

ICD-10 Coordination and Maintenance Committee Meeting March 8-9, 2022 Diagnosis Agenda

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Welcome and announcements Donna Pickett, MPH, RHIA Co-Chair, ICD-10 Coordination and Maintenance Committee

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ICD-10 TIMELINE

A timeline of important dates in the ICD-10 process is described below:

March 8-9, 2022	ICD-10 Coordination and Maintenance Committee Meeting.
March 2022	Recordings and slide presentations of the March 8-9, 2022, ICD-10 Coordination and Maintenance Committee Meeting will be posted on the following web pages:
	Diagnosis code portion of the recording and related materials— https://www.cdc.gov/nchs/icd/icd10cm_maintenance.htm
	Procedure code portion of the recording and related materials— https://www.cms.gov/Medicare/Coding/ICD10/C-and-M-Meeting- Materials.html
April 1, 2022	New ICD-10 codes to capture new diseases and technology will be implemented on April 1, 2022.
April 8, 2022	Deadline for receipt of public comments on proposed new codes and revisions discussed at the March 8-9, 2022, ICD-10 Coordination and Maintenance Committee Meeting being considered for implementation on October 1, 2022.
April 2022	Notice of Proposed Rulemaking to be published in the Federal Register as mandated by Public Law 99-509. This notice will include references to the FY 2023 ICD-10-CM diagnosis and ICD-10-PCS procedure codes finalized to date. It will also include proposed revisions to the MS-DRG system based on ICD-10-CM/PCS codes on which the public may comment. The proposed rule can be accessed at: https://www.cms.gov/medicare/medicare-

fee-for-service-payment/acuteinpatientpps

May/June 2022

Final addendum posted on web pages as follows:

Diagnosis addendum -

https://www.cdc.gov/nchs/icd/icd10cm.htm

Procedure addendum -

https://www.cms.gov/Medicare/Coding/ICD10/index.html

May 9, 2022

Deadline for receipt of public comments on proposed new codes and revisions discussed at the March 8-9, 2022, ICD-10 Coordination and Maintenance Committee Meeting being considered for implementation on October 1, 2023.

June 10, 2022

Deadline for requestors: Those members of the public requesting that topics be discussed at the September 13-14, 2022, ICD-10 Coordination and Maintenance Committee Meeting, must have their requests submitted to CMS for procedures and NCHS for diagnoses.

July 2022

Federal Register notice for the September 13-14, 2022, ICD-10 Coordination and Maintenance Committee Meeting will be published. This will include the tentative agenda.

August 1, 2022

Hospital Inpatient Prospective Payment System final rule expected to be published in the Federal Register as mandated by Public Law 99-509. This rule will also include links to all the final codes to be implemented on October 1, 2022.

This rule can be accessed at:

https://www.cms.gov/medicare/medicare-fee-for-service-payment/acuteinpatientpps

August 2022

Tentative agenda for the Procedure portion of the September 13, 2022, ICD-10 Coordination and Maintenance Committee Meeting will be posted on the CMS webpage at –

https://www.cms.gov/Medicare/Coding/ICD10/C-and-M-Meeting-Materials.html

Tentative agenda for the Diagnosis portion of the September 14, 2022, ICD-10 Coordination and Maintenance Committee Meeting will be posted on the NCHS webpage at –

https://www.cdc.gov/nchs/icd/icd10cm maintenance.htm

August 12, 2022

On-line registration opens for the September 13-14, 2022, ICD-10 Coordination and Maintenance Committee Meeting at: https://www.eventbrite.com/

Please note that this meeting will be conducted virtually, and registration is not required to attend. However, we are providing the ability to register on-line for those required to provide proof of attendance for continuing education purposes. The on-line registration will be available through September 12, 2022.

September 13-14, 2022

The September 2022, ICD-10 Coordination and Maintenance Committee Meeting is anticipated to be fully virtual by zoom and dial-in. Those who wish to attend must participate via Zoom Webinar or by dialing in.

September 2022

Recordings and slide presentations of the September 13-14, 2022, ICD-10 Coordination and Maintenance Committee Meeting will be posted on the following web pages:

Diagnosis code portion of the recording and related materials https://www.cdc.gov/nchs/icd/icd10cm_maintenance.htm

Procedure code portion of the recording and related materials https://www.cms.gov/Medicare/Coding/ICD10/C-and-M-Meeting-Materials.html

October 1, 2022

New and revised ICD-10-CM and ICD-10-PCS codes go into effect along with MS-DRG changes. Final addendum available on web pages as follows:

Diagnosis addendum -

https://www.cdc.gov/nchs/icd/icd10cm.htm

Procedure addendum -

https://www.cms.gov/Medicare/Coding/ICD10/

October 14, 2022

Deadline for receipt of public comments on proposed new codes discussed at the September 13-14, 2022, ICD-10 Coordination and Maintenance Committee Meeting being considered for implementation on April 1, 2023.

November 2022

Any new ICD-10 codes required to capture new technology that will be implemented on the following April 1 will be announced. Information on any new codes to be implemented April 1, 2023, will be posted on the following websites:

https://www.cdc.gov/nchs/icd/icd10cm.htm

https://www.cms.gov/Medicare/Coding/ICD10/

November 15, 2022

Deadline for receipt of public comments on proposed new codes and revisions discussed at the September 13-14, 2022, ICD-10 Coordination and Maintenance Committee Meeting being considered for implementation on October 1, 2023.

Contact Information

Mailing address:

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Comments on the diagnosis proposals presented at the ICD Coordination and Maintenance Committee meeting should be sent to the following email address: nchsicd10CM@cdc.gov

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Continuing Education Credits

Continuing education credits may be awarded by the American Academy of Professional Coders (AAPC) or the American Health Information Management Association (AHIMA) for participation in CMS/NCHS ICD-10 Coordination and Maintenance (C&M) Committee Meeting.

Continuing Education Information for American Academy of Professional Coders (AAPC)

If you plan to attend or participate via telephone the ICD-10 Coordination and Maintenance (C&M) Committee Meeting, you should be aware that CMS /NCHS do not provide certificates of attendance for these calls. Instead, the AAPC will accept your printed topic packet as proof of participation. Please retain your topic packet copy as the AAPC may request them for any conference call you entered into your CEU Tracker if you are chosen for CEU verification. Members are awarded one (1) CEU per hour of participation.

Continuing Education Information for American Health Information Management Association (AHIMA)

AHIMA credential-holders may claim 1 CEU per 60 minutes of attendance at an educational program. Maintain documentation about the program for verification purposes in the event of an audit. A program does not need to be pre-approved by AHIMA, nor does a CEU certificate need to be provided, in order to claim AHIMA CEU credit. For detailed information about AHIMA's CEU requirements, see the Recertification Guide on AHIMA's web site.

Please note: The statements above are standard language provided to NCHS by the AAPC and the AHIMA. If you have any questions concerning either statement, please contact the respective organization, not NCHS.

Anal Fistula

An anal fistula is an inflammatory tract or connection between the surface of the anal canal and, most frequently, the perianal skin or perineum, typically evolving from an anal abscess.¹ The disease has significant implications for a patient's quality of life, as symptoms range from pain and discharge to fecal incontinence.

Anal fistulas are typically classified using the Parks classification system, which considers the external sphincter as a central point of reference to describe five distinct types of fistulas: superficial, intersphincteric, transsphincteric, suprasphincteric, and extrasphincteric.² The classification system describes the anatomic location of the fistula and facilitates the identification of a treatment pathway. The system is also useful in describing the complexity of the condition and related treatment protocols.

While clinical definitions of complex anal fistula can vary, clinicians are aligned on a consistent definition of simple fistula. According to several clinical guidelines, an anal fistula is considered to be "simple" when the tract is intersphincteric or low intersphincteric (crossing <30% of the external anal sphincter). In addition, simple fistulas have a single external and internal opening, are associated with no pain or fluctuation to suggest presence of perianal abscess and have no evidence of a rectovaginal fistula or anorectal stricture.

The management of patients with anal fistulas varies depending on severity of disease and underlying comorbidities (such as Crohn's disease).⁴ Treatment and management of simple fistulas are relatively straightforward compared with complex anal fistulas. Complex anal fistulas can be much more challenging to manage, resulting in high disease burden, diminished health-related quality of life, and increased healthcare resource use and costs.⁵ Treatments vary by location and fistula type, and include fistulotomies, endoanal advancement flap or ligation of the intersphincteric fistula tract (LIFT), proctectomies, and fecal diversions.⁶

A common complication of anal fistula surgery is recurrence of fistulas after surgery, which represents a challenging problem as these fistulas are usually associated with higher risk of rerecurrence and fecal incontinence.⁷

Current ICD-10-CM coding, K60.3 Anal fistula, does not differentiate between simple versus complex fistulas, nor does it distinguish between persistent, and recurrent fistulas. This lack of specificity decreases the opportunity to use ICD-10-CM codes for accurate disease tracking.

Takeda Pharmaceuticals America, Incorporated is proposing the following tabular modifications to enable better tracking of complex fistulas, facilitating greater understanding of anal fistula epidemiology, and improving treatment paradigms. The American Gastroenterological Association (AGA) has reviewed and supports this proposal.

References:

- 1. Champagne, Bradley J. UpToDate, 2019, http://www.uptodate.com/contents/operative-management-of-anorectal-fistulas
- American Gastroenterological Association Clinical Practice Committee. American Gastroenterological Association medical position statement: perianal Crohn's disease. *Gastroenterology*. 2003;125(5):1503-1507. doi:10.1016/j.gastro.2003.08.024
- Vogel JD, Johnson EK, Morris AM, et al. Clinical Practice Guideline for the Management of Anorectal Abscess, Fistula-in-Ano, and Rectovaginal Fistula. *Dis Colon Rectum*. 2016;59(12):1117-1133. doi:10.1097/DCR.00000000000000033
- 4. Vogel, Jon D. UpToDate, 2020, https://www.uptodate.com/contents/anorectal-fistula-clinical-manifestations-diagnosis-and-management-principles
- 5. Panes J, Reinisch W, Rupniewska E, et al. Burden and outcomes for complex perianal fistulas in Crohn's disease: Systematic review. *World J Gastroenterol*. 2018;24(42):4821-4834. doi:10.3748/wjg.v24.i42.4821
- 6. Williams G, Williams A, Tozer P, et al. The treatment of anal fistula: second ACPGBI Position Statement 2018. *Colorectal Dis.* 2018;20 Suppl 3:5-31. doi:10.1111/codi.14054
- 7. Emile SH. Recurrent anal fistulas: When, why, and how to manage?. World J Clin Cases. 2020;8(9):1586-1591.doi:10.12998/wjcc.v8.i9.1586

TABULAR MODIFICATIONS

K60 Fissure and fistula of anal and rectal regions

New subcategory	K60.3	Anal fistul	a	
New sub-subcategory New code New code New code		K60.31	Anal fistu K60.311 K60.312 K60.319	la, simple Anal fistula, simple, persistent Anal fistula, simple, recurrent Anal fistula, simple, unspecified
New sub-subcategory New code New code New code		K60.32	K60.321	la, complex Anal fistula, complex, persistent Anal fistula, complex, recurrent Anal fistula, complex, unspecified
New code Add		K60.39	Other ana Anal fistu	

Appendicitis with Generalized Peritonitis with or without Perforation

When appendicitis leads to a frank perforation or rupture, that will usually cause severe peritonitis, which is commonly generalized peritonitis, although it can sometimes become walled off and localized. However, there can also be appendicitis with microperforations, which can lead to some degree of peritonitis, but milder. It is possible for appendicitis to present with generalized peritonitis, even without a frank perforation or rupture of the appendix.

It is being proposed to create codes for acute appendicitis with generalized peritonitis, with perforation and without perforation, and unspecified as to perforation. This proposal is based on internal discussions within CDC and CMS.

TABULAR MODIFICATIONS

K35 Acute appendicitis

Delete	K35.2	Appendici	tis (acute)	ith generalized peritonitis with generalized (diffuse) peritonitis r perforation of appendix
Dalas		K35.20	abscess	pendicitis with generalized peritonitis, without
Delete			(Acute) ap	opendicitis with generalized peritonitis NOS
New code			K35.200	Acute appendicitis with generalized peritonitis, without perforation or abscess
Add				(Acute) appendicitis with generalized peritonitis without rupture or perforation of appendix, NOS
New code			K35.201	Acute appendicitis with generalized peritonitis, with perforation, without abscess
Add				Appendicitis (acute) with generalized (diffuse) peritonitis following rupture or perforation of appendix, NOS
New code			K35.209	Acute appendicitis with generalized peritonitis, without abscess, unspecified as to perforation
Add				(Acute) appendicitis with generalized peritonitis NOS

	K35.21	Acute app abscess	endicitis with generalized peritonitis, with
New code		K35.210	Acute appendicitis with generalized peritonitis, without perforation, with abscess
Add			(Acute) appendicitis with generalized peritonitis without rupture or perforation of appendix, with abscess
New code		K35.211	Acute appendicitis with generalized peritonitis, with perforation and abscess
Add			Appendicitis (acute) with generalized (diffuse) peritonitis following rupture or perforation of appendix, with abscess
New code		K35.219	Acute appendicitis with generalized peritonitis, with abscess, unspecified as to perforation
Add			(Acute) appendicitis with generalized peritonitis and abscess NOS

Bardet-Biedl Syndrome and Laurence-Moon Syndrome

Bardet-Biedl Syndrome (BBS) is a rare genetic disorder of obesity, affecting approximately 1 in 140,000-160,000 people in North America and Europe, 1 and estimated to affect approximately 3000 people in the U.S. and Canada alone. 2 Patients with BBS can experience endocrine abnormalities, such as hypogonadism; visual impairment; cognitive disabilities; polydactyly; renal dysfunction; genital, renal, and dental anomalies; speech; and developmental delays. 3

BBS has been studied since the early 1900's.⁴ It is caused by genetic variants located on the MC4R pathway that affects signals between the brain and body. The underlying cause, regardless of gene type, is malfunction of the primary cilia, a key component of cellular communication. There are at least 21 genes associated with BBS, including the following: BBS1, BBS2, ARL6 (BBS3), BBS4, BBS5, MKKS (BBS6), BBS7, TTC8 (BBS8), BBS9, BBS10, TRIM32 (BBS11), BBS12, MKS1 (BBS13), CEP290 (BBS14), WDPCP (BBS15), SDCCAG8 (BBS16), LZTFL1 (BBS17), BBIP1 (BBS18), IFT27 (BBS19), IFT72 (BBS20), and C8ORF37 (BBS21).⁵ Genetic testing to confirm BBS has evolved from targeted sequencing of common genetic variants, including the common BBS1 p.M390R, BBS2 p.Y24X, BBS2 p.R275X, and BBS10 c.91fsX5 mutations to next-generation sequencing gene panels containing all known BBS genes.⁴

While there is no clear link between the different mutations identified and disease severity, patients with mutations in the BBS1 gene seem to have milder ophthalmologic involvement, whereas patients with mutations in the BBS2, BBS3 and BBS4 genes experience classic deterioration of their vision, which in some cases leads to blindness due to retinitis pigmentosa. Patients with mutations in the BBS10 gene generally have significantly increased tendency toward obesity and insulin resistance. Despite the large number of genes identified as being associated with BBS, genetic mutations have not been identified in an estimated 20-30 percent of individuals with BBS.

Genetic testing has also been developed to identify BBS and has become the diagnostic tool of choice. Error! Bookmark not defined. However, a diagnosis of BBS does not necessarily indicate any particular symptom or severity of symptoms.

Because BBS can potentially impact multiple body systems, the current treatment modality is to manage the BBS patient's presenting symptoms. Because obesity is a common manifestation, controlling the patient's weight is important as doing so can have a positive impact on other body systems as well. More recently, therapies that target the genetic mutation are being developed and may provide relief to BBS patients in the future. Error! Bookmark not defined.

To properly diagnose BBS, providers rely on the identification of four of the primary characteristics (listed below), or if the person has three primary characteristics and at least two secondary characteristics. Note that most people with BBS do not have all of the characteristics listed below.^{1,3,4} The primary characteristics of BBS (and approximate percent affected) are: visual impairment caused by retinal abnormalities (90-100); obesity, typically apparent by age one (72-92); polydactyly (extra fingers or toes) (63-81); hypogonadism (59-98); renal

anomalies (kidney malformations and/or malfunctions) (20-53); and learning disabilities (50-61). Secondary characteristics include: developmental delays; speech disorders / delay; dental anomalies (small teeth, small lower jaw, short teeth); behavioral problems; neurological problems; hypertension; lack of a sense of smell (anosmia); flat, wide feet; no arches; thyroid problems; strabismus (with "lazy eye"); short stature relative to parents' height; toe and finger variations including short digits (brachydactyly); curved digits (clinodactyly), especially the outer fingers or toes; mild webbing (syndactyly) especially between the 2nd and 3rd toes.

Laurence-Moon syndrome (LMS) is a rare autosomal recessive condition defined by visual degeneration compounded with pituitary dysfunction. For some time LMS and BBS were grouped together and termed Laurence-Moon-Bardet-Biedl syndrome, because of similarities in these conditions. There is also similarity to Oliver-McFarlane syndrome (OMS). All three conditions are characterized by progressive blindness, obesity, and learning disabilities.⁷

The pituitary gland serves to regulate the major chemicals that drive body processes, ranging from growth and metabolism to reproduction potential. LMS is characterized by childhood neurological problems including loss of control over movement and loss of peripheral nerve function, which can result in a stiffness-contraction of the limbs. Intellectual disabilities may be associated. ⁷

LNMS is most commonly associated with mutations in the PNPLA6 gene, with an autosomal recessive inheritance. The PNPLA6 gene is responsible for the production of proteins that drive the breakdown of cell membranes. The PNPLA6 protein is an enzyme that is thought to drive the growth of nerve and non-nerve cells as they grow and mature. This gene is notably associated not only with LNMS but also Oliver-McFarlane syndrome, and a number of other identified syndromes as well (Boucher-Neuhauser syndrome, Gordon-Holmes syndrome, and spastic paraplegia type 39). LNMS is estimated to have a prevalence of 1 in 100,000 in North America.⁷

Creation of a new ICD-10-CM diagnosis code for Bardet-Biedl syndrome (BBS) has been proposed by Rhythm Pharmaceuticals, Inc. A new code is needed to bring awareness to the BBS population, as well as to identify, diagnose and track patients and the clinical interventions used to treat and manage patients, and the outcomes of treatments. Given the way that LNMS and BBS have been grouped in the past, a separate code for LNMS is also being proposed.

References

- 1. M'hamdi O, Ouertani I, Chaabouni-Bouhamed H: Update on the Genetics of Bardet-Biedl Syndrome. *Mol Syndromol* 2014;5:51-56. https://doi.org/10.1159/000357054
- 2. Bardet Biedl Syndrome Foundation. What is BBS? Accessed at https://www.bardetbiedl.org/what-is-bbs.
- 3. Han C, Reyes-Capo DP, Liu CY, et al. Comprehensive Endocrine-Metabolic Evaluation of Patients with Alström Syndrome Compared with BMI-Matched Controls. *J Clin Endocrinol Metab*. 2018 Jul 1;103:2707-2719. https://doi.org/10.1210/jc.2018-00496
- 4. Beales PL, Warner AM, Hitman GA, Thakker R, Flinter FA. Bardet-Biedl syndrome: a molecular and phenotypic study of 18 families. *J Med Genet*. 1997;34(2):92-98. https://doi.org/10.1136/jmg.34.2.92
- 5. Forsythe E, Kenny J, Bacchelli C, Beales PL. Managing Bardet-Biedl Syndrome-Now and in the Future. *Front Pediatr.* 2018;6:23. Published 2018 Feb 13. https://dx.doi.org/10.3389%2Ffped.2018.00023
- 6. National Organization for Rare Disorders (NORD). Rare Disease Database. Bardet-Biedl Syndrome. Accessed at https://rarediseases.org/rare-diseases/bardet-biedl-syndrome/

7. National Organization for Rare Disorders (NORD). Rare Disease Database. Laurence-Moon Syndrome. Accessed at https://rarediseases.org/rare-diseases/laurence-moon-syndrome/

TABULAR MODIFICATIONS

Q87 Other specified congenital malformation syndromes affecting multiple systems

Q87.8 Other specified congenital malformation syndromes, not elsewhere classified

New code Q87.83 Bardet-Biedl syndrome

Add Code also associated conditions, such as:

Add obesity (E66.8)
Add polydactyly (Q69.-)
Add retinal dystrophy (H35.5-)

New code Q87.84 Laurence-Moon syndrome

Q87.89 Other specified congenital malformation syndromes,

not elsewhere classified

Delete Laurence-Moon (-Bardet)-Biedl syndrome

INDEX MODIFICATIONS

Syndrome ...

Add - Oliver-McFarlane Q87.89

Crohn's Disease

Crohn's disease is an idiopathic inflammatory bowel disease that most commonly involves the ileum and colon but also involves the esophagus in approximately 10% of cases. In pediatric patients, the rate of esophageal involvement may be twice as high. Approximately 5 to 15 percent have involvement of the mouth or gastroduodenal area.

Currently, Crohn's disease can be classified by ICD-10-CM with sites involving colon, duodenum, ileum, jejunum, large intestine and small intestine. However, Crohn's disease can affect the entire gastrointestinal tract from the mouth to the anus.

The Regulatory Committee of the Association of Clinical Documentation Integrity Specialists (ACDIS) is proposing the following tabular modifications to accurately capture the site specificity of this condition. The American Gastroenterologist Association (AGA) has reviewed and supports this proposal.

