

Table 2 Definitions of Comorbidities, Comorbidity Software version 3.7/ 2012	ICD9 CM Diagnosis Codes:	Discharge does not have these Pre-v25 DRGs:	V25 DRGs	V26 DRGs	V27 DRGs ; no new DRGs or description changes	V28 DRGs	V29 DRGs
1. Congestive Heart Failure	398.91, 402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91, 404.93, 428.0- 428.9	Cardiac: 103-112, 115-118, 121-127, 129, 132, 133, 135-143, 514-518, 525-527, 535-536, 547-558	Cardiac: 001-002, 215-238, 242-251, 253-254, 258-262, 280-293, 296-298, 302-303, 306-313	Cardiac: 001-002, 215-238, 215-238, 242-251, 253-254, 258-262, 265, 280- 293, 296- 298, 302- 303, 306-313	Cardiac: 001-002, 215-238, 242-251, 253-254, 258-262, 265, 280-293, 296- 298, 302-303, 306- 313	Cardiac: 001-002, 215-238, 242-251, 253-254, 258-262, 265, 280-293, 296- 298, 302-303, 306- 313	Cardiac: 001-002, 215-238, 242-252, 253-254, 258-262, 265, 280-293, 296- 298, 302-303, 306- 313
Changes from 3.3 to 3.4				Added 265			
No changes from 3.4 to 3.5							
No changes from 3.5 to 3.6							
Changes from 3.6 to 3.7							Added 252
2. Valvular disease	093.20- 093.24, 394.0- 397.1, 397.9, 424.0- 424.99, 746.3- 746.6, V42.2, V43.3	Cardiac: 103-112, 115-118, 121-127, 129, 132, 133, 135-143, 514-518, 525-527, 535-536, 547-558	Cardiac: 001-002, 215-238, 242-251, 253-254, 258-262, 280-293, 296-298, 302-303, 306-313	Cardiac: 001-002, 215-238, 215-238, 242-251, 253-254, 258-262, 265, 280- 293, 296- 298, 302- 303, 306-313	Cardiac: 001-002, 215-238, 242-251, 253-254, 258-262, 265, 280-293, 296- 298, 302-303, 306- 313	Cardiac: 001-002, 215-238, 242-251, 253-254, 258-262, 265, 280-293, 296- 298, 302-303, 306- 313	Cardiac: 001-002, 215-238, 242-252, 253-254, 258-262, 265, 280-293, 296- 298, 302-303, 306- 313
Changes from 3.3 to 3.4				Added 265			
No changes from 3.4 to 3.5							
No changes from 3.5 to 3.6							

Changes from 3.6 to 3.7							Added 252
3. Pulmonary Circulation disorders	415.11-415.19, 416.0-416.9, 417.9	Cardiac: 103-112, 115-118, 121-127, 129, 132,133, 135-143, 514-518, 525-527, 535-536, 547-558 or COPD asthma: 88, 96-98	Cardiac: 001-002, 215-238, 242-251, 253-254, 258-262, 280-293, 296-298, 302-303, 306-313 or COPD asthma 190-192, 202-203	Cardiac: 001-002, 215-238, 242-251, 253-254, 258-262, 265, 280-293, 296-298, 302-303, 306-313 or COPD asthma 190-192, 202-203	Cardiac: 001-002, 215-238, 242-251, 253-254, 258-262, 265, 280-293, 296-298, 302-303, 306-313 or COPD asthma 190-192, 202-203	Cardiac: 001-002, 215-238, 242-251, 253-254, 258-262, 265, 280-293, 296-298, 302-303, 306-313 or COPD asthma 190-192, 202-203	Cardiac: 001-002, 215-238, 242-252, 253-254, 258-262, 265, 280-293, 296-298, 302-303, 306-313 or COPD asthma 190-192, 202-203
Changes from 3.3 to 3.4				Added 265			
No changes from 3.4 to 3.5	NOTE: fy2010 code 416.2 included in range above						
No changes from 3.5 to 3.6							
Changes from 3.6 to 3.7	Note fy2012 415.13 included in range						Added 252
4. Peripheral vascular disease	440-440.9, 441.00-441.9, 442.0-442.9, 443.1-443.9, 444.21-444.22, 447.1,449, 557.1, 557.9, V43.4	Peripheral vascular: 130, 131	Peripheral vascular: 299-301	Peripheral vascular: 299-301	Peripheral vascular: 299-301	Peripheral vascular: 299-301	Peripheral vascular: 299-301
Changes from 3.4 to 3.5							

