Webinar Objectives

▶ Transitioning from Reactive Manual Queries to Proactive Real-time Autonomous Queries

▶ **How to Ensure Compliance While Optimizing Revenue and Quality Rankings**

▶ Maximizing CDI Program Effectiveness and Efficiency without Adding Resources

▶ **How Epic is Improving Clinical Note Accuracy and Timeliness Without the Need for Additional Software**

Webinar Outline

1. Know what CDI is, its effect on quality measurement and reimbursement, and recent update affecting CDI practice.

2. Realign and expand the CDI approach to compliantly enhance physician/provider engagement considering these recent updates

3. Address CDI staffing and time efficiency challenging CDI budgets

4. Embrace the people, processes, and technologies involving "proactive CDI" versus "reactive CDI" to address all models impacting physicians and facilities

5. Comprehend how Epic and HITEKS address ICD-10-CM/PCS clinical note accuracy, timeliness, and effectiveness in a time and cost-efficient manner in their *embedded* workflows

- 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.

Bottom line: The importance of consistent, complete documentation in the medical record cannot be overemphasized. Without such documentation accurate coding cannot be achieved.
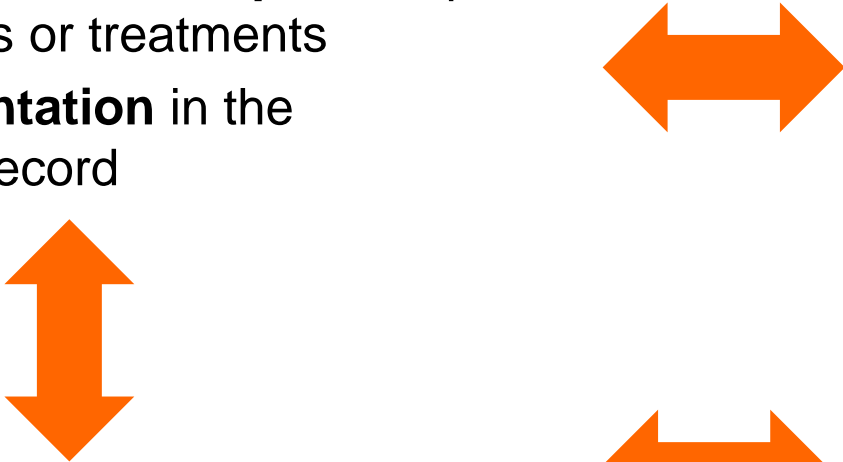
Physician

CDI team

Coding Professional

CDI Foundations
CDI Responsibilities

- **Physician/provider (Medical staff)**
  - **Definition(s)** of diagnostic or therapeutic terminologies
  - **Diagnosis** or **description** of patient conditions or treatments
  - **Documentation** in the medical record

- **Everyone**
  - **Defense** when held accountable by outside entities

- **Clinical documentation, ancillary, and coding staff (Facility)**
  - **Deciphering (reactively and proactively)** unclear, inconsistent, incomplete, imprecise, unreliable, conflicting, or illegible documentation considering the clinical circumstances and how they should be coded.
  - **Delineation with providers (reactive/proactive) (Templates/queries)** of what documented diagnoses or treatments should be in the context of their actual occurrence and within the limitations of HIPAA-associated transaction sets
  - **Deployment** of ICD-10 and CPT/HCPCS codes based upon the actual and vetted provider documentation in compliance with official conventions, guidelines, and advice
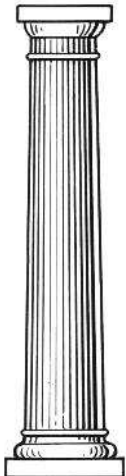
CDI Foundations Team Composition

HITEKS™

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

CDI

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

- **Medical informatics (Design, Analytics, AI, etc.)**
  - Incorporates ICD-10-CM/PCS or CPT terminology into paper or electronic health record (EHR)
- **Concurrent/Clinical Documentation Specialists (CDS)**
  - Nurses, coders or others who negotiate CDI principles with physicians, usually during an active patient encounter
  - Managers of the whole CDI process
- **Compliance officer**
  - Ensures that the process withstands retrospective scrutiny

- **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)**
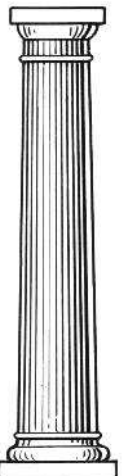
Physician advisors and C-suite are active supporters and champions

Available in **App Orchard** *Epic*

- **Results -** In clinical care, "words matters"
  - If patient conditions are properly defined and diagnosed, appropriate therapies impacting patient outcomes will be implemented sooner
  - Great patient outcomes begats the rest in the long haul
- **Respect** – Everyone respects physicians/providers who uses proper language
- **Reputation**
  - CMS Hospital Compare
  - CMS Physician Compare
  - US News and World Reports
  - Leapfrog
- **Referrals**
  - Based on patient perceptions of physician or facility quality
  - Inclusion or exclusion from various payer networks

- **Reimbursement**
  - Inpatient diagnosis-related group (DRG) payment
  - CMS Value-based Payments
  - CMS Hospital-acquired Condition penalties
  - CMS Readmission penalties
  - CMS physician cost efficiency measures
  - CMS funding of Medicare Advantage plans
  - State funding of Medicaid plans
  - Many others

CDI and coding professionals have tremendous opportunities affecting all of these measures!

