Observation, Medical Necessity and Diagnoses in Pediatric Acute Cute

May 11, 2022

Objectives / Intent

- How the medical record is used to decide Level of Care status
- Overview of DRG payment systems
- The importance of the right kind of documentation
- The Patient Continuum
- Diagnoses of Interest

Driven by Strong Case Management Partnership

The Purpose of the Medical Record

- Convey crucial medical information to all caregivers- doctor, nurse, therapist, chaplain

- If the chart completely and accurately does that, the rest will follow

Clinical Validation – Lots of $ at Stake

- Does the disease you documented really exist?
- Document the diagnosis
- Support the diagnosis with exam or test findings
- Link the findings to the diagnosis AND the plan

Diagnoses of interest

- Acute bronchiolitis, unspecified
- Unspecified effects of drowning and nonfatal submersion, initial encounter
- Dehydration
- Acute appendicitis with localized peritonitis
- Unspecified asthma with (acute) exacerbation
- Unspecified convulsions
- Pneumonia, unspecified organism
- Acute bronchiolitis due to human metapneumovirus
- Altered mental status, unspecified
- Cough

Let’s talk about Observation (Outpatient) Services

- When is it appropriate to place a patient in observation?
  - Observation is a SERVICE provided to patients with an OUTPATIENT level of care
  - Observation is often to evaluate symptoms for which a cause is not yet known
  - Can be considered an extension of care started in the emergency department

Determining Level of Care Status

- It depends on the payer source:
  - Medicare
    - Federal laws
    - 2-Midnight Rule
  - Medicaid – state laws
  - All other payers including Medicare Advantage – varies

- Outpatient, Observation, Inpatient

Do They Require Hospitalization?

What is Medically Necessary Hospital Care?

The care they need requires an acute care hospital setting (cannot be performed in another setting such as home, office, nursing home)

Not safe at home ≠ requires hospital care

Commercial Payers Including Medicare Advantage

- Looking for
  - Intensity of services
  - Severity of illness
  - Often based on MCG/InterQual

NOT looking at midnights

- Focus:
  - Deviations
  - Failed Observation period (persistent symptoms)
  - Unfortunate deteriorations

Medicare Severity DRGs (MS-DRG)

WHY?

- More effectively captures severity of illness and use of resources based on the complexity of the patient's illness, thru use of CC and MCC capture
- Improves the ability to place patients in proper DRG assignments with severity levels

HOW?

- One DRG is assigned per inpatient discharge
- Medicare, Managed Medicare and many 3rd party payers reimburse based on MS-DRG assignment

MS-DRGs - Major Diagnostic Categories

- MDCs are broken into 24 categories and generally follow body systems.
- Each of the 24 categories are then sub-divided into Medical and Surgical DRGs

The Result:

- The DRG should reflect the severity of illness and resource consumption for each inpatient stay
- Compliant documentation throughout the medical record should support the DRG assignment

All Patient Refined Diagnosis Related Groups (APR-DRGs)

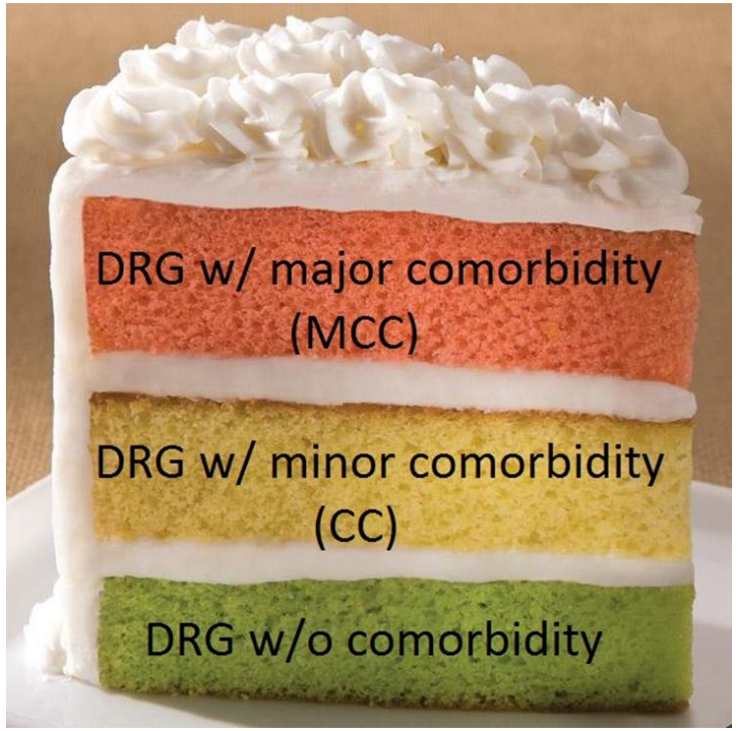
WHY?

- Most comprehensive and complete pediatric logic of any SOI classification system.
- APR-DRGs expand upon DRG models by assigning each case a severity of illness (SOI) and risk of mortality (ROM)
- Allow payment and quality to be more integrated using tools, like SOI and ROM

HOW?

- Severity of Illness: the extent of physiologic decomposition or organ system loss of function (4 levels – drive reimbursement)
- Risk of Mortality: the likelihood of dying (4 levels)

MS-DRGs



APR-DRGs

Example of Severity of Illness

SOI		Secondary Diagnosis of Diabetes Mellitus
1	Minor	Other specified diabetes mellitus without complications
2	Moderate	Other specified diabetes mellitus with diabetic kidney complication
3	Major	Other specified diabetes mellitus with ketoacidosis without coma
4	Extreme	Other specified diabetes mellitus with ketoacidosis with coma

Example of Risk of Mortality

ROM		Secondary Diagnosis of Diabetes Mellitus
1	Minor	Ventricular premature depolarization
2	Moderate	Sick sinus syndrome
3	Major	Ventricular tachycardia
4	Extreme	Ventricular fibrillation

DRGs & Reimbursement -- Relative Weight (RW)

Each DRG is assigned a relative weight which reflects the relative resource consumption (cost) associated with treatment of that condition

Higher Relative Weight = Higher Severity of Illness (SOI)

Relative weights range from-

0.1771(Normal Newborn)

to

26.4106 (Heart Transplant or Implant of Heart Assist Device with MCC).

- Most medical DRGs range from 0.8 to 2
- Most surgical DRGs range from 1.5 to 5

Relative Weight

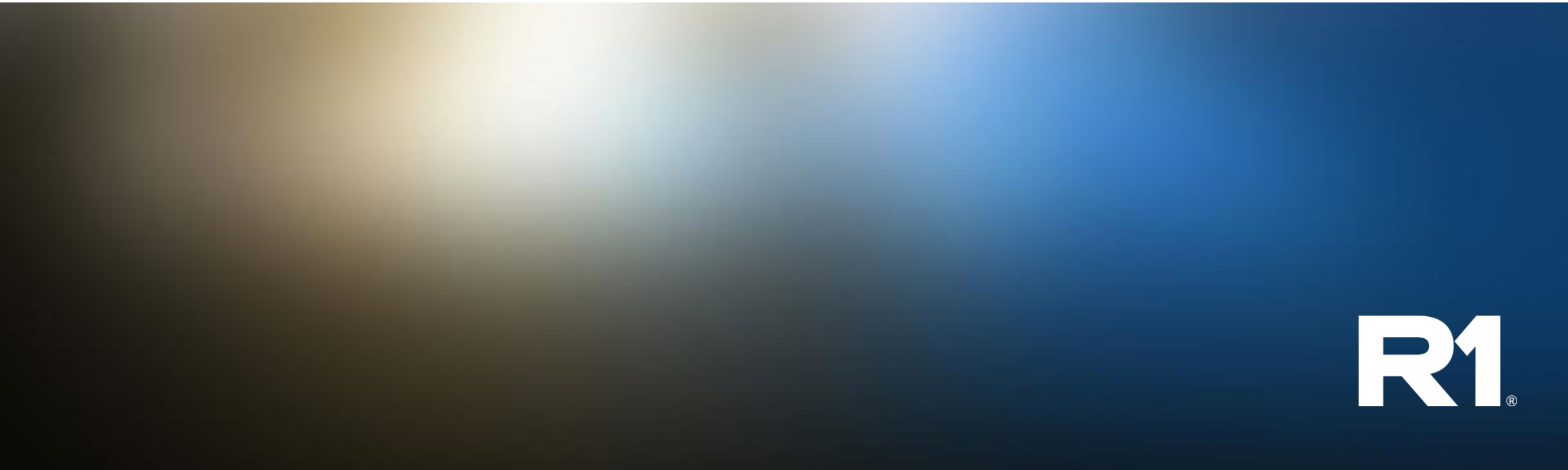
A number assigned to a DRG to reflect the costs and the severity of illness in caring for patients within that DRG

