



## ICD-10 for Neurosurgery

UConn Health



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# ***Introduction***

***Dr. Frank Turner***

***ICD-10 Implementation Physician Advisor***

# Agenda

- Describe the challenges associated with ICD-10 implementation as they affect Neurosurgeons
- Understand how the new format of ICD-10 impacts assigning diagnoses
- Understand specific ICD-10 documentation changes as they apply to common neurosurgical diagnoses and procedures

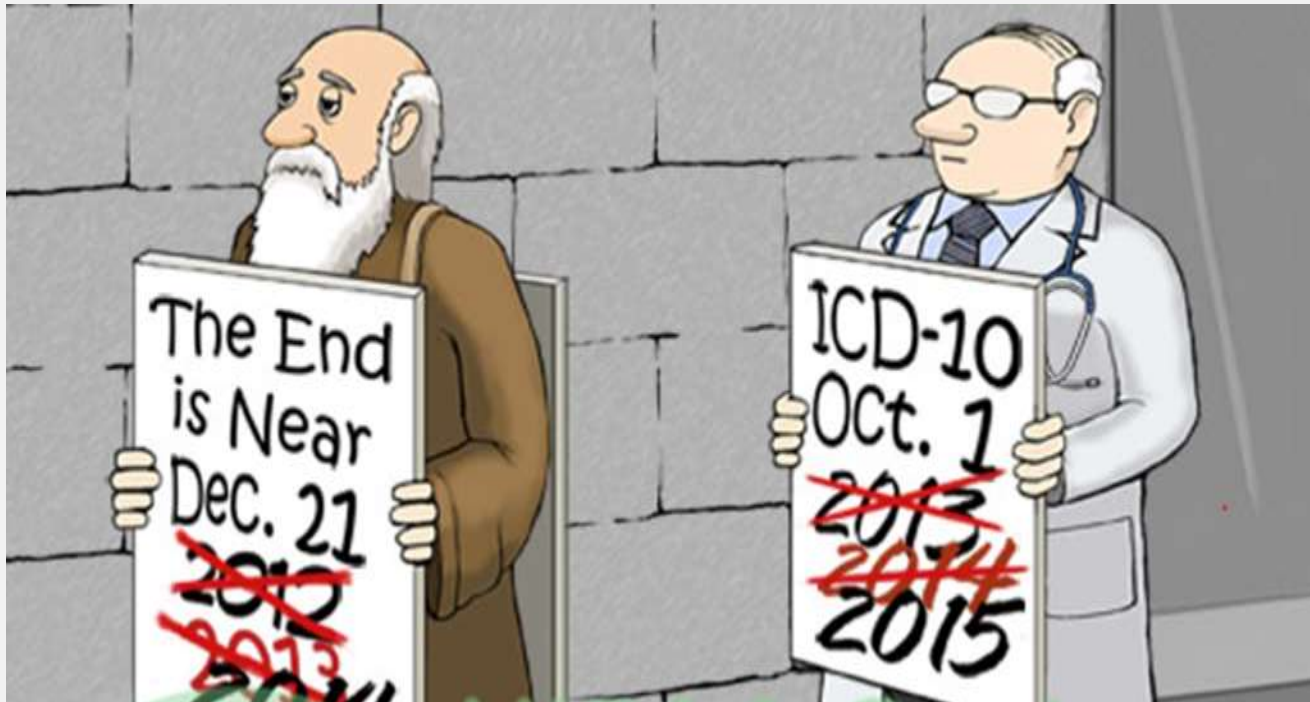


## Road to ICD-10

- ICD (International Classification of Diseases) System created by WHO in 1893 as worldwide standard for classifying deaths.
- Implemented worldwide with modifications by country to fit their needs.
- ICD-9 in use in the United States since 1979. ICD-10 published in 1992.
- Most recent country to implement ICD-10, Canada from 2001-2005.
- Difference in U.S., ICD used for multiple purposes besides classification.

## Will it happen this time?

- ▶ On July 31st, 2014, The U.S. Department of Health and Human Services issued a rule finalizing October 1, 2015 as the new compliance date.