Why Do Hospitals/Physicians Care?
Risk-Adjusted Outcomes Measures

- **CMS Medicare-Severity DRGs**
  - Used by Medicare and most private insurers
- **3M All-Payer Refined DRGs**
  - Used by many Medicaid programs and some private insurers
- **CMS measures** (IP and OP Dependent)
  - Mortality
  - Readmissions
  - Complications
  - Excessive Length of Stay
- **Other Inpatient Models**
  - 3M's Potential Preventable Complications, Readmissions, and Events (e.g., TX, IL, MD)
  - Vizient or US News World Report risk models
  - AHRQ PSIs and IQIs (Leapfrog)

- **Hierarchical condition categories (HCCs) CMS-HCCs**
  - CMS MACRA/MIPS (MVPs) /APMs
  - CMS Medicare Spending Per Beneficiary
- **Other Outpatient Models**
  - 3M Enhanced Ambulatory Payment Groups (applicable to Medicaid and BCBS in some states
  - CMS Physician Cost Efficiency Models beyond HCCs (MIPS/MVPs)
- **Insurance plan funding**
  - CMS HCCs (see above)
  - UCSD's Chronic Illness and Disability Payment System (CDPS)
  - HHS-HCCs (Obamacare "metal plans")

Inclusions and Exclusions CMS Pneumonia Mortality

Facility Name	City	State	Compared to National	Vol	Score
CEDARS-SINAI MEDICAL CENTER	LOS ANGELES	CA	Better Than the National Rate	1464	9.2
NEW YORK UNIVERSITY LANGONE MEDICAL CENTER	NEW YORK	NY	Better Than the National Rate	1505	10.8
NORTH SHORE UNIVERSITY HOSPITAL	MANHASSET	NY	Better Than the National Rate	1456	11.6
NEW YORK-PRESBYTERIAN HOSPITAL	NEW YORK	NY	Better Than the National Rate	2176	11.7
YALE-NEW HAVEN HOSPITAL	NEW HAVEN	CT	Better Than the National Rate	1605	11.8
NORTHSHORE UNIVERSITY HEALTHSYSTEM - EVANSTON HOSPITAL	EVANSTON	IL	Better Than the National Rate	2326	12.7
ADVENTHEALTH ORLANDO	ORLANDO	FL	Better Than the National Rate	2962	13.7
MEMORIAL HERMANN HOSPITAL SYSTEM	HOUSTON	TX	No Different Than the National Rate	1695	13.9
LONG ISLAND JEWISH MEDICAL CENTER	NEW HYDE PARK	NY	No Different Than the National Rate	1470	14
NORTON HOSPITALS, INC	LOUISVILLE	KY	No Different Than the National Rate	2135	14.2
SOUTH SHORE HOSPITAL	SOUTH WEYMOUTH	MA	No Different Than the National Rate	1904	14.3
SARASOTA MEMORIAL HOSPITAL	SARASOTA	FL	No Different Than the National Rate	1446	14.3
BOCA RATON REGIONAL HOSPITAL	BOCA RATON	FL	No Different Than the National Rate	1606	14.8
CLEVELAND CLINIC MARTIN NORTH HOSPITAL	STUART	FL	No Different Than the National Rate	1538	14.9
CHRISTIANA HOSPITAL	NEWARK	DE	No Different Than the National Rate	1799	15
METHODIST HOSPITAL	SAN ANTONIO	TX	No Different Than the National Rate	1628	15.1
PALOS COMMUNITY HOSPITAL	PALOS HEIGHTS	IL	No Different Than the National Rate	1665	15.5
CAPE COD HEALTHCARE	HYANNIS	MA	No Different Than the National Rate	1569	15.6
NORTHEAST GEORGIA MEDICAL CENTER, INC	GAINESVILLE	GA	No Different Than the National Rate	1521	16.2
SOUTHCOAST HOSPITALS GROUP	FALL RIVER	MA	No Different Than the National Rate	2077	16.3
SAINT FRANCIS HOSPITAL, INC	TULSA	OK	No Different Than the National Rate	1479	16.7
NOVANT HEALTH NEW HANOVER REGIONAL MEDICAL CENTER	WILMINGTON	NC	Worse Than the National Rate	1429	19.2
HUNTSVILLE HOSPITAL	HUNTSVILLE	AL	Worse Than the National Rate	1403	19.2
JACKSON-MADISON COUNTY GENERAL HOSPITAL	JACKSON	TN	Worse Than the National Rate	1428	20.6

CMS "Inclusions", "Not Included" and Exclusions Pneumonia Mortality

Inclusions

- Pneumonia at a Principal Diagnosis
- Sepsis as a Principal Diagnosis with Pneumonia as a Secondary Diagnosis

Not Included

- Other Principal Diagnoses (e.g., HIV Disease, acute respiratory failure) with pneumonia as a secondary diagnosis

Exclusions:

- ***Severe Sepsis*** or ***Septic Shock*** that was present at the time of the inpatient order EXCLUDE THE CASE!
  - Even if sepsis is the principal diagnosis with pneumonia, capturing these codes exclude the case
  - To exclude these, the MD must define, diagnosis, and document "severe sepsis" or "septic shock" when present which is not always done

Elixhauser Risk Model
A "New" Risk Model CDI Departments Are Managing

Elixhauser Comorbidity Software Refined for ICD-10-CM

The Elixhauser Comorbidity Software Refined for ICD-10-CM is one of the HCUP tools that can be applied to HCUP and other similar databases. These tools are created by AHRQ through a Federal-State-Industry partnership.

