

Supplemental Table 1: Sensitivity Analysis, Walkability Quintiles, Older Adults, and 2+ Conditions – Age 65-95

2 conditions 500 bootstrap May 2020					
	Unadjusted HR	Unadjusted pvalue		Adjusted HR	Adjusted pvalue
Sex					
Male	1.00 (- , -)	-		1.00 (- , -)	-
Female	1.05(0.91 , 1.23)	0.4947		1.15(0.95 , 1.39)	0.1417
Age, years					
65-74	1.00(- , -)	-		1.00(- , -)	-
75-95	1.27(1.08 , 1.49)	0.0059		1.25(1.06, 1.49)	0.0091
Education					
Less than high school	1.00(- , -)	-			
High school completed	0.73(0.59 , 0.92)	0.0061		0.83(0.65 , 1.04)	0.1085
Some post-secondary	1.11(0.79 , 1.56)	0.5304		1.21(0.83 , 1.76)	0.3172
Post-secondary completed	0.82(0.69 , 0.99)	0.035		1.03(0.84 , 1.26)	0.7746
Income group					
0-\$19,999	1.16(0.86 , 1.56)	0.3311		1.13(0.80 , 1.59)	0.4927
\$20,000-\$39,999	1.20(0.93 , 1.55)	0.1704		1.13(0.85 , 1.51)	0.3993
\$40,000-\$59,999	1.08(0.82 , 1.43)	0.5742		1.03(0.75 , 1.40)	0.8553
\$60,000-\$79,999	0.99(0.74 , 1.31)	0.9262		0.93(0.68 , 1.28)	0.6596
\$80000+	1.00(- , -)	-		1.00(- , -)	-
Marital status					
Married/common law	1.00(- , -)	-			
Wid/sep/divorced	1.01(0.88 , 1.17)	0.8393		0.84(0.71 , 1.01)	0.0578
Single	0.76(0.58 , 1.00)	0.0487		0.67(0.52 , 0.86)	0.0018
Smoker type					
Regular/former	1.13(0.97 , 1.32)	0.1188		1.26(1.06 , 1.49)	0.0101
Occasional/non-smoker	1.00(- , -)	-		1.00(- , -)	-
Physical activity					
Active	1.00(- , -)	-			
Inactive	1.14(0.98 , 1.32)	0.0859		1.11(0.94 , 1.31)	0.2055
Life stress					
None/low stress	1.00(- , -)	-		1.00(- , -)	-
High stress	0.67(0.34 , 1.30)	0.2358		0.49(0.21 , 1.12)	0.0888
Self-perceived health					
Excellent	1.00(- , -)	-		1.00(- , -)	-
Very good	1.11(0.91 , 1.34)	0.3028		1.13(0.93 , 1.37)	0.2070
Good	1.31(1.09 , 1.58)	0.0038		1.29(1.05 , 1.60)	0.0165
Fair	1.19(0.78 , 1.79)	0.4202		1.15(0.72 , 1.84)	0.5497
Poor	1.49(0.77 , 2.88)	0.2414		1.50(0.77 , 2.92)	0.2339
Walkability Index (DA-lvl)					
Q1 (least walkable)	0.85(0.67 , 1.09)	0.2004		0.90(0.68 , 1.18)	0.4416
2	0.84(0.67 , 1.07)	0.1629		0.92(0.71 , 1.19)	0.5217
3	0.95(0.73 , 1.24)	0.6991		0.95(0.72 , 1.26)	0.7386
4	0.91(0.72 , 1.16)	0.4631		0.88(0.68 , 1.14)	0.3369
Q5 (most walkable)	1.00(- , -)	-		1.00(- , -)	-

Supplemental Table 2: Sensitivity Analysis, Walkability Quintiles, and 3+ Conditions- Age 20-64