References:

New code

TABULAR MODIFICATIONS

K50 Crohn's disease [regional enteritis]

New subcategory	K50.2 Crohn's d	isease of or	opharynx
New code	K50.20	Crohn's d	isease of oropharynx without complications
New sub-subcategory	K50.21	Crohn's d	isease of oropharynx with complications
New code		K50.211	Crohn's disease of oropharynx with rectal bleeding
New code		K50.212	Crohn's disease of oropharynx with intestinal obstruction
New code		K50.213	Crohn's disease of oropharynx with fistula
New code		K50.214	Crohn's disease of oropharynx with abscess
New code		K50.218	Crohn's disease of oropharynx with other complications

K50.219

Crohn's disease of oropharynx with

unspecified complications

¹ https://www.sciencedirect.com/topics/nursing-and-health-professions/crohn-disease

² https://www.uptodate.com/contents/clinical-manifestations-diagnosis-and-prognosis-of-crohn-disease-in-adults

New subcategory	K50.3 Crohn's o	disease of es	ophagus
New code	K50.30	Crohn's d	isease of esophagus without complications
New			
sub-subcategory	K50.31	Crohn's d	isease of esophagus with complications
New code		K50.311	Crohn's disease of esophagus with rectal bleeding
New code		K50.312	Crohn's disease of esophagus with intestinal obstruction
New code		K50.313	Crohn's disease of esophagus with fistula
New code		K50.314	Crohn's disease of esophagus with abscess
New code		K50.318	Crohn's disease of esophagus with other complications
New code		K50.319	Crohn's disease of esophagus with unspecified complications
New subcategory	K50.4 Crohn's o	disease of sto	omach
New code	K50.40	Crohn's d	isease of stomach without complications
New			
sub-subcategory	K50.41	Crohn's d	isease of stomach with complications
New code		K50.411	Crohn's disease of stomach with rectal
			bleeding
New code		K50.412	bleeding Crohn's disease of stomach with intestinal
New code			Crohn's disease of stomach with intestinal obstruction
		K50.412 K50.413 K50.414	Crohn's disease of stomach with intestinal
New code		K50.413	Crohn's disease of stomach with intestinal obstruction Crohn's disease of stomach with fistula

Coma Due to Underlying Condition

Subsequently after the recent coding guideline changes which limits Glasgow coma scale codes to traumatic brain injury (TBI), National Center for Health Statistics received a proposal for the creation of a new ICD-10-CM code for "Coma NEC."

This is a representation from the September 2021 C&M meeting; edits are based on public comments and are **bolded**.

R40.20, Unspecified Coma, is the only code available for coma in patients who do not have TBI but have conditions without combination codes describing the coma; for example, coma secondary to spontaneous brain hemorrhage. Unspecified coma does not seem because it is known(specified) to be a non-TBI coma.

TABULAR MODIFICATIONS

R40 Somnolence, stupor and coma

Excludes1: neonatal coma (P91.5)

somnolence, stupor and coma in diabetes (E08-E13) somnolence, stupor and coma in hepatic failure (K72.-)

somnolence, stupor and coma in hypoglycemia

(nondiabetic) (E15)

R40.2 Coma

Code first any associated: fracture of skull (S02.-) intracranial injury (S06.-)

Note: One code from each subcategory, R40.21-R40.23, is required to complete the coma scale

New code R40.2A Coma due to underlying condition

Add Secondary coma

Add Code first underlying condition

Add Excludes1: Coma associated with traumatic brain

injury (R40.21 - R40.244)

Craniosynostosis and Other Congenital Deformities of Skull, Face and Jaw

In a newborn, the bones of the cranium are separated by intervening sutures (i.e., gaps) that enable the infant's skull to pass through the birth canal and to allow for both growth of the skull and brain. Craniosynostosis is the premature closure of one or more cranial sutures. When one or more sutures closes prematurely, an abnormally shaped skull and also, in more severe cases, increased intracranial pressure can occur.

A proposal was presented at the September 2021 ICD10 Coordination and Maintenance meeting. In response to public comments, a revised proposal is being submitted for reconsideration. Changes are noted in **bold**.

The prevalence of craniosynostosis is ~ 1 in 2000 births. Clinically, craniosynostosis is classified according to the suture involved. The most common sutures involved in craniosynostosis are sagittal ($\sim 60\%$), coronal ($\sim 25\%$), metopic ($\sim 15\%$), and lambdoid ($\sim 2\%$). Sagittal and metopic sutures are located midline. Coronal and lambdoid sutures extend laterally - left and right - on the skull. Therefore, coronal and lambdoid craniosynostosis can occur on one (i.e., unilateral) or both (i.e., bilateral) sides.

Pediatric clinicians routinely screen infants and children for abnormal shape of the cranium. These clinicians may suspect that craniosynostosis may be responsible for a particular head shape, and therefore pursue referral to craniosynostosis clinical specialists for further evaluation and treatment. Not all head shape findings (e.g., metopic ridge, sagittal crest) are abnormal or due to craniosynostosis. Definitive diagnosis of craniosynostosis is typically made with radiographic imaging of the skull (e.g., computerized tomography) and physical examination performed by a craniosynostosis clinical expert (e.g., neurosurgeon, plastic surgeon).

Currently, there is one ICD-10-CM code for craniosynostosis (Q75.0), for which acrocephaly, imperfect fusion of skull, oxycephaly, trigonocephaly are inclusion terms. These inclusion terms convey the subjective, phenotypic shape of the cranium that can occur as a result of craniosynostosis, but not the type/location of the craniosynostosis.

Classification of the type of the craniosynostosis is essential for several reasons, including (1) to accurately measure and assess worldwide trends in the epidemiology of craniosynostosis types, (2) outcomes and treatments vary by craniosynostosis type and (3) the removal of antiquated terms (acrocephaly, oxycephaly) in the tabular, but will remain indexed.

The revisions proposed are to achieve sufficient, clinical granularity of the type of craniosynostosis (i.e., sagittal, coronal, metopic, lambdoid, other, and not specified) and laterality (i.e., unilateral, bilateral, not specified). Sagittal and metopic craniosynostosis are midline, therefore the side is not applicable. The surgeons who diagnosis craniosynostosis most often, do not feel that knowing the actual side is more beneficial, but knowing if it was unilateral or bilateral is sufficient detail.

The following revisions are proposed to achieve sufficient, clinical granularity of the type of skull deformities. This granularity will significantly improve international classification, tracking, and surveillance of infants and children with craniosynostosis and skull characteristics that prompt evaluation for craniosynostosis.

Members of the American Society of Pediatric Neurosurgeons and the American Society of Craniofacial Surgeons have called for a revision of the current craniosynostosis ICD-10-CM diagnosis code (Q75.0) to provide more clinical granularity.^{1,2}

This proposal is supported by the American Academy of Pediatrics.

References

¹·Gonzalez SR, Han A, Golinko MS. Shifting epidemiology of single-suture craniosynostosis and the need for a more granular ICD classification system: a national survey of members from the American Society of Pediatric Neurosurgeons (ASPN) and the American Society of Craniofacial Surgeons (ASCFS). Childs Nerv Syst. 2019;35(9):1443-1444.

².Gonzalez SR, Light JG, Golinko MS. Assessment of Epidemiological Trends in Craniosynostosis: Limitations of the Current Classification System. Plast Reconstr Surg Glob Open. 2020;8(3):e2597.

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TABULAR MODIFICATIONS

Q75 Other congenital malformations of skull and face bones

Excludes1: congenital malformation of face NOS (Q18.-)

congenital malformation syndromes classified to Q87.dentofacial anomalies [including malocclusion] (M26.-) musculoskeletal deformities of head and face (Q67.0-Q67.4) skull defects associated with congenital anomalies of brain

such as:

anencephaly (Q00.0) encephalocele (Q01.-) hydrocephalus (Q03.-) microcephaly (Q02)

Q75.0 Craniosynostosis

Delete Acrocephaly

Delete Imperfect fusion of skull

Delete Oxycephaly
Delete Trigonocephaly

New code Q75.01 Sagittal craniosynostosis

Add Non-deformational dolichocephaly
Add Non-deformational scaphocephaly

New subcategory Q75.02 Coronal craniosynostosis

Add Anterior plagiocephaly

New code Q75.021 Coronal craniosynostosis unilateral

Add Non-deformational anterior plagiocephaly

New code Q75.022 Coronal craniosynostosis bilateral

Add Non-deformational brachycephaly

New code Q75.029 Coronal craniosynostosis unspecified

New code Q75.03 Metopic craniosynostosis

Add Trigonocephaly

New subcategory Q75.04 Lambdoid craniosynostosis

Add Non-deformational posterior plagiocephaly

New code Q75.041 Lambdoid craniosynostosis, unilateral

New code Q75.042 Lambdoid craniosynostosis, bilateral

New code Q75.049 Lambdoid craniosynostosis, unspecified

New subcategory Q75.05 Multi-suture craniosynostosis

New code Q75.051 Cloverleaf skull

Add Kleeblattschaedel skull

New code Q75.052 Pansynostosis

New code Q75.058 Other multi-suture craniosynostosis

New subcategory Q75.08 Other single-suture craniosynostosis

New code Q75.081 Other single-suture craniosynostosis,

unilateral

New code Q75.082 Other single-suture craniosynostosis, bilateral

New code Q75.089 Other single-suture craniosynostosis,

unspecified

New subcategory Q75.09 Craniosynostosis unspecified

Add Craniosynostosis NOS

New code Q75.091 Craniosynostosis unspecified, unilateral Q75.092 Craniosynostosis unspecified, bilateral

New code Q75.099 Craniosynostosis unspecified

Add Imperfect fusion of skull

Desmoid Tumors

Desmoid tumors are a rare type of tumor arising in deep connective and soft tissues which often have a variable and unpredictable course. Because desmoid tumors do not metastasize, they are not classified as malignant. However, desmoid tumors tend to be locally aggressive, infiltrative, and destructive, such that the condition is also known as aggressive fibromatosis.

The National Center for Health Statistics (NCHS) received a request to create ICD-10-CM codes for desmoid tumors. This is a representation from the September 2021 ICD10 Coordination and Maintenance (C&M) meeting; edits are based on public comments and are **bolded**.

Desmoid tumors constitute 0.03% of all tumors. The estimated incidence in the general population is 2-4 per million people per year. Desmoid tumors are observed to be more common in persons aged 10-40 years but can occur in other age groups. Desmoid tumors can commonly occur in women after childbirth. The female:male gender ratio is 2:1. In children, the gender incidence is the same.

In the US, it is estimated that about 900 to 1,500 people are diagnosed with desmoid tumors each year, although this may be significantly understated because of the challenges in diagnosis and reporting. The diagnosis is typically made via biopsy. It is about twice as common in women as men and tends to peak between the ages of 30 to 40 years old, although it may occur in anyone including infants, young children, and teenagers. The cause of desmoid tumors is generally unknown but up to 90% are associated with mutations of the β -catenin protein, potentially derived from trauma and inappropriate wound healing.

Desmoid tumors can occur in any soft or connective tissue throughout the body. In practice, the locations are typically categorized into four general areas:

- abdominal wall
- extremities/shoulder and pelvic girdles/chest wall
- intraabdominal/retroperitoneal/pelvic cavity
- head and neck/intrathoracic

This categorization is useful clinically because, in addition to tumor size and infiltration, location generally determines symptoms, is strongly linked to morbidity and mortality, and influences the treatment.

Abdominal wall tumors may present as a noticeable mass, which is sometimes revealed as pregnancy stretches the wall. Extremity tumors often present with significant pain and restricted mobility. Intraabdominal/retroperitoneal/pelvic cavity desmoid tumors can be asymptomatic, or they may present as weight loss or with significant comorbidities such as bowel obstruction or renal failure. Head and neck/intrathoracic tumors may present with symptoms such as dysphagia or shortness of breath.

The more serious desmoid tumors appear in the intraabdominal/retroperitoneal/pelvic cavity area and in the head and neck/intrathoracic area. Although desmoid tumors do not occur within vital

organs themselves, these locations often involve desmoid tumors attaching to and/or compressing vital organs. For example, intraabdominal desmoid tumors may compress the intestines and kidneys, and intrathoracic desmoids may compress the lungs. Similarly, critical blood vessels such as the vena cava and the mesenteric arteries may also be compressed. Compression of organs or vessels can be life-threatening and increased mortality is associated with desmoid tumors in these areas.

Desmoid tumors are often excised and may also be ablated. However, they frequently prove difficult to completely remove, especially when nearby tissues are infiltrated. Moreover, even after apparent complete removal, desmoid tumors quite commonly recur locally. For this reason, medical treatments are heavily used. These include chemotherapy, either systemic or via isolated limb perfusion; hormone-blocking agents such as tamoxifen; kinase inhibitors to arrest tumor progression; and radiation therapy.

Because the behavior of desmoid tumors is unpredictable, active surveillance is recommended as the frontline approach. When progression occurs, the course of treatment is then influenced by the anatomic location of the tumor. For example, surgical removal is favored as the first-line treatment for abdominal wall desmoid tumors, with medical treatment such as chemotherapy as a second-line. For the other areas, medical treatments are usually first-line. Second-line treatment of extremities/shoulder and pelvic girdles/chest wall includes surgery and isolated limb perfusion. Intraabdominal/retroperitoneal/pelvic cavity desmoid tumors are treated with surgery, radiation therapy, or both as second-line. For head and neck/intrathoracic desmoid tumors, second-line treatment is radiation or radiation with surgery. Because of the number of vital organs in the neck, first line treatment may proceed directly to radiation therapy or surgery with radiation.

The Desmoid Tumor Research Foundation is requesting the creation of ICD-10-CM codes for coding specificity and research.

References

- 1. Braggio et al. Patient Reported Outcomes of Treatments for Desmoid Tumors: An International Natural History Study. American Society of Clinical Oncology, 2021 abstract. https://meetinglibrary.asco.org/record/197911/abstract
- 2. Desmoid Tumor Working Group. The management of desmoid tumours: A joint global consensus-based guideline approach for adult and paediatric patients. European Journal of Cancer 127 (2020) 96-107. https://doi.org/10.1016/j.ejca.2019.11.013
- 3. Trovato, M. J., Schwartz , R. A., & Lambert , P. C. (2019). Home / For Patients and Families / Rare Disease Information / Desmoid Tumor. Retrieved May 29, 2019, from NORD National Organization for Rare Disorders: https://rarediseases.org/rare-diseases/desmoid-tumor/
- 4. See also: https://dtrf.org/published-research-articles/

TABULAR MODIFICATIONS

D48 Neoplasm of uncertain behavior of other and unspecified sites
D48.1 Neoplasm of uncertain behavior of connective and other soft tissue
Neoplasm of uncertain behavior of connective tissue of ear

Neoplasm of uncertain behavior of connective tissue of eyelid Stromal tumors of uncertain behavior of digestive system

Excludes1:	neoplasm of uncertain behavior of articular cartilage
	(D48.0)
	neoplasm of uncertain behavior of cartilage of
	larynx (D38.0)
	neoplasm of uncertain behavior of cartilage of nose
	(D38.5)
	neoplasm of uncertain behavior of connective tissue
	of breast (D48.6-)

New subcategory New code	D48.11	Desmoid t D48.110	umor Desmoid tumor of head and neck
New code		D48.111	Desmoid tumor of chest wall
New code		D48.112	Desmoid tumor, intrathoracic
New code		D48.113	Desmoid tumor of abdominal wall
New code Add Add		D48.114	Desmoid tumor, intraabdominal Desmoid tumor, peritoneal, retroperitoneal Desmoid tumor of pelvic cavity
New code		D48.115	Desmoid tumor of upper extremity and shoulder girdle
New code		D48.116	Desmoid tumor of lower extremity and pelvic girdle
Add			Desmoid tumor of buttock
New code		D48.117	Desmoid tumor of back
New code		D48.118	Desmoid tumor of other site
New code		D48.119	Desmoid tumor of unspecified site
New code	D48.19	-	rified neoplasm of uncertain behavior of ctive and other soft tissue

Encounter for Follow-Up Examination after Completed Treatment for Malignant Neoplasm

This topic was presented at the September 2021 ICD10 Coordination and Maintenance meeting and based on comments received during the public comment period it is being represented for consideration. Changes are noted in **bold**. Following diagnosis and treatment of malignant tumors, regular patient follow-up is essential. This is consequent to known risks of tumor recurrences, risk of metastasis of select tumors, and the enhanced probability of generating additional primary cutaneous cancers following an initial diagnosis.

Consequent to these known risks, the National Comprehensive Cancer Network (NCCN) guidelines recommend continued lifetime surveillance following a diagnosis of malignant neoplasm, with follow-up intervals guided by the type(s) of treated tumors. In relation to skin cancers, the American Academy of Dermatology/Association (AAD/A) published Guidelines of Care stipulating continued evaluations for new primary skin cancers on at least an annual basis following a diagnosis of squamous cell or basal cell carcinoma.

Based on the current coding guidelines, Section I.C.21.8 for Factors influencing health status and contact with health services follow-up codes are used to explain continuing surveillance following completed treatment of a disease, condition, or injury. They imply that the condition has been fully treated and no longer exists. They should not be confused with aftercare codes, or injury codes with a 7th character for subsequent encounter, that explain ongoing care of a healing condition or its sequelae. Follow-up codes may be used in conjunction with history codes to provide the full picture of the healed condition and its treatment. The follow-up code is sequenced first, followed by the history code.

However, should a condition be found to have recurred on the follow-up visit, then an active malignant neoplasm diagnosis code should be used in place of the follow-up code because the patient now defaults back into active treatment of the malignant condition.

The AAD/A believes that not having a full range of codes to capture follow-up encounters of completed treatment modalities hamper the ability for healthcare providers and statisticians to aggregate patient outcomes and efficacy of malignant treatment modalities.

The encounter for follow-up examination after treatment for malignant neoplasm can be reported as long as there is continued surveillance of the patient. Duration on surveillance for individual malignancies should be determined by specialty clinical guidelines. For example, dermatology, patients are followed and surveilled after treatment of malignant lesions for the rest of their life.

The American Academy of Dermatology/Association is requesting to bring over the list of codes from WHO ICD-10 that did not transition to ICD-10-CM for code category Z08 to include follow-up encounters after completed treatment for malignant neoplasms using other treatment modalities, including surgical.

TABULAR MODIFICATIONS

	Z08	Encounter for follow-up examination after completed treatment for malignant neoplasm
Add		Excludes1: Malignant neoplasm (C00 - C96)
New code		Z08.0 Encounter for follow-up examination after surgery for malignant neoplasm
Add		Medical surveillance following completed treatment, surgery only
New code		Z08.1 Encounter for follow-up examination after radiotherapy for malignant neoplasm
Add		Medical surveillance following completed treatment, radiotherapy only
New code		Z08.2 Encounter for follow-up examination after chemotherapy for malignant neoplasm
Add		Medical surveillance following completed treatment, chemotherapy only
New code		Z08.7 Encounter for follow-up examination after combined treatment for malignant neoplasm
Add		Medical surveillance following completed treatment of malignant neoplasm, multiple therapies
Add		Use additional code to identify personal history of medical treatment (Z92)
New code		Z08.8 Encounter for follow-up examination after other treatment for malignant neoplasm
Add		Medical surveillance following completed treatment, hormone therapy
Add		Medical surveillance following completed treatment, immunotherapy
Add		Medical surveillance following completed treatment, targeted therapy
Add		Use additional code to identify personal history of medical treatment (Z92)
New code		Z08.9 Encounter for follow-up examination after unspecified treatment for malignant neoplasm

Encounter for Observation for Suspected Newborn Problem

The American Academy of Pediatrics (AAP) respectfully submits the following code proposal for observation and evaluation of a newborn who presents with a physiological monitoring device concern, however, is found to not have a medical issue.

This request is in response to comments received and mirrors the proposal Z03.83, Encounter for observation for suspected conditions related to home physiologic monitoring device ruled out which was presented and supported at the September 2021 ICD10 Coordination and Maintenance (C&M) meeting.

Almost all of the babies diagnosed with apnea while inpatient will be discharged with a home monitor, e.g., apnea/bradycardia monitor. Unfortunately, the sensitivity of these monitors may cause false positive alarms that result in the child's family to seek medical services.

As many of these babies will go home with monitoring devices after discharge from the hospital, it is also important to be able to identify encounters, often times in the acute care setting, when the parent presents with a newborn/infant after their home monitoring device goes off indicating a problem.

These devices may vary, but typically detect apnea and bradycardia. After exam and review of the data, it is then discovered that there is nothing wrong with the baby. At that time there is no diagnosis to be made other than this was an observation after the home physiologic monitoring device went off, with no clinical findings.

TABULAR MODIFICATIONS

Z05 Encounter for observation and evaluation of newborn for suspected diseases and conditions ruled out

This category is to be used for newborns, within the neonatal period (the first 28 days of life), who are suspected of having an abnormal condition, but without signs or symptoms, and which, after examination and observation, is ruled out.

New subcategory Z05.8 Observation and evaluation of newborn for other specified suspected condition ruled out

New code Z05.81 Observation and evaluation of newborn for suspected

condition related to home physiologic monitoring device ruled out

device ruled out

Add Encounter for observation for apnea alarm without findings

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Add		Encounter for observation for bradycardia alarm without findings
Add		Encounter for observation for malfunction of home cardiorespiratory monitor
Add		Encounter for observation for non-specific findings home physiologic monitoring device
Add		Encounter for observation for pulse oximeter alarm without findings
Add		Excludes1: neonatal bradycardia (P29.12)
Add		other newborn apnea (P28.4-)
Add		primary asleep apnea of newborn (P28.3-)
New code	Z05.89	Observation and evaluation of newborn for other specified suspected condition ruled out

Extraocular Muscle Entrapment

The National Center for Health Statistics (NCHS) received a proposal requesting the creation of ICD-10-CM codes for extraocular muscle entrapment for coding specificity and research. This is a re-presentation from the September 2021 ICD10 Coordination and Maintenance (C&M) meeting; edits are based on public comments and are **bolded**.

Extraocular muscle entrapment in a nondisplaced orbital fracture, although a well-known entity in pediatric trauma, is atypical in adults. It can present with a triad of bradycardia, nausea, and in rare cases, syncope, and result in severe fibrosis of damaged and incarcerated muscle.¹

An article published by AO Surgery Reference states, "The inferior rectus muscle is the most common ocular muscle to become entrapped with an orbital floor fracture (trap-door phenomenon) and this may not be visible on conventional x-rays. Entrapment requires urgent freeing of the muscle to prevent necrosis of the incarcerated muscle. Clinical examination should give evidence on impaired ocular muscle function. Entrapment is often associated with severe ocular pain on attempted range of motion, as well as nausea and vomiting, especially in children".²

The American Academy of Ophthalmology (AAO) and American Association of Oral and Maxillofacial Surgeons (AAOMS) supports this proposal.

