Clinical Validation and Documentation Improvement for Coding and Reimbursement

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Provider Documentation

- Primarily a means of clinical communication to coordinate and deliver quality care to patients

- A means for clinicians to understand the thought process behind clinical decision making

- Coding is reliant on complete and accurate provider documentation to report all relevant diagnoses and procedures

- H.I.M. may also need to understand the thought process behind clinical decision making when assigning codes or when appealing a denial

A Joint Venture

- The ICD-10-CM Official Guidelines for Coding and Reporting state:

  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. These guidelines have been developed to assist both the healthcare provider and the coder in identifying those diagnoses that are to be reported. The importance of consistent, complete documentation in the medical record cannot be overemphasized. Without such documentation, accurate coding cannot be achieved. The entire record should be reviewed to determine the specific reason for the encounter and the conditions treated.

Provider Responsibility

- ICD-10-CM Official Guidelines for Coding and Reporting, Section 1.A.19 states:

  The assignment of a diagnosis code is based on the provider's diagnostic statement that the condition exists. The provider's statement that the patient has a particular condition is sufficient. Code assignment is not based on clinical criteria used by the provider to establish the diagnosis.

- Emphasizes that physician documentation of a condition is required for the condition to be reported.

Provider Responsibility

- What guideline 1.A.19 establishes is that responsibility lies with the provider and not the coder in ensuring complete, accurate, and appropriate documentation.

- What guideline 1.A.19 does not do is absolve coders and CDI specialists from working with the providers to improve their documentation.

- Guideline 1.A.19 emphasizes the need for a strong CDI program to provide concurrent clarification of diagnoses and clinical indicators noted in the documentation prior to coding and billing.

AHIMA's Stance

- In their practice brief on compliant queries, AHIMA states:

   When a practitioner documents a diagnosis that does not appear to be supported by the clinical indicators in the health record, it is currently advised that a query be generated to address the conflict or that the conflict be addressed through the facility's escalation policy.

- A coder should not decide whether to report diagnoses based on their meeting clinical criteria.

- A retrospective query may be needed to support and to avoid a denial

American Hospital Association's Take

- AHA *Coding Clinic* 4th Qtr 2016, pp 147-149 reiterates:
  - Guideline 1.A.19 addresses coding *not* clinical validation
  - Although linked to coding, clinical validation is a separate function outside of coding
  - Code assignment by a coder has always been based on physician documentation and never a particular clinical definition or criteria
  - Physicians may use a particular clinical definition or set of clinical criteria to establish a diagnosis
  - As an example, whether a physician uses the new clinical criteria for sepsis, the old criteria, his personal clinical judgment, or something else to decide a patient has sepsis, the code for sepsis is assigned if sepsis is documented

CMS's View

- Medicare too has standards for clinical evidence.
- According to the CMS MedLearn Matters Article SE1121:

  As with all codes, clinical evidence should be present in the medical record to support code assignment.

- This seemingly simplistic view was greatly expanded in the CMS Recovery Audit Contractor (RAC) Scope of Work 2013.

The RAC's Scope of Work

- From the Recovery Audit Contractor Scope of Work 2013:

   Clinical validation is an additional process that may be performed along with DRG validation. Cllinical validation involves a clinical review of the case to see whether or not the patient truly possess the conditions that were documented in the medical record. Recovery Auditor physicians shall review any information necessary to make a prepayment or post payment claim determination. Clinical validation is performed by a clinical (RN, CMD or therapist). Clinical validation is beyond the scope o DRG (coding) validation, and the skills o a certified coder.

Clinical Criteria

- For diagnoses:
  - Signs
  - Symptoms
  - Ancillary test results
  - Subsequent treatments, therapies, interventions
- For procedures:
  - Technical description
  - Integral components

Clinical Criteria Notes

- Conflict may evolve between actual clinical findings and a particular diagnostic statement by the provider.

- A physician may conclude a certain diagnosis despite certain clinical results which do not fall within the clinical confirmation range or levels.

- The provider must document the reasoning behind this decision-making.

- This will clarify any inconsistencies between a physician diagnostic statement and the clinical criteria.

Clinical Validation

- The use of clinical criteria to support reported codes
- Key component of many audit reviews
- Physician documentation may support code assignment, but what supports the physician documentation?
- Some coders may feel it is not within their realm to evaluate clinical criteria.
- In the past, some coders felt it was not their place to even question providers.
- Today, coders must share the responsibility of clinical validation.

Clinical Validation

- Coders must understand how clinical indicators support *or* do not support a diagnosis or procedure *and* just what documentation is required.

- This understanding should then be used to compose clinically accurate and appropriate physician queries.

- Coding has always been considered one of the pillars that supports compliance overall.

- Medical necessity is another factor to consider:
  - Do the clinical criteria warrant an inpatient stay?
  - Do the clinical criteria support the interventions performed?

Consistent Documentation

- CMS reinforces that all documentation must be consistent with other parts of the medical record.

- When an entry contradicts or in any way conflicts with documentation elsewhere in the record, clarification must be made.

- For clinical validation denials, this extends to all diagnostic statements and their correlating clinical criteria.

- This will ensure bullet-proof documentation against any audit.

