- Pediatric/adult nudge customization
- Measure physician engagement
- Be open to revisions of nudge criteria and/or tweaking things to best fit your organization

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## Custom Nudge Content: Service Line Specific



UC Davis provider nudges are customized based on service line / organizational & clinical criteria



Nudge content will be modified over time based on provider engagement and benchmarking data

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## What the NLU or NLP Would Use to Fire the Nudge

Clinical Diagnosis	Clinical Rule	Physician Message	Supporting Clinical Evidence
Anemia specificity needed (acute Blood Loss Anemia (ABLA), Chronic blood loss anemia, Acute on chronic blood loss anemia, Iron deficiency anemia)	There is explicit documentation or evidence of anemia without mention of type	BLOOD DISORDER There is evidence of a blood disorder; please consider documenting the type.	Hemoglobin $\leq 10$ Hematocrit $< 32$ Transfusions For blood loss anemia Abnormal Hemoglobin and Hematocrit Documentation of blood loss Transfusion was given
Debridement- B - Excisional/Non Excisional	Explicit mention of debridement and zero to many evidences of excisional debridement, without mention of excisional or non- excisional debridement.	DEBRIDEMENT - B There is explicit mention of debridement. If true, please verify the type (excisional or non-excisional).	Supporting evidence for debridement includes: -Technique used for debridement -Instruments used -Nature of the tissue removed -The appearance and size of the wound -The depth of the debridement
Hyponatremia (Low Sodium)	2 or more evidences of hyponatremia (sodium levels $<130$ mEq/L) without explicit mention.	Low Sodium We have identified electrolyte imbalances. If appropriate, please document the <b>associated diagnosis</b>	(sodium levels $<130$ mEq/L)
Encephalopathy - Type	Explicit mention of encephalopathy and zero to many evidence of encephalopathy, without documentation of etiology/type of encephalopathy	ENCEPHALOPATHY - TYPE Please mention the <b>type/etiology</b> of encephalopathy, if known.	Evidence of AMS Abnormal EEG Explicit mention of organic solvent, sepsis or alcoholism Hypoglycemia: serum or blood glucose $< 50$

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## KPI Improvement (in terms of query responses)

- Physician buy-in and education
- Designated physician champions (inpatient and outpatient)
- Alignment
- Customized data and analysis was actionable for various services lines
- Leveraged data and analytics to drive improvement in documentation & operations

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## Computer Assisted Physician Documentation (CAPD) in Action

**Left Screenshot (Unresolved):**

- Fluency Assistant:** Your messages are up to date.
- Blood Disorder - Anemia:** There is evidence of a blood disorder; please consider documenting the type (**acute blood loss anemia, acute on chronic blood loss anemia, other**).
- Encephalopathy - Type:** Please mention the **acuity** and **type** of encephalopathy, if known.
- My Note:**
  - Type: Progress Notes | Service: Internal Medicine
  - Date of Service: 12/2/2021 | 0955
  - Cosign Required: ☐
  - Font: Arial, Size: 12, Bold, Underline
  - Text: The patient has encephalopathy.
  - Lab Values: HGB 4.2, HCT 20, RBC 2.5
  - Text: The patient has blood loss.
- Provider Nudges:** Unresolved

**Right Screenshot (Resolved):**

- Fluency Assistant:** Your messages are up to date.
- My Note:**
  - Type: Progress Notes | Service: Internal Medicine
  - Date of Service: 12/2/2021 | 0955
  - Cosign Required: ☐
  - Font: Arial, Size: 12, Bold, Underline
  - Text: The patient has metabolic encephalopathy.
  - Lab Values: HGB 4.2, HCT 20, RBC 2.5
  - Text: The patient has acute blood loss anemia.
- Provider Nudges:** Resolved

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## Raise-Your-Hand Questions

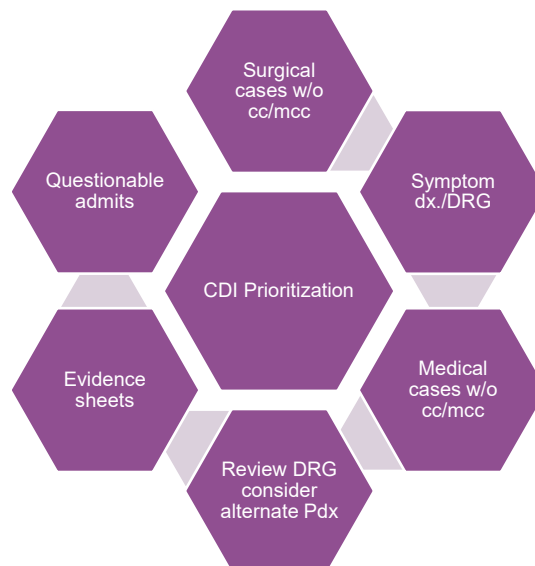
- **Question #1:** Does your organization have a CAPD (Computer Assisted Physician Documentation) application in use?
  - Yes
  - No
  - In process of implementing
- **Question #2:** In your organization, are your CDI assignments automated?
  - Yes
  - No
  - Hybrid