References

- 1. Grant, M. P., Mahoney, N. R., & Merali, F. I. (2015, 06 19). Orbital Floor Fracture with Atypical Extraocular Muscle Entrapment Pattern and Intraoperative Asystole in an Adult. Retrieved from Craniomaxillofac Trauma Reconstruction: https://journals.sagepub.com/doi/10.1055/s-0035-1556052
- 2. Cornelius, C.-P., Gellrich, N., Hillerup, S., Kusumoto, K., & Schubert, W. (n.d.). Emergency treatment. Retrieved from Surgery Reference: https://surgeryreference.aofoundation.org/cmf/trauma/midface/further-reading/emergency-treatment#

TABULAR MODIFICATIONS

H50	Other strabismus		
	H50.6 Mechanic	al strabism	us
New subcategory	H50.62	Inferior oblique muscle entrapment	
New code		H50.621	Inferior oblique muscle entrapment, right
			eye
New code		H50.622	Inferior oblique muscle entrapment, left eye
New code		H50.629	Inferior oblique muscle entrapment, unspecified eye
New sub-subcategory	H50.63	Inferior rectus muscle entrapment	
New code		H50.631	Inferior rectus muscle entrapment, right eye
New code		H50.632	Inferior rectus muscle entrapment, left eye

New code		H50.639	Inferior rectus muscle entrapment, unspecified eye
New sub-subcategory New code New code New code	H50.64	Lateral red H50.641 H50.642 H50.649	Lateral rectus muscle entrapment, right eye Lateral rectus muscle entrapment, left eye Lateral rectus muscle entrapment, unspecified eye
New sub-subcategory New code New code New code	H50.65	Medial rec H50.651 H50.652 H50.659	Medial rectus muscle entrapment, right eye Medial rectus muscle entrapment, left eye Medial rectus muscle entrapment, unspecified eye
New sub-subcategory New code New code New code	Н50.66	Superior o H50.661 H50.662 H50.669	Superior oblique muscle entrapment, right eye Superior oblique muscle entrapment, left eye Superior oblique muscle entrapment, left eye Superior oblique muscle entrapment, unspecified eye
New sub-subcategory New code New code New code	H50.67	Superior re H50.671 H50.672 H50.679	ectus muscle entrapment Superior rectus muscle entrapment, right eye Superior rectus muscle entrapment, left eye Superior rectus muscle entrapment, unspecified eye
New sub-subcategory New code	H50.68	Extraocular muscle entrapment H50.681 Extraocular muscle entrapment	
New Code		1130.001	unspecified, right eye
New code		H50.682	Extraocular muscle entrapment unspecified, left eye
New code		H50.689	Unspecified extraocular muscle entrapment, unspecified eye

Foreign Body Sensation

The National Center for Health Statistics (NCHS) received a request to create ICD-10-CM codes for foreign body sensation of the throat. This is a re-presentation from the September 2021 ICD10 Coordination and Maintenance (C&M) meeting; edits are based on public comments and are **bolded.**

Foreign body sensation is the persistent feeling of a lump in the throat or that something is stuck in the throat; patients often describe the sensation as throat fullness. It is usually not painful but described as annoying, it is a common condition.¹

Providers' documentation of foreign body sensation in throat, currently codes to R09.89, Other specified symptoms and signs involving the circulatory and respiratory systems. This is a broad code that includes the following: bruit (arterial), abnormal chest percussion, feeling of foreign body in throat, friction sounds in chest, chest tympany, choking sensation, rales, and weak pulse.

The American Gastroenterological Association (AGA) and American Academy of Ophthalmology (AAO) supports this proposal.

References

Foreign Body Sensation. (n.d.). Retrieved from San Diego ENT: https://sandiegoent.com/throat/voice-swallowing/foreign-body-sensation/

TABULAR MODIFICATIONS

H57 Other disorders of eye and adnexa H57.8 Other specified disorders of eye and adnexa

New subcategory	H57.8A	Foreign body sensation eye (ocular)	
New code		H57.8A1	Foreign body sensation, right eye
New code		H57.8A2	Foreign body sensation, left eye
New code		H57.8A3	Foreign body sensation, bilateral eyes
New code		H57.8A9	Foreign body sensation, unspecified eye

R09 Other symptoms and signs involving the circulatory and respiratory system

R09.8 Other specified symptoms and signs involving the circulatory and

respiratory systems

R09.89 Other specified symptoms and signs involving the

circulatory and respiratory systems

Add Abnormal chest percussion

Bruit (arterial)

Delete Abnormal chest percussion

Add Chest tympany
Add Choking sensation

Delete Feeling of foreign body in throat

Friction sounds in chest

Delete Chest tympany
Delete Choking sensation

Rales

Weak pulse

New subcategory R09.A Foreign body sensation of the circulatory and respiratory

system

New code R09.A0 Foreign body sensation, unspecified

New code R09.A1 Foreign body sensation, nose

New code R09.A2 Foreign body sensation, throat

Add Foreign body sensation, globus

New code R09.A9 Foreign body sensation, other site

Gadolinium Toxicity

The National Center for Health Statistics NCHS) has received a proposal requesting a unique code with a higher level of specificity for gadolinium toxicity. This will allow for accuracy in reporting gadolinium induced disease and used to track such disease and treatment.

Gadolinium is a heavy metal with paramagnetic properties in the middle of the lanthanides in the F block of the periodic table of elements. Gadolinium has many uses in electronics, medical imaging (as a contrast agent for MRI), phosphor in polymer matrix in x-ray detector, microwave applications, fabrication of various optical components, computer memory, refrigeration and in alloys making magnets and data storage discs.

Gadolinium toxicity has the potential to cause disease in humans, and even in small amounts may be associated with significant morbidity and mortality¹. Gadolinium toxicity can affect many body systems,² including the musculoskeletal, brain, skin, renal and neurologic systems.

This toxicity can manifest itself in various symptoms and effects on the body including but not limited to central nervous system symptoms, including impairment of cognition, memory, impairment of sight, painful tinnitus, and pseudoangioedema. Additional manifestations can include impairment of voice and pharyngeal swallowing mechanisms, cardiac arrythmias, changes in blood pressure, and impaired function of the gastrointestinal tract and urinary system. Symptoms can be mild in some patients, while others develop severe life-threatening illness similar to cytokine storm response ³.

Additional rationale as to why a new code is being requested includes: to ensure gadolinium toxic patients are recognized, diagnosed properly, treated appropriately⁴ and timely in order to prevent progressive disease and damages in the human body that is caused by gadolinium toxicity.

References:

¹.Semelka RC, Commander CW, Jay M, Burke LM, Ramalho M. Presumed Gadolinium Toxicity in Subjects With Normal Renal Function: A Report of 4 Cases. Invest Radiol. 2016 Oct;51(10):661-5. https://doi.org/10.1097/RLI.00000000000000318. PMID: 27548344.

². Denmark, D.; Ruhoy, I.; Wittmann, B.; Ashki,H.; Koran, L.M. Altered Plasma Mitochondrial Metabolites in Persistently Symptomatic Individuals after a GBCA-Assisted MRI.Toxics 2022, 10, 56. https://doi.org/10.3390/toxics10020056

³ Maecker HT, Wang W, Rosenberg-Hasson Y, Semelka RC, Hickey J, Koran LM. An initial investigation of serum cytokine levels in patients with gadolinium retention. Radiol Bras 2020 Set/Out;53(5):306–313. https://doi.org/10.1590/0100-3984.2019.0075

⁴. Semelka RC, Castro Pereira JF, Ramalho M. Severity of Flare Reactions in Diethylenetriamine Pentaacetate Chelations: Report on Different Immune Dampening Strategies in Clinical Practice. Invest Radiol. 2021 Dec 21.

doi: 10.1097/RLI.000000000000841. Epub ahead of print. PMID: 34935653 https://doi.org/10.1097/RLI.00000000000000841

TABULAR MODIFICATIONS

T56 Toxic effect of metals

Includes: toxic effects of fumes and vapors of metals

toxic effects of metals from all sources, except medicinal

substances

Use additional code to identify any retained metal foreign body, if

applicable (Z18.0-, T18.1-)

Excludes1: arsenic and its compounds (T57.0)

manganese and its compounds (T57.2)

The appropriate 7th character is to be added to each code from category

T56

A initial encounter

D subsequent encounter

S sequela

T56.8 Toxic effects of other metals

New subcategory	T56.82 Toxic effect of gadolinium		
New code	T56.821	Toxic effect of gadolinium, accidental (unintentional)	
		Toxic effect of gadolinium NOS	
New code	T56.822	Toxic effect of gadolinium, intentional self-harm	
New code	T56.823	Toxic effect of gadolinium, assault	
New code	T56.824	Toxic effect of gadolinium, undetermined	

Immunoglobulin G4-Related Disease

Immunoglobulin G4-Related Disease (IgG4-RD) is a recently characterized, rare, multifocal disease of unknown origin. It is considered a chronic, relapsing-remitting, immune-mediated fibroinflammatory disorder that if not diagnosed and left untreated can lead to impaired organ function. IgG4-RD is not associated with pain and may be asymptomatic, which can lead to intensified disease progression before it is identified by specialty physicians.

Over the past two decades, research has helped identify patients with this disease and distinctly classify them to alleviate confounding features that resemble other immune-mediated or malignancy-related conditions with similar initial characteristics. Despite these classification efforts, the complicated clinical diagnosis and nature of disease manifestation in multiple organs (e.g., lung, kidney, pancreas) present barriers to accurate classification, diagnosis, and treatment of the condition. This challenge may lead to an underappreciation of the disease by many physicians and indirectly contributes to unfavorable patient outcomes as a result. In general, IgG4-RD tends to possess the following characteristics in the majority of cases:²

- Tumefactive lesions (causing swelling)
- Dense lymphoplasmacytic infiltrate
- IgG4-positive plasma cells present in large numbers in tissues
- Storiform fibrosis (distinctive histopathological feature)
- Elevated serum IgG4 concentrations

Underappreciation, coupled with mis- or under-diagnosis, has hindered accurate estimates of the incidence and prevalence of IgG4-RD.³ There have been no studies to assess the prevalence of IgG4-RD in the US, but studies performed in other countries lead to current estimates of its prevalence in the US at around 30,000.^{4,5} Although data are not robust, there is a tendency for higher incidence in older male adults (61%) with an average age of onset of 58.8 years,^{3,4} but women and children can also manifest hallmark IgG4-RD, with some data demonstrating particular localizations in those populations.³

As many as 85% of patients with IgG4-RD have active disease at the time of diagnosis. Pancreatic involvement is present in about 20-25% of IgG4-RD cases, making it the most common manifestation. In rare pediatric cases, periorbital IgG4-RD is more common and has been seen in as many as 44% of studied cases in that population.⁶

While there are no diagnostic biomarkers for IgG4-RD, there are themes to show how clinical presentation may occur and what markers are most predictive of accurate diagnosis. For example, serum IgG4 levels predict disease in most cases,² but can be elevated independent of the disease, making it helpful but not definitive.

A global steering committee organized by The American College of Rheumatology (ACR) and The European Alliance of Associations for Rheumatology (EULAR) have identified, weighted, and tested potential classification criteria for IgG4-RD, beginning in 2011 and most recently in 2019.⁷ This effort is a consensus-driven source for IgG4-RD identification and diagnostic work

up procedures. Despite the ACR and EULAR guidelines, as well established clinical nomenclature⁸, diagnosis and treatment of IgG4-RD remains low.

Although time to diagnosis can often be months to years due to difficulty with early detection, time to treatment after a clinical diagnosis can be shorter. Clinical management of IgG4-RD is varied, and detection can be delayed. The root causes for this are driven by the multi-factorial nature of the disease. The diagnosis of IgG4-RD is made by many specialists including neurologists, gastroenterologists, pulmonologists, and rheumatologists who recognize various characteristics of the disease. patients who are not able to receive the proper diagnosis and treatment face the loss of function of critical organs like the pancreas, kidney, and liver.

Patients with IgG4-RD are generally responsive to treatment with glucocorticoids. Earlier diagnosis has vast potential to alleviate burden of this disease, to the benefit of both patients and the healthcare system. Clinical testing has also shown utility of rituximab for treatment, which maybe allow less glucocorticoid use (and avoid potential for side effects from glucocorticoids). ^{9,10} Limited clinical studies are underway to test other compounds.

A specific code for IgG4-RD has been requested by John H. Stone, MD, MPH; Division of Rheumatology, Allergy and Immunology; Massachusetts General Hospital; Boston, MA. A new ICD-10-CM code for IgG4-RD would enhance the epidemiological capabilities and evidence generation for the nature of the disease, and aid in unifying healthcare provider specialties on the same disease and shorten the time-to-diagnosis and treatment, thereby improving patient outcomes. It will lead to improved access to care, tracking, and disease management efforts. To reiterate, IgG4-RD is particularly amenable to treatment, so the potential to alleviate burden from both a patient and health care system perspective can be realized with a distinction that IgG4-RD is unique and can be affirmatively diagnosed as a stand-alone disease.

References

- Wolfson AR, Hamilos DL. Recent advances in understanding and managing IgG4-related disease [version 1; peer review: 4 approved]. F1000Research 2017; 6 (F1000 Faculty Rev):185. https://f1000research.com/articles/6-185/v1
- 2. Wallace ZS et al. The 2019 American College of Rheumatology/European League against Rheumatism Classification Criteria for IgG4-Related Disease. *ACR* 2020; 72: 7-19. https://www.rheumatology.org/Portals/0/Files/Classification-Criteria-IgG4-Related-Disease.pdf
- 3. Khalili OM. IgG-4 Related Disease: An Introduction. *Mo Med* 2018; 115: 253-256 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6140155/
- 4. Uchida K, Masamune A, Shimosegawa T, Okazaki K. Prevalence of IgG4-Related Disease in Japan. *Int J Rheumatol* 2012; 2012: 35871 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3415093/
- 5. Umehara et al. Comprehensive diagnostic criteria for IgG4-related disease (IgG4-RD), 2011. *Mod Rheumatol* 2012; 22(1): 21-30 https://pubmed.ncbi.nlm.nih.gov/22218969/
- 6. Salvadori M, Tsalouchos A. Immunoglobulin G4-related kidney diseases: An updated review. *World J Nephrol* 2018; 7:29-40. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5760510/
- 7. Stone JH et al. IgG4-Related Disease: Recommendations for the Nomenclature of this Condition and its Individual Organ System Manifestations. *Arthritis Rheum* 2012; 64: 3061- 67 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5963880/
- 8. Della-Torre E, Stone JH. "How I Manage" IgG4-Related Disease. *J Clin Immunology* 2016; 36: 754-763 https://pubmed.ncbi.nlm.nih.gov/27667138/

- 9. Khosroshahi A et al. International Consensus Guidance Statement on the Management and Treatment of IgG4-Related Disease. Arthritis Rheumatol 67(7): 1688-1699. https://doi.org/10.1002/art.39132
- 10. Deshpande V et al. Consensus Statement on The Pathology of IgG4- Related Disease. *Mod Pathol* 2021; 25:1181-92. https://pubmed.ncbi.nlm.nih.gov/22596100/

TABULAR MODIFICATIONS

D89 Other disorders involving the immune mechanism, not elsewhere classified

D89.8 Other specified disorders involving the immune mechanism, not elsewhere classified

New code D89.84 IgG4-related disease

Add Immunoglobulin G4-related disease

Add Excludes2: chronic pancreatitis (K86.1)

Impairing Emotional Outbursts

A significant number of children and adolescents present to outpatient departments, emergency rooms, and inpatient units and/or are suspended from school because they respond to relatively ordinary frustrations and disappointments with volcanic anger or distress. Such impairing emotional outbursts occur in the context of a number of different mental disorders (e.g., attention-deficit/hyperactivity disorder, autism spectrum disorder, oppositional defiant disorder, generalized anxiety disorder, posttraumatic stress disorder, mood and psychotic disorders) and are often the reason for families seeking treatment.

For example, in a study of 107 outpatients (ages 7-17) with anxiety disorders, 55.1% had rage episodes in the prior week, with 7.5% having daily rages (Johnco et al., 2015). In another study of 462 patients (ages 3-25) from the Interactive Autism Network, 24% of patients ages 3-11 and 28% of patients ages 12-25 had severe tantrums that lead to crisis (Vasa et al., 2020). Impairing emotional outbursts can also occur independent of other conditions, as is often the case in young children. For example, in a community sample of preschoolers obtained from the waiting rooms of 5 large pediatric practices, pathological tantrums were found in 8.6% of the sample and a suburban community sample of 6 year-olds found that 11.0% had "severe tantrums," lasting at least 15 minutes at least three times a week (Carlson et al., 2016; Wakschlag et al., 2012).

To facilitate appropriate care for such children and adolescents, it is necessary to identify them reliably and communicate the nature of their problems with caregivers and other professionals. The availability of a symptom code for impairing emotional outbursts will facilitate the identification of outbursts as a focus for care, alongside the other conditions for which the child is being treated. Finally, through the collection of research and medical records data over time, the inclusion of such a symptom code will allow for improvements in the understanding, assessment, and treatment of impairing emotional outbursts in youth.

Because of its clinical significance, the American Psychiatric Association is planning to add impairing emotional outbursts to the 5th edition of the *Diagnostic and Statistical Manual of Mental Disorders* as one of the Other Conditions That May Be a Focus of Attention. Impairing Emotional Outbursts will be defined as follows: "*Displays of anger or distress manifested verbally (e.g., verbal rages, uncontrolled crying) and/or behaviorally (e.g., physical aggression toward people, property, or self) that lead to significant functional impairment."*

In ICD-10-CM, there is currently no symptom code for noting such outbursts. The American Psychiatric Association is proposing a new code to capture this behavior.

References

Carlson GA, Danzig AP, Dougherty LR, et al. Loss of temper and irritability: The relationship to tantrums in a community and clinical sample. J Child Adolesc Psychopharmacol. 2016;26:114–122.

Johnco C, Salloum A, De Nadai AS, et al. Incidence, clinical correlates and treatment effect of rage in anxious children. Psychiatry Res 2015;30:63–69.

Wakschlag LS, Choi SW, Carter AS, Hullsiek H, Burns J, McCarthy K, Leibenluft E, Briggs-Gowan MJ. Defining the developmental parameters of temper loss in early childhood: implications for developmental psychopathology. J Child Psychol Psychiatry. 2012 Nov;53(11):1099-108.

Vasa RA, Hagopian L, Kalb LG. Investigating mental health crisis in youth with autism spectrum disorder. Autism Research 13:112-121, 2020.

TABULAR MODIFICATIONS

R45 Symptoms and signs involving emotional state

R45.8 Other symptoms and signs involving emotional state

New code R45.8A Impairing emotional outbursts

Inappropriate Sinus Tachycardia

Inappropriate sinus tachycardia (IST) is defined as a sinus heart rate >100 bpm at rest (with a mean 24-hour heart rate >90 bpm not due to primary causes) and is associated with distressing symptoms of palpitations.

The prevalence of IST was estimated in a middle-aged population of people with and without hypertension. Using a definition of a resting heart rate >100 bpm and an average heart rate of >90 bpm on 24-hour Holter monitoring, the IST prevalence was 1.2% (7 of 604 patients), including both symptomatic and asymptomatic patients.²

The mechanisms leading to IST are not completely understood, but there are several underlying diseases that can result in this syndrome, including increased sinus node automaticity, beta-adrenergic hypersensitivity, decreased parasympathetic activity, and impaired neurohumoral modulation. β -Adrenergic receptor antibodies can sensitize β - adrenergic receptors in some patients, while other patients might have increased sympathetic activity and sensitivity, with or without inherent impaired sinus node automaticity.

The National Center for Health Statistics (NCHS) received a request to create an ICD-10-CM code for inappropriate sinus tachycardia for coding specificity to accurately track cases, allowing for etiology related research, patient segmentation, and therapeutic selection.

References

¹Aino-Maija Still, Pekka Raatikainen, Antti Ylitalo, Heikki Kauma, Markku Ikäheimo, Y. Antero Kesäniemi, Heikki V. Huikuri, Prevalence, characteristics and natural course of inappropriate sinus tachycardia, EP Europace, Volume 7, Issue 2, 2005, Pages 104-112, https://doi.org/10.1016/j.eupc.2004.12.007

²2015 Heart Rhythm Society Expert Consensus Statement on the Diagnosis and Treatment of Postural Tachycardia Syndrome, Inappropriate Sinus Tachycardia, and Vasovagal Syncope, https://doi.org/10.1016/J.HRTHM.2015.03.029, Published: 2015-06

TABULAR MODIFICATIONS

I47 Paroxysmal tachycardia

	I47.1	Supraventricular tachycardia
Delete		Atrial (paroxysmal) tachycardia
Delete		Atrioventricular [AV] (paroxysmal) tachycardia
Delete		Atrioventricular re-entrant (nodal) tachycardia [AVNRT] [AVRT]
Delete		Junctional (paroxysmal) tachycardia
Delete		Nodal (paroxysmal) tachycardia

New code	I47.10	Supraventricular tachycardia, unspecified
New code	I47.11	Inappropriate sinus tachycardia
New code Add Add Add	I47.19	Other supraventricular tachycardia Atrial (paroxysmal) tachycardia Atrioventricular [AV] (paroxysmal) tachycardia Atrioventricular re-entrant (nodal) tachycardia [AVNRT] [AVRT]
Add		Junctional (paroxysmal) tachycardia
Add		Nodal (paroxysmal) tachycardia

Insulin Resistant Syndrome

The National Center for Health Statistics (NCHS) received a request to create ICD-10-CM codes for Type A and Type B insulin resistance-syndrome for coding specificity. This is a representation from the September 2021 ICD10 Coordination and Maintenance (C&M) meeting; edits are based on public comments and are **bolded**.

The National Institute of Health (NIH) defines metabolic syndrome as the presence of at least 3 of the following traits (including the ones that are controlled by medication): large waist, elevated triglyceride level, reduced HDL cholesterol, increased blood pressure and elevated fasting blood glucose. Other names for metabolic syndrome are: Dysmetabolic syndrome, Hypertriglyceridemic waist, Insulin resistance syndrome, Obesity syndrome or Syndrome X.

The National Heart, Lung and Blood Institute states the following: Insulin resistance also may increase your risk for metabolic syndrome. Insulin resistance is a condition in which the body cannot use its insulin properly. Insulin is a hormone that helps move blood sugar into cells where it is used for energy. Insulin resistance can lead to high blood sugar levels, and it is intricately linked to overweight and obesity. Genetics and aging may also contribute to the development of this syndrome.

Type A **and B** insulin-resistance syndrome belongs to the group of extreme insulin-resistance syndromes (which includes leprechaunism, the lipodystrophies, Rabson-Mendenhall syndrome) (characterized by the triad of hyperinsulinemia, acanthosis nigricans (skin lesions associated with insulin resistance), and signs of hyperandrogenism in females without lipodystrophy and who are not overweight.¹

The Office of Genomics Precision Public Health and American College of Medical Genetics and Genomics have reviewed and support the proposal.