# The ICD-10 and CPT Connection

- CPT codes **do not** change!
- ICD-10 diagnoses correlate with CPT procedures
- Potential reimbursement implications



## Structural Differences in ICD-9 and ICD-10

- ICD-10 has 2 parts compared to 3 volumes of ICD-9:
  - ICD-10-CM (Clinical Modification) - Diagnoses
  - ICD-10-PCS (Procedure Coding System) – Inpatient Procedures ONLY
- ICD-10-CM is 7 alphanumeric characters vs 5 for ICD-9:
  - Allows better description of acuity, complexity and location of medical conditions markedly increasing specificity, but similar premise to ICD-9-CM Volumes 1 and 2
- ICD-10-PCS developed by CMS to replace Volume 3 of ICD-9-CM:
  - Markedly different structure and approach compared to ICD-9

## Challenges Presented by ICD-10

- ICD-10 is a classification system, not a clinical language system:
  - Physician documentation - primarily to communicate clinical situation
  - Coders try to classify based on physician's clinical documentation
- Increased specificity required by ICD-10 can exacerbate gap between clinicians and coders

# Advantages of ICD-10

- Uses current medical terminology and disease classification reflecting the advances that have occurred in medicine
- Allows for greater specificity that can help in supporting clinical decision-making
- Greater flexibility with more room for expansion that can quickly incorporate emerging conditions
- Comparison of morbidity and mortality data will be easier.
- Greater specificity will support improved public health surveillance and measurement of health care services providing better data for research and in identifying fraud and abuse

## WHY THE INCREASED SPECIFICITY?

Optimist: New system will enhance our ability to specifically characterize how we care for patients resulting in more efficient use of resources and better outcomes.



- Pessimist: New system will provide new ways for payors to avoid reimbursement for medical care.



# Structure of ICD-10 codes



Category

Analogous to Problem List diagnoses, some with more specificity regarding etiology:

“Stroke”

Cerebral infarction = I63

“Head Injury”

Intracranial injury = S06

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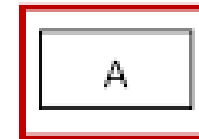


Etiology, Anatomic Site, Severity,  
other vital clinical details

Adds detail as clinical picture becomes clearer.

Cerebral infarction due to embolism of right middle cerebral artery = I63.411

Diffuse traumatic brain injury with loss of consciousness for greater than 24 hours without return to pre-existing level with patient surviving = S06.2X6



