

| <b>Table 2<br/>Definitions of Comorbidities,<br/>Comorbidity Software<br/>version 3.6 / 2011</b> | <b>ICD9 CM Diagnosis Codes:</b>  | <b>V28 DRGs</b>   |
|--|--|---|
| 1. Congestive Heart Failure  | 398.91, 402.01, 402.11, 402.91,<br>404.01, 404.03, 404.11, 404.13,<br>404.91, 404.93, 428.0-428.9  | Cardiac: 001-002, 215-238, 242-251, 253-<br>254, 258-262, 265, 280-293, 296-298, 302-<br>303, 306-313   |
| 2. Valvular disease  | 093.20-093.24, 394.0-397.1, 397.9,<br>424.0-424.99, 746.3-746.6, V42.2,<br>V43.4   | Cardiac: 001-002, 215-238, 242-251, 253-<br>254, 258-262, 265, 280-293, 296-298, 302-<br>303, 306-313   |
| 3. Pulmonary Circulation disorders   | 415.11-415.19, 416.0-416.9, 417.9  | Cardiac: 001-002, 215-238, 242-251, 253-<br>254, 258-262, 265, 280-293, 296-298, 302-<br>303, 306-313 or COPD asthma 190-192,<br>202-203                                      |
| 4. Peripheral vascular disease   | 440-440.9, 441.00-441.9, 442.0-442.9,<br>443.1-443.9, 444.21-444.22, 447.1, 449,<br>557.1, 557.9, V43.4  | Peripheral vascular: 299-301  |
| 5. Hypertension (combine<br>uncomplicated and complicated)                                       | Hypertension, uncomplicated: 401.1,<br>401.9, 642.00-642.04  | Hypertension: 077-079, 304-305  |
|  | Hypertension, complicated: 401.0,<br>402.00-405.99, 437.2, 642.10-642.24,<br>642.70-642.94   | Cardiac: 001-002, 215-238, 242-251, 253-<br>254, 258-262, 280-293, 296-298, 302-303,<br>306-313 or Renal: 652, 656-661, 673-675,<br>682-700 or Hypertension: 077-079, 304-305 |
| 6. Paralysis   | 342.0-344.9, 438.20-438.53, 780.72   | Cerebrovascular: 020-022, 034-038, 064-072  |
| 7. Other neurological disorders  | 330.1-331.9, 332.0, 333.4, 333.5,<br>333.71-333.79, 333.85, 333.94, 334.0-<br>335.9, 338.0, 340, 341.1-341.9, 345.00-<br>345.11, 345.2-345.3, 345.40-345.91,<br>347.00-347.01, 347.10-347.11, 649.40-<br>649.44, 768.7, 768.70, 768.71, 768.72,<br>768.73, 780.3, 780.31, 780.32, 780.33,<br>780.39, 780.97, 784.3 | Nervous system: 020-042, 052-103  |
| <b>Changes from 3.5 to 3.6</b>   | <b>Added 780.33</b>  |   |
| 8. Chronic pulmonary disease   | 490-492.8, 493.00-493.92, 494-494.1,<br>495.0-505, 506.4,  | COPD asthma: 190-192, 202-203   |
| 9. Diabetes without chronic<br>complications   | 249.00-249.31, 250.00-250.33, 648.00-<br>648.04  | Diabetes: 637-639   |
| 10. Diabetes with chronic<br>complications   | 249.40-249.91 250.40-250.93, 775.1   |   |
| 11. Hypothyroidism   | 243-244.2, 244.8, 244.9  | Thyroid endocrine: 625-627, 643-645   |
| 12. Renal failure  | 403.01, 403.11, 403.91, 404.02,<br>404.03, 404.12, 404.13, 404.92,<br>404.93, 585.3, 585.4, 585.5, 585.6,<br>585.9, 586, V42.0, V45.1, V45.11,<br>V45.12,<br>V56.0-V56.32, V56.8   | Kidney transplant, Renal failure/dialysis: 652,<br>682-685  |
| 13. Liver disease  | 070.22, 070.23, 070.32, 070.33,<br>070.44, 070.54, 456.0, 456.1, 456.20,<br>456.21, 571.0, 571.2, 571.3, 571.40-<br>571.49, 571.5, 571.6, 571.8, 571.9,<br>572.3, 572.8, V42.7   | Liver: 420-425, 432-434, 441-446  |