References

1. Orphanet: Insulin resistance syndrome type A. INSERM US14 -- ALL RIGHTS RESERVED https://www.orpha.net/consor/cgi-bin/OC Exp.php?Expert=2297

TABULAR MODIFICATIONS

E88 Other and unspecified metabolic disorders
Use additional codes for associated conditions
Excludes1: histocytosis X (chronic) (C96.6)

E88.8 Other specified metabolic disorders
E88.81 Metabolic syndrome and other insulin resistance

Dysmetabolic syndrome X

Revise Delete

Use additional codes for associated manifestations, such as: obesity (E66.-)

New code Add	E88.810	Metabolic syndrome Dysmetabolic syndrome X
New code	E88.811	Insulin resistance syndrome, Type A
New code Add	E88.818	Other insulin resistance Insulin resistance Type B
New code	E88.819	Insulin resistance, unspecified

Intestinal Failure-Associated Liver Disease

Intestinal failure is the inability to consume and absorb sufficient nutrition and fluid in order to maintain nutritional autonomy (Pironi et al. 2015). This serious disease is highly complex and require multidisciplinary management teams. Some patients develop complications and require intestinal transplantation. Upwards of 25-60% of these patients may develop liver disease, which may be reversible, or irreversible. If irreversible, death results in the absence of intestinal or intestine/liver transplantation. The disease intestinal failure-associated liver disease (IFALD) has been misclassified by clinicians as a form of non-alcoholic fatty liver disease (NAFLD), including non-alcoholic steatohepatitis (NASH), when in fact, the pathophysiology, biology, histology and prognosis are very distinct. IFALD is not NAFLD/NASH and is in fact, a different disease entity. (Buchman, 2017) IFALD is the leading indication for intestinal transplantation, (Buchman, 2021) yet it does not currently have a disease code.

IFALD, which occurs in patients dependent on parental nutrition support, is characterized by hepatic steatosis, cholestasis, fibrosis and rapid progression of liver disease through to hepatic failure and death in the absence of intestine-liver transplant. IFALD carries a relatively poor prognosis, with a 15–34% death rate within 1–4 years (Chan et al., 1999; Cavicchi et al., 2000). When IFALD presents with symptoms of liver disease in children, mortality is even higher (23–40%) (Willis et al., 2010; Pichler et al., 2012). The prevalence of IFALD in patients dependent upon PN increases as the number of years receiving PN increases, with up to 72% of patients presenting with IFALD after 6 years of chronic dependence on PN (Cavicchi et al., 2000).

In considering IFALD as a disease entity, it is important to note that IFALD is a distinct disease from nonalcoholic fatty liver disease (NAFLD) and nonalcoholic steatohepatitis (NASH), as salient medical characteristics, etiology, pathophysiology, epidemiology, and progression differ substantially between IFALD and these diseases (Buchman et al., 2017).

Histologically, both IFALD and NAFLD/NASH patients exhibit hepatic steatosis; however, patients with IFALD often exhibit an uncommon but characteristic subtype of steatosis, namely, a combination of both macro- and micro-vesicular steatosis (Cavicchi et al., 2000) and a low rate of steatohepatitis. A majority of IFALD patients exhibit microvesicular steatosis, in which small intracytoplasmic fat vacuoles (liposomes) accumulate and are diffusely dispersed throughout the cytoplasm in hepatic cells (Buchman et al., 2017). In contrast, microvesicular steatosis is not a common histological finding of NAFLD/NASH, which are commonly associated with macrovesicular steatosis. IFALD and NAFLD/NASH are described more fully as separate diseases in the published literature (Buchman et al., 2017).

Alan Buchman, MD, Professor of Clinical Surgery and Medical Director, Intestinal Rehabilitation and Transplant Center, University of Illinois at Chicago, is proposing the following tabular modifications for better tracking of these patients. The American Gastroenterologist Association (AGA) has reviewed and supports this proposal.

References:

Buchman AL, Naini BV, Spilker B. The differentiation of intestinal failure-associated liver disease from nonalcoholic fatty liver and nonalcoholic steatohepatitis. Semin Liver Dis 2017; 37:33-44.

Buchman AL. Short Bowel Syndrome In: Feldman M, Friedman LS, Brandt LJ, et al. Sleisenger and Fortran's Gastrointestinal and Liver Disease, 11th ed. Pp 1720-1735, 2021.

Cavicchi N, Beau P, Crenn P, et al. Prevalence of liver disease and contributing factors in patients receiving home parenteral nutrition for permanent intestinal failure. Ann Intern Med 2000; 132:525-532.

Chan, S., McCowen, K.C., Bistrian, B.R., Thibault, A., Keane-Ellison, M., Forse, R.A., Babineau, T., and Burke, P. (1999). Incidence, prognosis, and etiology of end-stage liver disease in patients receiving home total parenteral nutrition. Surgery 126, 28-34.

Lacaille F, Gupte G, Colomb, et al. Intestinal failure-associated liver disease: a position paper of the ESPGHAN working group of intestinal failure and intestinal transplantation. JPGN 2015; 60:272-83.

Lal S, Pironi L, Wanten G, et al. Clinical approach to the management of intestinal failure associated liver disease (IFALD) in adults: a position paper from the home artificial nutrition and chronic intestinal failure special interest group of ESPEN. Clin Nutr 2018; 37:8-11

Pichler, J., Horn, V., Macdonald, S., and Hill, S. (2012). Intestinal failure-associated liver disease in hospitalised children. Arch. Dis. Child 97, 211-214.

Pironi L, Arends J, Baxter J, et al. Home Artificial Nutrition & Chronic Intestinal Failure; Acute Intestinal Failure Special Interest Groups of ESPEN. ESPEN endorsed recommendations. Definition and classification of intestinal failure in adults. Clin Nutr. 2015;34:171-80.

Willis, T.C., Carter, B.A., Rogers, S.P., Hawthorne, K.M., Hicks, P.D., and Abrams, S.A. (2010). High rates of mortality and morbidity occur in infants with parenteral nutrition-associated cholestasis. JPEN. Journal of parenteral and enteral nutrition 34, 32-37.

TABULAR MODIFICATIONS

K76 Other diseases of liver

K76.8 Other specified diseases of liver

New code K76.83 Intestinal failure-associated liver disease

Lafora Body Disease

Lafora Body Disease, or Lafora progressive myoclonus epilepsy, is a neurodegenerative condition caused by a glycogen metabolism disorder that results in the accumulation of abnormal glycogen aggregates called Lafora Bodies in the brain, heart, and liver. This accumulation of Lafora Bodies causes the progressive degeneration of the nervous system resulting in generalized tonic-clonic seizures, occipital seizures, myoclonic seizures, tonic, absence and atonic seizures. In addition to the progression of seizures, patients with Lafora Disease also experience a rapid cognitive decline and gross and fine motor regression. Other symptoms of Lafora Disease include behavioral changes such as depression and confusion, and physical symptoms such as "ataxia (difficulty controlling muscles), difficulty walking, difficulty eating, dysarthria (difficulty speaking), and childhood dementia." ¹ Children are born with the Lafora bodies but typically do not begin showing symptoms until late childhood or adolescence. There is no treatment for Lafora, and therapy is primarily palliative and focused on reducing seizures. Life expectancy extends 10 years after the onset of symptoms, which is generally around the mid-twenties. ¹

Lafora Disease is typically caused by a mutation in the EPM2A or EMP2B (NHLRC1) gene, both of which are responsible for Laforin and Malin regulation. ¹ The EMP2A gene belongs to a family of genes that provide instructions for making a protein called Laforin, which plays a vital role in maintaining neurons in the brain. ² Laforin has various functions within the cell, and it must interact with other proteins to carry out these functions, such as Malin which is produced by the EMP2B gene. The EMP2B (NHLRC1) gene belongs to a family of genes that provide "instructions for making a protein called Malin. ⁶ Although this protein is active in cells throughout the body, it appears to play a critical role in the survival of nerve cells (neurons) in the brain. ² Malin helps break down unwanted proteins within cells and helps to tag damaged and excess proteins which aids in the degradation of these proteins. Malin targets several proteins such as Laforin which is produced by the EPM2A gene. Both Laforin and Malin control the way cells store glycogen, which is a form of sugar; and a mutation of either EMP2A or EMP2B results in a toxic buildup of unbranched, long chain glycogen molecules that accumulate in cells in the form of polyglucason bodies or Lafora bodies. The EMP2A and EMP2B genes are inherited, with Lafora body disease having autosomal recessive inheritance. ¹⁻⁶

Lafora disease has a prevalence of about four cases per one million persons.⁴ It has been found that there is a "higher incidence of the disease in children of Middle Eastern, Southern European (Spain, France and Italy), South Asian (India and Pakistan) and North African descent. The disease appears to affect males and females equally." ¹ It is estimated that the number is higher due to mis-and undiagnosed cases in undeveloped countries.⁴

The Lafora Cure Initiative (LECI) has four independent platforms working towards future treatments in Antisense Oligonucleotides, Antibody Enzyme Fusion, Small Molecules, and Gene Therapy. Through LECI, the Fundación Jiménez Díaz Hospital in Madrid, Spain has also established the Lafora Disease Registry which holds all patient data for future clinical trials.

There is currently no specific ICD-10-CM code for Lafora Disease. While it is now recognized to involve a disorder of carbohydrate metabolism, it has been classified with the generalized

idiopathic epilepsies (although it is no longer idiopathic). Chelsea's Hope Lafora Children Research's Fund has requested the creation of a specific ICD-10-CM code for Lafora Disease. A specific and unique code will be beneficial in more accurately capturing and tracking prevalence, enhancing research efforts, and aiding in proper diagnosis, treatment, and services for patients. Related neurodegenerative, childhood dementia, neurological and cognitive issues should also be coded.

It is proposed to create codes for Lafora progressive myoclonus epilepsy, and an inclusion term for Lafora body disease, as a new expansion at G40, Epilepsy and recurrent seizures. Clinically, Lafora progressive myoclonus epilepsy may be associated with seizures that can be intractable and can involve status epilepticus.

References

- 1. About Lafora Disease | Chelsea's Hope Lafora Research. (n.d.). Available from https://chelseashope.org/overview-of-lafora/
- 2. EPM2A gene: MedlinePlus Genetics. (n.d.). Available from https://medlineplus.gov/genetics/gene/epm2a/
- 3. Gentry, M. S., Guinovart, J. J., Minassian, B. A., Roach, P. J., & Serratosa, J. M. (2018). Lafora disease offers a unique window into neuronal glycogen metabolism. The Journal of Biological Chemistry, 293(19), 7117-7125. https://doi.org/10.1074/jbc.R117.803064
- 4. Ibrahim, F., & Murr, N. (2021). Lafora Disease. In StatPearls. StatPearls Publishing. http://www.ncbi.nlm.nih.gov/books/NBK482229/
- 5. Jansen, A. C., & Andermann, E. (1993). Progressive Myoclonus Epilepsy, Lafora Type. In M. P. Adam, H. H. Ardinger, R. A. Pagon, S. E. Wallace, L. J. Bean, G. Mirzaa, & A. Amemiya (Eds.), GeneReviews®. University of Washington, Seattle. http://www.ncbi.nlm.nih.gov/books/NBK1389/
- 6. NHLRC1 gene: MedlinePlus Genetics. (n.d.). Available from https://medlineplus.gov/genetics/gene/nhlrc1/
- 7. Scientists at IRB Barcelona discover the cause of neurodegeneration in Lafora disease. (n.d.). IRB Barcelona. Available from https://www.irbbarcelona.org/en/news/scientists-at-irb-barcelona-discover-the-cause-ofneurodegeneration-in-lafora-disease

TABULAR MODIFICATIONS

Epilepsy and recurrent seizures G40

New

subcategory G40.C Lafora progressive myoclonus epilepsy

Lafora body disease Add

Add Code also, if applicable, associated conditions such as dementia

(F02.8-)

New

sub-subcategory G40.C0 Lafora progressive myoclonus epilepsy, not intractable

New code G40.C01 Lafora progressive myoclonus epilepsy, not intractable, with status epilepticus

New code

Secondary G40.C09 Lafora progressive myoclonus epilepsy, not intractable, without status epilepticus

New sub-subcategory G40.C1 Lafora progressive myoclonus epilepsy, intractable

New code G40.C11 Lafora progressive myoclonus epilepsy, intractable, with status epilepticus

New code G40.C19 Lafora progressive myoclonus epilepsy,

intractable, without status epilepticus

Leukodystrophies

Leukodystrophies, or more specifically inherited leukodystrophies, are a group of diseases affecting the white matter of the brain, that cause significant morbidities and death in 1 of 3 patients by age 8 years. The Global Leukodystrophy Alliance (GLIA), an NIH-funded consortium composed of clinicians, scientists, patients, and patient advocacy groups, is requesting new ICD-10-CM codes for 31 separate and genetically distinct leukodystrophy diseases. NCHS has received letters of support from various professional and patient groups.

Leukodystrophies may present at any age from preterm infants and neonates to late adulthood and have been reported across all ethnicities and regions of the world. Thirty years ago only a few leukodystrophies were recognized as distinct disease entities, but in the past 10 years over 400 genetically unique leukodystrophies have been reported.² Even though most leukodystrophies are individually rare, as a group leukodystrophies affect close to 1 in 4,000 live births.^{3,4} Further, consensus work in the community has defined a group of leukodystrophies with unique genetic causes and well-studied, distinct clinical and pathophysiological features.

Currently there are only specific ICD-10-CM codes for six of the primary leukodystrophies (X-linked Adrenoleukodystrophy, ALD- E71.52x; Metachromatic leukodystrophy, MLD- E75.25; Krabbe disease- E75.23, Refsum's disease- G60.1; Zellweger syndrome- E71.510; and E71.511 Neonatal Adrenoleukodystrophy). Otherwise, many leukodystrophies are indexed under a single ICD-10-CM code E75.29, Other sphingolipidosis.

Prior to ICD-10-CM, there were not specific ICD codes for ALD, MLD, or Krabbe. The advent of specific ICD-10-CM codes for ALD, Krabbe, and MLD enabled clinical trials, newborn screening, and studies of racial disparities.^{6,7}

The leukodystrophies proposed for unique ICD-10-CM codes all have unique genetic causes; distinct clinical courses and morbidities; and have different treatments-either currently available or in clinical trials. For example, VWM has a sputtering clinical course⁸ and has a clinical trial with the α -agonist guanabenz.⁹ In contrast, Canavan's disease has an early rapid progression¹⁰ and potential treatment with antisense oligonucleotides.¹¹

Creation of specific codes for this heterogenous, complex group of disorders known as leukodystrophies is critical for patient care, clinical trials, and research. The diversity in causes should be reflected by a diversity of codes to best represent these disorders. The importance of and difference between these leukodystrophy disorders can be seen in the codes already created for ICD-11. In ICD-11, Leukodystrophy has its own ICD-11 category, there are five new leukodystrophy codes, and there are also fourteen new leukodystrophy indices.

References

1. Bonkowsky JL, Nelson C, Kingston JL, Filloux FM, Mundorff MB, Srivastava R. The burden of inherited leukodystrophies in children. Neurology. 2010;75(8):718–25.

- 2. Urbik VM, Schmiedel M, Soderholm H, Bonkowsky JL. Expanded phenotypic definition identifies hundreds of potential causative genes for leukodystrophies and leukoencephalopathies. Child Neurology Open. 2020;7.
- 3. Schmidt JL, Pizzino A, Nicholl J, Foley A, Wang Y, Rosenfeld JA, et al. Estimating the relative frequency of leukodystrophies and recommendations for carrier screening in the era of next-generation sequencing. American Journal of Medical Genetics Part A. 2020;182(8):1906–12.
- 4. Soderholm HE, Chapin AB, Bayrak-Toydemir P, Bonkowsky JL. Elevated leukodystrophy incidence predicted from genomics databases. Pediatric Neurology. 2020;111:66–9.
- 5. Vanderver A, Prust M, Tonduti D, Mochel F, Hussey HM, Helman G, et al. Case definition and classification of leukodystrophies and leukoencephalopathies. Molecular Genetics and Metabolism. 2015;114(4):494–500.
- 6. Bonkowsky JL, Wilkes J, Bardsley T, Urbik VM, Stoddard G. Association of diagnosis of Leukodystrophy with race and ethnicity among pediatric and Adolescent Patients. JAMA Network Open. 2018;1(7).
- 7. Grineski S, Morales DX, Collins T, Wilkes J, Bonkowsky JL. Geographic and specialty access disparities in US pediatric leukodystrophy diagnosis. The Journal of Pediatrics. 2020;220:193–9.
- 8. Hamilton EM, van der Lei HD, Vermeulen G, Gerver JA, Lourenço CM, Naidu S, et al. Natural history of vanishing white matter. Annals of Neurology. 2018;84(2):274–88.
- 9. A first trial of Guanabenz in vanishing white matter [Internet]. VUmc.com. 2021 [cited 2021Oct22]. Available from: https://www.vumc.com/departments/center-for-children-with-white-matter-disorders/guanabenz-trial-for-vanishing-white-matter-htm
- 10. Bley A, Denecke J, Kohlschütter A, Schön G, Hischke S, Guder P, et al. The natural history of canavan disease: 23 new cases and comparison with patients from literature. Orphanet Journal of Rare Diseases. 2021;16(1).
- 11. Hull V, Wang Y, Burns T, Zhang S, Sternbach S, McDonough J, et al. Antisense oligonucleotide reverses leukodystrophy in Canavan Disease Mice. Annals of Neurology. 2020;87(3):480–5.

TABULAR MODIFICATIONS

D81 Combined Immunodeficiencies
D81.8 Other combined immunodeficiencies

New sub-

subcategory D81.82 Heritable interferonopathies

New code D81.820 Aicardi-Goutières syndrome
New code D81.828 Other heritable interferonopathies

New code D81.829 Heritable interferonopathies, unspecified

E71 Disorders of branched-chain amino-acid metabolism and fatty-acid metabolism

E71.3 Disorders of fatty-acid metabolism

New sub-

subcategory E71.39 Other disorders of fatty-acid metabolism

New code E71.390 Sjögren-Larsson syndrome

New code E71.398 Other disorders of fatty-acid metabolism New code E71.399 Other disorders of fatty-acid metabolism,

unspecified

E71.5 Peroxisomal Disorders

New sub-

subcategory E71.53 Other Group 2 peroxisomal disorders

New code E71.530 Peroxisomal D-bifunctional enzyme deficiency

New code E71.531 Sterol carrier protein deficiency

New code E71.532 Peroxisomal acyl-CoA oxidase deficiency

E72 Other disorders of amino-acid metabolism

E72.8 Other specified disorders of amino-acid metabolism

New sub-

subcategory E72.82 Disorders of organic acid metabolism

New code E72.820 Canavan disease

E74 Other disorders of carbohydrate metabolism

E74.0 Glycogen storage disease

New sub-

subcategory E74.09 Other glycogen storage disease

Andersen disease

Delete Hers disease
Delete Tauri disease

Glycogen storage disease, types 0, IV, VI-XI

Add Hers disease

Liver phosphorylase deficiency

Muscle phosphofructokinase deficiency

Add Tauri disease

New code E74.091 Polyglucosan body disease

Add PGBD

New code E74.098 Other glycogen storage disease

E74.8 Other specified disorders of carbohydrate metabolism

New sub-

subcategory E74.82 Disorders of sialic acid metabolism

Add Excludes1: Sialidosis [mucolipidosis I] (E77.1)

New code E74.820 Salla disease

New code E74.821 Infantile sialic acid storage disease

New code E74.822 Intermediate severe sialic acid storage disease

E75 Disorders of sphingolipid metabolism and other lipid storage disorders

E75.2 Other sphingolipidosis

New code E75.27 Pelizaeus-Merzbacher disease

Add PMD

E77 Disorders of glycoprotein metabolism

New sub-

subcategory E77.1 Defects in glycoprotein degradation

Aspartylglucosaminuria

Delete Fucosidosis

Mannosidosis

Sialidosis [mucolipidosis I]

New code E77.10 Fucosidosis

New code E77.18 Other defects in glycoprotein degradation

New code E77.19 Unspecified defects in glycoprotein degradation

E78 Disorders of lipoprotein metabolism and other lipidemias

E78.7 Disorders of bile acid and cholesterol metabolism

New code E78.73 Cerebrotendinous xanthomatosis

Add CTX

E88 Other and unspecified metabolic disorders

E88.4 Mitochondrial metabolism disorders

New sub-

subcategory E88.43 Disorders of mitochondrial tRNA synthetases

New code E88.431 Leukoencephalopathy with brainstem - spinal cord

involvement - lactate elevation

Add LBSL

New code E88.432 Hypomyelination with brainstem - spinal cord involvement - leg spasticity Add **HBSL** New code E88.433 Leukoencephalopathy with thalamus - brainstem involvement - high lactate Add LTBL E88.438 Other disorders of mitochondrial tRNA New code synthetases E88.439 Other disorders of mitochondrial tRNA New code synthetases, unspecified G11 Hereditary ataxia New code G11.5 Hypomyelination - hypogonadotropic hypogonadism - hypodontia Add 4H syndrome Add Pol III-related leukodystrophy New code G11.6 Leukodystrophy with vanishing white matter disease G23 Other degenerative diseases of basal ganglia New code G23.3 Hypomyelination with atrophy of the basal ganglia and cerebellum Add H-ABC G31 Other degenerative diseases of nervous system, not elsewhere classified G31.8 Other specified degenerative diseases of nervous system New subsubcategory G31.89 Other specified degenerative diseases of nervous system New code G31.890 Alexander Disease New code G31.891 Pelizaeus-Merzbacher-like disease **PMLD** Add

G31.898 Other specified degenerative diseases of the

G31.899 Other specified degenerative diseases of the

nervous system, unspecified

nervous system

New code

New code

New code	G90	Disorders of autonomic nervous system G90.A LMNB1-related autosomal dominant leukodystrophy		
	G93	Other Disorders of the Brain		
		G93.4 Other and unspecified encephalopathy		
New sub- subcategory		G93.42 Leukoencephalopathy, non-infectious causes		
New code		G93.420 Chloride ion channel 2 (CIC-2) related leukoencephalopathy with intramyelinic oedema		
New code		G93.421 Megaloencephalic leukoencephalopathy with subcortical cysts		
Add		MLC		
New code		G93.422 Leukoencephalopathy with calcifications and cysts		
New code		G93.423 Adult-onset leukodystrophy with axonal spheroids		
New code		G93.424 RNASE T2-deficient cystic leukoencephalopathy		
New code		G93.428 Other leukoencephalopathy, non-infectious causes		
New code		G93.429 Other leukoencephalopathy, non-infectious causes unspecified		
New code	Q07	Other congenital malformations of nervous system Q07.1 SOX-10 associated peripheral demyelinating neuropathy-central demyelinating leukodystrophy-Waardenburg		
Add		syndrome-Hirschsprung disease PCWH		
New sub-	Q12	Congenital lens malformations		
subcategory		Q12.0 Congenital cataract		
New code Add		Q12.01 Hypomyelination with congenital cataract HCC		

New code Q12.08 Other congenital cataract

New code Q12.09 Congenital cataract unspecified

Q87 Other specified congenital malformation syndromes affecting multiple

systems

New sub-

subcategory Q87.0 Other specified congenital malformation syndromes

predominantly affecting facial appearance

New code Q87.01 Oculo-dento-digital dysplasia

New code Q87.08 Other specified congenital malformation syndromes

predominantly affecting facial appearance

Q93 Monosomies and deletions from the autosomes, not elsewhere classified

Q93.8 Other deletions from the autosomes

New code Q93.83 Deletions of the long arm of chromosome 18

Lumbar Degenerative Disc Disease With and Without Pain

The International Society for the Advancement of Spine Surgery (ISASS) is proposing the creation of new ICD-10-CM diagnosis codes for describing pain associated with lumbar and lumbosacral degenerative disc disease. The presence or absence of pain associated with degenerative disc disease in the low back is an important factor in clinical decision making in regard to selecting the appropriate treatment. Pain may be present in the low back, or may occur in the leg, or both. Absence of pain is generally a sign that the degenerative disc disease is non-noxious.

