

SUPPLEMENTAL MATERIAL

Table S1: ICD-9-CM codes used for VAD indication classification, and for comorbidities.

VAD Indication Classification	ICD-9-CM codes
Primary therapy	Heart failure: 428.x, 402.x1, 404.x1, 404.x3 Cardiogenic shock: 785.51
Post-cardiotomy	36.1x, 35.11-35.14, 35.21-35.28, 37.11, 37.62, 37.65
Comorbidities	
Diabetes	249.x, 250.x, 357.2, 362.0x
Atrial fibrillation/flutter	427.3x
Valvular heart disease	394.x-397.1, 424.x, 746.3-746.6, v42.2, v43.3
Coronary disease	36.0x-36.39, 410.x, 411.x, 412, 413.x, 414.x, v45.81-v45.82
Ventricular fibrillation	427.1, 427.4x
Cerebrovascular disease	430, 431, 432.x 433.x, 434.x, 435.x, 436, 437.x, 438.x
Peripheral vascular disease	38.03, 38.05, 38.06, 38.08, 38.10, 38.44, 39.22, 39.23, 39.24, 39.25, 39.26, 39.29, 39.71, 440.2x, 440.3x, 440.4, 440.8, 440.9, 441.x, 443.x, 445.x, 557.x
Hypertension	401.x-405.x
Chronic pulmonary disease	490.x-496.x, 500-505, 506.4, 516, 516.0, 516.1, 516.2, 516.3, 516.8, 516.9
Cancer	140.x-165.x, 170.x-172.x, 174.x, 175.x, 180.x-209.x, 238.6, 273.3
Liver disease	070.x, 456.0, 456.1, 456.1, 456.2x, 570-573.x, v42.7
Depression	296.2x, 296.3x, 296.5x, 296.82, 300.4, 311

Table S2. ICD-9-CM codes to identify infection related hospitalizations.

0031, 0362, 0380, 03810, 03811, 03812, 03819, 0382, 0383, 03840, 03841, 03842, 03843, 03844, 03849, 0388, 0389, 04082, 0545, 1125, 78552, 7907, 7908, 99591, 99592

03282, 03640, 03641, 03642, 03643, 07420, 07421, 07422, 07423, 11281, 11503, 11504, 11593, 11594, 1303, 3910, 3911, 3912, 3918, 3919, 3920, 4210, 4211, 4219, 4220, 42292

00321, 0360, 0361, 0470, 0471, 0478, 0479, 048, 0490, 0491, 0498, 0499, 0530, 05310, 05314, 0543, 05472, 05474, 0550, 05600, 05601, 05609, 05821, 05829, 0621, 0622, 0623, 0625, 0628, 0629, 0638, 0639, 064, 06641, 06642, 0721, 0722, 11283, 1142, 11501, 11591, 1300, 3200, 3201, 3202, 3203, 3207, 32081, 32082, 32089, 3209, 3210, 3211, 3212, 3230, 32301, 32302, 3231, 3234, 32341, 32342, 3240, 3241, 3249

03283, 5670, 5671, 5672, 56721, 56722, 56723, 56729, 56789, 5679, 0030, 0038, 0039, 0040, 0041, 0043, 0048, 0049, 0050, 0051, 0052, 0053, 0054, 00581, 00589, 0059, 0071, 0074, 0075, 00800, 00801, 00802, 00803, 00804, 00809, 0081, 0082, 0083, 00841, 00842, 00843, 00844, 00845, 00846, 00847, 00849, 0085, 00861, 00862, 00863, 00864, 00865, 00866, 00867, 00869, 0088, 0090, 0091, 0092, 0093, 0392, 0700, 0701, 07043, 07053, 0723, 07271, 11285, 1305, 5400, 5401, 5409, 541, 542, 56201, 56203, 56211, 56213, 566, 56781, 5695, 5720, 5721, 5750, 57510

03284, 0720, 59010, 59011, 5902, 5903, 59080, 59081, 5909, 5950, 5954, 59589, 5959, 5970, 59800, 59801, 5990, 6010, 6012, 6013, 6014, 6019, 6031, 6040, 60490, 60491, 6071, 6072, 6080, 6084, 6140, 6142, 6143, 6145, 6150, 6159, 6163, 6164