More for AHA *Coding Clinic*

- Coders are not to use background clinical information contained in an AHA *Coding Clinic* response as a basis for their code assignment.

- The information is provided to assist the coder in deciding whether to query a provider where the documentation is lacking.

- The information in *Coding Clinic* is never intended to justify code assignment where provider documentation is insufficient.

- To compose a clinically accurate and appropriate query, the coder must fully understand how the clinical indicators support or do not support a diagnosis or procedure and the documentation required.

Appropriate Coding & Reimbursement

- A quick review of some of the fundaments that play directly into clinical validation!

- With all that has been happening in coding with CDI and revenue cycle and quality measures, many coders seem to have lost sight of the coding guidelines and their undeniable importance.

- With the shortage of coders, many have been pushed into inpatient positions without adequate training or experience.

- Most CDI specialists come from a nursing background and have only a limited knowledge of the official coding guidelines.

Principal Diagnosis

- Foundational!
- To assign any ICD-10-CM diagnosis code as principal diagnosis, certain and specific criteria from the following sources must be met:

  - The coding conventions
  - The Official Coding Guidelines (OCG)
  - The Uniform Hospital Discharge Data Set (UHDDS)
  - Clinical criteria
  - Provider documentation

Principal Diagnosis -- UHDDS

- The principal diagnosis is defined in the UHDDS as –

    That condition established after study to be chiefly responsible for occasioning the admission of the patient to the hospital for care.

- "After study" is of particular relevance, since this indicates that the underlying condition for the admission may not at first be apparent.

Principal Diagnosis – Coding Conventions

- The coding conventions are an actual component of the World Health Organization's (WHO) code set.

- These provide instruction and guidance on how the tabular list and alphabetic index are to be used and applied to code assignment.

- These coding conventions can never be superseded by any other convention, guideline, instruction or advice.

Principal Diagnosis – OCG

- The official coding guidelines were developed and are maintained by the Centers for Medicare and Medicaid Services (CMS) and the National Center for Health Statistics (NCHS) with input, advice and approval from the other two of the four Cooperating Parties -- AHIMA and the AHA.

- The coding conventions are considered a part of these guidelines together with additional general guidelines and more chapter-specific guidelines.

- The OCG are applicable to all healthcare settings in the U.S. unless otherwise indicated.

Principal Diagnosis – OCG

- Section II of the OCG specifically addresses the selection of the principal diagnosis.

- The OCG are specific to ICD-10-CM and the U.S. not to I-10 WHO.

- Newly updated revisions of the OCG are published on the NCHS website annually in October.

- It is every coder's responsibility to review these revisions and to become familiar with them and their application.

- Separate guidelines exist for ICD-10-PCS.

Other or Additional Diagnoses -- OCG

- As with the "principal diagnosis" (or "first-listed" diagnosis in the outpatient setting), to assign an ICD-10-CM diagnosis code as an "additional", "other", or "secondary" diagnosis, criteria from the following must first be met:

  - Clinical evaluation
  - Therapeutic treatment
  - Diagnostic procedures
  - Extended length of hospital stay (LOS)
  - Increased nursing care and/or monitoring

Other or Additional Diagnoses -- OCG

- The definition of "other diagnoses" is interpreted as "additional conditions that affect patient care" in terms of requiring those five circumstances just mentioned.

- These "other diagnoses" might represent:

  - A comorbidity
  - A complication of care
  - A hospital-acquired condition
  - A hierarchical condition category

- Caution must be exercised in assigning!

Other or Additional Diagnoses -- UHDDS

- The UHDDS item 11-b defines "other diagnoses" as –

  All conditions that coexist qt the time of admission, that develop subsequently, or that affect the treatment received and/or the length of stay.

  Diagnoses that relate to an earlier episode which have no bearing on the current hospital stay are to be excluded.

- Additionally it is a good practice to take care in sequencing "other diagnoses" based on their relevance to the current stay and their overall significance in patient care.

Principle Procedure

- The concept of a principle procedure exists solely with MS-DRGs and not with APR DRGs, but regardless it is a good practice for a coder to always sequence the procedure codes as logically as possible based on their relation to the principal diagnosis.

- Procedure performed for definitive treatment of both principal diagnosis and secondary diagnosis:

  - Sequence procedure for definitive treatment most related to principal diagnosis as principle procedure.

Principle Procedure

- Procedure performed for definitive treatment and diagnostic procedures performed for both principal diagnosis and secondary diagnosis:

  - Sequence procedure performed for definitive treatment most related to principal diagnosis as principal procedure.

- A diagnostic procedure was performed for the principal diagnosis and a procedure is performed for definitive treatment of a secondary diagnosis:

  - Sequence diagnostic procedure as principal procedure, since the procedure most related to the principal diagnosis takes precedence

Principle Procedure

- Procedure performed for definitive treatment and diagnostic procedures performed for both principal diagnosis and secondary diagnosis:

- No procedures performed that are related to the principal diagnosis; procedures performed for definitive treatment and diagnostic procedures were performed for secondary diagnosis:

  - Sequence procedure performed for definitive treatment of secondary diagnosis as principal procedure, since there are no procedures related to the principal diagnosis.

