

## Establishing a Gold Standard Outpatient CDI Program Through Analytics and AI/Technology

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### Presented By



- **Loretta Broadnax, BA, BSW, MSW**, is the outpatient CDI supervisor at UC Davis Health HIM in Sacramento, California. An anomaly to the CDI world, Loretta has more than 25 years of experience in Health and Human services, specifically in child welfare social work. Her psychology and social work education along with her experience in population health, contributes to the ever important and emerging factors of social determinants of health. Loretta started in CDI/population health in 2018 and has been with UC Davis HIM since 2020.

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## Presented By



- **Reggie Ahlfield, MBA-HA, BSHI, RN-BC**, is a CDI specialist and data analyst at UC Davis Health HIM in Sacramento, California. He began his career in nursing before transitioning to HIM. He received his bachelor's degree from Western Governors' University in Health informatics, then later went on to receive an MBA with healthcare emphasis. Reggie has more than 20 years of experience in healthcare, informatics, and data analytics. He has worked in intensive care, emergency care, and other areas as a bedside nurse. In addition, he has worked as a clinical informaticist and program trainer, a manager of informatics, and as a director of nursing and informatics.

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## UC Davis Health

- A few highlights about the medical center
  - 625-bed multispecialty academic medical center
  - 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 in the *U.S. News & World Report*
  - Ranked Sacramento's top hospital by *U.S. News & World Report*, and among nation's best in 15 different medical specialties
  - Recognized as best hospital seven years in a row in the greater Sacramento area



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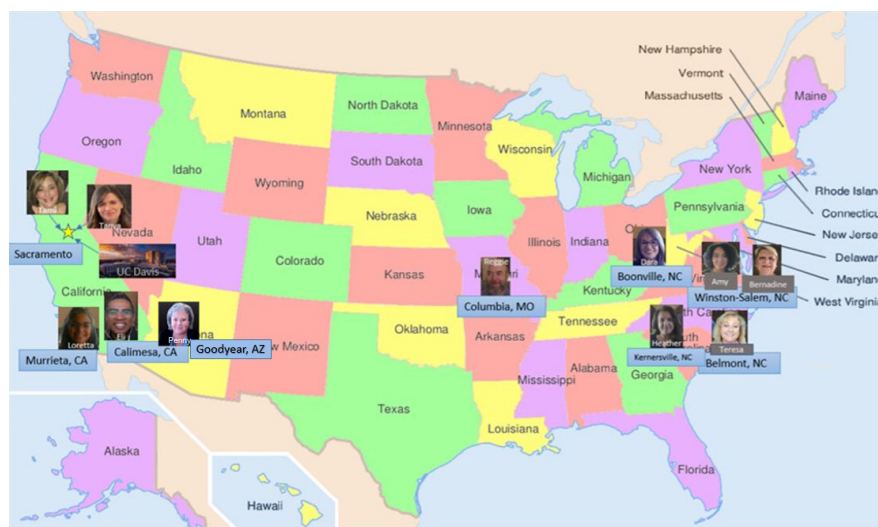
## Learning Outcomes

- At the completion of this educational activity, the learner will be able to:
  - Understand the framework used by UCD to begin and refine the OP CDI Program
  - Identify efficiencies gained by utilizing technology for engagement and workflow
  - Explain the benefits to standardizing an outpatient CDI program

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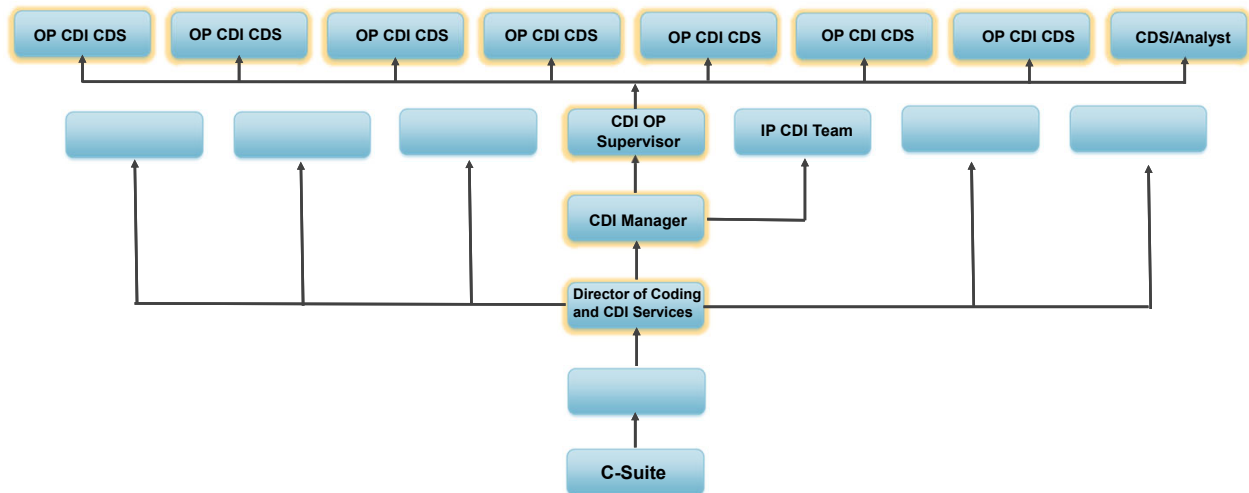
## UC Davis Health OP CDI Team



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## Organizational Chart: HIM (Patient Revenue Cycle)



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## Disclosure

- We do not have any affiliation with the following companies' software that may be mentioned during this presentation:
  - Microsoft Office (Word, Excel, Outlook, Access, Teams, OneNote, Visio, PowerPoint, Edge, 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

