

ICD-10 Coordination and Maintenance Committee Meeting March 20, 2024 Diagnosis Agenda

Welcome and announcements
Captain Monica Leonard
Co-Chair, ICD-10 Coordination and Maintenance Committee

Diagnosis Topics:

Contents

onormal rheumatoid factor and anti-citrullinated protein antibody without a diagnosis of rheu hritis	
Traci Ramirez	14
Kevin D. Deane, MD/PhD	
Professor of Medicine, William P. Arend Endowed Chair in Rheumatology Research	
The University of Colorado, Division of Rheumatology	
lverse effect to Fluoroquinolones	18
Traci Ramirez	
Stefan Pieper, MD	
Fluoroquinolone Toxicity Study	
POL1-Mediated Kidney Disease	21
Traci Ramirez	
Jeff Giullian, MD, MBA	
Renal Physicians Association	
ked Egg Tolerance in Egg Allergy	25
Cheryl Bulllock	
ked Milk Tolerance in Milk Allergy	30
Cheryl Bullock	
nnabis Hyperemesis Syndrome	35
Cheryl Bullock	

Coding of Firearm Injuries Default	39
Traci Ramirez	
Option 1	
Deborah Azrael, PhD	
Harvard Injury Control Research Center	
Option 2	
Tom Largo	
Michigan Department of Health and Human Services	
Co-chair of the Council of State and Territorial Epidemiologists (CSTE) Injury Epidemiolog	y
and Surveillance Subcommittee	
Demodex blepharitis	11
Shannon McConnell-Lamptey	
Walt Whitley, OD, MBA, FAAO	
Virginia Eye Consultants	
Eyecare Partners, LLC	
Digital Literacy	14
Traci Ramirez	
Sarah C DeSilvey, DNP, FNP-C	
Director of Terminology, The Gravity Project	
Pediatric Faculty, Larner College of Medicine at the University of Vermont	
Do Not Resuscitate	16
David Berglund, MD	
Alyssa Keeley, CCS, CPC, CPMA	
Coding Educator	
Bon Secours Mercy Health	
Encounter for prophylactic removal of fallopian tube(s) for persons with no known genetic/familial	
risk factors	1 9
Traci Ramirez	
Rebecca Stone, MD	
Associate Professor and Director of Gynecologic Oncology	
Department of Gynecology and Obstetrics	
Johns Hopkins School of Medicine	
Encounter for weaning from ventilator	54
Traci Ramirez	
Frederic Celestin, MD	
National Medical Director, Clinical Performance	
OptumCare	
External Causes: Fishing hook and wood splitting	56
Cheryl Bullock	
Flank Anatomical Specificity	57
Cheryl Bullock	_
Foreign Body Entering Into or Through a Natural Orifice	8
Cheryl Bullock	

Genetic Neurodevelopmental Disorders	69
David Berglund, MD	
Gulf War Illness	75
Shannon McConnell-Lamptey	
Hyperoxaluria	77
Shannon McConnell-Lamptey	
Hypothalamic obesity	80
David Berglund, MD	
Jennifer Miller, MD	
Rhythm Pharmaceuticals	
Kabuki Syndrome	83
Cheryl Bullock	
Margaret Adam, MD	
Professor of Pediatrics	
University of Washington School of Medicine	
Ledderhose Disease/Plantar Fibromatosis & Plantar Fasciitis	86
Shannon McConnell-Lamptey	
Paul J. Carroll DPM, FACFAS	
Podiatric Surgeon, MedStar Health	
Leukocyte Adhesion Deficiency Type I (LAD-I)	88
Cheryl Bullock	
Susan Prockop, MD	
Director of Clinical and Translational Research, Stem Cell Transplant Program	
Dana-Farber/Boston Children's Cancer and Blood Disorders Center	
Lynch Syndrome	92
David Berglund, MD	
Peter P. Stanich, MD	
Associate Professor, Division of Gastroenterology, Hepatology & Nutrition, The	Ohio State
University Wexner Medical Center	
Member, Fight CRC Genetics and Family History Advisory Council	
Target of (perceived) adverse discrimination and persecution	95
Traci Ramirez	
Kenyetta Jackson, MPH	
Director for Health Equity Initiatives	
American Medical Association	
Center for Health Equity	
Thyroid eye disease	97
Shannon McConnell-Lamptey	
Paola Mina-Osorio, MD, PhD	
VP, Medical Affairs	
Immunovant, Inc.	

Topical steroid withdrawal	100
Shannon McConnell-Lamptey	
Peter A. Lio, MD	
Medical Dermatology Associates of Chicago	
Clinical Assistant Professor of Dermatology and Pediatrics	
Northwestern Feinberg School of Medicine	
Type 2 diabetes mellitus in remission	102
Shannon McConnell-Lamptey	
Usher Syndrome	Error! Bookmark not defined
Shannon McConnell-Lamptey	
Xylazine-associated wounds	105
Shannon McConnell-Lamptey	
Daniel Teixeira da Silva, MD, MSHP	
Division of Substance Use Prevention and Harm Reduction	
Philadelphia Department of Public Health	
TABULAR MODIFICATIONS PROPOSED ADDENDA	121
INDEX MODIFICATION PROPOSED ADDENDA	
ICD-10-CM EXTERNAL CAUSE OF INJURIES INDEX	
ICD-10-CM TABLE of DRUGS and CHEMICALS	
ICD-10-CM TABLE of NEOPLASMS	

ICD-10 TIMELINE

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

March 19-20, 2024 The ICD-10 Coordination and Maintenance Committee Meeting.

March 2024 Recordings and slide presentations of the March 19-20, 2024 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-billing/icd-10-codes/icd-10-

 $\underline{coordination\text{-}maintenance\text{-}committee\text{-}materials}$

April 1, 2024 There will be no new ICD-10-CM codes implemented on April 1, 2024, but

there will be addenda changes.

April 2024 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 2025 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/payment/prospective-payment-systems/acute-

inpatient-pps

May 17, 2024 Deadline for receipt of public comments on proposed new diagnosis codes

and revisions discussed at the March 19-20, 2024 ICD-10 Coordination

and Maintenance Committee Meeting being considered for

implementation on October 1, 2025.

May/June 2024 Final addendum posted on web pages as follows:

Diagnosis addendum -

https://www.cdc.gov/nchs/icd/Comprehensive-Listing-of-ICD-10-CM-

Files.htm

Procedure addendum -

https://www.cms.gov/medicare/coding-billing/icd-10-codes

June 7, 2024 Deadline for requestors: Those members of the public requesting that

topics be discussed at the September 10-11, 2024 ICD-10 Coordination and Maintenance Committee Meeting must have their requests submitted

to CMS for procedures and NCHS for diagnoses.

Procedure code requests should be directed to CMS at: https://mearis.cms.gov.

Diagnosis code requests should be directed to NCHS at: nchsicd10cm@cdc.gov.

Requestors of new ICD-10-CM diagnosis codes should indicate if they are submitting their code request for consideration for an early April 1, 2025 implementation date or an October 1, 2025 implementation date.

The ICD-10 Coordination and Maintenance Committee will make efforts to accommodate requested early implementation dates if the following criteria are met: new diseases or disorders and / or public health importance or emergency.

July 2024

Federal Register notice for the September 10-11, 2024 ICD-10 Coordination and Maintenance Committee Meeting will be published. This will include the tentative agenda.

August 1, 2024

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, 2024.

This rule can be accessed at:

https://www.cms.gov/medicare/payment/prospective-payment-systems/acute-inpatient-pps

August 2024

Tentative agenda for the Procedure portion of the September 10, 2024 ICD-10 Coordination and Maintenance Committee Meeting will be posted on the CMS webpage at –

https://www.cms.gov/medicare/coding-billing/icd-10-codes/icd-10-coordination-maintenance-committee-materials

Tentative agenda for the Diagnosis portion of the September 11, 2024 ICD-10 Coordination and Maintenance Committee Meeting will be posted on the NCHS webpage at - https://www.cdc.gov/nchs/icd/icd10cm_maintenance.htm

September 10-11, 2024

The September 2024 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 2024

Recordings and slide presentations of the September 10-11, 2024 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-billing/icd-10-codes/icd-10-coordination-maintenance-committee-materials

October 1, 2024

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/Comprehensive-Listing-of-ICD-10-CM-Files.htm

Procedure addendum -

https://www.cms.gov/medicare/coding-billing/icd-10-codes

October 11, 2024

Deadline for receipt of public comments on proposed new codes discussed at the September 10-11, 2024 ICD-10 Coordination and Maintenance Committee Meeting being considered for implementation on April 1, 2025, if applicable.

November 2024

Any new ICD-10 codes that will be implemented on the following April 1 will be announced. Information on any new codes to be implemented April 1, 2025 will be posted on the following websites:

https://www.cdc.gov/nchs/icd/Comprehensive-Listing-of-ICD-10-CM-Files.htm

https://www.cms.gov/medicare/coding-billing/icd-10-codes/latest-news

November 15, 2024

Deadline for receipt of public comments on proposed new codes and revisions discussed at the September 10-11, 2024 ICD-10 Coordination and Maintenance Committee Meeting being considered for implementation on October 1, 2025.

December 6, 2024

Deadline for requestors: Those members of the public requesting that topics be discussed at the March 18-19, 2025 ICD-10 Coordination and Maintenance Committee Meeting must have their requests submitted to CMS for procedures and to NCHS for diagnoses by this date.

Procedure code requests should be directed to CMS at: https://mearis.cms.gov.

Diagnosis code requests should be directed to NCHS at: nchsicd10cm@cdc.gov.

Requestors of new ICD-10-CM diagnosis codes should indicate if they are submitting their code request for consideration for an early October 1, 2025, or an early April 1, 2026, implementation date or an October 1, 2026 implementation date.

The ICD-10 Coordination and Maintenance Committee will make efforts to accommodate requested early implementation dates if the following criteria are met; new diseases or disorders and / or public health importance or emergency.

January 2025

Federal Register notice for the March 18-19, 2025 ICD-10 Coordination and Maintenance Committee Meeting will be published. This will include the tentative agenda.

February 2025

Tentative agenda for the Procedure portion of the March 18, 2025 ICD-10 Coordination and Maintenance Committee Meeting posted on CMS webpage at:

 $\underline{\text{Mttps://www.cms.gov/Medicare/Coding/ICD10/C-and-M-Meeting-Materials.html}}$

Tentative agenda for the Diagnosis portion of the March 19, 2025 ICD-10 Coordination and Maintenance Committee Meeting posted on NCHS homepage at:

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

February 1, 2025

ICD-10 MS-DRG Grouper software and related materials posted on CMS webpage at: https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/MS-DRG-Classifications-and-Software

February 1, 2025

Any updates to the ICD-10-CM and ICD-10-PCS Coding Guidelines will be posted on the following websites:

https://www.cdc.gov/nchs/icd/Comprehensive-Listing-of-ICD-10-CM-Files.htm

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

February 1, 2025

All ICD-10-CM and ICD-10-PCS code update files (includes April 1 update and full files from prior October 1) will be posted on the following websites:

 $\underline{https://www.cdc.gov/nchs/icd/Comprehensive-Listing-of-ICD-10-CM-}\\ \underline{Files.htm}$

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

March 18-19, 2025

The 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.

March 2025

Recordings and slide presentations of the March 18-19, 2025 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, 2025

Any new or revised ICD-10 codes or addenda previously announced will be implemented on April 1, 2025.

April 18, 2025

Deadline for receipt of public comments on proposed new codes and revisions discussed at the March 18-19, 2025 ICD-10 Coordination and Maintenance Committee Meeting being considered for implementation on October 1, 2025.

April 2025

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 2026 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 16, 2025

Deadline for receipt of public comments on proposed new codes and revisions discussed at the March 18-19, 2025 ICD-10 Coordination and Maintenance Committee Meeting being considered for implementation on April 1, 2026, if applicable.

Deadline for receipt of public comments on proposed new diagnosis codes and revisions discussed at the March 18-19, 2025 ICD-10 Coordination and Maintenance Committee Meeting being considered for implementation on October 1, 2026.

May/June 2025

Final addendum posted on web pages as follows:

Diagnosis addendum -

https://www.cdc.gov/nchs/icd/Comprehensive-Listing-of-ICD-10-CM-Files.htm

Procedure addendum -

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

June 6, 2025

Deadline for requestors: Those members of the public requesting that topics be discussed at the September 9-10, 2025 ICD-10 Coordination and Maintenance Committee Meeting must have their requests submitted to CMS for procedures and NCHS for diagnoses.

Procedure code requests should be directed to CMS at: https://mearis.cms.gov.

Diagnosis code requests should be directed to NCHS at: nchsicd10cm@cdc.gov.

Requestors of new ICD-10-CM diagnosis codes should indicate if they are submitting their code request for consideration for an early April 1, 2026, implementation date or an October 1, 2026 implementation date.

The ICD-10 Coordination and Maintenance Committee will make efforts to accommodate requested early implementation dates if the following criteria are met: new diseases or disorders and / or public health importance or emergency.

July 2025

Federal Register notice for the September 9-10, 2025 ICD-10 Coordination and Maintenance Committee Meeting will be published. This will include the tentative agenda.

August 1, 2025

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, 2025.

This rule can be accessed at: https://www.cms.gov/Medicare/Medicare-Feefor-Service-Payment/AcuteInpatientPPS/index.html

August 2025

Tentative agenda for the Procedure portion of the September 9, 2025 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 10, 2025 ICD-10 Coordination and Maintenance Committee Meeting will be posted on the NCHS webpage at - https://www.cdc.gov/nchs/icd/icd10cm_maintenance.htm

September 9-10, 2025

The September 2025 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 2025 Record

Recordings and slide presentations of the September 9-10, 2025 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, 2025

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/Comprehensive-Listing-of-ICD-10-CM-Files.htm

Procedure addendum -

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

Contact Information

Comments on the diagnosis proposals presented at the ICD Coordination and Maintenance Committee meeting should be sent to the following email address: <a href="mailto:nchickletcharmootrage.nchicklet

Captain Monica Leonard	(404) 718-6443
David Berglund, MD	(301) 458-4095
Cheryl Bullock	(301) 458-4297
Shannon McConnell-Lamptey	(301) 458-4612
Traci Ramirez	(301) 458-4454

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.

Abnormal rheumatoid factor and anti-citrullinated protein antibody without a diagnosis of rheumatoid arthritis

The proposal was previously presented at the September 2022 and September 2023 ICD10 Coordination and Maintenance committee meeting and is being represented with changes received from public comments.

Rheumatoid arthritis (RA) is a well-known autoimmune condition that is characterized by the presence of inflammatory arthritis (IA)¹. Furthermore, in up to 80% of individuals with RA there are also abnormalities of circulating biomarkers including but not limited to the autoantibodies rheumatoid factor (RF) and anti-citrullinated proteins antibody (called 'ACPA') a subset of which that is commonly tested in clinical is anti-cyclic citrullinated protein (or peptide) antibodies (called 'anti-CCP')².

The current paradigm for the diagnosis and treatment of RA is for a clinician to identify joint findings that are determined to be IA, diagnose that as RA based on clinical, laboratory and radiographic features, and initiate treatment. Furthermore, this is the typical clinical situation when the existing ICD-10-CM codes for RA (e.g. M06/M05) are applied. Notably, RA may be formally classified according to established criteria^{3, 4}; however, in clinical practice RA is a clinical diagnosis that may or may not meet these criteria.

However, it is now well-established that RA-related immunologic tests such as RF and ACPA/anti-CCP can be present in individuals in absence of and prior to the appearance of IA, and predictive of future onset of clinical RA⁵. Furthermore, individuals who have abnormal RA-related immunologic tests without IA are identified in growing numbers in clinical care. Notably, these individuals may have symptoms such as joint pain, stiffness or swelling, but no other objective evidence of IA⁶⁻⁸. There are current recommendations for medical follow-up and lifestyle changes (e.g., smoking cessation) that can be applied to these individuals. In addition, the predictive ability of RF and ACPA for future clinical RA has underpinned multiple clinical observational studies and prevention trials in RA⁹⁻¹³. In particular, two studies have recently demonstrated that abatacept significantly reduces rate of progression from an anti-CCP positive state to clinical RA^{14, 15}. Based on this, there are efforts underway to obtain approval for pharmacologic therapy in this condition to prevent or delay the future onset of clinical RA.

There are ICD-10-CM codes that can be used to designate clinical RA. However, there is not currently a way in the existing ICD-10-CM system to have a single code to designate clearly in the main code title individuals who may have abnormal RA-related autoantibodies, but <u>not</u> have a diagnosis of clinical RA. As such, the introduction of a new code to accurately designate an

individual who has abnormal immunologic tests of RF and/or anti-CCP will facilitate clinical designation and care of these individuals, as well as facilitate clinical research.

This proposal was submitted by The University of Colorado, Division of Rheumatology and is supported by the American College of Rheumatology (ACR).

References

- 1. Smolen JS, Aletaha D, Barton A, Burmester GR, Emery P, Firestein GS, Kavanaugh A, McInnes IB, Solomon DH, Strand V, Yamamoto K. Rheumatoid arthritis. Nat Rev Dis Primers. 2018;4:18001. Epub 2018/02/09. doi: 10.1038/nrdp.2018.1. PubMed PMID: 29417936.
- 2. Whiting PF, Smidt N, Sterne JA, Harbord R, Burton A, Burke M, Beynon R, Ben-Shlomo Y, Axford J, Dieppe P. Systematic review: accuracy of anti-citrullinated Peptide antibodies for diagnosing rheumatoid arthritis. Ann Intern Med. 2010;152(7):456-64; W155-66. Epub 2010/04/07. doi: 10.7326/0003-4819-152-7-201004060-00010. PubMed PMID: 20368651.
- 3. Aletaha D, Neogi T, Silman AJ, Funovits J, Felson DT, Bingham CO, Birnbaum NS, Burmester GR, Bykerk VP, Cohen MD, Combe B, Costenbader KH, Dougados M, Emery P, Ferraccioli G, Hazes JM, Hobbs K, Huizinga TW, Kavanaugh A, Kay J, Kvien TK, Laing T, Mease P, Ménard HA, Moreland LW, Naden RL, Pincus T, Smolen JS, Stanislawska-Biernat E, Symmons D, Tak PP, Upchurch KS, Vencovský J, Wolfe F, Hawker G. 2010 Rheumatoid arthritis classification criteria: an American College of Rheumatology/European League Against Rheumatism collaborative initiative. Arthritis Rheum. 2010;62(9):2569-81. doi: 10.1002/art.27584. PubMed PMID: 20872595.
- 4. Arnett FC, Edworthy SM, Bloch DA, McShane DJ, Fries JF, Cooper NS, Healey LA, Kaplan SR, Liang MH, Luthra HS, et al. The American Rheumatism Association 1987 revised criteria for the classification of rheumatoid arthritis. Arthritis Rheum. 1988;31(3):315-24. Epub 1988/03/01. doi: 10.1002/art.1780310302. PubMed PMID: 3358796.
- 5. Deane KD, Holers VM. Rheumatoid Arthritis Pathogenesis, Prediction, and Prevention: An Emerging Paradigm Shift. Arthritis Rheumatol. 2021;73(2):181-93. Epub 2020/07/01. doi: 10.1002/art.41417. PubMed PMID: 32602263; PMCID: PMC7772259.
- 6. Stack RJ, van Tuyl LH, Sloots M, van de Stadt LA, Hoogland W, Maat B, Mallen CD, Tiwana R, Raza K, van Schaardenburg D. Symptom complexes in patients with seropositive arthralgia and in patients newly diagnosed with rheumatoid arthritis: a qualitative exploration of symptom development. Rheumatology (Oxford). 2014;53(9):1646-53. Epub 2014/04/15. doi: 10.1093/rheumatology/keu159. PubMed PMID: 24729397.
- 7. van Steenbergen HW, Aletaha D, Beaart-van de Voorde LJ, Brouwer E, Codreanu C, Combe B, Fonseca JE, Hetland ML, Humby F, Kvien TK, Niedermann K, Nuno L, Oliver S, Rantapaa-Dahlqvist S, Raza K, van Schaardenburg D, Schett G, De Smet L, Szucs G, Vencovsky J, Wiland P, de Wit M, Landewe RL, van der Helm-van Mil AH. EULAR definition of arthralgia suspicious for progression to rheumatoid arthritis. Ann Rheum Dis. 2017;76(3):491-6. Epub 2016/12/20. doi: 10.1136/annrheumdis-2016-209846. PubMed PMID: 27991858.
- 8. Ten Brinck RM, van Steenbergen HW, van Delft MAM, Verheul MK, Toes REM, Trouw LA, van der Helm-van Mil AHM. The risk of individual autoantibodies, autoantibody combinations and levels for arthritis development in clinically suspect arthralgia. Rheumatology (Oxford). 2017;56(12):2145-53. doi: 10.1093/rheumatology/kex340. PubMed PMID: 28968865; PMCID: PMC6703997.
- 9. Deane KD, Holers VM. Rheumatoid arthritis pathogenesis, prediction, and prevention: an emerging paradigm shift. Arth Rheum. 2021;73:181-93.

- 10. Gerlag DM, Safy M, Maijer KI, Tang MW, Tas SW, Starmans-Kool MJF, van Tubergen A, Janssen M, de Hair M, Hansson M, de Vries N, Zwinderman AH, Tak PP. Effects of B-cell directed therapy on the preclinical stage of rheumatoid arthritis: the PRAIRI study. Ann Rheum Dis. 2019;78(2):179-85. Epub 2018/12/07. doi: 10.1136/annrheumdis-2017-212763. PubMed PMID: 30504445; PMCID: PMC6352407.
- 11. Krijbolder DI, Verstappen M, van Dijk BT, Dakkak YJ, Burgers LE, Boer AC, Park YJ, de Witt-Luth ME, Visser K, Kok MR, Molenaar ETH, de Jong PHP, Böhringer S, Huizinga TWJ, Allaart CF, Niemantsverdriet E, van der Helm-van Mil AHM. Intervention with methotrexate in patients with arthralgia at risk of rheumatoid arthritis to reduce the development of persistent arthritis and its disease burden (TREAT EARLIER): a randomised, double-blind, placebocontrolled, proof-of-concept trial. Lancet. 2022;400(10348):283-94. doi: 10.1016/S0140-6736(22)01193-X. PubMed PMID: 35871815.
- 12. van Boheemen L, Turk S, Beers-Tas MV, Bos W, Marsman D, Griep EN, Starmans-Kool M, Popa CD, van Sijl A, Boers M, Nurmohamed MT, van Schaardenburg D. Atorvastatin is unlikely to prevent rheumatoid arthritis in high risk individuals: results from the prematurely stopped STAtins to Prevent Rheumatoid Arthritis (STAPRA) trial. RMD Open. 2021;7(1). doi: 10.1136/rmdopen-2021-001591. PubMed PMID: 33685928; PMCID: PMC7942258.
- 13. Deane K, Striebich C, Feser M, Demoruelle K, Moss L, Bemis E, Frazer-Abel A, Fleischer C, Sparks J, Solow E, James J, Guthridge J, Davis J, Graf J, Kay J, Danila M, Bridges L, Forbess L, O'Dell J, McMahon M, Grossman J, Horowitz D, Tiliakos A, Schiopu E, Fox D, Carlin J, Arriens C, Bykerk V, Jan R, Pioro M, Husni E, Fernandez-Pokorny A, Walker S, Booher S, Greenleaf M, Byron M, Keyes-Elstein L, Goldmuntz E, Holers M. Hydroxychloroquine Does Not Prevent the Future Development of Rheumatoid Arthritis in a Population with Baseline High Levels of Antibodies to Citrullinated Protein Antigens and Absence of Inflammatory Arthritis: Interim Analysis of the StopRA Trial (Abstract 1604). *Arthritis Rheumatol.* 74 (Suppl 9)2022.
- Cope AP, Jasenecova M, Vasconcelos JC, Filer A, Raza K, Qureshi S, D'Agostino MA, McInnes IB, Isaacs JD, Pratt AG, Fisher BA, Buckley CD, Emery P, Ho P, Buch MH, Ciurtin C, van Schaardenburg D, Huizinga T, Toes R, Georgiou E, Kelly J, Murphy C, Prevost AT, Norton S, Lempp H, Opena M, Subesinghe S, Garrood T, Menon B, Ng N, Douglas K, Koutsianas C, Cooles F, Falahee M, Echavez-Naguicnic I, Bharadwaj A, Villaruel M, Pande I, Collins D, Pegler S, Raizada S, Siebert S, Fragoulis G, Guinto J, Galloway J, Rutherford A, Barnes T, Jeffrey H, Patel Y, Batley M, O'Reilly B, Venkatachalam S, Sheeran T, Gorman C, Reynolds P, Khan A, Gullick N, Banerjee S, Mankia K, Jordan D, Rowlands J, Starmans-Kool M, Taylor J, Nandi P, Sahbudin I, Maybury M, Hider S, Barcroft A, McNally J, Kitchen J, Nisar M, Quick V. Abatacept in individuals at high risk of rheumatoid arthritis (APIPPRA): a randomised, double-blind, multicentre, parallel, placebo-controlled, phase 2b clinical trial. The Lancet. 2024. Epub February 13, 2024. doi: https://doi.org/10.1016/S0140-6736(23)02649-1.
- 15. Rech J, Tascilar K, Hagen M, Kleyer A, Manger B, Schoenau V, Hueber AJ, Kleinert S, Baraliakos X, Braun J, Kiltz U, Fleck M, Rubbert-Roth A, Kofler DM, Behrens F, Feuchtenberger M, Zaenker M, Voll R, Venhoff N, Thiel J, Glaser C, Feist E, Burmester GR, Karberg K, Strunk J, Cañete JD, Senolt L, Filkova M, Naredo E, Largo R, Krönke G, D'Agostino M-A, Østergaard M, Schett G. Abatacept inhibits inflammation and onset of rheumatoid arthritis in individuals at high risk (ARIAA): a randomised, international, multicentre, double-blind, placebo-controlled trial. The Lancet. 2024. Epub February 13, 2024. doi: https://doi.org/10.1016/S0140-6736(23)02650-8.

TABULAR MODIFICATIONS

M05 Rheumatoid arthritis with rheumatoid factor

New code M05.A Abnormal rheumatoid factor and anti-citrullinated peptide antibody

without rheumatoid arthritis

Add Abnormal anti-cyclic citrullinated peptide antibody and rheumatoid

factor

Add Abnormal CCP

Add Excludes1: rheumatoid arthritis without rheumatoid factor (M06.0)

Adverse effect to Fluoroquinolones

Fluoroquinolones (FQs) are a family of broad spectrum antibacterial agents that have been used widely as therapy for respiratory and urinary tract infections, as well as for other bacterial diseases [1]. In the United States in 2022, there were 14.8 million total fluoroquinolone prescriptions dispensed and 44 prescriptions per 1,000 of the population [2].

While the therapeutic efficacy of fluoroquinolones is clearly recognized and they are valuable for severe life-threatening infections, it is evident that fluoroquinolones are accompanied by a variety of systemic side effects and adverse effects. As reported by the FDA: "disabling side effects involving tendons, muscles, joints, nerves and the central nervous system, including agitation tremor, hallucinations, psychosis and convulsions" [3]. "Other adverse effects include, peripheral neuropathy, photosensitivity, retinal detachment, QTc prolongation, cardiac arrhythmia, gastrointestinal effects, hyperglycemia, hypoglycemia, and more" [4]. These side effects can occur hours to weeks after exposure to fluoroquinolones and may potentially be permanent [3].

In 2015, the FDA reported statistics showing that the top 6 disabling antibiotics were all fluoroquinolones, ranging from 9.9% - 31.1% of the total disabled percentage [5]. In 2010, the National Institute of Health reported the following fluoroquinolone statistics: besides FQ-induced tendon injury (0.14–0.4%), the most common adverse effects associated with FQ use are gastrointestinal (1–7%), neurological (0.1–0.3%), cutaneous eruptions (0.5–2.5%), gait disturbances (<1%), elevation of serum transaminases (1.8–2.5%) [6]. Nausea, vomiting, diarrhea and taste disturbance have been reported to occur in up to 20% of patients [7]. Fluoroquinolones are associated with a two- to fourfold increased risk of acute tendinopathy and tendon rupture in all ages. The incidence of this adverse effect may be up to 2% in patients aged 65 years and above [4]. FQ treated patients followed from 1997 to 2012, experienced 37,338 (2.1%) tendon ruptures, 3,246 (0.2%) retinal detachments, and 18,391 (1.1%) aortic aneurysms [7]. Adverse events of this antibiotic class range from acute to chronic, as noted in numerous FDA Black Box Warnings [8,9,10], briefings [11], webinar [6], and in fluoroquinolone research studies.

The FDA notes that adverse fluoroquinolone effects are underreported [12] and the occurrence is high in absolute numbers because of the vast quantities of prescriptions. In 2019, Bayer's Medical Director stated that the total combined use of fluoroquinolones was 800 million worldwide, and that is just data from one manufacturer [13]; the percentage that experience adverse effects (approximately 1 percent) would equate to 8 million individuals.

Representatives of the Fluoroquinolone Toxicity Study have requested the following tabular modifications.

References

[1] U.S. Food and Drug Administration (2016). Available at: https://www.fda.gov/drugs/information-drug-class/fda-approves-safety-labeling-changes-fluoroquinolones (Accessed: 17 November 2023).