00322, 01100, 01101, 01102, 01103, 01104, 01105, 01106, 01110, 01111, 01112, 01113, 01114, 01115, 01116, 01120, 01121, 01122, 01123, 01124, 01125, 01126, 01130, 01131, 01132, 01133, 01134, 01135, 01136, 01150, 01151, 01152, 01153, 01154, 01155, 01156, 01160, 01161, 01162, 01163, 01164, 01165, 01166, 01170, 01171, 01172, 01173, 01174, 01175, 01176, 01180, 01181, 01182, 01183, 01184, 01185, 01186, 01190, 01191, 01192, 01193, 01194, 01195, 01196, 0310, 0330, 0338, 0339, 0391, 0521, 0551, 0730, 0796, 1124, 1140, 1145, 11505, 11595, 1304, 1363, 4650, 4658, 4659, 4660, 46611, 46619, 4800, 4801, 4802, 4803, 4808, 4809, 481, 4820, 4821, 4822, 48230, 48231, 48232, 48239, 48240, 48241, 48242, 48249, 48281, 48282, 48283, 48284, 48289, 4829, 4830, 4831, 4838, 4841, 4843, 4846, 4847, 4848, 485, 486, 4870, 4871, 488, 4880, 4881, 490, 49122, 4941, 5100, 5109, 5111, 5130, 5131, 5192

0311, 03285, 0390, 0400, 37601, 6800, 6801, 6802, 6803, 6804, 6805, 6806, 6807, 6808, 6809, 68100, 68101, 68110, 68111, 6819, 6820, 6821, 6822, 6823, 6824, 6825, 6826, 6827, 6828, 6829, 684, 6850, 6868, 6869, 72886, 9101, 9103, 9109, 9111, 9113, 9119, 9121, 9123, 9129, 9131, 9133, 9139, 9141, 9143, 9149, 9151, 9153, 9159, 9161, 9163, 9169, 9171, 9173, 9179, 9191, 9193, 9199

00323, 00324, 03682, 37603, 05671, 71100, 71101, 71102, 71103, 71104, 71105, 71106, 71107, 71108, 71109, 71140, 71141, 71142, 71143, 71144, 71145, 71146,

71147, 71148, 71149, 71150, 71151, 71152, 71153, 71154, 71155, 71156, 71157, 71158, 71159, 71160, 71161, 71162, 71163, 71164, 71165, 71166, 71167, 71168, 71169, 71180, 71181, 71182, 71183, 71184, 71185, 71186, 71187, 71188, 71189, 71190, 71191, 71192, 71193, 71194, 71195, 71196, 71197, 71198, 71199, 73000, 73001, 73002, 73003, 73004, 73005, 73006, 73007, 73008, 73009, 73020, 73021, 73022, 73023, 73024, 73025, 73026, 73027, 73028, 73029, 73080, 73081, 73082, 73083, 73084, 73085, 73086, 73087, 73088, 73089, 73090, 73091, 73092, 73093, 73094, 73095, 73096, 73097, 73098, 73099

99662, 99931, 99668

53086, 53641, 56961, 99660, 99661, 99663, 99664, 99665, 99666, 99667, 99669, 99731, 99802, 99851, 99859, 9993, 99939

Dalrymple LS, Mu Y, Romano PS, Nguyen DV, Chertow GM, Delgado C, et al. Outcomes of infection-related hospitalization in Medicare beneficiaries receiving in-center hemodialysis. *Am J Kidney Dis.* 2015;65(5):754-62.

Table S3. Subdistribution hazard models for people with ESRD on dialysis at time of VAD implantation, with transplantation as a competing event.

Variables	Hazard Ratios (95% Confidence Intervals)	
	Univariate	Multivariate
Age (per 1 year)	1.01 (0.99, 1.03)	1.01 (0.99, 1.03)
Race		
Other	1 (ref)	1 (ref)
Black	0.65 (0.37, 1.13)	0.84 (0.47, 1.51)
Sex		
Female	1 (ref)	1 (ref)
Male	0.53 (0.28, 1.02)	0.46 (0.24, 0.85)
Cause of ESRD		
Other	1 (ref)	1 (ref)
Diabetes	1.53 (0.88, 2.64)	1.33 (0.77, 2.29)
VAD implantation year		
2006-2009	1 (ref)	1 (ref)
2010-2011	0.85 (0.44, 1.66)	0.89 (0.47, 1.68)
2012-2014	0.60 (0.31, 1.17)	0.59 (0.31, 1.14)
VAD implantation circumstance		
Primary	1 (ref)	1 (ref)
Post-cardiotomy	1.96 (1.13, 3.37)	1.73 (0.95, 3.16)

Figure S1. Cumulative incidence of mortality stratified by primary versus post-cardiotomy VAD implantation