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## Definitions

- Some terminology we may use:
  - Hierarchical Condition Categories (HCC): Categories of diagnoses that can add to the risk adjustment factor (RAF)
  - Risk Adjustment Factor (RAF): The actual weight applied to a county benchmark rate to generate the monthly capitated rate paid to a health plan
  - Medicare Shared Savings Program (MSSP): Our initial focus population
  - Primary Care First (PCF): An additional patient population created more recently and added into our team review pool
  - Key Performance Indicator (KPI): A data measurement that is monitored on a regular basis and is used to indicate a process is showing improvement
  - Return on Investment (ROI): A calculation of the monetary value of an investment versus its cost

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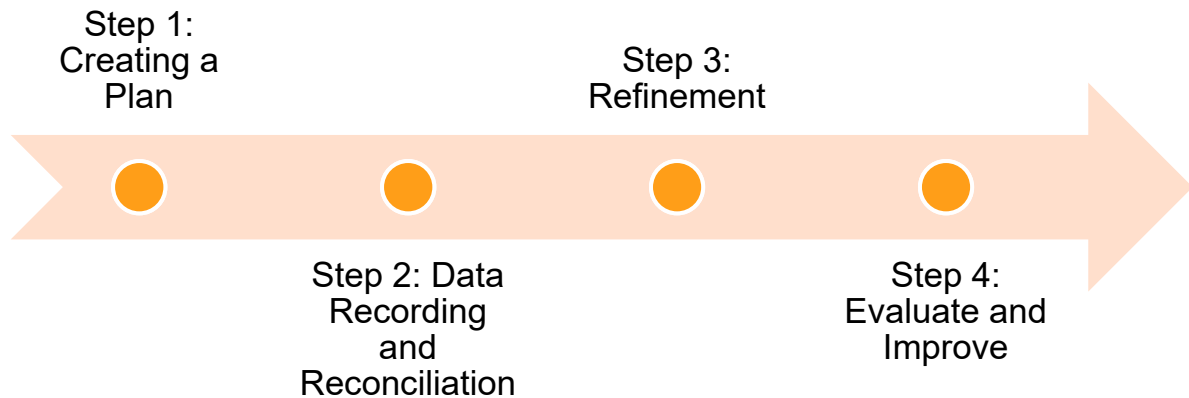
## Outpatient CDI Evolution

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How it all began...

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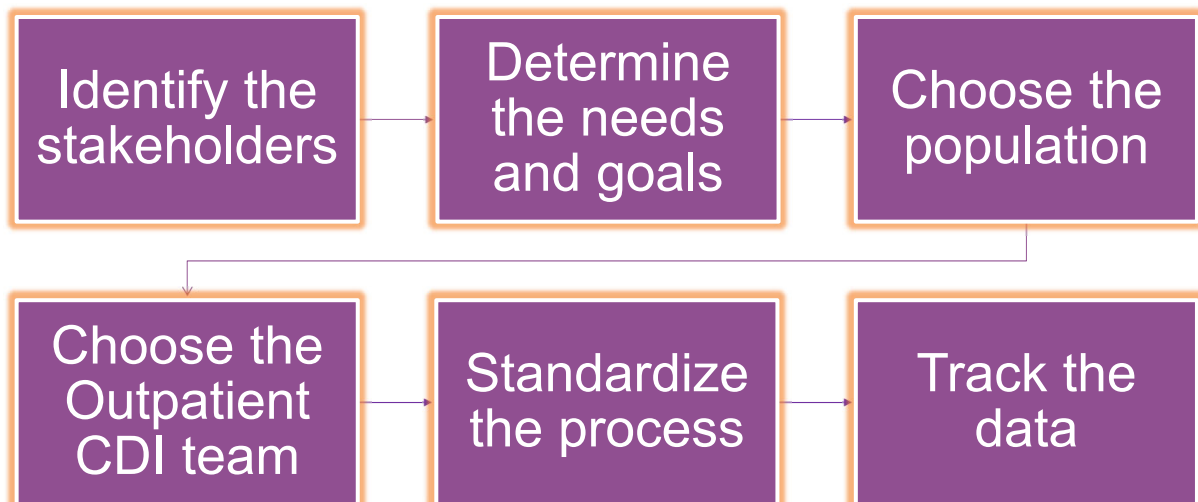
## Evolution of Outpatient CDI



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## Step 1: Creating a Plan



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## Step 2: Data Recording and Reconciliation

- Distribution of MSSP patient list
  - Manual process
  - Team recorded appointments in personal spreadsheet
- Outpatient CDI Query Portal Database (QPDB) was developed
  - “In-House” tool created to document and reconcile queries
- Created outpatient CDI workflow process and documentation
  - Used to standardize and evaluate our program

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## Step 3: Refinement



Update MSSP  
list to an  
upcoming visit  
list

Performed  
time studies

Added  
options to the  
QP database

Outpatient CDI  
coding notification

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## Step 4: Evaluate and Improve

- Daily patient assignment list was created
- Individual and leadership dashboards evolved
- Outpatient CDI coding reconciliation “closing the loop with coding”
- Expanded our patient population

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## Outpatient CDI Queries Impact and Improve



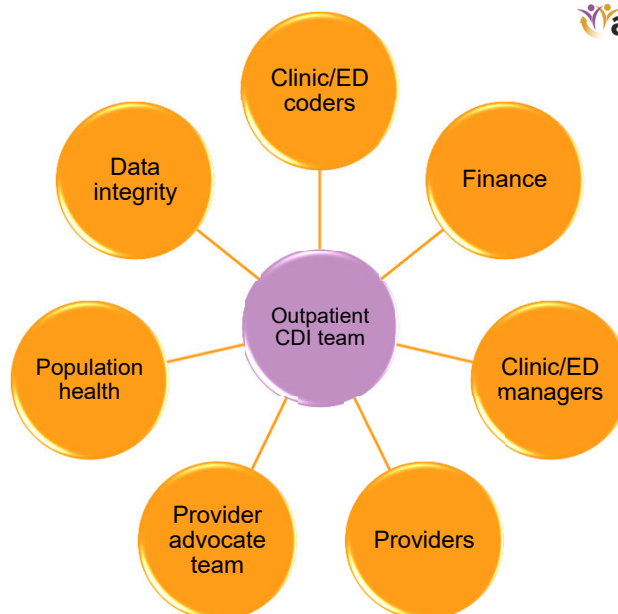
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## Engagement and Workflow