- [2] Centers for Disease Control and Prevention (2022). Antibiotic Use & Stewardship. Available at: https://arpsp.cdc.gov/profile/antibiotic-use/fluoroquinolones (Accessed: 17 November 2023).
- [3] Center for Drug Evaluation and Research (2022). Oral and injectable fluoroquinolone antibiotics, U.S. Food and Drug Administration. Available at: https://www.fda.gov/drugs/fda-drug-safety-podcasts/fda-drug-safety-podcast-fda-updates-warnings-oral-and-injectable-fluoroquinolone-antibiotics-due (Accessed: 17 November 2023).
- [4] Baggio D, Ananda-Rajah MR. Fluoroquinolone antibiotics and adverse events. Aust Prescr. 2021 Oct;44(5):161-164. doi: 10.18773/austprescr.2021.035. Epub 2021 Oct 1. PMID: 34728881; PMCID: PMC8542490.
- [5] Daneman N, Lu H, Redelmeier DA. Fluoroquinolones and collagen associated severe adverse events: a longitudinal cohort study. BMJ Open. 2015 Nov 18;5(11):e010077. doi: 10.1136/bmjopen-2015-010077. PMID: 26582407; PMCID: PMC4654346.
- [6] U.S. Food and Drug Administration (2017). Fluoroquinolone safety labeling changes U.S. Food and Drug Administration, FDA/DER Drug Information Webinar. Available at: https://www.fda.gov/media/104060/download (Accessed: 17 November 2023).
- [7] Owens RC, Jr, Ambrose PG. Antimicrobial safety: focus on fluoroquinolones. Clin Infect Dis 2005;41Suppl 2:S144-57. 10.1086/428055. PMID: 15942881.
- [8] U.S. Food & Drug Administration. Available at: https://www.fda.gov/search?s=+Fluoroquinolone&sort_bef_combine=rel_DESC (Accessed: 17 November 2023).
- [9] Center for Drug Evaluation and Research (2018) FDA updates warnings for oral and injectable fluoroquinolone, U.S. Food and Drug Administration. Available at: https://www.fda.gov/drugs/drug-safety-and-availability/fda-drug-safety-communication-fda-updates-warnings-oral-and-injectable-fluoroquinolone-antibiotics (Accessed: 17 November 2023).
- [10] Food and Drug Administration (2016). FDA Drug Safety Communication: FDA advises restricting fluoroquinolone antibiotic use for certain uncomplicated infections; warns about disabling side effects that can occur together. Available at: https://www.fda.gov/drugs/drug-safety-and-availability/fda-drug-safety-communication-fda-advises-restricting-fluoroquinolone-antibiotic-use-certain. (Accessed: 17 November 2023)
- [11] FDA briefing for November 5, 2015. Page 18. FDA Adverse Event Reporting System Review.
- [12] Pieper, S (2021). Fluoroquinolone-Associated Disability (FQAD) Pathogenesis, Diagnostics, Therapy and Diagnostic Criteria: Side-effects of Fluoroquinolones. Springer, 1st ed. 2021 Edition.
- [13] Watts, D (2019). Antibiotic alert carte blanche M-net, Vimeo. Available at:

https://vimeo.com/315214287 (Accessed: 20 November 2023).mitochondrial toxicity: a collaborative investigation by scientists and members of a social network. The Journal of community and supportive oncology, 14(2), 54–65. https://doi.org/10.12788/jcso.0167.

TABULAR MODIFICATIONS

T36 Poisoning by, adverse effect of and underdosing of systemic antibiotics

New subcategory T36.A Poisoning by, adverse effect of and underdosing of fluoroquinolone

antibiotics

New sub-subcategory T36.AX Poisoning by, adverse effect of and underdosing of

fluoroquinolone antibiotics

New code T36.AX1 Poisoning by fluoroquinolone antibiotics, accidental

(unintentional)

New code T36.AX2 Poisoning by fluoroquinolone antibiotics,

intentional self-harm

New code T36.AX3 Poisoning by fluoroquinolone antibiotics, assault

New code T36.AX4 Poisoning by fluoroquinolone antibiotics,

undetermined

New code T36.AX5 Adverse effect of fluoroquinolone antibiotics

New code T36.AX6 Underdosing of fluoroquinolone antibiotics

APOL1-Mediated Kidney Disease

APOL1- Mediated Kidney Disease (AMKD) is a serious and progressive kidney condition associated with specific inheritable mutations of the APOL1 gene. AMKD clinically manifests as a spectrum of kidney pathologies and is associated with rapid progression to kidney failure. AMKD overwhelmingly affects people of Sub-Saharan African ancestry and is believed to be the most significant contributor to persistent health disparities in end-stage renal disease (ESRD) in the United States, which disproportionately affects (by roughly 3.5-fold) African Americans compared to European Americans.

New ICD-10-CM diagnosis codes ("N-codes") are being requested to specifically identify individuals with AMKD. In addition, status codes are being requested to track individuals with genetic risk-factor variants that have not yet manifested into clinically overt AMKD. These individuals are at much higher risk for severe and rapidly progressive kidney disease and should be both advised and monitored more closely.

AMKD is a kidney disorder associated with certain APOL1 genetic variants. The APOL1 gene is on chromosome 22 and encodes to the APOL 1 protein, a trypanolytic protein that plays a role in innate immunity against various *Trypanosoma* parasite species. The root cause of AMKD is two variants in the APOL1 gene (G1 and G2), which are predominantly found in people of Sub-Saharan African ancestry, including approximately 13% of African Americans (or about 5 million individuals). The G1 variant consists of "two amino acid substitutions (NM_003661.3 p.S342G and p.I384M) in near-perfect linkage, and the G2 [variant is] defined by a 2-aa deletion at the C terminus (NM_003661.3 p.delN388/Y389)." Two copies of either of these variants "cause a 7- to 10-fold increased risk of hypertension associated end-stage renal disease, a 10- to 17-fold increase in focal and segmental glomerulosclerosis, and a 29-fold increase in HIV nephropathy." APOL1 genetic variants have been associated with much of the excess risk of chronic kidney disease and ESRD, with some estimates showing that the lifetime risk of kidney disease in APOL1 dual-risk genetic variants individuals is at least 15% (versus 2% lifetime risk for European Americans).

Not all individuals with the G1/G2 variants develop AMKD. Rather, individuals with G1/G2 APOL1 risk variants develop AMKD when genetic factors interplay with epigenetic factors. Infectious or inflammatory epigenetic factors are known to be the "second hit" required to trigger AMKD in individuals with the two APOL1 risk variants.

AMKD is characterized by "kidney function decline, variable proteinuria levels, and hypertension." Precise expression of AMKD can have diverse clinical manifestations of different primarily kidney and kidney-associated pathologies. Generally, however, the presence of two APOL1 risk variants and chronic kidney disease is associated with rapid kidney disease progression to kidney failure relative to patients without two APOL1 risk variants, including higher rates of ESRD and greater progression of chronic kidney disease irrespective of diabetes status. For people with non-diabetic kidney disease and two APOL1 risk variants, dialysis is initiated on average 9-12 years earlier than people without the two risk variants.

There are limitations on the current data about the incidence, prevalence, and epidemiology of AMKD due to deficits in identification, which are compounded by the absence of a unique diagnosis code. Nonetheless, researchers have estimated that AMKD accounts for meaningful proportions of the clinical presentations of certain notable categories of kidney disease in people of Sub-Saharan African ancestry, including between 54% to 73% of presentation of focal segmental glomerulosclerosis (FSGS), 62% to 79% of HIV-associated neuropathy, 23% of hypertension-associated kidney disease, and 17% to 25% of lupus nephritis within this sub-population. A study also is underway to further estimate the prevalence of APOL1 genotypes and to identify individuals who may be eligible for clinical trials evaluating APOL1-targeted therapies. A rough estimate suggests that AMKD may affect as many as 800,000 people in the United States.

Current treatments for people with AMKD include sodium glucose transporter 2 inhibitor (SGLT2i) therapies, renin-angiotensin-aldosterone system inhibitor (RAASI) therapies and other antihypertensives, diuretics, immunosuppressants and other drugs such as mineralocorticoid receptor antagonists. These treatments are not unique to targeting AMKD but instead target the consequences of kidney disease and are used across a range of kidney diseases to delay progression to ESRD. At present, there is no Food and Drug Administration approved treatment specifically targeting the underlying cause of AMKD, although there are a number of potential treatments for AMKD in clinical trials now.

An ICD-10-CM code is of value to the continued development of epidemiological initiatives, ongoing research into treatments targeting AMKD and to improving clinical practice (including prognosis, informing kidney donation decisions, supporting family planning, improving understanding of treatment options and success, and supporting quality assurance efforts related to blood pressure control and kidney disease screening).

The Renal Physicians Association has submitted the proposal for consideration.

References

See A. Bajaj, et al. Phenome-wide association analysis suggests the APOL1 linked disease spectrum primarily drives kidney-specific pathways, 97 Kidney Int. 1032–1041 (2020).

Patrick Dummer et al., APOL1 kidney disease risk variants – an evolving landscape, 35 Seminars in Nephrology 222 (2015).

Genovese et al., Association of Trypanolytic ApoL1 Variants with Kidney Disease in African-Americans, 320 Science 841 (2010).

Russell Thomson, Evolution of the Primate Trypanolytic Factor APOL 1, 20 Pro. Nat'l Acad. Sci. 111 (2014). David Friedman & Martin Pollak, APOL1 Nephropathy: From Genetics to Clinical Applications, 16 Clin. J. Soc. Nephrology (2021). In African Americans, the population frequency of ≥1 *APOL1* risk variant is approximately 35%. Patrick Dummer et al., APOL1 kidney disease risk variants – an evolving landscape, 35 Seminars in Nephrology 222 (2015).

Russell Thomson, Evolution of the Primate Trypanolytic Factor APOL 1, 20 Pro. Nat'l Acad. Sci. 111 (2014). Russell Thomson, Evolution of the Primate Trypanolytic Factor APOL 1, 20 Pro. Nat'l Acad. Sci. 111 (2014). Patrick Dummer et al., APOL1 kidney disease risk variants – an evolving landscape, 35 Seminars in Nephrology 222 (2015).

George Vasquez-Rios et al., Novel Therapies in APOL1-Mediated Kidney Disease: From Molecular Pathways to Therapeutic Options, Kidney International Reports 1 (2023). *See A.* Bajaj, et al. Phenome-wide association analysis

suggests the APOL1 linked disease spectrum primarily drives kidney-specific pathways, 97 Kidney Int. 1032–1041 (2020).

Afshin Parsa, APOL1 risk variants, race, and progression of chronic kidney disease, 369 N. Engl. J. Med. 2183 (2013). Shay Tzur et al., APOL1 allelic variants are associated with lower age of dialysis initiation and thereby increased dialysis vintage in African and Hispanic Americans with non-diabetic end-stage kidney disease, *Nephrology Dialysis Transplantation*, Volume 27, Issue 4 (2012).

G. Genovese et al., Association of Trypanolytic ApoL1 Variants with Kidney Disease in African-Americans, 320 Science 841 (2010).

Elizabeth I. Anyaegbu, Clinical phenotype of APOL1 nephropathy in young relatives of patients with end-stage renal disease, 30 Pediatric Nephrology 983 (2015).

Jeffrey Kopp et al., Clinical Features and Histology of Apolipoprotein L1-Associated Nephropathy in the FSGS Clinical Trial, 26 J. Am. Soc. Neprol. 1443 (2015).

Jeffrey Kopp et al., APOL1 Genetic Variants in Focal Segmental Glomerulosclerosis and HIV-Associated Nephropathy, 22 J. Am. Soc. Nephrol. 2129 (2011).

Emily Groopman et al., Diagnostic Utility of Exome Sequencing for Kidney Disease, 380 N. Engl. J. Med. 142 (2019). Debbie Gipson et al., Comparing Kidney Health Outcomes in Children, Adolescents, and Adults With Focal Segmental Glomerulosclerosis, 5 Jama Net. Open. 1 (2022).

Alex Kasembeli, APOL1 Risk Variants Are Strongly Associated with HIV-Associated Nephropathy in Black South Africans, 26 J. Am. Soc. Nephrol. 2882 (2015).

Mohamed G. Atta et al., HIV-associated nephropathy patients with and without apolipoprotein L1 gene variants have similar clinical and pathological characteristics, 82 Kidney Int. 338 (2012).

Teresa Chen et al., APOL1 Risk Variants and Cardiovascular Disease: Results From the AASK (African American Study of Kidney Disease and Hypertension), 37 Arterioscler Thromb Vasc Biol 1765 (2017).

Christopher Larsen, Apolipoprotein L1 risk variants associate with systemic lupus erythematosus-associated collapsing glomerulopathy, 24 J. Am. Soc. Neprol. 722 (2013).

Barry Feedman, End-Stage Renal Disease in African Americans With Lupus Nephritis Is Associated With APOL1, 66 Arth. & Rheum. 390 (2014).

See K. Bramham et al., Poster TH-PO481, Presented at the American Society of Nephrology (ASN) Kidney Week (Nov. 2022).

Derived from: 36M African American adults in the US (US Census 2022), 7M (19%) with CKD all stages (USRDS 2022), 1.8M (26%) with hypertension-attributed CKD (USRDS 2022), 418K (23%) with 2 APOL1 risk variants (Chen 2019) + 36M African American adults in the US (US Census 2022), 7M (19%) with CKD all stages (USRDS 2022), 2.4M (34%) with type 2 diabetes-attributed CKD (USRDS 2022; Bullard 2018), 422K (16%) with 2 APOL1 risk variants (Parsa 2013)

Barry Feedman et al., Diagnosis, Education, and Care of Patients with APOL1-Associated Nephropathy: A Delphi Consensus and Systematic Review, 32 J. Am. Soc. Neprol. 1765 (2021).

Lawrence J. Appel et al., Intensive Blood-Pressure Control in Hypertensive Chronic Kidney Disease, 363 N. Engl. J. Med. 918 (2010).

Patrick Cunnigham et al., Hypertensive APOL1 risk allele carriers demonstrate greater blood pressure reduction with angiotensin receptor blockade compared to low risk carriers, 14 PLoS ONE 1 (2019).

KDIGO 2021 Clinical Practice Guideline for the Management of Glomerular Diseases, 100 Kidney Inst. (2021).

Jeffrey Kopp et al., APOL1 Genetic Variants in Focal Segmental Glomerulosclerosis and HIV-Associated Nephropathy, 22 J. Am. Soc. Nephrol. 2129 (2011).

TABULAR MODIFICATIONS

N07 Hereditary nephropathy, not elsewhere classified

New Code N07.B Hereditary nephropathy, not elsewhere classified with APOL1-

mediated kidney disease [AMKD]

Add Note: Presence of two APOL1 alleles are genetically established.

Add AMKD with glomerulonephritis Add AMKD with glomerulosclerosis

Z15 Genetic susceptibility to disease

New subcategory Z15.3 Genetic susceptibility to kidney disease

New code Z15.31 Genetic susceptibility to APOL1-mediated kidney disease

Add Genetic susceptibility to AMKD

Add Note: Presence of two APOL1 alleles are genetically

established.

Add Use additional code to identify presence of:

hypertension (I10-I1A)

New code Z15.39 Other genetic susceptibility to kidney disease

Z84 Family history of other conditions

Z84.1 Family history of disorders of kidney and ureter

Conditions classifiable to N00-N29

New code Z84.11 Family history of APOL1-mediated kidney disease

[AMKD]

New code Z84.12 Family history of disorders of kidney disease and ureter

New code Z84.19 Family history of other disorders of kidney and ureter

Baked Egg Tolerance in Egg Allergy

Egg allergy affects an estimated 0.5% to 2.5% of children younger than 5 years of age. While 80% of children eventually outgrow egg allergy, and most were thought to develop tolerance by school age, studies indicate that some children are retaining egg allergy into adolescence. It appears that the longer the egg allergy persists, the less likely tolerance will develop. Thus, it is important to understand individualized prognosis of egg allergy and develop clinical management that will improve the quality of life of egg-allergic children and, ideally, promote earlier tolerance development. This proposal was presented at the September 2023 C&M Meeting. In response to public comments, changes have been made and noted in **bold**.

It has become clear that different phenotypes of egg allergy exist, and these appear to be associated with different prognoses. There are egg-allergic patients who tolerate egg in baked products (baked egg-tolerant) but still react to stove-top cooked eggs (scrambled, fried, and boiled), and then there are patients who react to all forms of egg including well-baked products (baked egg-reactive). Baking modifies egg proteins and makes them less allergenic by destroying conformational epitopes and/or blocking epitopes through interactions with the food matrix (e.g., wheat flour). This results in decreased IgE binding to egg proteins and increased tolerability. Clinical studies have indicated that a majority, 70-80%, of egg-allergic individuals can tolerate baked egg. 5,6

Ovalbumin is the predominant protein in egg, making up 54% of egg white (EW), and is heat labile. Ovomucoid makes up only 11% of EW but is considered the more dominant allergen and is heat stable. In one study, higher specific IgE (sIgE) to ovomucoid was associated with reactivity to heated (well-cooked, but not baked) egg and 94% of subjects who reacted to heated egg subsequently tolerated ovomucoid-depleted heated egg. Many studies have looked at using sIgE levels to total EW and components, such as ovomucoid, and/or skin prick testing to egg and components as a way to predict baked egg reactivity, however consistent cut-offs have not been found. Additional studies are ongoing to find a biomarker for baked egg reactivity.

In the meantime, baked egg tolerability is typically assessed clinically. Either the patient is already tolerating baked egg in their diet at the time of evaluation or an oral food challenge to a baked egg product (most often a muffin) is offered under supervision. Providers may use history, severity of past reactions, and testing as a guide for who to offer a baked egg challenge. Even if patients do not initially tolerate baked egg, tolerance may develop with time and regular reassessment is suggested.¹¹

Egg-allergic children that tolerate baked egg appear to be more likely to outgrow their egg allergy. ^{12,13} Studies have shown that predominant IgE binding to ovomucoid, particularly sequential or linear epitopes, is associated with persistent egg allergy. ^{14,15} Those epitopes are thought to be less effected by heating or baking and matrix effects. It is possible that egg-allergic children without predominant ovomucoid IgE binding are more likely to tolerate baked egg and be naturally predisposed to outgrowing their allergy, representing a more transient egg allergy.

There is also evidence that regular ingestion of baked egg in the diet may help children outgrow their egg allergy. ^{11,13,16} In one study, subjects ingesting baked egg regularly were 14.6 times more likely

than subjects in the comparison group (P<.0001) to develop regular egg tolerance, and they developed tolerance earlier (median 50.0 vs 78.7 months; P<.0001). Baked egg ingestion was associated with immunologic changes, including decreasing skin prick testing to egg and egg-specific IgE levels, and increasing egg-specific IgG4 levels. These immunologic changes parallel those seen in the natural resolution of egg allergy. The authors concluded that initiation of a baked egg diet accelerates the development of regular egg tolerance compared with strict avoidance. Therefore, differentiation of the different phenotypes of egg allergy can lead to different management, specifically earlier and sustained exposure to baked egg in tolerant patients as a form of possible treatment for egg allergy.

While tolerance to baked egg is associated with a better prognosis - i.e., more likely to outgrow their egg allergy, reactivity to baked egg is associated with poorer outcomes. Those that react to baked egg are less likely to outgrow their egg allergy and more likely to react to small amounts of egg. Thus, baked egg reactive patients may be considered for specific therapies due to this and a code to identify them would be beneficial.

Current ICD-10-CM codes include anaphylactic reaction due to eggs and a historical report of allergy to eggs (Z code). Neither specify tolerance of the baked form of egg, which a majority of egg-allergic patients tolerate, and which is associated with a better prognosis and increased likelihood of tolerance development. An additional ICD-10-CM code to signify baked egg tolerance would help to identify patients who may benefit from intervention and who are likely to outgrow their egg allergy, warranting close follow-up, repeat testing, and tolerance assessment.

This proposal is submitted jointly by physicians and coding professionals within the American Academy of Allery, Asthma & Immunology (AAAAI).

References

- 1. Rona RJ, Keil T, Summers C, et al. The prevalence of food allergy: a meta-analysis. J Allergy Clin Immunol 2007;120:638-46.
- 2. Savage JH, Matsui EC, Skripak JM, Wood RA. The natural history of egg allergy. J Allergy Clin Immunol 2007:120:1413-7.
- 3. Nowak-Wegrzyn A, Fiocchi A. Rare, medium, or well done? The effect of heating and food matrix on food protein allergenicity. Curr Opin Allergy Clin Immunol 2009;9:234-7.
- 4. Lomakina K, Mikova K. A Study of the Factors Affecting the Foaming Properties of Egg White a Review. Czech J Food Sci 2006;24:110-8.
- 5. Osborne NJ, Koplin JJ, Martin PE, et al. Prevalence of challenge-proven IgE-mediated food allergy using population-based sampling and predetermined challenge criteria in infants. J Allergy Clin Immunol 2011;127:668-76 e1-
- 6. Lemon-Mule H, Sampson HA, Sicherer SH, Shreffler WG, Noone S, Nowak-Wegrzyn A. Immunologic changes in children with egg allergy ingesting extensively heated egg. J Allergy Clin Immunol 2008;122:977-83 e1.
- 7. Urisu A, Ando H, Morita Y, et al. Allergenic activity of heated and ovomucoid-depleted egg white. J Allergy Clin Immunol 1997:100:171-6.
- 8. Leonard SA, Caubet JC, Kim JS, Groetch M, Nowak-Wegrzyn A. Baked milk- and egg-containing diet in the management of milk and egg allergy. The journal of allergy and clinical immunology In practice 2015;3:13-23; quiz 4.
- 9. Vilar LK, Rolins Neto PR, Abdo MA, Cheik MFA, Afonso C, Segundo GRS. Baked egg tolerance: is it possible to predict? J Pediatr (Rio J) 2020;96:725-31.

- 10. Suprun M, Sicherer SH, Wood RA, et al. Mapping Sequential IgE-Binding Epitopes on Major and Minor Egg Allergens. International archives of allergy and immunology 2022;183:249-61.
- 11. Leonard SA, Sampson HA, Sicherer SH, et al. Dietary baked egg accelerates resolution of egg allergy in children. J Allergy Clin Immunol 2012;130:473-80 e1.
- 12. Leonard SA. Debates in allergy medicine: baked milk and egg ingestion accelerates resolution of milk and egg allergy. The World Allergy Organization journal 2016;9:1.
- 13. Peters RL, Dharmage SC, Gurrin LC, et al. The natural history and clinical predictors of egg allergy in the first 2 years of life: a prospective, population-based cohort study. J Allergy Clin Immunol 2014;133:485-91.
- 14. Jarvinen KM, Beyer K, Vila L, Bardina L, Mishoe M, Sampson HA. Specificity of IgE antibodies to sequential epitopes of hen's egg ovomucoid as a marker for persistence of egg allergy. Allergy 2007;62:758-65.
- 15. Bernhisel-Broadbent J, Dintzis HM, Dintzis RZ, Sampson HA. Allergenicity and antigenicity of chicken egg ovomucoid (Gal d III) compared with ovalbumin (Gal d I) in children with egg allergy and in mice. J Allergy Clin Immunol 1994;93:1047-59.
- 16. Sicherer SH, Wood RA, Vickery BP, et al. The natural history of egg allergy in an observational cohort. J Allergy Clin Immunol 2014;133:492-9

TABULAR MODIFICATIONS

T78 Adverse effects, not elsewhere classified Excludes2:complications of surgical and medical care NEC (T80-T88)

T78.0 Anaphylactic reaction due to food
Anaphylactic reaction due to adverse food reaction
Anaphylactic shock or reaction due to nonpoisonous foods
Anaphylactoid reaction due to food

T78.08 Anaphylactic reaction due to eggs

New code T78.080 Anaphylactic reaction due to egg with

tolerance to baked egg

Add Excludes1: Anaphylactic reaction due to egg

with reactivity to baked egg (T78.081)

New code T78.081 Anaphylactic reaction due to egg with

reactivity to baked egg

Add Excludes1: Anaphylactic reaction due to egg

with tolerance to baked egg (T78.080)

New code T78.089 Anaphylactic reaction due to eggs, unspecified

T78.1 Other adverse food reactions, not elsewhere classified
Use additional code to identify the type of reaction, if applicable
Excludes 1: anaphylactic reaction or shock due to adverse food
reaction (T78.0-)

anaphylactic reaction due to food (T78.0-) bacterial food borne intoxications (A05.-)

Excludes2:allergic and dietetic gastroenteritis and colitis (K52.29) allergic rhinitis due to food (J30.5) dermatitis due to food in contact with skin (L23.6, L24.6, L25.4) dermatitis due to ingested food (L27.2) food protein-induced enterocolitis syndrome (K52.21) food protein-induced enteropathy (K52.22)

New subcategory T78.12 Other adverse food reaction due to eggs

New code T78.120 Other adverse food reaction due to egg with

tolerance to baked egg

Add Excludes1: Other adverse food reaction due to

egg with reactivity to baked egg (T78.121)

New code T78.121 Other adverse food reaction due to egg with

reactivity to baked egg

Add Excludes1: Other adverse food reaction due to

egg with tolerance to baked egg (T78.120)

New code T78.19 Other adverse food reactions, not elsewhere classified

Z91 Personal risk factors, not elsewhere classified
Z91.0 Allergy status, other than to drugs and biological substance
Z91.01 Food allergy status
Z91.012 Allergy to eggs

New code Z91.0120 Allergy to eggs, unspecified

New code Z91.0121 Allergy to eggs with tolerance to

baked egg

Add Excludes1: Allergy to eggs with

reactivity to baked egg (Z91.0122)

New code Z91.0122 Allergy to eggs with reactivity to

baked egg

Add Excludes1: Allergy to egg with

tolerance to baked egg (Z91.0121)

Baked Milk Tolerance in Milk Allergy

Cow's milk (CM) allergy affects up to 2% of children younger than 5 years of age. While 80% of children eventually outgrow milk allergy, and most were thought to develop tolerance by school age, studies indicate that some children are retaining milk allergy into adolescence. It appears that the longer the milk allergy persists, the less likely tolerance will develop. Thus, it is important to understand individualized prognosis of milk allergy and develop clinical management that will improve the quality of life of milk-allergic children and, ideally, promote earlier tolerance development.

It has become clear that different phenotypes of milk allergy exist, and these appear to be associated with different prognoses. There are milk-allergic patients who tolerate milk in baked products (baked milk-tolerant) but still react to uncooked milk, and then there are patients who react to all forms of milk including well-baked products (baked milk-reactive). Baking modifies milk proteins and makes them less allergenic by destroying conformational epitopes and/or blocking epitopes through interactions with the food matrix (e.g., wheat flour). This results in decreased IgE binding to milk proteins and increased tolerability. Clinical studies have indicated that a majority, 70-80%, of milk-allergic individuals can tolerate baked milk. 5,6

The predominant protein in CM is casein, making up 80%. Casein is heat stable and is considered the more dominant allergen. Whey makes up 20% of CM protein and is heat labile. Studies have reported that higher specific IgE (sIgE) to casein is associated with reactivity to baked milk. Among studies have looked at the using sIgE levels to total CM and components, such as casein, and/or skin prick testing to CM and components as a way to predict baked milk reactivity, however consistent cut-offs have not been found.

In the meantime, baked milk tolerability is typically assessed clinically. Either the patient is already tolerating baked milk in their diet at the time of evaluation or an oral food challenge to a baked milk product (most often a muffin) is offered under supervision. Providers may use history, severity of past reactions, and testing as a guide for who to offer a baked milk challenge. Even if patients do not initially tolerate baked milk, tolerance may develop with time and regular reassessment is suggested. ¹⁰

Milk-allergic children that tolerate baked milk appear to be more likely to outgrow their milk allergy. ^{10,11} Studies have shown that predominant IgE binding to casein, particularly sequential or linear epitopes, is associated with persistent milk allergy. ^{12,13} Those epitopes are thought to be less effected by heating or baking and matrix effects. It is possible that milk-allergic children without predominant casein IgE binding are more likely to tolerate baked milk and be naturally predisposed to outgrowing their allergy, representing a more transient milk allergy.

There is also evidence that regular ingestion of baked milk in the diet may help children outgrow their milk allergy. In one study, subjects ingesting baked milk regularly were 16 times more likely than subjects in the comparison group (P<.0001) to develop regular milk tolerance. Baked milk ingestion was associated with immunologic changes, including decreasing skin prick testing to CM,

and increasing casein-specific IgG4 levels.^{5,10} These immunologic changes parallel those seen in the natural resolution of milk allergy. The authors concluded that initiation of a baked milk diet accelerates the development of regular CM tolerance compared with strict avoidance. Therefore, differentiation of the different phenotypes of milk allergy can lead to different management, specifically earlier and sustained exposure to baked milk in tolerant patients as a form of possible treatment for milk allergy.

While tolerance to baked milk is associated with a better prognosis - i.e., more likely to outgrow their milk allergy, reactivity to baked milk is associated with poorer outcomes. Those that react to baked milk are less likely to outgrow their milk allergy and more likely to react to small amounts of milk. Thus, baked milk reactive patients may be considered for specific therapies due to this and a code to identify them would be beneficial.

Current ICD-10 codes include anaphylactic reaction due to milk and dairy products, and a historical report of allergy to milk products (Z code). Neither specify tolerance of the baked form of milk, which a majority of milk-allergic patients tolerate, and which is associated with a better prognosis and increased likelihood of tolerance development.

An additional ICD-10-CM code to signify baked milk tolerance would help to identify patients who may benefit from intervention and who are likely to outgrow their milk allergy, warranting close follow-up, repeat testing, and tolerance assessment.

This proposal is submitted jointly by physicians and coding professionals within the American Academy of Allergy, Asthma & Immunology (AAAAI).

References

- 1. Rona RJ, Keil T, Summers C, et al. The prevalence of food allergy: a meta-analysis. J Allergy Clin Immunol 2007:120:638-46.
- 2. Skripak JM, Matsui EC, Mudd K, Wood RA. The natural history of IgE-mediated cow's milk allergy. J Allergy Clin Immunol 2007;120:1172-7.
- 3. Nowak-Wegrzyn A, Fiocchi A. Rare, medium, or well done? The effect of heating and food matrix on food protein allergenicity. Curr Opin Allergy Clin Immunol 2009;9:234-7.
- 4. Lomakina K, Mikova K. A Study of the Factors Affecting the Foaming Properties of Egg White a Review. Czech J Food Sci 2006;24:110-8.
- 5. Nowak-Wegrzyn A, Bloom KA, Sicherer SH, et al. Tolerance to extensively heated milk in children with cow's milk allergy. J Allergy Clin Immunol 2008;122:342-7, 7 e1-2.
- 6. Leonard SA. Debates in allergy medicine: baked milk and egg ingestion accelerates resolution of milk and egg allergy. The World Allergy Organization journal 2016;9:1.
- 7. Bartnikas LM, Sheehan WJ, Hoffman EB, et al. Predicting food challenge outcomes for baked milk: role of specific IgE and skin prick testing. Ann Allergy Asthma Immunol 2012;109:309-13 e1.
- 8. Caubet JC, Nowak-Wegrzyn A, Moshier E, Godbold J, Wang J, Sampson HA. Utility of casein-specific IgE levels in predicting reactivity to baked milk. J Allergy Clin Immunol 2013;131:222-4 e1-4.
- 9. Leonard SA, Caubet JC, Kim JS, Groetch M, Nowak-Wegrzyn A. Baked milk- and egg-containing diet in the management of milk and egg allergy. The journal of allergy and clinical immunology In practice 2015;3:13-23; quiz 4.
- 10. Kim JS, Nowak-Wegrzyn A, Sicherer SH, Noone S, Moshier EL, Sampson HA. Dietary baked milk accelerates the resolution of cow's milk allergy in children. J Allergy Clin Immunol 2011;128:125-31 e2.

- 11. Wood RA, Sicherer SH, Vickery BP, et al. The natural history of milk allergy in an observational cohort. J Allergy Clin Immunol 2013;131:805-12.
- 12. Chatchatee P, Jarvinen KM, Bardina L, Beyer K, Sampson HA. Identification of IgE- and IgG-binding epitopes on alpha(s1)-casein: differences in patients with persistent and transient cow's milk allergy. J Allergy Clin Immunol 2001:107:379-83.
- 13. Caubet JC, Lin J, Ahrens B, et al. Natural tolerance development in cow's milk allergic children: IgE and IgG4 epitope binding. Allergy 2017;72:1677-85.

