

# Charlson Comorbidity Index

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# Charlson Comorbidity Index

## Chart review version

### Components of classical Charlson Comorbidity Index<sup>1</sup>

1. Has the patient had a myocardial infarction? (MI)

☐ No  
☐ Yes

*Criteria: Myocardial infarction includes patients with one or more definite or probable myocardial infarction. These patients should have been hospitalized for chest pain or an equivalent clinical event and have had electrocardiographic and/ or enzyme changes. Patients with electrocardiographic changes alone who have no clinical history are not designated as having had an infarction.*

2. Has the patient been hospitalized or treated for heart failure? (CHF)

☐ No  
☐ Yes

*Criteria: Congestive heart failure includes patients who have had exertional or paroxysmal nocturnal dyspnea and who have responded symptomatically (or on physical examination) to digitalis, diuretics, or afterload reducing agents. It does not include patients who are on one of those medications but who have had no response and no evidence of improvement of physical signs with treatment.*

3. Does the patient have peripheral vascular disease? (PVD)

☐ No  
☐ Yes

*Criteria: Peripheral vascular includes patients with intermittent claudication or those who had a bypass for arterial insufficiency, those with gangrene or acute arterial insufficiency, and those with a treated or untreated thoracic or abdominal aneurysm (6 cm or more).*

4. Has the patient had a CVA or transient ischemic disease? (CVA)

☐ No  
☐ Yes

*Criteria: Cerebrovascular disease includes patients with a history of a cerebrovascular accident with minor or no residua, and patients who have had transient ischemic attacks. If the CVA resulted in hemiplegia, code only hemiplegia.*

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<sup>1</sup> Charlson, ME, Ales, KA, Pompei, P, MacKenzie, CR. A new method of classification of prognostic comorbidity for longitudinal studies: development and validation. J Chron Disease. 1987; 40(5): 373-383

5. Does the patient have hemiplegia? (PLEGIA)

- ☐ No  
☐ Yes

*Criteria: This includes patients with a hemiplegia or paraplegia, whether it occurred as a result of a cerebrovascular accident or other condition.*

6. Does the patient have asthma, chronic lung disease, chronic bronchitis or emphysema? (COPD)

- ☐ No  
☐ Yes

*Criteria: Pulmonary disease includes patients with asthma, chronic bronchitis, emphysema, and other chronic lung disease who have ongoing symptoms such as dyspnea or cough, with mild or moderate activity. This includes patients who are dyspneic with slight activity, with or without treatment and those who are dyspneic with moderate activity despite treatment, as well as patients who are dyspneic at rest, despite treatment, those who require constant oxygen, those with CO<sub>2</sub> retention and those with a baseline PO<sub>2</sub> below 50 torr.*

7. Does the patient have diabetes that requires treatment? (DM)

- ☐ No  
☐ Yes

*Criteria: Diabetes includes all patients with diabetes treated with insulin or oral hypoglycemic, but not diet alone. Diabetes during pregnancy alone is not counted.*

7a. Does the patient have end organ damage from diabetes? (DMENDORGAN)

- ☐ No  
☐ Yes

*Criteria: This includes patients with retinopathy, neuropathy, or nephropathy attributable to diabetes.*

8. Does the patient have moderate or severe renal disease? (RENAL)

- ☐ No  
☐ Yes

*Criteria: Moderate renal insufficiency includes patients with a serum creatinine >3 mg/dl. Severe renal disease includes patients on dialysis, those who had a transplant, and those with uremia.*

9. Does the patient have a chronic liver disease? (MILDLIVER)

- ☐ No  
☐ Yes

*Criteria: Mild liver disease consists of chronic hepatitis (B or C) or cirrhosis without portal hypertension.*

9a. Does the patient have moderate to severe liver disease? (SEVERELIVER)

- ☐ No  
☐ Yes

*Criteria: Moderate liver disease consists of cirrhosis with portal hypertension, but without bleeding. Severe liver disease consists of patients with ascites, chronic jaundice, portal hypertension or a history of variceal bleeding or those who have had liver transplant.*

10. Has the patient had gastric or peptic ulcers? (ULCER)

- ☐ No  
☐ Yes

*Criteria: Peptic ulcer disease includes patients who have required treatment for ulcer disease, including those who have bled from ulcers.*

11. Has the patient had cancer (other than basal cell skin cancer)? (CANCER)

- ☐ No  
☐ Yes

If yes, which:

- ☐ Lymphoma?  
☐ Leukemia?  
☐ Solid tumor (which?) \_\_\_\_\_

*Criteria: Lymphoma includes patients with Hodgkins, lymphosarcoma, Waldenstrom's macroglobulinemia, myeloma, and other lymphomas. Leukemia includes patients with acute and chronic myelogenous leukemia, acute and chronic lymphocytic leukemia, and polycythemia vera. Solid tumor consists of patients with solid tumors without documented metastases, including breast, colon, lung, prostate, and a variety of other tumors.*

11a. Has the patient had a metastatic solid tumor? (METASTASES)