No changes from 3.4 to 3.5							
No changes from 3.5 to 3.6							
No changes from 3.6 to 3.7							
5. Hypertension (combine uncomplicated and complicated)	Hypertension, uncomplicated: 401.1, 401.9, 642.00-642.04	Hypertension: 22, 134	Hypertension: 077-079, 304-305	Hypertension: 077-079, 304-305	Hypertension: 077-079, 304-305	Hypertension: 077-079, 304-305	Hypertension: 077-079, 304-305
	Hypertension, complicated: 401.0, 402.00-405.99, 437.2, 642.10-642.24, 642.70-642.94	Cardiac:103-122, 115-118, 121-127, 129, 132,133,135-143, 518, 525-527, 535-536, 549-558 or Renal 302-305, 315-333, or Hypertension 22, 134	Cardiac: 001-002, 215-238, 242-251, 253-254, 258-262, 280-293, 296-298, 302-303, 306-313 or Renal: 652, 656-661, 673-675, 682-700 or Hypertension: 077-079, 304-305	Cardiac: 001-002, 215-238, 242-251, 253-254, 258-262, 280-293, 296-298, 302-303, 306-313 or Renal: 652, 656-661, 673-675, 682-700 or Hypertension: 077-079, 304-305	Cardiac: 001-002, 215-238, 242-251, 253-254, 258-262, 280-293, 296-298, 302-303, 306-313 or Renal: 652, 656-661, 673-675, 682-700 or Hypertension: 077-079, 304-305	Cardiac: 001-002, 215-238, 242-251, 253-254, 258-262, 280-293, 296-298, 302-303, 306-313 or Renal: 652, 656-661, 673-675, 682-700 or Hypertension: 077-079, 304-305	Cardiac: 001-002, 215-238, 242-252, 253-254, 258-262, 280-293, 296-298, 302-303, 306-313 or Renal: 652, 656-661, 673-675, 682-700 or Hypertension: 077-079, 304-305
Changes from 3.3 to 3.4				Added 265			
No changes from 3.4 to 3.5							
No changes from 3.5 to 3.6							
Changes from 3.6 to 3.7							Added 252
6. Paralysis	342.0-344.9, 438.20-438.53, 780.72	Cerebrovascular: 5, 14-17, 524, 528, 533-534, 577	Cerebrovascular: 020-022, 034-038, 064-072	Cerebrovascular: 020-022, 034-038, 064-072	Cerebrovascular: 020-022, 034-038, 064-072	Cerebrovascular: 020-022, 034-038, 064-072	Cerebrovascular: 020-022, 034-038, 064-072
Changes from 3.4 to 3.4	Added 780.72						

No changes from 3.4 to 3.5							
No changes from 3.5 to 3.6							
No changes from 3.6 to 3.7							
7. Other neurological disorders	330.1-331.9, 332.0, 333.4, 333.5, 333.71, 333.72, 333.79, 333.85, 333.94, 334.0-335.9, 338.0, 340, 341.1-341.9, 345.00-345.11, 345.2-345.3, 345.40-345.91, 347.00-347.01, 347.10-347.11, 649.40-649.44, 768.7, 780.3, 780.31, 780.32, 780.33, 780.39, 780.97, 784.3	Nervous system: 1-35, 524, 528-534, 543, 559-564, 577	Nervous system: 020-042, 052-103	Nervous system: 020-042, 052-103	Nervous system: 020-042, 052-103	Nervous system: 020-042, 052-103	Nervous system: 020-042, 052-103
Changes from 3.4 to 3.5	Add 768.70, 768.71, 768.72,						

	768.73						
Changes from 3.5 to 3.6	Add 780.33						
No changes from 3.6 to 3.7							
8. Chronic pulmonary disease	490-492.8, 493.00- 493.92, 494-494.1, 495.0-505, 506.4,	COPD asthma: 88, 96-98	COPD asthma: 190-192, 202-203	COPD asthma: 190- 192, 202-203	COPD asthma: 190- 192, 202-203	COPD asthma: 190- 192, 202-203	COPD asthma: 190- 192, 202-203
No changes from 3.4 to 3.5							
No changes from 3.5 to 3.6							
No changes from 3.6 to 3.7							
9. Diabetes without chronic complications	249.00- 249.31 250.00- 250.33, 648.00- 648.04	Diabetes: 294, 295	Diabetes: 637-639	Diabetes: 637-639	Diabetes: 637-639	Diabetes: 637-639	Diabetes: 637-639
Changes from 3.3 to 3.4	Added 249.00- 249.31						
No changes from 3.4 to 3.5							
No changes from 3.5 to 3.6							
No changes from 3.6 to 3.7							
10. Diabetes with chronic complications	250.40- 250.93, 775.1	Diabetes: 294, 295	Diabetes: 637-639	Diabetes: 637-639	Diabetes: 637-639	Diabetes: 637-639	Diabetes: 637-639
Changes from 3.3 to 3.4	Add 249.40- 249.91						
No changes from 3.4 to 3.5							
No changes from 3.5 to 3.6							
No changes from 3.6 to 3.7							