Diagnosis	DRG	RW
Anaphylactic Shock	916 Allergic Reactions w/o MCC	0.6002
Simple Pneumonia w/ UTI	194 Simple Pneumonia & Pleurisy w/ CC	0.9332
Heart Transplant w/ Acute kidney failure with tubular necrosis	001 Heart Transplant or Implant of Heart Assist System w/ MCC	26.4106

Documentation Specificity Matters

Documentation: **Equals:**	Pneumonia with **Acute Renal Insufficiency** = without a co-morbid or major co-morbid condition (cc/mcc)	Pneumonia with **Acute Renal Failure** = with a co-morbid condition **(CC)**	Pneumonia with **Acute Renal Failure with Tubular Necrosis** = with a major co-morbid condition **(MCC)**
Outcome: ***Sample base rate of $6000-***	**DRG 195** **Simple PNA w/o CC/MCC** **RW 0.7099** **LOS 2.7** **$4,259-**	**DRG 194** **Simple PNA w/ CC** **RW 0.9332** **LOS 3.4** **$5,599-**	**DRG 193** **Simple PNA w/ MCC** **RW 1.3731** **LOS 4.5** **$8,239-**

Documentation



Documentation – Auto-Fill Exam – Watch it!

Dialysis patient admitted for failed access, AMS, fall with facial trauma and BKA stump infection:

O:

General: He is awake, alert, oriented.

Vital Signs: Blood pressure of 171/63, heart rate of 92.

HEENT: normocephalic and **atraumatic** with anicteric sclerae

Neck: Supple. No JVD.

Chest and Lungs: Normal expansion Normal expansion. Clear breath sounds.

Heart: Without murmur, no edema

Abdomen: Soft, nontender.

Extremities: **Moves all extremities, strength 4/4**

Skin: no alterations in skin integrity no rashes

Documentation Matters….

"Templated exam: all fields pre-populated with normal findings"

or

"On exam patient appears ill and confused with tachypnea and tachycardia. Lungs noted diminished breath sounds and his abdomen was soft with suprapubic tenderness"

Documentation Matters….

Assessment/Plan:

“UTI- admit- start antibiotics, check labs in am”

or

“Admit for sepsis secondary to UTI with metabolic encephalopathy, hypotension, fever, tachypnea and hyponatremia, Admit as inpatient for at least 48 hours of IV antibiotics while trending urine and blood cultures to assess for bacteremia and tailor antibiotic coverage.”

Tell The Story

- Why are they there?
- Why can’t they go home?
- What concerns you?
- Will anyone reading the record know those answers?

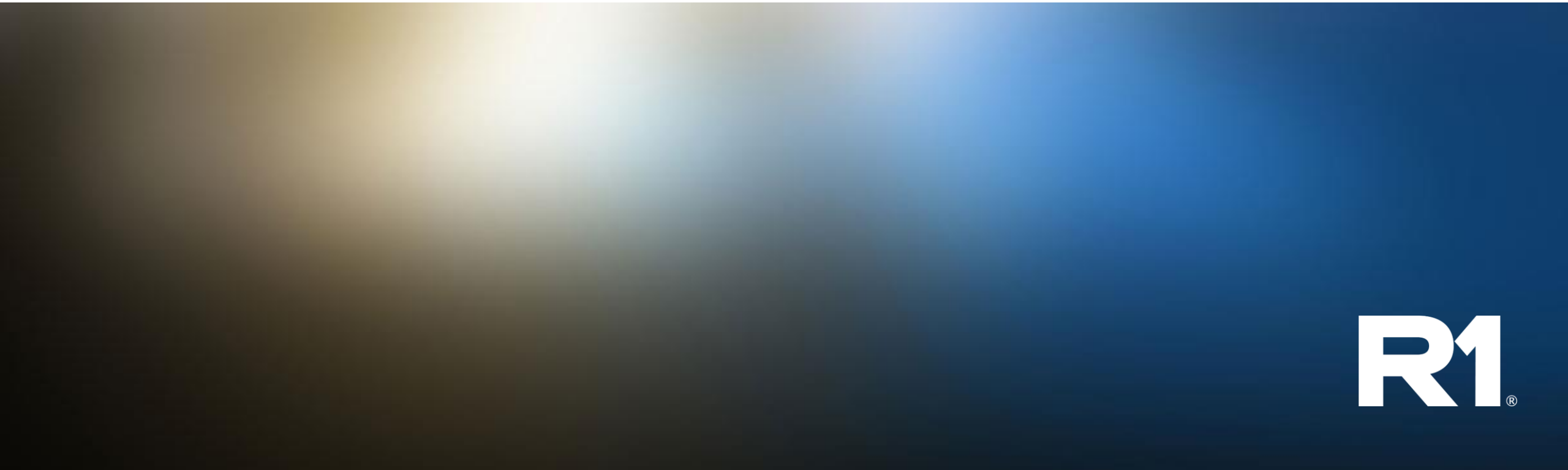
The Marriage of Documentation

- **Documented Intervention and Consult Verbiage**

  - "monitor" should be used instead of "observe" in your notes,
    ie. "The plan is to monitor overnight for hypoxia"

  - Is the Monitoring HAPPENING?
    - If progress notes say they are checking H/H Q8 hour to ensure stability – make sure they are actually being checked
    - Monitoring for tolerance of oral intake overnight, control of pain with oral opiates, etc can all support a medically necessary midnight for Medicare, but again, make sure they are truly doing the monitoring

Workflow – The Patient Continuum



Medical Decision Making

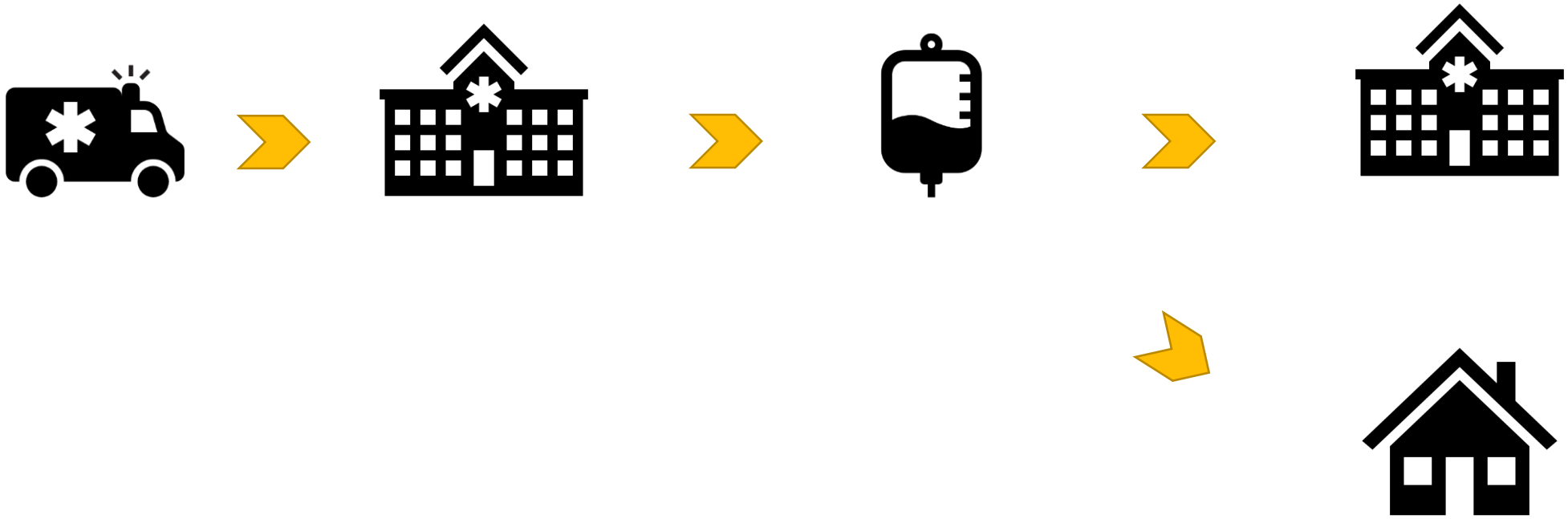
Emergency Room

- Initial Evaluation and Management
- Care Options:
  - Discharge “treat and street”
  - Hospitalization
- Critical Care
- Trauma Activation (Facility)
- E&M Billing