Present on Admission (POA)

- Present-on-admission (POA) indicators are required on all diagnosis and external cause-of-injury codes for all inpatient acute care hospital discharges.

- A select group of codes has been designated as *exempt* from POA.

- Mandated by the Deficit Reduction Act of 2005, section 5001(c)

- Effective October 1, 2007 for FY2008

- Appendix I of the Official Coding Guidelines(OCG) contains the Present on Admission Reporting Guidelines.

  - Not intended to replace the OCG

Present on Admission and the UHDDS

- Not to supersede the UDHHS definition of principal diagnosis
- Does not change the definition of "additional" diagnoses
- Coders must report all conditions that coexist at the time of admission, develop subsequently, or affect the treatment received and/or the length of stay.
- Significantly impacts assignment of the POA indicators
- The POA indicators must reflect the patient's condition at the time of admission.
- Review M.D. orders to admit to inpatient prior to assignment!

Other Exemptions

- In addition to certain designated codes being exempt from the POA required by law, certain facilities are exempt from reporting:

    - Critical access hospitals
    - Long-term care hospitals
    - Cancer hospitals
    - Inpatient psychiatric hospitals
    - Inpatient rehabilitation facilities
    - Veterans Administration Department of Defense hospitals
    - Children's inpatient facilities

The POA Indicators

- Y = Yes: Present at the time of inpatient admission
  - Reason to always check MD Admission Orders
  - Remember too that Observation is not inpatient
- N = No: Not present at the time of inpatient admission
  - Thoroughly investigate before assigning to be 100% certain
- U = Unknown: Documentation is insufficient to determine of condition is present on admission
  - Assigning this indicator is actually worse than assigning "N"
- W = Clinically undetermined: Provider is unable to clinically determine whether condition was or was not present on admission.
  - Perfectly acceptable and far better than an "N" or worse still "U"

Present on Admission

- Coders must review the entire medical record to determine if a condition was present on admission.

- When documentation is missing, conflicting, inconsistent, or unclear, the provider must be queried.

- CDI can prove helpful in ensuring clear documentation before the time of coding.

- Accurate POA assignment greatly impacts both the quality and the final billing of the patient encounter.

Hospital Acquired Conditions (HACs)

- Considered reasonably preventable through the application of evidence-based guidelines.
- The HACs are a subset of CCs and MCCs in MS-DRG.
- In MS-DRG will move DRG assignment from a lower-paying DRG to a higher-paying DRG when present on admission.
- When not present on admission, the CC or MCC designation is nullified and a higher-paying DRG based solely on that one condition will not be assigned.
- A HAC will be ignored and not increase payment.
- If other CCs or MCCs reported for the encounter are present on admission, then the higher-paying DRG will still be assigned.

Currently Fourteen Categories of HACs

- Foreign Object Retained After Surgery
- Air Embolism
- Blood Incompatibility
- Stage III and IV Pressure Ulcers
- Falls and Trauma
- Catheter-Associated Urinary Tract Infection (UTI)
- Vascular Catheter-Associated Infection
- Surgical Site Infection – Mediastinitis After Coronary Artery Bypass Graft (CABG)

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Currently Fourteen Categories of HACs

- Manifestations of Poor Glycemic Control
- Deep Vein Thrombosis (DVT)/Pulmonary Embolism (PE) with Total Knee (TKR) or Hip Replacement (THR)
- Surgical Site Infection – Bariatric Surgery
- Surgical Site Infection – Certain Orthopedic Procedures of Spine, Shoulder and Elbow
- Surgical Site Infection (SSI) Following Cardiac Implantable Electronic Device (CED) Procedures
- Iatrogenic Pneumothorax with Venous Catheterization

Queries

- Medical record documentation must be consistent with all other parts of the medical record.

- When documentation entries conflict with other data within the medical record, clarification must be obtained when the information is used to report diagnosis or procedure codes.

- Clinical data within the record and record documentation must be incorporated into a specifically stated yet open-ended query to substantiate and identify why clarification is needed.

Queries

- The query should assist the provider in making a clinical interpretation of a diagnosis, condition, or procedure.
- Must be based on:
  - Clinical criteria
  - Past medical history and the present condition
  - Treatment rendered
  - Evaluation performed
  - Diagnostic work-up
  - Any monitoring provided
  - Any services/resources used (PT, OT, etc.)
  - Official Coding Conventions and Guidelines

Appropriate Queries

- When a conflict exists between provider documentation and clinical indicators for a diagnosis made or a procedure performed
- When documentation between physicians conflicts
- When the documentation within the medical record is:
  - Inconsistent
  - Ambiguous
  - Incomplete
- When a higher level of specificity is obtainable

Queries

- To resolve conflicting and inconsistent documentation, the attending of the medical record will need to be queried.

- The attending is responsible for the final diagnosis.

- The surgeon will need to be queried for clarification on surgeries and procedures.
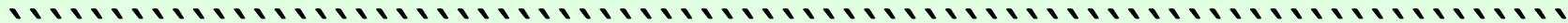
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- A query may not introduce new information or indicate any impact on reimbursement!