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## Leveraging Technology/Automation in CDI

## Leveraging the Vender Product: Concurrent Review Prioritization



## Concurrent Review Prioritization

- Addresses any cases that may have otherwise been overlooked
- Review of all accounts with a single CC/MCC
- Mortality, HAC, and PSI Reviews
- Prioritizing accounts allows us to maintain an average of 40 total reviews per week
- Focus on hospital specific metrics (sepsis/malnutrition)

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## CDI: Prioritizing Concurrent Reviews

CDI Priority	Description	Potential Condition	Indicators
	Surgical Cases with CC without MCC	CHF	
	Medical Cases without CC/MCC	CHF	
	Low Priority Cases - minimal change impact	CHF, Electr	PPC
	Medical Cases without CC/MCC		
	Optimal DRG - no need for review/re-review	CHF	
	Review DRG - Consider alternate DRG	Enceph, CHF, ACS	
	Review DRG - Consider alternate DRG	Arrh	PPC, ACR, PPR
	Low Priority Cases - minimal change impact	Enceph, Arrh	
	Surgical Cases without CC/MCC		
	Surgical Cases without CC/MCC		
	Questionable Admits	CHF, Arrh, Enceph	
	Medical Cases without CC/MCC	BehavH	PPC
	Medical Cases without CC/MCC	CHF, Enceph	
	Optimal DRG - no need for review/re-review	CHF, ACS	

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## Other Incentives IP CDI Evidence Sheets Provide

<p>There is evidence of hyponatremia without explicit mention.</p> <p>Required Evidence Not Found</p> <p>✗ Explicit mention of hyponatremia</p> <p>Evidence Found</p> <p>✓ Evidence of treatment for hyponatremia - Evidence of treatment for hyponatremia</p> <p>Progress Notes(SUBJECTIVE)(02/01/2023 at 10:37 AM)</p> <p>... / hr at 01/27/23 0000 NaCl 0.9%, IV, CONTINUOUS, Last Rate: 20 mL / ...</p> <p>Progress Notes(INTERVAL No)(01/29/2023 at 06:53 AM)</p> <p>... volume down - repletion with 500cc LRx2 ...</p> <p>Progress Notes(SUBJECTIVE)(02/01/2023 at 10:37 AM)</p> <p>... Lactated Ringers, IV, CONTINUOUS NaCl 0.9%, IV, CONTINUOUS, Last Rate: 20 mL / ...</p> <p>Progress Notes(SUBJECTIVE)(02/01/2023 at 10:37 AM)</p> <p>... Daily Bedtime CURRENT MEDICATION DRIPS: Lactated Ringers, IV, CONTINUOUS NaCl 0.9%, IV, CONTINUOUS, ...</p> <p>Progress Notes(SUBJECTIVE)(02/01/2023 at 01:44 PM)</p> <p>... / hr at 01/27/23 0000 NaCl 0.9%, IV, CONTINUOUS, Last Rate: 20 mL / ...</p> <p>Progress Notes(SUBJECTIVE)(01/31/2023 at 01:44 PM)</p> <p>... Lactated Ringers, IV, CONTINUOUS NaCl 0.9%, IV, CONTINUOUS, Last Rate: 20 mL / ...</p>	<p>Quality Indicators</p> <p>^ AHRQ Quality Indicators</p> <p>Processed Using MS DRG v39.0 (AHRQ v2022)</p> <p>AHRQ Quality Indicators for PSIs, PDIs or NQIs have not been identified for this visit.</p> <p>^ Potential Preventable Complications (PPCs)</p> <p>^ Potentially Preventable Readmissions (PPRs)</p> <p>Processed Using APR DRG v40.0</p> <p>A Potentially Preventable Readmission (PPR) have not been identified for this visit.</p> <p>^ Hospital-Acquired Conditions (HACs)</p> <p>Processed Using MS DRG v40.0</p> <p>Hospital Acquired Conditions (HACs) have not been identified for this visit.</p>
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## CDI Initial Reviews Auto Assignment

- Auto assignment, has no direct integration with Encoder- Home Grown Automation
- Elimination of manual assignment
- A database was developed to track all assignments
- Historical data was pulled to identify the average number of new reviews assigned
- You control the prioritization of assignments (Medicare, surgeries, trauma, etc.)