Low back pain or lumbago has 6 sources including discogenic, facetogenic, neurocompressive, sacroiliac, vertebrogenic, and psychogenic. The association between lumbar degenerative disc disease (LDDD) and low back pain (LBP) has been well established.^{1,2}

Discogenic back pain associated with degenerative disc disease can be multifactorial and difficult to treat. The type of pain present and whether it is primarily low back pain or sciatica pain is an important component of the clinical assessment.

Treatments for discogenic back pain have ranged from anti-inflammatory medications to invasive procedures including spine fusion and spinal arthroplasty. There has also been a growing interest in developing strategies that aim to repair or regenerate the degenerated disc biologically, or to supplement tissue lost to degenerative disc disease.^{3,4}

New ICD-10-CM codes that enable identification of pain present with lumbar and lumbosacral degenerative disc disease and enable the pain to be characterized as involving either the lumbar region only, the leg only, or both the back and leg will be of benefit for characterizing, tracking and improving treatments for this common and important clinical issue.

References

- 1. Fujii K, Yamazaki M, Kang JD, Risbud MV, Cho SK, Qureshi SA, Hecht AC, Iatridis JC. Discogenic Back Pain: Literature Review of Definition, Diagnosis, and Treatment. JBMR Plus. 2019 Mar 4;3(5):e10180. doi: https://doi.org/10.1002/jbm4.10180. PMID: 31131347; PMCID: PMC6524679.
- 2. Kallewaard JW, Terheggen MA, Groen GJ, Sluijter ME, Derby R, Kapural L, Mekhail N, van Kleef M. 15. Discogenic low back pain. Pain Pract. 2010 Nov-Dec;10(6):560-79. https://doi.org/10.1111/j.1533-2500.2010.00408.x. Epub 2010 Sep 6. PMID: 20825564.
- 3. Peng BG. Pathophysiology, diagnosis, and treatment of discogenic low back pain. *World J Orthop.* 2013; 4(2):42–52. Published 2013 Apr 18. doi: https://doi.org/10.5312/wjo.v4.i2.42.
- 4. Beall DP, Wilson GL, Bishop R, Tally T. VAST Clinical Trial: Safely Supplementing Tissue Lost to Degenerative Disc Disease International Journal of Spine Surgery April 2020, 7033; DOI: https://doi.org/10.14444/7033

TABULAR MODIFICATIONS

M51 Thoracic, thoracolumbar, and lumbosacral intervertebral disc disorders

M51.3 Other thoracic, thoracolumbar and lumbosacral intervertebral disc degeneration

	M51.36	Other inter	rvertebral disc degeneration, lumbar region
New code		M51.360	Other intervertebral disc degeneration, lumbar region with lumbar back pain only
New code		M51.361	Other intervertebral disc degeneration, lumbar region with leg pain only
New code		M51.362	Other intervertebral disc degeneration, lumbar region with lumbar back pain and leg pain
New code		M51.369	Other intervertebral disc degeneration, lumbar region without mention of lumbar back pain or leg pain
	M51.37	Other inter	rvertebral disc degeneration, lumbosacral
New code		M51.370	Other intervertebral disc degeneration, lumbosacral region with lumbar back pain
New code		M51.371	Other intervertebral disc degeneration, lumbosacral region with leg pain only
New code		M51.372	Other intervertebral disc degeneration, lumbosacral region with lumbar back pain and leg pain
New code		M51.379	Other intervertebral disc degeneration, lumbosacral region without mention of lumbar back pain or leg pain

Metabolic Acidemia in Newborn

The National Center for Health Statistics (NCHS) received a request to revise P19.9 Metabolic acidemia, unspecified to include "in newborn". Currently "in newborn" is included in the category P19 Metabolic acidemia in newborn, but not in the P19.9 Metabolic acidemia, unspecified. Changes in the index are also proposed.

TABULAR MODIFICATIONS

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

Revise P19.9 Metabolic acidemia in newborn, unspecified

INDEX MODIFICATIONS

Acidemia E87.2-

Revise - metabolic - see also Acidosis, metabolic (newborn) P19.9

Add -- newborn P19.9

Revise --- first noted before onset of labor P19.0

Revise --- first noted during labor P19.1

Revise --- noted at birth P19.2

Non-Traumatic Peritoneal Hemorrhage

Retroperitoneal hemorrhage is a particularly important site of occult or concealed hemorrhage. In one series, for example, 66% of patients were anticoagulated (42% on warfarin, 30% on heparin, and 11% on low-molecular-weight heparin); 30% were on antiplatelet therapy; 16% were taking both anticoagulant and antiplatelet medications; and 15% were taking neither. The most common symptom was pain: abdominal (67%), leg (24%), hip (22%), and back (21%); 10.1% were misdiagnosed upon their initial encounter. Mortality in this series was 6% within 7 days, 10% within 30 days, and 19% within 6 months. In another series, 82% of patients were on therapeutic anticoagulation, overall mortality was 22%, but hemorrhage-related mortality was 6%. A recent review identifies other risk factors for spontaneous retroperitoneal hemorrhage, including strenuous exercise, coughing, coagulation disorders, and invasive procedures on or through the abdominal wall. The management of retroperitoneal hemorrhage or hematoma is largely supportive, with the reversal of anticoagulation, transfusions if needed, and angioembolization if bleeding continues in the setting of hemorrhagic shock.³

The National Center for Health Statistics (NCHS) received a request to create ICD-10-CM codes for nontraumatic retroperitoneal hemorrhage and retroperitoneal fibrosis. This is a representation from the September 2021 ICD10 Coordination and Maintenance (C&M) meeting; edits are based on public comments and are **bolded**.

Retroperitoneal fibrosis is a slowly progressive disorder in which the ureters and other abdominal organs or vessels may become blocked by a fibrous mass and inflammation in the back of the abdomen.

The Agency for Healthcare Research and Quality (AHRQ) is requesting the creation of ICD-10-CM codes for non-traumatic peritoneal hemorrhage and retroperitoneal fibrosis for coding specificity and to improve quality of care for patients.

References

González C, Penado S, Llata L, Valero C, Riancho JA. The clinical spectrum of retroperitoneal hematoma in anticoagulated patients. Medicine (Baltimore). 2003 Jul:82(4):257–62.

Sunga KL, Bellolio MF, Gilmore RM, Cabrera D. Spontaneous Retroperitoneal Hematoma: Etiology, Characteristics, Management, and Outcome. The Journal of Emergency Medicine. 2012 Aug;43(2):e157–61. Baekgaard JS, Eskesen TG, Lee JM, Yeh DD, Kaafarani HMA, Fagenholz PJ, Avery L, Saillant N, King DR, Velmahos GC. Spontaneous Retroperitoneal and Rectus Sheath Hemorrhage-Management, Risk Factors and Outcomes. World J Surg. 2019 Aug;43(8):1890-1897.

Kasotakis G. Retroperitoneal and rectus sheath hematomas. Surg Clin North Am. 2014 Feb;94(1):71-6.

TABULAR MODIFICATIONS

K66 Other disorders of peritoneum

K66.1 Hemoperitoneum

Add **Peritoneal hematoma**Add **Peritoneal hemorrhage**

Add Excludes2: retroperitoneal hematoma (K68.3)

Add retroperitoneal hemorrhage (K68.3)

K68 Disorders of retroperitoneum

New code K68.2 Retroperitoneal fibrosis

Add Code also, if applicable, associated obstruction of ureter (N13.5)

New code K68.3 Retroperitoneal hematoma
Add Retroperitoneal hemorrhage

INDEX MODIFICATIONS

Hematoma (traumatic) (skin surface intact) -see also Contusion

Revise - retroperitoneal (nontraumatic) K66.1 K68.3

Revise - retroperitoneal R58 K68.3

Syndrome -see also Disease

Revise - retroperitoneal fibrosis N13.5 K68.2

Parkinson's Disease with OFF Episodes

This topic was presented at the September 2021 ICD10 Coordination and Maintenance (C&M) meeting. Based on feedback received during the public comment period, the proposal has been revised for consideration. Changes are noted in **bold**.

Parkinson's disease (PD) is a progressive neurodegenerative disease that presents with motor symptoms such as bradykinesia with muscle rigidity, tremor, and/or postural instability, as well as non-motor symptoms such as anxiety/panic attacks, problems with executive function, and pain. ¹ Normally, neurons in the substantia nigra produce the neurotransmitter dopamine, which helps to regulate movement. In patients with PD, these neurons (among others) begin to die and less dopamine is produced, resulting in PD symptoms.²

It is estimated that approximately 1.04 million people in the United States had PD in 2017 and 1.2 million are estimated to have PD by 2030.^{3,4} Currently, no cure or disease-modifying therapies exist and treatment relies mainly upon levodopa to relieve motor and nonmotor symptoms.⁵ As PD is a progressive disease, patients receiving standard maintenance treatment with levodopa will experience a narrowing duration of effect, leading to complications/fluctuations (dyskinesias/OFF episodes) that become difficult to control.^{2,6,7} Each patient's experience with PD is unique with some patients experiencing dyskinesias, OFF episodes, or both.⁷⁻⁹

Motor fluctuations are inherent to PD and are likely to occur in 50% of patients in 5 years and 100% of patients within 10 years of treatment initiation. Based on our epidemiology model using the 1 million people in the United States with PD (2020), it is estimated there are 375,000 PD patients experiencing OFF episodes. Motor fluctuations are typically described as periods of good motor function (ON state) followed by periods when PD symptoms reemerge (OFF state) or when uncontrollable hyperkinetic movements are present. He-15 The occurrence of motor fluctuations (OFF episodes/dyskinesias) are important signs/symptoms to monitor in the management of PD because it can be an indication that therapy may need to be optimized to control baseline symptoms.

A wide range of symptoms have been observed during OFF states such as tremor, rigidity, bradykinesia, difficulty with speech and balance, weakness, and reduced dexterity. ^{15,16} Response fluctuations may also present as nonmotor symptoms. ^{15,16} Non-motor symptoms that have been reported to occur during fluctuations include apathy, anxiety, irritability, mood changes, cognitive changes, fatigue, pain, and drenching sweats. ^{15,16}

Fluctuations may have a significant impact on patients.¹⁷ Fluctuations such as OFF episodes may also increase hospitalizations and emergency department (ED) visits, as well as increasing intensive care unit (ICU) admission and prolonging the length of stay.¹⁸ In a recent real world analysis of PD patients (N=1409), patients who reported experiencing "OFF" episodes were associated with three times higher number of emergency room visits and hospitalizations compared to those without "OFF" episodes. The study also demonstrated that each incremental OFF-hour/day may also result in 60-70% greater ICU admission and length of hospital stays.¹⁸

Interventions specifically targeting the reduction of OFF-time may help reduce the number of OFF-episode related ER visits, hospitalizations, and subsequent health care resource utilization.

Sunovion Pharmaceuticals Incorporated with 39 Movement Disorder Specialists (MDS) and the Unified Parkinson's Advocacy Council (UPAC) are requesting the following new codes to enhance the tracking and the progression of Parkinson's disease.

References:

- 1. Sveinbjornsdottir S. The clinical symptoms of Parkinson's disease. J Neurochem. 2016;139(S1).
- 2. Olanow CW, Obeso JA, Stocchi F. Drug insight: continuous dopaminergic stimulation in the treatment of Parkinson's disease. Nature Clin Practice Neurol. 2006;2:382–392.
- 3. Economic burden and future impact of Parkinson's disease: final report. Michael J. Fox Foundation website. https://www.michaeljfox.org/sites/default/files/media/document/2019%20Parkinson%27s%20Economic%20Burden%20Study%20-%20FINAL.pdf. Published July 5, 2019. Accessed June 4, 2020.
- 4. Marras C., Beck JC, Bower JH, et al. Prevalence of Parkinson's disease across North America. *Nature*. 2018:4(21):1-7.
- 5. Olanow CW, Watts RL, Koller WC. An algorithm (decision tree) for the management of Parkinson's disease (2001): treatment guidelines. *Neurology*. 2001;56(Suppl5):S1-S88.
- 6. Stacy M, Bowron A, Guttman M, et al. Identification of motor and nonmotor wearing-off in Parkinson's disease: comparison of a patient questionnaire versus a clinician assessment. *Mov Disord*. 2005;20(6):726-733.
- 7. Jankovic J. Motor fluctuations and dyskinesias in Parkinson's disease: clinical manifestations. *Mov Disord*. 2005;20(Suppl 11):S11-S16.
- 8. Nutt JG. Motor fluctuations and dyskinesia in Parkinson's disease. Parkinsonism Relat D. 2001.8:101-108.
- 9. Thanvi B, Lo N, Robinson T. Levodopa-induced dyskinesia in Parkinson's disease: clinical features, pathogenesis, prevention and treatment. *Postgrad Med J.* 2007;83:384-388.
- 10. Verhagen Metman L. Recognition and treatment of response fluctuations in Parkinson's disease: review article. *Amino Acids*. 2002;23(1-3):141-145.
- 11. Marsden CD, Parkes JD, Quinn N. Fluctuations of disability in Parkinson's disease—clinical aspects. In: Marsden CD, Fahn S, eds. *Neurology*. Vol 2. Oxford, UK: Butterworth-Heinemann; 1981:96-122.
- 12. Chou KL, Stacy M, simuni T, et al. The spectrum of "off" in Parkinson's disease: what have we learned over 40 years?
- 13. 2016 LEK Physician Survey. Data on file. Sunovion Pharmaceuticals Inc.
- 14. Hinson VK. Parkinson's disease and motor fluctuations. Curr Treat Options Neurol. 2010;12:186-199.
- 15. Pahwa R, Lyons KE. Levodopa-related wearing-off in Parkinson's disease: identification and management. *Curr Med Res Opin.* 2009;25(4):841-849.
- 16. Colombo D, Abbruzzese G, Antonini A, et al. The "gender factor" in wearing-off among patients with Parkinson's disease: a post hoc analysis of the DEEP study. *Scientific World Journal*. 2015; Article ID 787451.
- 17. Onozawa R, Tsugawa J, Tsuboi Y, Fukae J, Mishima T, Fujioka S. The impact of early morning off in Parkinson's disease on patient quality of life and caregiver burden. *J Neurol Sci.* 2016;364:1-5.
- 18. Rajagopalan K, Barton J, Pike J. Real-world assessment of "OFF" episode-related health resource use among patients with Parkinson's disease. Poster presented: 2nd Pan American Parkinson's Disease and Movement Disorders Congress; June 22-24, 2018; Miami, FL.

TABULAR MODIFICATIONS

G20 Parkinson's disease
Hemiparkinsonism
Idiopathic Parkinsonism or Parkinson's disease
Paralysis agitans
Parkinsonism or Parkinson's disease NOS
Primary Parkinsonism or Parkinson's disease

Delete

New

subcategory G20.A Parkinson's disease without dyskinesia

New code G20.A1 Parkinson's disease without dyskinesia, without mention

of fluctuations

Add Parkinson's disease NOS

Add Parkinson's disease without dyskinesia, without mention

of OFF episodes

New code G20.A2 Parkinson's disease without dyskinesia, with fluctuations

Add Parkinson's disease without dyskinesia, with OFF episodes

New

subcategory G20.B Parkinson's disease with dyskinesia

Add Excludes1: drug induced dystonia (G24.0-)

New code G20.B1 Parkinson's disease with dyskinesia, without mention

of fluctuations

Add Parkinson's disease with dyskinesia, without **mention**

of OFF episodes

New code G20.B2 Parkinson's disease with dyskinesia, with fluctuations

Add Parkinson's disease with dyskinesia, with OFF episodes

New code G20.C Parkinsonism, unspecified

Add Parkinsonism, NOS

Add Excludes1: Parkinson's disease with dyskinesia (G20.B-)

Add Parkinson's disease without dyskinesia (G20.A-)

Add secondary parkinsonism (G21-)

Problems Related to Upbringing

The American Academy of Pediatrics (AAP) has previously presented a proposal on Problems Related to Upbringing at the September 2019, March 2020 and September 2021 ICD10 Coordination and Maintenance (C&M) meetings. In response to comments received, the Academy is submitting a revised proposal for consideration to better identify problems related to upbringing and to better clarify the specific caregiver (or situation) the child is involved. Changes are noted in **bold**.

In addition, at the September 2021 C&M meeting AAP requested expansion at Z02.8, Encounter for other administrative examinations, in order to show when a child is brought to medical attention by a welfare or law enforcement agency for examination unrelated to alleged physical or sexual abuse, but prior to placement outside of parental care (e.g., "medical clearance").

Today there are a greater variety of family dynamics that are more extended then the traditional nuclear family. A child may be living with a step-parent or non-parental guardian, such as a grandparent, almost as often as living with a biological or adopted parent. Children living with non-parental caregivers often present similar situations that may contribute to the child's wellbeing and need to seek medical attention.

The current ICD-10-CM codes identifying problems related to upbringing and parent-child conflict do not cover some of these other family situations. These types of circumstances often present unique situations that frequently contribute to the child being brought to seek medical attention. It is the intent of the Academy that this revised proposal will better capture these expanded "family" dynamics and conflicts that can complicate a medical encounter.

TABULAR MODIFICATIONS

Z02 Encounter for administrative examination

Z02.8 Encounter for other administrative examinations

New code
Add
Encounter for child welfare exam
Encounter for child welfare screening exam
Excludes 2: encounter for examination and observation

for alleged child physical abuse (Z04.72)
encounter for examination and
observation for alleged child rape (Z04.42)

Z62 Problems related to upbringing

Includes: current and past negative life events in childhood current and past problems of a child related to upbringing

Excludes2: maltreatment syndrome (T74.-) problems related to housing and economic circumstances (Z59.-)

Z62.2 Upbringing away from parents

Excludes 1: problems with boarding school (Z59.3)

Z62.21 Child in welfare custody

Delete Child in care of non-parental family member

Child in foster care

Add Child in welfare guardianship

Delete Excludes 2: problem for parent due to child in welfare

custody (Z63.5)

Z62.22 Institutional upbringing

Add Child living in orphanage
Add Child living in group home

Add Code also, if applicable, child in welfare custody

(Z62.21)

New code Z62.23 Child in custody of non-parental relative
Add Child in care of non-parental family member

Add Child in custody of grandparent

Add Child in kinship care

Add Guardianship by non-parental relative

Add Code also, if applicable, child in welfare custody

(Z62.21)

New code Z62.24 Child in custody of non-relative guardian

Add Code also, if applicable, child in welfare custody

(Z62.21)

Z62.8 Other specified problems related to upbringing

Add Code also, if applicable:

Add absence of family member (Z63.3-)

Add disappearance and death of family member

(Z63.4)

Add disruption of family by separation and divorce

(Z63.5)

Add other specified problems related to primary

support group (Z63.8)

Add other stressful life events affecting family and

household (Z63.7-)

Z62.82 Parent-child conflict

Z62.820 Parent-biological child conflict

Parent-child problem NOS

Z62.821 Parent-adopted child conflict

Z62.822 Parent-foster child conflict

New code Z62.823 Parent-step child conflict

New subcategory Z62.83 Non-parental relative or guardian-child conflict

New code Z62.831 Non-parental relative-child conflict

Add Grandparent-child conflict
Add Kinship-care child conflict

Add Non-parental relative legal guardian-child

conflict

Add Other relative-child conflict

Add Excludes1: Group home staff-child conflict

(Z62.833)

New code Z62.832 Non-relative guardian-child conflict

Add Excludes1: Group home staff-child conflict

(Z62.833)

New code Z62.833 Group home staff-child conflict

Z62.89 Other specified problems related to upbringing

New code Z62.892 Runaway [from current living environment]

Add Child leaving living situation without

permission

Resistant Hypertension

Resistant hypertension (RH) is a condition where the blood pressure (BP) of a patient with hypertension remains above goal in spite of the concurrent use of at least three antihypertensive medications of different pharmacologic classes, commonly including a long-acting calcium channel blocker, a blocker of the renin-angiotensin system (angiotensin converting enzyme inhibitor or angiotensin receptor blocker) and a diuretic.¹ The definition of RH stipulates that all pharmacologic agents should be administered at maximum or maximally tolerated doses and at the appropriate dosing interval. RH also includes patients who achieve their BP target levels on four or more antihypertensive medications, a condition termed "controlled RH". Thus, the designation of RH refers to patients with both uncontrolled and controlled hypertension depending on the number of antihypertensive agents administered.¹ True RH is defined as RH in which the causes of pseudo-resistance, as discussed below, have been excluded; when any of the causes of pseudo-resistance cannot be ruled out, the term "apparent treatment resistant hypertension (aTRH)" is applied.

Pseudo-resistance can result in a misdiagnosis of RH, due to error in BP measurement, the "white coat effect," or medication non-adherence. Inaccurate BP measurement may result from improper preparation of the patient, non-ideal environmental conditions, incorrect cuff size and improper measurement technique. To minimize BP variability, diagnostic BP recordings should include an average of ≥ 2 readings obtained on ≥ 2 separate occasions. Therefore, before diagnosis of RH accurate BP measurement is imperative. Similarly, out-of-office BP monitoring including home BP monitoring (HBPM) requires use of correct technique. The "white coat effect" is defined as having treated office BP above goal, but out-of-office BP by ambulatory blood pressure monitoring (ABPM) (or HBPM) at goal, in a patient taking ≥ 3 antihypertensive agents. The risk of cardiovascular disease (CVD) complications in patients with the white coat effect is similar to the risk in patients with controlled hypertension. Accurate BP measurement sharply reduces but does not totally eliminate the white coat effect. Out-of-office BP monitoring is required to make the diagnosis of true RH. Medication non-adherence is highly prevalent in patients with aTRH. This is in part due to the large pill burden, dosing complexity, expense and high frequency of adverse reactions that may occur with multi-drug antihypertensive regimens. Exclusion of non-adherence includes frank and nonjudgmental clinician-patient discussion and monitoring of the most recent prescription drug refills, pill counts, and, if available, biochemical assay of drugs or metabolites in urine or plasma.