# Terminology Clarification

- Postoperative vs. complication
- The term "postoperative" denotes a time period, and does **not** convey a causal relationship between surgery and a condition.
- This cause-and-effect relationship must be documented by the provider and never assumed.
- Examples of such documentation:
  - "Due to"
  - "Iatrogenic"
  - "Misadventure"
  - "Intraoperative"
  - "Nosocomial"

# Terminology Clarification

- The official coding guideline I.B.16 addresses the documentation of complications of care:

    *Code assignment is based on the provider's documentation of the relationship between the condition and the care or procedure, unless otherwise instructed by the classification. The guideline extends to any complications of care, regardless of the chapter the code is located in. It is important to note that not all conditions that occur during or following medical care or surgery are classified as complications. There must be a cause-and-effect relationship between the care provided and the condition, and an indication in the documentation that it is a complication. Query the provider for clarification, if the complication is not clearly documented.*

# Terminology Clarification

- Postoperative conditions described as below are **NOT** considered complications and are **NOT** reported as secondary diagnoses:
  - Routine
  - Incidental
  - Inherent to the procedure
  - Of no clinical significance
  - Inadvertent
  - Expected outcome
- Certain serosal or dural tears during surgery are good examples
- Any doubt – query!

# Terminology Clarification

- Conditions **NOT** described as on slide 42 *are* reportable if they meet the official coding guideline section III definition as an additional diagnosis.

- Pre-existing conditions exacerbated by a surgery or procedure are **NOT** complications related to surgery.

- May be reported if properly documented and meet the official coding guideline section III definition for additional diagnoses.

- "Complication" as used in ICD-10-CM does not imply improper or inadequate care.

- A means of classification to indicate the etiology of the condition without negative implications

# The Importance of Documentation

- Supports patient status or type
- Supports medical necessity
  - For level of care – inpatient vs. observation
  - For interventions performed
- Reduces denials
- Supports quality measures
- Promotes accountability and transparence
- Captures the level of risk and severity
- Supports accurate diagnosis and procedure code assignment
- Supports DRG assignment

# The Importance of Documentation

- Supports hospital-acquired condition (HAC) identification
- Supports present on admission (POA) indicator assignment
- Identifies and supports patient discharge status (disposition)
- Provides clear communication within the facility with other providers
- Provides clear communication outside the facility with other providers
- Ensures efficient and timely billing and supports proper payment
- Discourages "upcoding" resulting in improper higher reimbursement

# The Importance of Documentation

- Can only be effective when the documentation is –

  - Accurate
  - Complete
  - Compliant
  - Consistent
  - Timely
  - Specific

- This is the key role and main function throughout all health information management!

# Where to Begin!

- Approximately 43 diagnoses currently in the cross-hairs of payers, auditors, quality organizations, etc. (listed in slides 48 – 53)
- Approximately 17 procedures ( listed in slides 54 – 56)
- Great list to start working on -- even just one a month or quarterly.
- Hold meetings with departments involved to learn and discuss:
    - Coding
    - CDI
    - Quality
    - Patient Access
    - Medical Staff
    - H.I.M.
    - Billing

# A Look at Diagnoses

- Acidosis
- Acute Kidney Injury
- Acute Myocardial Infarction
- Acute Pulmonary Edema, Noncardiogenic
- AIDS
- Aspiration Pneumonia/Pneumonitis Bronchitis
- Atelectasis
- Bacteremia as Principal Diagnosis

# A Look at Diagnoses

- Candidiasis
- Cerebral Edema
- Cerebrovascular Accident
- Chest Pain as Principal Diagnosis
- Chronic Obstructive Pulmonary Disease (COPD) Exacerbation with Asthma/Bronchitis
- Coagulopathy
- COVID-19 with Respiratory Complications

# A Look at Diagnoses

- Deep Vein Thrombosis of Upper and Lower Extremities
- Dehydration as Principal Diagnosis
- Diabetic Ketoacidosis
- Empyema, Pleural or Pyothorax
- Encephalopathy
- Gastrointestinal Hemorrhage
- Heart Failure (non-rheumatic)
- Hepatic Encephalopathy/Hepatic Coma/Portosystemic Encephalopathy

# A Look at Diagnoses

- Hypernatremia
- Hyponatremia
- Iatrogenic(Intraoperative) Puncture or Laceration (Tear) (Rent)
- Ileus
- Intraoperative or Postoperative Hemorrhage (not due to device, implant, or graft)
- Intravenous/Dialysis Line/Catheter Infection
- Malnutrition
- Pleural Effusion

# A Look at Diagnoses

- Poisoning and Toxic Effects of Illicit Drugs, Prescribed Drugs, Nonprescribed Drugs, Alcohol, Chemicals, and Other Substances
- Postoperative Anemia
- Postoperative (Postprocedural) Wound Infection
- Post-traumatic Seizures
- Pressure Ulcer
- Pulmonary or Respiratory Insufficiency or Distress
- Respiratory Failure

# A Look at Diagnoses

- Sepsis
- SIRS of Noninfectious Origin
- Syncope as Principal Diagnosis
- Transient Ischemic Attack
- Urinary Tract Infection (Bacterial)