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## Step 1: Setting the Foundation for Auto Assignment

- Ask the right questions – What do you want to accomplish?
  - Determine what databases are available
    - You will also need a clarity report writer and DBA
  - Determine ability to export to databases or visualization tools
    - Export, Transform, and Load (ETL)
  - Build a system visualization tool to auto assign cases
  - Know the total number of cases you want to assign daily
  - Connect to staffing calendars so the code logic knows who to assign to

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## Step 2: Creating the Build for Auto Assignment

- Our system analyst created the build/logic in our analytic platform by creating a script to pull in the following information from the database:
  - Account ID
  - Patient MRN
  - Hospital admit date
  - Discharge date
  - Financial class
  - Hospital service
  - Hospital department

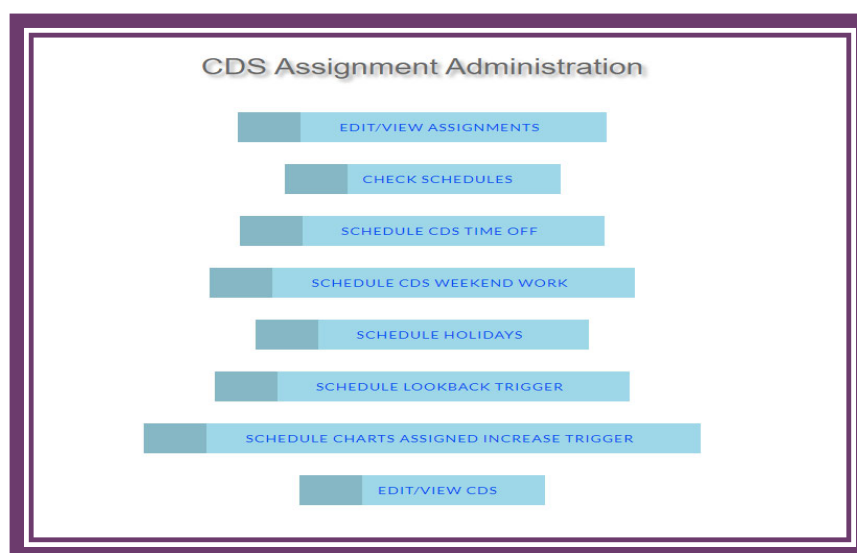
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## Setting Max (New Patient Assigned?) Accounts, Increased Production by Eliminating Reconciliation

Day of week	PTO	Regular assignment	PTO or holiday caps	
Monday	1-person	10	12 & out 1 day	All holidays are programmed in tool to eliminate assignment for those days
Monday	2 or more-people	11	12 & 2 or more days from holiday	12 is our max per day
Tuesday	1 or more people out	8	9 (holiday return 10)	
Wed.-Fri.	1 or more PTO	7		
Sat./Sun		7		

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## Flexibility!!!! Report Logic and Scheduling is Key



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## Elimination of CDI Reconciliation

- Increased CDI production by 25-33%
- Strong coding team with high accuracy rates allowed for CDI reconciliation removal
- Leveraged data reports to support the elimination of CDI reconciliation
- Allows coders to code
- CDI now has more time to review more complex cases
- Added benefit was improved team morale

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## Doing More With Less

- Increased CDI productivity, has allowed us to re-classify one of our full time CDI FTEs to a CDI educator/quality reviewer
  - Increased CDI education
  - Additional staff resource for questions
  - Added subject matter expert
  - Regular quality auditing for compliance
  - Little or no impact to CDI workload

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## Case Management and Leveraging CDI Technology

Encoder with AI provides auto-suggested DRGs that can be leveraged to engage with case management and hospital specific goals with LOS

LOS	Working DRG - /Wt/GLOS/ROI/ROM	Sex
1 Days	027 CRANIOTOMY AND ENDOVASCULAR INTRACRANIAL PROCEDURES WITHOUT CC/MCC - /2.5118/1.90/1/1 *MS	M
1 Days	708 MAJOR MALE PELVIC PROCEDURES WITHOUT CC/MCC - /1.4914/1.40/1/1 *MS	M
1 Days	708 MAJOR MALE PELVIC PROCEDURES WITHOUT CC/MCC - /1.4914/1.40/1/1 *MS	M
1 Days	708 MAJOR MALE PELVIC PROCEDURES WITHOUT CC/MCC - /1.4914/1.40/1/1 *MS	M
6 Days	658 KIDNEY AND URETER PROCEDURES FOR NEOPLASM WITHOUT CC/MCC - /1.5791/2.10/3/2 *MS	M
2 Days	661 KIDNEY AND URETER PROCEDURES FOR NON-NEOPLASM WITHOUT CC/MCC - /1.0644/1.90/2/1 *MS	M

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## Case Management, Leveraging the Working & Auto Suggested DRG

Status: In Progress

New Review

Change Status

Complete

Review Timeline (6)

1/31/2023 10:58 PM

1/30/2023 3:21 AM

1/30/2023 3:21 AM

1/27/2023 3:49 AM

1/26/2023 12:37 PM

1/26/2023 12:09 AM

Diagnoses ICD-10-CM

Code	POA	CC
G93.9 - Disorder of brain, unspecified	Y	No
C78.00 - Secondary malignant neoplasm of unspecified lung	Y	CC
C79.31 - Secondary malignant neoplasm of brain	Y	CC
Z85.3 - Personal history of malignant neoplasm of breast	E	No
C50.919 - Malignant neoplasm of unspecified site of unspecified female breast	Y	No
G40.909 - Epilepsy, unspecified, not intractable, without status epilepticus	Y	No
Z17.1 - Estrogen receptor negative status (ER-)	E	No
Z92.3 - Personal history of irradiation	E	No
I69.30 - Unspecified sequelae of cerebral infarction	E	No
Z68.30 - Body mass index (BMI) 30.0-38.9, adult	E	No
E66.9 - Obesity, unspecified	Y	No

