

CMS Chronic Conditions Data Warehouse (CCW)

Other Chronic and Potentially Disabling Condition Algorithm References

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| Algorithm | References |
|---|--|
| ADHD, Conduct Disorders, and Hyperkinetic Syndrome | 1. SAMHSA http://store.samhsa.gov/product/Mental-Health-and-Substance-Abuse-Services-in-Medicaid-2003/SMA10-4608 |
| Anxiety Disorders | 1. Healthcare Cost and Utilization Project (HCUP) Appendix A - Clinical Classification Software-DIAGNOSES (January 1980 through September 2012) http://www.hcup-us.ahrq.gov/toolssoftware/ccs/AppendixASingleDX.txt |
| Autism Spectrum Disorders | 1. Centers for Disease Control and Prevention. Prevalence of autism spectrum disorders - autism and developmental disabilities monitoring network, 14 Sites. (2012) Morbidity and Mortality Weekly Report, 61(03):1-19. http://www.cdc.gov/mmwr/pdf/ss/ss6103.pdf 2. Healthcare Utilization Project - Clinical Classification Software (HCUP CCS) http://www.hcup-us.ahrq.gov/toolssoftware/ccs/AppendixASingleDX.txt |
| Bipolar Disorder | 1. SAMHSA category minus Depressive feature codes Mental Health and Substance Abuse Services in Medicaid, 2003: Charts and State Tables http://store.samhsa.gov/product/Mental-Health-and-Substance-Abuse-Services-in-Medicaid-2003/SMA10-4608 |
| Cerebral Palsy | 1. Yeargin-Allsopp, M., Braun K., Doernberg, N., Benedict, R., Kirby, R., and Durkin, M. Prevalence of cerebral palsy in 8-year-old children in three areas of the United States: a multisite collaboration. (2008) Pediatrics 121(3) 547-554. http://pediatrics.aappublications.org/content/121/3/547.full.pdf+html |
| Cystic Fibrosis and Other Metabolic Developmental Disorders | 1. Watson, M. S., Mann, M. Y., Lloyd-Puryear, M., Rinaldo, P., Howell, R. (2006) Newborn screening: toward a uniform screening panel and system. Genetics in Medicine, 8(5), 1S-11S. 2. National Newborn Screening and Genetics Resource Center: National Newborn Screening Status report (2012). http://genes-r-us.uthscsa.edu/sites/genes-r-us/files/nbsdisorders.pdf |
| Depressive Disorders | 1. Spettell, C. M., Wall, T. C., Allison, J., Calhoun, J., Kobyliski, R., Fargason, R., et al. (2003). Identifying physician-recognized depression from administrative data: Consequences for quality measurement. Health Services Research, 38(4), 1081-1102. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1360934/ |

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| Algorithm | References |
|---|---|
| Epilepsy | <ol style="list-style-type: none"> Centers for Disease Control and Prevention. Epilepsy surveillance among adults – 19 states, behavioral risk factor surveillance system. (2008) Morbidity and Mortality Weekly Report, 57(SS06):1-20. http://www.cdc.gov/mmwr/preview/mmwrhtml/ss5706a1.htm Healthcare Utilization Project - Clinical Classification Software (HCUP CCS) http://www.hcup-us.ahrq.gov/toolssoftware/ccs/AppendixASingleDX.txt Kee, V., Gilchrist, B., Granner, M., Sarrazin, N., Carnahan, R. (2012) A systematic review of validated methods for identifying seizures, convulsions, or epilepsy using administrative and claims data. Pharmacoepidemiology and Drug Safety, 21(S1): 183–193. http://onlinelibrary.wiley.com/doi/10.1002/pds.2329/pdf |
| Fibromyalgia, Chronic Pain and Fatigue | <ol style="list-style-type: none"> Berger, A., Dukes, E., Martin, S., Edelsberg, J., Oster, G. Characteristics and healthcare costs of patients with fibromyalgia syndrome. International Journal of Clinical Practice. Sep 2007; 61(9): 1498–1508. Healthcare Utilization Project – Clinical Classification Software (HCUP CCS) http://www.hcup-us.ahrq.gov/toolssoftware/ccs/AppendixASingleDX.txt |
| Human Immunodeficiency Virus and/or Acquired Immunodeficiency Syndrome (HIV/AIDS) | <ol style="list-style-type: none"> Healthcare Utilization Project – Clinical Classification Software (HCUP CCS) http://www.hcup-us.ahrq.gov/toolssoftware/ccs/AppendixASingleDX.txt |
| Intellectual Disabilities and Related Conditions | <ol style="list-style-type: none"> Oeseburg, B., Dijkstra, G., Groothoff, J., Reijneveld, S., Jansen, D. (2011) Prevalence of chronic health conditions in children with intellectual disability: a systematic literature review. Intellectual and Developmental Disabilities, 49(2), 59-85. http://www.aaidjournals.org/doi/abs/10.1352/1934-9556-49.2.59?journalCode=mere Streissguth, A. P., Aase, J. M., Clarren, S. K., Randels, S. P., LaDue, R. A., Smith, D. F. (1991) Fetal alcohol syndrome in adolescents and adults. JAMA: The Journal of the American Medical Association, 265(15):1961-1967. doi:10.1001/jama.1991.03460150065025. http://jama.jamanetwork.com/article.aspx?articleid=385636 |
| Learning Disabilities | <ol style="list-style-type: none"> Centers for Disease Control and Prevention. (1996) Prevalence of selected developmental disabilities in children 3-10 years of age: the metropolitan Atlanta developmental disabilities surveillance program. Morbidity and Mortality Weekly Report, 45(SS-2):1-14. http://www.cdc.gov/mmwr/preview/mmwrhtml/00040928.htm Healthcare Utilization Project - Clinical Classification Software (HCUP CCS) http://www.hcup-us.ahrq.gov/toolssoftware/ccs/AppendixASingleDX.txt |