# A Look at Procedures

- Bone Marrow Stem Cell Transplant
- Bronchoalveolar
- Control of Hemorrhage
- COVID-19 New Technology Treatments
- Debridement by Excision (Fascia, Muscle, Bone)
- Debridement by Excision (Skin, Subcutaneous Tissue, Nail)
- Debridement by Extraction (Muscle, Bone)
- Debridement  by Extraction (Skin, Subcutaneous Tissue and Fascia, Nail

# A Look at Procedures

- Fusion, Spinal
- Joint Replacement, Hip, Total, Partial, Revision and Spacers
- PICC/Central Venous Catheter/Vascular Access Device Insertion
- Release (Lysis) of Adhesions
- Right Heart Catheterization/Diagnostic with Heart Biopsy
- Tracheostomy and Ventilation

# A Look at Procedures

- Transbronchial Biopsy of Lung, Lymph Node, Mediastinum via Bronchoscope (extraction) (suction catheter aspiration) (needle aspiration biopsy/Wang)

- Valve Replacement, Aorta

- Whipple Procedure

# Plan for Today

- To review an approach to clinical validation for acidosis and acute kidney injury fairly

- Plan for future CtHIMA education sessions to explore the other diagnoses and procedures on the list
  - Perhaps active, participatory workgroups to actually fill-in the information?

# Valuable Resources

- Wolter Kluwers "Up-to-Date"
  - Comprehensive
  - Easy to understand
  - Lends itself well to coding, CDI, physician education and most all H.I.M. functions
  - Completely online and easily searchable
  - Costly!

- Current Medical Diagnosis & Treatment (CMDT)
  - 2021 60th Anniversary Edition
  - Published by Lange Medical Books/McGraw Hill
  - Available online and in hardcopy
  - Affordable!

# Valuable Resources

- Merck Manual
- Physicians Desk Reference (PDR)
- Mosby's Manual of Diagnostic and Lab Tests
- Diagnostic and Statistical Manual of Mental Disorders Fifth Edition
  - References the ICD-CM codes
- Reference packages already included in your software:
  - 3M™ Clinical Documentation Improvement System Reference
- ICD-10-CM – both tabular and alphabetic index
  - Inclusion notes
  - Exclusion notes
  - Nonessential modifiers
  - Subterms

# Acidosis and Acidemia

- **Acidosis** is the metabolic process that results in an increased acidity of blood plasma and other tissue or alkali loss when the kidneys/lungs cannot maintain the balance.

- The normal pH level varies between 7.35 and 7.45.

- **Acidemia** is a component of acidosis where the arterial pH level is less than 7.35 and is not compensated by the respiratory system.
  - Severe acidemia is a pH < 7.20.
  - Chronic acidemia can cause rickets, osteomalacia, osteoporosis, and osteopenia.

# Acidosis and Acidemia

- When ***compensated***, by the respiratory system, acidosis is mild with few signs or symptoms.
- When ***uncompensated***, the respiratory system too is compromised or has become overwhelmed, acidosis can be severe affecting all organ systems.
- There are three general types of acidosis:
  - Lactic
  - Metabolic
  - Respiratory
- All three can be either acute or chronic.
- All three are represented by ICD-10-CM diagnosis code E87.2 Acidosis.

# Lactic Acidosis

- A form of metabolic acidosis
- An excess of lactic acid in the body from:
  - Overproduction of lactate
  - Decreased metabolism of lactate
  - Combination of both
- Lactate level > 5mEq/L
- Acidemia is present
- Two types of lactic acid:
  - Type A
  - Type B

# Lactic Acidosis – Type A

- Due to tissue hypoperfusion and hypoxia including localized skeletal muscle:
  - Acute pulmonary edema
  - Carbon monoxide poisoning
  - Cardiopulmonary arrest
  - Hypothermic shivering
  - Massive rhabdomyolysis
  - Sepsis
  - Severe anemia
  - Severe seizure
  - Severe strenuous muscle activity
  - Shock

# Lactic Acidosis – Type B

- Due to tissue hypoperfusion and hypoxia including localized skeletal muscle:
  - Diabetes mellitus
  - Hypoglycemia
  - Uremia
  - Liver disease
  - Infections
  - Malignancy
  - Total parenteral nutrition (TPN) therapy
  - Inborn errors of metabolism
  - Drug and alcohol ingestion or poisoning
  - Toxins
  - D-lactic acidosis from short bowel syndrome with colonic overgrowth of Lactobacilli

# Metabolic Acidosis

- Can be due to:
  - Increased acid production
  - Acid ingestion
  - Decreased acid excretion by the kidneys
  - Gastrointestinal/renal bicarbonate loss (HCO3<24 mEq/L
- Types:
  - Diabetic acidosis or diabetic ketoacidosis (DKA)
    - Excluded from E87.2 Acidosis
    - Captured in category E08 – E11 or E13 when with ketoacidosis
  - Ketoacidosis alcoholism, starvation
  - Lactic acidosis (actually a specified form of metabolic acidosis)

# More Types of Metabolic Acidosis

- More Types:
  - Hyperchloremic acidosis
    - Caused by an excessive loss of sodium bicarbonate
      - Severe diarrhea
      - Colostomy
      - Ileostomy
      - High stomal output
      - Short bowel remnant
  - Kidney disease
    - Impaired renal tubular function
      - Distal renal tubular acidosis
      - Proximal renal tubular acidosis
      - Both are captured with code N25.89 Other disorders resulting from impaired renal tubular function