3 conditions 500 bootstrap May 2020				
	Unadjusted HR	Unadjusted pvalue	Adjusted HR	Adjusted pvalue
Sex				
Male	1.00 (-, -)	-	1.00 (-, -)	-
Female	1.05(0.96 , 1.15)	0.2759	1.05(0.95 , 1.16)	0.3263
Age, years				
20-34	1.00 (-, -)	-	1.00 (-, -)	-
35-49	2.32(2.05 , 2.63)	<0.0001	2.11(1.85 , 2.41)	<0.0001
50-64	4.61(4.01 , 5.30)	<0.0001	4.21(3.64 , 4.88)	<0.0001
Education				
Less than high school	1.00(-, -)	-		
High school completed	0.64(0.52 , 0.80)	0.0001	0.79(0.62 , 1.00)	0.0531
Some post-secondary	0.57(0.43 , 0.73)	<0.0001	0.84(0.64 , 1.11)	0.2218
Post-secondary completed	0.52(0.44 , 0.63)	<0.0001	0.78(0.64 , 0.94)	0.0103
Income group				
0-\$19,999	1.27(1.03 , 1.56)	0.0279	0.87(0.68 , 1.10)	0.2421
\$20,000-\$39,999	1.35(1.14 , 1.61)	0.0006	1.04(0.85 , 1.26)	0.7014
\$40,000-\$59,999	1.44(1.22 , 1.69)	<0.0001	1.17(0.97 , 1.40)	0.0995
\$60,000-\$79,999	1.36(1.19 , 1.55)	<0.0001	1.02(0.88 , 1.19)	0.7759
\$80000+	1.00(-, -)	-	1.00(-, -)	-
Marital status				
Married/common law	1.00(-, -)	-	1.00(-, -)	-
Wid/sep/divorced	1.31(1.13 , 1.51)	0.0004	1.06(0.90 , 1.25)	0.4580
Single	0.53(0.47 , 0.60)	<0.0001	0.96(0.84 , 1.10)	0.5550
Smoker type				
Regular/former	1.23(1.11 , 1.35)	<0.0001	1.06(0.95 , 1.18)	0.2793
Occasional/non-smoker	1.00(-, -)	-	1.00(-, -)	-
Physical activity				
Active	1.00(-, -)	-		
Inactive	1.19(1.08 , 1.30)	0.0004	1.02(0.92 , 1.13)	0.6705
Life stress				
None/low stress	1.00(-, -)	-		
High stress	1.32(1.07 , 1.62)	0.0106	1.03(0.83 , 1.27)	0.8227
Self-perceived health				
Excellent	1.00(-, -)	-	1.00(-, -)	-
Very good	1.12(1.00 , 1.25)	0.0514	1.11(0.98 , 1.25)	0.1008
Good	1.56(1.38 , 1.78)	<0.0001	1.50(1.31 , 1.72)	<0.0001
Fair	2.68(2.20 , 3.25)	<0.0001	2.31(1.88 , 2.84)	<0.0001
Poor	3.26(2.27 , 4.67)	<0.0001	2.60(1.76 , 3.83)	<0.0001
Walkability Index (DA-lvl)				
Q1 (least walkable)	1.14(0.97 , 1.32)	0.1026	1.06(0.90 , 1.24)	0.5030
2	1.12(0.95 , 1.31)	0.1664	1.05(0.89 , 1.24)	0.5497
3	1.17(0.99 , 1.37)	0.0627	1.09(0.92 , 1.28)	0.3388
4	1.01(0.85 , 1.20)	0.8892	0.96(0.80 , 1.16)	0.6644
Q5 (most walkable)	1.00(-, -)	-	1.00(-, -)	-

Supplemental Table 3: Sensitivity Analysis, Walkability Quintiles, Older Adults and 3+ Conditions – Age 65-95

3 conditions 500 bootstrap May 2020					
	Unadjusted HR	Unadjusted pvalue		Adjusted HR	Adjusted pvalue
Sex					
Male	1.00 (-, -)	-		1.00 (-, -)	-
Female	0.94(0.80 , 1.11)	0.4528		0.94(0.77 , 1.14)	0.5210
Age, years					
65-74	1.00(-, -)	-		1.00(-, -)	-
75-95	1.54(1.30 , 1.82)	<0.0001		1.52(1.27 , 1.85)	<0.0001
Education					
Less than high school	1.00(-, -)	-		1.00(-, -)	-
High school completed	0.63(0.49 , 0.81)	0.0003		0.89(0.69 , 1.15)	0.3818
Some post-secondary	1.02(0.70 , 1.46)	0.9326		1.21(0.82 , 1.78)	0.3298
Post-secondary completed	0.65(0.53 , 0.80)	<0.0001		1.01(0.79 , 1.28)	0.9630
Income group					
0-\$19,999	1.47(1.01 , 2.15)	0.0435		1.19(0.73 , 1.94)	0.4796
\$20,000-\$39,999	1.64(1.19 , 2.26)	0.0027		1.29(0.88 , 1.91)	0.1949
\$40,000-\$59,999	1.24(0.88 , 1.74)	0.2248		1.01(0.68 , 1.51)	0.9512
\$60,000-\$79,999	1.28(0.90 , 1.83)	0.1648		1.00(0.67 , 1.47)	0.9840
\$80000+	1.00(-, -)	-		1.00(-, -)	-
Marital status					
Married/common law	1.00(-, -)	-		1.00(-, -)	-
Wid/sep/divorced	1.09(0.92 , 1.29)	0.3118		0.95(0.75 , 1.19)	0.6347
Single	0.82(0.58 , 1.15)	0.2443		0.85(0.60 , 1.21)	0.3729
Smoker type					
Regular/former	1.28(1.07 , 1.53)	0.0080		1.32(1.07 , 1.62)	0.0092
Occasional/non-smoker	1.00(-, -)	-		1.00(-, -)	-
Physical activity					
Active	1.00(-, -)	-		1.00(-, -)	-
Inactive	1.30(1.09 , 1.54)	0.0033		1.14(0.94 , 1.37)	0.1762
Life stress					
None/low stress	1.00(-, -)	-		1.00(-, -)	-
High stress	0.42(0.15 , 1.20)	0.1066		0.22(0.02 , 2.59)	0.2294
Self-perceived health					
Excellent	1.00(-, -)	-		1.00(-, -)	-
Very good	1.00(0.80 , 1.26)	0.9976		0.99(0.79 , 1.23)	0.8971
Good	1.24(0.99 , 1.56)	0.0644		1.21(0.96 , 1.53)	0.1137
Fair	1.26(0.83 , 1.91)	0.2860		1.13(0.74 , 1.73)	0.5711
Poor	1.64(0.90 , 2.98)	0.1070		1.68(0.77 , 3.67)	0.1896
Walkability Index (DA-ivl)					
Q1 (least walkable)	0.88(0.64 , 1.22)	0.4431		0.99(0.71 , 1.39)	0.9503
2	1.07(0.77 , 1.50)	0.6838		1.23(0.88 , 1.71)	0.2267
3	1.15(0.82 , 1.62)	0.4250		1.14(0.82 , 1.60)	0.4387
4	1.07(0.77 , 1.48)	0.6879		1.11(0.80 , 1.53)	0.5223
Q5 (most walkable)	1.00(-, -)	-		1.00(-, -)	-