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| Algorithm | References |
|--|--|
| Leukemias and Lymphomas | <ol style="list-style-type: none"> 1. Goldberg, S., Chen, E., Corral, M., Guo, A., Mody-Patel, N., Pecora, A., Laouri, M. (2010) Incidence and Clinical Complications of Myelodysplastic Syndromes Among United States Medicare Beneficiaries; Journal of Clinical Oncology. 2. Healthcare Utilization Project – Clinical Classification Software (HCUP CCS) http://www.hcup-us.ahrq.gov/toolssoftware/ccs/AppendixASingleDX.txt |
| Liver Disease, Cirrhosis and Other Liver Conditions (excluding Hepatitis) | <ol style="list-style-type: none"> 1. Menzin, J., White, L., Nichols, C., Deniz, B., The economic burden of advanced liver disease among patients with Hepatitis C Virus: a large state Medicaid perspective; BMC Health Services Research 2012, 12:459. http://www.biomedcentral.com/1472-6963/12/459 2. Healthcare Utilization Project – Clinical Classification Software (HCUP CCS) http://www.hcup-us.ahrq.gov/toolssoftware/ccs/AppendixASingleDX.txt |
| Migraine and Chronic Headache | <ol style="list-style-type: none"> 1. Vijay, J., Cady, P., Shaw, J. (2000) Health care utilization by migraine patients: a 1998 Medicaid population study. Clinical Therapeutics. 2000 Nov; 22(11):1346-56. 2. Healthcare Utilization Project – Clinical Classification Software (HCUP CCS) http://www.hcup-us.ahrq.gov/toolssoftware/ccs/AppendixASingleDX.txt |
| Mobility Impairments | <ol style="list-style-type: none"> 1. Healthcare Utilization Project - Clinical Classification Software (HCUP CCS) http://www.hcup-us.ahrq.gov/toolssoftware/ccs/AppendixASingleDX.txt |
| Multiple Sclerosis and Transvers Myelitis | <ol style="list-style-type: none"> 1. Williamson, D.M., Noonan, C., Henry, J., Wagner, L., Indian, R., Lynch, S., Neuberger, J., Schiffer, R., Trottier, J., Marie, R. (2010) The prevalence of multiple sclerosis in 3 US communities. Preventing Chronic Diseases, 7(1): A12. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2811507/ |
| Muscular Dystrophy | <ol style="list-style-type: none"> 1. Centers for Disease Control and Prevention. (2009) Prevalence of Duchenne/Becker muscular dystrophy among males aged 5-24 years: four states. Morbidity and Mortality Weekly Report, 58(40):1119-1122. http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5840a1.htm |
| Obesity | <ol style="list-style-type: none"> 1. Hedley Dodd, A., Gleason, P., Using the MAX-NHANES Merged Data to Evaluate the Association of Obesity and Medicaid Costs. 2. Healthcare Utilization Project – Clinical Classification Software (HCUP CCS) http://www.hcup-us.ahrq.gov/toolssoftware/ccs/AppendixASingleDX.txt |
| Other Developmental Delays | <ol style="list-style-type: none"> 1. Centers for Disease Control and Prevention. (1996) Prevalence of selected developmental disabilities in children 3-10 years of age: the metropolitan Atlanta developmental disabilities surveillance program. Morbidity and Mortality Weekly Report, 45(SS-2):1-14. http://www.cdc.gov/mmwr/preview/mmwrhtml/00040928.htm |