TABULAR MODIFICATIONS

T78 Adverse effects, not elsewhere classified Excludes2:complications of surgical and medical care NEC (T80-T88)

T78.0 Anaphylactic reaction due to food

T78.07 Anaphylactic reaction due to milk and dairy products

New code

T78.070 Anaphylactic reaction due to milk and dairy products with tolerance to baked milk

Excludes1: Anaphylactic reaction due to milk and dairy products with reactivity to baked milk (T78.071)

New code
T78.071 Anaphylactic reaction due to milk and dairy products with reactivity to baked milk
Add
Excludes1: Anaphylactic reaction due to milk and dairy products with tolerance to

baked milk (T78.070)

New code T78.079 Anaphylactic reaction due to milk and dairy products, unspecified

T78.1 Other adverse food reactions, not elsewhere classified
Use additional code to identify the type of reaction, if applicable
Excludes1:anaphylactic reaction or shock due to adverse food
reaction (T78.0-)
anaphylactic reaction due to food (T78.0-)
bacterial food borne intoxications (A05.-)

Excludes2:allergic and dietetic gastroenteritis and colitis (K52.29) allergic rhinitis due to food (J30.5) dermatitis due to food in contact with skin (L23.6, L24.6, L25.4)

dermatitis due to ingested food (L27.2) food protein-induced enterocolitis syndrome (K52.21) food protein-induced enteropathy (K52.22)

New subcategory T78.11 Other adverse food reactions due to milk and

dairy products

New code T78.110 Other adverse food reactions due to milk and

dairy products with tolerance to baked milk

Add Excludes1: Other adverse food reaction due to

milk and dairy products with reactivity to

baked milk (T78.111)

New code T78.111 Other adverse food reaction due to milk and

dairy products with reactivity to baked

milk

Add Excludes1: Other adverse food reaction due to

milk and dairy products with tolerance to

baked milk (T78.110)

New code T78.19 Other adverse food reactions to other food, not elsewhere

classified

Z91 Personal risk factors, not elsewhere classified

Z91.0 Allergy status, other than to drugs and biological substance

Z91.01 Food allergy status

Z91.011 Allergy to milk products

New code Z91.0110 Allergy to milk products, unspecified

New code Z91.0111 Allergy to milk products with

tolerance to baked milk

Add Excludes1: Allergy to milk products

with reactivity to baked milk

(Z91.0112)

New code

Add

Z91.0112 Allergy to milk products with reactivity to baked milk

Excludes1: Allergy to milk products with tolerance to baked milk (Z91.0111)

Cannabis Hyperemesis Syndrome

Cannabis Hyperemesis Syndrome (CHS), also called Cannabinoid Hyperemesis Syndrome, is an emerging syndrome among cannabis consumers characterized by symptoms of cyclical nausea, vomiting, and stomach pain and attributed to prolonged, frequent (i.e., weekly) cannabis use. Reports of suspected CHS have increased in recent years, correlating with widespread cannabis legalization in the United States and Canada. Individuals experiencing CHS often seek medical care as symptoms can be severe and debilitating. Reported medical outcomes vary widely, from contributing to death to full resolution of symptoms with cessation of cannabis use.

Determining the prevalence of CHS in emergency department and hospitalization data is difficult as no single ICD-10-CM code describing this diagnosis exists. An ICD-10-CM code is critically needed to identify CHS cases and document trends over time.

CHS was first described in 2004 in a case series of 9 patients with cyclical vomiting from South Australia.⁵ In all cases, chronic (in this case, daily and prolonged) cannabis use predated the onset of cyclical vomiting illness. Since then, additional case reports and case series have characterized the syndrome as including the following: a history of chronic cannabis use (long-term weekly, and usually daily, use) predating the onset of vomiting illness; hyperemesis following a cyclical pattern every few weeks or months, often for years, in combination with chronic cannabis use; resolution of cyclical vomiting following cessation of cannabis use; a return of hyperemesis with resumption of regular cannabis use; and severe abdominal pain that is often relieved by compulsive bathing (i.e., taking multiple hot showers or baths while experiencing illness).⁶⁻¹⁴ Survey data suggest patients with CHS almost universally have cannabis use disorder.¹⁵ Diagnosis of CHS is often made by exclusion.⁴

Apart from cannabis use disorder, CHS is the first clinical syndrome attributable to cannabis consumption, and therefore important to monitor with increasing legalization of cannabis in the United States. In 2021, 5.8% of adults aged 12 or older (16.3 million people) had a marijuana use disorder in the past year; prevalence is higher among those aged 18 to 25, at 14.4%. Daily or near daily cannabis use has increased in recent years; among adults using cannabis during 2002-2017, daily/near daily use increased from 18.0% to 27.2%. In addition, concentrations of tetrahydrocannabinol (THC), which is impairing or mindaltering, in cannabis products have increased over time. Higher THC concentration (>10% THC) is associated with continued and more frequent use among adolescents and young adults. While higher THC concentrations have not been associated with CHS directly, it is likely they lead to increased chronic use, thereby increasing risk of CHS.

CHS is likely underrecognized in both the adult and adolescent populations. A retrospective chart review in a Canadian emergency department found that clinicians are either failing to question patients' cannabis use, or failing to document it, leading to underdiagnosis or misdiagnosis as cyclical vomiting syndrome (CVS), for which there is an

ICD-10-CM code.²¹

Lack of an ICD-10-CM code for CHS and associated awareness among providers may lead to unnecessary and costly investigation to identify a diagnosis, as well as potential increased risk of severe outcomes (e.g., seizures, kidney failure, shock) for patients if CHS is not accurately identified. The addition of an ICD-10-CM code for CHS would allow for improved identification of CHS in clinical settings, including increased understanding of its presenting features; interventions to prevent complications and effective treatment for CHS including increased availability of counseling on cannabis cessation for patients. Induction for CHS and ICD-10-CM code is also needed to develop a standardized surveillance definition for CHS. This would allow for a better understanding of the incidence, prevalence, and potential risk factors of CHS, as well as monitoring of trends and crossiparisational comparisons of CHS as cannabis use patterns change.

This proposal, submitted by the Division of Overdose Prevention, National Center for Injury Prevention and Control in the Centers for Disease Control and Prevention and the Colorado Department of Public Health and Environment.

This proposal is supported by the U.S. Food and Drug Administration (FDA), the American Society of Addiction Medicine (ASAM), the American College of Emergency Physicians (ACEP), the Cannabis Regulators Association (CANNRA), the National Institute on Drug Abuse (NIDA), the Substance Abuse and Mental Health Services Administration (SAMHSA), the Council of State and Territorial Epidemiologists (CSTE) and the Rocky Mountain Poison and Drug Safety.

REFERENCES:

- 1. Wang GS, Buttorff C, Wilks A, Schwam D, Tung G, Pacula RL. Changes in Emergency Department Encounters for Vomiting After Cannabis Legalization in Colorado. JAMA Netw Open Sep 1 2021;4(9):e2125063.
- 2. Myran DT, Roberts R, Pugliese M, Taljaard M, Tanuseputro P, Pacula RL. Changes in Emergency Department Visits for Cannabis Hyperemesis Syndrome Following Recreational Cannabis Legalization and Subsequent Commercialization in Ontario, Canada. JAMA Netw Open Sep 1 2022;5(9):e2231937.
- 3. Nourbakhsh M, Miller A, Gofton J, Jones G, Adeagbo B. Cannabinoid Hyperemesis Syndrome: Reports of Fatal Cases. J Forensic Sci Jan 2019;64(1):270-274.
- 4. Russo EB, Spooner C, May L, Leslie R, Whiteley VL. Cannabinoid Hyperemesis Syndrome Survey and Genomic Investigation. Cannabis Cannabinoid Res Jun 2022;7(3):336-344.
- 5. Allen JH, de Moore GM, Heddle R, Twartz JC. Cannabinoid hyperemesis: cyclical hyperemesis in association with chronic cannabis abuse. Gut Nov 2004;53(11):1566-70.
- 6. Contreras Narvaez C, Mola Gilbert M, Batlle de Santiago E, Bigas Farreres J, Gine Serven E, Canete Crespillo J. Cannabinoid hyperemesis syndrome. A report of six new cases and a summary of previous reports. Adicciones Mar 2 2016;28(2):90-8.
- 7. Donnino MW, Cocchi MN, Miller J, Fisher J. Cannabinoid hyperemesis: a case series. J Emerg Med Apr 2011;40(4):e63-6.
- 8. Klassen J, Wilson G. Cannabinoid Hyperemesis Syndrome Masquerading as Uremia: An Educational Case Report. Can J Kidney Health Dis 2018;5:2054358118791146.

- 9. Lonsdale H, Kimsey KM, Brown JM, Dey A, Peck J, Son S, Wilsey M. Pediatric Cannabinoid Hyperemesis: A Single Institution 10-Year Case Series. J Adolesc Health Feb 2021;68(2):255-261.
- 10. Nicolson SE, Denysenko L, Mulcare JL, Vito JP, Chabon B. Cannabinoid hyperemesis syndrome: a case series and review of previous reports. Psychosomatics May-Jun 2012;53(3):212-9.
- 11. Rotella JA, Ferretti OG, Raisi E, Seet HR, Sarkar S. Cannabinoid hyperemesis syndrome: A 6-year audit of adult presentations to an urban district hospital. Emerg Med Australas Aug 2022;34(4):578-583.
- 12. Simonetto DA, Oxentenko AS, Herman ML, Szostek JH. Cannabinoid hyperemesis: a case series of 98 patients. Mayo Clin Proc Feb 2012;87(2):114-9.
- 13. Soriano-Co M, Batke M, Cappell MS. The cannabis hyperemesis syndrome characterized by persistent nausea and vomiting, abdominal pain, and compulsive bathing associated with chronic marijuana use: a report of eight cases in the United States. Dig Dis Sci Nov 2010;55(11):3113-9.
- 14. von Both I, Santos B. Death of a young woman with cyclic vomiting: a case report. Forensic Sci Med Pathol Dec 2021;17(4):715-722.
- 15. Andrews CN, Rehak R, Woo M, et al. Cannabinoid hyperemesis syndrome in North America: evaluation of health burden and treatment prevalence. Aliment Pharmacol Ther Dec 2022;56(11-12):1532-1542.
- Substance Abuse and Mental Health Services Administration. Key substance use and mental health indicators in the United States: Results from the 2021 National Survey on Drug Use and Health (HHS Publication No. PEP22-07-01-005, NSDUH Series H-57). 2022. https://www.samhsa.gov/data/report/2021-nsduh-annual-national-report
- 17. Compton WM, Han B, Jones CM, Blanco C. Cannabis use disorders among adults in the United States during a time of increasing use of cannabis. Drug Alcohol Depend Nov 1 2019;204:107468.
- 18. ElSohly MA, Chandra S, Radwan M, Majumdar CG, Church JC. A Comprehensive Review of Cannabis Potency in the United States in the Last Decade. Biol Psychiatry Cogn Neurosci Neuroimaging Jun 2021;6(6):603-606.
- 19. Barrington-Trimis JL, Cho J, Ewusi-Boisvert E, Hasin D, Unger JB, Miech RA, Leventhal AM. Risk of Persistence and Progression of Use of 5 Cannabis Products After Experimentation Among Adolescents. JAMA Netw Open Jan 3 2020;3(1):e1919792.
- 20. Hines LA, Freeman TP, Gage SH, et al. Association of High-Potency Cannabis Use With Mental Health and Substance Use in Adolescence. JAMA Psychiatry Oct 1 2020;77(10):1044-1051.
- 21. Hernandez JM, Paty J, Price IM. Cannabinoid hyperemesis syndrome presentation to the emergency department: A two-year multicentre retrospective chart review in a major urban area. CJEM Jul 2018;20(4):550-555.

TABULAR MODIFICATIONS

R11 Nausea and vomiting

Excludes 1: cyclical vomiting associated with migraine (G43.A-) excessive vomiting in pregnancy (O21.-) hematemesis (K92.0) neonatal hematemesis (P54.0) newborn vomiting (P92.0-) psychogenic vomiting (F50.89) vomiting associated with bulimia nervosa (F50.2) vomiting following gastrointestinal surgery (K91.0)

R11.0 Nausea

Nausea NOS Nausea without vomiting

R11.1 Vomiting

New code R11.16 Cannabis hyperemesis syndrome Add Cannabinoid hyperemesis syndrome

Add Code also: cannabis abuse (F12.1-)

cannabis dependence (F12.2-) cannabis use, unspecified (F12.92-, F12.93, F12.95-, F12.98-, F12.99)

Add Code also manifestations

Coding of Firearm Injuries Default

The National Center for Health Statistics received a proposal to change the default in the Alphabetic Index for External Causes.

This is a representation of a proposal that was originally presented at the March 2023 and September 2023, ICD10 Coordination and Maintenance meetings. Two coding options are being presented for consideration.

Option 1: change the intent category to which firearm injuries would default to (assault) or another intent category (accidental, intentional self-harm, legal intervention, terrorism or undetermined) is indicated by the medical documentation.

Option 2: change the intent category to which firearm injuries would default to (undetermined) or another intent category (accidental, intentional self-harm, legal intervention, terrorism or assault) is indicated by the medical documentation.

Please note that coding generally requires direct documentation by the patient's provider. However, the ICD-10-CM Official Guidelines for Coding and Reporting will be updated to show as an exception: *firearm injuries by intent, such as assault (X93-X95), or undetermined intent (Y22-Y24)*, to 1.B.14, Documentation by Clinicians Other than the Patient's Provider.

Option #1 [Changing default to assault]

EXTERNAL CAUSE OF INJURY INDEX MODIFICATIONS

Discharge (accidental)

Revise - firearm (accidental) W34.00 X95.9

Add -- accidental W34.00

Revise -- handgun (pistol) (revolver) W32.0 X93

Add --- accidental W32.0

Revise -- hunting rifle W33.02 X94.1

Add --- accidental W33.02

Revise -- larger W33.00 X94.9

Add --- accidental W33.00

Revise --- specified NEC W33.09 X94.8

Add --- accidental W33.09

Revise -- machine gun W33.03 <u>X94.2</u>

Add --- accidental W33.03

Revise -- shotgun W33.01 <u>X94.0</u>

Add --- accidental W33.01

Revise Gunshot wound (see also Discharge, firearm, by type) W34.00 X95.9

Option #2 [Changing default to undetermined, shown below]. EXTERNAL CAUSE OF INJURY INDEX MODIFICATIONS

Discharge (accidental)

Revise - firearm (accidental) W34.00-Y24.9

Add -- accidental W34.00

Revise -- handgun (pistol) (revolver) W32.0 Y22

Add --- accidental W32.0

Revise -- hunting rifle W33.02 <u>Y23.1</u>

Add --- accidental W33.02

Revise -- larger W33.00 <u>Y23.9</u>

Add --- accidental W33.00

Revise --- specified NEC W33.09 <u>Y23.8</u>

Add ---- accidental W33.09

Revise -- machine gun W33.03 <u>Y23.3</u>

Add --- accidental W33.03 Revise -- shotgun W33.01 Y23.0 Add --- accidental W33.01

Revise Gunshot wound (see also Discharge, firearm, by type) W34.00 Y24.9

Demodex blepharitis

Blepharitis is the inflammation of the eyelids causing irritation and redness. It has classically been categorized as anterior blepharitis or posterior blepharitis with the cilium or eyelashes as the landmark. Anterior blepharitis has been further subcategorized by presumed causation into staphylococcal blepharitis, seborrheic blepharitis, and acne rosacea-associated blepharitis. Additionally, nearly 70% of all cases are due to demodex infestation, which leads to demodex blepharitis by acting as a vector for harmful bacteria [3,4,5]. Demodex blepharitis is common among all people of all ages, races, ethnicities, and genders.

Demodex, a genus of tiny parasitic mites that live in or near hair follicles of mammals, are among the smallest of arthropods with two species Demodex folliculorum and Demodex brevis typically found on humans. Symptoms of demodex blepharitis include itching and redness, ocular pain and burning, foreign body sensation, dryness, lacrimation, purulence, irritation, loss of lashes, matted or crusty lashes, and blurry vision. Research has shown that the overwhelming majority of demodex blepharitis patients have difficulty negotiating daily activities. However, it is underdiagnosed, undertreated, and often misdiagnosed despite chronically persisting signs and symptoms that often require multiple visits to an eye care practitioner.

Diagnosis is complex because demodex mites reside on the eyelids of both healthy patients and those experiencing symptoms of blepharitis. No clinical standard currently exists that determines what level of demodex infestation causes blepharitis. Additionally, the symptoms of demodex blepharitis are in alignment with those of other ocular diseases, thus making it difficult for eye care practitioners to pinpoint [6]. Current management options include lid scrubs, tea tree oil, warm compresses, antibiotic/steroid combinations and microblepharoexfoliation. However, these treatments have low efficacy and eradication rates are low. Recently, the first and only FDA-approved treatment has been developed for the treatment of demodex blepharitis [7].

The American Optometric Association is requesting new codes to capture this significant condition and to facilitate research.

References

- 1. Trattler W, et al. 2022. The Prevalence of Demodex Blepharitis in US Eye Care Clinic Patients as Determined by Collarettes: A Pathognomonic Sign. Clin Ophthalmol.
- 2. Liu J, et al. 2010. Pathogenic role of Demodex mites in blepharitis. Curr Opin Allergy Clin Immunol. 10(5):505-510.
- 3. English FP, et al. 1970. The vector potential of Demodex folliculorum. Arch Ophthalmol. 84(1):83-85.
- 4. Fromstein SR, et al. 2018. Demodex blepharitis: clinical perspectives. Clin Optom (Auckl). 10:57-63.
- 5. https://www.ophthalmologymanagement.com/newsletters/the-cornea-and-ocular-surface/october-2023

TABULAR MODIFICATIONS

B88 Other infestations

B88.8 Other specified infestation

Delete <u>Ichthyoparasitism due to Vandellia cirrhosa</u>

Delete <u>Linguatulosis</u>

Delete <u>Porocephaliasis</u>

New code B88.81 Infestation by Demodex mites

Add Demodex follculorum infestation

Add Code also, if applicable, eyelid inflammation (H01.8-)

New code B88.89 Other specified infestation

Add Ichthyoparasitism due to Vandellia cirrhosa

Add Linguatulosis
Add Porocephaliasis

H01 Other inflammation of eyelid

H01.8 Other specified inflammation of eyelid

Add Code also, if applicable, infestation by Demodex mites

(B88.81)

New code H01.81 Other specified inflammation of right upper eyelid

New code H01.82 Other specified inflammation of right lower eyelid

New code H01.83 Other specified inflammation of right eye,

unspecified eyelid

New code H01.84 Other specified inflammation of left upper eyelid

New code H01.85 Other specified inflammation of left lower eyelid

New code H01.86 Other specified inflammation of left eye, unspecified

eyelid

New code	H01.89	Other specified inflammation of unspecified eye, unspecified eyelid
New code	H01.8A	Other specified inflammation of right eye, upper and lower eyelids
New code	H01.8B	Other specified inflammation of left eye, upper and lower eyelids

Digital Literacy

The Gravity Project (GP) requests new codes for Digital Literacy and Housing Instability. Over the last decades growing literature has clarified and further identified the social determinants of heath and the impact on healthcare. This has sparked initiation and dissemination of national recommendations and projects. Advances have been made to collectively gain insight into social risks and social interventions; yet the terminology used to represent these concepts lags behind.

Digital literacy is widely recognized as a critical skill in an increasingly digital age. Addressing digital literacy specifically was born out of Gravity Project's previous work on health literacy given the critical role of digital skills in accessing health appointments and health information.

Furthermore, the literature shows a clear association between digital literacy and outcomes in social attainment in the sphere of education, employment, and connection. The submission for digital literacy mirrors a previous request for health literacy.

In addition, inclusion terms and instructional notes are being requested for further specificity and clarification as it relates to the codes pertaining to housing instability with a new code for "Other specified housing instability".

TABULAR MODICATIONS

Z55 Problems related to education and literacy

New code Z55.7 Problems related to digital literacy

Add Difficulty demonstrating basic use of digital device

Add Difficulty demonstrating internet use skills

Add Difficulty demonstrating safe internet use

Add Difficulty demonstrating use of patient portal

Z59 Problems related to housing and economic circumstances

Z59.8 Other problems related to housing and economic circumstances

Z59.81 Housing instability, housed

Add Burdensome rent or mortgage payments

Foreclosure on home loan

Past due on rent or mortgage

Unwanted multiple moves in the last 12 months

Add Excludes2: extreme poverty (Z59.5)

Add financial insecurity (Z59.86)

Add low income (Z59.6)

Add material hardship due to limited financial

resources, not elsewhere classified (Z59.87)

New code Z59.818 Other specified housing instability, housed

Z59.819 Housing instability, housed unspecified

Delete Excludes2: extreme poverty (Z59.5)

Delete <u>financial insecurity (Z59.86</u>

Delete low income (Z59.6)

Delete material hardship due to limited financial

resources, not elsewhere classified

(Z59.87)

Do Not Resuscitate

A Do Not Resuscitate (DNR) order consists of a statement by a physician in the medical record informing the medical staff should cardiac or respiratory arrest occur, cardiopulmonary resuscitation (CPR) should not be performed, preventing the unnecessary or unwanted invasive treatment to prolong life.

A Full Code status indicates that in the event of cardiac or respiratory arrest, all life-sustaining measures should be attempted to resuscitate the patient such as chest compressions, intubation, defibrillation, and resuscitative medications.

While there are standard definitions of a Full Code status and a Do Not Resuscitate (DNR) status, there is limited literature available regarding Limited or Partial do-not-resuscitate code statuses. A Do Not Intubate (DNI) status indicates a patient does not want to receive endotracheal intubation in the event of a medical emergency, such as cardiac or respiratory arrest. A Limited Code or Partial Code status is based on the patient's anticipated need for resuscitation and interventions can be individually declined by patients and families. It can imply only certain procedures will be done, such as allowing for chest compressions and antiarrhythmic drugs (to prevent or relieve cardiac arrhythmia) but no endotracheal intubation or mechanical ventilation. Further, it can mean the DNR is limited NOT to take one or more of the following steps/actions as requested by the patient: withhold antiarrhythmics, withhold IV vasoactive drugs, withhold defibrillation/cardioversion, withhold chest compression, withhold ventilation by mask, withhold endotracheal intubation, withhold mechanical ventilation, withhold other CPR measures.

Code status and details of CPR and chest compressions can be severely underutilized inpatient populations, and based on demographics, a not insignificant portion of patients may elect to be a limited code or partial code. The hurdle with limited codes or partial codes is when the provider is not performing compressions and providing circulation. From a clinical perspective, the patient might as well be a DNR because the provider cannot properly follow Advanced Cardiovascular Life Support (ACLS) guidelines when a limited code or partial code is in place.

Example: A patient has a code status of a Limited Code and they agree with intubation, defibrillation, and resuscitative medications, but decline chest compressions. The patient goes into ventricular fibrillation, which is a direct indication to defibrillate the patient (because it's a shockable rhythm); however, ACLS guidelines state that chest compressions should be done throughout the code in between shocks. Another factor to consider is if antiarrhythmic drugs are injected but no chest compressions are allowed per the patient's code status, the drugs are not circulated throughout the body and do not give any benefit to the patient. There is a lower likelihood of survival if the healthcare professional deviates from the ACLS guidelines.

Bon Secours Mercy Health is requesting unique ICD-10-CM codes to differentiate when a patient is a DNR versus Do Not Intubate versus partial code / limited code. These unique codes will improve data analysis, allow providers to track different code statuses, and ultimately empower patients or surrogates to give informed consent with a full understanding of code statuses.

References:

- 3M ICD-10-CM and ICD-10-PCS Coders' Desk Reference
- Ludhwani, D. (2023, August 8). *Ventricular fibrillation*. StatPearls [Internet]. https://www.ncbi.nlm.nih.gov/books/NBK537120/
- 2020 American Heart Association Guidelines for CPR and ECC. cpr.heart.org. (n.d.). https://cpr.heart.org/en/resuscitation-science/cpr-and-ecc-guidelines
- Highlights of the 2020 American Heart Association's ... (n.d.). https://cpr.heart.org/-/media/CPR-Files/CPR-Guidelines-Files/Highlights/Hghlghts_2020_ECC_Guidelines_English.pdf
- European Resuscitation Council guidelines 2021: Ethics of ... Resuscitation Journal. (2021, March 24). https://www.resuscitationjournal.com/article/S0300-9572(21)00070-8/fulltext#supplementaryMaterial
- Bhatia, H. L., Patel, N. R., Choma, N. N., Grande, J., Giuse, D. A., & Lehmann, C. U. (2015, February). Code status and resuscitation options in the electronic health record. Resuscitation Journal. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4293350/
- Sanders, A., Schepp, M., & Baird, M. (2011, January). Partial do-not-resuscitate orders: A hazard to patient...:
 Critical care medicine. LWW.
 https://journals.lww.com/ccmjournal/abstract/2011/01000/partial_do_not_resuscitate_orders__a_hazard_to.3.asp_x
- Clark, P. (2021, February 10). Death Education: An Educational Approach to Death and Dying. Journal of Healthcare Ethics & Administration. https://www.jheaonline.org/pdf/clark_jhea.1.171627.pdf
 Appendix IV – Chapter 4: Do Not Resuscitate Orders, Living wills/Advanced Directives & Durable Powers of Attorney for Health Care
- Clark, P. (2021, February 10). Death Education: An Educational Approach to Death and Dying. Journal of Healthcare Ethics & Administration. https://www.jheaonline.org/pdf/clark_jhea.1.171627.pdf
 Appendix C: Sample DNR Order Sheet that would allow for a Limited Code Status
- Stevenson, E. K., Mehter, H. M., Walkey, A. J., & Wiener, R. S. (2017, April). Association between do not resuscitate/do not intubate status and resident physician decision-making. A national survey. Annals of the American Thoracic Society. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5427717/
- Wilson, M. E., Mittal, A., Karki, B., Dobler, C. C., Wahab, A., Curtis, J. R., Erwin, P. J., Majzoub, A. M., Montori, V. M., Gajic, O., & Murad, M. H. (2020, January). *Do-not-intubate orders in patients with acute respiratory failure: A systematic review and meta-analysis*. Intensive care medicine. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7223954/

TABULAR MODIFICATIONS

Revise Z66 Do not resuscitate and code status

Delete DNR status

New code Z66.1 Do not resuscitate Add DNR status

New

sub-subcategory Z66.2 Limited (partial) code status

Add Excludes 1: Do not resuscitate (Z66.1)

New code Z66.20 Limited (partial) code status, unspecified

Add Limited (partial) code status, NOS

New code Z66.21 Do not intubate Add DNI status

New code Z66.29 Other limited (partial) code status

Encounter for prophylactic removal of fallopian tube(s) for persons with no known genetic/familial risk factors

This proposal was originally presented at the September 2023 ICD-10 Coordination and Maintenance meeting, changes were made, and additional codes are being requested per public comments from the meeting. The changes are in **bold**.

Ovarian cancer (OC) is among the top 5 deadliest cancers in women. The American Cancer Society estimates that in 2023 about 19,710 new cases of ovarian cancer will be diagnosed; the vast majority of cases (70%) will have high grade serous histology. This amounts to one woman diagnosed with high grade serous cancer every 40 minutes in the US. Despite the name "ovarian cancer," accumulating epidemiological, clinical, pathological, and molecular data over the past 20 years indicate that high grade serous carcinoma primarily originates from microscopic precancers in the fimbriated ends of fallopian tubes, rather than from the ovary itself. Given the seemingly insurmountable obstacles to effectively screening for and treating the disease, the medical community and the patients are increasingly interested in the option of ovarian cancer prevention through fallopian tube removal (bilateral salpingectomy).

For the past decade, gynecologic surgeons have used the term *opportunistic salpingectomy* to describe the recommended practice of discussing salpingectomy for the primary prevention of ovarian cancer with post-reproductive women planning to undergo pelvic surgery for another indication (eg, hysterectomy) or as an alternative to tubal ligation for surgical sterilization.⁴ While 20% of high grade serous cancer is attributable to genetic risk factors, and genetically high risk women are still advised to have both fallopian tubes and ovaries removed to reduce OC risk upon completion of child-bearing, opportunistic salpingectomy is designed to prevent the 80% of high grade serous cancer that affects women with no known risk factors. There is a lack of clear understanding of predisposing factors in this vast majority of cases diagnosed in women who are seemingly average risk for the disease.^{5,6}

What is known is that bilateral salpingectomy substantially decreases ovarian cancer risk. Data from nested case-control and population-based retrospective cohort studies indicate that bilateral salpingectomy reduces the risk of ovarian cancer by at least 65 percent. In 2022, Canadian researchers published the first prospective evidence that opportunistic salpingectomy may substantially decrease the incidence of high-grade serous carcinoma in the general population. At the time of 9 years follow-up, no high-grade serous carcinoma was observed among the 25,889 women who underwent opportunistic salpingectomy during hysterectomy or in lieu of tubal ligation for surgical sterilization. This is significantly less than the expected rate as well as the rate seen in the 32,080 women who did not undergo bilateral salpingectomy. Studies that have compared the addition of opportunistic salpingectomy to a gynecological or pelvic procedure without

salpingectomy have not found significant differences in ovarian endocrine function, surgical complications, operative time, or length of stay. ^{10,11} In the US, over a million women undergo hysterectomy or surgical sterilization annually. ^{12,13} By current projections, universal uptake of salpingectomy during hysterectomy and in lieu of tubal ligation could prevent nearly 2000 deaths from ovarian cancer per year. ¹⁴ Expanding opportunistic salpingectomy to post-reproductive women undergoing non-gynecologic elective abdominal surgeries such as cholecystectomy, hernia repair, appendectomy, and gastrointestinal and urologic operations would at least double the impact of opportunistic salpingectomy on decreasing ovarian cancer incidence and mortality.

A 2020 study demonstrated feasibility of opportunistic salpingectomy at the time of elective laparoscopic cholecystectomy, with 60% of counseled patients accepting salpingectomy, a surgical success rate of 95 out of 105 (93.3%) of enrolled patients, and no attributable surgical complications. Mean additional operating time was 13 minutes. 15 Given that the morbidity of the procedure is low, it can be performed using all available approaches (open, laparoscopic, robotic, vaginal), there is no impact on ovarian function and the acceptance rate is high. Salpingectomy as a practical, populationlevel approach to ovarian cancer prevention. ^{4,16,17} Fallopian tube removal for ovarian cancer prevention was publicized in recent media coverage by the New York Times, Washington Post and Scientific American Magazine headlining the importance of empowering people to consider and choose opportunistic salpingectomy, especially when it comes to preventing a cancer for which there is neither adequate screening nor a dependable cure. 18,19,20 It is equally important that providers have the tools to offer it as a standard of care. Updating medical coding to the current standard of care is an immediate action item. Medical coding deficiencies for cancer-preventive surgeries like opportunistic salpingectomy need to be rectified because they endanger patient access and health care clinician engagement.²¹ One of the most obvious coding deficiencies is that there is no ICD-10-CM code for an encounter for the purpose of opportunistic salpingectomy. The only code available is Z40.03, which requires risk factors such as an inherited genetic mutation.