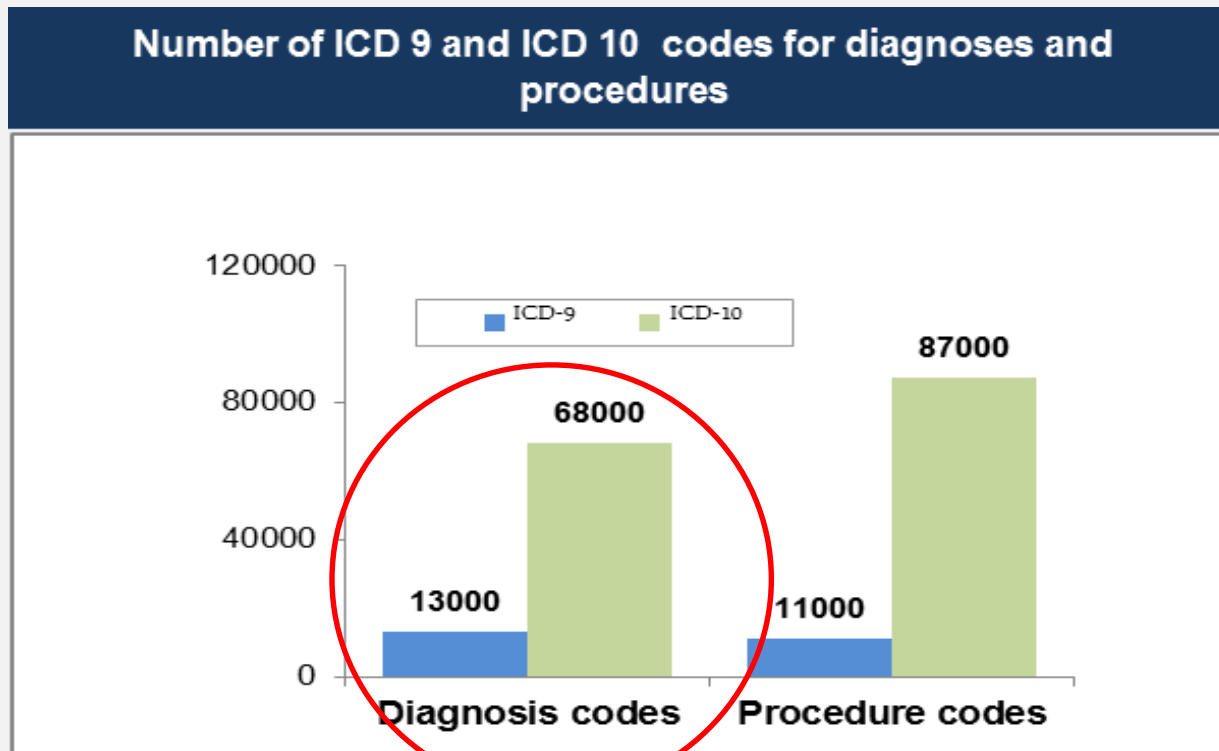
Extension

For Injuries and Fractures:  
- Initial, Subsequent, Sequela  
- Open, Closed, Nonunion, etc. for fractures  
- Only other use is in OB

Initial encounter = S06.2X6A

Also must describe how injury occurred.

# Increased Number of Codes



*(Source: ICD-10-CM and ICD-10-PCS Update, Thirteenth National HIPAA Summit, 9/26/2006; Rand Study, March 2004)*



# Code Breakdown by ICD-10 Chapter\*

# of Codes	Description	# of Codes	Description	# of Codes	Description
1,056	Infectious and Parasitic Diseases	642	Diseases of Ear and Mastoid Process	2,155	Pregnancy, Childbirth & the Puerperium
1,620	Neoplasms	1,254	Diseases of Circulatory System	417	Certain Perinatal Conditions
238	Blood and Immune System Diseases	336	Diseases of Respiratory System	790	Congenital malform., Chromosomal Abnl.
675	Endocrine, Nutritional, Metabolic Diseases	706	Diseases of Digestive System	639	Symptoms, Signs, Abnl Clinical & Lab Findings
724	Mental, Neurodevel., Behavioral Disorders	769	Diseases of Skin and Subcutaneous Tissue	39,869	Injury, Poisonings, Other External Causes
591	Disease of the Nervous System	6,339	Musculoskeletal and Connective Tissue Dz	6,812	External Causes of Morbidity
2,452	Diseases of the Eye and Adnexa	591	Diseases of Genitourinary System	1,178	Factors influencing health and care

\*<http://www.roadto10.org/icd-10-basics/>



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# Diagnosis Documentation Examples





# Top Diagnosis Codes – Neurosurgery

237.5 - UNC BEH NEO BRAIN/SPINAL
432.1 - SUBDURAL HEMORRHAGE
348.4 - COMPRESSION OF BRAIN
331.5 - IDIOPATHIC NORMAL PRESSURE HYDROCEPHALUS (INPH)
225.2 - BEN NEO CEREBR MENINGES
348.2 - PSEUDOTUMOR CEREBRI
784.0 - HEADACHE
324.0 - INTRACRANIAL ABSCESS
431. - INTRACEREBRAL HEMORRHAGE
198.3 - SEC MAL NEO BRAIN/SPINE
998.59 - OTHER POSTOPERATIVE INFECTION
227.3 - BENIGN NEO PITUITARY
747.81 - CEREBROVASCULAR ANOMALY
331.4 - OBSTRUCTIV HYDROCEPHALUS
348.0 - CEREBRAL CYSTS
348.5 - CEREBRAL EDEMA
239.6 - BRAIN NEOPLASM NOS
191.9 - MALIG NEO BRAIN NOS
V58.49 - OTHER SPECIFIED AFTERCARE FOLLOWING SURGERY
162.9 - MAL NEO BRONCH/LUNG NOS
239.7 - ENDOCRINE/NERV NEO NOS
430. - SUBARACHNOID HEMORRHAGE
852.20 - TRAUMATIC SUBDURAL HEM
348.89 - OTHER CONDITIONS OF BRAIN
998.31 - DISRUPTION OF INTERNAL OPERATION WOUND
723.0 - CERVICAL SPINAL STENOSIS
213.0 - BEN NEO SKULL/FACE BONE
331.3 - COMMUNICAT HYDROCEPHALUS
305.00 - ALCOHOL ABUSE-UNSPEC
225.1 - BENIGN NEO CRANIAL NERVE