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| Algorithm | References |
|---|---|
| Peripheral Vascular Disease (PVD) | <ol style="list-style-type: none"> 1. Healthcare Utilization Project – Clinical Classification Software (HCUP CCS) http://www.hcup-us.ahrq.gov/toolssoftware/ccs/AppendixASingleDX.txt 2. Clinical outcomes and medical care costs among medicare beneficiaries receiving therapy for peripheral arterial disease. Jaff MR1, Cahill KE, Yu AP, Birnbaum HG, Engelhart LM, Ann Vasc Surg. 2010 Jul;24(5):577-87. doi: 10.1016/j.avsg.2010.03.015. 3. National health care costs of peripheral arterial disease in the Medicare population, Alan T Hirsch, Lacey Hartman, Robert J Town, Beth A Virning, Vasc Med. 2008 Aug;13(3):209-15. doi: 10.1177/1358863X08089277. |
| Personality Disorders | <ol style="list-style-type: none"> 1. SAMHSA Mental Health and Substance Abuse Services in Medicaid, 2003: Charts and State Tables http://store.samhsa.gov/shin/content//SMA10-4608.pdf 2. HCUP Appendix A - Clinical Classification Software-DIAGNOSES (January 1980 through September 2012) http://www.hcup-us.ahrq.gov/toolssoftware/ccs/AppendixASingleDX.txt |
| Post-Traumatic Stress Disorders (PTSD) | <ol style="list-style-type: none"> 1. Gravely, A. A., Cutting, A., Nugent, S., Grill, J., Carlson, K., Spont, M. (2011). Validity of PTSD diagnoses in VA administrative data: Comparison of VA administrative PTSD diagnoses to self-reported PTSD Checklist scores. Journal of Rehabilitation Research & Development, 48(1), 21–30. http://www.rehab.research.va.gov/jour/11/481/pdf/gravely.pdf |
| Pressure and Chronic Ulcers | <ol style="list-style-type: none"> 1. Healthcare Utilization Project – Clinical Classification Software (HCUP CCS) http://www.hcup-us.ahrq.gov/toolssoftware/ccs/AppendixASingleDX.txt |
| Schizophrenia | <ol style="list-style-type: none"> 1. Manitoba Regional Health Authority Indicators Atlas; August 2009. http://mchp-appserv.cpe.umanitoba.ca/reference/RHA_Atlas_Report.pdf 2. SAMHSA Mental Health and Substance Abuse Services in Medicaid, 2003: Charts and State Tables http://store.samhsa.gov/shin/content//SMA10-4608/SMA10-4608.pdf |
| Schizophrenia and Other Psychotic Disorders | <ol style="list-style-type: none"> 1. Healthcare Cost and Utilization Project Appendix A - Clinical Classification Software-DIAGNOSES (January 1980 through September 2012) http://www.hcup-us.ahrq.gov/toolssoftware/ccs/AppendixASingleDX.txt 2. Multimorbidity Pattern Analyses and Clinical Opportunities: Schizophrenia. Cynthia Boyd, MD, MPH; Bruce Leff, MD; Carlos Weiss, MD, MHS; Jennifer Wolff, PhD; Rebecca Clark; Thomas Richards, MS December 2010 http://www.chcs.org/usr_doc/Schizophrenia_final.pdf |

