

SUPPLEMENT

Supplement 1. Comorbidity definitions (ICD-9-CM codes)

Elixhauser comorbidity	ICD-9-CM (Quan ²⁶)	ICD-9-CM (Quan ²⁶ + changes from AHRQ ²⁷ V2.1, 3.0-3.7)
Congestive heart failure (CHF)	398.91, 402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91, 404.93, 425.4-425.9, 428.x	No change
Cardiac arrhythmias	426.0, 426.13, 426.7, 426.9, 426.10, 426.12, 427.0-427.4, 427.6-427.9, 785.0, 996.01, 996.04, V45.0, V53.3	No change
Valvular disease	093.2, 394.x-397.x, 424.x, 746.3-746.6, V42.2, V43.3	No change
Pulmonary circulation disorders	415.0, 415.1, 416.x, 417.0, 417.8, 417.9	No change
Peripheral vascular disorders	093.0, 437.3, 440.x, 441.x, 443.1-443.9, 447.1, 557.1, 557.9, V43.4	<u>Add:</u> 442.0, 442.1, 442.2, 442.3, 442.81-442.84, 442.89, 442.9, 449.x
Hypertension (combined)	401.x (uncomplicated), 402.x-405.x (complicated)	<u>Add:</u> 642.00, 642.01, 642.02, 642.03, 642.04 (uncomplicated), 401.0, 437.2, 642.10-642.11, 642.13-642.14, 642.20-642.24, 642.70-642.74, 642.90-642.94 (complicated)
Paralysis	334.1, 342.x, 343.x, 344.0-344.6, 344.9	<u>Add:</u> 438.20-438.22, 438.30-438.32, 438.40-438.42, 438.50-438.52, 780.72
Other neurological disorders	331.9, 332.0, 332.1, 333.4, 333.5, 333.92, 334.x-335.x, 336.2, 340.x, 341.x, 345.x, 348.1, 348.3, 780.3, 784.3	<u>Add:</u> 330.0-330.3, 330.8-330.9, 331.0, 331.11, 331.19, 331.2-331.4, 331.7, 331.81-331.82, 331.89, 333.7, 333.85, 333.94, 338.0, 347.00, 347.01, 347.10, 347.11, 649.30-649.34, 768.7, 780.31, 780.32, 780.97 <u>Remove:</u> 348.1, 348.3
Chronic pulmonary disease	416.8, 416.9, 490.x-505.x, 506.4, 508.1, 508.8	No change
Diabetes, uncomplicated	250.0-250.3	<u>Add:</u> 249.00, 249.01, 249.10, 249.11, 249.20, 249.21, 249.30, 249.31
Diabetes, complicated	250.4-250.9	<u>Add:</u> 249.40, 249.41, 249.50, 249.51, 249.60, 249.61, 249.70, 249.71, 249.80, 249.81, 249.90, 249.91
Hypothyroidism	240.9, 243.x, 244.x, 246.1, 246.8	No change
Renal failure	403.01, 403.11, 403.91, 404.02, 404.03, 404.13, 404.92, 404.93, 585.x, 586.x, 588.0, V42.0, V45.1, V56.x	No change
Liver disease	070.22, 070.23, 070.32, 070.33, 070.44, 070.54, 070.6, 070.9, 456.0-456.2, 570.x, 571.x, 572.2-572.8, 573.3, 573.4, 573.8, 573.9, V42.7	<u>Add:</u> 573.9
Peptic ulcer disease excluding bleeding	531.7, 531.9, 532.7, 532.9, 533.7, 533.9, 534.7, 534.9	<u>Add:</u> 531.41, 531.51, 531.61, 532.41, 532.51, 532.61, 533.41, 533.51, 533.61, 534.41, 534.51, 534.61
AIDS/HIV	042.x-044.x	No change
Lymphoma	200.x-202.x, 203.0, 238.6	<u>Add:</u> 203.12, 203.82
Metastatic cancer	196.x-199.x	<u>Add:</u> 209.70-209.75, 209.79, 789.51
Solid tumor without	140.x-172.x, 174.x-195.x	<u>Add:</u> 209.00-209.03, 209.10-209.17,

metastasis		209.20-209.27, 209.29, 209.30-209.36, 258.01-258.03
Rheumatoid arthritis / collagen vascular diseases	446.x, 701.0, 710.0-710.4, 710.8, 710.9, 711.2, 714.x, 719.3, 720.x, 725.x, 728.5, 728.89, 729.30	No change
Coagulopathy	286.x, 287.1, 287.3-287.5	<u>Add:</u> 289.84, 649.30-649.34
Obesity	278.0	<u>Add:</u> V85.3, V85.4, 649.10-649.14, 793.91, V85.54
Weight loss	260.x-263.x, 783.2, 799.4	No change
Fluid and electrolyte disorders	253.6, 276.x	No change
Blood loss anemia	280.0	<u>Add:</u> 648.20-648.24
Deficiency anemia	280.1-280.9, 281.x	<u>Add:</u> 285.21, 285.22, 285.29
Alcohol abuse	265.2, 291.1-291.3, 291.5-291.9, 303.0, 303.9, 305.0, 357.5, 425.5, 535.3, 571.0-571.3, 980.x, V11.3	<u>Add:</u> 291.0 <u>Remove:</u> V11.3
Drug abuse	292.x, 304.x, 305.2-305.9, V65.42	<u>Add:</u> 648.30-648.34
Psychoses	293.8, 295.x, 296.04, 296.14, 296.44, 296.54, 297.x, 298.x	No change
Depression	296.2, 296.3, 296.5, 300.4, 309.x, 311	No change