# Documentation in ICD-10

## Requirements for Detailed Documentation for Diagnoses

Acuity	Acute, chronic, both, subacute
Specific site	Wound to abdominal wall: RUQ, LUQ, epigastric, RLQ, LLQ, periumbilical, unspecified
<b>Laterality</b>	Right, left, bilateral (although ovaries, fallopian tubes and kidneys usually omitted)
Etiology of diagnosis	Infectious agent, mechanism of occurrence
Link must be established between manifestations and underlying diseases	<b>Combination codes</b> <ul style="list-style-type: none"> <li>- Renal failure “<b>due to</b>” hypertension, diabetes, drug induced</li> <li>- Atherosclerosis of leg: side, type of vessel, with claudication, rest pain, ulceration, gangrene, “<b>due to</b>” tobacco use, diabetes</li> </ul>
Degree of severity	Mild, moderate, severe for diagnoses where appropriate
Complications of care	Intraoperative, postoperative, mechanical malfunctions, Infections (device vs. wound)

# Documentation in ICD-10

Requirements for Detailed Documentation for Diagnoses	
Injury details	Place of occurrence, activity causing the injury; accident details
<b>Episode of care</b>	Initial treatment, subsequent treatment (for routine or delayed healing), sequela
Specific type of fractures	Displaced/non-displaced fractures, transverse, oblique, spiral, comminuted, segmental
Drug reactions/interactions/adverse reactions	Poisoning (accidental/intentional/assault/undetermined), adverse effect, <b>underdosing</b> (due to financial hardship, age-related)

# Cerebrovascular Diseases

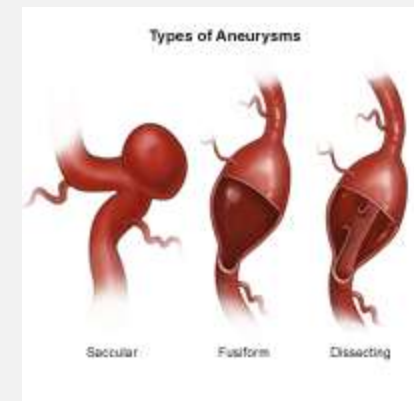
- **Documentation needed for Hemorrhage:**
  - Location or source of hemorrhage
    - Subarachnoid
      - Specify artery, if known
    - Intracerebral
      - Specify location, if known
    - Intracranial
      - » Subdural - Acute, Subacute, Chronic
      - » Extradural
    - Laterality
    - Document any associated diagnoses/conditions
  - Location should be documented by physician, cannot be taken from radiology report by coder.
  - Example:
    - I60.01 Nontraumatic subarachnoid hemorrhage from right carotid siphon and bifurcation

# Cerebrovascular Diseases

- **Documentation needed for causes other than hemorrhage:**
  - Cause
    - Thrombosis
    - Embolism
    - Other (specify)
    - Unspecified Occlusion or Stenosis
  - Site
    - Precerebral Arteries - specify artery, if known
    - Cerebral Arteries - specify artery, if known
  - Laterality
  - Document any associated diagnoses/conditions
  - Example:
    - I63.031 Cerebral infarction due to thrombosis of right carotid artery

# Cerebrovascular Diseases

- Aneurysms and Dissections
  - ICD-10 does not require specification of artery for nonruptured dissections and aneurysms, but this does not seem like “best practice.”
  - Examples:
    - I67.0 Dissection of cerebral arteries, nonruptured
    - I67.1 Cerebral aneurysm, nonruptured



## Glascow Coma Scale in ICD-10

- ICD-10 allows for the incorporation of the Glasgow Coma Scale (GCS) score into coding, either as a whole score or through use of its individual components (eye-opening, verbal and motor response categories)
- Separate symptom code created to correlate with GCS
- Examples:
  - R40.241 Glasgow coma scale 13-15
  - R40.213 Coma scale, eyes open, to sound
  - R40.234 Coma scale, best motor response, flexion withdrawal

## Dominant and Nondominant Side Documentation in ICD-10

- ICD-10 requires documentation from the Physician indicating *if the side affected by condition is dominant or nondominant*
- Default if not documented:
  - If the left side is affected → *non-dominant*.
  - If the right side is affected → *dominant*.



# Disc Herniation or Degeneration and Spinal Stenosis

- No major changes just more codes in ICD-10 mainly because there are more unique codes for anatomic sites, which you are likely already documenting. New combination codes for adjacent regions.
- For disc displacement, there is now a code for associated radiculopathy.
- Examples:
  - **M51.17** *Intervertebral disc disorders with radiculopathy, lumbosacral region*
  - **M50.31** *Other cervical disc degeneration, occipito-atlanto-axial region*
  - **M48.06** *Spinal stenosis, lumbar region*