## Program “Champions”

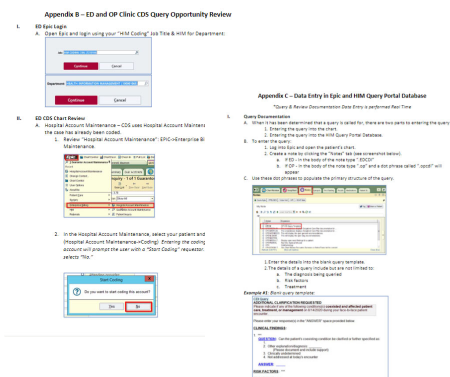


## Goals

- Education
  - Focusing on the importance of documentation integrity
  - Understanding RAF score and risk adjustment
  - Why HCC capture is important
- Documentation
  - Accurate and correct query response in EHR

## Information/Education

- Resources
  - 1:1 meetings
  - Tip sheet
  - Training videos
  - Physician “champions”
  - Clinic dashboards
  - Newsletters (catered to physicians)



## Future

- At UC Davis Health we will continue to:
  - Refine and automate our program
  - Evaluate the need for expansion
    - Patient population
    - Outpatient CDI team



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## Utilizing Technology

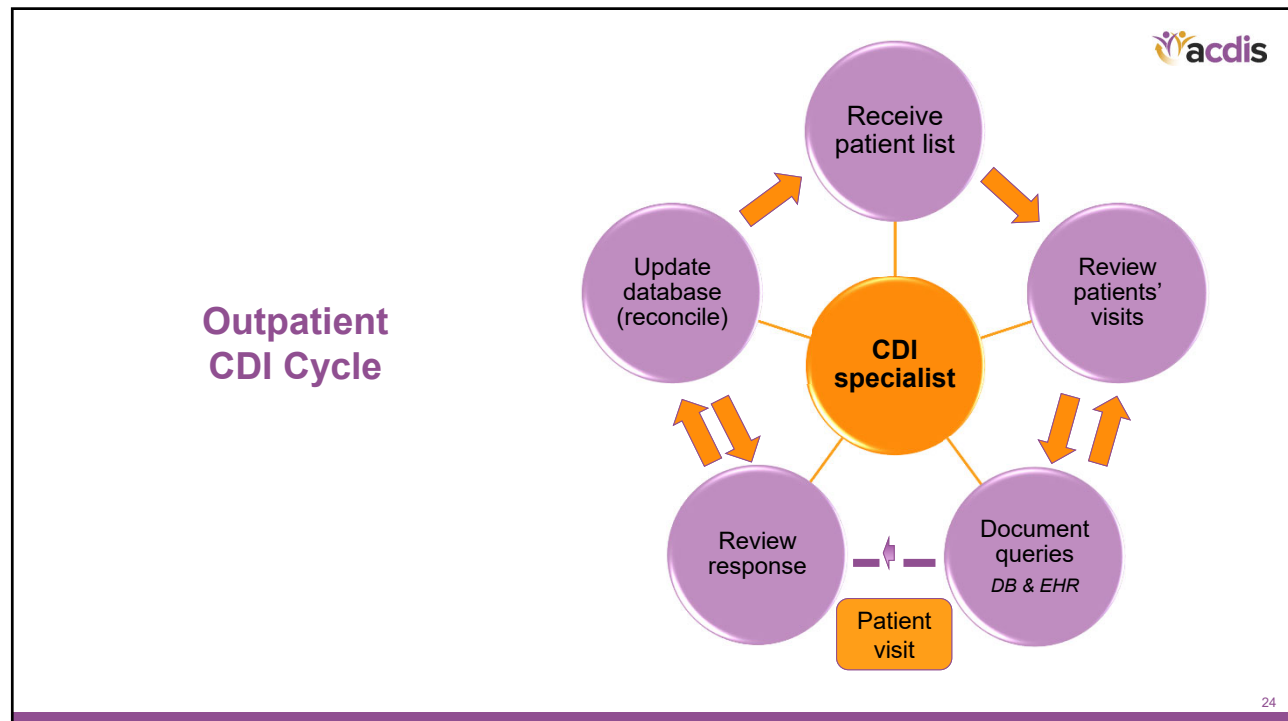
Ways to Get Useful Data

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## Raise Your Hand - Question #1

