

**Supplemental Table 1. ICD-9 Codes**

| <b>Variable</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>Codes</b>                                                                                                                                                                                                                                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Critical Limb Ischemia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 440.22, 440.23, 440.24                                                                                                                                                                                                                                                |
| Peripheral Artery Disease                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 440.2, 440.20, 440.21, 440.22, 440.23, 440.24, 440.29, 440.3, 440.0, 440.30, 440.31, 440.32, 440.9, 249.70, 249.71, 250.70, 250.71, 250.72, 250.73, 443.1, 443.81, 443.9, 444.22, 444.81, 785.4                                                                       |
| Major Amputation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 84.10, 84.13, 84.14, 84.15, 84.16, 84.17, 84.3                                                                                                                                                                                                                        |
| Minor Amputation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 84.11, 84.12                                                                                                                                                                                                                                                          |
| Endovascular Revascularization                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 39.50, 39.90, 00.55                                                                                                                                                                                                                                                   |
| Surgical Revascularization                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 39.25, 39.29, 38.08, 38.16, 38.18, 38.38, 38.48, 38.68, 38.88                                                                                                                                                                                                         |
| Revascularization, Not Otherwise Specified                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 00.40, 00.41, 00.42, 00.43, 00.44, 00.45, 00.46, 00.47, 00.48                                                                                                                                                                                                         |
| Prior Amputation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | V497.0, V497.1, V497.2, V497.3, V497.4, V497.5, V497.6, V497.7                                                                                                                                                                                                        |
| Depression                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 296.20, 296.21, 296.22, 296.23, 296.24, 296.25, 296.26, 296.30, 296.31, 296.32, 296.33, 296.34, 296.35, 296.36, 300.4, 311                                                                                                                                            |
| 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                                                                                                                                                                          |
| Coronary Artery Disease                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 410.0 or 414.9; 36.xx                                                                                                                                                                                                                                                 |
| Chronic Pulmonary Disease                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 88, 96-98, 190-192, 202-203, 490-492.8, 493.00-493.92, 494-494.1, 495.0-505, 506.4                                                                                                                                                                                    |
| Hypertension                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 401.1, 401.9, 642.00- 642.04, 401.0, 402.00- 405.99, 437.2, 642.10- 642.24, 642.70- 642.94                                                                                                                                                                            |
| Diabetes without Chronic Complications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 249.00- 249.31, 250.00- 250.33, 648.00- 648.04                                                                                                                                                                                                                        |
| Diabetes with Chronic Complications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 249.40-249.91, 250.40-250.93, 775.1                                                                                                                                                                                                                                   |
| 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                                                                                            |
| Liver Disease                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 070.22, 070.23, 070.32, 070.33 , 070.44, 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, 573.5, V42.7                                                                                            |
| Obesity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 278.0, 278.00, 278.01, 278.03, 649.10- 649.14, 793.91, V85.30- V85.39, V85.41- V85.45, V85.54, 296-298, 288, 619-621, 640-641                                                                                                                                         |
| Smoking                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 305.1, V15.82                                                                                                                                                                                                                                                         |
| Pulmonary Failure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 518.81, 518.4, 518.5, 518.8                                                                                                                                                                                                                                           |
| Pneumonia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 481, 482.0-482.9, 483, 484, 485, 507.0                                                                                                                                                                                                                                |
| Myocardial Infarction                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 410.00-410.91                                                                                                                                                                                                                                                         |
| Deep Venous Thrombosis/Pulmonary Embolism                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 415.1, 451.11, 451.19, 451.2, 451.81, 453.4, 453.41, 453.42, 453.8, 453.9                                                                                                                                                                                             |
| Acute Renal Failure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 584                                                                                                                                                                                                                                                                   |
| Hemorrhage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 998.1                                                                                                                                                                                                                                                                 |
| Transfusion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 99.00, 99.02, 99.03, 99.04                                                                                                                                                                                                                                            |
| Surgical Site Infection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 958.3, 998.3, 998.5, 998.59, 998.51                                                                                                                                                                                                                                   |
| GI Bleeding                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 530.82, 531.00 –531.21, 531.40, 531.41, 531.60, 531.61, 532.00 – 532.21, 532.40, 532.41, 532.60, 532.61, 533.00– 533.21, 533.40, 533.41, 533.60, 533.61, 534.00–534.21, 534.40, 534.41, 534.60, 534.61, 535.01, 535.11, 535.21, 535.31, 535.41, 535.51, 535.61, 578.9 |
| <b>Note:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                       |
| <b>The primary variable for CLI included the following 6 scenarios:</b> 1) one of the CLI codes in the primary position, 2) one of the CLI codes in any position plus a PAD code in the primary position, 3) the patient had a peripheral endovascular revascularization procedure, 4) the patient had a surgical peripheral revascularization procedure, 5) the patient had a revascularization, NOS code PLUS PAD in the primary position OR CLI in any position, or 6) the patient had a major amputation PLUS a PAD code in the primary position OR a CLI code in any position. (n=116,008) |                                                                                                                                                                                                                                                                       |
| <b>The more restrictive CLI variable</b> used for the sensitivity analysis was the same except that: scenarios 3 and 4 from above also had to be accompanied by a PAD code in any position. (n=91,133)                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                       |