# More Types of Metabolic Acidosis

- **More Types:**
  - Maintenance dialysis
    - Result of the actual dialysis itself
    - Result of the chronic renal failure
  - Severe dehydration

# Respiratory Acidosis

- Causes:
  - Decreased alveolar ventilation(hypoventilation)
  - Decreased respiratory rate
  - A combination of both

- Presentation:
  - Increased blood carbon dioxide concentration (hypercapnia)
  - Acidosis
  - Hypoxia (particularly when hypoventilation is present)
  - Can be acute or chronic

# Respiratory Acidosis

- Types:
  - Acute
    - $PaCO_2$: > 45 mmHg
    - pH: < 7.35
  - Failure of Ventilation
    - Due to:
      - Depression of central respiratory center
      - Cerebral disease
        - Coma
        - Cerebral vascular accident (CVA)
        - Traumatic brain injury
        - Drug-induced
          - Including alcohol
        - Brain tumors

# Respiratory Acidosis

- Types:
  - Chronic
    - Includes "compensated"
    - PaCO$^2$: > 50 mmHg
    - pH: 7.35 – 7.45
      - The pH can be near normal due to renal compensation
      - The degree of acidemia is an indication of acute hypoventilation in chronic ventilatory failure
    - HCO3: > 30 mEq/L
    - Ventilation-perfusion mismatch
    - Decreased diaphragm function
      - Due to fatigue
      - Due to hyperinflation

# Respiratory Acidosis

- Many conditions fall into one or more category or categories can cross each other:
  - COPD
  - Obesity hypoventilation syndrome
  - Severe obesity
  - Amyotrophic lateral sclerosis (ALS)
  - Restrictive disease:
    - Interstitial fibrosis
    - Thoracic deformities

# Respiratory Acidosis Documentation Tips

- Code assignment cannot be based on ancillary test results, therapies, or clinical criteria alone.

- A diagnosis and its clinical significance must be supported by physician or other qualified healthcare professional documentation.

- To report as a **complication**, must be more than a routinely expected condition or event.

- To report as a **complication**, the condition must be linked to the procedure by provider documentation.

- May need to query the appropriate provider(s) for clarification.

# Respiratory Acidosis Coding Tips

- Adverse effects:
  - First code the presentation or the actual adverse effect or manifestation
  - Follow with a code from category T36 – T50 to identify the specific drug
  - Fifth or sixth character of 5 will identify that this was an adverse effect
- Poisonings:
  - First Identify the drug or chemical with a code from category T36 – T50
  - The fifth or sixth character of this code will show the "intent" –
    - Accidental/unintentional
    - Assault (intended harm by another)
    - Intentional (Suicide)
    - Underdetermined circumstance
    - Unspecified (defaults to accidental)

# Respiratory Acidosis Coding Tips

- Exclusions:
  - Metabolic acidosis with or complicated by respiratory acidosis would be coded as E87.4 Mixed disorder of acid-base balance
    - Describes and includes both
  - Respiratory acidosis with or complicated by metabolic acidosis would be coded as E87.4 Mixed disorder of acid-base balance
    - Describes and includes both
  - Diabetic acidosis or ketoacidosis would be reported using categories E08 – E11 and E13

# Respiratory Acidosis Coding Tips

- Exclusions:
  - Newborns:
    - Newborn acidosis reported with P84 Other problems with newborn in addition to E87.2
    - Late metabolic acidosis of newborn reported with P74.0 Late metabolic acidosis of newborn
    - Metabolic acidemia in newborn is captured with category P19

| P19 ☐ | Metabolic acidemia in newborn |
|-------|-------------------------------|
| **INCLUDES** metabolic acidemia in newborn | |
| P19.0 | Metabolic acidemia in newborn first noted before onset of labor |
| P19.1 | Metabolic acidemia in newborn first noted during labor |
| P19.2 | Metabolic acidemia noted at birth |
| P19.9 | Metabolic acidemia, unspecified |

# Pairing Coding Criteria with Clinical Criteria

- The Categories for Coding or Reporting Criteria:
  - Physical Evaluation
  - Clinical Evaluation
  - Diagnostic Procedure
  - Therapeutic Treatment
  - Increased Nursing Care and/or Monitoring
  - Extended Length of Stay (LOS)

# Clinical Criteria for Physical Exam

- For acidosis, some features overlap all three types:
  - Symptoms rely on disease or underlying condition
  - Some symptoms can be seen in all types of acidosis and/or in acidemia
- Others symptoms noted in the physical exam are specific to each type of acidosis.
- A few examples for each type of acidosis follow, but note, there are many more for each.