Supplemental Table 4: Stratified Sensitivity Analysis of Neighbourhood Walkability Quintiles, Material Deprivation, and 3+ Chronic Conditions – Age 20-64

3 conditions 500 bootstrap May 2020										
	Adjusted HR Dpr 1	Adjusted pvalue	Adjusted HR Dpr 2	Adjusted pvalue	Adjusted HR Dpr 3	Adjusted pvalue	Adjusted HR Dpr 4	Adjusted pvalue	Adjusted HR Dpr 5	Adjusted pvalue
Sex										
Male	1.00(-,-)	-	1.00(-,-)	-	1.00(-,-)	-	1.00(-,-)	-	1.00(-,-)	-
Female	0.95(0.78, 1.16)	0.6227	1.05(0.85, 1.31)	0.6405	0.98(0.78, 1.22)	0.8369	1.17(0.92, 1.50)	0.2018	1.18(0.92, 1.51)	0.1965
Age, years										
20-34	1.00(-,-)	-	1.00(-,-)	-	1.00(-,-)	-	1.00(-,-)	-	1.00(-,-)	-
35-49	2.39(1.71, 3.36)	<0.0001	2.68(2.02, 3.54)	<0.0001	1.81(1.32, 2.50)	0.0003	1.99(1.46, 2.71)	<0.0001	2.04(1.56, 2.66)	<0.0001
50-64	4.52(3.21, 6.37)	<0.0001	5.33(3.92, 7.26)	<0.0001	4.34(3.13, 6.03)	<0.0001	3.57(2.58, 4.94)	<0.0001	4.27(3.08, 5.92)	<0.0001
Education										
Less than high school	1.00(-,-)	-	1.00(-,-)	-	1.00(-,-)	-	1.00(-,-)	-	1.00(-,-)	-
High school completed	1.06(0.58, 1.91)	0.8540	0.81(0.45, 1.48)	0.5016	0.73(0.41, 1.30)	0.2869	0.56(0.36, 0.87)	0.0095	1.01(0.64, 1.60)	0.9525
Some post-secondary	1.09(0.56, 2.10)	0.8075	0.92(0.46, 1.87)	0.8229	0.40(0.20, 0.82)	0.0126	0.69(0.38, 1.24)	0.2130	1.40(0.79, 2.47)	0.2476
Post-secondary completed	1.03(0.62, 1.72)	0.9103	0.92(0.51, 1.65)	0.7726	0.52(0.32, 0.85)	0.0093	0.63(0.42, 0.95)	0.0256	1.09(0.76, 1.58)	0.6279
Income group										
0-\$19,999	0.48(0.22, 1.06)	0.0687	0.82(0.37, 1.84)	0.6344	0.91(0.52, 1.61)	0.7460	0.75(0.43, 1.32)	0.3163	1.02(0.63, 1.65)	0.9438
\$20,000-\$39,999	0.82(0.51, 1.31)	0.4024	1.15(0.68, 1.95)	0.6022	0.74(0.47, 1.18)	0.2046	1.01(0.63, 1.65)	0.9528	1.22(0.78, 1.92)	0.3762
\$40,000-\$59,999	0.95(0.62, 1.47)	0.8220	1.31(0.81, 2.10)	0.2695	0.99(0.67, 1.45)	0.9390	1.39(0.89, 2.17)	0.1512	1.18(0.74, 1.89)	0.4829
\$60,000-\$79,999	0.94(0.68, 1.31)	0.7308	1.03(0.71, 1.48)	0.8822	1.04(0.73, 1.48)	0.8316	1.13(0.73, 1.73)	0.5827	0.93(0.60, 1.44)	0.7441
\$80000+	1.00(-,-)	-	1.00(-,-)	-	1.00(-,-)	-	1.00(-,-)	-	1.00(-,-)	-
Marital status										
Married/common law	1.00(-,-)	-	1.00(-,-)	-	1.00(-,-)	-	1.00(-,-)	-	1.00(-,-)	-