Because 80% of ovarian cancers affect women with no known genetic or familial risk, the intervention should be available to all women following the completion of childbearing; it should not be restricted to those with genetic susceptibility for and/or a family history of ovarian cancer. At present, Z40.03 is the only ICD-10-CM code for prophylactic salpingectomy. Use of this singular ICD-10-CM code has been and is restricted to high risk people - people with genetic susceptibility or family history of ovarian cancer. There is no ICD-10-CM code for the risk factor of simply being a human with fallopian tubes. This is a major deficiency because having fallopian tubes is the only identifiable risk for ovarian cancer for most women. Establishing the epidemiological basis for prophylactic salpingectomy as a primary prevention strategy for ovarian cancer, both as a population-wide and as a targeted high-risk strategy, will only be feasible through the generation of separate ICD-10-CM diagnosis codes for prophylactic salpingectomy that differentiate people with no known genetic/familial risk of ovarian cancer from those with known genetic/familial risk.

The Gynecologic Oncology Division of the Department of Gynecology and Obstetrics at Johns Hopkins University requested the following tabular modifications. This proposal was reviewed and is supported by the American College of Obstetricians and Gynecologists.

References:

- (1) American Cancer Society (2023, January 12). *Key Statistics for Ovarian Cancer*. Caner.org. Retrieved June 7, 2023, from https://www.cancer.org/cancer/types/ovarian-cancer/about/key-statistics.html
- (2) Erickson BK, Conner MG, Landen CN. The role of the fallopian tube in the origin of ovarian cancer. Am J Obstet Gynecol. 2013 Nov;209(5):409-14.
- (3) George SH, Garcia R, Slomovitz BM. Ovarian Cancer: The fallopian tube as the site of origin and opportunities for prevention. Front Oncol. 2016 May 2;6:109.
- (4) ACOG Committee Opinion No. 774: Opportunistic salpingectomy as a strategy for epithelial ovarian cancer prevention. Obstet Gynecol. 2019 Apr;133(4):e279-e284.
- (5) Song H, et al. The contribution of deleterious germline mutations in BRCA1, BRCA2 and the mismatch repair genes to ovarian cancer in the population. *Hum. Mol. Genet.* 2014;23:4703–4709.
- (6) Jones MR, Kamara D, Karlan BY, Pharoah PDP, Gayther SA. Genetic epidemiology of ovarian cancer and prospects for polygenic risk prediction. *Gynecol. Oncol.* 2017;147:705–713.
- (7) Madsen, C., Baandrup, L., Dehlendorff, C., & Kjaer, S. K. (2015). Tubal ligation and salpingectomy and the risk of epithelial ovarian cancer and borderline ovarian tumors: A nationwide case-control study. *Acta Obstetricia et Gynecologica Scandinavica*, 94(1), 86-94.
- (8) Falconer, H., Yin, L., Gronberg, H., & Altman, D. (2015). Ovarian cancer risk after salpingectomy: A nationwide population-based study. *Journal of the National Cancer Institute*, 107(2).
- (9) Hanley GE, Pearce CL, Talhouk A, et al. Outcomes from opportunistic salpingectomy for ovarian cancer prevention. *JAMA Netw Open.* 2022;5(2):e2147343.
- (10) Kho, R. M., & Wechter, M. E. (2017). Operative outcomes of opportunistic bilateral salpingectomy at the time of benign hysterectomy in low-risk premenopausal women: A systematic review. *Journal of Minimally Invasive Gynecology*, 24(2), 218-229.
- (11) Song, T., Lee, S. H., Kim, W. Y., Heo, E. J., & Kim, T. J. (2016). Opportunistic salpingectomy does not affect ovarian reserve or surgical outcomes in patients undergoing laparoscopic myomectomy.
- (12) ACOG Practice Bulletin No 208: Benefits and risks of sterilization. Obstet Gynecol. 2019 Mar;133(3):e194-e207.
- (13) Simms KT, Yuill S, Killen J et al. Historical and projected hysterectomy rates in the USA: Implications for future observed cervical cancer rates and evaluating prevention interventions. Gynecol Oncol. 2020 Sep;158(3):710-718.
- (14) Naumann RW, Hughes BN, Brown J et al. The impact of opportunistic salpingectomy on ovarian cancer mortality and healthcare costs: a call for universal health coverage. Am J Obstet Gynecol. 2021 Oct;225(4):397.
- (15) Tomasch G, Lemmerer M, Oswald S et al. Prophylactic salpingectomy for prevention of ovarian cancer at the time of laparoscopic cholecystectomy. Br J Surg. 2020. Apr;107(5):519-524.
- (16) Alicja Zietek, Mogusiewicz M, Szumilo J et al. Opportunistic salpingectomy for prevention of sporadic ovarian cancer a jump from basic science to clinical practice? Ginekol Pol. 2016;87(6):467-72.
- (17) Subramaniam A, Einerson BD, Blanchard CT et al. The cost-effectiveness of opportunistic salpingectomy versus standard tubal ligation at the time of cesarean delivery for ovarian cancer risk reduction. Gynecol Oncol. 2019 Jan;152(1): 127-32.
- (18) Rabin R. (2023, Feb. 1) To Prevent Cancer, More Women Should Consider Removing Fallopian Tubes, Experts Say. The New York Times.

https://www.nytimes.com/2023/02/01/health/ovarian-cancer-fallopian-tubes.html

(19) Amenabar T, Goldstein A, Bever L. (2023, Feb. 2) Fallopian Tube Removal Advised for More Women to Prevent Ovarian Cancer. The Washington Post.

https://www.washingtonpost.com/wellness/2023/02/02/fallopian-tube-removal-ovarian-cancer/

(20) Sakran JV, Long Roche K, Stone R. (2023, May 21) Having Their Fallopian Tubes Removed Will Spare a Large Number of Women from Ovarian Cancer. Scientific American.

https://www.scientificamerican.com/article/having-their-fallopian-tubes-removed-will-spare-a-large-number-of-women-from-ovarian-cancer/

(21) Stone R, Sakran JV, Long Roche K. Salpingectomy in ovarian cancer prevention. JAMA. 2023 June 1. Doi: 10.1001/jama.2023.6979. Online ahead of print.

TABULAR MODIFICATIONS

Z15 Genetic susceptibility to disease

Z15.0 Genetic susceptibility to malignant neoplasm

Code first, if applicable, any current malignant neoplasm (C00-C75,

C81-C96)

Use additional code, if applicable, for any personal history of

malignant neoplasm (Z85.-)

New code Z15.05 Genetic susceptibility to malignant neoplasm of fallopian

tube(s)

Z40 Encounter for prophylactic surgery

Excludes1: organ donations (Z52.-)

therapeutic organ removal-code to condition

Z40.0 Encounter for prophylactic surgery for risk factors related to

malignant neoplasms

Admission for prophylactic organ removal Use additional code to identify risk factor

Z40.03 Encounter for prophylactic removal of fallopian tube(s)

New code Z40.031 Encounter for prophylactic removal of fallopian

tube(s) for persons with known genetic/familial risk

factors

Add Encounter for salpingectomy for persons with known

genetic/familial risk factors

New code Z40.032 Encounter for prophylactic removal of fallopian

tube(s) for persons with no known genetic/familial

risk factors

Add Encounter for prophylactic salpingectomy tube(s) for

persons with no known genetic/familial risk factors

Add Opportunistic salpingectomy

New code Z40.039 Encounter for prophylactic removal of fallopian

tube(s), unspecified

Z80 Family history of primary malignant neoplasm Z80.4 Family history of malignant neoplasm of genital organs Conditions classifiable to C51-C63 New code Z80.44 Family history of malignant neoplasm of fallopian tube(s) **Z85** Personal history of malignant neoplasm Z85.4 Personal history of malignant neoplasm of genital organs **Conditions classifiable to C51-C63** New code Z85.4A Personal history of malignant neoplasm of fallopian tube(s) **Z86** Personal history of certain other diseases Z86.0 Personal history of in-situ and benign neoplasms and neoplasms of uncertain behavior **Z86.00** Personal history of in-situ neoplasm Conditions classifiable to D00-D09 **Z86.00A** Personal history of in-situ neoplasm of the fallopian New code

tube(s)

Encounter for weaning from ventilator

The National Center for Health Statistics (NCHS) received a proposal to create a new code for ventilator status and weaning. Those patients who have life-threatening conditions that require constant monitoring and comprehensive care will usually be admitted to a hospital critical care or intensive care unit (ICU).

With Intensive Care Unit (ICU) utilization on the rise, it is vitally important that physicians adhere to the established guidelines when reporting the clinical acuity or severity of illness and the intensity of critical care services rendered to their patients.

Critical care is defined as the direct delivery by a physician(s) medical care for a critically ill or critically injured patient. A critical illness or injury acutely impairs one or more vital organ systems such that there is a high probability of imminent or life-threatening deterioration in the patient's condition. It is necessary document a complete clinical picture for the patient and cognitive work effort by the physician to support and to communicate the medical necessity for this high-level of hospital service.

When a critically ill patient is admitted to an intensive care unit (ICU), it is important that the documentation clearly depicts the clinical acuity of the patient for which the physician is caring. When a patient is intubated and put on mechanical ventilation, they are at risk for ventilator associated complications; therefore, the patient will be evaluated and monitored as well as receiving ventilator assistance and planning for trials of weaning (Nair & Niederman, 2017).

The term "weaning" is used to describe the gradual process of decreasing ventilator support. It is estimated that 40% of the duration of mechanical ventilation is dedicated to the process of weaning. Spontaneous breathing trial (SBT) assesses the patient's ability to breathe while receiving minimal or no ventilator support. The collective task force in 2001 stated that the process of SBT and weaning should start by assessing whether the underlying cause of respiratory failure has been resolved or not. Weaning predictors are parameters that are intended to help clinicians predict whether weaning attempts will be successful or not.

References:

American Academy of Professional Coders (2018). ICD-10CM Expert for Providers and Facilities. Salt Lake City, UT: American Academy of Professional Coders.

Chang, D.C., Shapiro, M.F. (2016). Association Between Intensive Care Unit Utilization During Hospitalization and Costs, Use of Invasive Procedures, and Mortality. JAMA Internal Medicine; 176(10):1492-1499

Nair, GB, Niederman, M.S. (2017) Using Ventilator-Associated Pneumonia Rates as a Health Care Quality Indicator: A contentious Concept. US National Library of Medicine National Institutes of Health, June 38(3):237-244, Retrieved from: https://www.ncbi.nlm.nih.gov/pubmed/28578548.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4893753/

TABULAR MODIFICATIONS

Z99 Dependence on enabling machines and devices, not elsewhere classified

Z99.1 Dependence on respirator

Dependence on ventilator

Z99.11 Dependence on respirator [ventilator] status

Add Ventilator status

New code Z99.13 Encounter for weaning from respirator [ventilator]

External Causes: Fishing hook and wood splitting

NCHS has received a request to add specific codes for external cause fishing hook and activity code for wood splitting. These activities were requested due to frequency in specific geographical regions.

The following tabular modifications are being requested.

TABULAR MODIFICATIONS

W45 Foreign body or object entering through skin
Includes: foreign body or object embedded in skin
nail embedded in skin
Excludes2:contact with hand tools (nonpowered) (powered) (W27W29)
contact with other sharp object(s) (W26.-)
contact with sharp glass (W25.-)
struck by objects (W20-W22)

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

W45

A initial encounter

D subsequent encounter

S sequela

W45.0 Nail entering through skin

W45.1 Fishing hook entering through skin

W45.8 Other foreign body or object entering through skin

Splinter in skin NOS

Y93 Activity codes

New

New code

sub category Y93.L Other outdoor activity

New code Y93.L1 Activity, splitting wood

New code Y93.L9 Activity, other outdoor activity

Flank Anatomical Specificity

The "flank" (also known as "latus" or "lumbar region") of the thorax is a unique area of the body that lies between on the lateral aspect of the thorax between the rib cage and the iliac bone of the hip (below the rib cage and above the ilium). [Alberts, D; et al. (2012). Dorland's illustrated medical dictionary (32nd ed.). Philadelphia, PA: Saunders/Elsevier. p. 714]. Simply is it "the fleshy part of the side between the ribs and the hip" [https://www.merriam-webster.com/dictionary/flank].

This proposal was presented at the March 2021, September 2022, March 2023 and September 2023 Coordination and Maintenance meeting. In response to public comments, a revised proposal is being submitted for reconsideration. Changes are noted in **bold**.

There are times when a patient will seek medical care because of "flank pain" as opposed to abdominal or back pain. Pathology specific to flank pain can include kidney stones, pyelonephritis, gall bladder or liver disease, or muscle spasm to name a few. In addition, injuries to this area can lead to different muscle or intra-abdominal pathology.

The specific anatomical locale helps determine the clinician's evaluation process as well as resource utilization. The division of the frontal and lateral aspects of the abdomen allows for greater specificity in evaluating the patient. Currently, ICD-10-CM directs the term "flank" to the abdomen.

The American College of Emergency Physicians (ACEP) requests specific codes be added to the ICD-10-CM code set to better capture this specific anatomic region. This proposal is supported by the American Academy of Pediatrics.

TABULAR MODIFICATIONS

L02 Cutaneous abscess, furuncle and carbuncle

L02.2 Cutaneous abscess, furuncle and carbuncle of trunk

Excludes1: non-newborn omphalitis (L08.82)

omphalitis of newborn (P38.-)

Excludes2: abscess of breast (N61.1)

abscess of buttocks (L02.3)

abscess of female external genital organs (N76.4) abscess of male external genital organs (N48.2, N49.-)

abscess of hip (L02.4)

L02.21 Cutaneous abscess of trunk

Revise L02.212 Cutaneous abscess of back [any part, except

buttock and flank]

New code L02.217 Cutaneous abscess of flank

L02.22 Furuncle of trunk

Boil of trunk

Folliculitis of trunk

Revised L02.222 Furuncle of back [any part, except buttock and flank]

New code L02.227 Furuncle of flank

L02.23 Carbuncle of trunk

Revise L02.232 Carbuncle of back [any part, except buttock and

flank]

New code L02.237 Carbuncle of flank

L03 Cellulitis and acute lymphangitis

L03.3 Cellulitis and acute lymphangitis of trunk

L03.31 Cellulitis of trunk

New code L03.31A Cellulitis of flank

L03.32 Acute lymphangitis of trunk

New code L03.32A Acute lymphangitis of flank

R10 Abdominal and pelvic pain

Excludes1: renal colic (N23)

Add Excludes2: costovertebral (angle) tenderness (R39.85)

dorsalgia (M54.-)

Add flatulence and related conditions (R14.-)

R10.1 Pain localized to upper abdomen

Add Excludes2: pain localized to flank (R10.A-)
Add pelvic and perineal pain (R10.2-)

R10.2 Pelvic and perineal pain

Add Excludes2: pain localized to other parts of lower abdomen (R10.3-)

Add pain localized to upper abdomen (R10.1-)

New code R10.20 Pelvic and perineal pain unspecified side

New code R10.21 Pelvic and perineal pain right side New code R10.22 Pelvic and perineal pain left side New code R10.23 Pelvic and perineal pain bilateral

New code R10.24 Suprapubic pain

R10.3 Pain localized to other parts of lower abdomen

Add Excludes2: pain localized to flank R10.A-Add pelvic and perineal pain (R10.2-)

New subcategory R10.A Pain localized to flank Add Lateral abdomen pain Add Lateral flank pain Add Latus region pain

Add Excludes2: pain localized to other parts of lower abdomen

(R10.3-)

Add pain localized to upper abdomen (R10.1-)

New code R10.A0 Flank pain, unspecified side

New code R10.A1 Flank pain, right side New code R10.A2 Flank pain, left side New code R10.A3 Flank pain, bilateral

R10.8 Other abdominal pain

R10.81 Abdominal tenderness

Abdominal tenderness NOS

Add Excludes2: pain localized to other parts of lower abdomen

(R10.3-)

Add pain localized to upper abdomen (R10.1-)

R10.82 Rebound abdominal tenderness

Add Excludes2: pain localized to other parts of lower abdomen

(R10.3-)

Add pain localized to upper abdomen (R10.1-)

New subcategory R10.8A Flank tenderness

New codeR10.8A1 Right flank tendernessNew codeR10.8A2 Left flank tendernessNew codeR10.8A3 Suprapubic tenderness

New code R10.8A9 Flank tenderness, unspecified

Add Flank tenderness NOS

New code R10.85 Abdominal pain of multiple sites

Add Excludes 1: abdominal rigidity NOS (R19.3)

Add generalized abdominal pain associated with

acute abdomen (R10.0)

Add generalized abdominal pain NOS (Rl0.84)
Add localized abdominal pain (Rl0.1-Rl0.4-)

R39.8 Other symptoms and signs involving the genitourinary system

New sub-category R39.85 Costovertebral (angle) tenderness Add

Excludes2: abdominal and pelvic pain (R10.-)

New code

R39.851 Costovertebral (angle) tenderness, right side

R89.852 Costovertebral (angle) tenderness, left side

R89.853 Costovertebral (angle) tenderness, bilateral

R89.859 Costovertebral (angle) tenderness, unspecified

side

S30 Superficial injury of abdomen, lower back, pelvis and external genitals

S30.1 Contusion of abdominal wall and flank

Delete Contusion of flank
Delete Contusion of groin

New code S30.11 Contusion of abdominal wall

New code S30.12 Contusion of groin

New code S30.13 Contusion of flank (latus) region

S30.8 Other superficial injuries of abdomen, lower back, pelvis,

and external genitals

S30.81 Abrasion of abdomen, lower back, pelvis, and

external genitals

New code S30.81A Abrasion of flank

S30.82 Blister (nonthermal) of abdomen, lower back, pelvis,

and external genitals New code S30.82A Blister (nonthermal) of flank S30.84 External constriction of abdomen, lower back, pelvis and external genitals New code S30.84A External constriction of flank S30.85 Superficial foreign body of abdomen, lower back, pelvis, and external genitals New code S30.85A Superficial foreign body of flank S30.86 Insect bite (nonvenomous) of abdomen, lower back, pelvis, and external genitals New code S30.86A Insect bite (nonvenomous) of flank S30.87 Other superficial bite of abdomen, lower back, pelvis, and external genitals New code S30.87A Other superficial bite of flank S30.9 Unspecified superficial injury of abdomen, lower back, pelvis, and external genitals New code S30.9A Unspecified superficial injury of flank S31

Open wound of abdomen, lower back, pelvis and external genitals

New code

New code

S31.1 Open wound of abdominal wall without penetration into peritoneal cavity

> S31.10 Unspecified open wound of abdominal wall without penetration into peritoneal cavity

> > S31.106 Unspecified open wound of abdominal wall, right flank without penetration into peritoneal cavity

S31.107 Unspecified open wound of abdominal wall, left flank without penetration into peritoneal cavity

61

New code S31.10A Unspecified open wound of abdominal wall, unspecified flank without penetration into peritoneal cavity Add Open wound of abdominal wall of flank NOS without penetration into peritoneal cavity S31.11 Laceration without foreign body of abdominal wall without penetration into peritoneal cavity New code S31.116 Laceration without foreign body of abdominal wall, right flank without penetration into peritoneal cavity New code S31.117 Laceration without foreign body of abdominal wall, left flank without penetration into peritoneal cavity New code S31.11A Laceration without foreign body of abdominal wall, unspecified flank without penetration into peritoneal cavity Add Laceration without foreign body of flank NOS without penetration into peritoneal cavity S31.12 Laceration with foreign body of abdominal wall without penetration into peritoneal cavity New code S31.126 Laceration with foreign body of abdominal wall, right flank without penetration into peritoneal cavity New code S31.127 Laceration with foreign body of abdominal wall, left flank without penetration into peritoneal cavity

New code Add	S31.12A Laceration with foreign body of abdominal wall unspecified flank without penetration into peritoneal cavity Laceration with foreign body of abdominal wall of flank NOS without penetration into peritoneal cavity
	S31.13 Puncture wound of abdominal wall without foreign body without penetration into peritoneal cavity
New code	S31.136 Puncture wound of abdominal wall without foreign body, right flank without penetration into peritoneal cavity
New code	S31.137 Puncture wound of abdominal wall without foreign body, left flank without penetration into peritoneal cavity
New code	S31.13A Puncture wound of abdominal wall without foreign body, unspecified flank without penetration into peritoneal cavity
Add	Puncture wound of abdominal wall of flank NOS without foreign body
	S31.14 Puncture wound of abdominal wall with foreign body without penetration into peritoneal cavity
New code	S31.146 Puncture wound of abdominal wall with foreign body, right flank without penetration into peritoneal cavity
New code	S31.147 Puncture wound of abdominal wall with foreign body, left flank without penetration into peritoneal cavity

New code Add	S31.14A Puncture wound of abdominal wall with foreign body, unspecified flank without penetration into peritoneal cavity Puncture wound of abdominal wall with foreign body of flank NOS without penetration into peritoneal cavity
	S31.15 Open bite of abdominal wall without penetration into peritoneal cavity
New code	S31.156 Open bite of abdominal wall, right flank without
New code	penetration into peritoneal cavity S31.157 Open bite of abdominal wall, left flank without penetration into peritoneal cavity
New code	S31.15A Open bite of abdominal wall, unspecified flank
Add	without penetration into peritoneal cavity Open bite of abdominal wall of flank NOS without penetration into peritoneal cavity
	S31.6 Open wound of abdominal wall with penetration into peritoneal cavity
	S31.60 Unspecified open wound of abdominal wall with penetration into peritoneal cavity
New code	S31.606 Unspecified open wound of abdominal wall, right flank with penetration into peritoneal cavity
New code	S31.607 Unspecified open wound of abdominal wall, left flank with penetration into peritoneal cavity
New code	S31.60A Unspecified open wound of abdominal wall, unspecified flank with penetration into peritoneal cavity
Add	Unspecified open wound of abdominal wall of flank NOS, with penetration into peritoneal cavity

S31.61	Laceration without foreign body of abdominal wall with penetration into peritoneal cavity
New code	S31.616 Laceration without foreign body of abdominal wall, right flank with penetration into peritoneal cavity
New code	S31.617 Laceration without foreign body of abdominal wall, left flank with penetration into peritoneal cavity
New code	S31.61A Laceration without foreign body of abdominal wall, unspecified flank with penetration into peritoneal cavity
Add	Laceration without foreign body of abdominal wall of flank NOS, with penetration into peritoneal cavity
S31.62	2 Laceration with foreign body of abdominal wall with penetration into peritoneal cavity
New code	S31.626 Laceration with foreign body of abdominal wall, right flank with penetration into peritoneal cavity
New code	S31.627 Laceration with foreign body of abdominal wall, left flank with penetration into peritoneal cavity
New code	S31.62A Laceration with foreign body of abdominal wall,
	unspecified flank with penetration into peritoneal cavity

S31.63 Puncture wound without foreign body of abdominal wall
with penetration into peritoneal cavity

New code	S31.636 Puncture wound of abdominal wall without
	foreign body, right flank with penetration
	into peritoneal cavity

New code	S31.637 Puncture wound of abdominal wall without
	foreign body, left flank with penetration into
	peritoneal cavity

New code	S31.63A Puncture wound of abdominal wall without
	foreign body, unspecified flank with
	penetration into peritoneal cavity

Add	Puncture wound of abdominal wall without
	foreign body, flank NOS, with penetration
	into peritoneal cavity

S31.64 Puncture wound with foreign body of abdominal wall with
penetration into peritoneal cavity

New code	S31.646 Puncture wound of abdominal wall with foreign
	body, right flank with penetration into
	peritoneal cavity

New code	S31.647 Puncture wound of abdominal wall with foreign
	body, left flank with penetration into
	peritoneal cavity

New code	S31.64A Puncture wound of abdominal wall with foreign
	body, unspecified flank with penetration into
	peritoneal cavity
Add	Puncture wound of abdominal wall with foreign

body, flank NOS, with penetration into peritoneal cavity

S31.65 Open bite of abdominal wall with penetration into peritoneal cavity

New code S31.656 Open bite of abdominal wall, right flank with

penetration into peritoneal cavity

New code S31.657 Open bite of abdominal wall, left flank with

penetration into peritoneal cavity

New code S31.65A Open bite of abdominal wall, unspecified flank

with penetration into peritoneal cavity

Add Open bite of abdominal wall, flank NOS, with

penetration into peritoneal cavity

Foreign Body Entering Into or Through a Natural Orifice

Foreign bodies can enter through natural body orifices. Some of which are benign and cause irritation (i.e., bead in the ear or nose). However other types of foreign bodies can have significant morbidity or mortality.

NCHS has received a request for an additional code in the recently approved expansion which was implemented October 1, 2023. The original proposal was requested by the American Academy of Pediatrics. The American Academy of Pediatrics supports the additional new code.

TABULAR MODIFICATION

	W44.H Ot	her sharp object entering into or through a natural orifice
	W44.H0	Other sharp object unspecified, entering into or through a natural orifice
	W44.H1	Needle entering into or through a natural orifice Dart entering into or through a natural orifice Hypodermic needle entering into or through a natural orifice Safety pin entering into or through a natural orifice Sewing needle entering into or through a natural orifice
	W44.H2	Knife, sword or dagger entering into or through a natural orifice
New Code	W44.H9	Other sharp object entering into or through a natural orifice
Add		Shard pottery entering into or through a natural orifice

Genetic Neurodevelopmental Disorders

This proposal is a repeat presentation for certain disorders that were previously presented separately in 2023. It provides an alternative option for creation of specific codes for a number of genetic neurodevelopmental disorders.

Neurodevelopmental disorders are coming to be more widely recognized. Many of these have a genetic basis. This current proposal considers certain specific genetic neurodevelopmental disorders, but is not exhaustive.

Detailed clinical presentations for certain specific genetic neurodevelopmental disorders were presented in 2023. At the March 2023 ICD-10 C&M meeting, there were presentations related to the ionotropic glutamate receptor (GRIN1, GRIN2A, GRIN2B, GRIN2D, GRIA1, GRIA2, GRIA3, GRIA4, and GRIK2), SCN2A-related disorders, SLC6A1-related Disorders, and STXBP1-related disorders (syntaxin-binding protein 1). Also, a detailed proposal for specific codes for DLG4-related synaptopathy was presented at the September 2023 C&M meeting. It is recognized that these neurodevelopmental disorders may involve a range of associated findings and conditions, and these may include epilepsy, autism spectrum disorders, intellectual disability, and specific learning and developmental impairments, among other things. Further clinical details are available from the prior proposals and from the references included below.

A separate category for genetic neurodevelopmental disorders is proposed.

References

- López-Rivera JA, Pérez-Palma E, Symonds J, et al. A catalogue of new incidence estimates of monogenic neurodevelopmental disorders caused by de novo variants. Brain, Volume 143, Issue 4, April 2020, Pages 1099– 1105. https://doi.org/10.1093/brain/awaa051
- 2. Lemke JR. Predicting incidences of neurodevelopmental disorders. Brain. 2020 Apr 1;143(4):1046-1048. https://doi.org/10.1093/brain/awaa079
- 3. Hansen KB, Wollmuth LP, Bowie D, et al. Structure, Function, and Pharmacology of Glutamate Receptor Ion Channels. Pharmacol Rev. 2021 Oct; 73(4): 298–487. Pub. online 2021. PMCID: PMC8626789. PMID: 34753794 https://doi.org/10.1124/pharmrev.120.000131
- 4. Geisheker MR, Heymann G, Wang T, et al. Hotspots of missense mutation identify neurodevelopmental disorder genes and functional domains. Nat Neurosci. 2017 Aug; 20(8): 1043–1051. Published online 2017 Jun 19. https://doi.org/10.1038/nn.4589. PMCID: PMC5539915. PMID: 28628100.
- 5. Wolff, M., Brunklaus, A. & Zuberi, S. M. Phenotypic spectrum and genetics of SCN2A-related disorders, treatment options, and outcomes in epilepsy and beyond. Epilepsia 60, (2019). https://doi.org/10.1111/epi.14935
- Goodspeed K, Pérez-Palma E, Iqbal S, Cooper D, Scimemi A, Johannesen KM, et al. Current knowledge of SLC6A1-related neurodevelopmental disorders. Brain Commun. 2020;2(2):fcaa170. https://doi.org/10.1093/braincomms/fcaa170
- 7. Abramov D, Guiberson NGL, Burré J. STXBP1 encephalopathies: Clinical spectrum, disease mechanisms, and therapeutic strategies. J Neurochem. 2021 Apr;157(2):165–78. https://doi.org/10.1111/jnc.15120
- 8. Tümer Z, Dye TJ, Prada C, White-Brown AM, MacKenzie A, Levy AM. DLG4-Related Synaptopathy. GeneReviews®; Univ. of Wash, Seattle. NLM. NIH. Initial Posting: June 22, 2023. https://www.ncbi.nlm.nih.gov/books/NBK592682/

9. Guerrini R, Conti V, Mantegazza M, et al. Developmental and epileptic encephalopathies: from genetic heterogeneity to phenotypic continuum. Review Physiol Rev. 2023 Jan 1;103(1):433-513. https://doi.org/10.1152/physrev.00063.2021

TABULAR MODIFICATIONS

F88 Other disorders of psychological development

Add Excludes2: genetic neurodevelopmental disorders (F8A.-)

New

category F8A Neurodevelopmental disorders related to specific genetic pathogenic variants

Add Code also any associated disorders, such as:

Add attention-deficit hyperactivity disorders (F90.-)

Add autism spectrum disorder (F84.0) Add epilepsy, by specific type (G40.-) Add intellectual disabilities (F70-F79)

Add pervasive developmental disorders (F84.-)

New

subcategory F8A.0 Neurodevelopmental disorders related to pathogenic variants in specific

genes

New sub-

subcategory F8A.01 Neurodevelopmental disorders related to pathogenic variants

in certain specific genes

New sub-

subcategory F8A.010 Neurodevelopmental disorders, related to

pathogenic variants in ion channel genes

New code F8A.0101 SCN2A-related neurodevelopmental

disorder

New code F8A.0109 Neurodevelopmental disorder related

to pathogenic variant in other ion

channel gene

Add SCN8A-related neurodevelopmental

disorder

New sub-

subcategory	F8A.011	Neurodevelopmental disorders, related to pathogenic variants in glutamate receptor genes
New code		F8A.0111 GRIN1-related neurodevelopmental disorder
New code		F8A.0112 GRIN2A-related neurodevelopmental disorder
New code		F8A.0113 GRIN2B-related neurodevelopmental disorder
New code		F8A.0114 GRIN2D-related neurodevelopmental disorder
New code		F8A.0115 GRIA1-related neurodevelopmental disorder
New code		F8A.0116 GRIA2-related neurodevelopmental disorder
New code		F8A.0117 GRIA3-related neurodevelopmental disorder
New code		F8A.0118 GRIA4-related neurodevelopmental disorder
New code		F8A.011A GRIK2-related neurodevelopmental disorder
New code		F8A.0119 Other glutamate receptor, ionotropic, related neurodevelopmental disorder
New code	F8A.012	Neurodevelopmental disorders, related to pathogenic variants in other receptor genes

Note: for SLC6A1 related disorder and related to the expansion for F8A.013 shown immediately below, an alternative option is also shown separately further below.