# Clinical Criteria for Physical Exam

- **Metabolic**:
  - Rapid, deep breathing
  - Hyperventilation
  - Dyspnea

- **Respiratory**:
  - Shortness of breath
  - Anxiety
  - Tremor

- **Lactic**:
  - Exhaustion or extreme fatigue
  - Muscle cramps or pain
  - Body weakness

# Clinical Criteria for Physical Exam

- **Severe acidemia** (pH < 7.20)
  - Lethargy
  - Stupor
  - Seizures

# Clinical Criteria for Clinical Evaluation

- These are just some of the tests that might be done to confirm a diagnosis of acidosis and/or to determine its underlying cause:
    - Arterial blood gas (ABG) analysis
    - Serum electrolytes (basic metabolic panel)
    - Anion gap calculated
    - Delta gap calculated (HC)3 equivalent)
    - Urine pH
    - Ketone level
    - Serum lactate level
    - Salicylate levels
    - Iron levels

# Clinical Criteria for Diagnostic Procedures

- Here are some of the tests that might be performed to confirm a diagnosis of acidosis and/or to determine its underlying cause:
  - Chest x-ray
  - Imaging (kidney, ureter, bladder)
  - Pulmonary function test
  - Electrocardiology
  - Continuous pulse oximetry

# Clinical Criteria for Therapeutic Treatment

- Here are some of the interventions that might be performed in the treatment of acidosis and its underlying causes:
  - Hemodynamic support
  - Respiratory support
  - Administration of sodium bicarbonate
    - Small amounts in severe acidemia to maintain a pH > 7.20
  - Administration of alkalinizing agents
  - Dialysis
  - Oxygen
  - Bronchodilator medications
  - Noninvasive positive-pressure ventilation
  - Mechanical ventilation with endotracheal intubation

# Clinical Criteria for Increased Nursing Care

- Iatrogenic cause of underlying condition occurs postprocedure
- Underlying cause or condition occurs during the admission

# Clinical Criteria for Extended LOS

- Iatrogenic cause of underlying condition occurs postprocedure
- Underlying cause or condition occurs during the admission and delays discharge.
- Other factors would be considered social and not clinical:
  - Delay in scheduling a physical therapy consult
  - No safe discharge
  - No room available at the SNF

# Acute Kidney Injury

- The rapid loss of kidney function within 48 hours
- Can occur in patients with prior normal kidney function
- Can occur in patients with pre-existing renal disease
  - Acute on chronic renal disease
- This is a nontraumatic acute kidney injury or impairment (AKI)
- Also referred to as:
  - Acute renal failure
  - Acute kidney failure
- Considered a syndrome of progressive kidney injury/impairment

# Acute Kidney Injury -- RIFLE

- The acronym RIFLE was applied by the Acute Dialysis Quality Initiative in order to better develop a more uniform definition of AKI.
  - R = Risk
  - I = Injury
  - F = Failure
  - L = Loss
  - E = End-stage

- It all begins with "risk" as an elevated absolute serum creatinine (SCr)

# Acute Kidney Injury -- RIFLE

- From here the risk can proceed to injury with eventual loss of kidney function possibly through to end-stage renal disease or failure requiring dialysis:
  - SCr ≥ 0.3 mg/dl
  - An SCr increase from the baseline ≥ 50%
    - Or 1.5 fold from baseline
  - Reduction in urine output
  - Worsening with each stage
- AKI is considered reversable until it progresses to complete loss of renal function or end-stage renal disease (ESRD)
- Treatment will depend on both the underlying cause and the stage of the AKI.

# Acute Kidney Injury – RIFLE and ICD-10-CM

- ICD-10-CM currently does not capture the stages of AKI as it does for chronic kidney disease (CKD)
- As a guide:
  - Stage III of the RIFLE system represents ICD-10-CM code N17.9 Acute kidney injury, unspecified
  - Stages I and II would be captured with ICD-10-CM code N28.9 Disorder of kidney and ureter, unspecified
- Far more complicated and scientific than I describe here!

# Acute Kidney Injury – RIFLE

Risk, Injury, Failure, Loss of kidney function and End-stage kidney disease (RIFLE) classification [8][a]

| Class | GFR | UO |
|---|---|---|
| Risk | ↑ SCr × 1.5 or ↓ GFR >25% | <0.5 mL/kg/h × 6 h |
| Injury | ↑ SCr × 2 or ↓ GFR >50% | <0.5 mL/kg/h × 12 h |
| Failure | ↑ SCr × 3 or ↓ GFR >75% or if baseline SCr ≥353.6 μmol/L(≥4 mg/dL) ↑ SCr >44.2 μmol/L(>0.5 mg/dL) | <0.3 mL/kg/h × 24 h or anuria × 12 h |
| Loss of kidney function | Complete loss of kidney function >4 weeks | |
| End-stage kidney disease | Complete loss of kidney function >3 months | |

[a]GFR, glomerular filtration rate; UO, urine output; SCr, serum creatinine.

# Acute Kidney Injury – ICD-10-CM Codes

- N17.0 Acute kidney failure with tubular necrosis
- N17.1 Acute kidney failure with acute cortical necrosis
- N17.2 Acute kidney failure with medullary necrosis
- N17.8 Other acute kidney failure
- N17.9 Acute kidney failure, unspecified
- N99.0 Postprocedural (acute) (chronic) kidney failure

# Acute Kidney Injury -- AKIN

- The Acute Kidney Injury Network (AKIN) also developed indicators to help diagnose AKI in 2007.

- Modified version of the RIFLE criteria.

- Involves the timing and amount of reduction in kidney function.

- Established to increase the sensitivity and specificity of the diagnosis of AKI.

- Advised that acute renal failure be changed to acute kidney injury to represent the full spectrum of renal injury (mild to severe).