# Non-traumatic Vertebral Fractures

- More codes in ICD-10 due to ability to specify spinal location and secondary cause.
- If the specific cause is known, then the code specifies vertebra and not the spinal level. If the specific cause is not known, then the code specifies the spinal region.
- Possible causes:
  - Age-related osteoporosis
  - Other osteoporosis
  - Neoplastic disease
  - Other disease
  - Stress/fatigue fracture
- Examples:
  - **M80.08XA** *Age-related osteoporosis with current pathological fracture, vertebra(e), initial encounter for fracture {Cause known}*
  - **M48.56XA** *Collapsed vertebra, not elsewhere classified, lumbar region, initial encounter for fracture {Cause unknown}*

## Injuries in ICD-10

- Significant changes in require documentation
- **Episode of care:**
  - A - Initial - receiving active treatment
  - D – Subsequent - receiving routine care for the injury during the period of recovery
  - S – Sequela - complications or conditions that arise as a direct result of an injury
- **Injury site:** as specific as possible
- **Etiology:** how did it happen?
- **Place of occurrence:** home, work, school
- **Intent:** accidental, self-harm, malicious
- **Head Injury:** specify loss of consciousness and duration

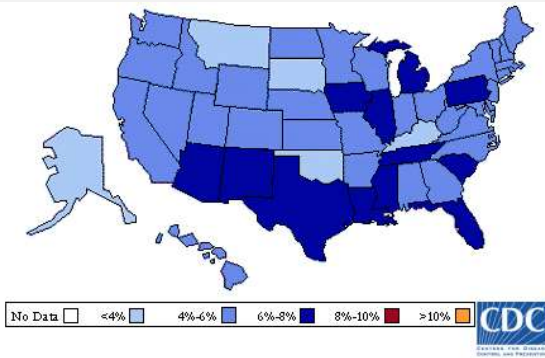
*Results in two codes, one for injury, second for how it occurred.*

## Fracture Documentation in ICD-10

- In addition to documenting specific fracture and type, must also document mechanism of injury
- Both fracture and mechanism must be documented for every patient encounter:
  - Can't use "Returns for follow-up for vertebral fracture"
- Coders can only code from physician documentation not x-ray reports
- Not documented open or closed → closed
- Not documented displaced or non-displaced → displaced
- Document episode of care (initial, subsequent, sequela) and type of healing (routine, delayed, nonunion) at all patient visits
- Example:
  - S12.031D Nondisplaced posterior arch fracture of first cervical vertebrae, subsequent encounter with routine healing



# Diabetes Mellitus



- The diabetes mellitus codes are combination codes that include the type of diabetes mellitus, the body system affected, and the complications affecting that body system.
- When documenting diabetes, include the following:
  - **Type:** e.g. Type 1 or Type 2 disease, drug or chemical induced, due to underlying condition, gestational
  - **Control:** No longer “poorly controlled”, use “With Hyperglycemia”
  - **Complications:** What (if any) other body systems are affected by the diabetes condition? e.g. Foot ulcer related to diabetes mellitus
  - **Treatment:** Is the patient on insulin?



# Hypertension

- Documentation has been simplified to Essential (Primary) Hypertension
  - No longer use malignant, systolic, accelerated, etc.
  - As with diabetes, document associated heart or kidney disease
- Examples:
  - I10 Essential hypertension
  - I12 Hypertensive heart disease
  - I12 Hypertensive chronic kidney disease
  - I13 Hypertensive heart and kidney diseaseAdditional specificity by indicating with or without heart failure and stage of kidney disease
- If Secondary Hypertension, document cause



## UNDERDOSING

- New concept in ICD-10 that can be used to document patient compliance with medications
- Identify condition being treated, medication, and why they are not taking it as prescribed
- May be Intentional      OR      Unintentional
  - Financial hardship
  - Other reasons
  - Age-related debility
  - Other reasons



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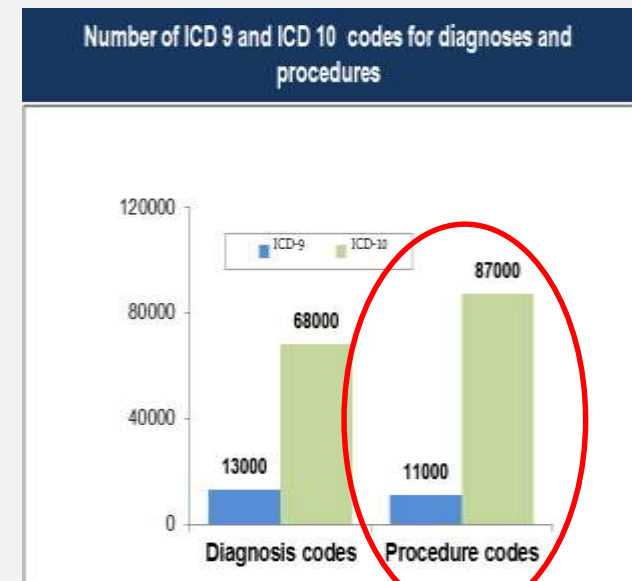
# Procedure Documentation Examples