New sub-

subcategory F8A.013 Neurodevelopmental disorders, related to

pathogenic variants in other transporter and

solute carrier genes

New code F8A.0131 SLC6A1-related disorder

Add GABA transporter 1 deficiency

New code F8A.0139 Neurodevelopmental disorder, related

to pathogenic variant in other transporter or solute carrier gene

New sub-

subcategory F8A.014 Neurodevelopmental disorders, related to

pathogenic variants in synapse related genes

New code F8A.0141 Syntaxin-binding protein 1-related

disorder

Add STXBP1-related disorders

New code F8A.0142 DLG4-related synaptopathy

New code F8A.0149 Neurodevelopmental disorder, related

to pathogenic variant in other

synapse related gene

Add Other genetic synaptopathy

New code F8A.015 Neurodevelopmental disorders, related to genes

associated with transcription and gene

expression

Add FOXG1 syndrome

New code F8A.8 Other neurodevelopmental disorders related to pathogenic variants in

other specific genes

Alternative Option for SLC6A1 related disorder / GABA transporter 1 deficiency

E72 Other disorders of amino-acid metabolism

E72.0 Disorders of amino-acid transport

New sub- subcategory	E72.05	Disorders	of gamma aminobutyric acid transport
New code		E72.050	Gamma aminobutyric acid transporter 1 deficiency
Add			GABA transporter 1 deficiency
Add			GAT-1 deficiency
Add			Gamma aminobutyric acid transporter protein type 1 deficiency
Add			SLC6A1-related disorder
Add Add			Code also any associated disorders, such as: attention-deficit hyperactivity disorders (F90)
Add			autism spectrum disorder (F84.0)
Add			epilepsy, by specific type (G40)
Add			intellectual disabilities (F70-F79)
Add			pervasive developmental disorders (F84)
New code		E72.058	Other disorders of gamma aminobutyric acid transport
Add			Other GABA transporter deficiency

Note: for this alternative for SLC6A1 related disorder, there would be a single new code for F8A.013, rather than the expansion shown previously.

Gulf War Illness

This topic was presented at the March and September 2023 ICD10 Coordination and Maintenance meeting and based on comments received during the public comment period it is being represented for consideration. Gulf War Illness (GWI) is an exposure-induced chronic multisymptom illness affecting personnel who served in the 1990-1991 Persian Gulf conflict and tied to drug/environment exposures associated with that conflict. A solid body of evidence implicates such exposures, including dose-response and gene-environment interaction data. New, unique, and excessive exposures occurred to multiple agents, distributed differently across deployed personnel. This included exposure to organophosphate nerve agents (sarin, cyclosarin), prolonged exposure to multiple pesticides (including organophosphates and carbamates, among others), pyridostigmine bromide (PB) as a nerve agent pretreatment adjunct, anthrax and botulinum toxoid vaccines and multiple vaccines, permethrin-impregnated uniforms, high concentrate DEET insect repellant, depleted uranium, ciprofloxacin, and other agents. Especially strong evidence ties acetylcholinesterase inhibiting agents including organophosphates (as pesticides and nerve agents) and carbamates (such as PB and carbamate pesticides) to GWI. Changes are indicated in BOLD.

Epidemiological studies affirm that deployment to the 1990-1991 conflict and associated exposures are tied to marked increases specifically in an empirically-defined debilitating multisymptom profile. Data show no difference in the fraction of individuals reporting symptoms that have persisted for at least six months in 1-2 defined symptom domains, but a marked difference in the fraction reporting concurrent symptoms across 3-6 distinct symptom domains in Gulf War-deployed personnel vs. Gulf War-era veterans (who were not deployed to the Gulf War Theater). Gulf War illness is distinguished by this identified complex of symptoms consistently characterized across 1990-91 Gulf War-deployed veteran populations.

This health condition requires deployment to the Gulf War Theater of Operations anytime between August 1, 1990, and July 31, 1991. It requires chronic symptoms for ≥ 6 months, arising during or after this deployment, in ≥ 3 of the 6 Kansas criteria questionnaire symptom domains of fatigue/sleep; neurological/cognitive/mood; pain; gastrointestinal; respiratory; and dermatologic. For a domain to qualify for this condition, symptoms in the domain must be either of at least moderate severity (not mild) and/or there must be multiple symptoms in that domain. Currently, there is no existing ICD-10-CM code which adequately captures this health condition.

The consortium of GWI clinicians, researchers, and patient advocates propose the following tabular modifications to aid clinical care of affected veterans, advance epidemiological tracking of this condition and improve health outcomes in affected veterans.

TABULAR MODIFICATIONS

T75 Other and unspecified effects of other external causes

T75.8 Other specified effects of external causes

New

sub-subcategory T75.83 Effects of war theater

Add Use additional code to identify associated manifestations

New code T75.830 Gulf war illness Add Gulf war syndrome

New code T75.838 Effects of other war theater

Z77 Other contact with and (suspected) exposures hazardous to health

New

subcategory Z77.3 Contact with and (suspected) exposure to war theater

New code Z77.31 Contact with and (suspected) exposure to Gulf War

theater

Add Contact with and (suspected) exposure to Persian Gulf

War theater

New Code Z77.39 Contact with and (suspected) exposure to other war

theater

Hyperoxaluria

This topic was originally presented at the September 2023 ICD10 Coordination and Maintenance meeting. Based on comments received during the public comments period, a revised proposal is being presented for consideration. Changes are indicated in **BOLD**.

Hyperoxaluria is a condition which originates from a diverse group of disorders which all ultimately result in excess levels of oxalate, a toxic metabolite which cannot be broken down by the body and which forms insoluble calcium oxalate. Primary Hyperoxaluria (PH) Types 1 (PH1), 2 (PH2), and 3 (PH3) are caused by distinct inherited genetic mutations and lead to different phenotypes of disease. Other forms of hyperoxaluria including enteric hyperoxaluria (EH) and dietary hyperoxaluria (DH) are caused by a variety of conditions which lead to accumulation of oxalate in the body.

Primary hyperoxaluria (PH) is a group of rare genetic disorders caused by mutations that cause the body to overproduce oxalate. PH1 is caused by a mutation in the AGXT gene and is the most common and severe form of PH, comprising 70-80 percent of known cases. 1,2,3 PH1 impacts both children and adults, and can present as early as infancy. 2,4 Infants with PH1 often present with failure to thrive, nephrocalcinosis, kidney failure, and kidney stones. In a survey of infants with PH1 in both developing and developed nations, the overall infant mortality rate was 52 percent. Older children and adults may present with frequent kidney stones due to build-up of oxalate often requiring emergency room visits, hospitalizations, and surgery. People are often hospitalized for invasive stone-removal procedures (ureteroscopy, percutaneous nephrolithotomy), acute pain from ureteral stones or pyelonephritis, renal colic, urinary tract infection, or vomiting. As renal failure progresses, oxalate accumulates and leads to systemic oxalosis (the spread of oxalate to organs and tissues outside of the kidneys), which can lead to joint damage, bone fractures, skin ulcers, vision loss, heart failure, and death. 5,7,8

Renal outcomes are meaningfully different among the different subtypes of PH. PH2, caused by a mutation in the GRHPR gene, and PH3, caused by a mutation in the HOGA1 gene, are less prevalent and usually less severe than PH1, but can both contribute to adverse outcomes for patients and are markedly different in terms of severity and age of onset. By age 30, renal survival decreases to 27%, 92%, and 95% for patients with PH1, PH2, and PH3, respectively. By age 60, renal survival decreases further to 12% and 66% for PH1 and PH2 patients, respectively, while PH3 renal survival generally doesn't worsen. PH1 is the most severe phenotype, with up to 70 percent of patients presenting with End Stage Kidney Disease. 9,10,11 Though PH3 is generally the least severe and progresses the most slowly, it generally presents with the earliest symptoms, with a median age of 2.6 years (range from infancy to 31 years). PH1 and PH2 generally have a slightly later onset, with a median age of symptoms at 5.2 years for PH1 (range from infancy to 53 years) and 7.4 years for PH2 (range from infancy to 42 years). PH1 is the only form of PH caused by a liver-specific defect, and the only form of PH where oxalate production comes solely from the liver. The enzymes defective in PH2 and PH3 are also important outside of the liver, and thus excess oxalate production occurs in extra-hepatic sources in the body. 10,12,13 As such, existing treatments such as liver transplantation or new liver-directed therapies targeting the defective AGXT gene which are, or will be, approved are appropriate only for treating PH1.¹⁴

Enteric hyperoxaluria (EH) occurs as a result of a variety of gastrointestinal disorders promoting fat malabsorption, leading to an excess absorption of dietary oxalate and increased urinary oxalate excretion. Dietary hyperoxaluria (DH) is caused by increased ingestion of oxalate and/or its precursors such as ascorbic acid. In some cases, the causes of hyperoxaluria may be unknown, or idiopathic. Patients with these non-genetic forms of hyperoxaluria can develop recurrent kidney stones or renal damage with progression to CKD or kidney failure depending on severity. Treatment for EH and DH is distinct from genetically-caused PH and depends on treatment of underlying gastrointestinal disorders, intensive dietary modifications, and/or the use of hydration and crystallization inhibitors. Currently, there is no effective way to capture these forms of hyperoxaluria in the coding set. If a specific type of hyperoxaluria is not indicated, coders may use R82.992 (Hyperoxaluria, a nonspecific code for abnormal findings in urine), or incorrectly use E72.53 (PH) for patients who actually have EH or DH.

Alnylam Pharmaceuticals, Incorporated is requesting the following new codes to further differentiate the various types of hyperoxaluria.

References:

- 1. Danese D, Murray R, Monpara A, et al. The importance of evaluating for potential underlying causes of kidney stones: a survey of physician experiences in diagnosing primary hyperoxaluria type 1. *Nephrol Dial Transplant*. 2019;34(Issue Supplement 1). doi:10.1093/ndt/gfz106.FP007
- 2. Hoppe B. An update on primary hyperoxaluria. *Nat Rev Nephrol*. 2012;8(8):467-475. doi:10.1038/nrneph.2012.113
- 3. Cochat P, Rumsby G. Primary hyperoxaluria [published correction appears in *N Engl J Med.* 2013 Nov 28;369(22):2168]. *N Engl J Med.* 2013;369(7):649-658. doi:10.1056/NEJMra1301564
- 4. Milliner DS, Harris PC, Sas DJ, et al. Primary Hyperoxaluria Type 1. Published 2002, updated 2022. Adam MP, Mirzaa GM, Pagon RA, et al., editors. *GeneReviews*®. Seattle (WA): University of Washington, Seattle; 1993-2023. Available from: https://www.ncbi.nlm.nih.gov/books/NBK1283/
- 5. van der Hoeven SM, van Woerden CS, Groothoff JW. Primary hyperoxaluria type 1, a too often missed diagnosis and potentially treatable cause of end-stage renal disease in adults: results of the Dutch cohort. *Nephrol Dial Transplant*. 2012;27(10):3855-3862. doi:10.1093/ndt/gfs320
- 6. Cochat P, Koch Nogueira PC, Mahmoud MA, et al. Primary hyperoxaluria in infants: medical, ethical, and economic issues. *J Pediatr*. 1999;135(6):746-750. doi:10.1016/s0022-3476(99)70095-8
- 7. Lorenzo V, Torres A, Salido E. Primary hyperoxaluria. *Nefrologia*. 2014;34(3):398-412. doi:10.3265/Nefrologia.pre2014.Jan.12335
- 8. Milliner DS, McGregor TL, Thompson A, et al. End Points for Clinical Trials in Primary Hyperoxaluria. *Clin J Am Soc Nephrol*. 2020;15(7):1056-1065. doi:10.2215/CJN.13821119
- 9. Zhao F, Bergstralh EJ, Mehta RA, et al. Predictors of Incident ESRD among Patients with Primary Hyperoxaluria Presenting Prior to Kidney Failure. Clin J Am Soc Nephrol. 2016;11(1):119-126. doi:10.2215/CJN.02810315
- 10. Hopp K, Cogal AG, Bergstralh EJ, et al. Phenotype-Genotype Correlations and Estimated Carrier Frequencies of Primary Hyperoxaluria. J Am Soc Nephrol. 2015;26(10):2559-2570. doi:10.1681/ASN.2014070698
- 11. Mandrile G, van Woerden CS, Berchialla P, et al. Data from a large European study indicate that the outcome of primary hyperoxaluria type 1 correlates with the AGXT mutation type. Kidney Int. 2014;86(6):1197-1204. doi:10.1038/ki.2014.222
- 12. Giafi CF, Rumsby G. Kinetic Analysis and Tissue Distribution of Human D-Glycerate Dehydrogenase/Glyoxylate Reductase and its Relevance to the Diagnosis of Primary Hyperoxaluria Type 2. *Ann Clin Biochem.* 1998;35(1):104-109. doi:10.1177/000456329803500114
- 13. Wood KD, Holmes RP, Erbe D, et al. Reduction in urinary oxalate excretion in mouse models of Primary Hyperoxaluria by RNA interference inhibition of liver lactate dehydrogenase activity. *Biochim Biophys Acta Mol Basis Dis.* 2019;1865(9):2203-2209. doi:10.1016/j.bbadis.2019.04.017
- 14. Groothoff JW, Metry E, Deesker L, et al. Clinical practice recommendations for primary

hyperoxaluria: an expert consensus statement from ERKNet and OxalEurope. Nat Rev Nephrol. 2023;19:194-211. doi:10.1038/s41581-022-00661-1

15. Witting C, Langman CB, Assimos D, et al. Pathophysiology and Treatment of Enteric Hyperoxaluria. Clin J Am Soc Nephrol. 2021;16(3):487-495. doi:10.2215/CJN.08000520

16. Bhasin B, Ürekli HM, Atta MG. Primary and secondary hyperoxaluria: Understanding the enigma. World J Nephrol. 2015;4(2):235-244. doi:10.5527/wjn.v4.i2.235

TABULAR MODIFICATIONS

E72 Other disorders of amino-acid metabolism

E72.5 Disorders of glycine metabolism

E72.53 Primary hyperoxaluria

Oxalosis Oxaluria

Add Excludes1: secondary hyperoxaluria (E72.54-)

New code E72.530 Primary hyperoxaluria, type 1

New code E72.538 Other specified primary hyperoxaluria

Primary hyperoxaluria, type 2 Add Add Primary hyperoxaluria, type 3

New code E72.539 Primary hyperoxaluria, unspecified

sub-subcategory E72.54 Secondary hyperoxaluria

Add Excludes1: primary hyperoxaluria (E72.53-)

New code E72.540 Dietary hyperoxaluria E72.541 Enteric hyperoxaluria New code

New code E72.548 Other secondary hyperoxaluria

E72.549 Secondary hyperoxaluria, unspecified New code

> Other and unspecified abnormal findings in urine R82

> > R82.9 Other and unspecified abnormal findings in urine

R82.99 Other abnormal findings in urine

R82.992 Hyperoxaluria

Excludes1: primary hyperoxaluria (E72.53-) **Revise** Add

secondary hyperoxaluria (E72.54-)

Hypothalamic obesity

Obesity is defined as abnormal or excessive fat accumulation that presents a risk to health, with assessments using a body mass index (BMI) over 30 kg/m² for determining obesity.¹ Obesity, in general, results from imbalance in energy consumption and energy expenditure. Hypothalamic obesity (HO) is a highly unique form of severe obesity characterized by the rapid onset and sustained weight gain that is unresponsive to lifestyle or traditional medical interventions. A proposal for a specific ICD-10-CM diagnosis code for hypothalamic obesity has been received from Rhythm Pharmaceuticals, Inc. HO affects approximately 5,000 to 10,000 patients in the United States and is associated with hyperphagia and decreased physical activity and energy expenditure resulting from an impairment in the MC4R signaling pathway.²,3,4

The hypothalamus plays an important role in the body's regulation of appetite and energy balance. The term "hypothalamic obesity" describes obesity caused by injury or damage to the hypothalamus, in contrast to other forms of obesity related to the hypothalamic dysfunction such as genetic disorders, like Prader-Willi syndrome, Bardet Biedl Syndrome, or malformations of the brain. Damage to the hypothalamus disrupts the balance between caloric intake and expenditure, often leading to more calories consumed than needed for the body to properly function. This results in rapid weight gain that is very difficult to control. 5

HO sometimes presents with hyperphagia which is the lack of feeling full (satiety) and constant insatiable feelings of extreme hunger. However, the clinical presentation may vary depending on the type and location of sustained hypothalamic injury. Some individuals, for example, do not experience hyperphagia but still gain weight rapidly because of decreased energy expenditure, both at rest and/or during physical activity leading to caloric imbalance even when food intake is restricted.⁵

A diagnosis of hypothalamic obesity is suspected when an individual experiences rapid and excessive weight gain relative to a hypothalamic injury. Providers may rely on brain imaging studies and/or other diagnostic tests to identify deficits in one or more hypothalamic/pituitary hormones. These tools help differentiate HO from other types of obesity caused by genetics, lifestyle or other factors.⁵

Specific structures within the hypothalamus that regulate both peripheral energy expenditure and satiety include the arcuate nucleus, paraventricular nucleus, dorsomedial nucleus, and dorsal hypothalamic nuclei, all found in the medial hypothalamus.⁶ Injury to hypothalamic structures may occur as a result of the surgical removal or resection of a hypothalamic brain tumor, complications related to the tumor, radiotherapy treatment, and in rare cases inflammation and/or other trauma to the area.^{7,8}

Craniopharyngiomas, germinomas, gliomas, hamartomas and pituitary adenomas are tumors that arise from the pituitary gland or invade the hypothalamus. Up to 50% of patients who are treated for craniopharyngioma by tumor removal surgery and/or external beam radiation therapy develop HO. Individuals who acquire HO following surgery or radiation may have been of normal weight prior to their tumor diagnosis but became obese following surgery. Individuals with hypothalamic damage due to other causes, such as traumatic brain injury or inflammation, tend to begin gaining weight at

the time of the injury or very shortly after treatment.⁵ Both of these types of hypothalamic injuries cause damage of varying degree to the ventromedial nuclei (satiety center) and the lateral hypothalamic area (feeding center).

In addition to excessive weight gain, injury to the hypothalamus may also result in other disorders such as disordered sleep and circadian phase regulation, pituitary hormone deficiencies and psychosocial factors that influence healthful behaviors. Some may experience difficulties maintaining normal body temperatures, have challenges regulating heart rate and blood pressure, or experience seizures. Individuals diagnosed with HO should undergo endocrinology assessment for related hypothalamic/pituitary hormone deficiencies such as diabetes insipidus (vasopressin deficiency), secondary adrenal insufficiency (ACTH deficiency), secondary hypothyroidism (TSH deficiency), growth hormone deficiency, and hypogonadism (deficiency of GNRH leading to deficiency of sex steroids or estrogen in females and testosterone in males). Monitoring for potential health consequences of obesity, such as fatty liver disease, type 2 diabetes mellitus, abnormal lipid profile, sleep-disordered breathing, pseudotumor cerebri syndrome, orthopedic problems and psychosocial/mental health disorders should also occur.

Unfortunately, there are no approved therapeutics for HO, however experimental therapeutics are in development and undergoing clinical evaluation. Current treatment requires evaluating the underlying condition and attempting a variety of strategies to manage the patient's obesity through a well-coordinated, multi-disciplinary team who can implement an individualized treatment approach. This may include monitoring for early detection of tumor recurrence (for tumor survivors), pituitary hormone replacement, nutrition, physical activity and exercise, mental and behavioral health interventions and sometimes weight loss medications and/or or metabolic/bariatric surgery.⁵

In conclusion, hypothalamic obesity is a distinct condition that occurs when damage to the hypothalamus causes an imbalance between someone's energy intake from food and the amount of energy their body has used those results in adipose tissue accumulation. It is different from other forms of obesity related to lifestyle, genetic disorders, or malformations of the brain. Hypothalamic dysfunction broadly may result in impairment of the multiple body functions which the hypothalamus ordinarily helps regulate such as: body temperature, emotions, behavior, memory, growth, sex drive, and the sleep-wake cycle. In addition, hypothalamic dysfunction characterizes the impact of the hypothalamus on controlling the pituitary gland creating a hormone imbalance. In order to properly identify, diagnose and track patients with HO and the clinical interventions used to treat and manage them, including individualized specialized treatments currently available, as well as new treatments currently in development, a specific ICD-10-CM code has been requested.

References

- 1 World Health Organization (WHO). Obesity, https://www.who.int/health-topics/obesity/#tab=tab 1
- 2 Müller HL, Tauber M, Lawson EA, Özyurt J, Bison B, Martinez-Barbera JP, et al. Hypothalamic syndrome. Nat Rev Dis Prim 2022;8:24. https://doi.org/10.1038/s41572-022-00351-z
- 3 Müller HL. Consequences of craniopharyngioma surgery in children. J Clin Endocrinol Metab 2011;96:1981–91. https://doi.org/10.1210/jc.2011-0174

- 4 Roth CL, Eslamy H, Werny D, Elfers C, Shaffer ML, Pihoker C, et al. Semiquantitative analysis of hypothalamic damage on MRI predicts risk for hypothalamic obesity. Obesity 2015;23:1226–33. https://doi.org/10.1002/oby.21067
- 5 National Organization for Rare Disorders (NORD). Hypothalamic Obesity, Acquired. 2021. https://rarediseases.org/rare-diseases/hypothalamic-obesity-acquired/
- 6 Dimitri P. Treatment of Acquired Hypothalamic Obesity: Now and the Future. Front Endocrinol (Lausanne) 2022;13:1–14. https://doi.org/10.3389/fendo.2022.846880
- 7 Daousi C, MacFarlane IA, English PJ, Wilding JP, Patterson M, Dovey TM, et al. Is there a role for ghrelin and peptide-YY in the pathogenesis of obesity in adults with acquired structural hypothalamic damage? J Clin Endocrinol Metab. 2005 Sep;90(9):5025-30. https://doi.org/10.1210/jc.2004-1874
- 8 Abuzzahab MJ, Roth CL, Shoemaker AH. Hypothalamic Obesity: Prologue and Promise. Horm Res Paediatr 2019;91:128–36. https://doi.org/10.1159/000496564
- 9 Rose SR, Horne VE, Bingham N, Jenkins T, Black J, Inge T. Hypothalamic Obesity: 4 Years of the International Registry of Hypothalamic Obesity Disorders. Obesity. 2018;26(11):1727-32. https://doi.org/10.1002/oby.22315 10 Hochberg I, Hochberg Z. Hypothalamic obesity. Endocr Dev 2010;17:185–96. https://doi.org/10.1159/000262539
- 11 Deepak D, Furlong NJ, Wilding JP, MacFarlane IA. Cardiovascular disease, hypertension, dyslipidaemia and obesity in patients with hypothalamic–pituitary disease. Postgrad Med J. 2007 Apr;83(978):277-80. https://doi.org/10.1136/pgmj.2006.052241

TABULAR MODIFICATIONS

E23 Hypofunction and other disorders of the pituitary gland

E23.3 Hypothalamic dysfunction, not elsewhere classified

Excludes1: Prader-Willi syndrome (Q87.11) Russell-Silver syndrome (Q87.19)

New code E23.31 Hypothalamic obesity

Add Use additional code, if applicable, to identify associated

manifestations, such as polyphagia (R63.2)

Add Use additional code, if known, to identify body mass index

(BMI) (Z68.-)

New code E23.39 Other hypothalamic dysfunction

Kabuki Syndrome

Kabuki syndrome (KS) is a rare genetic disorder affecting multiple body systems and requires comprehensive medical management¹. A specific code for KS will assure accurate diagnoses, research, and healthcare management for individuals with KS.

Kabuki syndrome is distinct and cannot be grouped with other congenital malformations. KS's unique and specific phenotypic presentation is caused by mutations in genes of histone modification, including *KMT2D* and *KDM6A*^{2,3}. Patients are identified by genetic testing and characteristic phenotypes including distinct facial features, developmental delay, intellectual disability, heart defects, hypotonia, skeletal anomalies, and immune dysfunction⁴. KS requires accurate diagnosis in order for patients to receive proper treatment, particularly with precision KS therapy currently in development.

The current coding options, fails to distinguish KS from other congenital malformations, resulting in a loss of essential clinical information. It limits the ability to track and analyze KS's unique clinical characteristics, medical comorbidities, and healthcare utilization. As a result, important data related to the prevalence, treatment outcomes, and healthcare resource requirements for KS remain obscured, and medical reimbursement is delayed.

Although there are no known cures for KS, at least eight treatments specifically for KS are currently in development. One has received rare pediatric disease and orphan drug designations from the U.S. FDA⁵. Another treatment that was being developed for KS received orphan drug designation from the U.S. FDA and European Commission in 2018⁶. These designations indicate that the FDA and EMA consider KS a separate indication that cannot be grouped with others in ICD coding.

Current best estimates for the prevalence of KS are 1:32,000-86,000 live births^{7,8} (figures that were estimated in 1988 and 2004, before genetic testing for KS was available). This prevalence is similar to other rare disorders that have been provided codes, including Prader-Willi syndrome (Q87.11), SYNGAP1 Encephalopathy (F78.A1) and Angelman syndrome (Q93.51); these syndromes also have intellectual disabilities and developmental delay as hallmark symptoms. Without a specific code, KS patients cannot be tracked to corroborate prevalence estimates and document morbidity and mortality of the condition, critical for informing public health initiatives and patient care.

A unique code will improve patient care by enabling accurate diagnosis, leading to better clinical management and patient outcomes. A specific code will ensure continuation of proper treatment, aiding in the early identification of potential complications and comorbidities, as well as more easily enabling potential retrospective studies for best practices in clinical care. In addition, a specific KS code facilitates the collection of evidence-based data, accelerating research on the syndrome's pathogenetic mechanisms, natural history, and therapeutic interventions, as well as helping discover and recruit participants for clinical studies/trials and patient registries. A dedicated code improves patient care, accelerates research and promotes health equity.

In summary, the creation of a dedicated ICD-10-CM code for KS has the potential to transform the landscape of KS research, treatment, and awareness. Accurate identification and documentation of this specific rare condition will advance public health knowledge and the well-being of affected individuals.

This proposal is submitted by and with contributions made from the following clinicians:

- Clara Tang, PhD, Director of Research at the KSF
- Bruce Bloom, JD, DDS, Chief Science Officer at the KSF
- Olaf Bodamer MD, PhD, Director of the Roya Kabuki Program at Boston Children's Hospital and Associate Professor at Harvard Medical School
- Margaret Adam, MD, Professor at University of Washington
- Jacqueline Harris, MD, Director of the Epigenetics Clinic at Kennedy Krieger Institute and Associate Professor at Johns Hopkins University School of Medicine
- Hans Bjornsson, MD, PhD, Associate Professor at Johns Hopkins University and Professor at the University of Iceland
- Brittany Simpson, MD, Assistant Professor at Cincinnati Children's Hospital Medical Center
- Ian Krantz, MD, Professor at The Children's Hospital of Philadelphia
- Drea K. Petersen, MD, Clinical Geneticist and Pediatrician at Randall Children's Hospital and Legacy Health

References:

- Adam MP, Hudgins L, Hannibal M. Kabuki Syndrome. September 1 2011 [Updated September 15 2022]. In: Adam MP, Ardinger HH, Pagon RA et al., editors. GeneReviews[®]. Seattle (WA): University of Washington, Seattle; 1993–2022. Accessed September 5, 2023. https://www.ncbi.nlm.nih.gov/books/NBK62111/
- 2. Ng SB, Bigham AW, Buckingham KJ, et al. Exome sequencing identifies MLL2 mutations as a cause of Kabuki syndrome. Nat Genet. 2010;42(9):790-793. doi:10.1038/ng.646
- Lederer D, Grisart B, Digilio MC, et al. Deletion of KDM6A, a histone demethylase interacting with MLL2, in three patients with Kabuki syndrome. Am J Hum Genet. 2012;90(1):119-124. doi:10.1016/j.ajhg.2011.11.021
- Adam MP, Banka S, Bjornsson HT, et al. Kabuki syndrome: international consensus diagnostic criteria. J Med Genet. 2019;56(2):89-95. doi:10.1136/jmedgenet-2018-105625
- Teater B. Rescindo's top drug candidate gains special FDA designations. Nebiotech.org.
 Published February 15, 2021. Accessed September 5, 2023. https://www.nebiotech.org/news/rescindos-top-drug-candidate-gains-special-fda-designations
- EU/3/18/2082: Orphan designation for the treatment of Kabuki syndrome. European Medicines Agency. Published February 19, 2019. Accessed September 5, 2023. https://www.ema.europa.eu/en/medicines/human/orphan-designations/eu-3-18-2082

- 7. Niikawa N, Kuroki Y, Kajii T, et al. Kabuki make-up (Niikawa-Kuroki) syndrome: A study of 62 patients. Am J Med Genet. 1988;31(3):565-589. doi:10.1002/ajmg.1320310312
- 8. White SM, Thompson EM, Kidd A, et al. Growth, behavior, and clinical findings in 27 patients with Kabuki (Niikawa-Kuroki) syndrome. Am J Med Genet A. 2004;127A(2):118-127. doi:10.1002/ajmg.a.20674

TABULAR MODIFICATIONS

Q89 Other congenital malformations, not elsewhere classified

Q89.8 Other specified congenital malformations

Use additional code(s) to identify all associated

manifestations

New subcategory Q89.81 Kabuki (Niikawa-Kuroki) syndrome

New code Q89.810 Kabuki syndrome, type 1

New code Q89.811 Kabuki syndrome, type 2

New code Q89.818 Other Kabuki syndrome

New code Q89.819 Kabuki syndrome, unspecified

Ledderhose Disease/Plantar Fibromatosis & Plantar Fasciitis

Ledderhose Disease is a genetic disease, in the same family of diseases as Dupuytren's contacture and Peyronie's Disease. It leads to growth of painful fibrous nodules known as fibromas on the plantar surface of the feet that can be disabling to many. The nodules are most commonly found on the medial and central band of the plantar fascia in the midfoot and forefoot. Nodules are consistently painful and worsening after long periods of standing or ambulation.

Plantar fasciitis is an inflammatory and, at times, degenerative condition of the plantar fascia related to chronic or repetitive strain. Typically, symptoms present as pain first step in the morning with improvement in ambulation.