11. Hypothyroidism	243-244.2, 244.8, 244.9	Thyroid endocrine: 290, 300, 301	Thyroid endocrine: 625- 627, 643-645	Thyroid endocrine: 625-627, 643-645	Thyroid endocrine: 625-627, 643-645	Thyroid endocrine: 625-627, 643-645	Thyroid endocrine: 625-627, 643-645
No changes from 3.4 to 3.5							
No changes from 3.5 to 3.6							
No changes from 3.6 to 3.7							
12. Renal failure	403.01, 403.11, 403.90, 403.91, 404.02, 404.03, 404.12, 404.13, 404.92, 404.93, 585.3, 585.4, 585.5, 585.6, 585.9, 586, V42.0, V45.1, V45.11, V45.12, V56.0- V56.32, V56.8	Kidney transplant, Renal failure/dialysis: 302, 316, 317	Kidney transplant, Renal failure/dialysis: 652, 682-685	Kidney transplant, Renal failure/dialysi s: 652, 682- 685	Kidney transplant, Renal failure/dialysis: 652, 682-685	Kidney transplant, Renal failure/dialysis: 652, 682-685	Kidney transplant, Renal failure/dialysis: 652, 682-685
Changes from 3.3 to 3.4	Added V45.11, V45.12						
No changes from 3.4 to 3.5							
No changes from 3.5 to 3.6							
Changes from 3.6 to 3.7	Add 403.90						
13. Liver disease	070.22, 070.23, 070.33, 070.44,	Liver: 199-202, 205-208	Liver: 420-425, 432-434, 441-446	Liver: 420- 425, 432- 434, 441-446	Liver: 420-425, 432- 434, 441-446	Liver: 420-425, 432- 434, 441-446	Liver: 420-425, 432- 434, 441-446

	070.54, 456.0, 456.1, 456.20, 456.21, 571.0, 571.2, 571.3, 571.40- 571.49, 571.5, 571.6, 571.8, 571.9, 572.3, 572.8, V42.7						
No changes from 3.4 to 3.5							
No changes from 3.5 to 3.6							
Changes from 3.6 to 3.7	Add 573.5						
14. Chronic Peptic ulcer disease (includes bleeding only if obstruction is also present)	531.41, 531.51, 531.61, 531.70, 531.71, 531.91, 532.41, 532.51, 532.61, 532.70, 532.71, 532.91, 533.41, 533.51, 533.61, 533.70, 533.71, 533.91, 534.41, 534.51, 534.61, 534.70, 534.71,	GI Hemorrhage or ulcer: 174-178	GI Hemorrhage or ulcer: 377-384	GI Hemorrhage or ulcer: 377- 384	GI Hemorrhage or ulcer: 377-384	GI Hemorrhage or ulcer: 377-384	GI Hemorrhage or ulcer: 377-384