Procedures ICD-10-PCS

Code	Date	Provider
00B00ZX - Excision of Brain, Open Approach, Diagnostic		

DRGs

Type	Qualifier	Code	Weight	Exp. Reimb.	SOI	ROM	GML...	AMLOS
MS-DRG VS 40...		[026] CRANIOTOMY AND E...	3.0235	41,991.07			3.60	5.10
APR-DRG VS 4...		[021] OPEN CRANIOTOMY ...	1.8308	0.00	1	2	2.78	3.37

Next Review Date: Not Set

Comments

There are no comments

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## Custom SmartLists: ENT / Malnutrition

**Evidenced by:**  
 {Malnutrition Adult Diagnosis:28263}  
 Nutrition Focused Physical Exam: {N {Moderate Acute Malnutrition:28257}  
 {Severe Acute Malnutrition:28258}  
 {Moderate Chronic Malnutrition:28259}  
 {Severe Chronic Malnutrition:28260}  
 {Moderate Social Malnutrition:28261}  
 {Severe Social Malnutrition:28262}}

**Evidenced by:**  
 {Severe Acute Malnutrition:28258}  
 Nutrition Focused  
 Intake of less than or equal to 50% of estimated energy requirements for 5 or more days  
 Weight loss of more than 2% (\*\* kg) over 1 week  
 Weight loss of more than 5% (\*\* kg) within 1 month  
 Weight loss of more than 7.5% (\*\* kg) within 3 months  
 Moderate loss of (RD Muscle/Fat Loss:15660) mass based upon physical exam  
 Moderate to severe fluid accumulation

**Additional diagnoses, health status, and social determinants assessed during this admission:**  
 {ENT Acuity:21927}  
 Anemia: {ENT Anemia:21925}  
 Atelectasis  
 BMI greater than or equal to 30 or less than 18.5: {ENT BMI Diagnosis:21926}  
 Dysphagia  
 Electrolyte disturbances: {ENT Electrolytes:21924}  
 Malnutrition (include dietitian assessment here). \*\*\*  
 Metastasis to \*\*\*  
 Neoplasm related pain  
 Social status: {ENT Social Status:21928}  
 \*\*\*

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## Improvement in KPIs and Continuous Data Monitoring

## What We Did to Improve KPIs

- Expanded CDI program
- Ongoing audits (Coding and CDI)
- Established backend reviews and controls to ensure integrity
- Invested in technology
  - CAPD, HCC Management
  - CDI Prioritization tools
- Data analysis and dashboards
- Work to decrease 1 day stays (considered inpatient admissions)
- Template builds
  - Utilization SmartPhrases, SmartLists, etc.

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## Dashboards to Measure KPIs

Key Performance Indicator	FY20 Baseline	FY21 Actual	Target FY21	Goal Baseline	FY 2021			FY 2022
					Q2	Q3	Q4	Q1
Case Mix Index	1.64	1.77	1.64	⊕	1.84	1.75	1.68	1.72
Mortality Index	1.01	0.74	0.95	⊕	1.11	0.48	0.69	1.18
Expected Mortality	1.01	1.24	1.02	⊕	1.02	1.39	1.29	1.40
Sepsis Expected Mortality	4.41	3.99	4.42	⊕	3.04	2.12	6.04	4.72
Expected LOS	5.48	6.33	5.48	⊕	6.72	6.30	6.27	5.89

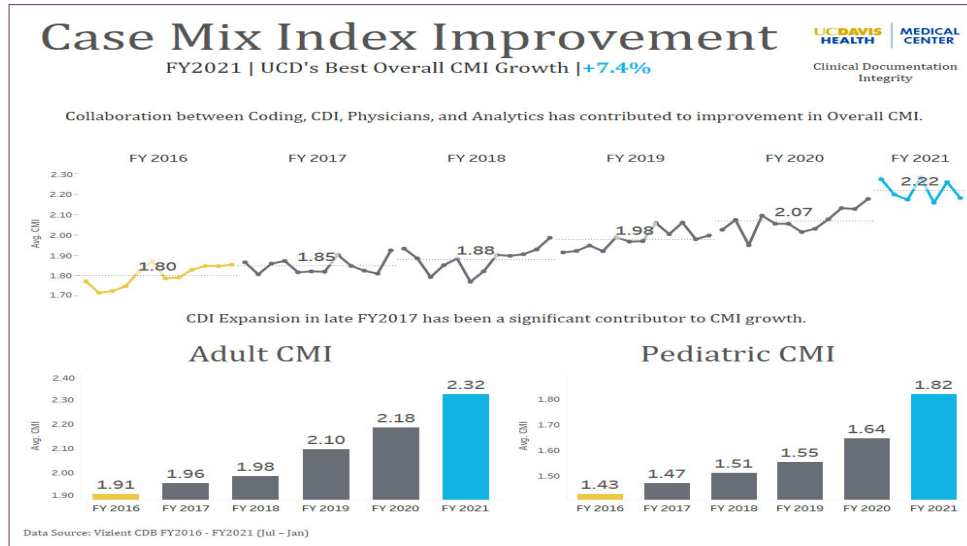
Data Source: Varent CDB FY2020-FY2022 (July) | 2020 AARC Risk Model | Age <18