Currently, both Ledderhose Disease/Plantar Fibromatosis & Plantar fasciitis share the same ICD-10-CM code of M72.2. In addition, there is no laterality assigned to this code. The two entities are very different in presentation, different in treatment and are of different causes. There has been difficulty in tracking Ledderhose Disease with respect to incidence and prevalence due to the lack of a unique diagnosis code.

Podiatrists, Dr. Paul Carroll and Dr. Eddie Davis, are requesting new ICD-10-CM codes to distinguish between the two conditions and better track these patients.

TABULAR MODIFICATIONS

M67 Other disorders of synovium and tendon

New

subcategory M67.A Plantar fasciitis

New code M67.A0 Plantar fasciitis, unspecified site

Add Plantar fasciitis NOS

New

sub-subcategory M67.A1 Plantar fasciitis, heel

New code M67.A10 Plantar fasciitis, unspecified heel

New code M67.A11 Plantar fasciitis, right heel

New code M67.A12 Plantar fasciitis, left heel

New code M67.A9 Other plantar fasciitis
Add Plantar fasciitis midfoot

M72 Fibroblastic disorders

M72.2 Plantar fascial fibromatosis

Delete Plantar faseiitis
Add Ledderhose disease

New code M72.20 Plantar fascial fibromatosis, unspecified foot

New code M72.21 Plantar fascial fibromatosis, right foot New code M72.22 Plantar fascial fibromatosis, left foot

Leukocyte Adhesion Deficiency Type I (LAD-I)

Leukocyte adhesion deficiency type I (LAD-I) is a rare genetic disorder caused by mutation(s) in the *ITGB2* gene that result in impaired production of CD18¹. CD18, the beta subunit of the β2 integrins, is a glycoprotein on the surface of white blood cells that mediates their migration from inside blood vessels to sites of infection or inflammation in tissues. Because the white blood cells with *ITGB2* mutation(s) can't get to the site of infection, patients with LAD-I have an impaired ability to fight infections, especially at sites of microbial entry, and have an abnormal hyperinflammatory response to infections. Patients are especially susceptible to recurrent atypical bacterial or fungal infections such as peri-rectal infections, as well as abnormal inflammation of tissues such as periodontitis and gingivitis. The clinical severity depends on the level of preserved CD18 on the surface of neutrophils. Mortality for patients with severe LAD-I has been reported at 60-75% by the age of 2 years². Diagnosis depends on an astute clinician considering the possibility of LAD-I deficiency in a child with omphalitis, other atypical infections, or recurrent infections associated with very high neutrophil counts. However, given the rarity of LAD-I, most clinicians have never made the diagnosis or treated a patient with LAD-I.

The incidence of LAD-I is estimated to be under 10 in 1,000,000 live births^{3,4}. Given the impediments to diagnosis and the greatly shortened life expectancy, the exact incidence of LAD-I is not well-established and may increase as recognition of the disease continues to grow. To quote the National Organization for Rare Diseases⁵:

Leukocyte adhesion deficiencies often go unrecognized and may be misdiagnosed, making it difficult to determine their true frequency in the general population.

As of 2009, one author reported approximately 300 cases of LAD-I worldwide⁶.

Frequent infections (93% of patients) and poor wound healing (86%) beginning as early as the neonatal period are the two most common presenting symptoms of LAD-I⁷. Common infections in LAD-I patients include pneumonia, gingivitis, and peritonitis, all of which can be life-threatening. Patients with severe disease (caused by <2% expression of CD18) present with frequent, severe infections which can be life-threatening⁸. Patients with severe disease have very poor prognosis without hematopoietic stem cell transplant⁸. Patients with moderate disease (2% to 30% expression of CD18) have less frequent and less severe infections but still have multiple infections affecting the skin and mucosal surfaces. Although these patients can survive to adulthood with adequate treatment⁸, mortality exceeds 50% by the age of 40 years².

Suspicion of LAD-I may be raised by inflammation (omphalitis) and delayed separation of the umbilical stump, which occurs in 58-84% of patients². The diagnosis can also be suspected in infants with recurrent soft tissue infections, especially in those who present with abscess-like lesions without pus and in those who present with infections with an exceedingly high white blood cell count. A flow cytometry analysis demonstrating the absence of functional CD18 and the associated alpha subunit molecules (CD11) on the surface of leukocytes provides the definitive diagnoses of LAD-I⁹. This diagnosis is then confirmed with genetic testing to define the exact molecular defect.

LAD-II results from mutations in the *ITGB2* gene and is unique from the other two types of LAD (LAD-II and LAD-III) in molecular cause, diagnosis, and symptoms. LAD-II is caused by a mutation of the *SLC35C1* gene, is definitively diagnosed via flow cytometry analysis showing the absence of CD15a, and typically is associated with milder infections and no omphalitis. LAD-III is caused by a mutation in the *FERMT3* gene (also called kindlin-3 gene) and is differentially diagnosed from LAD-I via molecular testing. It commonly causes bleeding complications, bone marrow failure, and osteoporosis.

Treatment of LAD-I includes management of the repeated, prolonged infections that characterize the disease, and often involves hospitalization, long courses of antibiotic and antimicrobial medications, and preventative isolation or formation of limited social pods to minimize risk of infection. Allogeneic hematopoietic stem cell transplant (HSCT) is currently the only curative treatment. However, a high incidence of graft rejection and acute graft vs host disease (aGVHD) both pose barriers to HSCT success⁶. When HSCT is performed in LAD-I patients, 17% of patients experience graft failure and 24% experience grade II to IV acute GVHD by 100 days, with 8% of patients experiencing lethal GVHD¹⁰.

An ICD-10-CM code would aid physicians in improving patient care by better ensuring appropriate patient treatment and making it possible to track clinical results of interventions. This is extremely important in addressing these patients' atypical serious infections and wound healing limitation. An appropriate code would intrinsically justify prolonged courses of antibiotics and would help identify a population of patients with an increased risk of complications related to otherwise standard management approaches. As an example, as a result of poor wound healing and excessive inflammation, patients with LAD-I can have significant complications resulting from standard-of-care procedures (such as routine incision and drainage) that are very well-tolerated in most other conditions.

In addition, it would promote effective communication across health care teams. Close monitoring is essential to ensuring proper care of LAD-I patients since infections typically require prolonged treatment and any medical intervention creating a wound, such as a surgery, biopsy, or circumcision, has the potential to be complicated by poor wound healing, abscess formation, and potentially fatal microbial dissemination.

An ICD-10-CM code can also help in identifying patients for clinical trials. Finally, an ICD-10-CM code will improve the ability to verify the prevalence and natural history of the disease, make genotype-phenotype correlations, and enable tailored and long-term monitoring of outcomes from future therapies.

Although no other curative therapies are currently available, an investigational genetic therapy for severe LAD-I being developed by Rocket Pharmaceuticals has demonstrated 100% 12-month survival in a Phase I/II study and has a PDUFA review date established with the FDA for March 31, 2024. An ICD-10 code for LAD-I will ensure that patients can be identified, and their outcomes

tracked while receiving this new therapy as well as more conventional hematopoietic stem cell transplants.

This proposal for a specific code for LAD-I is submitted by Susan Prockop, MD, Boston Children's Hospital and Magnolia Innovation with assistance from the medical team at Rocket Pharmaceuticals, Inc.

REFERENCES

- 1. Parvaneh, N., Mamishi, S., Rezaei, A., Rezaei, N., Tamizifar, B., Parvaneh, L., Sherkat, R., Ghalehbaghi, B., Kashef, S., Chavoshzadeh, Z., Isaeian, A., Ashrafi, F., & Aghamohammadi, A. (2010). Characterization of 11 new cases of leukocyte adhesion deficiency type 1 with seven novel mutations in the ITGB2 gene. Journal of Clinical Immunology, 30(5), 756–760. https://doi.org/10.1007/s10875-010-9433-2
- 2. Almarza Novoa, E., Kasbekar, S., Thrasher, A. J., Kohn, D. B., Sevilla, J., Nguyen, T., Schwartz, J. D., & Bueren, J. A. (2018). Leukocyte adhesion deficiency-I: A comprehensive review of all published cases. The Journal of Allergy and Clinical Immunology: In Practice, 6(4). https://doi.org/10.1016/j.jaip.2017.12.008
- 3. Cox, D. P., & Weathers, D. R. (2008). Leukocyte Adhesion Deficiency Type 1: An important consideration in the clinical differential diagnosis of prepubertal periodontitis. A case report and review of the literature. Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology, and Endodontology, 105(1), 86–90. https://doi.org/10.1016/j.tripleo.2007.02.026
- Leukocyte adhesion deficiency type I: Orphanet. (2023, October 17). https://www.orpha.net/consor/cgibin/OC Exp.php?lng=EN&Expert=99842
- Leukocyte adhesion deficiency syndromes symptoms, causes, treatment: NORD. National Organization for Rare Disorders. (2023, January 12). https://rarediseases.org/rare-diseases/leukocyte-adhesion-deficiencysyndromes/#affected
- 6. Qasim, W., Cavazzana-Calvo, M., Davies, E. G., Davis, J., Duval, M., Eames, G., Farinha, N., Filopovich, A., Fischer, A., Friedrich, W., Gennery, A., Heilmann, C., Landais, P., Horwitz, M., Porta, F., Sedlacek, P., Seger, R., Slatten, M., Teague, L., ... Veys, P. (2009). Allogeneic hematopoietic stem-cell transplantation for leukocyte adhesion deficiency. Pediatrics, 123(3), 836–840. https://doi.org/10.1542/peds.2008-1191
- Movahedi, M., Entezari, N., Pourpak, Z., Mamishi, S., Chavoshzadeh, Z., Gharagozlou, M., Mir-Saeeid-Ghazi, B., Fazlollahi, M.-R., Zandieh, F., Bemanian, M.-H., & Farhoudi, A. (2007). Clinical and laboratory findings in Iranian patients with leukocyte adhesion deficiency (study of 15 cases). Journal of Clinical Immunology, 27(3), 302–307. https://doi.org/10.1007/s10875-006-9069-4
- 8. Hanna, S., & Etzioni, A. (2012a). Leukocyte adhesion deficiencies. Annals of the New York Academy of Sciences, 1250(1), 50–55. https://doi.org/10.1111/j.1749-6632.2011.06389.x
- 9. Nigar, S., Khan, E. A., & Ahmad, T. A. (2018). Leukocyte adhesion defect: An uncommon immunodeficiency. JPMA. The Journal of the Pakistan Medical Association, 68(1), 119–122.
- Bakhtiar, S., Salzmann-Manrique, E., Blok, H. J., Eikema, D. J., Hazelaar, S., Ayas, M., Toren, A., Goldstein, G., Moshous, D., Locatelli, F., Merli, P., Michel, G., Öztürk, G., Schulz, A., Heilmann, C., Ifversen, M., Wynn, R. F., Aleinikova, O., Bertrand, Y., Tbakhi, A., ... Lankester, A. (2021). Allogeneic hematopoietic stem cell transplantation in leukocyte adhesion deficiency type I and III. Blood advances, 5(1), 262–273. https://doi.org/10.1182/bloodadvances.2020002185

TABULAR MODIFICATIONS

D71	Functional	disorders of	of po	lymorr	honuc	lear neutror	ohils

Delete Cell membrane receptor complex [CR3] defect
Delete Chronic (childhood) granulomatous disease

Delete Congenital dysphagocytosis

Delete Progressive septic granulomatosis

New Code D71.1 Leukocyte adhesion deficiency type I (LAD-I)

Add LAD-I

New Code D71.8 Other functional disorders of polymorphonuclear

neutrophils

Add Cell membrane receptor complex [CR3] defect
Add Chronic (childhood) granulomatous disease

Add Congenital dysphagocytosis

Add LAD-II Add LAD-III

Add Leukocyte adhesion deficiency type II
Add Leukocyte adhesion deficiency type III
Add Progressive septic granulomatosis

Lynch Syndrome

Lynch syndrome is the most common cause of inherited colorectal and endometrial cancer and accounts for about 4% of colorectal cancers and 3% of endometrial cancers. It is estimated to affect one in 279 people in the general population. It is caused by pathogenic variants in genes in the DNA mismatch repair pathway that maintain fidelity during replication (MLH1, MSH2, MSH6, PMS2, EPCAM). These are inherited in an autosomal dominant fashion, meaning offspring have a 50% risk of inheriting the problematic gene causing Lynch syndrome independent of sex.

Lynch syndrome is characterized by increased risk of cancer in multiple organ systems. The lifetime risk varies by gene but includes elevated risks of colorectal cancer up to 46-61%, endometrial cancer up to 34-54%, ovarian cancer up to 8-38%, urinary tract cancer up to 2.2 - 28%, gastric cancer up to 9% as well as increased but less defined risks of small bowel, pancreas, biliary tract, and prostate cancer. In addition to the high lifetime risks of these cancers, the cancers are also found to occur significantly earlier in life in comparison to sporadic cancers, with the average age of colon and endometrial cancer being in the forties. The cancer risks vary dramatically by gene.

Cancers resulting from Lynch syndrome have a characteristic feature called microsatellite instability. This is the finding of abnormal expansion or contraction of repetitive sequences in tumor DNA called microsatellite repeats. Although this can be found in sporadic cancers, it is much more common in cancers in patients with Lynch syndrome. This can be easily tested by staining pathology specimens of tumor tissue with immunochemistry techniques or through direct microsatellite instability testing. This has led to recommendations for universal testing of all colorectal cancers initially with subsequent expansion to include all endometrial cancers to identify patients at risk for Lynch syndrome. This universal testing is widely endorsed by medical societies across the world. In addition to its use in identifying patients at risk for Lynch syndrome, microsatellite instability is also the feature of tumors that indicates an increased likelihood of response to immunotherapy with immune checkpoint inhibitors and is thus also critical in optimizing cancer treatment plans. Germline genetic testing allows for testing for inherited pathogenic variants prior to a cancer diagnosis. This has been available for Lynch syndrome since the 1990s.

The creation of new ICD-10-CM codes to specifically identify patients with Lynch syndrome has been proposed by Fight Colorectal Cancer (Fight CRC) and its Genetics and Family History Advisory Council, which includes national leaders in the field of hereditary gastrointestinal cancers from multiple disciplines and institutions, with support from American Cancer Society, American College of Gastroenterology, American Society of Gastrointestinal Endoscopy, Collaborative Group of the Americas on Inherited Gastrointestinal Cancer, Lynch Syndrome Screening Network, and other groups as well as individual experts in the field. Since the cancer risks vary dramatically by gene, they have proposed ICD-10-CM codes for Lynch syndrome specifically indicating which of the five genes is responsible.

Creation of unique ICD-10-CM codes for Lynch syndrome will improve patient care in multiple ways. This includes facilitating access to multidisciplinary treatment including genetic counseling, colonoscopy, upper endoscopy, prophylactic surgery, and immunotherapy with checkpoint inhibitors.

Unique codes will also impact clinical care by making it possible to track outcomes from clinical interventions and therapies and to help provide evidence to optimize guidelines and ensure consistency between different specialists. In addition, this will aid in the implementation of approved national quality measures ensuring adequate performance of Lynch syndrome screening measures. Finally, these codes will also help aid research that is needed to measure and improve identification and clinical care of Lynch syndrome patients.

TABULAR MODIFICATIONS

Z15 Genetic susceptibility to disease

Z15.0 Genetic susceptibility to malignant neoplasm

New sub- subcategory	Z15.05	Genetic susceptibility to malignant neoplasm of digestive system			
New sub- subcategory Add		Z15.050	Lynch syndrome Hereditary nonpolyposis colorectal cancer susceptibility		
New code			Z15.0500 Lynch syndrome, unspecified		
New code			Z15.0501 MLH1 Lynch syndrome		
New code			Z15.0502 MSH2 Lynch syndrome		
New code			Z15.0503 MSH6 Lynch syndrome		
New code			Z15.0504 PMS2 Lynch syndrome		
New code			Z15.0505 EPCAM Lynch syndrome		
New code		Z15.058	Other genetic susceptibility to malignant neoplasm of digestive system		

INDEX MODIFICATIONS

Add Add Add Add Add Add Add	Genetic - susceptibility to disease NEC Z15.89 malignant neoplasm Z15.09 digestive Z15.05 Lynch syndrome Z15.0500 EPCAM Z15.0505 MLH1 Z15.0501 MSH2 Z15.0502 MSH6 Z15.0503 PMS2 Z15.0504
Add	Lynch syndrome – see Syndrome, Lynch
	Susceptibility to disease, genetic Z15.89 - malignant neoplasm Z15.09
Add	digestive Z15.05-
Add	Lynch syndrome Z15.0500
Add	EPCAM Z15.0505
Add	MLH1 Z15.0501
Add	MSH2 Z15.0501
Add	MSH6 Z15.0502
Add	PMS2 Z15.0504
	Syndrome -see also Disease
Add	- Lynch Z15.0500
Add	EPCAM Z15.0505
Add	MLH1 Z15.0501
Add	MSH2 Z15.0502
Add	MSH6 Z15.0503
Add	PMS2 Z15.0504

Target of (perceived) adverse discrimination and persecution

The National Center for Health Statistics (NCHS) received a request to expand the ICD-10-CM code category Z60.5, Target of (perceived) adverse discrimination and persecution from members of the American Medical Association (AMA). The proposed new code will identify patients presenting with conditions related to experiencing racism and discrimination, including systemic racism and unconscious bias. The AMA is advocating for this new ICD-10-CM code because it will provide physicians with a necessary tool within the clinical encounter to address racism and discrimination.

The existing ICD-10-CM code Z60.5, Target of (perceived) adverse discrimination and persecution, is not specific enough. A new code will be different from this existing code in that it will focus on the patient's unique experience. The new proposed new code will identify conditions related to experiencing racism and discrimination and its effect on the patient's health status. The capture of this information and later data analysis is needed to provide more fair and effective patient care. The new code will also open up an important conversation between the patient and physician about the effect of the social environment on health outcomes and help inform policy approaches.

Research is continually clarifying the full impact that racism and discrimination have on health. It is known that longstanding racism has negatively impacted communities of color. Data show higher rates of illness and death related to a range of conditions, such as hypertension, heart disease, diabetes, and asthma, among minoritized racial and ethnic groups compared to White people. For example, according to the Centers for Disease Control and Prevention, Blacks and Hispanics have the highest percentage of people with asthma in the United States. Studies have also shown that discrimination, specifically racial discrimination is linked to mental health issues such as post-traumatic stress disorder, anxiety, substance use disorder, and depression. A 2023 report by the Alzheimer's Association highlighted the impact of racism on health and that Black patients are about twice as likely than whites to develop dementia.

Anti-racism efforts can close gaps in health for minoritized patients while also improving the health of white patients.⁴ To improve health for everyone and help close the gap in health opportunity of minoritized patients, there is a need to capture data on experiences with racism and discrimination.

The AMA is requesting new ICD-10-CM codes that will identify patients presenting with conditions related to experiencing racism and discrimination, including systemic racism and unconscious bias.

References:

Centers for Disease Control and Prevention. "Racism and Health." Accessed August 17, 2023. https://www.cdc.gov/minorityhealth/racism-disparities/index.html.

2 Centers for Disease Control and Prevention. "Asthma." Accessed August 30, 2023. https://www.cdc.gov/asthma/asthmadata.htm.

3 Alzheimer's Association. "2023 Alzheimer's Disease Facts and Figures." Accessed August 30, 2023. https://www.alz.org/media/Documents/alzheimers-facts-and-figures.pdf.

4 Manning M, Yongue C, Garikipati A, Cykert S, Eng E, Schaal J, Lightfoot A, Jones N, Robertson L. Overall Survival From a Prospective Multi-Institutional Trial to Resolve Black-White Disparities in the Treatment of Early Stage Breast and Lung Cancer. International Journal of Radiation Oncology, Biology, Physics. 2021 Nov 1;111(3):S28. https://www.redjournal.org/article/S0360-3016(21)00961-5/fulltext.

TABULAR MODIFICATION

Z60 Problems related to social environment

Z60.5 Target of (perceived) adverse discrimination and persecution

Excludes 1: social exclusion and rejection (Z60.4)

New code Z60.50 Target of (perceived) adverse discrimination and

persecution, unspecified

New code Z60.51 Target of (perceived) adverse discrimination and

persecution, due to racism

Add Target of (perceived) adverse discrimination and

persecution due to racial intolerance

Thyroid eye disease

Thyroid eye disease (TED) also known as Graves' Orbitopathy (Ophthalmopathy) (GO) is a sight threatening autoimmune disease occurring most commonly in hyperthyroid patients, and less frequently in hypothyroid and euthyroid patients. In patients with TED, anomalies in the immune system trigger the production of pathogenic anti- thyroid-stimulating hormone receptor (anti-TSHR) antibodies. These antibodies stimulate TSHR signaling and activate orbital fibroblasts, leading to enhanced cell differentiation and proliferation. This causes expansion of the orbital fat tissue, followed by fibrosis. Moreover, there is an upsurge in the production of inflammatory cytokines, resulting in orbital inflammation. An augmented secretion of extracellular matrix components further contributes to tissue remodeling and the enlargement of orbital muscles and overall orbital tissues.

Patients with TED can manifest signs and symptoms on a spectrum ranging from mild to severe and sight threatening unilaterally or bilaterally. The most common symptoms are dry eyes, conjunctival redness, periorbital swelling, eyelid retraction, diplopia, and proptosis. Studies have shown that the physical disfiguration and visual disruptions associated with TED diminishes patients' quality of life, psychosocial health, and result in limitations on their ability to work^{1,2,3}. Until recently, the primary management of TED patients typically involved over-the-counter eye drops, while oral or intravenous corticosteroids were used for patients with persistent inflammatory symptoms. For those who developed sustained ocular changes from TED despite the resolution of inflammation, procedures such as orbital decompression surgery, strabismus surgery or eyelid surgery are necessary to mitigate symptoms and avert blindness⁴. The first biologic therapy specifically targeting TED was introduced in 2020⁵, with another advanced therapy currently in phase 3 clinical trials⁶.

In clinical practice, the diagnosis of TED is primarily based on a combination of medical history, presenting symptoms, radiographic imaging, and laboratory results (e.g., TSH, T3, T4, and TSH receptor antibody levels, TRAb or TSI)⁷. Several assessment tools have been devised for grading the degree of functional impairment, inflammation, and severity of TED. These grading systems include Clinical Activity Score (CAS), Gorman-Bahn diplopia score, VISA (Vision, Inflammation, Strabismus, and Appearance), and the European Group of Graves' Orbitopathy (EUGOGO) severity classifications⁸.

Currently, ICD-10-CM lacks a specific code to identify TED patients, significantly complicating their identification. While scientific literature has made attempts to classify TED patients using varied coding algorithms, these methodologies differ widely across publications and lack validation, raising concerns about potentially misidentifying TED patients and misrepresenting their medical journey. The paucity and inconsistency of available data on TED incidence and prevalence further highlight the challenge of tracking the disease without clearly defined classifications. Estimates vary widely, suggesting that there are anywhere from 21 per 100,000 to 90 per 100,000^{8,9} patients with TED in the United States, and that 25% to 50% of individuals with Graves' Disease will develop TED, illustrating the considerable uncertainty surrounding these figures 10,11,12.

Immunovant, Incorporated is requesting the following tabular modifications to enable improved identification of individuals with TED, improve longitudinal follow-up via EHR and facilitate focused research in this population.

References:

- 1. Kahaly GJ, Petrak F, Hardt J, Pitz S, Egle UT. Psychosocial morbidity of Graves' orbitopathy. Clin Endocrinol (Oxf). 2005;63(4):395-402
- 2. Ponto KA, Merkesdal S, Hommel G, Pitz S, Pfeiffer N, Kahaly GJ. Public health relevance of Graves' orbitopathy. J Clin Endocrinol Metab. 2013;98(1):145-152.
- 3. Ferløv-Schwensen C, Brix TH, Hegedüs L. Death by suicide in Graves' disease and Graves' orbitopathy: a nationwide Danish register study. Thyroid. 2017;27(12):1475-1480.
- 4. Burch HB, Perros P, Bednarczuk T, et al. Management of thyroid eye disease: a Consensus Statement by the American Thyroid Association and the European Thyroid Association. Thyroid. 2022;11(6):e220189.
- 5. FDA approves first treatment for thyroid eye disease https://www.fda.gov/news-events/press-announcements/fda-approves-first-treatment-thyroid-eye-disease Accessed 10/10/2023
- Study to Assess Batoclimab in Participants With Active Thyroid Eye Disease https://clinicaltrials.gov/study/NCT05517421 Accessed 10/10/2023
- 7. Wang Y, Patel A, Douglas RS. Thyroid eye disease: how a novel therapy may change the treatment paradigm. Ther Clin Risk Manag. 2019;15:1305-18.
- 8. Yu CY, Ford RL, Wester ST, Shriver EM. Update on thyroid eye disease: regional variations in prevalence, diagnosis, and management. Indian J Ophthalmol. 2022 Jul;70(7):2335-45. doi:http://dx.doi.org/10.4103/ijo.IJO 3217 21.
- 9. Ramesh S, Zhang QE, Sharpe J, et al. Thyroid Eye Disease and its Vision-Threatening Manifestations in the Academy IRIS Registry: 2014-2018. Am J Ophthalmol. 2023;253:74-85. doi:10.1016/j.ajo.2023.04.013
- 10. Stan M, Wagner L, Rachmasari K, et al. Incidence of Thyroid Eye Disease in the United States: Analysis of a Healthcare Claims Database. Presented at American Thyroid Association Annual Meeting September 2023.
- 11. Lazarus JH. Epidemiology of Graves' orbitopathy (GO) and relationship with thyroid disease. *Best Pract Res Clin Endocrinol Metab.* 2012;26(3):273-279.
- 12. Kashkouli MB, Pakdel F, Kiavash V, Heidari I, Heirati A, Jam S. Hyperthyroid vs hypothyroid eye disease: the same severity and activity. *Eye (Lond)*. 2011;25(11):1442-1446.

TABULAR MODIFICATIONS

H05 Disorders of orbit

H05.8 Other disorders of orbit

sub-subcategory	H05.83	Thyroid orbitopathy
Add		Graves' ophthalmopathy
Add		Graves' orbitopathy
Add		Thyroid eye disease

Add Code also, if applicable, any associated conditions such

as:

autoimmune thyroiditis (E06.3)

thyrotoxicosis with diffuse goiter (E05.0)

New code	H05.831	Thyroid orbitopathy, right eye
New code	H05.832	Thyroid orbitopathy, left eye
New code	H05.833	Thyroid orbitopathy, bilateral

New code H05.839 Thyroid orbitopathy, unspecified eye

Topical steroid withdrawal

Topical corticosteroids (TCS) are first-line therapies for Atopic Dermatitis (AD) and other inflammatory dermatological conditions [1]. While short-term low- to mid-potency TCS monotherapy is likely safe and efficacious, there are well-established adverse effects to higher-potency or longer-term us of TCS such as skin atrophy, telangiectasia, and striae, as well as systemic side effects, including Hypothalamus-Pituitary-Adrenal (HPA) Axis suppression [2][3]. In recent decades, there has been a concerning rise in severe systemic adverse reactions due to long-term use and abrupt cessation of moderate- to high-potency TCS, commonly referred to as Topical Steroid Withdrawal (TSW) [4][5][6]. TSW is the most common term used to describe this syndrome, there are alternate names such as "Red Skin Syndrome, Topical Steroid Addiction, Steroid Withdrawal Syndrome, Steroid Rosacea, and Steroid-induced Dermatitis" among others. The National Eczema Association, additionally, acknowledges TSW as a separate clinical entity from AD and highlights the absence of a formal diagnostic criteria for TSW [4]. This lack of standardized criteria and inconsistency in naming create constraints in conducting population studies.

The most up-to-date literature on TSW demonstrates an increased prevalence of TSW in adult (83.1%) females (78.9%) [4]. The primary indication for TCS use was cosmetic (61.4%), atopic dermatitis (14.2%) and acne (11.2%) and location of TCS use was also predominantly on the face (97.4%) [4]. Potency of TCS used was mostly moderate (68.9%) or high (20.85%) and duration of usage was typically 6 months or more [4]. The etiology of TSW in literature is strongly correlated with the potency and duration of topical corticosteroid (TCS) use.

Clinical findings associated with TSW that are distinct from atopic dermatitis include thermodysregulation, neurogenic pain, burning sensation, telangiectasia, skin atrophy, oozing containing a metallic smell, and specific cutaneous signs such as the "red sleeve sign" and "elephant wrinkles" [4][8]. These symptoms and morphological features are often notably distinct from the patient's primary dermatoses and may manifest in regions of the body where TCS were never applied. Two subtypes of TSW have been proposed: an erythematous-edematous subtype in patients with underlying eczematous dermatosis and a papulopustular subtype in patients who used TCS for cosmetic or acneiform conditions [4][7].

The management and treatment of TSW focus on symptom relief and promoting skin healing. Strategies include gradual tapering of TCS, regular use of moisturizers and emollients to repair skin barrier and alleviate dryness, wet wrap therapy, dupilumab, psychological support and lifestyle adjustments. However, no current therapy appears to offer more than symptomatic control.

Currently, there is no ICD-10-CM code for TSW. Diagnosis often relies on clinical evaluation, patient history of TCS use, and exclusion of other potential causes of the symptoms. The distinct clinical features and course of TSW is inadequately characterized by existing diagnosis codes as symptoms are not a flare of existing AD or other skin condition, but of another clinical condition. The availability of a specific code would increase awareness among healthcare providers about the

existence and significance of TSW as a potential complication of topical corticosteroid use, thereby guiding the judicious application of high-potency TCS in the management of atopic dermatitis. Patients with eczematous dermatitis after >4-6 months of TCS use who have additional symptoms of thermodysregulation and cutaneous neurogenic pain should be diagnosed under this new code instead of the existing codes for "atopic dermatitis" or "rash and other nonspecific skin eruption."

The International Topical Steroid Awareness Network, with the support of National Eczema Association, Allergy & Asthma Network, and National Institute of Allergy and Infectious Disease allergy training program leadership is requesting the following tabular modifications.