	534.91						
No changes from 3.4 to 3.5							
No changes from 3.5 to 3.6							
No changes from 3.6 to 3.7							
15. HIV and AIDS (Acquired immune deficiency syndrome)	042-044.9	HIV: 488, 489, 490	HIV: 969-970, 974-977	HIV: 969-970, 974-977	HIV: 969-970, 974-977	HIV: 969-970, 974-977	HIV: 969-970, 974-977
No changes from 3.4 to 3.5							
No changes from 3.5 to 3.6							
Changes from 3.6 to 3.7							
16. Lymphoma	200.00-202.38, 202.50-203.01, 203.02-203.82, 203.8-203.81, 238.6, 273.3	Leukemia/lymphoma: 400-414, 473, 492, 539-540	Leukemia/lymphoma: 820-830, 834-849	Leukemia/lymphoma: 820-830, 834-849	Leukemia/lymphoma: 820-830, 834-849	Leukemia/lymphoma: 820-830, 834-849	Leukemia/lymphoma: 820-830, 834-849
Changes from 3.3 to 3.4	Added 203.02, 203.82						
No changes from 3.4 to 3.5							
No changes from 3.5 to 3.6							
No changes from 3.6 to 3.7							
17. Metastatic cancer	196.0-199.1, 789.51	Cancer, Lymphoma: 10, 11, 64, 82, 172, 173, 199, 203, 239, 257-260, 274, 275, 303, 318, 319, 338, 344, 346, 347, 354, 355, 357,	Cancer, Lymphoma: 054, 055, 146-148, 180-182, 374-376, 435-437, 542-544, 582-583, 597-599, 656-658, 686-688, 715-716, 722-724, 736-741, 754-756,	Cancer, Lymphoma: 054, 055, 146-148, 180-182, 374-376, 435-437, 542-544, 582-583,	Cancer, Lymphoma: 054, 055, 146-148, 180-182, 374-376, 435-437, 542-544, 582-583, 597-599, 656-658, 686-688, 715-716, 722-724, 736-741, 754-756, 826-830, 843-849	Cancer, Lymphoma: 054, 055, 146-148, 180-182, 374-376, 435-437, 542-544, 582-583, 597-599, 656-658, 686-688, 715-716, 722-724, 736-741, 754-756, 826-830, 843-849	Cancer, Lymphoma: 054, 055, 146-148, 180-182, 374-376, 435-437, 542-544, 582-583, 597-599, 656-658, 686-688, 715-716, 722-724, 736-741, 754-756, 826-830, 843-849

		363, 366, 367, 406-414	826-830, 843-849	597-599, 656-658, 686-688, 715-716, 722-724, 736-741, 754-756, 826-830, 843-849			
Changes from 3.4 to 3.5	Add 209.70, 209.72, 209.73, 209.74, 209.75, 209.79						
No changes from 3.5 to 3.6							
No changes from 3.6 to 3.7							
18. Solid tumor without metastasis	140.0- 172.9, 174.0- 175.9, 179-195.8, 258.01- 258.03	Cancer, Lymphoma: 10, 11, 64, 82, 172, 173, 199, 203, 239, 257-260, 274, 275, 303, 318, 319, 338, 344, 346, 347, 354, 355, 357, 363, 366, 367, 406-414	Cancer, Lymphoma: 054, 055, 146- 148, 180-182, 374-376, 435-437, 542-544, 582-583, 597-599, 656-658, 686-688, 715-716, 722-724, 736-741, 754-756, 826-830, 843-849	Cancer, Lymphoma: 054, 055, 146-148, 180-182, 374-376, 435-437, 542-544, 582-583, 597-599, 656-658, 686-688, 715-716, 722-724, 736-741, 754-756, 826-830, 843-849	Cancer, Lymphoma: 054, 055, 146-148, 180-182, 374-376, 435-437, 542-544, 582-583, 597-599, 656-658, 686-688, 715-716, 722-724, 736-741, 754-756, 826-830, 843-849	Cancer, Lymphoma: 054, 055, 146-148, 180-182, 374-376, 435-437, 542-544, 582-583, 597-599, 656-658, 686-688, 715-716, 722-724, 736-741, 754-756, 826-830, 843-849	Cancer, Lymphoma: 054, 055, 146-148, 180-182, 374-376, 435-437, 542-544, 582-583, 597-599, 656-658, 686-688, 715-716, 722-724, 736-741, 754-756, 826-830, 843-849
Changes from 3.3 to 3.4	Add 209.00- 209.24, 209.25- 209.3						
Changes from 3.4 to 3.5	Add 209.31- 209.36						

No changes from 3.5 to 3.6							
No changes from 3.6 to 3.7							
19. Rheumatoid arthritis/collagen vascular diseases	701.0, 710.0-710.9, 714.0-714.9, 720.0-720.9, 725	Connective tissue: 240, 241	Connective tissue: 545-547	Connective tissue: 545-547	Connective tissue: 545-547	Connective tissue: 545-547	Connective tissue: 545-547
No changes from 3.4 to 3.5							
No changes from 3.5 to 3.6							
No changes from 3.6 to 3.7							
20. Coagulation deficiency	286.0-286.9, 287.1, 287.3-287.5, 649.30-649.34	Coagulation disorders: 397	Coagulation disorders: 813	Coagulation disorders: 813	Coagulation disorders: 813	Coagulation disorders: 813	Coagulation disorders: 813
Changes from 3.3 to 3.4	Add 289.84						
No changes from 3.4 to 3.5							
No changes from 3.5 to 3.6							
Changes from 3.6 to 3.7	286.52, 286.53, 286.59						
21. Obesity	278.0, 278.00, 278.01, 278.03, 649.10-649.14, 793.91, V85.30-V85.41 – V85.45, V85.54	Nutrition/metabolic: 296-298 or Obesity Proc: 288	Nutrition/metabolic: 619-621, 640-641				
No changes from 3.4 to 3.5							