RH, as defined above, identifies patients who are at significantly higher risk for target organ damage, morbid CVD events, end-stage kidney disease and death compared with hypertensive patients without treatment resistance.^{1,2} In addition, patients with RH are much more likely to have medication adverse effects or a secondary cause for their hypertension compared with patients with hypertension without drug resistance.¹ Patients with RH require special expertise for careful assessment and may benefit from special diagnostic and/or therapeutic approaches to control their BP.

In reporting the prevalence of RH, the term 'apparent' treatment resistant hypertension (aTRH) has been employed when one or more of the following data elements is (are) missing: medication

dose, level of adherence, or out-of-office BP. Among treated adults with hypertension, aTRH occurs in approximately 12% -15% of population-based and 15%-18% of clinic-based reports. In a recent study of RH prevalence using the BP cutoff of <140/90 mm Hg compared to the more recently adopted cutoff of <130/80 mm Hg to define BP control, 17.7 and 19.7% of patients, respectively, were estimated to have aTRH.

RH is not a new diagnostic term and has been recognized since the 1980s. It was highlighted as a distinct clinical entity in the Seventh Report of the Joint National Committee on the Prevention, Detection, Evaluation and Treatment of High Blood Pressure (JNC-7) in 2003.⁵ The first American Heart Association (AHA) Scientific Statement on Resistant Hypertension, published in 2008, provided a precise definition of RH (as given above). The 2008 Scientific Statement codified the various causes of pseudo-resistance and reviewed lifestyle factors and secondary causes resulting in drug resistance. The document recommended the most appropriate modification steps in pharmacologic treatment and indications for hypertension specialist referral if BP control could not be achieved. The updated 2018 AHA Scientific Statement¹ definition of RH differed from that in the 2008 document in 3 important ways: (1) BP should be measured and the BP threshold for diagnosis and treatment goals should be in accord with current clinical practice guidelines⁷; (2) patients with the white-coat effect should not be classified as having RH; and (3) the diagnosis of RH requires exclusion of antihypertensive medication nonadherence. These criteria distinguish pseudo-resistance, which can be managed with accurate BP monitoring and improved medication adherence, from true RH which warrants further evaluation and adjustments of therapy.

An essentially identical definition of RH was published by the 2018 European Society of Cardiology/European Society of Hypertension and the 2020 International Society of Hypertension (ISH) clinical practice guidelines. ^{8,9} The ISH document further recommended that, because of its complexity, RH should be managed in a hypertension specialty center. ⁹

RH is a complex disorder necessitating special clinical expertise and devotion of additional time and effort to validate the diagnosis, assess the extent of target organ damage, determine potential specific causes and contributing factors and recommend changes in the treatment regimen that will enhance the chance of success in lowering BP to goal. Explicit specialized knowledge is requisite to conduct ABPM and accurately interpret its results (to exclude the white coat effect or detect masked uncontrolled hypertension) and to train patients to perform accurate HBPM for monitoring the response to pharmacologic dose-titration. Detection and reversal of suboptimal medication adherence also requires special expertise, time and sensitivity to the barriers to optimal adherence. Secondary hypertension is a frequent cause of RH demanding knowledge of the various drug classes and disorders that can cause treatment resistance (e.g., sleep disorders, renal parenchymal and vascular disease, endocrine disorders such as primary aldosteronism, Cushing's syndrome, pheochromocytoma and other endocrine disorders). If a specific cause of RH cannot be identified during a systematic search, treatment usually entails a combination of lifestyle modification (diet, sodium and potassium intake, exercise and limitation of alcohol consumption) and drug titration steps, initiated on the basis of the most likely pathophysiologic mechanisms of the RH in each individual patient.¹

The 2018 AHA Scientific Statement¹ presented a new evidence-based template for the therapeutic sequence in RH. Regardless of the particular antihypertensive agents employed, intensive BP lowering is superior to standard treatment in terms of CVD outcomes in RH.¹⁰ Regarding the prognosis of RH using the new 2018 AHA guideline BP goal of <130/80 mm Hg, a large RH cohort study from Korea recently demonstrated that the risk for major adverse CVD events and adverse kidney outcomes is similar under the 2018 AHA as compared with earlier definitions of RH with no significant difference for predicting major adverse CVD events.^{11,12}

To summarize, based on the complexity of accurately diagnosing and effectively treating RH, and requirements for expertise in conducting out-of-office BP monitoring (i.e. ABPM and HBPM), documentation of target organ damage, identification of secondary causes of and contributing factors to resistance, institution of rigorous lifestyle modification and intricate pharmacological management, the American Heart Association Hypertension Council requests consideration of a new ICD-10 code for RH separate from the existing codes for hypertension. The American Heart Association Hypertension Council *Ad Hoc* Writing Committee includes Robert M. Carey, MD, MACP, Chair; George L. Bakris, MD; Jan N. Basile, MD; John Flack, MD; Daiichi Shimbo, MD; Sandra J. Taler, MD; and Lillie Noe, Council Manager.

A specific code for RH will enable specific identification of patients with RH within the general hypertensive population; help to overcome existing suboptimal antihypertensive therapy; enable proper evaluation of the contributing factors/causes of true RH, including lifestyle factors and secondary causes that may be reversible with specific treatment; and enable optimal BP control, thus improving cardiovascular and renal morbidity and mortality. In addition, clear identification and categorization of persons with RH with subsequent optimal treatment will help to alleviate certain existing racial health disparities in BP management.

References

- Carey RM, Calhoun D, Bakris G, Brook RD, Daugherty S, Dennison-Himmelfarb C, Egan BM, Flack JM, Gidding SS, Judd E, Lackland DT, Laffer CL, Newton-Cheh C, Smith SM, Taler SJ, Textor SC, Turan T, White WB. Resistant hypertension: detection, evaluation and management. A Scientific Statement of the American Heart Association. *Hypertension*. 2018;72:e55-e90. https://doi.org/10.1161/HYP.000000000000000084.
- 2. Buhnerkempe MG, Prakash V, Botchway A, Adekola B, Cohen JB, Rahman M, Weir MR, Ricardo AC, Flack JM. Adverse health outcomes associated with refractory and treatment resistant hypertension in the chronic renal insufficiency cohort. *Hypertension*. 2021;77:72081. https://doi.org/10.1161/hypertensionaha.120.15064
- 3. Buhnerkempe MG, Botchway A, Prakash V, Al-Akchar M, Nolasco Morales CE, Calhoun DA, Flack JM. Prevalence of refractory hypertension in the United States from 1999-2014. *J Hypertens*. 2019;37:1797-1804. https://doi.org/10.1097/hjh.000000000000002103
- Carey RM, Sakhuja S, Calhoun D, Whelton PK, Muntner P. Prevalence of apparent treatment resistant hypertension in the United States: comparison of the 2008 and 2018 American Heart Association Scientific Statements on resistant hypertension. *Hypertension*. 2019;73:424-431. https://doi.org/10.1161/HYPERTENSIONAHA.118.12191

- Chobanian AV, Bakris GL, Black HR, Cushman WC, Green LA, Izzo JL Jr, Jones DW, Materson BJ, Oparil S, Wright JT Jr, Roccella EJ; National Heart, Lung, and Blood Institute Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure; National High Blood Pressure Education Program Coordinating Committee. Seventh report of the Joint National Commission on the Prevention, Detection, Evaluation and Treatment of High Blood Pressure: the JNC-7 Report. *JAMA*. 2003;289:2560-2572. https://doi.org/10.1001/jama.289.19.2560
- Calhoun DA, Jones D, Textor S, Goff DC, Murphy TP, Toto RD, White A, Cushman WC, White W, Sica D, Ferdinand K, Giles TD, Falkner B, Carey RM. Resistant hypertension: diagnosis, evaluation and treatment.
 A Scientific Statement of the American Heart Association. *Hypertension*. 2008;51:1403-19 and *Circulation*. 2008;117:e510-26. https://doi.org/10.1161/CIRCULATIONAHA.108.189141
- 7. Whelton PK, Carey RM, Aronow WS, Casey DE, Collins KJ, Dennison-Himmelfarb C, DePalma SM, Gidding S, Jamerson KA, Jones DW, MacLaughlin EJ, Muntner PK, Ovbiabele B, Smith SC, Spencer CC, Stafford RS, Taler SJ, Thomas RJ, Williams KA, Williamson JD, Wright JT. A guideline for the prevention, detection, evaluation and management of high blood pressure. A report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. *Hypertension*. 2018;71:1269-1324. https://doi.org/10.1161/HYP.000000000000000065
- 8. Williams B, Mancia G, Spiering W, Agabiti Rosei E, Azizi M, Burnier M, Clement DL, Coca A, de Simone G, Dominiczak A, Kahan T, Mahfoud F, Redon J, Ruilope L, Zanchetti A, Kerins M, Kjeldsen SE, Kreutz R, Laurent S, Lip GYH, McManus R, Narkiewicz K, Ruschitzka F, Schmieder RE, Shlyakhto E, Tsioufis C, Aboyans V, Desormais I; Authors/Task Force Members. 2018 ESC/ESH guideline for the management of arterial hypertension. *J Hypertens*. 2018;36:1953-2041. https://doi.org/10.1097/HJH.00000000000002017
- 9. Unger T, Borghi C, Charchar F, Khan NA, Poulter NR, Prabhakaran D, Ramirez A, Schlaich M, Stergiou GS, Tomaszewski M, Wainford RD, Williams B, Schutte AE. 2020 International Society of Hypertension global hypertension practice guidelines. *Hypertension*. 2020;75:1334-1357. https://doi.org/10.1161/HYPERTENSIONAHA.120.15026.
- 10. Tsujimoto T, Kajio H. Intensive blood pressure treatment for resistant hypertension: secondary analysis of a randomized controlled trial. *Hypertension*. 2019;73:415-423. https://doi.org/10.1161/HYPERTENSIONAHA.118.12156.
- 11. Chun K-H, Lee CJ, Oh J, Lee S-H, Kang S-M, Kario K, Park S. Prevalence and prognosis of the 2018 vs 2008 AHA definition of apparent treatment resistant hypertension in high risk hypertension patients. *J Clin Hypertens*. 2020;22:2093–2102. https://doi.org/10.1111/jch.14043.
- 12. Carey RM, Wright JT Jr, Taler SJ, Whelton PK. Guideline-driven management of hypertension; an evidence-based update. *Circulation Research*. 2021;198:827-846. https://doi.org/10.1161/CIRCRESAHA.121.318083.

TABULAR MODIFICATIONS

New Category	I1A	Other hypertension
New code Add Add		I1A.0 Resistant hypertension Apparent treatment resistant hypertension True resistant hypertension
Add Add Add		Code first specific type of existing hypertension, if known, such as: essential hypertension (I10) secondary hypertension (I15)

Sickle-Cell Dactylitis and Vaso-Occlusive Crisis

Vaso-occlusive crisis is the most frequent reason for inpatient care of children with sickle cell anemia. Acute episodes of pain, also commonly referred to as sickle cell pain crises, or vaso-occlusive crises (VOCs), are not only the primary presenting morbidity associated with sickle cell disease, (SCD) but also the cause of hospitalization in approximately 95% of cases." (Darbarai 2020).

This diagnosis of sickle cell vasoocclusive crisis can result in a prolonged hospital stay with intractable pain, and lead to development of a chronic pain syndrome. Difficulties in pain control may potentiate the risk of pneumonia, acute chest syndrome, and even acute respiratory failure. The frequency and severity of vaso-occlusive crisis may be predictive of developing other life-threatening complications of sickle cell disease including splenic sequestration crisis, pulmonary hypertension, and stroke.

This proposal, submitted by the Regulatory Committee of the Association of Clinical Documentation Integrity Specialists (ACDIS) propose changes to ICD-10-CM to enhance the specificity of reporting for sickle cell disease. It is being requested that (1) unique codes be created for sickle cell disease with dactylitis for various types of sickle cell disease and (2) making the term vaso-occlusive crisis a non-essential modifier in the Index and Tabular entries for sickle cell disease.

Dactylitis is a severe inflammation of the fingers and toes commonly seen in infants with sickle cell anemia. In the pre-verbal child, it may be the only clinical indication of vaso-occlusive pain crisis. Early recognition of dactylitis and care for the underlying condition helps prevent later complications of sickle cell disease.

Dactylitis is not currently able to be specified within the ICD-10-CM code set. ICD-10-CM is clear in promoting additional specificity in clinical coding when such specificity is possible; the potential for further specificity exists in the reporting of manifestations of sickle cell disease. As early dactylitis has been suggested as a factor suggesting more severe disease, accurate reporting of the nature and frequency of dactylitis as a manifestation of acute sickle cell vaso-occlusive crisis may guide clinicians to early intervention to prevent long-term complications, morbidity, and mortality from sickle cell disease.

ACDIS proposes that "vaso-occlusive" be made a non-essential modifier for sickle cell disease with pain. It is of the opinion of ACDIS, that this request is supported by review of hospitalization documentation that demonstrates that the documentation of 'pain' in SCD patients is commonly not further described as 'vaso-occlusive' pain. Clinically, pain in a patient treated for sickle cell disease is vaso-occlusive. As reported by Darabi et. al., "Acute episodes of pain, also commonly referred to as sickle cell pain crises, or vaso-occlusive crises (VOCs), are not only the primary presenting morbidity associated with SCD.

The enhanced specificity promoted by these ICD-10-CM codes will enable improved tracking of patient severity of illness and promote a more accurate assessment of the need and intensity of care, in patients with sickle cell disease.

References:

Darbari DS, Sheehan VA, Ballas SK. The vaso-occlusive pain crisis in sickle cell disease: Definition, pathophysiology, and management. European Journal of Haematology. 2020;105(3):237-246. doi:10.1111/ejh.13430

Quinn CT, Lee NJ, Shull EP, et al. Prediction of Adverse Outcomes in Children with Sickle Cell Anemia: A Study of the Dallas Newborn Cohort. Blood 2008; 111(2):544-8. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2200853/

Shah N, Bhor M,Xie L, et al. Evaluation of Vaso-occlusive Crises in United States Sickle Cell Disease Patients: A Retrospective Claims-Based Study. Hematology 2019; 6(3). https://jheor.org/article/9667-evaluation-of-vaso-occlusive-crises-in-united-states-sickle-cell-disease-patients-a-retrospective-claims-based-study

Miller ST, Sleeper LA, Pegelow CH, et al. Prediction of Adverse Outcomes in Children with Sickle Cell Disease. NEJM 2000; 342:83-9.

TABULAR MODIFICATIONS

D57 Sickle-cell disorders

Use additional code for any associated fever (R50.81)

Excludes 1: other hemoglobinopathies (D58.-)

D57.0 Hb-SS disease with crisis

Sickle-cell disease with crisis

Revise Hb-SS disease with (vaso-occlusive) pain

D57.00 Hb-SS disease with crisis, unspecified

Hb-SS disease with (painful) crisis NOS

Revise Hb-SS disease with (vaso-occlusive) pain NOS

New code D57.04 Hb-SS disease with dactylitis

D57.09 Hb-SS disease with crisis with other specified

complication

Revise Use additional code Code also, if applicable to identify

complications, such as: cholelithiasis (K80.-) priapism (N48.32)

76

D57.2 Sickle-cell/Hb-C disease Hb-SC disease Hb-S/Hb-C disease

D57.21 Sickle-cell/Hb-C disease with crisis

New code D57.214 Sickle-cell/Hb-C disease with dactylitis

D57.219 Sickle-cell/Hb-C disease with crisis, unspecified Sickle-cell/Hb-C disease with crisis NOS

Sickle-cell/Hb-C disease with (vaso-occlusive) pain

NOS

D57.4 Sickle-cell thalassemia Sickle-cell beta thalassemia Thalassemia Hb-S disease

Revise

Revise

Revise

New code

D57.41 Sickle-cell thalassemia, unspecified, with crisis Sickle-cell thalassemia with (painful) crisis NOS

Sickle-cell thalassemia with (vaso-occlusive) pain NOS

D57.414 Sickle-cell thalassemia, unspecified, with

dactylitis

D57.418 Sickle-cell thalassemia, unspecified, with crisis

with other specified complication

Revise Use additional code Code also, if applicable to

identify complications, such as: cholelithiasis (K80.-) priapism (N48.32)

D57.419 Sickle-cell thalassemia, unspecified, with crisis Sickle-cell thalassemia with (painful) crisis NOS Sickle-cell thalassemia with (vaso-occlusive) pain

NOS

D57.43 Sickle-cell thalassemia beta zero with crisis

HbS-beta zero with crisis Sickle-cell beta zero with crisis

New code D57.434 Sickle-cell thalassemia beta zero with dactylitis

77

D57.438 Sickle-cell thalassemia beta zero with crisis with other specified complication

HbS-beta zero with other specified complication

Sickle-cell beta zero with other specified

complication

Use additional code Code also, if applicable to

identify complications, such as:

cholelithiasis (K80.-) priapism (N48.32)

D57.439 Sickle-cell thalassemia beta zero with crisis, unspecified

HbS-beta zero with other specified complication Sickle-cell beta zero with crisis unspecified Sickle-cell thalassemia beta zero with (painful)

crisis NOS

Sickle-cell thalassemia beta zero with (vaso-occlusive) pain NOS

D57.45 Sickle-cell thalassemia beta plus with crisis
HbS-beta plus with crisis
Sickle-cell beta plus with crisis

D57.454 Sickle-cell thalassemia beta plus with dactylitis

D57.458 Sickle-cell thalassemia beta plus with crisis with other specified complication

HbS-beta plus with crisis with other specified complication

Sickle-cell beta plus with crisis with other specified complication

Use additional code Code also, if applicable to identify complications, such as:

cholelithiasis (K80.-) priapism (N48.32)

D57.459 Sickle-cell thalassemia beta plus with crisis, unspecified

HbS-beta plus with crisis with unspecified complication

Sickle-cell beta plus with crisis with unspecified complication

Revise

Revise

New code

Revise

Sickle-cell thalassemia beta plus with (painful) crisis NOS
Sickle-cell thalassemia beta plus with
(vaso-occlusive) pain NOS

Revise

D57.8 Other sickle-cell disorders Hb-SD disease Hb-SE disease

D57.81 Other sickle-cell disorders with crisis

New code D57.814 Other sickle-cell disorders with dactylitis

D57.818 Other sickle-cell disorders with crisis with other

specified complication

Revise <u>Use additional code Code also, if applicable</u> to

identify complications, such as: cholelithiasis (K80.-) priapism (N48.32)

Revise

Add

D57.819 Other sickle-cell disorders with crisis, unspecified Other sickle-cell disorders with crisis NOS Other sickle-cell disorders with (vaso-occlusive) pain NOS

INDEX MODFICATIONS

Disease

- sickle-cell D57.1

-- with

--- crisis(painful) D57.00 ---- with dactylitis D57.04

Add --- dactylitis D57.04

Revise --- vasoocclusive pain (vaso-occlusive) D57.00

Add -- priaprism D57.09 -- Hb-C D57.20

--- with

---- crisis D57.219

Add ---- with dactylitis D57.214 Add ---- dactylitis D57.214

Revise ---- vasoocclusive pain (vaso-occlusive) D57.219 Add -- priaprism D57.218 -- Hb-SD D57.80 --- with ---- crisis D57.819 Add ---- with dactylitis D57.814 Add ---- dactylitis D57.814 Revise ---- vasoocclusive pain (vaso-occlusive) D57.819 -- Hb-SE D57.80 --- with ---- crisis D57.819 Add ---- with dactylitis D57.814 ---- dactylitis D57.814 Add Revise ---- vasoocclusive pain (vaso-occlusive) D57.819 -- specified NEC D57.80 --- with ---- crisis D57.819 ---- with dactylitis D57.814 Add Add ---- dactylitis D57.814 Revise ---- vasoocclusive pain (vaso-occlusive) D57.819 -- thalassemia D57.40 --- with ---- acute chest syndrome D57.411 ---- with dactylitis D57.414 Add ---- with specified complication NEC D57.418 Add ---- dactylitis D57.414 ---- vasoocclusive pain (vaso-occlusive) D57.419 Revise --- beta plus D57.44 ---- with ---- acute chest syndrome D57.451 Add ----with dactylitis D57.454 Add ----dactylitis D57.454 Revise -----vasoocclusive pain (vaso-occlusive) D57.459 --- beta zero D57.42 ---- with ---- acute chest syndrome D57.431 ---- with dactylitis D57.434 Add Add ---- dactylitis D57.434 ---- vasoocclusive pain (vaso-occlusive) D57.439 Revise

Social Determinants of Health

This proposal was originally submitted by the Gravity Project (GP) and presented at the March 2021 and September 2021 ICD10 Coordination and Maintenance meetings. Parts of the proposal were previously approved and will be implemented on October 1, 2022. Subsequently, we have received additional code requests from the GP and AHIMA that have been incorporated in the proposal.

The Gravity Project requests a revision of the original request for Z59.87 Material Hardship and requests that it be titled Z59.87 Material hardship, due to limited financial resources to clarify economics as the driver. Furthermore, a request for a new term under Z58 to cover basic necessities unavailable in the environment, Z58.81 Material hardship, inadequate physical environment.

The Gravity Project's continues in collaboration with the US Department of Veteran Affairs the need to clarify for a distinct code separate from Z91.82 Personal history of military deployment. The risks of deployment and service are distinct and need to be independently identified.

The Gravity Project worked with international experts on social connection over the course of 2021. Through that work, they identified missing concepts across the types of lack of social connection - social isolation, loneliness, and lack of social support. Social isolation is adequately covered in the taxonomy. However, to allow for consistent documentation of "loneliness" and "lack of social support" they are requesting for a "loneliness" inclusion term under R45.89 Other symptoms and signs involving emotional stateand "lack of emotional support" under Z60.8 Other problems related to social environment.

The Gravity Project requests specific codes for intimate partner violence (IPV) (confirmed and suspected.) At present, to represent IPV across the age spectrum, one would have to code adult and child abuse codes across the abuse subtypes (neglect, physical, psychological, sexual exploitation, etc.)

The Gravity Project is requesting two areas of Elder Abuse terms. All terms align with the Center for Disease Control and Prevention 2016 publication "Elder Abuse Surveillance: Uniform Definitions and Recommended Core Data Elements." Elder Abuse is defined as "An intentional act or failure to act by a caregiver or another person in a relationship involving an expectation of trust that causes or creates a risk of harm to an older adult and can be in the form of physical abuse, psychological abuse, sexual abuse, financial abuse, and neglect by someone in a caregiving role. (The Gravity Project, 2021)"

The previously proposed Y07.2 Acquaintance or friend, perpetrator of maltreatment and neglect presented at the September 2021 meeting is requested to be placed at the Y07.5 Nonfamily member, perpetrator of maltreatment and neglect. The is also a need for financial abuse terms (confirmed and suspected.) The Gravity Project requests missing critical perpetrator

codes to align with the CDC core data elements and the literature of elder abuse.