References:

- 1. Eichenfield LF, Tom WL, Berger TG, et al. Guidelines of care for the management of atopic dermatitis: section 2. Management and treatment of atopic dermatitis with topical therapies. *J Am Acad Dermatol.* 2014;71(1):116–132. [PMC free article] [PubMed] [Google Scholar]
- 2. Barta K, Fonacier LS, Hart M, et al. Corticosteroid exposure and cumulative effects in patients with eczema: results from a patient survey. Ann Allergy Asthma Immunol. Published online September 29, 2022. doi:10.1016/j.anai.2022.09.031
- 3. Hengge UR, Ruzicka T, Schwartz RA, Cork MJ. Adverse effects of topical glucocorticosteroids. J Am Acad Dermatol. 2006 Jan;54(1):1-15; quiz 16-8. doi:10.1016/j.jaad.2005.01.010. PMID: 16384751.
- 4. Hwang J, Lio PA. Topical corticosteroid withdrawal ('steroid addiction'): an update of a systematic review. J Dermatolog Treat. 2022;33(3):1293-1298. doi:10.1080/09546634.2021.1882659
- 5. Hajar T, Leshem YA, Hanifin JM, et al. A systematic review of topical corticosteroid withdrawal ("steroid addiction") in patients with atopic dermatitis and other dermatoses. J Am Acad Dermatol. 2015;72(3):541-549.e2. doi:10.1016/j.jaad.2014.11.024
- 6. Brooks TS, Barlow R, Mohandas P, Bewley A. Topical Steroid Withdrawal: An Emerging Clinical Problem. Clin Exp Dermatol. Published online June 21, 2023. doi:10.1093/ced/llad161
- 7. Fukaya M. Histological and Immunohistological Findings Using Anti-Cortisol Antibody in Atopic Dermatitis with Topical Steroid Addiction. Dermatol Ther. 2016;6(1):39-46. doi:10.1007/s13555-016-0096-7
- 8. Sheary B, Harris MF. Cessation of Long-term Topical Steroids in Adult Atopic Dermatitis: A Prospective Cohort Study. Dermatitis. 2020;31(5):316-320. doi:10.1097/DER.00000000000006

TABULAR MODIFICATIONS

L30 Other and unspecified dermatitis

L30.8 Other specified dermatitis

New code Add	L30.81	Topical steroid withdrawal syndrome Red skin syndrome
New code	L30.89	Other specified dermatitis

Type 2 diabetes mellitus in remission

People with type 2 diabetes mellitus (T2DM) should be considered in remission after sustaining normal blood glucose (sugar) levels for three months or more, according to a new consensus statement from the American Diabetes Association® (ADA), the Endocrine Society, the European Association for the Study of Diabetes and Diabetes UK jointly published in 2021 in Diabetes Care, the Journal of Clinical Endocrinology & Metabolism, Diabetologia, and Diabetic Medicine, respectively.

The choice of terminology has implications for clinical practice and coding accuracy. Several terms have been proposed for people who have become free of a previously diagnosed disease state. In T2D, the terms "resolution," "reversal," "remission," and "cure" have been used to describe a favorable outcome of interventions resulting in a disease-free status. In agreement with the prior consensus group's conclusions [1], this expert panel concluded that diabetes remission is the most appropriate term [2]. It strikes a proper balance, noting that diabetes may not always be active and progressive yet implying that a notable improvement may not be permanent. It is important to note that the term "cure" has not been applied to T2DM, as weight regain is always a risk factor for its reoccurrence. Additionally, while the terms "reversal" and "remission" are used interchangeably, recent consensus supports the use of "remission" in the context of T2DM. Furthermore, a distinction could be made between mere reversal (return to normoglycemia) and true remission (normoglycaemia maintained for at least three months in the absence of glucose-lowering drugs)

Permanente Medicine is requesting the following tabular modification to report the clinical status of regression along the diabetes continuum in alignment with the current clinical guidelines.

References

- 1. Buse JB, Caprio S, Cefalu WT, et al. How do we define cure of diabetes? Diabetes Care 2009;32:2133-2135
- Shibib L, Al-Qaisi M, Ahmed A, Miras AD, Nott D, Pelling M, Greenwald SE, Guess N. Reversal and Remission of T2DM An Update for Practitioners. Vasc Health Risk Manag. 2022 Jun 14;18:417-443. doi: 10.2147/VHRM.S345810. PMID: 35726218; PMCID: PMC9206440.

TABULAR MODIFICATIONS

E11 Type 2 diabetes mellitus E11.9 Type 2 diabetes mellitus without complications

New code E11.A Type 2 diabetes mellitus in remission
Add Use additional code(s) to identify all associated manifestations

Usher Syndrome

This topic was presented at the September 2023 ICD10 Coordination and Maintenance meeting. Based on public comments, revisions to the proposal have been made for reconsideration. Usher syndrome (USH) is a hereditary disorder with well-defined genetic causation that results in impairment of both hearing and vision. USH is a recessive genetic disorder that is responsible for 50% of those with hereditary deafblindness[1]. Hearing loss varies in age of onset and severity as described further below. Retinitis pigmentosa, the visual component of USH, is a progressive and untreatable retinal degeneration that initially causes nightblindness followed by loss of peripheral vision and finally impaired central vision. USH also affects balance in some patients. Variants in at least 12 genes have been identified as causing USH with a combined estimated incidence of 4-17:100,000[1]. Three clinically identifiable categories of USH account for the majority of patient presentations and are characterized by age of onset and severity of symptoms[2]:

- Type 1: Children have profound hearing loss or deafness at birth and may have severe balance problems that may lead to delayed motor milestones. Many obtain little or no benefit from hearing aids, but early use of cochlear implants may allow for development of speech. Decreased night vision by age 10, progressing to severe vision loss by midlife.
- Type 2: Moderate to severe hearing loss at birth. Normal balance. Decreased night vision by adolescence, progressing to severe vision loss by midlife.
- Type 3: Progressive hearing loss in childhood or early teens. Normal to near-normal balance in childhood. Chance of later problems. Vision loss varies in severity and age of onset; night vision problems often begin in teens and progress to severe vision loss by midlife.

Given the current absence of a unique ICD-10-CM code that simultaneously captures the auditory and visual manifestations of USH, clinicians are forced to choose among several non-specific codes including: H35.5 (Hereditary retinal dystrophy), H35.53 (Other dystrophies primarily involving the sensory retina), H35.52 (Pigmentary retinal dystrophy), H91.93 (Unspecified hearing loss, bilateral), Q87.89 (Other specified congenital malformation syndromes, not elsewhere classified). The proposed new codes are important at a systems level as data about patients with USH cannot currently be reliably extracted from general medical databases or disease-specific registries such as the American Academy of Ophthalmology's IRIS Registry.

Usher 1F Collaborative, the Usher Syndrome Coalition, and the Usher Syndrome Society, which are all nonprofit patient advocacy organizations, are requesting the following new codes to enable better tracking of these cases and treatment outcomes.

References

- 1. https://www.nidcd.nih.gov/health/usher-syndrome#3
- 2. Nolen RM, Hufnagel RB, Friedman TB, Turriff AE, Brewer CC, Zalewski CK, King KA, Wafa TT, Griffith AJ, Brooks BP, Zein WM. Atypical and ultra-rare Usher syndrome: a review. Ophthalmic Genet. 2020 Oct;41(5):401-412. doi: 10.1080/13816810.2020.1747090. Epub 2020 May 6. PMID: 32372680.

TABULAR MODIFICATIONS

F88	Other	disorders	of p	sycho	logical	deve	lopment
-----	-------	-----------	------	-------	---------	------	---------

Delete Developmental agnosia
Delete Global developmental delay

Delete Other specified neurodevelopmental disorder

New

Subcategory F88.1 Usher syndrome

Add Code also, if applicable, any associated retinal dystrophy

such as:

Add other dystrophies primarily involving the sensory retina

(H35.53)

Add pigmentary retinal dystrophy (H35.52)

New code

New code

New code

F88.10

Usher syndrome, unspecified

F88.11

Usher syndrome, type 1

Wew code

F88.12

Usher syndrome, type 2

Wew code

F88.13

Usher syndrome, type 3

Wew code

F88.19

Other Usher syndrome

New code F88.8 Other disorders of psychological development

Add Developmental agnosia
Add Global developmental delay

Add Other specified neurodevelopmental disorder

New code F88.9 Disorders of psychological development, unspecified

Xylazine-associated wounds

On April 12, 2023, the White House Office of National Drug Control Policy (ONDCP) declared fentanyl adulterated or associated with xylazine an emerging drug threat. In their response plan, the ONDCP urged the creation of ICD-10-CM codes specific to xylazine and its health consequences. This proposal addresses the need for standardized diagnostic coding for one distinct and ulcerating consequence: that of xylazine-associated wounds.

Xylazine is an α-2 receptor agonist approved by the Food and Drug Administration (FDA) for sedation and analgesia in veterinary medicine.² Xylazine is not approved for use in humans due to unsafe hypotension and central nervous system depression. Xylazine first emerged as an illicit drug in the early 2000s in Puerto Rico and 2006 in Philadelphia, PA.³ In 2009, Rodríguez et al. reported a higher prevalence of skin wounds among people who injected xylazine-containing drugs compared to people who injected drugs without xylazine.⁴ As xylazine has become pervasive in Philadelphia's illicit opioid supply, wounds and skin and soft tissue infections have come to dominate the needs of people who use drugs. In 2021, Xylazine was present in 90% of illicit fentanyl samples tested by the Philadelphia Department of Public Health.⁵ Between 2020 and 2021, there was a 39% increase in hospitalizations for skin and soft tissue infections related to injection drug use in Philadelphia.⁶ Wound care providers across community, outpatient, and hospital settings in Philadelphia have developed an expertise in identifying, evaluating, and treating xylazine-associated wounds. However, the lack of standardized ICD-10-CM codes has hindered continuity of care, as well as the evaluation and monitoring of xylazine-wounds and associated sequelae.

Xylazine-associated wounds are distinctly recognizable, yet their etiology is poorly understood.⁷ Xylazine-associated wounds are consistently described in peer-reviewed literature as partial to full thickness skin defects with progressive necrosis of the skin, muscle, tendon, and bone. ^{8,9,10,11,12,13,14,15,16} Although xylazine-associated wounds commonly develop at sites of injection, they can appear anywhere on the body irrespective of the route of xylazine administration. ^{7,12,17,18} Xylazine-associated wounds may initially appear as areas of blistered skin, often over reddish-purple discolored tissue which evolve into a thick layer of eschar overlying a partial or full thickness ulcer that progressively increases in size and depth. ^{11,19} Indeed, xylazine-associated wounds are often typified by the presence of necrotic tissue (eschar, and slough) and wound diameters greater than 10 cm. ¹⁹ Xylazine-associated wounds increase a person's risk of bacteremia, endocarditis, sepsis, limb amputation, and death. ^{12,18} Treatment of xylazine-associated wounds is often complicated by patients' experiences of opioid and xylazine withdrawal, co-occurring mental illness, local and systemic infections, physical disability, and health-related social needs such as housing instability and food insecurity. ^{9,10,14}

Catherine Tomson, Daniel Teixeira da Silva, MD, MSHP, and Rachel Neuschatz, RN, MSN of the Substance Use Prevention and Harm Reduction Division in the Philadelphia Department of Public Health are requesting the following tabular modifications for reporting, evaluation, and monitoring of xylazine-associated wounds.

References:

- Office of National Drug Control Policy. Fentanyl Adulterated or Associated with Xylazine Response Plan. The White House Executive Office of the President. Published online July 2023. https://www.whitehouse.gov/wp-content/uploads/2023/07/FENTANYL-ADULTERATED-OR-ASSOCIATED-WITH-XYLAZINE-EMERGING-THREAT-RESPONSE-PLAN-Report-July-2023.pdf
- 2. Greene SA, Thurmon JC. Xylazine--a review of its pharmacology and use in veterinary medicine. J Vet Pharmacol Ther. 1988;11(4):295-313. doi:10.1111/j.1365-2885.1988.tb00189.x
- 3. Johnson J, Pizzicato L, Johnson C, Viner K. Increasing presence of xylazine in heroin and/or fentanyl deaths, Philadelphia, Pennsylvania, 2010-2019. *Inj Prev.* 2021;27(4):395-398. doi:10.1136/injuryprev-2020-043968
- Rodríguez N, Vidot JV, Panelli J, Colón H, Ritchie B, Yamamura Y. GC-MS confirmation of Xylazine (Rompun), a veterinary sedative, in exchanged needles. *Drug Alcohol Depend*. 2008;96(3):290-293. doi:10.1016/j.drugalcdep.2008.03.005
- 5. Philadelphia Department of Public Health. Health Update: Xylazine (tranq) exposure among people who use substances in Philadelphia. *Philadelphia Department of Public Health Health Alert Network*. Published online December 8, 2022. https://hip.phila.gov/document/3154/PDPH-HAN Update 13 Xylazine 12.08.2022.pdf/
- 6. Philadelphia Department of Public Health, Division of Substance Use Prevention and Harm Reduction Annual Report, 2021. Philadelphia, PA: City of Philadelphia. https://www.phila.gov/media/20230306134420/Final-2021-SUPHR-AR.pdf
- 7. D'Orazio J, Nelson L, Perrone J, Wightman R, Haroz R. Xylazine Adulteration of the Heroin–Fentanyl Drug Supply. Ann Intern Med. Published online October 10, 2023. doi:10.7326/M23-2001
- 8. Rengifo S, Ilyas AM, Tosti R. Upper Extremity Soft Tissue Wound Related to Xylazine-laced Fentanyl Intravenous (IV) Drug Abuse: A Case Report. SurgiColl. 2023;1(1). https://doi.org/10.58616/surgicoll.00002
- 9. Warp PV, Hauschild M, Tookes HE, Ciraldo K, Serota DP, Cruz I. A Confirmed Case of Xylazine-Induced Skin Ulcers in a Person Who Injects Drugs in Miami, Florida, USA. *Research Square*. Published online July 26, 2023. https://doi.org/10.21203/rs.3.rs-3194876/v1
- 10. Ehrman-Dupre R, Kaigh C, Salzman M, Haroz R, Peterson LK, Schmidt R. Management of Xylazine Withdrawal in a Hospitalized Patient: A Case Report. *Journal of Addiction Medicine*. 2022;16(5):595-598.
- 11. Dowton A, Doernberg M, Heiman E, et al. Recognition and Treatment of Wounds in Persons Using Xylazine: A Case Report from New Haven, Connecticut. *Journal of Addiction Medicine*. 2023;00(00):1-3. doi:10.1097/ADM.0000000000001198
- 12. Wei J, Wachuku C, Berk-Krauss J, Steele KT, Rosenbach M, Messenger E. Severe cutaneous ulcerations secondary to xylazine (tranq): A case series. *JAAD Case Reports*. 2023;36:89-91. doi:https://doi.org/10.1016/j.jdcr.2023.04.016.
- 13. Sherman SV. Xylazine-Associated Skin Injury. New England Journal of Medicine. 2023;388(24):2274.
- 14. Rose L, Kirven R, Tyler K, Chung C, Korman A. Xylazine-induced acute skin necrosis in two patients who inject fentanyl. *JAAD Case Reports*. 2023;36:113-115.
- 15. Malayala SV, Papudesi BN, Bobb R, Wimbush A. Xylazine-Induced Skin Ulcers in a Person Who Injects Drugs in Philadelphia, Pennsylvania, USA. *Cureus*. 2022;14(8). doi:10.7759/cureus.28160
- 16. Soderquist M, Delgado G, Abdelfattah H, Thoder J, Solarz M. Necrotic Upper-Extremity Infections in People Who Inject Drugs: A Case Series. *The Journal of Hand Surgery*. Published online May 12, 2023. doi:10.1016/j.jhsa.2023.04.001.
- 17. Ahuja K, DeSena G. Xylazine: An Ulcerating Addiction. *SKIN The Journal of Cutaneous Medicine*. 2023;7(4):958-959. doi:10.25251/skin.7.4.24
- O'Malley PA. Rising Xylazine Drug Abuse in Humans: A Deep and Lingering High with Wounds, Amputations, and Death. *Clinical Nurse Specialist*. Published online August 2023:164-165. doi:10.1097/NUR.000000000000000758

19. Zagorski CM, Hosey RA, Moraff C, et al. Reducing the harms of xylazine: clinical approaches, research deficits, and public health context. *Harm Reduction Journal*. 2023;20(1):141. doi:10.1186/s12954-023-00879-7

TABULAR MODIFICATIONS

T65 Toxic effect of other and unspecified substances

T65.8 Toxic effect of other specified substances

New

sub-subcategory T65.84 Toxic effect of xylazine

Add Use additional code(s) for all associated manifestions,

such as:

Add cutaneous abscess, furuncle and carbuncle (L02.-)

Add cellulitis and acute lymphangitis (L03.-)

Add non-pressure chronic ulcer of lower limb, not elsewhere

classified (L97.-)

New code T65.841 Toxic effect of xylazine, accidental

(unintentional)

Add Toxic effect of xylazine NOS

New code T65.842 Toxic effect of xylazine, intentional self-harm

New code T65.843 Toxic effect of xylazine, assault

New code T65.844 Toxic effect of xylazine, undetermined

L97 Non-pressure chronic ulcer of lower limb, not elsewhere classified

L97.1 Non-pressure chronic ulcer of thigh

Add Non-pressure chronic ulcer of groin

L97.2 Non-pressure chronic ulcer of calf

Add Non-pressure chronic ulcer of shin

L98	Other disorders of skin and subcutaneous tissue, not elsewhere classified
	L98.4 Non-pressure chronic ulcer of skin, not elsewhere classified

New

sub-subcategory L98.43 Non-pressure chronic ulcer of abdomen

New code L98.431 Non-pressure chronic ulcer of abdomen limited to

breakdown of skin

New code L98.432 Non-pressure chronic ulcer of abdomen with fat

layer exposed

New code L98.433 Non-pressure chronic ulcer of abdomen with

necrosis of muscle

New code L98.434 Non-pressure chronic ulcer of abdomen with

necrosis of bone

New code L98.435 Non-pressure chronic ulcer of abdomen with

muscle involvement without evidence of necrosis

New code L98.436 Non-pressure chronic ulcer of abdomen with

bone involvement without evidence of necrosis

New code L98.438 Non-pressure chronic ulcer of abdomen with

other specified severity

New code L98.439 Non-pressure chronic ulcer of abdomen with

unspecified severity

New

sub-subcategory L98.44 Non-pressure chronic ulcer of chest

New code L98.441 Non-pressure chronic ulcer of chest limited to

breakdown of skin

New code L98.442 Non-pressure chronic ulcer of chest with fat

layer exposed

N7 1	T 00 440	
New code	L98.443	Non-pressure chronic ulcer of chest with
		necrosis of muscle
New code	L98.444	Non-pressure chronic ulcer of chest with
		necrosis of bone
New code	L98.445	Non-pressure chronic ulcer of chest with
		muscle involvement without evidence of necrosis
New code	L98.446	Non-pressure chronic ulcer of chest with
		bone involvement without evidence of necrosis
New code	L98.448	Non-pressure chronic ulcer of chest with
		other specified severity
New code	L98.449	Non-pressure chronic ulcer of chest with
		unspecified severity
New		
sub-subcategory	L98.45 Non-pres	sure chronic ulcer of neck
New code	L98.451	Non-pressure chronic ulcer of neck limited to
		breakdown of skin
New code	L98.452	Non-pressure chronic ulcer of neck with fat
		layer exposed
New code	L98.453	Non-pressure chronic ulcer of neck with
		necrosis of muscle
New code	L98.454	Non-pressure chronic ulcer of neck with
		necrosis of bone
New code	L98.455	Non-pressure chronic ulcer of neck with
		muscle involvement without evidence of necrosis
New code	L98.456	Non-pressure chronic ulcer of neck with
		bone involvement without evidence of necrosis
New code	L98.458	Non-pressure chronic ulcer of neck with
		other specified severity
New code	L98.459	Non-pressure chronic ulcer of neck with
		unspecified severity 109

New

sub-subcategory L98.46 Non-pressure chronic ulcer of face

New code L98.461 Non-pressure chronic ulcer of face limited to

breakdown of skin

New code L98.462 Non-pressure chronic ulcer of face with fat

layer exposed

New code L98.463 Non-pressure chronic ulcer of face with

necrosis of muscle

New code L98.464 Non-pressure chronic ulcer of face with

necrosis of bone

New code L98.465 Non-pressure chronic ulcer of face with

muscle involvement without evidence of necrosis

New code L98.466 Non-pressure chronic ulcer of face with

bone involvement without evidence of necrosis

New code L98.468 Non-pressure chronic ulcer of face with

other specified severity

New code L98.469 Non-pressure chronic ulcer of face with

unspecified severity

New code L98.A Non-pressure chronic ulcer of upper limb, not elsewhere

classified

Add Includes: chronic ulcer of upper limb NOS

Add non-healing ulcer of skin

Add ulcer of skin NOS

Add Exclude2: gangrene (I96)

Add pressure ulcer (pressure area) (L89.-)

Add skin infections (L00-L08)

Add specific infections classified to A00-B99

Add ulcer of lower limb NEC (L97.-)

Add varicose ulcer (I83.0-I83.93)

110

New

sub-subcategory L98.A1 Non-pressure chronic ulcer of upper arm Non-pressure chronic ulcer of axilla

New

sub-subcategory L98.A11 Non-pressure chronic ulcer of right upper arm

New code L98.A111 Non-pressure chronic ulcer of

right upper arm limited to

breakdown of skin

New code L98.A112 Non-pressure chronic ulcer of

right upper arm with fat layer

exposed

New code L98.A113 Non-pressure chronic ulcer of

right upper arm with necrosis of

muscle

New code L98.A114 Non-pressure chronic ulcer of

right upper arm with necrosis of

bone

New code L98.A115 Non-pressure chronic ulcer of

right upper arm with muscle

involvement without evidence of

necrosis

New code L98.A116 Non-pressure chronic ulcer of

right upper arm with bone

involvement without evidence of

necrosis

New code L98.A118 Non-pressure chronic ulcer of

right upper arm with other

New code L98.A119 Non-pressure chronic ulcer of

right upper arm with unspecified

severity

New

sub-subcategory L98.A12 Non-pressure chronic ulcer of left upper arm

New code L98.A121 Non-pressure chronic ulcer of

left upper arm limited to

breakdown of skin

New code L98.A122 Non-pressure chronic ulcer of

left upper arm with fat layer

exposed

New code L98.A123 Non-pressure chronic ulcer of

left upper arm with necrosis of

muscle

New code L98.A124 Non-pressure chronic ulcer of

left upper arm with necrosis of

bone

New code L98.A125 Non-pressure chronic ulcer of

left upper arm with muscle

involvement without evidence of

necrosis

New code L98.A126 Non-pressure chronic ulcer of

left upper arm with bone

involvement without evidence of

necrosis

New code L98.A128 Non-pressure chronic ulcer of

left upper arm with other

New code L98.A129 Non-pressure chronic ulcer of

left upper arm with unspecified

severity

New

sub-subcategory L98.A19 Non-pressure chronic ulcer of unspecified

upper arm

New code L98.A191 Non-pressure chronic ulcer of

unspecified upper arm limited to

breakdown of skin

New code L98.A192 Non-pressure chronic ulcer of

unspecified upper arm with fat

layer exposed

New code L98.A193 Non-pressure chronic ulcer of

unspecified upper arm with

necrosis of muscle

New code L98.A194 Non-pressure chronic ulcer of

unspecified upper arm with

necrosis of bone

New code L98.A195 Non-pressure chronic ulcer of

unspecified upper arm with

muscle involvement without

evidence of necrosis

New code L98.A196 Non-pressure chronic ulcer of

unspecified upper arm with bone

involvement without evidence of

necrosis

New code L98.A198 Non-pressure chronic ulcer of

unspecified upper arm with other

New code L98.A199 Non-pressure chronic ulcer of

unspecified upper arm with

unspecified severity

New

sub-subcategory L98.A2 Non-pressure chronic ulcer of forearm

New

sub-subcategory L98.A21 Non-pressure chronic ulcer of right forearm

New code L98.A211 Non-pressure chronic ulcer of

right forearm limited to

breakdown of skin

New code L98.A212 Non-pressure chronic ulcer of

right forearm with fat layer

exposed

New code L98.A213 Non-pressure chronic ulcer of

right forearm with necrosis of

muscle

New code L98.A214 Non-pressure chronic ulcer of

right forearm with necrosis of

bone

New code L98.A215 Non-pressure chronic ulcer of

right forearm with muscle

involvement without evidence of

necrosis

New code L98.A216 Non-pressure chronic ulcer of

right forearm with bone

involvement without evidence of

necrosis

New code L98.A218 Non-pressure chronic ulcer of

right forearm with other

New code L98.A219 Non-pressure chronic ulcer of

right forearm with unspecified

severity

New

sub-subcategory L98.A22 Non-pressure chronic ulcer of left forearm

New code L98.A221 Non-pressure chronic ulcer of

left forearm limited to

breakdown of skin

New code L98.A222 Non-pressure chronic ulcer of

left forearm with fat layer

exposed

New code L98.A223 Non-pressure chronic ulcer of

left forearm with necrosis of

muscle

New code L98.A224 Non-pressure chronic ulcer of

left forearm with necrosis of

bone

New code L98.A225 Non-pressure chronic ulcer of

left forearm with muscle

involvement without evidence of

necrosis

New code L98.A226 Non-pressure chronic ulcer of

left forearm with bone

involvement without evidence of

necrosis

New code L98.A228 Non-pressure chronic ulcer of

left forearm with other

New code L98.A229 Non-pressure chronic ulcer of

left forearm with unspecified

severity

New

sub-subcategory L98.A29 Non-pressure chronic ulcer of unspecified

forearm

New code L98.A291 Non-pressure chronic ulcer of

unspecified forearm limited to

breakdown of skin

New code L98.A292 Non-pressure chronic ulcer of

unspecified forearm with fat

layer exposed

New code L98.A293 Non-pressure chronic ulcer of

unspecified forearm with

necrosis of muscle

New code L98.A294 Non-pressure chronic ulcer of

unspecified forearm with

necrosis of bone

New code L98.A295 Non-pressure chronic ulcer of

unspecified forearm with

muscle involvement without

evidence of necrosis

New code L98.A296 Non-pressure chronic ulcer of

unspecified forearm with bone

involvement without evidence of

necrosis

New code L98.A298 Non-pressure chronic ulcer of

unspecified forearm with other

New code L98.A299 Non-pressure chronic ulcer of

unspecified forearm with

unspecified severity

New

sub-subcategory L98.A3 Non-pressure chronic ulcer of hand

New

sub-subcategory L98.A31 Non-pressure chronic ulcer of right hand

New code L98.A311 Non-pressure chronic ulcer of

right hand limited to breakdown

of skin

New code L98.A312 Non-pressure chronic ulcer of

right hand with fat layer

exposed

New code L98.A313 Non-pressure chronic ulcer of

right hand with necrosis of

muscle

New code L98.A314 Non-pressure chronic ulcer of

right hand with necrosis of

bone

New code L98.A315 Non-pressure chronic ulcer of

right hand with muscle

involvement without evidence of

necrosis

New code L98.A316 Non-pressure chronic ulcer of

right hand with bone

involvement without evidence of

necrosis

New code L98.A318 Non-pressure chronic ulcer of

right hand with other

New code L98.A319 Non-pressure chronic ulcer of

right hand with unspecified

severity

New

sub-subcategory L98.A32 Non-pressure chronic ulcer of left hand

New code L98.A321 Non-pressure chronic ulcer of

left hand limited to breakdown

of skin

New code L98.A322 Non-pressure chronic ulcer of

left hand with fat layer

exposed

New code L98.A323 Non-pressure chronic ulcer of

left hand with necrosis of

muscle

New code L98.A324 Non-pressure chronic ulcer of

left hand with necrosis of

bone

New code L98.A325 Non-pressure chronic ulcer of

left hand with muscle

involvement without evidence of

necrosis

New code L98.A326 Non-pressure chronic ulcer of

left hand with bone

involvement without evidence

of necrosis

New code L98.A328 Non-pressure chronic ulcer of

left hand with other

New code L98.A329 Non-pressure chronic ulcer of

left hand with unspecified

severity

New

sub-subcategory L98.A39 Non-pressure chronic ulcer of unspecified

hand

New code L98.A391 Non-pressure chronic ulcer of

unspecified hand limited to

breakdown of skin

New code L98.A392 Non-pressure chronic ulcer of

unspecified hand with fat layer

exposed

New code L98.A393 Non-pressure chronic ulcer of

unspecified hand with necrosis of

muscle

New code L98.A394 Non-pressure chronic ulcer of

unspecified hand with necrosis of

bone

New code L98.A395 Non-pressure chronic ulcer of

unspecified hand with muscle

involvement without evidence of

necrosis

New code L98.A396 Non-pressure chronic ulcer of

unspecified hand with bone

involvement without evidence of

necrosis

New code L98.A398 Non-pressure chronic ulcer of

unspecified hand with other

New code

L98.A399 Non-pressure chronic ulcer of unspecified hand with unspecified severity

TABULAR MODIFICATIONS PROPOSED ADDENDA All approved modifications will be effective October 1, 2025

		••
Revise	B96	Other bacterial agents as the cause of diseases classified elsewhere B96.2 Escherichia coli [E. coli] as the cause of diseases classified elsewhere B96.21 Shiga toxin-producing Escherichia coli [E. coli] [STEC] O157 as the cause of diseases classified elsewhere O157:H7 Escherichia coli [E.coli] [E.coli] with or without confirmation of Shiga toxin-production
Revise		Shiga toxin-producing Escherichia coli [E.coli] [E.coli]
ъ.		B96.22Other specified Shiga toxin-producing Escherichia coli [E. coli] [STEC] as the cause of diseases classified elsewhere
Revise		Non-O157 Shiga toxin-producing Escherichia coli [E.coli] [Ecoli]
Revise		Non-O157 Shiga toxin-producing Escherichia coli [E.coli] [E.coli] with known O group
	С7В	Secondary neuroendocrine tumors
Revise		C7B.0 Secondary carcinoid tumors C7B.04 Secondary carcinoid tumors of peritoneum Mesentary Mesentery metastasis of carcinoid tumor
	C77	Secondary and unspecified malignant neoplasm of lymph nodes Excludes 1: malignant neoplasm of lymph nodes, specified as primary (C81-C86, C88, C96)
Revise		mesentary mesentery metastasis of carcinoid tumor (C7B.04)
	D12	Benign neoplasm of colon, rectum, anus and anal canal
		D12.6 Benign neoplasm of colon, unspecified Oct 1, 2024 Adenomatosis of colon Benign neoplasm of large intestine NOS Polyposis (hereditary) of colon
Delete Add		Excludes1: inflammatory polyp of colon (K51.4-) Excludes2: inflammatory polyp of colon (K51.4-)
	D48	Neoplasm of uncertain behavior of other and unspecified sites D48.1 Neoplasm of uncertain behavior of connective and other soft tissue D48.11Desmoid tumor
Add		Aggressive fibromatosis