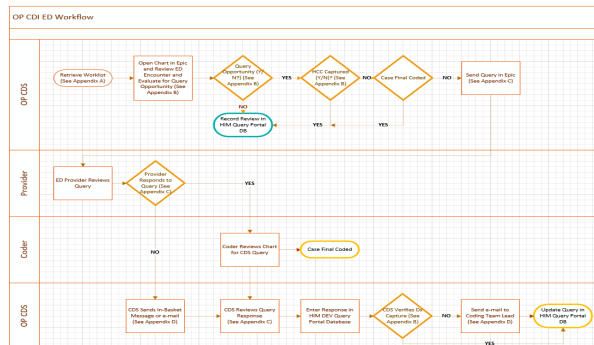
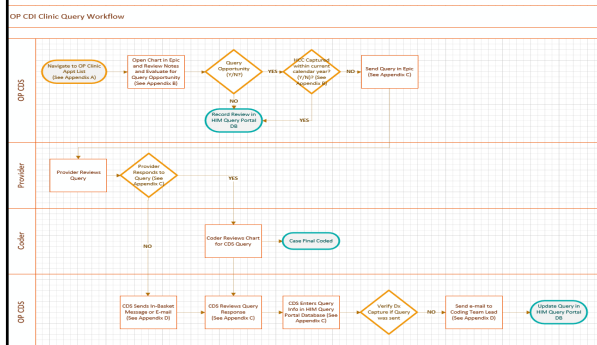
- If you have an outpatient CDI program, how much automation does your program have?
  - A. Not Applicable: There little to none or no program
  - B. Small: Auto-sorting of patients to follow and delivery to CDI specialist
  - C. Medium: Auto-sort and delivery and tracking of query from start to finish
  - D. Large: The entire query process starting with list delivery all the way to KPI tracking takes place without additional human intervention

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## Step 1: Creating a Plan—Workflows



- Standardized workflows:
  - Optimize training
  - Provide a resource for reference

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## Institutional Goal Alignment

Data Source: Optum OPA- Rolling 12-month period (Jan 2022 – Jan 2023)

Institutional Driver	CDI Aligned Indicator	CY21	CY22	Gap	Q1 CY23	Q2 CY23	Q3 CY23	Q4 CY23
Outpatient CDI	CY22 RAF Score MSSP	1.35	1.38	.03				

**Current State**

- Outpatient CDI staff is reviewing all HSAIP and PCF population
- Daily reviews completed to determine HCC capture opportunities at upcoming visits
- Current utilization of "HCC Collaborate" to enhance OP visit review and physician notification of possible HCCs that have not been added to patient

**Barriers**

- Learning curve with new process implementing hybrid approach 2022
- HCC pause to ensure integrity and complete fixes
- Providers not responding to and/or deleting queries

**Action Plan**

- Continue to send queries when documentation is insufficient
- Continue to educate providers on query response in progress notes and/or HCC collaborate

**CMS-HCC RAF Score for HSAIP Pts**

CMS-HCC Score Timeframe	CMS-HCC Score Eligible Pts	# Patients	Score - CMS-HCC Score Average
Rolling 12 Months	Claims, Billing, Claims, Billing, Claims, Billing	23,795	1.2754

**CMS-HCC RAF Score for PCF Pts**

CMS-HCC Score Timeframe	CMS-HCC Score Eligible Pts	# Patients	Score - CMS-HCC Score Average
Rolling 12 Months	Claims, Billing, Claims, Billing, Claims, Billing	66,764	0.8624

**CMS-HCC RAF Score for HSAIP Pts**

CMS-HCC Score Timeframe	CMS-HCC Score Eligible Pts	# Patients	Score - CMS-HCC Score Average
Rolling 12 Months	Claims, Billing, Claims, Billing, Claims, Billing	37,543	0.8382

\*CY22 RAF will increase. Optum data is 3 months behind

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## Step 2: Using Technology—Data Recording and Reconciling

**Add MD Query**

Patient MRN:

HAR:

Admit Date (mm/dd/yyyy):

MD:

Clinic:

CDS:

Review Type:

Query/Review Date (mm/dd/yyyy):

Topic:

Response:

Response Method:

Query Response Date (mm/dd/yyyy):

Dr Coded (Y/N):

Provider Notification (Y/N):

Comments (max 300 characters):

- Select Type -----
- 01, Concurrent
  - 02, Retrospective
  - 03, Physician Advisor
  - 04, Outpatient CDI
  - 05, ED Query
  - 06, ASU Query
  - 07, Review Only
  - 08, ED Review Only

- Select Response -----
- 01, Agreed
  - 02, Disagreed
  - 08, Unable to Determine
  - 09, No Response
  - 10, Withdrawn
  - 11, No Codable
  - 12, Pending
  - 13, PN Missed Dx

- Select Response Method -----
- 01, CDI Query
  - 02, HCC Notify/Nudge

**Health Information Management**

Business Unit Services Portal - Outpatient CDI - MD Query (PROD)

Welcome cahfield [Logout]

ONE > Edit/View MD Query

New Query | Edit Selected | Refresh | MRN:  | CDS:  | AND Response:

MRN	HAR	Admit Date	Query Type	CDS	Provider	Clinic	Query Date	Topic	Response
10000001	12/29/20	04, Outpatient CDI	Review Only	Review Only	Review Only	FOL INTERNAL MED.	12/29/20	Diabetes with ...	12, Pending
10000002	12/29/20	04, Outpatient CDI	Review Only	Review Only	Review Only	CARM INTERNAL...	12/29/20	48, Chronic Kidney...	12, Pending
10000003	12/29/20	04, Outpatient CDI	Review Only	Review Only	Review Only	MIDTOWN INT	12/29/20	55, Mental Health...	12, Pending
10000004	12/29/20	04, Outpatient CDI	Review Only	Review Only	Review Only	ROC FAN PRACIN...	12/29/20	60, Rx HCC	12, Pending
10000005	12/29/20	04, Outpatient CDI	Review Only	Review Only	Review Only	CARM INTERNAL...	12/29/20	62, Diabetes with ...	12, Pending
10000006	12/29/20	04, Outpatient CDI	Review Only	Review Only	Review Only	ROC FAN PRACIN...	12/29/20	55, Mental Health...	12, Pending
10000007	12/29/20	07, Review Only	Review Only	Review Only	Review Only	BELL INT MED	12/29/20	74, Atheroscleroti...	12, Pending
10000008	12/29/20	07, Review Only	Review Only	Review Only	Review Only	Unknown	12/29/20	Unknown	12/29/20
10000009	12/29/20	07, Review Only	Review Only	Review Only	Review Only	Unknown	12/29/20	Unknown	12/29/20
10000010	12/29/20	07, Review Only	Review Only	Review Only	Review Only	Unknown	12/29/20	Unknown	12/29/20
10000011	12/29/20	07, Review Only	Review Only	Review Only	Review Only	Unknown	12/29/20	Unknown	12/29/20
10000012	12/29/20	07, Review Only	Review Only	Review Only	Review Only	Unknown	12/29/20	Unknown	12/29/20
10000013	12/29/20	07, Review Only	Review Only	Review Only	Review Only	Unknown	12/29/20	Unknown	12/29/20
10000014	12/29/20	07, Review Only	Review Only	Review Only	Review Only	Unknown	12/29/20	Unknown	12/29/20