Hospitalization

- Status based on
  - Criteria
    - MCG
    - InterQual
  - Complex Medical Judgement
- Observation “observation as a service”
  - “Obs Unit”
  - Regular Floor / ICU
- Inpatient
  - DRG [diagnosis]
  - Per Diem payment [per day]

Emergency Department



Clinical Care Protocols

- Dehydration / Need for IV Hydration
- Headache
- Allergic Reaction
- Croup
- Toxic Ingestion / Exposure
- Cellulitis
- Diabetic Ketoacidosis
- Mild Traumatic Brain Injury
- Seizure
- Asthma / Bronchospasm
- Pneumonia

Medical Error Reduction
Lower death rates
Reduced complications
Better Prescribing
Fewer Drug Errors
Reduced Unnecessary Diagnostic Tests
Consistency of Practice
Reduced Readmissions
Reduced Length of Stay
Reduced Costs

Streamlined Approach and Standardization

Case Example – Nausea and Vomiting

- 3-year-old male presents to the ED with chief concern of N/V.
- Physical exam: as indicated above --VS: VSS
- DDx includes but is not limited to: patient has mild dehydration with only x2 wet diapers and has persistent N/V despite txt multiple times with antiemetics. Plan for dehydration protocol. No abd TTP at this time. No sick contacts. Will check for COVID. No indication of PNA, UTI. No HA or meningismus.

- Medications/therapies administered:
  - Medications ondansetron (ZOFRAN ODT) disintegrating tablet 2 mg (2 mg Oral Given 3/16/22 1615)
  - IVF 0.9 % bolus 280mL

- Patient was placed on hydration protocol, had improvement of symptoms, was able tolerate PO intake without any vomiting, and patient's family would like to return home at this time.
- Provided prescription for Zofran. Written return precautions provided, and additional return precautions discussed in person. They expressed understanding and agreement with plan. Discharged home in safe and stable condition.

Case Example – Migraine

- 16-year-old female with history of chronic migraines presenting with 3 days of headaches
- Physical Exam: tired and uncomfortable; Pulse 118 → 92
- The characteristics of her current presentation is consistent with her usual migraine headaches. She has already tried two rounds of eletriptan 40 mg, OTC naproxen, and Benadryl 25 mg at home (yesterday) with no relief.
- She was given Compazine 5 mg, Benadryl 25 mg, Toradol 25 mg, Tylenol 1G, and normal saline bolus 1L. A lidocaine patch was added to help relieve muscle aches in her neck.
- Upon re-evaluation, patient took a 2-hour nap and upon waking reported 2/10 pain down from 4/10 initially. She continued to endorse muscle tightness so was given cyclobenzaprine 5 mg. Patient reported improvement in symptoms and felt she was well enough to discharge home.

ADMIT TO EMERGENCY DEPARTMENT OBS PEDS HEADACHE

Orders Placed	Admit to Emergency Department Observation for Peds Headache Protocol ; Peripheral IV, Insert / Non-VAST ; sodium chloride 0.9 % IV bolus 1,000 mL ; acetaminophen

1216	Patient arrived in ED
1326	Patient roomed in ED
1447	Patient transferred
1812	Patient discharged

Case Example – (OBS)

- Mickey Mouse is a 5-month-old male without significant past medical history who presented to the hospital on 11/26/2017 with care initiated at 2150 for a dry non-barking cough over one week with persistent fever over 4 days despite over-the-counter acetaminophen.
- He does not take prescription medication and is up-to-date on his vaccinations.
- Vital signs: T 101.7, P 156, RR 56, and O2 97% on room air.
- Physical examination is notable for nasal congestion, right erythematous tympanic membrane with purulent infusion, a regular cardiac rhythm, coarse upper airway breath sounds, and rales.
- He is treated with acetaminophen.
- He was hospitalized with the diagnosis of bronchiolitis, and an observation order was placed on 11/27/2017 at 0204. On 11/27/2017, he remains febrile with temperature peaking to 104 with tachycardia to 187. He wheezes on exam and remains tachypneic to 70. Chest x-ray shows bilateral peribronchial coughing suggestive for viral bronchiolitis. His fever is treated with acetaminophen and is initiated on high-dose oral amoxicillin every 12 hours.
- On 11/28/2017, he remains febrile with temperature peaking to 102 with tachycardia to 167 and tachypnea to 56. He has poor oral intake and refuses most liquids. Amoxicillin continues with acetaminophen for fever control.

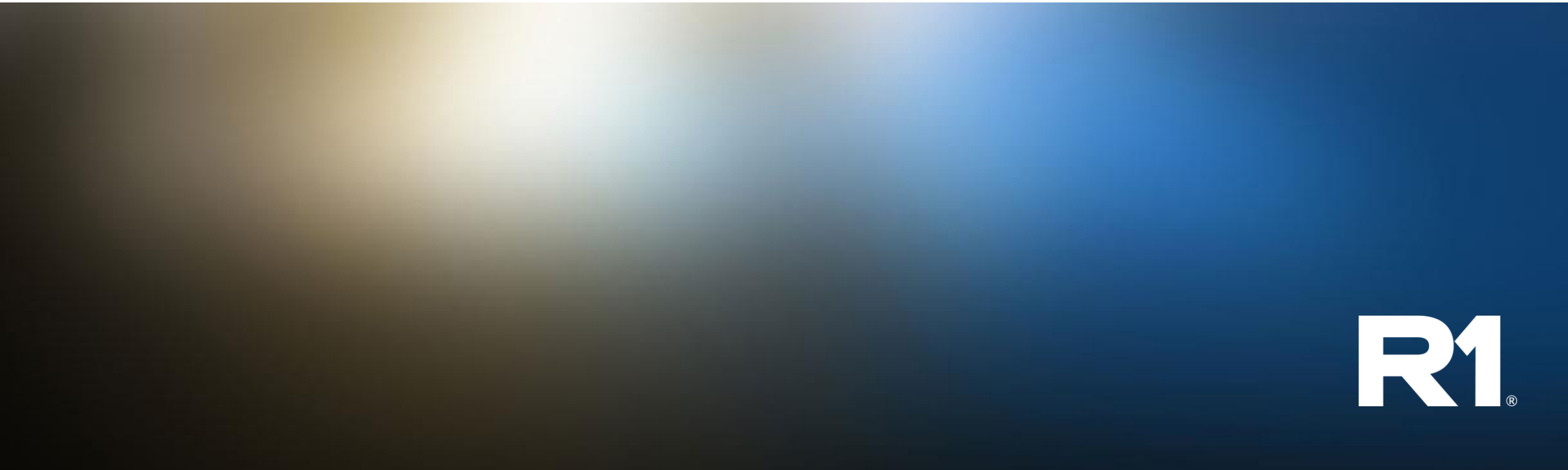
  Based on the patient's severity of illness with persistent fever, hemodynamic instability with tachycardia, tachypnea with wheezing, poor oral intake, the potential risk for an adverse event, and documentation of a medically necessary hospitalization spanning 2 midnights, an **inpatient admission** is appropriate.