D68 Other coagulation defects D68.3 Hemorrhagic disorder due to circulating anticoagulants D68.31Hemorrhagic disorder due to intrinsic circulating anticoagulants, antibodies, or inhibitors Antiphospholipid antibody with hemorrhagic disorder Lupus anticoagulant (LAC) with hemorrhagic disorder Systemic lupus erythematosus [SLE] inhibitor with hemorrhagic disorder Delete Excludes 1: antiphospholipid antibody syndrome (D68.61) antiphospholipid antibody with Delete hypercoagulable state (D68.61) Delete lupus anticoagulant (LAC) with hypercoagulable state (D68.62) Delete systemic lupus erythematosus [SLE] inhibitor with hypercoagulable state (D68.62) Add Excludes2: antiphospholipid antibody syndrome (D68.61)Add antiphospholipid antibody with hypercoagulable state (D68.61) Add lupus anticoagulant (LAC) with hypercoagulable state (D68.62) Add systemic lupus erythematosus [SLE] inhibitor with hypercoagulable state (D68.62) D68.6 Other thrombophilia

D68.61 Antiphospholipid syndrome

Delete	Excludes1: anti-phospholipid antibody, finding without diagnosis (R76.0)
Delete	anti-phospholipid antibody with
	hemorrhagic disorder (D68.312)
Delete	lupus anticoagulant syndrome (D68.62)
Add	Excludes2: anti-phospholipid antibody, finding without
	diagnosis (R76.0)
Add	anti-phospholipid antibody with
	hemorrhagic disorder (D68.312)
Add	lupus anticoagulant syndrome (D68.62)

Delete Delete Delete Delete	D68.62	antipl lupus dia lupus	ant syndrome ardiolipin syndrome (D68.61) nospholipid syndrome (D68.61) anticoagulant (LAC) finding without agnosis (R76.0) anticoagulant (LAC) with morrhagic disorder (D68.312)
Add Add Add Add		antip lupus dia lupus	ardiolipin syndrome (D68.61) hospholipid syndrome (D68.61) s anticoagulant (LAC) finding without gnosis (R76.0) s anticoagulant (LAC) with morrhagic disorder (D68.312)
Add Add	E88 Ot	E88.4 Mitoch	l metabolic disorders nondrial metabolism disorders Disorders of mitochondrial tRNA synthetases ARS2-related mitochondrial disorders LBSL
Add			Leukoencephalopathy with brainstem - spinal cord involvement – lactate elevation
Add			Leukoencephalopathy with thalamus – brainstem involvement - high lactate
Add Add			LTBL Mitochondrial aminoacyl-tRNA synthetase disorders

F42 Obsessive-compulsive disorder Excludes2: obsessive-compulsive symptoms occurring in depression (F32-F33) (F32.-, F33.-)

Revise	F63	Impulse disorders F63.2 Kleptomania Pathological stealing Excludes2: depressive disorder with stealing (F31-F33) (F31, F32, F33)
Revise	G00	Bacterial meningitis, not elsewhere classified G00.1 Pneumococcal meningitis Meningitis Meningitis due to Streptococcal pneumoniae
		G23 Other degenerative diseases of basal ganglia G23.3 Hypomyelination with atrophy of the basal ganglia and cerebellum
Add		H-ABC TUBB4A-related neurologic disorders
Delete	J43	Emphysema Excludes 1: emphysema due to inhalation of chemicals, gases, fumes or
Add		vapors (J68.4) Code also, if applicable, emphysema due to inhalation of chemicals, gases, fumes or vapors (J68.4)
	J84	Other interstitial pulmonary diseases
Delete		J84.1 Other interstitial pulmonary diseases with fibrosis Excludes1: pulmonary fibrosis (chronic) due to inhalation of chemicals, gases, fumes or vapors (J68.4)
Add		Code also, if applicable, pulmonary fibrosis (chronic) due to inhalation of chemicals, gases, fumes or vapors (J68.4)
Add	K75	Other inflammatory liver diseases K75.8 Other specified inflammatory liver diseases K75.81 Nonalcoholic steatohepatitis (NASH) Metabolic dysfunction-associated steatohepatitis (MASH)
	K76	Other diseases of liver K76.0 Fatty (change of) liver, not elsewhere classified
Add		Nonalcoholic fatty liver disease (NAFLD) Metabolic dysfunction-associated steatotic liver disease (MASLD)

Add	M36	Systemic disorders of connective tissue in diseases classified elsewhere M36.3 Arthropathy in other blood disorders Code first underlying disease
Revise	O04	Complications following (induced) termination of pregnancy Excludes2: encounter for elective termination of pregnancy uncomplicated (Z33.2)
Revise	O70	Perineal laceration during delivery O70.1 Second degree perineal laceration during delivery Excludes1:perineal laceration involving anal sphincter (O70.2_) O70.4 Anal sphincter tear complicating delivery, not associated with third
Revise		degree laceration Excludes1:anal sphincter tear with third degree perineal laceration (O70.2-)
Delete	O90	Complications of the puerperium, not elsewhere classified O90.4 Postpartum acute kidney failure Excludes 1: non-anuria and oliguria (R34)
		O90.41 Hepatorenal syndrome following labor and delivery
Add		O90.49 Other postpartum acute kidney failure Excludes1:anuria and oliguria (R34)
Revise		abnormal findings on neonatal screening 09.6 Abnormal findings on neonatal hearing screening for neonatal hearing loss
(Q75	Other congenital malformations of skull and face bones Q75.0 Craniosynostosis
Revise		Q75.00 Craniosynostosis, unspecified Craniosynostosis NOS
Revise		Q75.001 Craniosynostosis, unspecified type, unilateral
Revise		Q75.001 Craniosynostosis, unspecified <u>type</u> , unlateral
Revise		Q75.002 Craniosynostosis, unspecified Q75.009 Craniosynostosis, unspecified
101150		Imperfect fusion of skull
		Q75.02 Coronal craniosynostosis
Delete		Non-deformational anterior plagiocephaly
Revise		Excludes1: dolichocephaly (Q67.2) Q75.021 Coronal craniosynostosis, unilateral

Revise Revise		Non-deformational anterior plagiocephaly Q75.022 Coronal craniosynostosis, bilateral Q75.029 Coronal craniosynostosis, unspecified
Delete Delete Add Add	R15	Fecal incontinence R15.0 Incomplete defecation Excludes1: constipation (K59.0-) fecal impaction (K56.41) Excludes2: constipation (K59.0-) fecal impaction (K56.41)
Revise	R39	Other and unspecified symptoms and signs involving the genitourina system R39.0 Extravasation of urine R39.1 Other difficulties with micturition R39.12 Poor urinary stream Weak urinary steam stream
Revise	R40	Somnolence, stupor and coma R40.1 Stupor Catatonic stupor Semicoma Excludes1:depressive stupor (F31-F33) (F31, F32, F33)
Revise	R53	Malaise and fatigue R53.8 Other malaise and fatigue Excludes1: exhaustion and fatigue due to recurrent depressive episode (F33)
Add	R62	Lack of expected normal physiological development in childhood and adults R62.5 Other and unspecified lack of expected normal physiological development in childhood R62.51 Failure to thrive (child) Faltering growth
Revise	R69	Illness, unspecified Unknown and unspecified eases causes of morbidity

R87 Abnormal findings in specimens from female genital organs R87.6 Abnormal cytological findings in specimens from female genital organs R87.61 Abnormal cytological findings in specimens from cervix uteri Unspecified abnormal cytological findings in specimens from cervix uteri Revise Atypical endocervial endocervical cells of cervix NOS S06 Intracranial injury S06.3 Focal traumatic brain injury S06.34 Traumatic hemorrhage of right cerebrum Traumatic intracerebral hemorrhage and hematoma of right cerebrum S06.341 Traumatic hemorrhage of right cerebrum with loss of consciousness of 30 minutes or less Revise Traumatic hemorrhage of right cerebrum with brief loss of consciousness S12 Fracture of cervical vertebra and other parts of neck S12.8 Fracture of other parts of neck Fracture of Hhyoid bone Revise Revise Fracture of Llarynx Revise Fracture of Tthyroid cartilage Revise Fracture of Ttrachea S37 Injury of urinary and pelvic organs S37.6 Injury of uterus Delete Excludes 1: injury to gravid uterus (O9A.2-) T65 Toxic effect of other and unspecified substances T65.3 Toxic effect of nitroderivatives and aminoderivatives of benzene and its homologues Revise Toxic effect of anilin aniline [benzenamine] Pedestrian injured in collision with other nonmotor vehicle V06 V06.9 Pedestrian injured in collision with other nonmotor vehicle, unspecified whether traffic or nontraffic accident V06.93 Pedestrian on standing micro-mobility pedestrian conveyance injured in collision with other nonmotor vehicle, unspecified whether traffic or nontraffic accident

Revise	V06.938 Pedestrian on other standing micro-mobility pedestrian conveyance injured in collision with other nonmotor vehicle, unspecified whether traffic or nontraffic accident Pedestrian on hoverboard injured in collision with other nonmotor vehicle, unspecified whether traffic or nontraffic accident
Revise	W44 Foreign body entering into or through a natural orifice W44.A Battery entering into or through a natural orifice W44.A9 Other batteries entering into or through a natural orifice Cylindrical battery entering into or through a natural orifice
	Y07 Perpetrator of assault, maltreatment and neglect Y07.4 Other family member, perpetrator of maltreatment and neglect Y07.43Stepparent or stepsibling, perpetrator of maltreatment and neglect
Revise	Y07.435 Stepbrother, perpetrator of of maltreatment and neglect
Delete Add	Persons encountering health services for examinations (Z00-Z13) Excludes1: examinations related to pregnancy and reproduction (Z30-Z36, Z39) Excludes2: examinations related to pregnancy and reproduction (Z30-Z36, Z39)
	Z01 Encounter for other special examination without complaint, suspected or reported diagnosis
Delete	Excludes 1: encounter for laboratory and radiologic examinations as a component of general medical examinations (Z00.0-)
Add	Excludes2: encounter for laboratory and radiologic examinations as a component of general medical examinations (Z00.0-)
Revise	Z83.7 Family history of diseases of the digestive system Z83.71 Family history of colonic polyps Z83.718 Other fFamily history of colon polyps

INDEX MODIFICATION PROPOSED ADDENDA All approved modifications will be effective October 1, 2025

Abnormal, abnormality, abnormalities - see also Anomaly

- cytology

- - anus R85.619

- - - human papillomavirus (HPV) DNA test

Revise ---- low risk positive P85.82

- Papanicolaou (smear)

- - anus R85.619

- - - human papillomavirus (HPV) DNA test

Revise ---- low risk postive positive R85.82

-- cervix R87.619

Revise --- thin preparation R87.619

Admission (for) - see also Encounter (for)

- adjustment (of)

- - artificial

Revise --- eye Z44.2 <u>Z44.2</u>-

- - device NEC

--- prosthetic Z44.9

Revise ---- eye Z44.2 <u>Z44.2</u>-

-- prosthesis Z44.9

Revise --- eye Z44.2 <u>Z44.2</u>-

- fitting (of)

- - artificial

Revise --- eye Z44.2 <u>Z44.2</u>-

Algoneurodystrophy M89.00

Revise - multiple sites M89.0-M89.09

Anemia (essential) (general) (hemoglobin deficiency) (infantile) (primary) (profound)

D64.9

- due to (in) (with)

Revise -- fish tapeworm (D.latum D. latum) infestation B70.0 [D63.8]

Angulation

Revise - coccyx (acquired) - see also subcategory M43.8 M43.8X8

Aversion

- oral R63.39

Revise -- newborn P92.- P92.8

Arthritis, arthritic (acute) (chronic) (nonpyogenic) (subacute) M19.90

- in (due to)

-- crystals M11.9

- - - specified type NEC M11.80

Revise ---- multiple sites M11.8-M11.89

Arthropathy (see also Arthritis) M12.9

- in (due to)

Revise -- ulcerative colitis K51.90 [M07.60 M07.6-]

Breathing

- mouth R06.5

Revise -- causing malocclusion M26.5 M26.59

Bronchiolitis (acute) (infective) (subacute) J21.9

Delete - chronic (fibrosing) (obliterative) J44.89

Add -- obliterative J44.81

Conflict (with) - see also Discord

Revise - family Z73.9 Z63.8

Cubitus

Revise - valgus (acquired) M21.0-M21.02-Revise - varus (acquired) M21.1-M21.12-

Chancre (any genital site) (hard) (hunterian) (mixed) (primary) (seronegative)

(seropositive) (syphilitic) A51.0

Revise - Ducreyi's A57

Chloasma (skin) (idiopathic) (symptomatic) L81.1

Revise - evelid H02.719 H02.71-

Revise -- hyperthyroid E05.90 [H02.719 H02.71-]

Revise --- with thyroid storm E05.91 [H02.719-H02.71-]

Chondritis M94.8x9

Revise - auricle H61.03-

Complication(s) (from) (of) - circulatory system I99.8

- - postprocedural I97.89

Revise --- following cardiac surgery (see also Infarct, myocardium, associated with

revascularization procedure) 197.19- 197.190

- transfusion (blood) (lymphocytes) (plasma) T80.92

Revise -- air emblism embolism

Density - breast R92.30 Revise --low R92.30 Depression (acute) (mental) F32.A Revise - central nervous system R09.2 G96.9 Derangement - knee (recurrent) M23.9-- - meniscus M23.30-Revise --- cystic M23.00-M23.0-Disease - sickle-cell D57.1 - - with Revise - - - priaprism priapism D57.09 -- Hb-C D57.20 - - - with Revise --- priaprism priapism D57.218 Dislocation (articular) - vertebral (articular process) (body) (traumatic) - - traumatic --- cervical S13.100 - - - joint between Revise ---- C5 and C6 S13.161 Revise ---- C6 and C7 S13.171 ---- C7-and T1 S13.181 Revise - - lumbar S33.101 - - - joint between Revise ---- L1_and L2 S33.111 Revise ---- L2 and L3 S33.121 Revise ---- L4_and L5 S33.141 Disturbance(s) - see also Disease - heart, functional (conditions in I44-I50) - - due to presence of (cardiac) prosthesis 197.19-- - postoperative I97.89 Revise - - - cardiac surgery (see also Infarct, myocardium, associated with revascularization procedure) 197.19-197.190 Add - - - other surgery I97.191

Dyspnea (nocturnal) (paroxysmal) R06.00 - asthmatic (bronchial) J45.909 Delete -- cardiac - see Failure, ventricular, left Encephalopathy (acute) G93.40 Revise - spongioform, spongiform (subacute) (viral) A81.09 Enlargement, enlarged - see also Hypertrophy - prostate N40.0 Revise - - without lower urinary tract symtpoms symptons (LUTS) N40.0 Endophthalmitis (acute) (infective) (metastatic) (subacute) H44.009 - bleb associated H59.4-see also Bleb, inflamed (infected), Revise postprocedural Enthesopathy (peripheral) M77.9 Delete - shoulder M77.8 - shoulder region -see Lesion, shoulder Epilepsy, epileptic, epilepsia (attack) (cerebral) (convulsion) (fit) (seizure) G40.909 Revise - Lafora progressive myoclonus (see also Epilepsy, myoclonus, progressive, Lafora) G40.C09 - progressive (familial) myoclonic - see Epilepsy, myoclonus, progressive Revise - - Lafora (see also Epilepsy, myoclonus, progressive, Lafora) G40.C09 - related to - - alcohol G40.509 - - - not intractable G40.509 Revise --- without status epliepticus epilepticus G40.509 - - drugs G40.509 - - - not intractable G40.509 Revise - - - - without status epliepticus epilepticus G40.509 - - external causes G40.509 - - - not intractable G40.509 Revise - - - - without status epliepticus epilepticus G40.509 - - hormonal changes G40.509 - - - not intractable G40.509 Revise - - - - without status epliepticus epilepticus G40.509 - - sleep deprivation G40.509 - - - not intractable G40.509

- - - - without status epliepticus epilepticus G40.509

--- without status epliepticus epilepticus G40.509

- - stress G40.509

- - - not intractable G40.509

Revise

Revise

Erysipelas (gangrenous) (infantile) (newborn) (phlegmonous) (suppurative) A46

Revise - external ear A46 [H62.40 H62.4-]

Add EVALI (e-cigarette, or vaping, product use associated lung injury) U07.0

Failure, failed

- heart (acute) (senile) (sudden) I50.9

Revise -- following cardiac surgery <u>197.13–197.130</u>

Add -- following other surgery I97.131

Revise -- stage B -see also Failure, heart, by type as diastolic or systolic, <u>if known</u> I50.9

Revise -- stage C -see also Failure, heart, by type as diastolic or systolic, <u>if known</u> I50.9

Revise - intestinal failure K90.83

Fitting (and adjustment) (of)

- artificial

Revise -- eye Z44.2-

- device NOS Z46.9

- - prosthetic (external) Z44.9

Revise --- eye Z44.2-

- prosthesis (external) Z44.9

Revise -- eye Z44.2-

Fracture, pathological (pathologic) (see also Fracture, traumatic M84.40)

- due to

- - specified disease NEC M84.60

Revise --- hip M84.65-M84.659

Fracture, traumatic (abduction) (adduction) (see also Fracture,

pathological) T14.8

Revise - basicervical (basal) (femoral) \$\frac{872.0}{20}\$

- femur, femoral S72.9-

Revise -- basicervical (basal) \$72.0 \$72.04

Frostbite (superficial) T33.90

Revise - leg T33.9-T33.99

Revise -- with tissue necrosis T34.9-T34.99

Fungemia NOS B49

Add - candida B37.7

History

- personal (of) - see also History, family (of)

Revise -- cardiac arrest (death), suscessfully successfully resuscitated Z86.74

Revise -- osteoporosis fractures Z87.31 Z87.310

Hyperplasia, hyperplastic

- prostate (adenofibromatous) N40.0

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

Impetigo (any organism) (any site) (circinate) (contagiosa) (simplex) (vulgaris)

L01.00

Revise - external ear L01.00 [H62.40]

Infarct, infarction

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

- - postprocedural - see also Infarct, myocardium, associated with

revascularization procedure

Revise --- following cardiac surgery surgery (see also Infarct, myocardium, type 4 or

type 5) I97.190

Infection

- Bacillus A49.9

Revise -- Ducrey's <u>Ducreyi's</u> (any location) A57

Inflammation, inflamed, inflammatory (with exudation)

Revise - dura matter matter - see Meningitis

Revise - pia mater matter - see Meningitis

Injury -see also specified injury type T14.90 - lung - see also Injury, intrathoracic, lung

Revise -- EVALI - [e-cigarette, or vaping, product use associated] U07.0

(remove dash after EVALI)

Laceration

Revise - peritoneum \$36.893 \$36.81

Revise Maculae ceruleae – B85.1

delete hyphens

Meningoencephalitis (see also Encephalitis) G04.90

- in (due to)

Revise -- Hemophilus influenzae (H. influenzae H. influenzae) G00.0

Nephropathy (see also Nephritis) N28.9 - IgA N02.B-Revise - - with glomerular lesion N02.B1 Add - - - glomerular lesion N02.B1 Add --- focal and segmental N02.B2 - - - glomerulonephritis Add - - - - membranoproliferative (diffuse) N02.B3 Revise - - - - membranous (diffuse) N02.B4 Revise --- mesangial proliferative (diffuse) N02.B5 Revise Revise --- mesangiocapillary (diffuse) N02.B6 Delete --- proliferative NEC N02.B9 - - proliferative NEC N02.B9 Add --- specified pathology NEC N02.B9 Delete Add - - specified pathology NEC N02.B9 Neurosyphilis (arrested) (early) (gumma) (late) (latent) (recurrent) (relapse) A52.3 Revise - dura (mater matter) A52.13 Nodule(s), nodular - prostate N40.2 Revise -- without lower urinary tract symtpoms (LUTS) N40.2 Osteonecrosis M87.9 - secondary NEC M87.30 - - due to --- drugs M87.10 Revise --- neck M87.18 M87.188 ---rib M87.18 M87.188 Revise Revise ---- skull M87.18 M87.188 Revise --- vertebra M87.18 M87.188 Osteoporosis (female) (male) M81.0 - with current pathological fracture M80.00 - - with current pathologic fracture M80.00 Revise - - - ilium M80.0A M80.0B-Revise - - - ischium M80.0A M80.0B-- - - pubis ramus M80.0A-M80.0B-Revise Otitis (acute) H66.90 - externa H60.9-- - in (due to) Revise --- erysipelas A46 [H62.40 H62.4-] --- impetigo L01.00 [H62.40 H62.4-] Revise

--- mycosis NEC B36.9 [H62.40 H62.4-]

Revise

Revise --- parasitic disease NEC B89 [<u>H62.40 H62.4-</u>]
Revise --- viral disease NEC B34.9 [<u>H62.40 H62.4-</u>]
Revise -- mycotic NEC B36.9 [<u>H62.40 H62.4-</u>]

Revise -- tropical NEC B36.9 [H62.40 H62.4-]

Revise Otomycosis (diffuse) NEC B36.9 [H62.40 H62.4-]

Overgrowth - bacterial

- - small intestinal K63.8219

Delete --- fungal K63.822

Add - fungal

Add -- small intestinal K63.22

Pain(s) (see also Painful) R52

Revise - rib R07.81 <u>R07.89</u>

Paralysis, paralytic (complete) (incomplete) G83.9

Revise - subcapsularis subscapularis G56.8-

Puerperal, puerperium (complicated by, complications)

- hemiplegia, cerebral O99.355

Revise -- due to cerbrovascular cerebrovascular disorder O99.43

Revise - retrated retracted nipple O92.02

Polydactylism, polydactyly Q69.9

Add - fingers Q69.0 Add - thumb Q69.1

Polyposis - see also Polyp

Revise - coli (adenomatous) D12.6 Add - adenomatous D13.91 Revise - colon (adenomatous) D12.6

Add -- adenomatous D13.91

Pregnancy (single) (uterine) - see also Delivery and Puerperal Z33.1

- complicated by (care of) (management affected by)

- - fetal (maternal care for)- - - musculoskeletal anomalies

Revise ---- trunk O35.F O35.F

Relapsing fever A68.9

Revise - Obermeyer's (European) A68.0

Revise Restriction of housing space Z59.19

Add - growth

Add -- fetal O36.59-

Add - of housing space Z59.19

Restoration (of)

- dental

Revise -- failure of periodontal anatomical intergrity integrity K08.54

Retinopathy (background) H35.00

- proliferative NEC H35.2-

Revise -- thaslassemia thalassemia H35.2

Revise Saber, sabre shin or tibia (syphilitic) A50.56 [M90.8-M90.86-]

Sepsis (generalized) (unspecified organism) A41.9

- with

Add -- ectopic or molar pregnancy O08.82

- due to device, implant or graft T85.79

Delete — ectopic or molar pregnancy O08.82

Short, shortening, shortness

Revise - bowel syndrome K91.2 K90.82-

Revise Sin Nombre virus disease (Hantavirus) (cardio)-pulmonary syndrome) B33.4

Snapping

- hip - see Derangement, joint, specified type NEC, hip

Revise -- involving the iliotibial iliotibial band M76.3-

- knee - see Derangement, knee

Revise -- involving the iliotiblial iliotibial band M76.3-

Spasm(s), spastic, spasticity (see also condition) R25.2

Revise - nerve, trigeminal G51.0 G50.0

Stasis

Revise - foot T69.0-T69.02-

Subluxation - see also Dislocation - vertebral - - traumatic --- cervical S13.100 - - - joint between Revise ---- C5 and C6 S13.160 Revise ---- C6 and C7 S13.170 Revise ---- C7 and T1 S13.180 --- lumbar S33.100 --- joint between Revise ---- L1 and L2 S33.110 ---- L2 and L3 S33.120 Revise --- thoracic S23.100 - - - joint between ---- T1 and T2 S23.110 Revise Revise ---- T2 and T3 S23.120 Add Sudden infant death syndrome (SIDS) R99 Syndrome -see also Disease - Gopalan's (burning feet) E53.8 Revise Revise - Lemierre I80.8 Revise - tropical wet feet T69.0-T69.02-Revise - - feet (maceration) (tropical) T69.0-T69.02-Synovitis (see also Tenosynovitis) M65.9 - crepitant Revise - - hand M70.0- M70.04-Syphilis, syphilitic (acquired) A53.9 Revise - dura matter A52.13 Thrombophlebitis I80.9 - lower extremity – see also Phlebitis, leg 180.299 Revise Add - - deep (see also Phlebitis, leg, deep) I80.29-Revise tPA (rtPA) administration administration in a different facility within the last 24 hours prior to admission to current facility Z92.82 Revise Tuberosity, enitre entire maxillary M26.07

Tumor - see also Neoplasm, unspecified behavior, by site

- carcinoid D3A.00

Revise -- mesentary mesentery metastasis C7B.04

Vomiting R11.10

Revise - fecal matter R11.13

ICD-10-CM EXTERNAL CAUSE OF INJURIES INDEX All approved modifications will be effective October 1, 2025

Accident (to) X58

- nontraffic (victim's mode of transport NOS) V88.9

-- collision (between) V88.7

Revise --- car and:

Revise --- specified vehicle NEC and:

- traffic (victim's mode of transport NOS) V87.9

-- collision (between) V87.7

Revise --- car and:

- watercraft V94.9

- - nonpowered, struck by

Revise --- nonpowered vessel V94.22 <u>V94.21</u> Revise --- powered vessel V94.21 V94.22

Activity (involving) (of victim at time of event) Y93.9

Add - badminton (Y93.73) Add - pickleball (Y93.73)

Asphyxia, asphyxiation

- by

- - food (bone) (seed) - see categories T17 and T18

Revise -- vomitus T17.81 T17.810

Aspiration

- food (any type) (into respiratory tract) (with asphyxia, obstruction respiratory tract, suffocation) - see categories T17 and T18

Revise - vomitus (with asphyxia, obstruction respiratory tract, suffocation) T17.81 T17.810

Assault (homicidal) (by) (in) Y09 - bodily force Y04.8

Revise -- sexual - see subcategories T74.0, T76.0

Revise Bean in nose <u>- see categories T17 and T18</u> T17.1

Discharge (accidental)

- firearm (accidental) W34.00

- - legal intervention

- - - injuring

Revise ---- suspect <u>Y35.03</u> <u>Y35.003</u>

Drowning (accidental) W74

Revise - resulting from accident to watercraftCsee watercraft - see Drowning, due to,

accident, watercraft

Explosion (accidental) (of) (with secondary fire) W40.9

- firearm (parts) NEC W34.19

Revise -- hangun W32.1

Revise - handgun (parts) - see Explosion, firearm, hangun handgun (parts)

Exposure (to) X58 - electric current W86.8

- - taser W86.8

Revise --- undetermined undetermined intent Y33

- fire, flames (accidental) X08.8

- - controlled (in)

- - - building or structure X02.0

- - - with

Revise ---- jump from building X02.5

Revise Hanging (accidental) - see also eategory T71-T71.16-

Place of occurrence Y92.9

- school (private) (public) (state) Y92.219

Revise -- trace trade school Y92.215

ICD-10-CM TABLE of DRUGS and CHEMICALS All approved modifications will be effective October 1, 2025

Substance	Poisoning Accidental (unintentional)	Poisoning Intentional self-harm	Poisoning Assault	Poisoning Undetermined	Adverse effect	Underdosing
Add Antihelminthic	T37.4X1	T37.4X2	T37.4X3	T37.4X4	T37.4X5	T37.4X6
Revise Benzylhydrochlorthia-zide Benzylhydrochlorthiazide	T50.2X1	T50.2X2	T50.2X3	T50.2X4	T50.2X5	T50.2X6
Add Bithionol – antihelminthic	T37.4X1	T37.4X2	T37.4X3	T37.4X4	T37.4X5	T37.4X6
Revise Bromochlorosalicylani-lide Bromochlorosalicylanilide	T49.0X1	T49.0X2	T49.0X3	T49.0X4	T49.0X5	T49.0X6
Calcium Revise gluconogalactogluconate gluconogalactogluconate	T50.3X1	T50.3X2	T50.3X3	T50.3X4	T50.3X5	T50.3X6
Revise Cyamopsis tetragono-loba tetragonoloba	T46.6X1	T46.6X	T46.6X	T46.6X	T46.6X	T46.6X
Revise Diisopropylfluorophos- phonate Diisopropylfluorophosphate	T44.0X1	T44.0X2	T44.0X3	T44.0X4	T44.0X5	T44.0X6
Revise Hexaethyl tetraphos-phate tetraphosphate	T60.0X1	T60.0X2	T60.0X3	T60.0X4		
Revise Hydroxymethylpenta-none Hydroxymethylpentanone	T52.4X1	T52.4X2	T52.4X3	T52.4X4		
Revise Lente lietin Iletin (insulin)	T38.3X1	T38.3X2	T38.3X3	T38.3X4	T38.3X5	T38.3X6
Revise MOPP (mechloreth-amine mechlorethamine + vincristine	T45.1X1	T45.1X2	T45.1X3	T45.1X4	T45.1X5	T45.1X6

+ prednisone + procarba-zine						
procarbazine)						
Revise Neosporin- opthalmic ophthalmic preparation	T49.5X1	T49.5X2	T49.5X3	T49.5X4	T49.5X5	T49.5X6
Revise NPH lletin <u>lletin</u> (insulin)	T38.3X1	T38.3X2	T38.3X3	T38.3X4	T38.3X5	T38.3X6
Revise Polish (car) (floor) (furniture furniture) (metal) (porcelain) (silver)	T65.891	T65.892	T65.893	T65.894		

ICD-10-CM TABLE of NEOPLASMS All approved modifications will be effective October 1, 2025

	Neoplasm	Malignant Primary	Malignant Secondary	Ca in situ	Benign	Uncertain Behavior	Unspecified Behavior
Neopla	sm, neoplastic						
	abdomen, abdominal	C76.2	C79.8-	D09.8	D48.7	D49.89	
	- wall (see also Neoplasm, abdomen, wall, skin)						
Revise	connective tissue	C49.4-	C79.8-	- D21.4		D48.1 D48.11-	
Revise	adipose tissue (see also Neoplasm, connective tissue)		C49.4	C79.89	D21.9	D48.1 D48.11-	D49.2
Revise	aorta (thoracic)	C49.3		C79.89	-	D21.3	D48.11-
	- abdominal	C49.4	C79.89		-	D21.4	D48.1 D48.11-
Revise	cerebrum, eerebra cerebral (cortex) (hemisphere) (white matter)						
Revise	eye NEC	C69.9	C79.49	D09.2 D09.2-	D31.9 D31.9-	D48.7	D49.89
Revise	- overlapping sites	C69.8 C69.8-	-	-	_	-	-
Revise	femur (any part)	C40.2	<u>C79.5-</u>	-	-	D16.2-	-
	ligament - see also Neoplasm, connective tissue	C57.1 C57.1-	<u>C79.82</u>	D07.39	D28.2	D39.8	D49.59
Revise	- broad						
Revise	lung - linqu la <u>lingula</u>	C34.1-	C78.0-	D02.2-	D14.3-	D38.1	D49.1

	meninges	C70.0	C79.32	-	D32.0	D42.0	D49.7
Revise	- crainial <u>cranial</u>						
Revise	odontogenic -see Neoplasm, jaw, bone						
Revise	patella	C40.20	C79.51	-	-	-	-
		C40.2-					