TABULAR MODIFICATIONS

Add Add	R45	Symptoms and signs involving emotional state R45.8 Other symptoms and signs involving emotional state R45.89 Other symptoms and signs involving emotional state Flat affect Loneliness
	T74	Adult and child abuse, neglect, and other maltreatment, confirmed Use additional code, if applicable, to identify any associated current injury The appropriate 7th character is to be added to each code from category T74 A initial encounter D subsequent encounter S sequela
New code		T74.1 Physical abuse, confirmed T74.13 Intimate partner physical abuse, confirmed
New code		T74.2 Sexual abuse, confirmed T74.23 Intimate partner sexual abuse, confirmed
New code		T74.3 Psychological abuse, confirmed T74.33 Intimate partner psychological abuse, confirmed
New subcategory New code		T74.A Financial abuse, confirmed T74.A1 Adult financial abuse, confirmed
	T76	Adult and child abuse, neglect, and other maltreatment, suspected Use additional code, if applicable, to identify any associated current injury The appropriate 7th character is to be added to each code from category T76 A initial encounter D subsequent encounter S sequela

Intimate partner physical abuse, suspected

T76.1 Physical abuse, suspected

T76.13

New code

T76.2 Sexual abuse, suspected New code T76.23 Intimate partner sexual abuse, suspected T76.3 Psychological abuse, suspected New code T76.33 Intimate partner psychological abuse, suspected New T76.A Financial abuse, suspected subcategory New code T76.A1 Adult financial abuse, suspected Z58 Problems related to physical environment New subcategory Z58.8 Other problems related to physical environment New code Material hardship, inadequate physical environment Z58.81 Unable to obtain electricity, due to inadequate physical Add environment Add Unable to obtain internet service, due to inadequate physical environment New code Z58.89 Other problems related to physical environment Z59 Problems related to housing and economic circumstances Z59.8 Other problems related to housing and economic circumstances Z59.87 New code Material hardship, due to limited financial resources, **NEC** Material deprivation Add Unable to obtain adequate childcare due to limited Add financial resources Unable to obtain adequate clothing due to limited Add financial resources Add Unable to obtain adequate utilities due to limited financial resources Add Unable to obtain basic needs, due to limited financial resources Z60 Problems related to social environment Z60.8 Other problems related to social environment

Inadequate social support

Lack of emotional support

Add

Add

Add	Z65			ified proble	vchosocial circumstances ems related to psychosocial circumstances
	Z91				where classified are with medical treatment and regimen
New sub		_, .,.	1 4010110 5 110		
subcategor	y		Z91.14		ther noncompliance with medication regimen nderdosing of medication NOS
New code				Z91.141	Patient's other noncompliance with medication regimen due to financial hardship
New code				Z91.148	Patient's other noncompliance with medication regimen for other reason
New sub			504.45	-	
subcategor New code	Ty .			Patient's no Z91.151	oncompliance with renal dialysis Patient's noncompliance with renal dialysis due to financial hardship
New code				Z91.158	Patient's noncompliance with renal dialysis for other reason
New code		Z91.4		Personal h	ychological trauma, not elsewhere classified istory of adult abuse Personal history of adult financial abuse
N 1		Z91.A	Caregiver' regime	-	liance with patient's medical treatment and
New sub subcategor	ry		Z91.A4	-	s other noncompliance with patient's ation regimen
				Caregiver'	s underdosing with patient's medication NOS
New code				Z91.A41	Caregiver's other noncompliance with patient's medication regimen due to financial hardship
New code				Z91.A48	Caregiver's other noncompliance with patient's medication regimen for other reason
New sub					
subcategor	'V		Z91.A	5 Caregive	r's noncompliance with patient's renal dialysis
New code	· <i>J</i>		<i>عر</i> ۲۰۰۱ کی	Z91.A51	* * *
New code				Z91.A58	· · · · · · · · · · · · · · · · · · ·

New sub subcategory	701 AQ Care	giver's noncompliance with patient	's other medical
subcategory		eatment and regimen	s other medical
Add		adherence to medical treatment	
New code		.A91 Caregiver's noncompliance	e with natient's
ivew code		other medical treatmen	<u>-</u>
		to financial hardshi	_
New code	Z9	1.A98 Caregiver's noncompliance	1
		other medical treatmen	
		other reason	C
	Z91.8 Other specific	d personal risk factors, not elsewher	re classified
	*	rsonal history of military deployme	
	In	dividual (civilian or military) with p	oast history of
		military war, peacekeeping and hu	
		deployment (current or past co	onflict)
	R	eturned from military deployment	
Add	E	cludes2: personal history of militar	y service
		(Z91.85)	
New code	Z91.85 Pe	rsonal history of military service	
Add	E	cludes2: personal history of mile (Z91.82)	itary deployment
Add		served in the armed for	rces
Add		veteran	
	Z91.89 O	her specified personal risk factors, i	not elsewhere
Add	In	creased risk for social isolation	

Shwachman-Diamond Syndrome

Shwachman-Diamond syndrome (SDS) is a genetic multi-system disorder characterized by bone marrow failure, exocrine pancreatic dysfunction, and predisposition to myeloid malignancies. The estimated incidence of SDS is 1:76,000. With a reduced life expectancy of about 40 years (estimated), there are expected to be several thousand patients in the US alone. It is anticipated that substantially more individuals will be identified as genetic and biochemical testing becomes more widely adopted.

The diagnosis of SDS is established with the classic clinical findings of exocrine pancreatic insufficiency and bone marrow failure and/or identification of biallelic pathogenic variants in *DNAJC21*, *EFL1*, or *SBDS*, or a heterozygous pathogenic variant in *SRP54* by molecular genetic testing. Biallelic mutations in *SBDS* account for over 90% of cases of SDS, while the other genes, *EFL1*, *DNAJC21*, and *SRP54* account only for a small percentage of cases. For close to 10% of cases, no genetic cause has yet been identified. All the genes associated with SDS are involved in the ubiquitous pathway of ribosome biogenesis and function, and thus are necessary for the ribosomal subunits to assemble into translationally competent ribosomes and enable adequate levels of translation. All

The major cause of mortality from SDS are hematological complications, such as severe bone marrow failure, myelodysplastic syndrome (MDS) and acute myeloid leukemia (AML), which are estimated to occur in about 30% of patients with biallelic *SBDS* mutations by age 30.^{3,4,9,10} This risk has not been confirmed in SDS patients without biallelic *SBDS* mutations, emphasizing the need to distinctly demark *SBDS* cases from other gene variants resulting in the SDS phenotype.

Clinically, the distinction of the various genetic causes of SDS is important as different underlying genetic causes may give rise to different natural histories, symptoms, and phenotypes and directly impact patient anticipatory counseling and clinical monitoring. Additionally, patients in the different categories will require different management and treatment strategies for optimal outcomes including lifesaving interventions, especially with precision medicine approaches and gene targeting therapies currently in development.

Creation of a new code would enable more readily tracking morbidity rates, hospital admissions, and treatment outcomes for SDS, and will be of benefit for clinical and policy research efforts. The Shwachman-Diamond Syndrome Alliance, a nonprofit patient advocacy organization, formally requests that an ICD-10-CM code be created for Shwachman-Diamond Syndrome (SDS).

References

1. Dror, Yigal, et al. "Draft Consensus Guidelines for Diagnosis and Treatment of Shwachman-Diamond Syndrome." Annals of the New York Academy of Sciences, vol. 1242, no. 1, Dec. 2011, pp. 40–55. https://doi.org/10.1111/j.1749-6632.2011.06349.x.

- 2. Goobie, Sharan, et al. "Shwachman-Diamond Syndrome with Exocrine Pancreatic Dysfunction and Bone Marrow Failure Maps to the Centromeric Region of Chromosome 7." The American Journal of Human Genetics, vol. 68, no. 4, Apr. 2001, pp. 1048–54. https://doi.org/10.1086/319505.
- 3. Nelson, Adam, and Kasiani Myers. "Shwachman-Diamond Syndrome." NCBI Bookshelf, 18 Oct. 2018, https://www.ncbi.nlm.nih.gov/books/NBK1756/.
- 4. Myers, Kasiani C., et al. "Variable Clinical Presentation of Shwachman–Diamond Syndrome: Update from the North American Shwachman–Diamond Syndrome Registry." The Journal of Pediatrics, vol. 164, no. 4, Apr. 2014, pp. 866–70. https://doi.org/10.1016/j.jpeds.2013.11.039.
- 5. Boocock, Graeme R. B., et al. "Mutations in SBDS Are Associated with Shwachman–Diamond Syndrome." Nature Genetics, vol. 33, no. 1, Dec. 2002, pp. 97–101. https://doi.org/10.1038/ng1062.
- 6. Stepensky, Polina, et al. "Mutations in EFL1, an SBDS Partner, are Associated with Infantile Pancytopenia, Exocrine Pancreatic Insufficiency and Skeletal Anomalies in a Shwachman-Diamond like Syndrome."

 Journal of Medical Genetics, vol. 54, no. 8, Mar. 2017, pp. 558–66. https://doi.org/10.1136/jmedgenet-2016-104366.
- 7. Dhanraj, Santhosh, et al. "Biallelic Mutations in DNAJC21 Cause Shwachman-Diamond Syndrome." Blood, vol. 129, no. 11, Mar. 2017, pp. 1557–62. https://doi.org/10.1182/blood-2016-08-735431.
- 8. Carapito, Raphael, et al. "Mutations in Signal Recognition Particle SRP54 Cause Syndromic Neutropenia with Shwachman-Diamond–like Features." Journal of Clinical Investigation, vol. 127, no. 11, Oct. 2017, pp. 4090–103. https://doi.org/10.1172/jci92876.
- 9. Kennedy, Alyssa L., et al. "Distinct Genetic Pathways Define Pre-Malignant versus Compensatory Clonal Hematopoiesis in Shwachman-Diamond Syndrome." Nature Communications, vol. 12, no. 1, Feb. 2021. https://doi.org/10.1038/s41467-021-21588-4.
- 10. Furutani, Elissa, et al. "Hematologic Complications with Age in Shwachman-Diamond Syndrome." Blood Advances, Nov. 2021. https://doi.org/10.1182/bloodadvances.2021005539.

TABULAR MODIFICATIONS

D61 Other aplastic anemias and other bone marrow failure syndromes

D61.0 Constitutional aplastic anemia

New code	D61.02	Shwachman-Diamond Syndrome
Add Add Add Add		Code also, if applicable, associated conditions such as: acute myeloblastic leukemia (C92.0-) exocrine pancreatic insufficiency (K86.81) myelodysplastic syndrome (D46)
Add		Use additional code, if applicable, for genetic susceptibility to other malignant neoplasm (Z15.09)

Wasting Disease (Syndrome) Due to Underlying Condition

The National Center for Health Statistics (NCHS) received a request to create an ICD-10-CM code for wasting disease (syndrome) due to underlying condition. This will improve coding specificity and aid in capturing severity of illness for morbidity of the underlying conditions and help with improved treatments for these conditions.

Wasting disease (syndrome) is an involuntary, on-going loss of more than 10% of body weight with reduction in muscle mass, with or without loss of fat due to underlying condition. The manifestations of the disease occur in multiple conditions as an indicator of end-stage progression and complicate those concurrent conditions.

Wasting disease (syndrome) is a metabolic-catabolic syndrome that is a severe complication of a chronic, primary disease. It has a constellation of signs and symptoms and is a manifestation signaling the later end-stage or morbidity of an underlying condition and is typically irreversible.

References

Argilés, J. M., Olivan, M., Busquets, S., & López-Soriano, F. J. (2010, January 22). *Optimal management of cancer anorexia–cachexia syndrome*. Retrieved from US National Library of Medicine:

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3004581/

Fearon, K., Strasser, F., Anker, S., Bosaeus, I., Bruera, E., Fainsinger, R. L., . . . Baracos, V. E. (2011, February 4). *Definition and classification of cancer cachexia: an international consensus*. Retrieved from PubMed.gov: https://pubmed.ncbi.nlm.nih.gov/21296615/

Tisdale, M. J. (1997, December 3). *Biology of Cachexia*. Retrieved from Journal of the National Cancer Institute: http://jnci.oxfordjournals.org/content/89/23/1763.full

Wasting Syndrome. (n.d.). Retrieved from HIV/AIDS Glossary: https://aidsinfo.nih.gov/understanding-hiv-aids/glossary/750/wasting-syndrome

TABULAR MODIFICATIONS

E88 Other and unspecified metabolic disorders

E88.8 Other specified metabolic disorders

New code E88.A Wasting disease (syndrome) due to underlying condition

Add Code first underlying condition

TABULAR MODIFICATIONS PROPOSED ADDENDA

All proposed effective October 1, 2023

Diseases of liver (K70-K77)

Excludes2: hemochromatosis (E83.11-)

> Reye's syndrome (G93.7) viral hepatitis (B15-B19) Wilson's disease (E83.01)

Revise

D64 Other anemias

D64.2 Secondary sideroblastic anemia due to drugs and toxins

Revise

Revise

Code first poisoning due to drug or toxin, if applicable (T36-T65 with fifth or sixth character 1-4 or 6)

D70 Neutropenia

Use additional code for any associated:

fever (R50.81)

mucositis (J34.81, K12.3-, K92.81, N76.81) Delete

Add Code also, if applicable, mucositis (J34.81, K12.3-, K92.81, N76.81)

> Other disorders of blood and blood-forming organs in diseases classified D77 elsewhere

Code first underlying disease, such as: congenital early syphilis (A50.0-)

E03 Other hypothyroidism

E03.2 Hypothyroidism due to medicaments and other exogenous

substances

Revise Code first poisoning due to drug or toxin, if applicable (T36-T65

with fifth or sixth character 1-4 or 6)

E09 Drug or chemical induced diabetes mellitus

Revise Code first poisoning due to drug or toxin, if applicable (T36-T65 with fifth

or sixth character 1-4 or 6)

	E35	Disorders of endocrine glands in diseases classified elsewhere
Revise		Code first underlying disease, such as: late congenital syphilis of thymus gland [Dubois disease] (A50.5_)
Add	E87	Other disorders of fluid, electrolyte and acid-base balance Excludes1: diabetes insipidus (E23.2) metabolic acidemia in newborn, unspecified (P19.9)
Revise	F02	Dementia in other diseases classified elsewhere Code first the underlying physiological condition, such as: hepatolenticular degeneration (E83.0 <u>1</u>)
Revise	F05	Delirium due to known physiological condition Code first the underlying physiological condition <u>such as:</u> Dementia (F03.9-)
Add	F11	Opioid related disorders F11.1 Opioid abuse F11.18 Opioid abuse with other opioid-induced disorder F11.188 Opioid abuse with other opioid-induced disorder Opioid-associated amnestic syndrome with opioid abuse
Add		F11.2 Opioid dependence F11.28 Opioid dependence with other opioid-induced disorder F11.288 Opioid dependence with other opioid- induced disorder Opioid-associated amnestic syndrome with opioid dependence
Add		F11.9 Opioid use, unspecified F11.98 Opioid use, unspecified with other specified opioid- induced disorder F11.988 Opioid use, unspecified with other opioid- induced disorder Opioid-associated amnestic syndrome without use disorder

	F33	Major depressive disorder, recurrent F33.8 Other recurrent depressive disorders Recurrent brief depressive episodes Seasonal affective disorder
Revise		Code first the underlying physiological condition, such as: hepatolenticular degeneration (E83.0 <u>1</u>)
Revise	F50	Eating disorders Excludes2: feeding difficulties (R63.3 <u>-</u>)
	F98	Other behavioral and emotional disorders with onset usually occurring in childhood and adolescence F98.2 Other feeding disorders of infancy and childhood
Revise		Excludes2: anorexia nervosa and other eating disorders (F50) feeding difficulties (R63.3 ₋)
	G04	Encephalitis, myelitis and encephalomyelitis
Delete		Excludes1: acute transverse myelitis (G37.3-)
Add		Excludes2: acute transverse myelitis (G37.3-)
	G05	Encephalitis, myelitis and encephalomyelitis in diseases classified elsewhere G05.3 Encephalitis and encephalomyelitis in diseases classified elsewhere
Add		Code also, if applicable, underlying disease
	G73	Disorders of myoneural junction and muscle in diseases classified elsewhere G73.7 Myopathy in diseases classified elsewhere
Revise		Code first underlying disease, such as: glycogen storage disease (E74.0-)
Revise	G92	Toxic encephalopathy G92.8 Other toxic encephalopathy Code first poisoning due to drug or toxin, if applicable, (T36-T65 with fifth or sixth character 1-4 or 6)
Revise		G92.9 Unspecified toxic encephalopathy Code first poisoning due to drug or toxin, if applicable, (T36-T65 with fifth or sixth character 1-4 or 6)

G96 Other disorders of central nervous system G96.0 Cerebrospinal fluid leak G96.08 Other cranial cerebrospinal fluid leak Postoperative cranial cerebrospinal fluid leak Traumatic cranial cerebrospinal fluid leak Code also if applicable: Revise head injury (S00.- to S09.-) (S00 - S09) G96.09 Other spinal cerebrospinal fluid leak Code also if applicable: Revise head injury (S00.- to S09.-) (S00 - S09) Other disorders of nervous system in diseases classified elsewhere G99 G99.8 Other specified disorders of nervous system in diseases classified elsewhere Code first underlying disorder, such as: Revise avitaminosis (E56.9 -) H35 Other retinal disorders H35.3 Degeneration of macula and posterior pole Toxic maculopathy H35.38 Revise Code first poisoning due to drug or toxin, if applicable (T36-T65 with fifth or sixth character 1-4 or 6) H54 Blindness and low vision Note: For definition of visual impairment categories see table below H54.5 Low vision, one eye Visual impairment categories 1 or 2 in one eye [normal vision in other eyel H54.51 Low vision, right eye, normal vision left eye

H62 Disorders of external ear in diseases classified elsewhere H62.4 Otitis externa in other diseases classified elsewhere Code first underlying disease, such as:

H54.511

H54.512

Revise

New subcategory

Low vision, right eye, category 1-2

Low vision, right eye, category 2

H54.511A Low vision right eye category 1,

H54.512A Low vision right eye category 2,

normal vision left eye

normal vision left eye

impetigo (L01.0 <u>-</u>)
nd unspecified hearing loss Ototoxic hearing loss Code first poisoning due to drug or toxin, if applicable (T36-T65 with fifth or sixth character 1-4 or 6)
ary embolism es1: cor pulmonale without embolism (I27.81)
ulmonary heart diseases Other specified pulmonary heart diseases I27.81 Cor pulmonale (chronic) Code also, if applicable, Right heart failure (I50.81-)
myopathy Cardiomyopathy due to drug and external agent Code first poisoning due to drug or toxin, if applicable (T36-T65 with fifth or sixth character 1-4 or 6)
umatic subarachnoid hemorrhage litional code, if known, to indicate National Institutes of Health ske Scale (NIHSS) score (R29.7-)
umatic intracerebral hemorrhage ditional code, if known, to indicate National Institutes of Health ske Scale (NIHSS) score (R29.7-)
nd unspecified nontraumatic intracranial hemorrhage ditional code, if known, to indicate National Institutes of Health oke Scale (NIHSS) score (R29.7-)
ul infarction es2: chronic, without residual deficits (sequelae) Z86.73
erebrovascular diseases es1: Occlusion and stenosis of cerebral artery causing cerebral infarction (I63.3-I63.5-) Occlusion and stenosis of precerebral artery causing cerebral infarction (I63.2-)

Add		I67.4 Hypertensive encephalopathy Code also, if applicable, associated hypertensive conditions such as: essential (primary) hypertension (I10) hypertensive heart disease (I11) hypertensive chronic kidney disease (I12) hypertensive heart and chronic kidney disease (I13)
Add	I87	Other disorders of veins I87.2 Venous insufficiency (chronic) (peripheral) Use additional, if applicable, code to specify site and severity of ulcer (L97)
Delete	J31	Chronic rhinitis, nasopharyngitis and pharyngitis Use additional code to identify: exposure to environmental tobacco smoke (Z77.22) exposure to tobacco smoke in the perinatal period (P96.81) history of tobacco dependence (Z87.891) occupational exposure to environmental tobacco smoke (Z57.31) tobacco dependence (F17.) tobacco use (Z72.0)
Delete	J32	Chronic sinusitis Use additional code to identify: exposure to environmental tobacco smoke (Z77.22) exposure to tobacco smoke in the perinatal period (P96.81) history of tobacco dependence (Z87.891) occupational exposure to environmental tobacco smoke (Z57.31) tobacco dependence (F17.) tobacco use (Z72.0)
Delete	J33	Nasal polyp Use additional code to identify: exposure to environmental tobacco smoke (Z77.22) exposure to tobacco smoke in the perinatal period (P96.81) history of tobacco dependence (Z87.891) occupational exposure to environmental tobacco smoke (Z57.31) tobacco dependence (F17) tobacco use (Z72.0)
Delete	J35	Chronic diseases of tonsils and adenoids Use additional code to identify: exposure to environmental tobacco smoke (Z77.22) exposure to tobacco smoke in the perinatal period (P96.81) history of tobacco dependence (Z87.891)

occupational exposure to environmental tobacco smoke (Z57.31) tobacco dependence (F17.-) tobacco use (Z72.0) J38 Diseases of vocal cords and larynx, not elsewhere classified Delete Use additional code to identify: exposure to environmental tobacco smoke (Z77.22) exposure to tobacco smoke in the perinatal period (P96.81) history of tobacco dependence (Z87.891) occupational exposure to environmental tobacco smoke (Z57.31) tobacco dependence (F17.-) tobacco use (Z72.0) J43 Emphysema Delete Use additional code to identify: exposure to environmental tobacco smoke (Z77.22) exposure to tobacco smoke in the perinatal period (P96.81) history of tobacco dependence (Z87.891) occupational exposure to environmental tobacco smoke (Z57.31) tobacco dependence (F17.-) tobacco use (Z72.0) J44 Other chronic obstructive pulmonary disease Delete Use additional code to identify: exposure to environmental tobacco smoke (Z77.22) exposure to tobacco smoke in the perinatal period (P96.81) history of tobacco dependence (Z87.891) occupational exposure to environmental tobacco smoke (Z57.31) tobacco dependence (F17.-) tobacco use (Z72.0)