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## Step 3: Refinement

**Health Information Management**

Business Unit Services Portal - Outpatient CDS Assignment Administration

Welcome cahfield [Logout]

HOME

**OUTPATIENT CDS Assignment Administration**

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**Health Information Management**

Business Unit Services Portal - Outpatient CDS Assignment Administration

Welcome cahfield [Logout]

HOME > View CDS Assignments

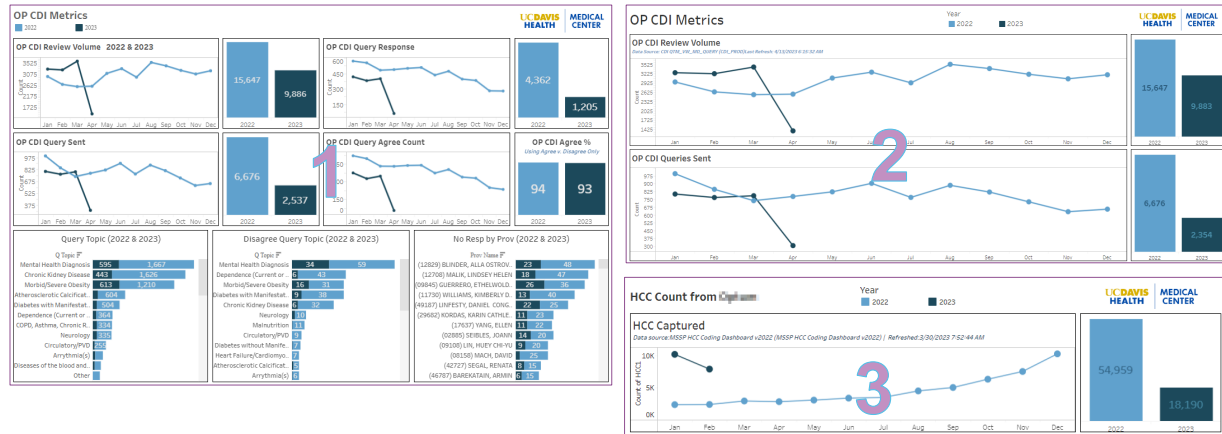
Refresh | ICD10 - HCCs | CDS:  | AND Assigned Date From:  To:

Assigned Date	CDS Name	Appt. Time	MRN	Visit	Appt. Note	Visit Prov.	Dept. ID	Dept. Name
01/20/2023	UNASSIGNED	01/24/2023 08...	10000001	NEW	NP-Memory difficulties	Review Only	100037001	MIDTOWN
01/20/2023	UNASSIGNED	01/24/2023 08...	10000002	OFFICE VISIT	Diabetes	Review Only	100040003	CARM IN
01/20/2023	UNASSIGNED	01/24/2023 13...	10000003	MYC VIDEO VISIT	NP-Squamous cell carcinoma of o...	Review Only	100016017	CANCER
01/20/2023	UNASSIGNED	01/24/2023 11...	10000004	CLINICAL PHARMA...	DM/BD resumed prandin, trexiba...	Review Only	100031009	MIDTOWN
01/20/2023	UNASSIGNED	01/24/2023 09...	10000005	ECHO	TTE: Primary cardiomyopathy (HCC)	Review Only	100001099	RAV CH
01/20/2023	UNASSIGNED	01/24/2023 14...	10000006	TELEPHONE VISIT	NP Med Rec (3rd attempt)	Review Only	100031009	MIDTOWN
01/20/2023	UNASSIGNED	01/24/2023 13...	10000007	OFFICE VISIT	Follow up Test results	Review Only	100051009	FOL CAR
01/20/2023	UNASSIGNED	01/24/2023 01...	10000008	HO AIDE HOME VL...		Review Only	1000517002	HOSPICE
01/20/2023	UNASSIGNED	01/24/2023 09...	10000009	NEW	Return for Referral to Dr. Lin for c...	Review Only	100011006	TEI OPT
01/20/2023	UNASSIGNED	01/24/2023 14...	10000010	OFFICE VISIT	f/u	Review Only	100040003	CARM IN
01/20/2023	UNASSIGNED	01/24/2023 11...	10000011	MYC VIDEO VISIT	new patient New stage IV lung ca...	Review Only	100016017	CANCER
01/20/2023	UNASSIGNED	01/24/2023 14...	10000012	NEW	Annual DM eye exam no cdi	Review Only	100034021	RSLV OP
01/20/2023	UNASSIGNED	01/24/2023 14...	10000013	INJECTION	Follow-up in 6 weeks with OCT O...	Review Only	100034010	RSLV OP
01/20/2023	UNASSIGNED	01/24/2023 15...	10000014	ANNUAL EXAM	Annual, Dr. Chang Type 2 diabete...	Review Only	100034021	RSLV OP
01/20/2023	UNASSIGNED	01/24/2023 11...	10000015	OFFICE VISIT	ck wt, f/u wt loss	Review Only	100040006	DIABETE
01/20/2023	UNASSIGNED	01/24/2023 13...	10000016	OFFICE VISIT	f/u med n/d	Review Only	100009010	FOL INT
01/20/2023	UNASSIGNED	01/24/2023 09...	10000017	NEW	Granuloma annulare	Review Only	100051019	FOL DER
01/20/2023	UNASSIGNED	01/24/2023 12...	10000018	OFFICE VISIT	3 month return	Review Only	100016006	CANCER
01/20/2023	UNASSIGNED	01/24/2023 08...	10000019	OFFICE VISIT	DM FOLLOW UP	Review Only	100011004	RNC FAN
01/20/2023	UNASSIGNED	01/24/2023 14...	10000020	OFFICE VISIT	Return in 3 months [around 1/7/2...	Review Only	100011007	TEI OPT
01/20/2023	UNASSIGNED	01/24/2023 14...	10000021	NEW	Np cons concerning growing nos...	Review Only	100030001	DERMAT
01/20/2023	UNASSIGNED	01/24/2023 04...	10000022	HO RN COMP W/L...		Review Only	1000517002	HOSPICE