# Overview of ICD-10-Procedure Coding System

- Developed by CMS with 3M Health Information Systems and completed in 1998.
- Only used for **Inpatient Procedures**.
- Goal was to create **unique codes** for substantially different procedures and with **easy expandability** to incorporate new procedures, technologies and devices utilized in medical/surgical procedures.



(Source: ICD-10-CM and ICD-10-PCS Update, Thirteenth National HIPAA Summit, 9/26/2006; Rand Study, March 2004)



# ICD-10-PCS: Overall Structure and Components

1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>
Section	Body System	Root Operation	Body Part	Approach	Device	Qualifier

7 character alphanumeric code structure

## ICD-10 PCS Components

- **Section:** general type of procedure “Medical/Surgical”
- **Body System, Root Operation, Body Part**
- **Approach:** External, Open, Percutaneous, Percutaneous Endoscopic, Via Natural or Artificial Opening +/- Endoscope or Percutaneous Endoscope
- **Device:** left in or on body
- **Qualifier:** additional info if needed

Information needed for coding likely included in normal op notes.



# Catheter Insertion into Vein

## Procedures require documentation of:

- Specific vein where insertion performed
  - Right or left internal jugular vein
  - Right or left external jugular vein
- Approach
  - Open
  - Percutaneous
  - Percutaneous endoscopic
- Type of device
  - Infusion
  - intraluminal
- Code examples
  - ICD-9 – 38.93 – venous catheterization.
  - ICD-10-PCS – 05HM33Z – Insertion, internal jugular vein right, percutaneous, infusion device.



# Catheter Insertion

<b>S</b> <i>System</i>	<b>0</b> Medical and Surgical
<b>B</b> <i>Body System</i>	<b>2</b> Heart and Great Vessels
<b>O</b> <i>Operation</i>	<b>H</b> Insertion: Putting in a nonbiological appliance that monitors, assists, performs, or prevents a physiological function but does not physically take the place of a body part

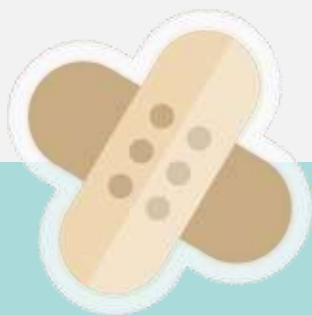
  

<i>Body Part</i>	<i>Approach</i>	<i>Device</i>	<i>Qualifier</i>
<b>4</b> Coronary Vein <b>6</b> Atrium, Right <b>7</b> Atrium, Left <b>K</b> Ventricle, Right <b>L</b> Ventricle, Left	<b>0</b> Open <b>3</b> Percutaneous <b>4</b> Percutaneous Endoscopic	<b>0</b> Monitoring Device, Pressure Sensor <b>2</b> Monitoring Device <b>3</b> Infusion Device <b>D</b> Intraluminal Device <b>J</b> Cardiac Lead, Pacemaker <b>K</b> Cardiac Lead, Defibrillator <b>M</b> Cardiac Lead	<b>Z</b> No Qualifier
<b>P</b> Pulmonary Trunk <b>Q</b> Pulmonary Artery, Right <b>R</b> Pulmonary Artery, Left <b>S</b> Pulmonary Vein, Right <b>T</b> Pulmonary Vein, Left <b>V</b> Superior Vena Cava <b>W</b> Thoracic Aorta	<b>0</b> Open <b>3</b> Percutaneous <b>4</b> Percutaneous Endoscopic	<b>0</b> Monitoring Device, Pressure Sensor <b>2</b> Monitoring Device <b>3</b> Infusion Device <b>D</b> Intraluminal Device	<b>Z</b> No Qualifier



# ICD-10-PCS Qualifiers for Neurosurgical Procedures

- Excision of Intervertebral Disc
  - Differentiate between removal of *portion* or *all* of disc
- Spinal Fusion
  - Document level of spinal column involved and number of joints fused
  - For operative approach, document:
    - Anterior approach, anterior column
    - Posterior approach, posterior column
    - Posterior approach, anterior column



# Questions?