**Supplemental Table 2. Sensitivity analysis with a more restriction definition of CLI for major amputation, inpatient mortality, and length of stay between those with and without depression**

| Predictor <sup>a</sup>     |                                            | Major Amputation (n=83,491) <sup>b</sup> |             |         | Death (n=85,036) |             |         | Length of Stay <sup>c</sup> (n=85,057) |                |         |
|----------------------------|--------------------------------------------|------------------------------------------|-------------|---------|------------------|-------------|---------|----------------------------------------|----------------|---------|
|                            |                                            | OR                                       | 95% CI      | P-value | OR               | 95% CI      | P-value | Coef.                                  | 95% CI         | P-value |
| <b>Major Amputation</b>    |                                            | 1.42                                     | (1.32-1.52) | <0.001  | -                | -           | -       | -                                      | -              | -       |
| <b>Inpatient Mortality</b> |                                            | -                                        | -           | -       | 0.78             | (0.65-0.94) | 0.007   | -                                      | -              | -       |
| <b>log(Length of Stay)</b> |                                            | -                                        | -           | -       | -                | -           | -       | 0.74                                   | (0.56, 0.94)   | <0.001  |
|                            | Age (years)                                | 1.01                                     | (1.01-1.01) | <0.001  | 1.02             | (1.01-1.02) | <0.001  | -0.03                                  | (-0.03, -0.02) | 0.03    |
|                            | Female Sex                                 | 0.86                                     | (0.82-0.90) | <0.001  | 1.25             | (1.14-1.37) | <0.001  | 0.11                                   | (0.00, 0.22)   | 0.004   |
|                            | Race (ref: white)                          |                                          |             |         |                  |             |         |                                        |                |         |
|                            | Black                                      | 1.86                                     | (1.76-1.97) | <0.001  | 0.86             | (0.75-0.98) | 0.02    | 1.29                                   | (1.14, 1.44)   | <0.001  |
|                            | Hispanic                                   | 1.32                                     | (1.22-1.42) | <0.001  | 0.88             | (0.74-1.05) | 0.17    | 0.68                                   | (0.067, 0.166) | <0.001  |
|                            | Asian or Pacific Islander                  | 1.17                                     | (0.96-1.42) | 0.13    | 1.40             | (1.01-1.94) | 0.04    | 1.35                                   | (0.87, 1.84)   | 0.44    |
|                            | Native American                            | 1.28                                     | (1.00-1.64) | 0.05    | 1.00             | (0.56-1.78) | 0.99    | -0.22                                  | (-0.88, 0.42)  | 0.66    |
|                            | Other                                      | 0.99                                     | (0.86-1.14) | 0.89    | 0.99             | 0.76-1.30)  | 0.96    | 0.51                                   | (0.19, 0.83)   | 0.35    |
|                            | Socioeconomic Status (ref: first quartile) |                                          |             |         |                  |             |         |                                        |                |         |