Changes from 3.5 to 3.6	Add 278.03, V85.41- V85.45						
Changes from 3.6 to 3.7							
22. Weight loss	260-263.9, 783.21, 783.22	Nutrition/metabolic: c: 296-298	Nutrition/metabolic: c: 640-641	Nutrition/metabolic: 640-641	Nutrition/metabolic: 640-641	Nutrition/metabolic: 640-641	Nutrition/metabolic: 640-641
No changes from 3.4 to 3.5							
No changes from 3.5 to 3.6							
No changes from 3.6 to 3.7							
23. Fluid and electrolyte disorders	276.0- 276.9	Nutrition/metabolic: c: 296-298	Nutrition/metabolic: c: 640-641	Nutrition/metabolic: 640-641	Nutrition/metabolic: 640-641	Nutrition/metabolic: 640-641	Nutrition/metabolic: 640-641
No changes from 3.4 to 3.5							
No changes from 3.5 to 3.6							
No changes from 3.6 to 3.7							
24. Blood loss anemia	280.0, 648.20- 648.24	Anemia: 395, 396, 574	Anemia: 808-812	Anemia: 808-812	Anemia: 808-812	Anemia: 808-812	Anemia: 808-812
No changes from 3.4 to 3.5							
No changes from 3.5 to 3.6							
No changes from 3.6 to 3.7							
25. Deficiency anemias	280.1- 280.9, 285.21- 285.29, 285.9	Anemia: 395, 396, 574	Anemia: 808-812	Anemia: 808-812	Anemia: 808-812	Anemia: 808-812	Anemia: 808-812
No changes from 3.4 to 3.5							
No changes from 3.5 to 3.6							
No changes from 3.6 to 3.7							
26. Alcohol	291.0-	Alcohol or drug:	Alcohol or drug:	Alcohol or	Alcohol or drug: 894-	Alcohol or drug: 894-	Alcohol or drug: 894-

abuse	291.3, 291.5, 291.8, 291.81, 281.82, 291.89, 291.9, 303.00- 303.93, 305.00- 305.03	433-437, 521-523,	894-897	drug: 894- 897	897	897	897
No changes from 3.4 to 3.5							
No changes from 3.5 to 3.6							
No changes from 3.6 to 3.7							
27. Drug abuse	292.0, 292.82- 292.89, 292.9, 304.00- 304.93, 305.20- 305.93, 648.30- 648.34	Alcohol or drug: 433-437, 521-523	Alcohol or drug: 894-897	Alcohol or drug: 894- 897	Alcohol or drug: 894- 897	Alcohol or drug: 894- 897	Alcohol or drug: 894- 897
No changes from 3.4 to 3.5							
No changes from 3.5 to 3.6							
No changes from 3.6 to 3.7							
28. Psychoses	295.00- 298.9, 299.10, 299.11	Psychoses: 430	Psychoses: 885	Psychoses: 885	Psychoses: 885	Psychoses: 885	Psychoses: 885
No changes from 3.4 to 3.5							
No changes from 3.5 to 3.6							
No changes from 3.6 to 3.7							
29. Depression	300.4, 301.12, 309.00,	Depressive neuroses: 426	Depressive neurosis: 881	Depressive neurosis: 881	Depressive neurosis: 881	Depressive neurosis: 881	Depressive neurosis: 881

	309.1, 311						
No changes from 3.4 to 3.5							
No changes from 3.5 to 3.6							
No changes from 3.6 to 3.7							
Comments: The following DRGs had been deleted prior to 2007 and renumbered to a different DRG; they did not have a corresponding V25 MSDRG value, but the renumbered DRGs were included in the 2007 update and has been represented by the equivalent v25 MSDRGs: 004-005, 020, 024-025, 107, 109, 112, 115,- 116, 298, 363, 400, 414, 434-437, 514, 516-517, 522, 526-527							