Search HCUP-US

HCUP Home	Databases	Research Tools	Reports	Data Visualizations	Data Query Tools	News & Events	Purchase HCUP Data	Technical Assistance

Elixhauser Comorbidity Software Refined for ICD-10-CM v2022.1: Fiscal Year 2022, Released October 2021 - valid for ICD-10-CM diagnosis codes through September 2022

- Elixhauser Comorbidity Software Refined Tool, v2022.1 (ZIP file, 1.5 MB) released 10/29/21

For convenience, the user documentation for the Elixhauser Comorbidity Software Refined for ICD-10-CM v2022.1 is also provided as separate documents:

- User Guide: Elixhauser Comorbidity Software Refined for ICD-10-CM, v2022.1 (PDF file, 700 KB)
- Elixhauser Comorbidity Software Refined for ICD-10-CM Reference File, v2022.1 (Excel file, 641 MB)
- Elixhauser Comorbidity Software Refined for ICD-10-CM Change Log
    - v2021.1 to v2022.1 (Excel file 28 KB)

https://www.hcup-us.ahrq.gov/toolssoftware/comorbidityicd10/comorbidity_icd10.jsp

New FY2023 Elixhauser should be released by October 28, 2022

40 Comorbidity Measures
Determined by ICD-10-CM Secondary Dx

Abbreviation (SAS Data Element Name)	Comorbidity Description	Uses present on admission (POA) indicators for assignment?
CMR_AIDS	Acquired immune deficiency syndrome	No
CMR_ALCOHOL	Alcohol abuse	No
CMR_ANEMDF	Deficiency anemias	Yes
CMR_AUTOIMMUNE	Autoimmune conditions	No
CMR_BLDLOSS	Chronic blood loss anemia	Yes
CMR_CANCER_LEUK	Leukemia	No
CMR_CANCER_LYMPH	Lymphoma	No
CMR_CANCER_METS	Metastatic cancer	No
CMR_CANCER_NSITU	Solid tumor without metastasis, in situ	No
CMR_CANCER_SOLID	Solid tumor without metastasis, malignant	No
CMR_CBVD	Cerebrovascular disease	Yes
CMR_COAG	Coagulopathy	Yes
CMR_DEMENTIA	Dementia	No
CMR_DEPRESS	Depression	No
CMR_DIAB_CX	Diabetes with chronic complications	No
CMR_DIAB_UNCX	Diabetes without chronic complications	No
CMR_DRUG_ABUSE	Drug abuse	No

Abbreviation (SAS Data Element Name)	Comorbidity Description	Uses present on admission (POA) indicators for assignment?
CMR_HF	Heart failure	Yes
CMR_HTN_CX	Hypertension, complicated	No
CMR_HTN_UNCX	Hypertension, uncomplicated	No
CMR_LIVER_MLD	Liver disease, mild	Yes
CMR_LIVER_SEV	Liver disease, moderate to severe	Yes
CMR_LUNG_CHRONIC	Chronic pulmonary disease	No
CMR_NEURO_MOVT	Neurological disorders affecting movement	Yes
CMR_NEURO_OTH	Other neurological disorders	Yes
CMR_NEURO_SEIZ	Seizures and epilepsy	Yes
CMR_OBESE	Obesity	No
CMR_PARALYSIS	Paralysis	Yes
CMR_PERIVASC	Peripheral vascular disease	No
CMR_PSYCHOSES	Psychoses	Yes
CMR_PULMCIRC	Pulmonary circulation disease	Yes
CMR_RENLFL_MOD	Renal failure, moderate	Yes
CMR_RENLFL_SEV	Renal failure, severe	Yes
CMR_THYROID_HYPO	Hypothyroidism	No
CMR_THYROID_OTH	Other thyroid disorders	No
CMR_ULCER_PEPTIC	Peptic ulcer with bleeding	Yes
CMR_VALVE	Valvular disease	Yes
CMR_WGHTLOSS	Weight loss	Yes