- ☐ Breast  
☐ Colon  
☐ Prostate  
☐ Lung  
☐ Melanoma  
☐ Other \_\_\_\_\_

*Criteria: Metastatic cancer includes patients with metastatic solid tumors, including breast, lung, colon and other tumors*

12. Does the patient have Alzheimer's, dementia from any etiology or any serious cognitive impairment? (DEMENTIA)

☐ No  
☐ Yes

*Criteria: Dementia includes patients with moderate to severe chronic cognitive deficit resulting in impaired function from any cause.*

13. Does the patient have any rheumatic or connective tissue disease? (RHEUMATIC)

☐ No  
☐ Yes

*Criteria: Rheumatologic disease includes patients with systemic lupus erythematosus, polymyositis, mixed connective tissue disease, rheumatoid arthritis, polymyositis, polymyalgia rheumatica, vasculitis, sarcoidosis, Sjogrens syndrome or any other systemic vasculitis*

14. Does the patient have HIV or AIDS? (HIV)

☐ No  
☐ Yes

*Criteria: Acquired immune deficiency syndrome includes patients with definite or probable AIDS, i.e. AIDS related complex, and those who are HIV positive and asymptomatic.*

Additional components of Charlson Comorbidity Index adapted to predict cost<sup>2</sup>

15. Does the patient have hypertension? (HBP)

☐ No  
☐ Yes

*Criteria: Hypertension includes patients who have systolic pressures >140 mm Hg and/or diastolic pressures >90 mm Hg if without diabetes or renal disease, as well as controlled hypertensives; or patients with diabetes or renal disease who have systolic pressures >140 mm Hg or diastolic pressures >80 mm Hg.*

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<sup>2</sup> Charlson, ME, Charlson RE, Briggs, W, Hollenberg, J. Can disease management target patients most likely to generate high costs? The impact of comorbidity. J Gen Intern Med. 2007; 22(4): 464-469

16. Has the patient had decubitus ulcers, peripheral skin ulcers or repeated episodes of cellulitis? (SKINULCER)

- ☐ No  
☐ Yes

*Criteria: Partial thickness loss of skin over legs or back with open ulcers or two or more episodes of cellulitis requiring treatment with antibiotics, regardless of etiology.*

17. Does the patient have depression? (DEPRESSION)

- ☐ No  
☐ Yes

*Criteria: Patients who are currently receiving treatment for depression, whether pharmacologic or psychotherapy, or cognitive behavioral therapy, or notes indicating that the patient has probable or definite depression.*

18. Is the patient on warfarin or coumadin? (WARFARIN)

- ☐ No  
☐ Yes

Conditions that are not assigned weights

- Angina includes patients with chronic exertional angina, those who had coronary artery bypass graft, and those initially admitted with unstable angina.
- Arrhythmia includes patients with chronic atrial fibrillation or flutter, sick sinus syndrome, or ventricular arrhythmias requiring chronic treatment.
- Valvular disease includes patients with hemodynamically significant aortic stenosis and/or insufficiency, those with significant mitral stenosis and/or insufficiency, and those with prosthetic aortic or mitral valves, asymmetric septal hypertrophy requiring treatment, or tricuspid insufficiency.
- Other neurologic conditions includes patients with Parkinson's disease, uncontrolled seizures, or syncope without an identified cause or treatment.
- Other endocrine includes patients with hypopituitarism, adrenal insufficiency, and recurrent acidosis.
- Inflammatory bowel disease includes patients with ulcerative colitis or regional enteritis.
- Gastrointestinal bleeding includes those who have had bleeding requiring transfusions from causes other than ulcer disease.
- Coagulopathy includes patients with a circulating anticoagulant, or other coagulopathy.

## Charlson Comorbidity Index Scoring

Condition	Variable name	Points	Notes
Myocardial infarction	MI	1	
Congestive heart failure	CHF	1	
Peripheral vascular disease or bypass	PVD	1	
Cerebrovascular disease or transient ischemic disease	CVA	1	CVA only
Hemiplegia	PLEGIA	2	If hemiplegia, do not count CVA separately
Pulmonary disease/ asthma	COPD	1	
Diabetes	DM	1	DM only
Diabetes with end organ damage	DMENDORGAN	2	If end organ damage, do not count DM separately
Renal disease	RENAL	2	
Mild liver disease	MILDLIVER	2	
Severe liver disease	SEVERELIVER	3	
Gastric or peptic ulcer	ULCER	1	
Cancer (lymphoma, leukemia, solid tumor)	CANCER	2	Nonmetastatic cancer only
Metastatic solid tumor	METASTASES	6	If Metastatic, do not count cancer separately
Dementia or Alzheimer's	DEMENTIA	1	
Rheumatic or connective tissue disease	RHEUMATIC	1	
HIV or AIDS	HIV	6	
Hypertension	HBP	1	
Skin ulcers/ cellulitis	SKIN ULCER	2	These should not be included
Depression	DEPRESSION	1	
Warfarin	WARFARIN	1	