Case Example – (IN)

- Minnie Mouse is a 13-year-old female with a past medical history significant for endometriosis status post laparotomies, prior ovarian cysts, and an unspecified autoimmune disease who presented to the hospital on 11/13/2017 with care initiated at 1931 for thoracic and lumbar back pain worsened by standing and walking.
  - Home medications include - but are not limited- to Flexeril.
  - Vital signs T 99.4, BP 94/67, P 80, RR 18, and oxygen saturation 99% on room air.
  - Physical examination is notes a nontender spine on palpation when the child is distracted
  - Laboratory data: sedimentation rate 56, and C-reactive protein 8.4.
  - She is treated with one dose each of IV Benadryl, IV morphine, and IV Toradol.
  - The patient was hospitalized with the diagnosis of a controlled back pain, and an inpatient order was placed on 11/13/2017 at 2009.
- On 11/14/2017, she remains hemodynamically stable on room air. She awaits rheumatology consultation. She receives 2 doses of IV Toradol by 1242. There is no physician documentation of clinical progress or further treatment plan on this date.

  Based on the above information, she patient has met **medical necessity** for hospitalization with the need for pain management, IV therapies, and rheumatology evaluation across the first midnight. However, it is unclear if her documented plan of care will support greater than two midnights in the hospital.
- **At this time, observation services are appropriate.**

Pediatric Diagnoses of Interest



Nervous System

- Viral Meningitis
  - Mixed pair DRG
    - MS-DRG 075: Viral Meningitis with CC/MCC
    - MS-DRG 076: Viral Meningitis without CC/MCC
  - Review for clinical signs and symptoms of bacterial meningitis
  - Review spinal tap for any growth of bacterial organism
  - Query if any consistent for bacterial meningitis
  - If specific virus identified via culture, ensure linked to final diagnosis

- Concussion
  - DRG 088 / 089 / 090; triplet DRG
  - Transient and reversible post-traumatic alteration in mental status
    - Can be seconds to minutes; generally, defined as less than 6 hours
    - Can be with nausea, headache, dizziness and memory disturbances
  - Clinical dx: does NOT require abnormal imaging, minimum timeframe for LOC
    [LOC should be documented if present]

Seizures
Couplet or Pair DRG

MS-DRG 100: Seizures with MCC			
RW 1.6478	GMLOS 4.2	AMLOS 5.7	*Transfer DRG*
MS-DRG 101: Seizures without MCC			
RW 0.8286	GMLOS 2.6	AMLOS 3.3	*Transfer DRG*

Seizures
Convulsions (R56-)
Epilepsy and recurrent seizures (G40-)

Seizure

- Abnormal, unregulated electrical discharge in the brain
- 2% of adults have a seizure in their lifetime
- **Epilepsy** is a chronic brain disorder characterized by recurrent (≥ 2) unprovoked seizures (e.g., not related to reversible stressors). Epilepsy is often idiopathic, but various brain disorders, such as malformations, strokes, and tumors, can cause symptomatic epilepsy.
- **Nonepileptic seizures** are provoked by a temporary disorder or stressor (e.g., metabolic disorders, infections, cardiovascular disorders, drug toxicity or withdrawal).
- **Symptomatic seizures** are due to a known cause (e.g., brain tumor, stroke). Symptomatic seizures are most common among neonates and the elderly.
- **Psychogenic seizures (pseudoseizures)** are symptoms that simulate seizures in patients with psychiatric disorders but that do not involve an abnormal electrical discharge in the brain.

Seizure
Terminology and Documentation Tips

- "Seizure disorder" codes to *Epilepsy*
  - DRG 101 Seizures
- "Seizure" (non-epileptic patient) codes to *Convulsions*
  - DRG 101 Seizures
- Symptomatic seizure codes to the **cause** of the seizure first, and then seizure second
  - The DRG varies
- "Psychogenic seizure" codes to *Conversion Disorder*
  - DRG 880

CDI Considerations: Query for etiology of seizure, when appropriate

Seizure
Common etiologies

- Autoimmune disorders (cerebral vasculitis)
- Cerebral ischemia, edema or hypoxia
- Head trauma
- CNS infections
- Congenital or developmental abnormalities
- Drugs and toxins

- Expanding intracranial lesions (bleed, **tumors**)
- Hyperpyrexia (fever, heat stroke, drug toxicity)
- Metabolic disturbances
- Pressure-related
- Withdrawal syndromes (ETOH, drugs)
- Late effect of CVA

Headaches

Couplet or Pair DRG

MS-DRG 102: Headaches with MCC		
RW 1.0611	GMLOS 3.0	AMLOS 4.1
MS-DRG 103: Headaches without MCC		
RW 0.7497	GMLOS 2.3	AMLOS 2.9

Headaches
Arteritis, cerebral
Headache
Headache syndromes, other
Headache, tension
Hypertension, benign intracranial
Migraine
Post-concussion syndrome
Reaction to spinal or lumbar puncture

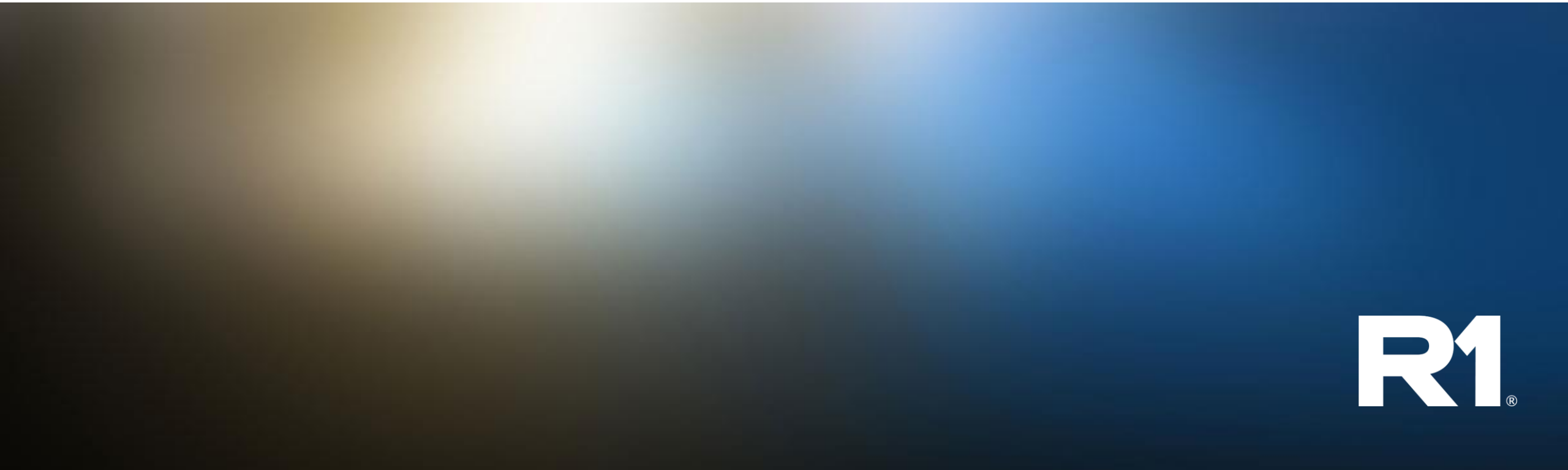
Headaches

- One of the most common reasons patients seek medical attention
- This is a **symptom** code
- **Coding Guideline**: This condition should not be used as PDx when a related definitive condition is present
- **Coding Guideline**: if 2 or more contrasting/comparative diagnoses are documented (e.g. “Headache due to neoplasm versus aneurysm”) code both as if they exist and either may be sequenced as principle
- Causes include intracranial, extracranial, systemic disorders, and drugs & toxins

Nervous System Considerations

- Query for etiology of headache
- Query for etiology of seizures
- Consider query for encephalopathy in patients with altered mental status
- Consider a query for CVA if TIA symptoms last >24-48 hrs
- Cerebral edema is an MCC in hemorrhagic CVA's, consider query when being treated
- Query may be required to link relationship of coma/stupor to trauma
- Query for intracranial injury, if CHI has changes in consciousness or persistent confusion
- Query for duration of loss of consciousness in traumatic head injury patients
- Consider Carotid Sinus Syncope in elderly population