# Secondary Diagnoses Only and Their POA (PATIO Status) Matters

Elixhauser Mortality Coefficients

Cohort	AHRQ Weights	Cohort	AHRQ Weights
mwAIDS	-4	mwHTN_CX	1
mwALCOHOL	-1	mwHTN_UNCX	0
mwANEMDEF	-3	mwLIVER_MLD	2
mwAUTOIMMUNE	-1	**mwLIVER_SEV**	**17**
mwBLDLOSS	-4	mwLUNG_CHRONIC	2
mwCANCER_LEUK	**9**	mwNEURO_MOVT	-1
mwCANCER_LYMPH	**6**	**mwNEURO_OTH**	**23**
mwCANCER_METS	**23**	mwNEURO_SEIZ	2
mwCANCER_NSITU	**0**	mwOBESE	-7
mwCANCER_SOLID	**10**	mwPARALYSIS	4
mwCBVD	**5**	mwPERIVASC	3
mwHF	15	mwPSYCHOSES	-9
mwCOAG	**15**	mwPULMCIRC	4
mwDEMENTIA	5	mwRENLFL_MOD	3
mwDEPRESS	-9	mwRENLFL_SEV	8
mwDIAB_CX	-2	mwTHYROID_HYPO	-3
mwDIAB_UNCX	0	mwTHYROID_OTH	-8
mwDRUG_ABUSE	-7	mwULCER_PEPTIC	0
		mwVALVE	0
		mwWGHTLOSS	**14**

- Note that:
  – Weights for metastatic cancer, solid tumors, and coagulation defect, commonly seen at high-functioning hospitals, have significantly increased
  – Severe liver disease, "other neurology", and weight loss are high weighted
  – While some have negative weights, they should not be ignored since no one knows how RTI weights any of these Elixhauser categories

AHRQ Mortality Models
Coefficients Translate To Death Probability
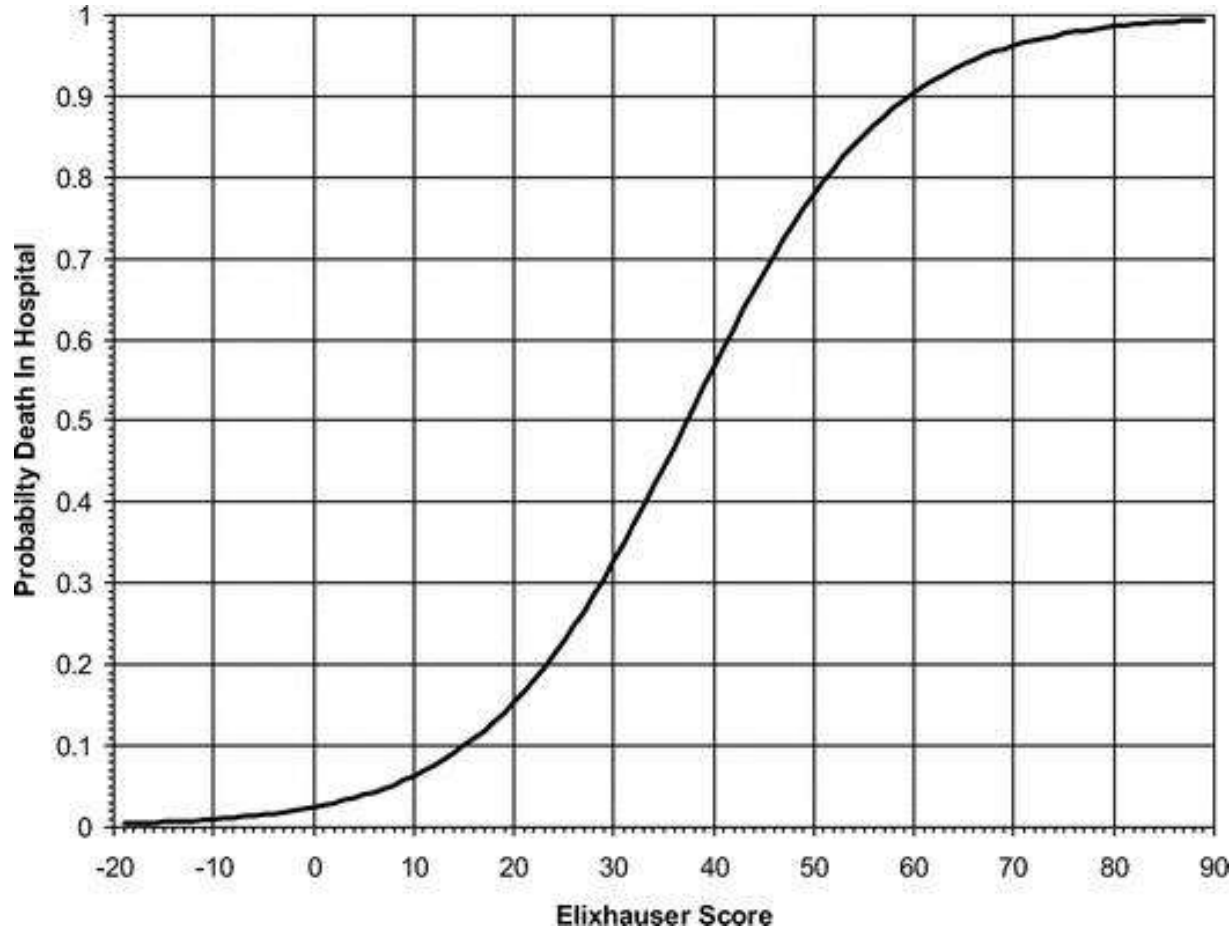
- **The total Elixhauser score than translates to a probability of an inpatient death.**
  - Obviously, the higher the score, the higher the probability

- Source: A Modification of the Elixhauser Comorbidity Measures Into a Point System for Hospital Death Using Administrative Data Medical Care 47(6):626-633, June 2009.