|                            | Second quartile                            | 0.90                                     | (0.85-0.96) | <0.000  | 1.02             | (0.90-1.15) | 0.77    | -0.11                                  | (-0.25, 0.03)  | 0.12    |
|                            | Third quartile                             | 0.82                                     | (0.77-0.87) | <0.001  | 1.01             | (0.89-1.15) | 0.82    | -0.06                                  | (-0.20, 0.09)  | 0.61    |
|                            | Fourth quartile                            | 0.72                                     | (0.67-0.77) | <0.001  | 1.05             | (0.92-1.20) | 0.49    | 0.34                                   | (0.17, 0.50)   | 0.65    |
|                            | Tobacco Use (current or prior)             | 0.75                                     | (0.72-0.79) | <0.001  | 0.62             | (0.55-0.68) | <0.001  | -1.25                                  | (-1.36, -1.14) | <0.001  |
|                            | Obesity                                    | 0.82                                     | (0.76-0.88) | <0.001  | 0.86             | (0.73-1.02) | 0.08    | 0.40                                   | (0.22, 0.57)   | <0.001  |
|                            | Hypertension                               | 1.03                                     | (0.98-1.10) | 0.24    | 0.59             | (0.53-0.66) | <0.001  | -0.59                                  | (-0.72, 0.45)  | 0.91    |
|                            | Diabetes, uncomplicated                    | 0.85                                     | (0.80-0.90) | <0.001  | 0.81             | (0.72-0.91) | <0.001  | -0.83                                  | (-0.96, -0.69) | <0.001  |
|                            | Diabetes with chronic complications        | 1.40                                     | (1.33-1.48) | <0.001  | 0.59             | (0.52-0.67) | <0.001  | 1.60                                   | (1.46, 1.75)   | <0.001  |
|                            | Congestive Heart Failure                   | 3.87                                     | (3.66-4.10) | <0.001  | 2.29             | (2.03-2.57) | <0.001  | 3.40                                   | (3.21, 3.59)   | <0.001  |
|                            | Coronary Artery Disease                    | 0.48                                     | (0.38-0.61) | <0.001  | 3.24             | (2.59-4.06) | <0.001  | 4.38                                   | (3.95, 4.81)   | <0.001  |
|                            | Liver Disease                              | 1.15                                     | (0.99-1.33) | 0.07    | 2.65             | (2.10-3.35) | <0.001  | 1.62                                   | (1.23, 2.02)   | <0.001  |
|                            | Renal Failure                              | 1.13                                     | (1.08-1.19) | <0.001  | 1.98             | (1.79-2.19) | <0.001  | 1.60                                   | (1.47, 1.73)   | <0.001  |
|                            | Prior Amputation                           | 1.74                                     | (1.64-1.86) | <0.001  | 0.58             | (0.47-0.70) | <0.001  | -0.42                                  | (-0.60, -0.23) | 0.06    |

The above table represents three different multivariable models – one each for the primary outcomes of major amputation, inpatient mortality, and length of stay. Each model treats depression as the primary predictor and therefore compares patients with and without depression. The odds ratios (OR) reported are adjusted for all other variables listed in the table.

<sup>a</sup> Predictors were selected *a priori* and added to the multivariable model after running a univariate analysis for each predictor with depression.

<sup>b</sup> Excludes patients who died prior to receiving a major amputation in order to eliminate the issue of competing risk.

<sup>c</sup> Reported coefficients and confidence intervals are from non-logged model whereas reported p-values are from the log(LOS) model.