Respiratory System



Documentation Specificity Matters

Simple vs Complex Pneumonia

DRG 195 **SIMPLE PNEUMONIA** w/o comorbidity	RW 0.6821 LOS 2.6 $4,093	**DRG 179** **RESPIRATORY INFECTIONS** w/o comorbidity	RW 0.8661 LOS 3.1 $5,197
DRG 194 **SIMPLE PNEUMONIA** w/co-morbid condition (CC)	RW 0.8886 LOS 3.2 $5,332	**DRG 178** **RESPIRATORY INFECTIONS** w/co-morbid condition (CC)	RW 1.2433 LOS 4.2 $7,460
DRG 193 **SIMPLE PNEUMONIA** w/Major co-morbid condition (MCC)	RW 1.3335 LOS 4.2 $8,001	**DRG 177** **RESPIRATORY INFECTIONS** w/Major co-morbid condition (MCC)	RW 1.8912 LOS 5.5 $11,347

Complex Pneumonia

RISK FACTORS	Signs and Symptoms	TREATMENT
• Co-morbidities- • Heart failure • Cancer • Immunocompromised • Alcoholism • COPD with or without chronic respiratory failure • Chronic debilitation • Immunosuppressive drug therapy • Recent hospitalization, surgery or nursing home stay • Trauma	• Cough • Dyspnea • Fever • Wheezing • Purulent sputum • Increased O2 needs • Home O2 or nebs • Failed outpatient antibiotic Tx **DIAGNOSTICS** • CXR- patchy infiltrates • Leukocytosis w/left shift • Sputum gram stain • Blood & sputum culture • ABG • CT chest	• IV antibiotics 'off the simple pneumonia pathway' • IV fluids • Oxygen • Nebs, MDI's • Bronchoscopy to clear secretions and mucus plugs • Consults • Pulmonary • Infectious disease • Respiratory therapy

Common Antibiotics and corresponding organism

Respiratory Infections and Inflammations

MS-DRG 177 / 178 / 179

Complex PNA Pathogen	Common Abx Used
Staph (MSSA)	Clindamycin, Azithromycin, Nafcillin, Levaquin, Ampicillin
MRSA	Vanco, Zyvox
Other Gram Neg: Pseudomonas E. Coli Klebsiella Seratia Enterobacter Acinetobacter	Cefepime or Ceftazidime Imipenem, Primaxin, or Meropenem Zosyn
Aspiration	Clindamycin Zosyn
Legionnaires'	Levaquin, Cipro, Doxy, Azithromycin
Mycobacteria	Clarithromycin, Azithromycin, Rifampin, Ethambutol, Cipro

Bronchitis and Asthma
Mixed Pair DRG – moves w/ either CC or MCC

MS-DRG 202: Bronchitis and Asthma with CC/MCC
MS-DRG 203: Bronchitis and Asthma without CC/MCC

Bronchitis and Asthma
Asthma
Bronchiolitis, acute
Bronchitis, acute
Bronchitis, not specified as acute or chronic
Diseases, other, of trachea and bronchus
Tracheitis, acute
Whooping cough

* Typically does not meet medical necessity for inpatient admission

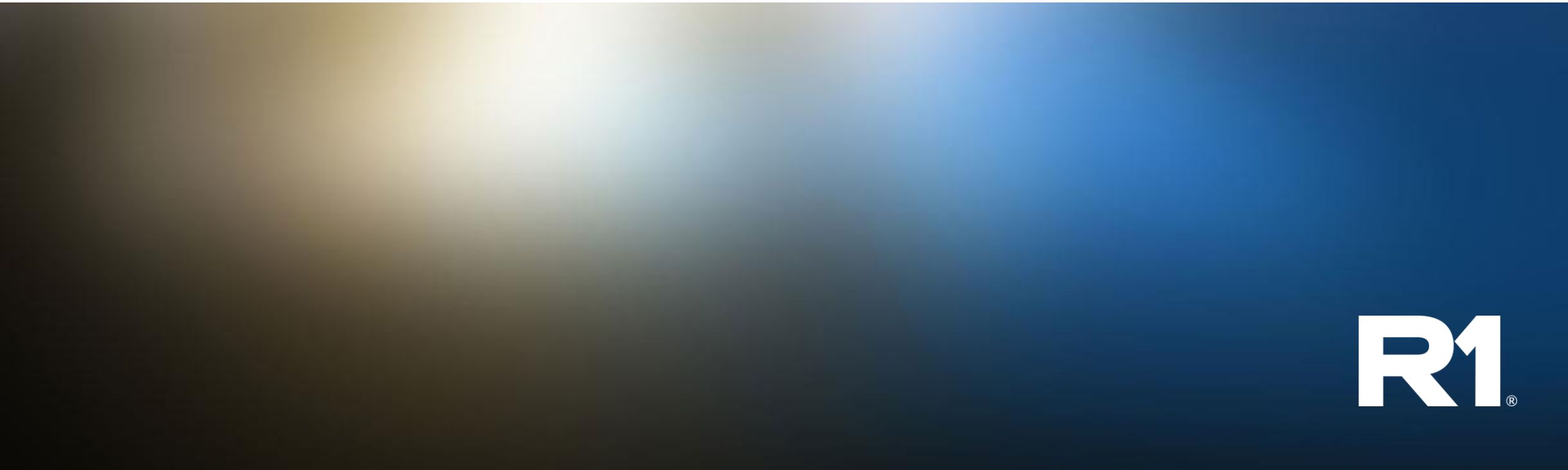
Bronchitis and Asthma
MS-DRG 202 / 203

CDI Considerations

- COPD with asthma or acute bronchitis- COPD is PDx
- Review the record for evidence of **pneumonia***
  - Use of one or more antibiotics
  - Aggressive respiratory treatments (supplemental O2, nebulizers)
  - CXR demonstrating infiltrates
- Review record for evidence of **acute respiratory failure***

Sequencing of PDx will depend on circumstances of admission

Muscle and Bone



Osteomyelitis

Triplet DRGs

MS-DRG 539: Osteomyelitis with MCC
MS-DRG 540: Osteomyelitis with CC
MS-DRG 541: Osteomyelitis without CC/MCC

Osteomyelitis
Osteomyelitis
Tuberculosis of vertebral column, limb bones, other specified bones

Osteomyelitis

MS-DRG 539 / 540 / 541

Osteomyelitis is inflammation of the bone &/or bone marrow caused by an infecting organism

- Acute osteomyelitis is the clinical term for a new infection in bone, which develops within two weeks after disease onset.
  - This infection occurs predominantly in children and is often seeded hematogenously.
  - Most commonly infecting organism is Staphylococcus aureus
- Subacute (one to several months) or chronic infection (after a few months) that develops secondary to an open injury to bone and surrounding soft tissues
  - Most common type for adults
  - Subacute - one to several months after an injury
  - Chronic - a few months after injury
  - Staphylococcus epidermidis, S. aureus, Pseudomonas aeruginosa, Serratia marcescens and Escherichia coli are most common infecting organisms

https://www.aafp.org/afp/2001/0615/p2413.html

Osteomyelitis

MS-DRG 539 / 540 / 541

Risk Factors	Signs & Symptoms	Studies	Treatment
• Recent trauma/surgery • Presence of foreign bodies or prostheses • Immunosuppression • Diabetes • Poor circulation • Hemodialysis • IV Drug abuse	• Fever, Chills • Pain • Localized swelling	• Blood cultures • X-rays, MRI • Bone scan • Bone biopsy • CBC	• Antibiotics • Debridement • Amputation

Osteomyelitis

CDI Considerations

- ***Etiology*** of osteomyelitis? Query for underlying organism.
- Link between diabetes with osteomyelitis is assumed-
  - 'DM w/other specified complication' takes precedence over osteomyelitis dx.*
  - Consider- is Osteomyelitis likely d/t trauma or infected decubitus ulcer and not likely a complication of DM?
- Clarify if osteomyelitis is also a dx with…
  - Infected ulcers (e.g., decubitus ulcer) that extend to the bone
  - Cellulitis that extends to the bone
- Review documentation of excisional debridement

Common comorbids

- Sepsis
- Cellulitis
- Intraspinal abscess
- Paraplegia
- Pressure ulcer
- Psoas Muscle Abscess
- Quadriplegia
- Skin ulcer