Key Performance Indicator	FY20 Baseline	FY21 Actual	Target FY21	Goal Baseline	FY 2021			FY 2022
					Q2	Q3	Q4	Q1
Case Mix Index	2.19	2.30	2.19	⊕	2.33	2.29	2.28	2.31
Mortality Index	0.84	0.68	0.80	⊕	0.79	0.70	0.53	0.71
Oncology Mortality Index	1.19	0.68	1.18	⊕	0.82	0.83	0.55	0.95
Sepsis Mortality Index NPOA	2.15	1.44	2.12	⊕	1.58	1.42	1.23	1.61
LOS Index	0.95	0.96	0.94	⊕	0.96	0.98	0.93	0.95
CY2021 MSSP RAF Score	1.338	1.514	1.402	⊕				

Data Source: Varent CDB FY2020-FY2022 (July) | 2020 AARC Risk Model | RAF Score Source: Optum OPR - Rolling 12 Month Period

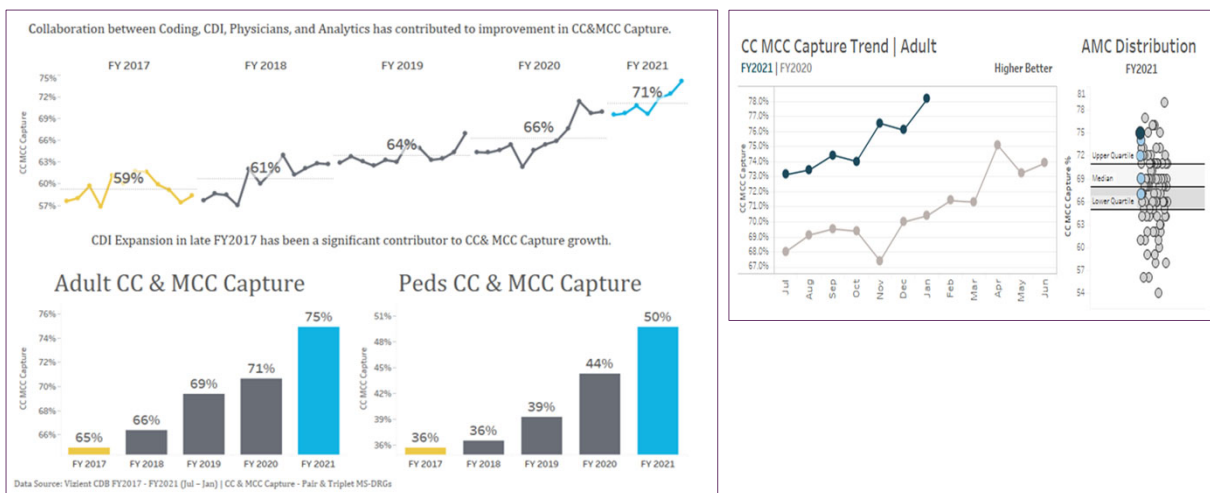
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## Case Mix Index / KPI



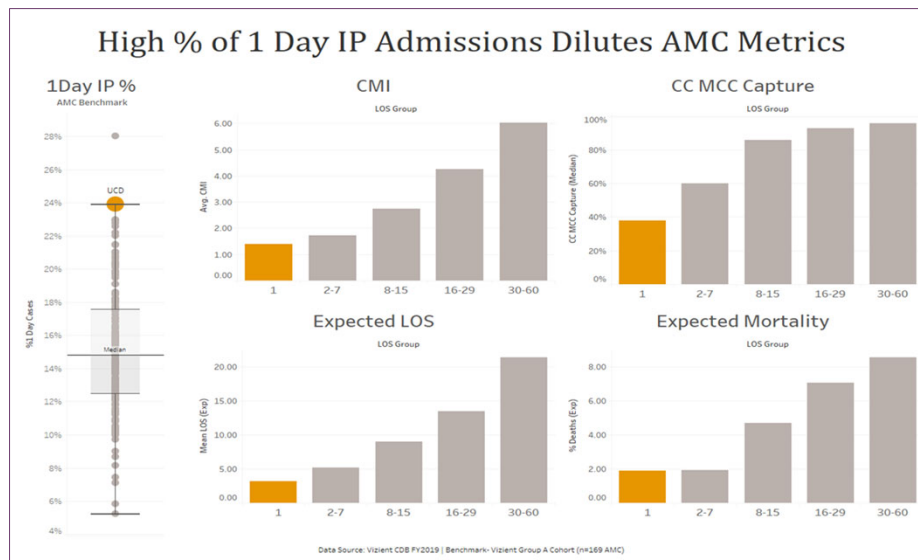
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## CC/MCC Capture Rates / KPI