| 14. Chronic Peptic ulcer disease<br>(includes bleeding only if obstruction<br>is also present)   | 531.41, 531.51, 531.61, 531.70,<br>531.71, 531.91, 532.41, 532.51,<br>532.61, 532.70, 532.71, 532.91,<br>533.41, 533.51, 533.61, 533.70,<br>533.71, 533.91, 534.41, 534.51,<br>534.61, 534.70, 534.71, 534.91  | GI Hemorrhage or ulcer: 377-384   |
| 15. HIV and AIDS (Acquired<br>immune deficiency syndrome)  | 042-044.9  | HIV: 969-970, 974-977   |
| 16. Lymphoma   | 200.00-202.38, 202.50-203.01, 203.02-<br>203.82, 238.6, 273.3  | Leukemia/lymphoma: 820-830, 834-849   |
| 17. Metastatic cancer  | 196.0-199.1, 789.51, 209.70, 209.71,<br>209.72, 209.73, 209.74, 209.75,<br>209.79, 789.51  | Cancer, Lymphoma: 054, 055, 146-148, 180-<br>182, 374-376, 435-437, 542-544, 582-585,<br>597-599, 656-658, 686-688, 715-716, 722-<br>724, 736-741, 754-756, 826-830, 843-849  |
| 18. Solid tumor without metastasis   | 140.0-172.9, 174.0-175.9, 179-195.8,<br>209.00-209.24, 209.25-209.3, 209.31,   | Cancer, Lymphoma:<br>054, 055, 146-148, 180-182, 374-376, 435-  |

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|---|---|---|
|   | 209.32, 209.33, 209.34, 209.35,<br>209.36, 258.01-258.03  | 437, 542-544, 582-585, 597-599, 656-658,<br>686-688, 715-716, 722-724, 736-741, 754-<br>756, 826-830, 843-849 |
| 19. Rheumatoid arthritis/collagen<br>vascular<br>diseases   | 701.0, 710.0-710.9, 714.0-714.9, 720.0-<br>720.9, 725   | Connective tissue: 545-547  |
| 20. Coagulation deficiency  | 286.0-286.9, 287.1, 287.3-287.5,<br>289.84, 649.30-649.34   | Coagulation disorders: 813  |
| 21. Obesity   | 278.0, 278.00, 278.01, 278.03, 649.10-<br>649.14, 793.91, V85.30-V85.39,<br>V85.41-V85.45, V85.54 |   |
| <b>Changes from 3.5 to 3.6</b>  | <b>Added 278.03, V85.41-V85.45</b>  |   |
| 22. Weight loss   | 260-263.9, 783.21, 783.22   | Nutrition/metabolic: 640-641  |
| 23. Fluid and electrolyte disorders   | 276.0-276.9   | Nutrition/metabolic: 640-641  |
| 24. Blood loss anemia   | 280.0, 648.20-648.24  | Anemia: 808-812   |
| 25. Deficiency anemias  | 280.1-281.9, 285.21-285.29, 285.9   | Anemia: 808-812   |
| 26. Alcohol abuse   | 291.0-291.3, 291.5, 291.8, 291.81,<br>281.82, 291.89, 291.9, 303.00-303.93,<br>305.00-305.03      | Alcohol or drug: 894-897  |
| 27. Drug abuse  | 292.0, 292.82-292.89, 292.9, 304.00-<br>304.93, 305.20-305.93, 648.30-648.34                      | Alcohol or drug: 894-897  |
| 28. Psychoses   | 295.00-298.9, 299.10, 299.11  | Psychoses: 885  |
| 29. Depression  | 300.4, 301.12, 309.0, 309.1, 311  | Depressive neurosis: 881  |
| Comments: The following DRGs<br>had been deleted prior to 2007 and<br>renumbered to a different DRG; they<br>did not have a corresponding V25<br>MSDRG value, but the renumbered<br>DRGs were included in the 2007<br>update and has been represented<br>by the equivalent v25 MSDRGs:<br>004-005, 020, 024-025, 107, 109,<br>112, 115,-116, 298, 363, 400, 414,<br>434-437, 514, 516-517, 522, 526-<br>527 |   |   |