J84 Other interstitial pulmonary diseases

J84.1 Other interstitial pulmonary diseases with fibrosis
J84.17 Other interstitial pulmonary diseases with fibrosis in
diseases classified elsewhere

Revise		J84.170 Interstitial lung disease with progressive fibrotic phenotype in diseases classified elsewhere Code first underlying disease, such as: sarcoidosis (D86)
Revise Revise	J93	Pneumothorax and air leak J93.1 Other spontaneous pneumothorax J93.12 Secondary spontaneous pneumothorax Code first underlying condition, such as: eosinophilic pneumonia (J82.81 - J82.82) Marfan's syndrome (Q87.4 -)
Revise Revise Revise	J99	Respiratory disorders in diseases classified elsewhere Code first underlying disease, such as: ankylosing spondylitis (M45) congenital syphilis (A50.5-) early congenital syphilis (A50.0-, A51.2)
Revise	K22	Other diseases of esophagus K22.1 Ulcer of esophagus Code first poisoning due to drug or toxin, if applicable (T36-T65 with fifth or sixth character 1-4 or 6)
Revise Revise Revise		Code first underlying disease, such as: ankylosing spondylitis (M45) congenital syphilis (A50.5-) early congenital syphilis (A50.0-, A51.2)
Add	K55	Vascular disorders of intestine Excludes2: angioectasia (angiodysplasia) duodenum (K31.81-)
Delete	K56	Paralytic ileus and intestinal obstruction without hernia K56.6 Other and unspecified intestinal obstruction K56.69 Other intestinal obstruction Excludes1: intestinal condition code to condition obstruction due to specified
Revise	K71	Toxic liver disease Code first poisoning due to drug or toxin, if applicable (T36-T65 with fifth or sixth character 1-4 or 6)

L24 Irritant contact dermatitis

Revise

Revise

L24.A Irritant contact dermatitis due to friction or contact with body

fluids

Revise L24.A9 Irritant contact dermatitis due to friction or contact with

other specified body fluids

Irritant contact dermatitis related to endotracheal tube Irritant contact dermatitis related to \www.ound fluids,

exudate

L53 Other erythematous conditions

L53.0 Toxic erythema

Revise Code first poisoning due to drug or toxin, if applicable (T36-T65

with fifth or sixth character 1-4 or 6)

Metabolic disorders (E70-E88)

Excludes1: androgen insensitivity syndrome (E34.5-)

congenital adrenal hyperplasia (E25.0)

hemolytic anemias attributable to enzyme disorders (D55.-)

Marfan's syndrome (Q87.4-)

M24 Other specific joint derangements

M24.1 Other articular cartilage disorders

Excludes2: chondrocalcinosis (M11.1, M11.2-)

Revise metastatic calcification (E83.5<u>9</u>)

M34 Systemic sclerosis [scleroderma]

M34.2 Systemic sclerosis induced by drug and chemical

Revise Code first poisoning due to drug or toxin, if applicable (T36-T65

with fifth or sixth character 1-4 or 6)

M36 Systemic disorders of connective tissue in diseases classified elsewhere

M36.8 Systemic disorders of connective tissue in other diseases classified

elsewhere

Code first underlying disease, such as:

Revise alkaptonuria (E70.29) Revise ochronosis (E70.29)

M41 Scoliosis

Revise Excludes2: postprocedural scoliosis (M96.-) (M96.89)

Add postradiation scoliosis (M96.5)

Revise		M41.1 Juvenile and adolescent idiopathic scoliosis M41.12 Adolescent <u>idiopathic</u> scoliosis
Revise Revise	M83	Adult osteomalacia Excludes1: infantile and juvenile osteomalacia (E55.0) renal osteodystrophy (N25.0) rickets (active) (E55.0) rickets (active) sequelae (E64.3) vitamin D-resistant osteomalacia (E83.31) vitamin D-resistant rickets (active) (E83.31)
Revise	M89	Other disorders of bone M89.7 Major osseous defect Code first underlying disease, if known, such as: osteolysis (M89.5-)
Revise	M90	Osteopathies in diseases classified elsewhere M90.8 Osteopathy in diseases classified elsewhere Code first underlying disease, such as: vitamin-D-resistant rickets (E83.31)
Add	M97	Periprosthetic fracture around internal prosthetic joint Code first, if known, the specific type and cause of fracture, such as traumatic or pathological
Revise	N14	Drug- and heavy-metal-induced tubulo-interstitial and tubular conditions Code first poisoning due to drug or toxin, if applicable (T36-T65 with fifth or sixth character 1-4 or 6)
Revise	N16	Renal tubulo-interstitial disorders in diseases classified elsewhere Code first underlying disease, such as: Wilson's disease (E83.01)
Revise	N20	Calculus of kidney and ureter Excludes1: nephrocalcinosis (E83.59)
Revise	N29	Other disorders of kidney and ureter in diseases classified elsewhere Code first underlying disease, such as: nephrocalcinosis (E83.59)
Delete	O04	Complications following (induced) termination of pregnancy Excludes1: encounter for elective termination of pregnancy, uncomplicated (Z33.2) failed attempted termination of pregnancy (O07.)

Add		Excludes2: encounter for elective termination of pregnancy, uncomplicated (Z33.2) failed attempted termination of pregnancy (O07)
	O75	Other complications of labor and delivery, not elsewhere classified O75.8 Other specified complications of labor and delivery O75.82 Onset (spontaneous) of labor after 37 completed weeks of gestation but before 39 completed weeks gestation, with delivery by (planned) cesarean section
Revise		Code first to specify reason for planned cesarean section such as: previous cesarean delivery (O34.21 <u>-</u>)
	O87	Venous complications and hemorrhoids in the puerperium O87.0 Superficial thrombophlebitis in the puerperium
Add		Use additional code, if applicable, to identify the superficial vein thrombosis, such as thrombosis of superficial vessels of lower extremities (I80.0-)
	P00	Newborn affected by maternal conditions that may be unrelated to present pregnancy P00.8 Newborn affected by other maternal conditions P00.89 Newborn affected by other maternal conditions
Revise		Excludes-2: newborn affected by positive maternal group B streptococcus (GBS)colonization (P00.82)
	P04	Newborn affected by noxious substances transmitted via placenta or breast milk PO4.1. Nowhern affected by other meternal mediantion
Revise		P04.1 Newborn affected by other maternal medication Code first, if applicable, withdrawal symptoms from maternal use of drugs of addiction, if applicable (P96.1)
Add		withdrawal symptoms from therapeutic use of drugs in newborn (P96.2)
	P09	Abnormal findings on neonatal screening P09.3 Abnormal findings on neonatal screening for congenital hematologic disorders

Revise		Abnormal findings for hemoglobinothies hemoglobinopathy screening
Revise	P58	Neonatal jaundice due to other excessive hemolysis P58.4 Neonatal jaundice due to drugs or toxins transmitted from mother or given to newborn Code first poisoning due to drug or toxin, if applicable (T36-T65 with fifth or sixth character 1-4 or 6)
	D02	
Revise	P92	Feeding problems of newborn Excludes2: feeding problems in child over 28 days old (R63.3 <u>-</u>)
	Q84	Other congenital malformations of integument Q84.1 Congenital morphological disturbances of hair, not elsewhere classified
		Excludes1: Menkes' kinky hair syndrome (E83.09)
	Q87	Other specified congenital malformation syndromes affecting multiple systems
Revise Revise Revise Revise Revise		Q87.4 Marfan's syndrome Q87.40 Marfan's syndrome, unspecified Q87.41 Marfan's syndrome with cardiovascular manifestations Q87.410 Marfan's syndrome with aortic dilation Q87.418 Marfan's syndrome with other
Revise Revise		cardiovascular manifestations Q87.42 Marfan's syndrome with ocular manifestations Q87.43 Marfan's syndrome with skeletal manifestation
	R78	Findings of drugs and other substances, not normally found in blood
Delete		Excludes1: mental or behavioral disorders due to psychoactive substance use (F10-F19)
Add		Excludes2: mental or behavioral disorders due to psychoactive substance use (F10-F19)
	S22	Fracture of rib(s), sternum and thoracic spine
Revise		Code first also, if applicable, any associated: injury of intrathoracic organ (S27) spinal cord injury (S24.0-, S24.1-)
Add	S42	Fracture of shoulder and upper arm Excludes2: periprosthetic fracture around internal prosthetic shoulder joint (M97.3)

Add	S52	Fracture of forearm Excludes2: fracture at wrist and hand level (S62) periprosthetic fracture around internal prosthetic elbow joint (M97.4)
Add	S72	Fracture of femur S72.0 Fracture of head and neck of femur Excludes2: physeal fracture of upper end of femur (S79.0-) physeal fracture of lower end of femur (S79.1-)
Add	S82	Fracture of lower leg, including ankle Excludes2: fracture of foot, except ankle (S92) periprosthetic fracture around internal prosthetic ankle joint (M97.2) periprosthetic fracture around internal prosthetic implant of knee joint (M97.1-)
Revise	T80	Complications following infusion, transfusion and therapeutic injection Excludes2: any encounters with medical care for postprocedural conditions in which no complications are present, such as: poisoning and toxic effects of drugs and chemicals (T36-T65 with fifth or sixth character 1-4 or 6)
Revise	T81	Complications of procedures, not elsewhere classified Excludes2: complications following immunization (T88.0-T88.1) poisoning and toxic effects of drugs and chemicals (T36- T65 with fifth or sixth character 1-4 or 6)
Delete		T81.1 Postprocedural shock Shock during or resulting from a procedure, not elsewhere classified Excludes1: anaphylactic shock NOS (T78.2) septic shock (R65.21)
Add Add Add Add Add		T81.8 Other complications of procedures, not elsewhere classified T81.83 Persistent postprocedural fistula Code also, if applicable, site of fistula such as: anal fistula (K60.3) anorectal fistula (K60.5) bladder fistula (N32.2) other female intestinal-genital tract fistulae (N82.4)
	T88	Other complications of surgical and medical care, not elsewhere classified

Excludes2: complication following infusion, transfusion and

therapeutic injection (T80.-)

Revise poisoning and toxic effects of drugs and chemicals (T36-

T65 with fifth or sixth character 1-4 or 6)

INDEX MODIFICATION PROPOSED ADDENDA

All proposed effective October 1, 2023

Abuse

- - opioid F11.10

- - - with

Add ---- opioid-associated amnestic syndrome F11.118

Accident

Delete - cerebral I63.9

Revise - cerebrovascular (embolie) (ischemic) (thrombotic) I63.9

Add - chronic (old) (remote) (imaging) (without sequelae) Z86.73

- with residual defects - see Sequelae, disease, cerebrovascular

Add -- embolic I63.-Add -- thrombotic I63.-

Revise Acrochondrohyperplasia -see Syndrome, Marfan's

Additional -see also Accessory

Revise - chromosome(s) (see also Trisomy) Q99.8 Add - marker - see Extra, marker chromosomes

Aneurysm (anastomotic) (artery) (cirsoid) (diffuse) (false) (fusiform) (multiple)

(saccular) I72.9

Revise - sinus of Valsalva Q25.49 <u>Q25.43</u>

Revise Angiospasm (peripheral) (traumatic) (vessel) (see also vasospasm) I73.9

Revise Arachnodactyly -see Syndrome, Marfan's

Arteriosclerosis, arteriosclerotic (diffuse) (obliterans) (of) (senile) (with calcification) I70.90

- brain I67.2

Add -- with infarction— see Occlusion, artery, brain or cerebral, with infarction

- central nervous system I67.2

Add -- with infarction— see Occlusion, artery, cerebral or precerebral, with infarction

- cerebral I67.2

Add -- with infarction— see Occlusion, artery, brain or cerebral, with infarction

- cerebrovascular I67.2

Add -- with infarction— see Occlusion, artery, brain or cerebral, with infarction

Revise - heart (disease) -see Arteriosclerosis, coronary (artery),

- vertebral (artery) I67.2

Add -- with infarction— see Occlusion, artery, vertebral, with infarction

Asphyxia, asphyxiation (by) R09.01 Revise - mucus -see also Foreign body, respiratory tract, causing, asphyxia asphyxiation Checking (of) - wound Z48.0-Add - - postoperative – see also Aftercare Revise - pulmonale (chronic) I27.81 - - acute I26.09 Add - - - without pulmonary embolism I27.81 Add - - chronic I27.81 Add - - - with chronic pulmonary embolism I27.82 Counseling (for) Z71.9 - medical (for) Z71.9 Revise - - person living alone (see also Consultation, specified reason NEC) Z60.2 Dependence (on) (syndrome) F19.20 - - opioid F11.20 - - - with Add - - - - opioid-associated amnestic syndrome F11.228 Dermatitis (eczematous) L30.9 - due to Add - - exudate (wound fluids) L24.A9 - contact (occupational) L25.9 - - irritant L24.9 - - - due to ---- body fluids L24.A0 Add ---- feces L24.A2 Add ---- urine L24.A2 Add - - - - wound exudate L24.A9 Add --- exudate L24.A9 Add - - - - friction L24.A0 - due to Add - - exudate -see Dermatitis, contact, irritant Diabetes, diabetic (mellitus) (sugar) E11.9

- - pancreatectomy - see Diabetes, specified type NEC

- due to

Add

Difficult, difficulty (in)

- feeding R63.30

Add -- elderly R63.39 Add -- infant NOS R63.39

Disease, diseased -see also Syndrome

Revise - arterial (see also Disease, artery) 177.9

Revise - occlusive -see also Occlusion, by site

Revise - artery (see also Disease, arterial) 177.9

- lung J98.4

- - interstitial J84.9

Add --- drug-induced - see Disorder, lung, interstitial, drug-induced

- - - of childhood, specified NEC J84.848

Add ---- drug-induced - see Disorder, lung, interstitial, drug-induced

- peripheral

- - vascular NOS I73.9

Add --- in diabetes mellitus -see Diabetes, by type, with peripheral angiopathy

Revise Dolichostenomelia -see Syndrome, Marfan's

Duodenitis (nonspecific) (peptic) K29.80

Add - erosive - see Ulcer, duodenum

Duplication, duplex -see also Accessory

Revise - chromosome NEC – see also Trisomy

Elevated, elevation

Revise - troponin R77.8 R79.89

Add -- due to

Add --- myocardial infarction – see Infarction, myocardial

Add --- myocardial injury – see Injury, myocardial

Embolism (multiple) (paradoxical) I74.9

- vein (acute) I82.90

Add -- calf muscular I82.46-Add -- chronic I82.56-Add -- peroneal I82.45-Add -- chronic I82.55-

Encephalitis (chronic) (hemorrhagic) (idiopathic) (nonepidemic) (spurious)

(subacute) G04.90

- in (due to)

Revise -- systemic lupus erythematosus M32.19 [G05.3] Revise - lupus erythematosus, systemic M32.19 [G05.3]

Encounter (with health service) (for) Z76.89

Add - postoperative – see also Aftercare

Enlargement, enlarged -see also Hypertrophy

- prostate N40.0

- - with lower urinary tract symptoms (LUTS) N40.1

Add --- nodular N40.3 Add -- nodular N40.2

Add --- with lower urinary tract symptoms (LUTS) N40.3

- - without lower urinary tract symtpoms (LUTS) N40.0

Add --- nodular N40.2

Epilepsy, epileptic, epilepsia (attack) (cerebral) (convulsion) (fit) (seizure)

G40.909

Add - Partial – see Epilepsy, localization-related, symptomatic, with simple partial

seizures

Erosion - come back to

Add - cameron – see Ulcer, stomach

Esophagitis (acute) (alkaline) (chemical) (chronic) (infectional) (necrotic) (peptic)

(postoperative) (without bleeding) K20.90

- reflux K21.00

Add -- with bleeding K21.01

Exudate

Add

Add

Revise

Add - causing irritant dermatitis L24.A9

Revise - wound fluids causing irritant dermatitis L24.A9

Failure, failed
- hepatic K72.90
- - end stage K72.10
- - - with coma K72.11

Fistula (cutaneous) L98.8

Revise - postoperative, persistent (see also Fistula, by site, if known) T81.83

Delete -- specified site -see Fistula, by site

Granuloma L92.9 - Hodgkin C81.9-

Add Hemimegalencephaly Q04.5

Hygroma (congenital) (cystic) D18.1

Add - subdural – see Leak, cerebrospinal fluid

Hyperplasia, hyperplastic

Revise - prostate (adenofibromatous) (nodular) N40.0

- - with lower urinary tract symptoms (LUTS) N40.1

Add --- nodular N40.3 Add -- nodular N40.2

Add --- with lower urinary tract symptoms (LUTS) N40.3

- - without lower urinary tract symtpoms (LUTS) N40.0

Add --- nodular N40.2

Infarct, infarction

Revise - cerebral (acute) (chronic) - see also Occlusion, artery cerebral or precerebral,

with infarction I63.9-

Add -- chronic (old) (remote) (imaging) (without sequelae) Z86.73
Add -- with residual defects - see Sequelae, disease, cerebrovascular

- myocardium, myocardial (acute) (with stated duration of 4 weeks or less) I21.9

Revise -- Q wave (see also, Infarct, myocardium, <u>ST elevation</u>, by site) I21.3 Revise -- transmural (see also, Infarct, myocardium, ST elevation, by site) I21.3

Keratosis

Add - lichenoid L82.0

Add Lactate, elevated – see Acidosis, lactic

Lesion(s) (nontraumatic)

Add - cameron – see Ulcer, stomach

Add Lichenoid, keratosis – see Keratosis, lichenoid

Loose -see also condition

- body

- - joint M24.00

Add --- temporomandibular M24.08

Lymphoma (of) (malignant) C85.90

Revise - Hodgkin C81.9-

Revise Marfan's syndrome -see Syndrome, Marfan's

Microangiopathy (peripheral) I73.9

- thrombotic M31.10

Revise -- hematopoietic stem cell transplantation-associated [HSCT-TMA] M31.10

M31.11

Add Monoparesis – see Monoplegia

Myelopathy (spinal cord) G95.9

- in (due to)

Add -- disease classified elsewhere G99.2

Add Non-accidental trauma – see Abuse, physical

Osteoporosis (female) (male) M81.0

- age-related M81.0

- - with current pathologic fracture M80.00

Add --- femur M80.05 Add --- hip M80.05

Revise --- ilium <u>M80.05 M80.0A</u> Revise --- ischium <u>M80.05 M80.0A</u> Revise --- pelvis <u>M80.05 M80.0A</u>

Add --- pubis ramus – see Osteoporosis, pelvis

- disuse M81.8

- - with current pathological fracture M80.80

Add --- femur M80.85 Add --- hip M80.85

Revise --- ilium <u>M80.85- M80.8A</u> Revise --- ischium <u>M80.85- M80.8A</u> Revise --- pelvis <u>M80.85- M80.8A</u>

Add --- pubis ramus – see Osteoporosis, pelvis

- postmenopausal M81.0

- - with pathological fracture M80.00

Add --- femur M80.05 Add --- hip M80.05

Revise --- ilium <u>M80.05- M80.0A</u> Revise --- ischium <u>M80.05- M80.0A</u> Revise --- pelvis <u>M80.05- M80.0A</u>

Add --- pubis ramus – see Osteoporosis, pelvis

- specified type NEC M81.8

- - with pathological fracture M80.80

Add --- femur M80.85 Add --- hip M80.85

Revise --- ilium <u>M80.85- M80.8A</u>
Revise --- ischium <u>M80.85- M80.8A</u>
Revise --- pelvis <u>M80.85- M80.8A</u>
Add --- pubis ramus M80.8A

Revise Postoperative (postprocedural) -see also Complication, postoperative

Add - visit – see also Aftercare

Add - wound check – see also Aftercare

Problem (with) (related to)

Revise - feeding (elderly) (infant) NOS R63.39

Add Rhinosinusitis – see Sinusitis

Schizophrenia, schizophrenic F20.9

Revise - childhood type F84.5 F20.9

Revise Sciatica (infective) M54.3-

Scoliosis (acquired) (postural) M41.9

Add - postprocedural scoliosis M96.89

Sepsis (generalized) (unspecified organism) A41.9

Revise - escherichia coli (E. coli) A41.5<u>1</u>
Revise - gram-negative (organism) A41.5<u>0</u>
Add - other gram-negative A41.59

Add - pseudomonas (pseudomonas aeruginosa) A41.52

Add - serratia A41.53

Spider

Revise - fingers -see Syndrome, Marfan's roes -see Syndrome, Marfan's

Spondyloarthritis

Revise - axial -see also Spondlyitis Spondylitis, ankylosing

Spondylosis M47.9

- specified NEC M47.899

Revise -- facet joint -see also Spondylosis M47.819

Stasis

- ulcer -see Varix, leg, with, ulcer

Revise -- without varicose veins (see also Ulcer, by site) I87.2

Revise Stroke (apoplectic) (brain) (embolic) (ischemic) (paralytic) (thrombotic) I63.9

Add - cerebrovascular (ischemic) I63.9

Add -- chronic (old) (remote) (imaging) (without sequelae) Z86.73
Add -- with residual defects - see Sequelae, disease, cerebrovascular

Add -- embolic I63.-Add -- thrombolic I63.-

Syndrome -see also Disease

Revise - schizophrenic, of childhood NEC F84.5 F20.9

Add - Snyder-Robinson Q87.89

Therapy

- drug, long-term (current) (prophylactic)

Add -- oral antidiabetic Z79.84 Add -- oral hypoglycemic Z79.84

Thrombosis, thrombotic (bland) (multiple) (progressive) (silent) (vessel) I82.90

Add -- calf muscular I82.46-Add -- chronic I82.56-Add -- peroneal I82.45-Add -- chronic I82.55-

Trauma, traumatism -see also Injury

Add - non-accidental – see Abuse, physical

Ulcer, ulcerated, ulcerating, ulceration, ulcerative

Add - cameron – see Ulcer, stomach

- duodenum, duodenal (eroded) (peptic) K26.9

Revise -- chronic (erosive) K26.7

- stasis (venous) -see Varix, leg, with, ulcer

Revise -- without varicose veins (see also Ulcer, by site) 187.-

Use (of)

- opioid F11.90

- - with

Add --- opioid-associated amnestic syndrome F11.988

Revise Vasospasm (vasoconstriction) (see angiospasm) I73.9

Wound check Z48.0-

Add - postoperative – see also Aftercare

External Cause of Morbidity Index Addenda

Accident

Delete - animal-rider - see Accident, transport, animal-rider

- animal-drawn vehicle -see Accident, transport, animal-drawn vehicle occupant

Add - animal-rider -see Accident, transport, animal-rider

Place of occurrence Y92.9

Add - bar Y92.59 Add - tavern Y92.59

Prolonged

Revise - sitting in transport vehicle -see Travel, by type of vehicle Sitting