Large Volume NY/MA Hospital Elixhauser Performance – FY2021

Hospital Name	City	ST	DC Vol	CM Capture Avg	Cases ≥ 4 CM Avg	Elix Mort Score Avg
MOUNT SINAI HOSPITAL	New York	NY	7,292	3.44	43.99%	10.36
BETH ISRAEL DEACONESS MEDICAL CENTER	Boston	MA	4,420	3.39	44.25%	9.49
NEW YORK-PRESBYTERIAN HOSPITAL	New York	NY	10,818	3.53	46.48%	9.27
MASSACHUSETTS GENERAL HOSPITAL	Boston	MA	6,824	3.72	49.07%	8.83
MONTEFIORE MEDICAL CENTER	Bronx	NY	5,644	4.07	57.28%	8.72
NYU LANGONE HOSPITALS	New York	NY	11,575	3.47	44.82%	8.36
ST FRANCIS HOSPITAL, ROSLYN	Roslyn	NY	5,213	3.48	45.30%	8.23
KALEIDA HEALTH	Buffalo	NY	5,643	3.42	45.73%	8.19
UMASS MEMORIAL MEDICAL CENTER INC	Worcester	MA	4,022	3.80	52.83%	7.88
ALBANY MEDICAL CENTER HOSPITAL	Albany	NY	4,484	3.38	44.31%	7.78
BRIGHAM AND WOMEN'S HOSPITAL	Boston	MA	6,331	3.20	39.25%	7.75
NORTH SHORE UNIVERSITY HOSPITAL	Manhasset	NY	6,705	3.06	36.85%	7.69
STONY BROOK UNIVERSITY HOSPITAL	Stony Brook	NY	4,070	3.51	46.41%	7.15
LONG ISLAND JEWISH MEDICAL CENTER	New Hyde Park	NY	5,380	2.95	34.44%	7.09
BAYSTATE MEDICAL CENTER	Springfield	MA	4,573	3.39	43.49%	6.48
LENOX HILL HOSPITAL	New York	NY	4,909	2.99	34.32%	6.23
ROCHESTER GENERAL HOSPITAL	Rochester	NY	4,240	3.66	49.43%	5.76
HOSPITAL FOR SPECIAL SURGERY	New York	NY	6,391	2.11	16.83%	-2.97

Source: CDIMD Tracker for the Elixhauser Model – https://www.cdimdtracker.com

CDI Opportunities

- Coefficients must be captured on ALL patients
- Commonly missed factors:
    - "Metastatic cancer"
    - "Functional quadriplegia"
    - Pancytopenia
    - Pulmonary hypertension PLUS its consequential right heart failure
    - Abnormal Weight Loss, Cachexia, and Malnutrition
    - Many, many others that don't affect the MS-DRG

We will show a CAPD example in a subsequent slide

Why Do Hospitals/Physicians Care?
Different Methodology Collection Periods

Methodology	Data Sets Used	Time Period	
MS-DRG	Inpatient Facility Claims	During inpatient stay only	
APR-DRG	Inpatient Facility Claims	During inpatient stay only	
CMS (Yale) 30-Day Mortality, Readmission, and Complications	Inpatient and Outpatient Facility AND Physician Claims	During inpatient stay and the previous 12 months	
AHRQ PSI, Elixhauser (HCUP), and Vizient Comorbidities	Inpatient Facility Claims	During inpatient stay only	
CMS Hierarchical Condition Categories (HCCs)	Inpatient and Outpatient Facility AND Physician Claims	**TPCC** – Jan 1 – Dec 31 of each year	
		MSPB – The 90 days prior to (and not including) the inpatient admission	
		MIPS Episode Models – Varies with the individual model, most of which involve 120 days **PRIOR TO** the trigger date of model	
		APMs – Varies with the individual model	

Physician Billing Impact

Inpatient and Emergency Department MD billing will radically change on 1/1/2023

- **Physicians will have to describe their patient's illness in more severe terms to qualify for higher fees**
- **Quantity AND Quality of diagnoses will matter.**

Also impacts critical care billing

https://www.ama-assn.org/system/files/2023-e-m-descriptors-guidelines.pdf

CPT® Evaluation and Management (E/M)

Code and Guideline Changes

This document includes the following CPT E/M changes,

effective January 1, 2023:

- E/M Introductory Guidelines related to Hospital Inpatient and Observation Care Services codes 99221-99223, 99231-99239, Consultations codes 99242-99245, 99252-99255, Emergency Department Services codes 99281-99285, Nursing Facility Services codes 99304-99310, 99315, 99316, Home or Residence Services codes 99341, 99342, 99344, 99345, 99347-99350
- Deletion of Hospital Observation Services E/M codes 99217-99220
- Revision of Hospital Inpatient and Observation Care Services E/M codes 99221-99223, 99231-99239 and guidelines
- Deletion of Consultations E/M codes 99241 and 99251
- Revision of Consultations E/M codes 99242-99245, 99252-99255 and guidelines
- Revision of Emergency Department Services E/M codes 99281-99285 and guidelines