** Coding Clinic, 1Q 2004 pages: 14-15*

Septic Arthritis

Triplet DRG

MS-DRG 548: Septic Arthritis with MCC

MS-DRG 549: Septic Arthritis with CC

MS-DRG 550: Septic Arthritis without CC/MCC

Septic Arthritis
Pyogenic arthritis (M00-) CC as SDx

Septic Arthritis

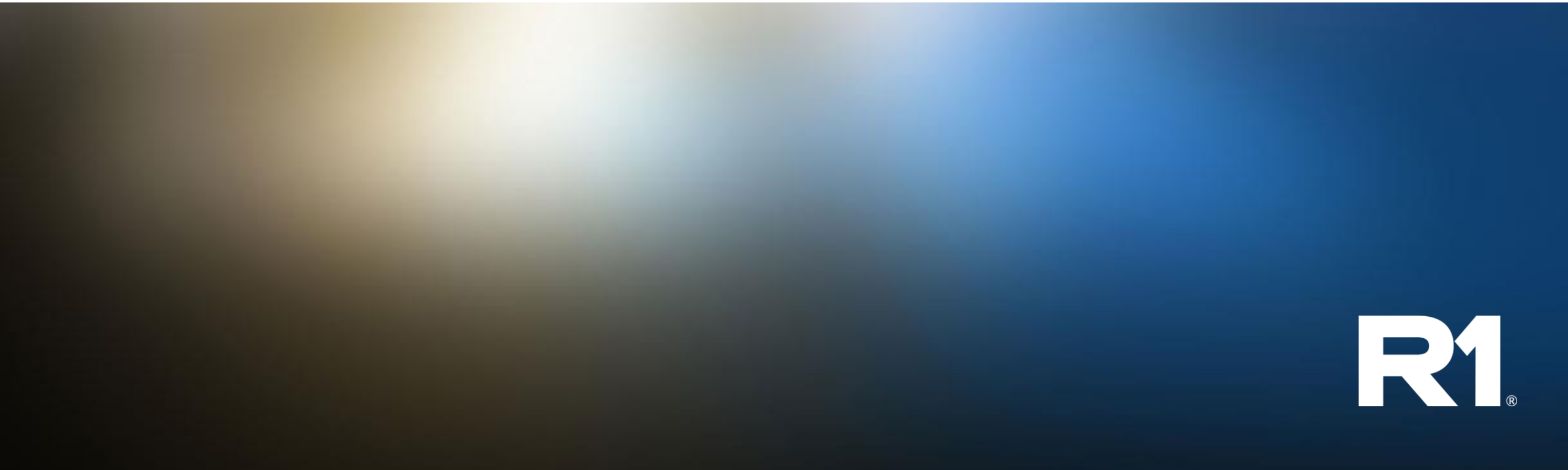
MS-DRG 548/549/550

CDI Considerations

- Bacteria in an arthritic joint indicates the arthritis is pyogenic
- What is the organism identified? Is it documented by the provider?
- A “septic joint” does not equal Sepsis, but patient can become septic from a septic joint- Is there evidence of sepsis?

Risk Factors	Signs and Symptoms	Studies	Treatment
▪ Joint injury ▪ Open wound ▪ Idiopathic ▪ Prosthetic joint ▪ Recent joint injection	▪ Acute onset of joint pain ▪ Fever ▪ Effusion of joint ▪ Erythema	▪ X-rays ▪ MRI ▪ Synovial fluid CX ▪ Labs	▪ Orthopedic Consult ▪ Antibiotics ▪ Pain medications ▪ Arthrocentesis ▪ Surgery ▪ Remove prosthesis

Skin



Septic Arthritis

Triplet DRG

MS-DRG 548: Septic Arthritis with MCC

MS-DRG 549: Septic Arthritis with CC

MS-DRG 550: Septic Arthritis without CC/MCC

Septic Arthritis
Pyogenic arthritis (M00-) CC as SDx

Septic Arthritis

MS-DRG 548/549/550

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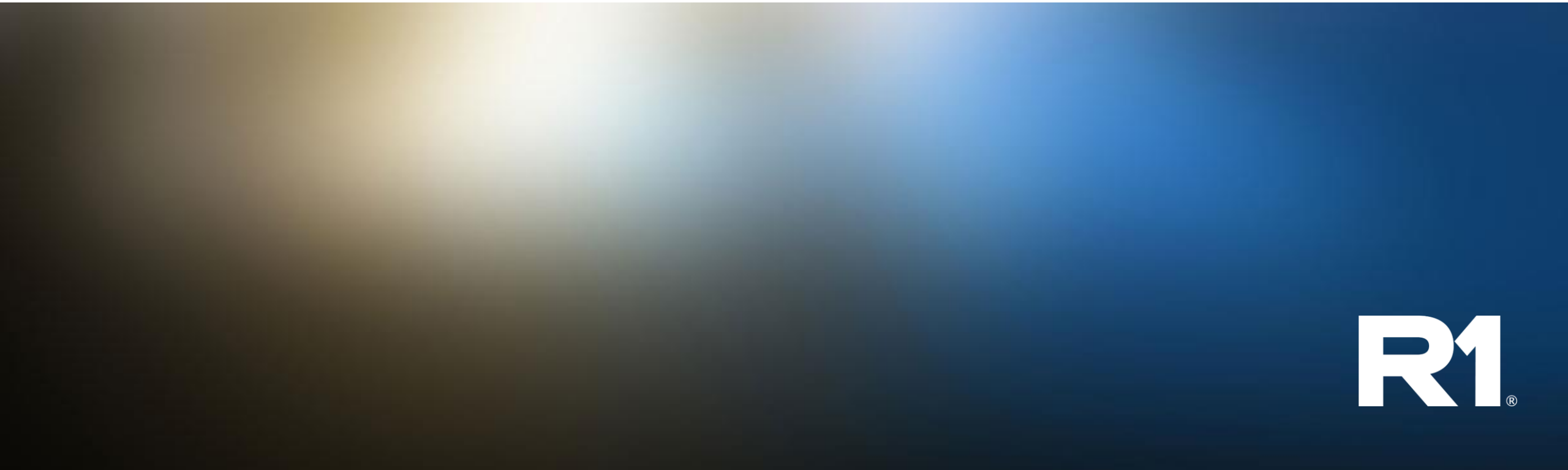
▪ Joint injury ▪ Open wound ▪ Idiopathic ▪ Prosthetic joint ▪ Recent joint injection	▪ Acute onset of joint pain ▪ Fever ▪ Effusion of joint ▪ Erythema	▪ X-rays ▪ MRI ▪ Synovial fluid CX ▪ Labs	▪ Orthopedic Consult ▪ Antibiotics ▪ Pain medications ▪ Arthrocentesis ▪ Surgery ▪ Remove prosthesis