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## Step 4: Evaluate and Improve—Individual and Leadership Dashboards

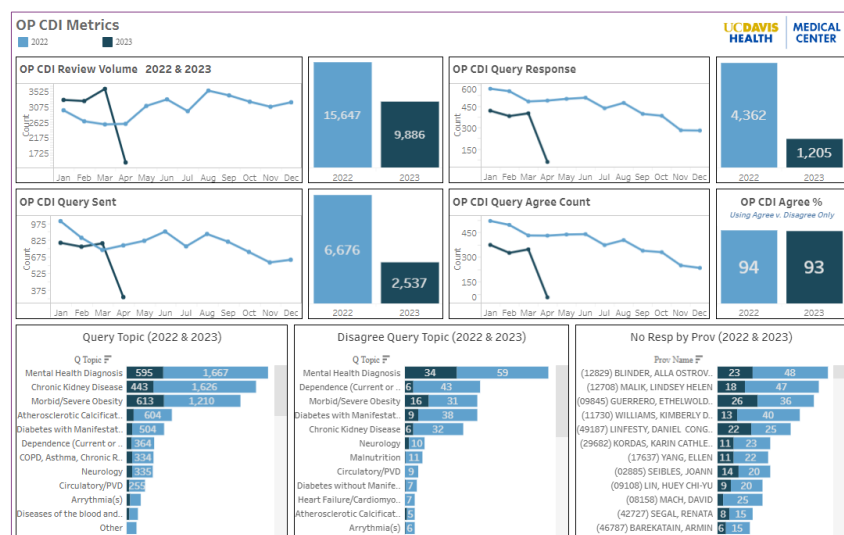


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## Step 4: Evaluate and Improve—Individual and Leadership Dashboards

### Outpatient CDI View



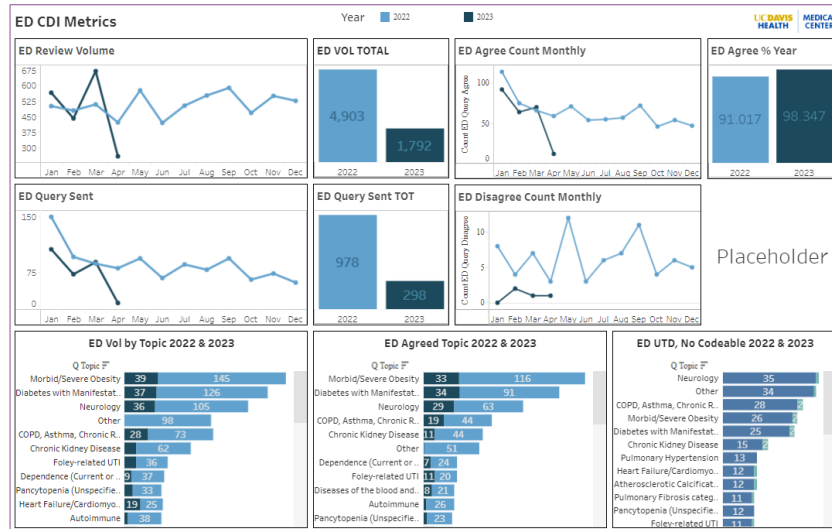
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## Step 4: Evaluate and Improve—Individual and Leadership Dashboards