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## Historical Data on 1 Day Stays



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## Service Line Analysis (LOS Outliers C-Section Population)

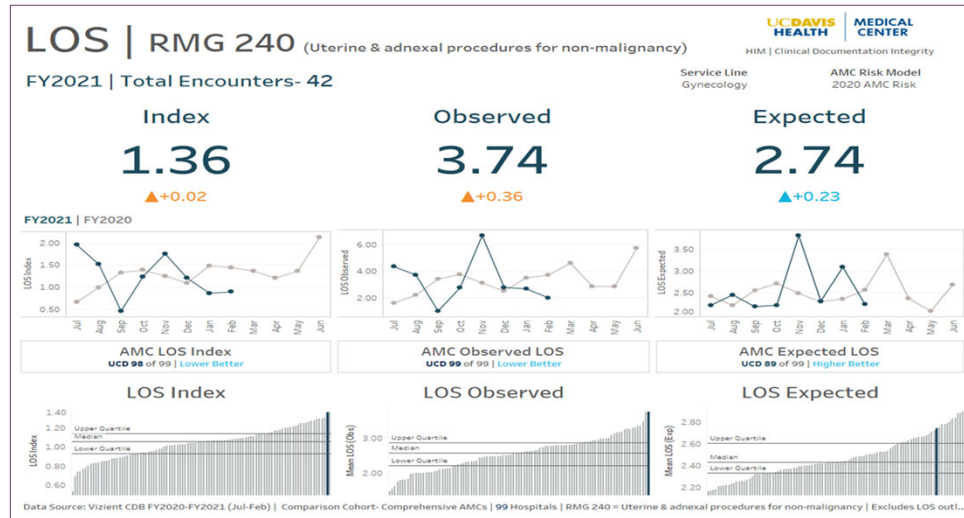
Edvh# P V G U J	P dvhv	( # P dvhv	P hdq# OR V# Rev,	P hdq# OR V# H (s,	OR V# lggh{
595#dj l dgh d yhu	:5;	86 (	5177	5387	31<9
57;#hfwlrq	73:	63 (	7174	7349	4139
66<#qjhsdwp zhfwslf	47:	44 (	51:4	638	31;<
673#rrvedwcp zsrwderwlrq	8;	7 (	51:9	51<4	31<;
674#derwlrq	56	5 (	41:3	43<	413:

Edvh# P V G U J	P dvhv	( # P dvhv	P hdq# OR V# Rev,	P hdq# OR V# H (s,	OR V# lggh{
595#dj l dgh d yhu	465,6<8	8< (	5163	5178	31<7
57;#hfwlrq	99/497	5< (	619:	61;	31<7
66<#qjhsdwp zhfwslf	4;/:4<	; (	613:	617	4134
673#rrvedwcp zsrwderwlrq	9/;:9	6 (	51:8	51<4	31<8
674#derwlrq	4/5<:	4 (	41:4	41<	31<8

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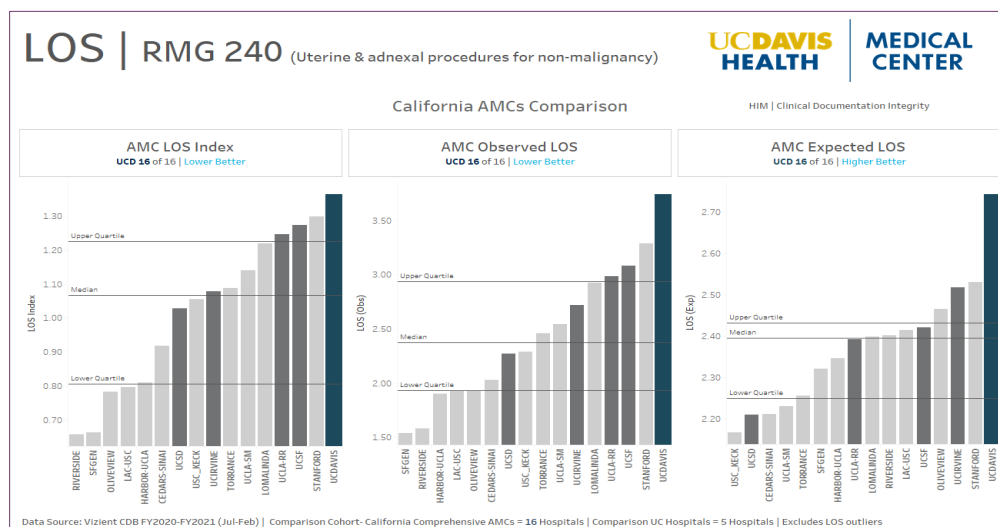