Infection



Fever and Inflammatory Conditions

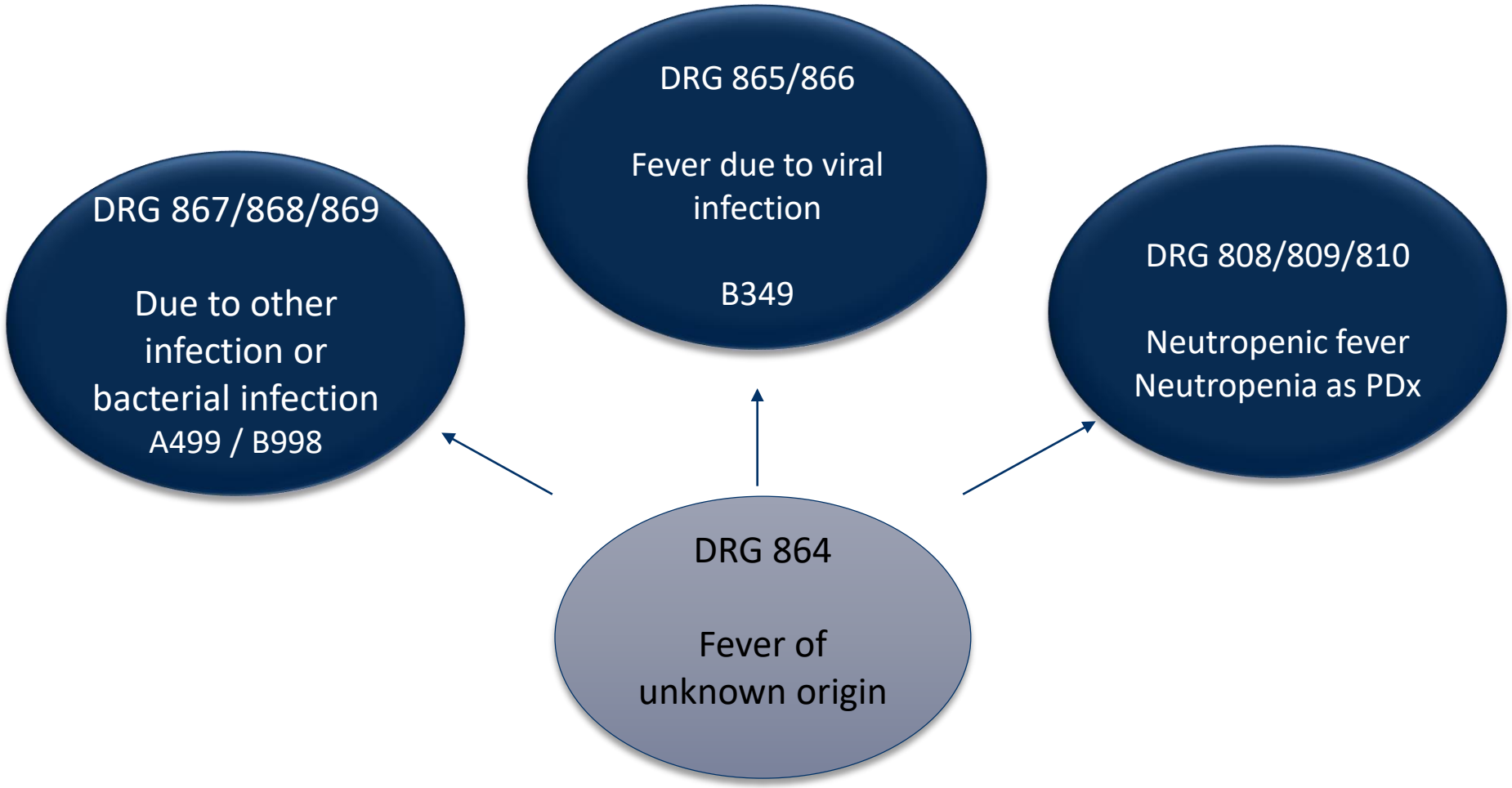
MS-DRG 864: Fever and Inflammatory Conditions
Stand Alone DRG

Febrile nonhemolytic transfusion reaction
Fever, postprocedural
Fever, postvaccination
Fever, unspecified
Systemic inflammatory response syndrome (SIRS) of non-infectious origin without acute organ dysfunction
Systemic inflammatory response syndrome (SIRS) of non-infectious origin with acute organ dysfunction

Fever

- Fever is a symptom, the result of inflammation and/or infection
- Fever of unknown origin, drug-induced fever and post-procedural fever
- Sequence the underlying infection as the principal diagnosis – viral or bacterial infection
- Non-infectious fever due to a specified cause would be sequenced to the underlying cause as principal diagnosis (e.g., Neutropenic fever)
- **CDI Consideration:** Query for underlying cause of the fever: bacterial versus viral infection

Alternate Diagnosis Options



SIRS “Criteria” Does NOT Equate to - Sepsis

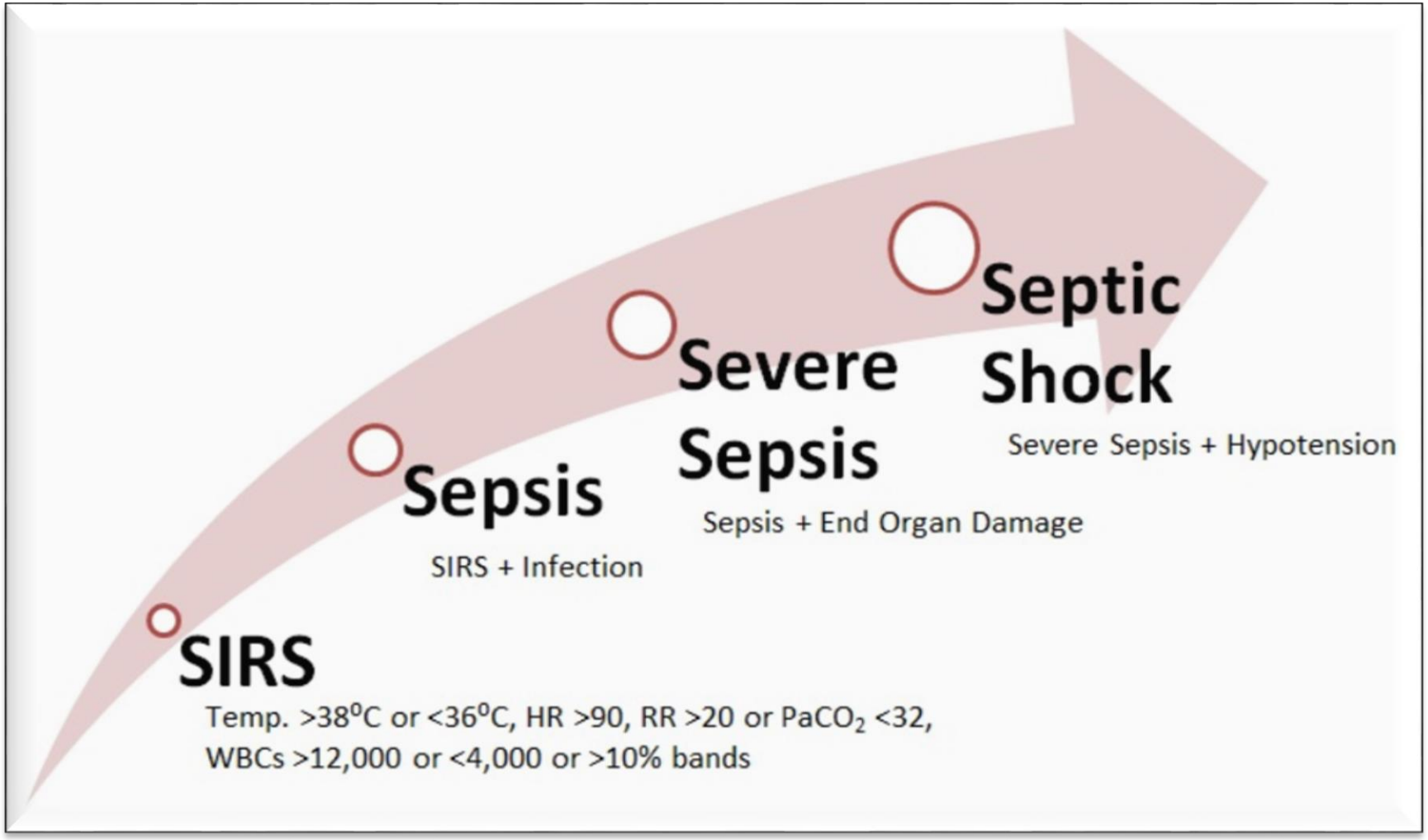
- Be sure criteria are caused by an infection
- Abnormalities in vital signs not caused by inflammatory processes due to an infection are NOT SIRS
- Tachycardia due to AFib with RVR may not be caused by the infection
- Leukocytosis caused by steroids or by leukemia may not be caused by an infection
- Tachypnea caused by asthma is not caused by an infection
- Hypotension caused by dehydration with hypovolemia or by beta blockers is not caused by an infection

Systemic Inflammatory Response Syndrome (SIRS)