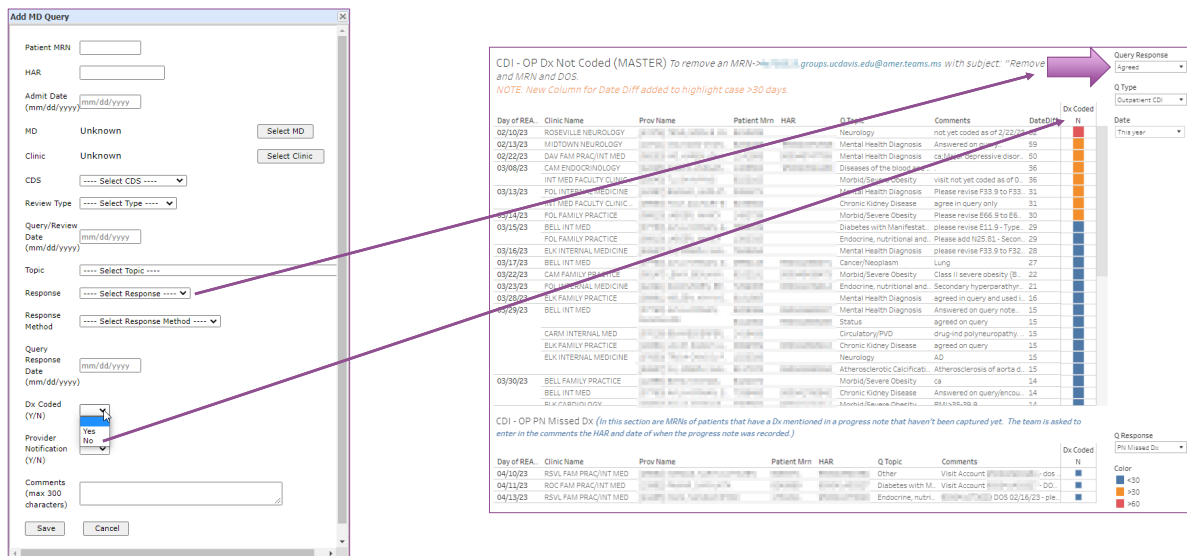
ED Data  
Same Look  
and Feel



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## Using Technology: Closing the Data Loop With Coding

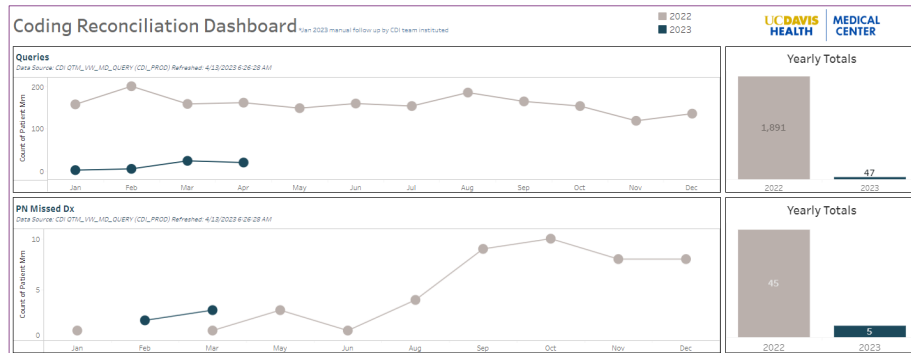


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## Using Technology: Closing the Data Loop With Coding (Cont.)



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## Using Technology: Closing the Data Loop With Coding (Cont.)

### 2023 ED Not Captured/Coded on Visit

Once the code for the HCC (or other Dx) has been added to the visit (bill), e-mail Loretta & Reggie ([reggie@groups.ucdavis.edu](mailto:reggie@groups.ucdavis.edu) or [amercteams.ms](mailto:amercteams.ms)) with ONLY Name, MRN, and DOS of the patients TO BE REMOVED from list. Clear out ANY additional e-mail content below your signature.  
*If you copy anyone on the notification, please use BCC instead of CC and delete any content except the entries that need to be removed from the list.*

Query Response  
Agreed

Q Type  
ED Query

Day of REA..	Prov Name	Patient Mrn	HAR	Q Topic	Comments	Dx Coded
03/20/23				Morbid/Severe Obesity		N
03/30/23				COPD, Asthma, Chronic Re...	Provider agreed; coding c...	
04/03/23				Pulmonary Fibrosis categ...	Provider agreed; dx not co...	
04/04/23				Pancytopenia (Unspecifi...	Provider agreed; dx not co...	
04/05/23				Pancytopenia (Unspecifi...	Provider agreed; dx not co...	
04/05/23				Morbid/Severe Obesity	Provider agreed; dx not co...	
04/05/23				Morbid/Severe Obesity	Provider agreed; dx not co...	



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## Using Technology: Custom Tools

05/12/2022 at 05:48 PM - Provider notification turned on

**Included Diagnoses**

Secondary hyperparathyroidism of renal origin

**Notification** ☐ OFF ☒ ON

Providers will see the following notification when accessing the patient in the EHR.

Automatically turn off on this date (optional)  
05/22/2022

[Print this notification.](#)

**Comments for provider**

In HCC Engage, these are accessed via the icon.

**Clinical Findings:** On 10/13/2021 diagnosis and documentation notes "Renal HBD with secondary hyperparathyroidism - PTH 43 from the 80s-80s historically. Corrected Ca and Phos at target off binders". If appropriate and remains viable, please provide supporting documentation and diagnosis for current year.

**Risk Factors:** age, CKD, DM

**Treatments:** Monitoring, routine scheduled appointments, labs and medication management of chronic conditions

Last modified yesterday at 5:48 pm

[Return to Worklist](#) [Close](#)

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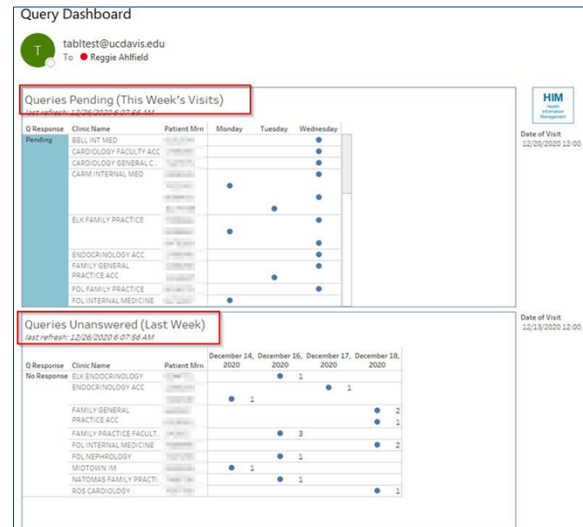
## Engagement

Using Our Data to Engage Our Stakeholders

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## Provider Engagement

- Daily updates sent to clinic manager
  - If a query was submitted this week and is listed as “pending” in status, it will appear in the top box
  - If a query was sent and never received an answer, the response is changed by the team to “no response” and then the lower box will show all the queries with “no response” in the previous week