- All queries must meet the same compliant standards regardless of how or when they are generated, including those autogenerated by artificial intelligence (AI) and computer-assisted coding (CAC), whether in real-time computer-assisted physician documentation (CAPD) or after the episode of care is complete.
- Any technology-generated documentation query must follow the query compliance guidance discussed above. If a query response from a technology-driven query does not yield the response desired, it is inappropriate to send a follow-up manual query, for the same diagnosis/condition/procedure, in absence of new clinical indicators
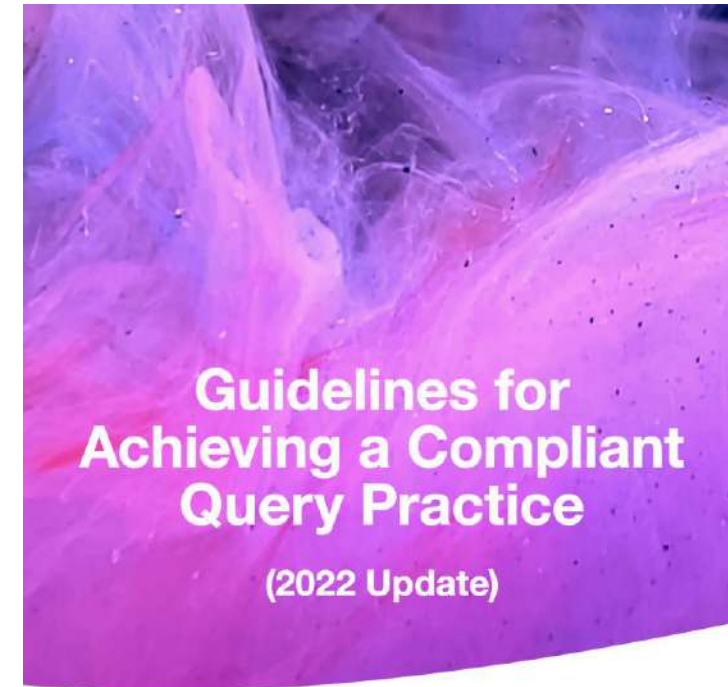
https://acdis.org/resources/guidelines-achieving-compliant-query-practice%E2%80%942022-update

Guidelines for Achieving a Compliant Query Practice

(2022 Update)

Potential CDI Practice Changes
Proposed 2022 AHIMA (ACDIS) Query Practice Brief

- Assigns authority for any CDI activity to AHIMA and ACDIS
  - The AMA or any other physician group is excluded
- Provide(s) a resource for all stakeholders including external reviewers (e.g., the Office of Inspector General (OIG), government contractors, payer review agencies) in the evaluation of provider queries and the documentation they provide.
- Applies not only CDI and coding professionals but also physician advisors, case management/utilization review, quality management professionals, infection control clinicians, *information technology professionals*, and any others working to clarify healthcare documentation/information.

https://acdis.org/resources/guidelines-achieving-compliant-query-practice%E2%80%942022-update

CDI Past (and Perhaps the Present)

- **Reactive CDI (Post Time of (MD) Service)**
  - Negotiate with the coding staff if changing the codes or their sequencing can be compliantly accomplished, if needed, and what physician engagement strategy would they agree with
  - Engage physicians to address identified issues in a compliant AND effective manner, sometimes negotiating with the physician as to what the most compliant answer is
  - Assure that the coding department deploys the most accurate code based on provider documentation
  - Defend these codes and their sequencing when challenged or denied by an accountability agent

- **Proactive CDI (Before or During Time of Service)**
  - Develop standardized definitions of clinical language with providers and coders that enhances the clinical practice of medicine
  - Partner with other clinicians (e.g., wound care, antibiotic stewardship, respiratory therapy, preprocedural assessments, care management, quality, sepsis coordinators, service line managers) toward standardizing clinical language and facilitating its proper entry in the EHR.
  - Collaborate with executive leadership, managers, utilization review, quality, and case management in meeting common goals
  - Develop and integrate EHR documentation infrastructure (e.g., templates, "smart phrases") and technology (*e.g., artificial intelligence, automated queries, etc.*)
  - Analyze data that identifies CDI risks and opportunities as to focus improvement activities and refine the CDI approach

Maximizing CDI Program Effectiveness & Efficiency without Adding Resources

- CDI Department Key Performance Indicators (KPIs)
- Staffing Ratio – What is appropriate for your organization?
- Progression of CDI in the Industry
- Levels of CDI professionals
  - Core CDS Concurrent Reviewers
  - Lead CDS
  - CDI Educators – CDI and Provider
  - Quality Auditors – Retrospective Reviewers
  - Specialty CDS team members
  - New Service Lines (Outpatient, OB, Pedi, Rehab, ER)
  - Provider Engagement and Education
    - Empowering the Expertise of the Provider in the Query Process

This report shows satisfied queries and the users with the most responses by either responding to it in the preferred workflow or reading the query.