## Service Line Data Analysis (LOS Outliers – Hysterectomy Population)



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## Service Line Data Analysis (LOS Outliers – Hysterectomies)



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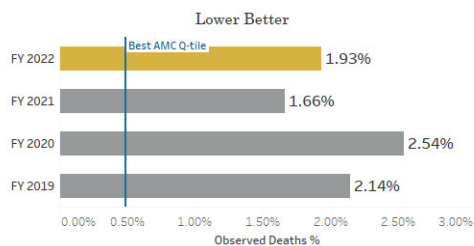
# Neonatology Mortality

FY2022 | Vizient Best AMC Quartile

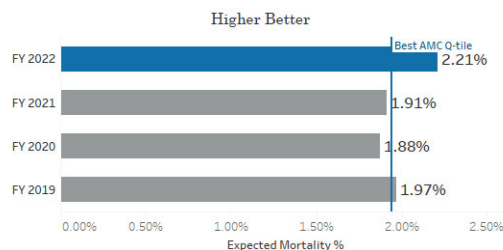
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## Observed Mortality



## Expected Mortality



25th PCT = 0.49 | Median = 0.85 | 75th PCT = 1.63

25th PCT = 0.89 | Median = 1.27 | 75th PCT = 1.94

Data Source: Vizient CDB | 2021 AMC Risk Model | Service Line: Neonatology | Benchmark: Peds Q&A Hospitals (n=87) | Discharge Date Range: 7/1/2018 to 6/30/2022

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# General Medicine KPI Improvement

Age Group  
Adult

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## Case Mix Index

FY 2022	FY 2021	FY 2020	FY 2019
1.38	1.38	1.30	1.29

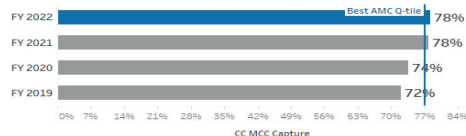
## CC & MCC Capture

FY 2022	FY 2021	FY 2020	FY 2019
78%	78%	74%	72%

## CMI | Higher Better



## CC & MCC Capture | Higher Better



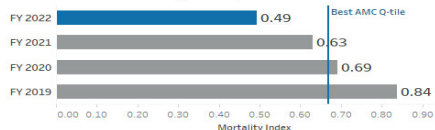
## Mortality Index

FY 2022	FY 2021	FY 2020	FY 2019
0.49	0.63	0.69	0.84

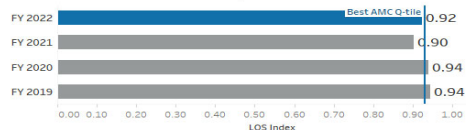
## LOS Index

FY 2022	FY 2021	FY 2020	FY 2019
0.92	0.90	0.94	0.94

## Mortality Index | Lower Better



## LOS Index | Lower Better



Data Source: Vizient CDB | 2021 AMC Risk Model | Service Line: General Medicine | LOS Index Excludes LOS Outliers  
Discharge Date Range: 7/1/2018 to 6/30/2022

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# Predictive CMI Model

FY22 Targeted 1 DLOS Pediatric MS-DRGs and the Impact on Overall CMI

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Overall CMI

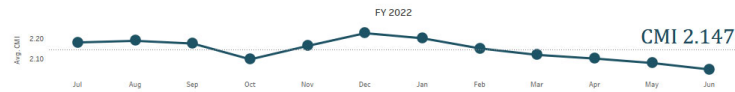
2.138

FY 2022

50% reduction | +.006 CMI



75% reduction | +.009 CMI



100% reduction | +.012 CMI



Data Source: Vident CDB FY2019 - FY2022 (July - June) | All Payers | Target Peds MS-DRGs: 203 BRONCHITIS AND ASTHMA WITHOUT CC/MCC | 392 ESOPHAGITIS, GASTROENTERITIS AND MISCELLANEOUS DIGESTIVE DISORDERS WITHOUT MCC | 153 OTITIS MEDIA AND URI WITHOUT MCC



## Targeted MS-DRGs 203, 392, 153

MSDRg	MSDRg Description	DRG Wt. Avg	1
203	BRONCHITIS AND ASTHMA WITHOUT CC/MCC	0.707	59
392	ESOPHAGITIS, GASTROENTERITIS AND MISCELLANEOUS DIGESTIVE DISORDERS WITHOUT MCC	0.766	49
153	OTITIS MEDIA AND URI WITHOUT MCC	0.713	25
50% Cases			132

6% of Peds 1 DLOS

MSDRg	MSDRg Description	DRG Wt. Avg	1
203	BRONCHITIS AND ASTHMA WITHOUT CC/MCC	0.707	88
392	ESOPHAGITIS, GASTROENTERITIS AND MISCELLANEOUS DIGESTIVE DISORDERS WITHOUT MCC	0.766	73
153	OTITIS MEDIA AND URI WITHOUT MCC	0.713	37
75% Cases			197