Wid/sep/divorced	1.14(0.85, 1.53)	0.3791	1.00(0.68, 1.46)	0.9913	1.24(0.90, 1.71)	0.1835	0.95(0.65, 1.39)	0.7975	1.01(0.65, 1.58)	0.9602
Single	0.97(0.65, 1.46)	0.8914	1.10(0.82, 1.48)	0.5121	0.80(0.59, 1.09)	0.1582	0.94(0.69, 1.29)	0.7202	1.02(0.76, 1.35)	0.9108
Smoker type										
Regular/former	1.12(0.92, 1.37)	0.2590	1.01(0.81, 1.26)	0.9380	1.17(0.90, 1.52)	0.2264	1.00(0.79, 1.28)	0.9788	1.09(0.87, 1.38)	0.4558
Occasional/non-smoker	1.00(-,-)	-	1.00(-,-)	-	1.00(-,-)	-	1.00(-,-)	-	1.00(-,-)	-
Physical activity										
Active	1.00(-,-)	-	1.00(-,-)	-	1.00(-,-)	-	1.00(-,-)	-	1.00(-,-)	-
Inactive	1.07(0.88, 1.30)	0.5172	0.97(0.77, 1.21)	0.7570	0.92(0.73, 1.16)	0.4904	1.01(0.80, 1.28)	0.9049	1.09(0.85, 1.41)	0.5002
Life stress										
None/low stress	1.00(-,-)	-	1.00(-,-)	-	1.00(-,-)	-	1.00(-,-)	-	1.00(-,-)	-
High stress	1.00(0.66, 1.52)	0.9925	1.00(0.62, 1.62)	0.9968	1.09(0.64, 1.87)	0.7428	0.94(0.56, 1.58)	0.8145	1.04(0.64, 1.70)	0.8637
Self-perceived health										
Excellent	1.00(-,-)	-	1.00(-,-)	-	1.00(-,-)	-	1.00(-,-)	-	1.00(-,-)	-
Very good	1.31(1.03, 1.67)	0.0302	1.47(1.15, 1.88)	0.0022	1.15(0.87, 1.52)	0.3297	0.97(0.73, 1.30)	0.8528	0.69(0.51, 0.93)	0.0156
Good	1.59(1.21, 2.08)	0.0008	1.62(1.24, 2.13)	0.0005	1.81(1.30, 2.52)	0.0005	1.25(0.90, 1.73)	0.1849	1.27(0.93, 1.73)	0.1331
Fair	3.71(2.26, 6.08)	<0.0001	1.80(0.90, 3.63)	0.0983	2.30(1.47, 3.60)	0.0003	2.27(1.50, 3.43)	0.0001	1.72(1.12, 2.64)	0.0131
Poor	4.10(0.22, 77.81)	0.3473	1.82(0.49, 6.78)	0.3688	2.73(0.97, 7.65)	0.0565	2.98(1.15, 7.71)	0.0244	2.06(1.01, 4.20)	0.0463
Neighbourhood Walkability										
Q1 (least walkable)	1.22(0.84, 1.78)	0.2913	1.21(0.83, 1.76)	0.3266	1.32(0.90, 1.94)	0.1552	1.06(0.70, 1.62)	0.7847	0.67(0.41, 1.10)	0.1103
2	1.30(0.89, 1.90)	0.1805	1.32(0.88, 1.98)	0.1818	1.09(0.74, 1.60)	0.6778	1.03(0.67, 1.57)	0.8909	0.84(0.59, 1.22)	0.3671
3	1.33(0.88, 2.01)	0.1714	1.05(0.69, 1.61)	0.8062	1.58(1.07, 2.34)	0.0225	0.89(0.59, 1.33)	0.5676	1.02(0.71, 1.46)	0.9214
4	1.14(0.66, 1.98)	0.6356	0.95(0.63, 1.44)	0.8156	0.99(0.66, 1.49)	0.9706	1.02(0.70, 1.48)	0.9306	0.90(0.63, 1.28)	0.5504
Q5 (most walkable)	1.00(-,-)	-	1.00(-,-)	-	1.00(-,-)	-	1.00(-,-)	-	1.00(-,-)	-