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| Algorithm | References |
|--|--|
| Sensory – Deafness and Hearing Impairment | <ol style="list-style-type: none"> Centers for Disease Control and Prevention. (2004) Economic costs associated with mental retardation, cerebral palsy, hearing loss, and vision impairment – United States. Morbidity and Mortality Weekly Report, 53(03):57-59. http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5303a4.htm Healthcare Utilization Project - Clinical Classification Software (HCUP CCS) http://www.hcup-us.ahrq.gov/toolssoftware/ccs/AppendixASingleDX.txt |
| Sensory – Blindness and Visual Impairment | <ol style="list-style-type: none"> Centers for Disease Control and Prevention. (2004) Economic costs associated with mental retardation, cerebral palsy, hearing loss, and vision impairment – United States, 2003. Morbidity and Mortality Weekly Report, 53(03):57-59. http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5303a4.htm Healthcare Utilization Project - Clinical Classification Software (HCUP CCS) http://www.hcup-us.ahrq.gov/toolssoftware/ccs/AppendixASingleDX.txt |
| Spina Bifida and Other Congenital Anomalies of the Nervous System | <ol style="list-style-type: none"> Mathews, T. J., Honein, M. A., Erickson, J. D. (2005) Spina bifida and anencephaly prevalence – United States, 1991-2001. Morbidity and Mortality Weekly Report, 53(03):57-59, 51(RR13):9-11. http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5113a3.htm Shin, M., Besser, L., Siff, C., Kucik, J., Shaw, J., Shaw, G., Lu, C., Correa, A. (2010) Prevalence of Spina Bifida Among Children and Adolescents in 10 Regions in the United States. Pediatrics. 126(2), 274-279 http://pediatrics.aappublications.org/content/126/2/274.short Roach J., Short B., Saltzman, H. (2011) Adult consequences of spina bifida: a cohort study. Clin Orthop Relat Res. 469(5): 1246–1252. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3069297/ Danielsson, A., Bartonek, A., Levey, E., McHale, K., Sponseller, P., Saraste, H. (2008) Associations between orthopaedic findings, ambulation and health-related quality of life in children with myelomeningocele. J Child Orthop. 2(1): 45–54. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2656781/ |
| Spinal Cord Injury | <ol style="list-style-type: none"> Parent, S., Mac-Thiong, J., Roy-Beaudry, M., Sosa, J., Labelle, H. (2011) Spinal cord injury in the pediatric population: a systematic review of the literature. Journal of Neurotrauma, 28(8): 1515–1524. Healthcare Utilization Project - Clinical Classification Software (HCUP CCS) http://www.hcup-us.ahrq.gov/toolssoftware/ccs/AppendixASingleDX.txt |
| Tobacco Use | <ol style="list-style-type: none"> CCW Task Order 10 Inter-Agency Panel working document and input from subject matter experts |
| Traumatic Brain Injury and Nonpsychotic Mental Disorders Due To Brain Damage | <ol style="list-style-type: none"> Centers for Disease Control and Prevention. (2010) Traumatic brain injury in the United States: emergency department visits, Hospitalizations, and Deaths. (2010). http://www.cdc.gov/ncipc/pub-res/TBI_in_US_04/TBI_ED.htm |

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| Algorithm | References |
|------------------------------------|---|
| Viral Hepatitis (General) | 1. Healthcare Utilization Project – Clinical Classification Software (HCUP CCS) http://www.hcup-us.ahrq.gov/toolssoftware/ccs/AppendixASingleDX.txt |
| Hepatitis A | 2. The Burden of Digestive Diseases in the United States, James E. Everhart, M.D., M.P.H., Editor, NIDDK Available at: http://www3.niddk.nih.gov/Burden_of_Digestive_Diseases/index.shtml#APPENDIX1 3. Bell B et al. The Epidemiology of Newly Diagnosed Chronic Liver Disease in Gastroenterology Practices in the United States: Results from Population-based Surveillance. Am J Gastroenterol 2008; 103: 2727-2736. 4. Kim WR et al. Burden of liver disease in the United States: summary of a Workshop. Hepatology 2003; 36: 227-242. 5. Gordon SC et al. Impact of disease severity on healthcare costs in patients with chronic hepatitis C (CHC) virus infection. Hepatology. 2012 Nov;56(5):1651-60. 6. Roberts H et al. The contribution of viral hepatitis to the burden of chronic liver disease in the United States. Am J Gastroentrol 2014; 109:387–393. 7. Centers for Disease Control and Prevention (CDC) Surveillance Website http://www.cdc.gov/HEPATITIS/Statistics/index.htm |
| Hepatitis B (acute or unspecified) | |
| Hepatitis B (chronic) | |
| Hepatitis C (acute) | |
| Hepatitis C (chronic) | |
| Hepatitis C (unspecified) | |
| Hepatitis D | |
| Hepatitis E | |