8% of Peds 1 DLOS

MSDRg	MSDRg Description	DRG Wt. Avg	1
203	BRONCHITIS AND ASTHMA WITHOUT CC/MCC	0.707	117
392	ESOPHAGITIS, GASTROENTERITIS AND MISCELLANEOUS DIGESTIVE DISORDERS WITHOUT MCC	0.766	97
153	OTITIS MEDIA AND URI WITHOUT MCC	0.713	49
100% Cases			263

11% of Peds 1 DLOS

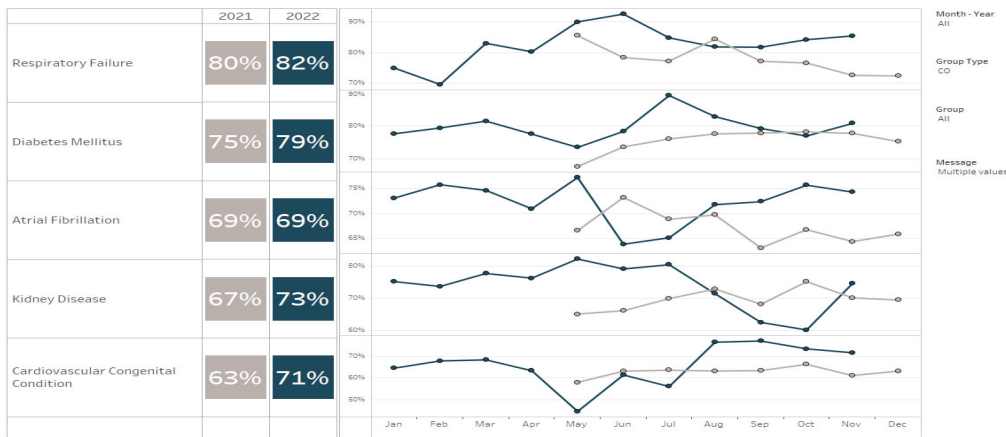
FY22 Peds 1 LOS = 2,396

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## CAPD Utilization- Overall Compliance Rate

The % a provider's overall documentation was compliant, whether via a message card resolution or a naturally compliant event

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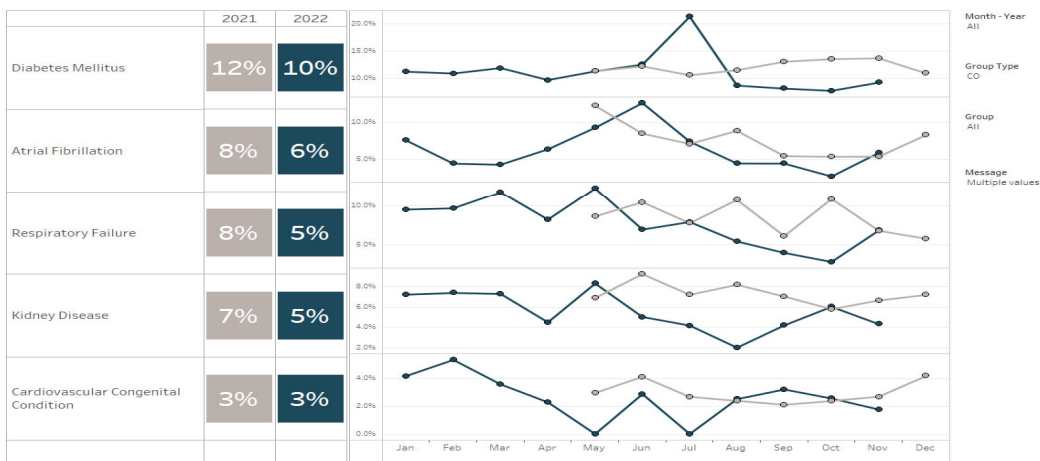
Data Source: CDI Engage - May 2021 - November 2022



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## CAPD Utilization- Message Resolution Rate

Agreement rate with NLU or reconsideration. This provides insight of nudge reconsideration and/or physician education needs.



flourish  
CDI IN BLOOM | acdis 2023



## Outcome

## Outcome of Implementation of AI for Physicians and CDI at UC Davis

Brought together workflows, enabled better engagement, efficiency and collaboration



Improved Case Mix Index (CMI) by 7.4%



Increased capture of CC and MCC's by 5%



Positively drove query agreement rates above 80%



Identified outliers for expected length of stay and expected mortality



Establish backend reviews and controls to improve accuracy and compliance



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## Learning Outcomes

- At the completion of this educational activity, the learner will be able to:
  - Construct an action plan to engage physicians proactively with AI powered CAPD
  - Give examples of using data to provide feedback
  - Describe the impact automation has on KPIs

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## Thank you. Questions?

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