# Acute Kidney Injury -- KDIGO

- Kidney Disease Improving Global Outcomes.
- Released in 2012 for use and is a build off of the RIFLE and AKIN criteria already being used.
- This criteria reserved the baseline creatinine that was established in RIFLE and a small increase in creatinine from AKIN.
- This is thought to give KDIGO greater sensitivity than RIFLE or AKIN.
- Most current and preferred definition.
- Met in 2019 to discuss new advances and information for AKI definition and staging practices, but the 2012 guidelines remain.

# Acute Kidney Injury  -- Coding

- Linking AKI to any type of nephropathy does not alter the reporting of N17.9 when AKI is documented.

- AKI can occur in ESRD patients when caused by another condition.

- In other words, AKI can be superimposed on ESRD.
  - Acute on chronic renal disease
  - Both may be separately reported.

- The etiology of the AKI should be documented and any link made to the underlying pathology.

- This will of course lead to greater specificity in code assignment.

# Acute Kidney Injury -- Coding

- **Exclusions**:
  - Posttraumatic renal failure would be coded to the TT79.5- category.
  - Traumatic kidney injury would be coded to category S37.0-

- Although these criteria cannot be used for code assignment without the supporting provider documentation, presence of the criteria in the medical record ensures the appropriateness of reporting a code for AKI and supports compliance.

# Acute Kidney Injury/Of Note …

- When using AKIN in evaluating clinical indicators, serum creatinine (SCr) levels must show an elevation from baseline or from between two levels within 48 hours.

- Cannot represent a mere "jump"!

- Calculations should be based on levels taken after adequate fluid resuscitation.

- RIFLE criteria do not use these same parameters.

- For RIFLE, stage is determined by whichever of the two criteria, serum creatinine (SCr) level or urinary output (UO), is higher after meeting the criteria for AKI.

# Acute Kidney Injury  -- Query Opportunities

- When documentation and serum creatinine levels do not match, query the provider for clarification of the diagnosis.

- If AKI is documented but the clinical indicators for Stage III are not met,
  - Consider renal insufficiency if the clinical indicators show Stage I or Stage II.

- If AKI is documented but the serum creatinine levels are less than 0.3 mg/L or lasts less than 24 hours with a return to baseline with no or limited treatment,
  - Query for the clinical significance noting the inconsistencies.

# Acute Kidney Injury  -- Query Opportunities

- If there is a bump in the serum creatinine level, with minimal rise in the BUN/Cr ration, query for the clinical significance when not documented --
  - Azotemia [elevation of blood urea nitrogen (BUN) and serum creatinine levels]
  - Integral to another condition –
    - Hemoconcentration due to dehydration

# Acute Kidney Injury -- Etiology

- There are three basic categories:
  - **Pre-rena**l: diminished blood flow to kidneys or volume loss oliguria (production of abnormally small amounts of urine)
    - Severe dehydration
    - Shock
    - Embolism
    - Cardiac failure
    - Hepatic failure
    - Sepsis
    - Excessive diuresis
    - Hemorrhage
    - Tense ascites

# Acute Kidney Injury -- Etiology

- Peritonitis
- Pancreatitis
- Burns
- Myocardial infarction
- Antihypertension medications
- NSAIDS
- Cyclosporine
- Tacrolimus
- ACE inhibitors
- Anesthetics
- Renal artery obstruction
- Renal vein thrombosis

# Acute Kidney Injury -- Etiology

- **Intrinsic renal diseases and disorders of the kidneys**:
  - Acute tubular necrosis
  - SLE /glomerulonephritis
  - Sickle cell disease
  - Nephrotoxins: IV iodinated radiological contrast agents
  - Renal ischemia
  - Acute pyelonephritis
  - Acute postprocedural glomerulonephritis
  - Wegener's granulomatosis
  - Goodpasture syndrome
  - Acute tubulointerstitial nephritis due to drug reaction
  - Atheroembolism
  - Infiltrative diseases:
    - Lymphoma
    - Sarcoidosis
    - Leukemia

# Acute Kidney Injury -- Etiology

- **Post-renal**: bilateral obstruction of urinary outflow; anuria
  - Ureteral calculi
  - Blood clot
  - Neoplasm
  - Benign prostate hypertrophy (BPH)
  - Urethral stricture
  - Congenital defects
  - Retroperitoneal fibrosis
  - Ureteral trauma or surgical ureteral injury
  - Phimosis
  - Obstructed indwelling urinary catheter
  - Anticholinergic medications

# Acute Kidney Injury -- Associated Conditions

- Cardiac arrythmia

- Hyperkalemia

- Acidemia

- Metabolic acidosis

- Hypernatremia

- Encephalopathy


- Inherent to all three types!

# Pairing Coding Criteria with Clinical Criteria

- The Categories for Coding or Reporting Criteria:
  - Physical Evaluation
  - Clinical Evaluation
  - Diagnostic Procedure
  - Therapeutic Treatment
  - Increased Nursing Care and/or Monitoring
  - Extended Length of Stay (LOS)
- Would gather information from reliable resources such as those mentioned on slides 58 – 59 and organize as for acidosis in slides 77 – 84.

# Thank you!

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