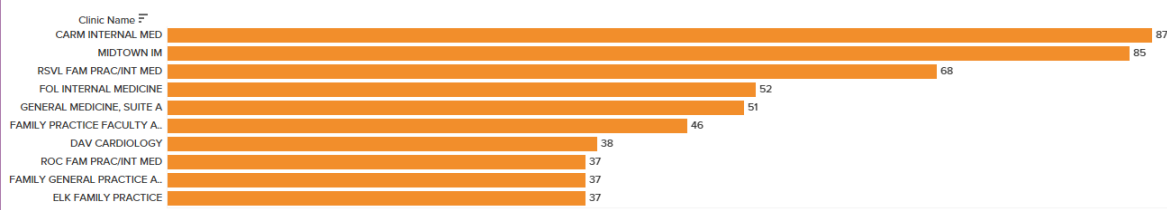


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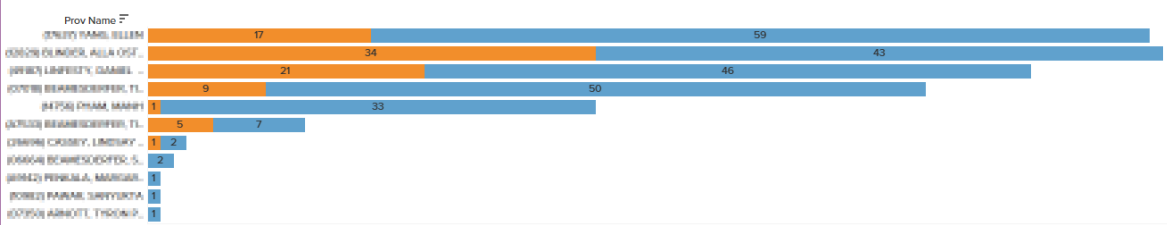
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## Clinic Engagement

### 2022 Top 10 No Response Ranked by Clinic



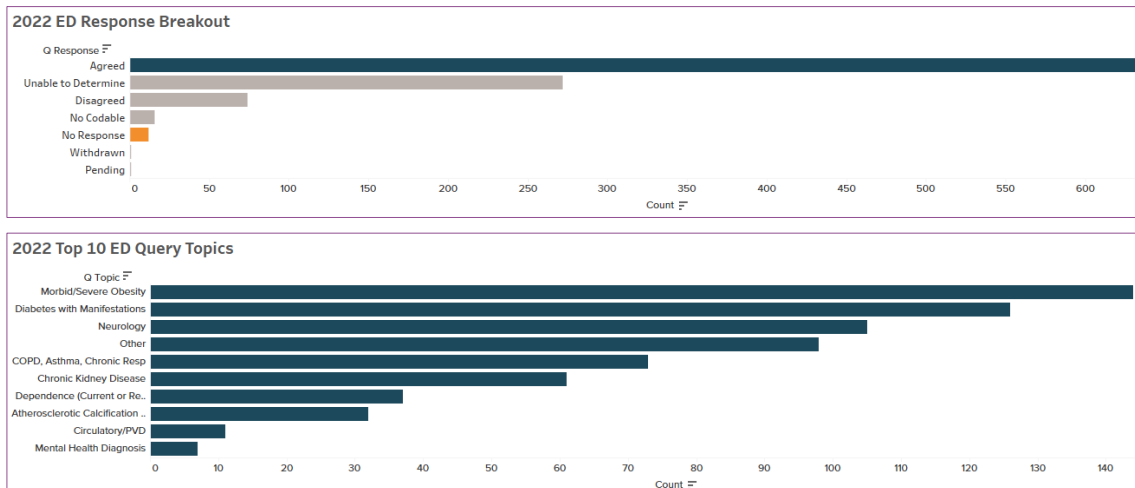
### 2022 CARM INTERNAL MED



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## ED Engagement

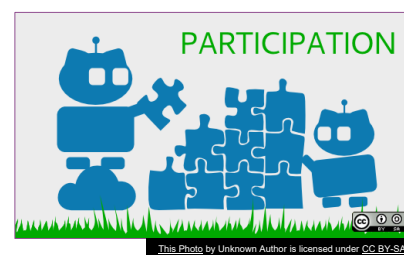


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## Team Engagement

- Continuous chat in Microsoft Teams chat channel
- Dedicated “channels” to communications
- Dedicated shared file storage
- Structured but semi-informal meetings



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## Other Stakeholder Engagement

Stakeholder	Means to Engage	Frequency
Coding	Data*	Min biweekly
ED and clinic management	Data*	As needed
Providers	Data*	As needed and rep at quarterly steering committee
Provider advocate	Data**	Biweekly
Population health	Data**	As needed
Data integrity	Data**	Biweekly



\*Specific to them \*\*Needs based

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## Learning Outcomes: Revisited

- At the completion of this educational activity, the learner will be able to:
  - Understand the framework used by UCD to begin and refine the OP CDI program
  - Identify efficiencies gained by utilizing technology for engagement and workflow
  - Explain the benefits to standardizing an outpatient CDI program

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## Raise Your Hand - Question #2

- After hearing this presentation do you *want* to have an outpatient CDI program?
  - A. NO WAY!
  - B. MAYBE: Interested in outpatient CDI, but still on the fence
  - C. PROBABLY: See the value and will encourage outpatient CDI development
  - D. DEFINITELY: Know the value and fully intend to take measures to implement (or continue development including more automation for sites with existing outpatient CDI programs)

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## Thank you. Questions?

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[tgomez@ucdavis.edu](mailto:tgomez@ucdavis.edu), [pjefferson@ucdavis.edu](mailto:pjefferson@ucdavis.edu)

In order to receive your continuing education certificate(s) for this program, you must complete the online evaluation. The link can be found in the continuing education section of the program guide.

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