Rank	Clinician	Specialty	Agree	Disagree	Read	Decline	Indeterminate	Total
Total			181	38	1,096	2	2	1,319
1		Internal Medicine	41	-	14	-	1	56
2		Internal Medicine	-	-	34	-	-	34
3		Internal Medicine	-	5	23	-	-	28
4		Internal Medicine	-	-	26	-	-	26
5		Internal Medicine	18	-	5	-	1	24
6		Internal Medicine	11	-	7	-	-	18
7		Internal Medicine	17	-	1	-	-	18
8		Intensive Care	14	-	4	-	-	18
9		Internal Medicine	1	-	16	-	-	17
10		Internal Medicine	-	-	16	-	-	16
11		Internal Medicine	-	-	15	-	-	15
12		Internal Medicine	9	-	6	-	-	15
13		Internal Medicine	9	-	5	-	-	14
14		Internal Medicine	-	-	13	-	-	13
15		Internal Medicine	9	-	4	-	-	13
16		Internal Medicine	-	-	13	-	-	13
17		Internal Medicine	6	-	6	-	-	12
18		Internal Medicine	1	-	10	-	-	11
19		Internal Medicine	5	-	6	-	-	11
20		Internal Medicine	-	-	11	-	-	11
21		Internal Medicine	6	-	4	-	-	10
22		Internal Medicine	-	-	10	-	-	10
23		Internal Medicine	5	-	4	-	-	9

VALUE of Proactive CDI

HITEKS™

▶ ## Satisfaction. Reimbursement. Efficiency.

Reduced documentation headaches

More efficient delivery network collaboration, generating additional revenue and improving care quality and its reporting

More favorable public reporting for all involved

Multiple Risk Models
Capture codes for comorbidities affecting revenue (e.g., DRG/HCC) and quality (e.g., U.S. News & World Report, PSI) rankings

Physician Satisfaction – Reduces Burnout
Our doctors craft the prompts; AI detects where to suggest. A win-win for both sides!

Ensure Revenue Integrity
Capture all applicable codes in payer language for fair reimbursement.

Real Time Data Feedback
Clinical workflow prompts at point of care in Epic

Nothing Missed
Empower CDI team to look comprehensively

Improves Quality Reporting
Strengthen data used by U.S. News & World Reports and CMS Hospital/Physician Compare

HCC, MS-DRG, MS-DRG Base, APR Base, APR SIO/ROM Impact

Elixhauser-Focused Queries

Abdominal Pain	Acute COPD/Asthma	Hypomagnesemia
Abnormal CXR on Antibiotic	Cor Pulmonale	Hyponatremia
Acidosis (acute metabolic/respiratory)	Debridement	Hypophosphatemia
Acute Blood Loss	Diabetes Mellitus Hyperglycemia	Incision and drain
Acute Heart Failure	Diabetic Hyperosmolarity	Malignant Hypertension
Acute Hypercapnic Respiratory Failure	Diabetic Ketoacidosis	Nicotine Withdrawal
Acute Hypoxic Respiratory Failure	Drug Overdose	Pneumonia Specificity
Acute Myocardial Infarction	DVT	Pulmonary Embolism POA
Acute on Chronic Diastolic Heart Failure	Dysphagia Phase	Respiratory Failure
Acute on Chronic Systolic Heart Failure	Elevated lactate with Sepsis (Severe Sepsis)	Sepsis
Acute Respiratory Failure	Elevated Troponin	Sepsis with specific sources of infection
Acute tubular necrosis	Fracture	Shock
AIDS/HIV	Gastroenteritis	Simple Pneumonia
ARDS	Hepatic Failure Severity	SIRS
Asthma Severity	HIV - Symptomatic/Asymptomatic	Spinal Cord Edema
Acute Asthma/COPD	Hypercalcemia	Thiamine Deficiency
Atrial Fibrillation	Hyperkalemia	Thrombocytopenia
Bowel Obstruction	Hypernatremia	Uncontrolled diabetes
Child Abuse	Hyperphosphatemia	Urosepsis
Chronic Heart Failure Type	Hypertension	UTI
Coma	Hypocalcemia	UTI Linkage to catheter
Complex Pneumonia	Hypokalemia	

Anemia - Macrocytic	Lymphoma
Anemia - Microcytic	Malnutrition
Brain Hemorrhage	Metabolic Encephalopathy
Cause of Delirium	Midline Shift
Cerebral Edema	Mild/Moderate Malnutrition
Chronic Kidney Disease	Morbid Obesity >35+ & >40
CVA	Obesity BMI>30
Cause of Delirium	Pancytopenia
Drug induced hemorrhage disorder	Portal Hypertension
Encephalopathy	Pulmonary Embolism Specificity
End-Stage Renal Disease	Pulmonary Hypertension
Fluid Overload	Right Heart Failure Etiology
GI Bleeding+Ulcer	Septic Encephalopathy
Hepatic Encephalopathy/Failure	Severe Malnutrition
HFpEF (with EF >=50%)	Solid Cancer
HFrEF (with EF<50%)	Subdural Hemorrhage/Hematoma
Hypertensive Encephalopathy	Toxic Encephalopathy
Hypothyroidism	Uncontrolled diabetes
Immobility Status	Underweight
Leukemia	

Query Language Optimization: Cancer Metastasis

Left panel:

Please indicate the cancer's current local extension/distal metastasis status, if any.