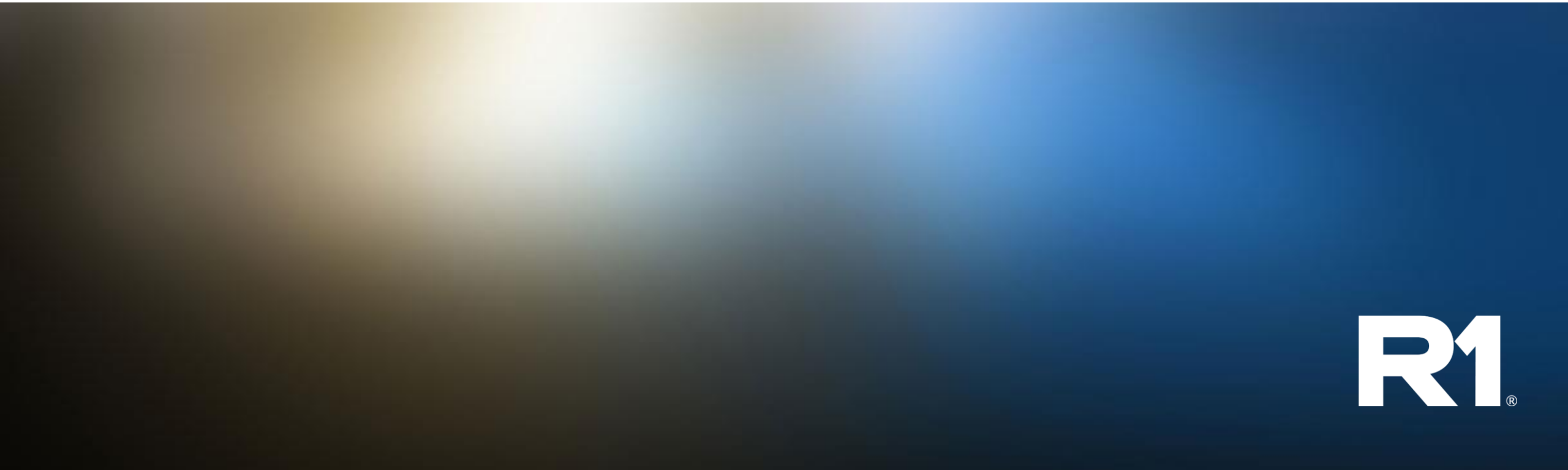
SIRS is defined as a clinical response to a nonspecific insult of either infectious or noninfectious origin and the presence of two or more of the following variables:

- **Fever** >100.4° F (>38.0° C), or **Hypothermia** <96.8° F (<36°C)
- **Leukocytosis** (WBC >12,000 cells/mm^3), **Leukopenia** (WBC <4,000 cells/mm^3), or left shift (>10% bands)
- **Tachycardia** >90 beats/minute
- **Tachypnea** (respiratory rate >20 breaths/min) or PaCO2 <32 mmHg

Infection Continuum



Neonatal Nuances



NICU Levels

- Level I – Facilities and ability to provide basic care in a Well newborn nursery. Evaluate and provide postnatal care to stable term newborns, or infants born at 35 to 37 weeks of gestation who remain physiologically stable. Generally, corresponds to National Uniform Billing Committee Code of Level 1 or 2.
- Level II – Facilities and ability to provide specialty care in a Special care nursery. Care for sick but not critically ill infants who do not require prolonged ventilation or comprehensive pediatric subspecialty services available at Level III. Generally, corresponds to National Uniform Billing Committee Level 2 or 3.
- Level III – Facilities and ability to provide intensive care in a Neonatal intensive care unit; sustained life support, continuous nursing, and comprehensive care for the sickest neonates. Generally, corresponds to National Uniform Billing Committee Level 3 or 4.
- Level IV – Provides advanced intensive care in a Regional neonatal intensive care unit; located within an institution with the capability to provide surgical repair of complex congenital or acquired conditions. Generally, corresponds to National Uniform Billing Committee Level 3 or 4.

Level 1

- Nurseries have personnel and equipment to perform resuscitation at every delivery and provide routine care for healthy neonates born after at least 37 weeks of gestation In addition, Level I nurseries can care for physiologically stable infants born after at least 35 weeks of gestation
  - They may also stabilize a newborn infant who is ill and/or born at less than 35 weeks of gestation until they are transferred to a higher level of care

Level II

- Nurseries care for sick but not critically ill infants who do not require prolonged mechanical ventilation or continuous positive airway pressure (i.e., less than 24 hours)
- Level II nurseries are appropriate for infants born after at least 32 weeks of gestation and weighing 1500 grams or more, who have physiologic immaturity or who are moderately ill with problems that are expected to resolve rapidly and are not anticipated to need subspecialty services on an urgent basis
  - They may also care for infants convalescing after intensive care or stabilize infants born before 32 weeks of gestation and weighing less than 1500 grams until transfer to a neonatal intensive care facility

Level III

- Nurseries are appropriate for neonates born after less than 32 weeks of gestation, or who weigh less than 1500 grams, or who are critically ill (e.g., require respiratory support for more than 24 hours, need urgent subspecialty care)
- Level III nurseries have the personnel (e.g., neonatologists, respiratory therapists) and equipment continuously available to provide life support for as long as needed, and have a broad range of pediatric medical subspecialists and pediatric surgical specialists readily accessible on site or by prearranged consultative agreements
  - In addition, Level III nurseries have the capability to care for infants who have undergone major surgery onsite or at a closely related institution

Level IV

- Nurseries are usually regional referral centers and have the ability to provide care for neonates who have undergone surgical repair of complex conditions, such as congenital cardiac malformations that require cardiopulmonary bypass or extracorporeal membrane oxygenation
- They have the added capability to care for the most complex and critically ill newborn infants and have pediatric medical and pediatric surgical specialty consultants continuously available 24 hours a day

National Uniform Billing Committee Level Definitions

- NUBC Level 1 (code 0171) – Routine care: For apparently normal fullterm or pre-term neonate

- NUBC Level 2 (code 0172) – Continuing care: For low-birth-weight neonates who are not sick but require frequent feeding and neonates who require more hours of nursing than do normal neonates

- NUBC Level 3 (code 0173) – Intermediate care: For sick neonates who do not require intensive care but require 6 to 12 hours of nursing each day

- NUBC Level 4 (code 0174) – Intensive care: For severely ill infants who require constant nursing and continuous cardiopulmonary and other support

MCG Care Guidelines

- Neonatal Levels of Care Comparison Charts
  - Clear delineations for each level of care
  - Assists with “leveling”
- Dedicated guidelines for common diagnoses for full-term babies
- Discharge and recovery milestones
  - Feeding
  - Respiratory function
  - Temperature stability
- Length of stay benchmarking
  - Newborn, full term
  - 25th and 50th percentile LOS for top 40 diagnoses in sick but full-term newborns
  - Recovery tables/charts to give estimates of LOS for premature babies
- Post acute care resources
  - Durable equipment
  - Patient education
  - Criteria for home care

OB / GYN Examples

Hysterectomy

- 68-year-old female presents for planned Total Abdominal Hysterectomy
  - Not on Medicare IOL
- Undergoes the procedure without documented complication
- Diet is advanced POD #1
- She developed increased pain and vaginal spotting that evening
- Imaging shows a cuff hematoma
- Ongoing IV Dilaudid on POD #1 and #2 in addition to Percocet and Ibuprofen, able to transition back to oral pain meds

- Would now meet IN under ambulatory surgery exception

Pre-Eclampsia

- 34-year-old G2P1 at 34 5/7 week sent from clinic for blood pressures in 150s/80s

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- On the floor, blood pressures 130s/90s with 1+ edema

OBSERVATION

Medicare: Consider orientation around 2MN and if needs further monitoring/intervention

- Blood pressures stable overnight Click to add text
- Growth U/S day 2 showed appropriate growth and normal Doppler
- Stable overnight again with a slight uptrend in blood pressures
- 24-hour urine returned day 3 at 344mg
- Did not require magnesium sulfate for seizure prophylaxis but did receive antenatal corticosteroids
- True “mild pre-eclampsia”

Pre-Eclampsia

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- True “mild pre-eclampsia”
- Furthermore:
  - What if patient lived 90 minutes away
  - Husband is a marine deployed on hospital day 2 – no other family nearby

Metrics

Why not LOS?

- Medicare GMLOS based on millions of admissions for each DRG
  - Your doctors may have tens of admissions

- Attribution impossible
  - Admitting doc?
  - Majority of care doc?
  - Discharging doc?
  - By group?

What Can We Use?

- Avoidable Days/Progression of Care Delay
  - Delay due to lack of available care when/where needed
  - May result in additional hospital day
  - May result in delay in discharge or transfer to lower level of care- internal/external