Add sentence at cursor:

+ Local extension/distal metastasis never occurred

+ Local extension/distal metastasis now present OR treated, please specify location

+ Local extension/distal metastasis no longer present and not being treated

Other options:

Agree (I have updated the note text accordingly)

Reject query (for all users)

Clinically undetermined

Ask me later

Someone else should address this

Why am I seeing this?

Cancer (Diagnosis)

Progress Notes Joshua Smith, MD   Today 1513
H&P Joshua Smith, MD   Yesterday 0920

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Right panel:

Please clarify the mentioned cancer diagnosis from all sites, if under active treatment.

Add sentence at cursor:

+ Secondary/ Metastatic cancer present with treatment; please specify location(s)

+ Secondary/ Metastatic cancer, with recurrence and treatment; please specify location(s)

+ No known Secondary/ Metastatic cancer, no active treatment

Other options:

Agree (I have updated the note text accordingly)

Reject query (for all users)

Clinically undetermined

Ask me later

Someone else should address this

Why am I seeing this?

Cancer (Diagnosis)

Progress Notes Joshua Smith, MD   Today 1513
H&P Joshua Smith, MD   Yesterday 0920

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321% Increase in Accepted Advice With Direct-to-Physician in EHR Workflow
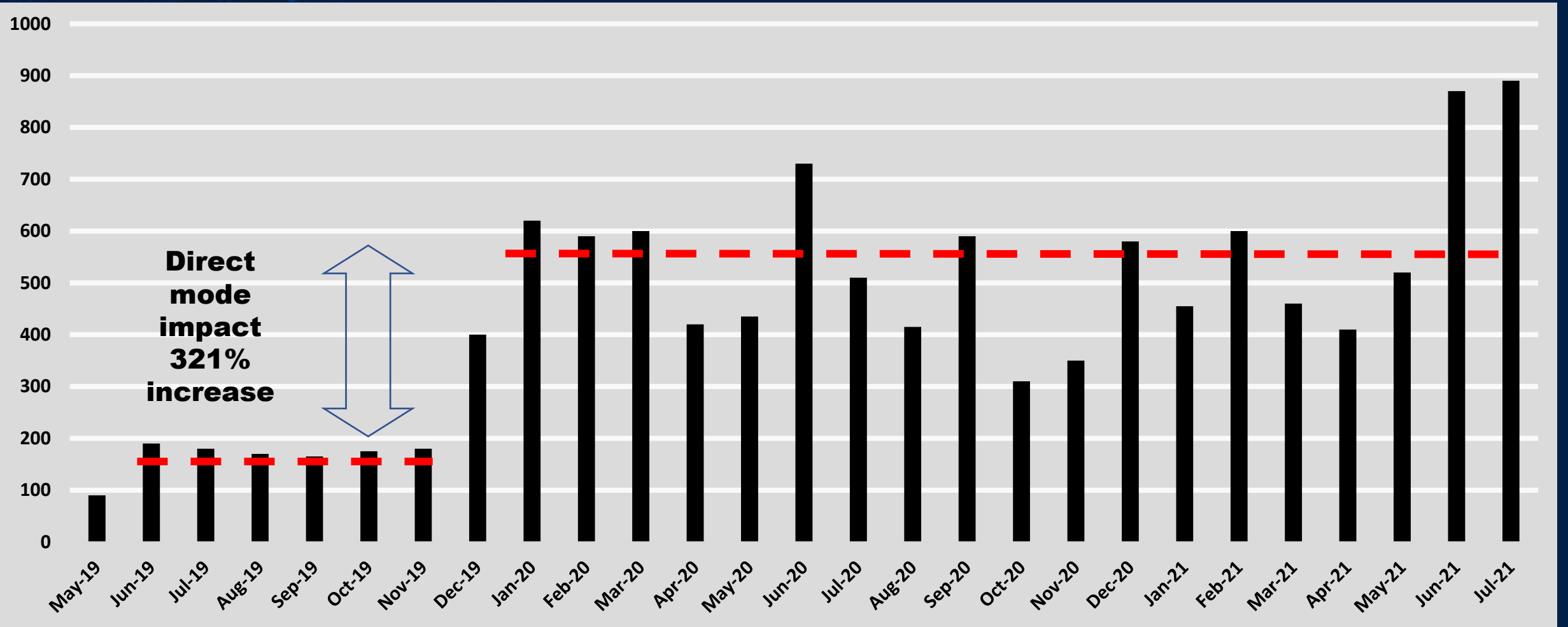
Embedded, Direct & Silent Modes

HITEKS™

Embedded Direct Mode

Pre-sign/save

Note side-bar:
Query Title, Suggestions & Evidence

Reduce denials from changed documentation
Reduce overall query burden

Care Team Direct Mode

Presented to All Providers of Record for Signed Notes

Uses Preferred Screens: Note Side-bar, To-Do List, Patient List

Increase provider responses before discharge

Silent Mode to CDS

Presented "Silently" in Epic Work Queues

Automates Sending to Provider in Preferred Screens

Follow-up for Queries that are not responded

Provider Workflow

- **On-demand Analyze Note**
  (Epic's May 2022 release)

- **Provides feedback within seconds PRIOR to pending or signing**

Provider Workflow

- **On-demand Analyze Note**
(Epic's May 2022 release)

- **Provides feedback within seconds prior to pending or signing**

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Thank You

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