

Table A1 Full results for the downtown zone: estimated at the local mean of pollution

| Downtown Core | Beta | St. Error | t | RR(μ) | Lower | Upper | Mean |
|------------------------------------|-----------|-----------|--------|-------------|-------|-------|-------|
| | | | | | 95% | 95% | % Ch. |
| CoH _{lag0} | -0.063747 | 0.056049 | -1.137 | 0.97 | 0.92 | 1.02 | -2.95 |
| CoH _{lag1} | 0.106686 | 0.056906 | 1.875 | 1.05 | 1.00 | 1.11 | 5.14 |
| CoH _{lag2} | 0.089946 | 0.054928 | 1.638 | 1.04 | 0.99 | 1.10 | 4.32 |
| CoH _{lag3} | 0.045201 | 0.055430 | 0.815 | 1.02 | 0.97 | 1.07 | 2.15 |
| CoH _{lag4} | -0.044044 | 0.054958 | -0.801 | 0.98 | 0.93 | 1.03 | -2.05 |
| CoH _{lag5} | 0.022550 | 0.053542 | 0.421 | 1.01 | 0.96 | 1.06 | 1.07 |
| CoH _{lag1,lag2,lag3} | 0.143628 | 0.077380 | 1.856 | 1.07 | 1.00 | 1.15 | 6.98 |
| CoH _{lag0,lag1} | 0.287256 | 0.154760 | 1.856 | 1.14 | 0.99 | 1.32 | 14.45 |
| CoH _{lag0,lag1,lag2} | 0.101117 | 0.079380 | 1.274 | 1.05 | 0.97 | 1.13 | 4.87 |
| CoH _{lag0,lag1,lag2,lag3} | 0.097453 | 0.088455 | 1.102 | 1.05 | 0.96 | 1.14 | 4.69 |
| SO _{2lag0} | 0.000790 | 0.002084 | 0.379 | 1.006 | 0.98 | 1.04 | 0.58 |
| SO _{2lag1} | 0.004459 | 0.002096 | 2.128 | 1.033 | 1.00 | 1.07 | 3.34 |
| SO _{2lag2} | 0.004768 | 0.002069 | 2.304 | 1.036 | 1.01 | 1.07 | 3.57 |
| SO _{2lag3} | 0.001824 | 0.002090 | 0.873 | 1.014 | 0.98 | 1.04 | 1.35 |
| SO _{2lag4} | -0.000190 | 0.002076 | -0.091 | 0.999 | 0.97 | 1.03 | -0.14 |
| SO _{2lag5} | 0.002624 | 0.002040 | 1.286 | 1.019 | 0.99 | 1.05 | 1.95 |
| SO _{2lag1,lag2,lag3} | 0.006780 | 0.002876 | 2.357 | 1.051 | 1.01 | 1.10 | 5.12 |
| SO _{2lag0,lag1} | 0.003754 | 0.002524 | 1.487 | 1.028 | 0.99 | 1.07 | 2.80 |
| SO _{2lag0,lag1,lag2} | 0.006279 | 0.002886 | 2.176 | 1.047 | 1.00 | 1.09 | 4.73 |
| SO _{2lag0,lag1,lag2,lag3} | 0.006863 | 0.003189 | 2.152 | 1.052 | 1.00 | 1.10 | 5.18 |
| Co-Pollutant Model | | | | | | | |
| CoH _{lag1} | 0.009144 | 0.065708 | 0.139 | 1.00 | 0.95 | 1.07 | 0.43 |

| | | | | | Lower | Upper | Mean |
|--------------------------------|----------|-----------|-------|-------------|-------|-------|-------|
| Downtown Core | Beta | St. Error | t | RR(μ) | 95% | 95% | % Ch. |
| SO ₂ lag1,lag2,lag3 | 0.005521 | 0.003199 | 1.726 | 1.041 | 0.99 | 1.09 | 4.15 |

Table A2 Results for the industrial zone: estimated at the local mean of pollution

| | | | | | Lower | Upper | Mean |
|------------------------------------|-----------|-----------|--------|-------------|-------|-------|-------|
| Industrial North | Beta | St. Error | t | RR(μ) | 95% | 95% | Ch. |
| CoH _{lag0} | 0.064902 | 0.059816 | 1.085 | 1.03 | 0.97 | 1.10 | 3.10 |
| CoH _{lag1} | 0.157433 | 0.062899 | 2.503 | 1.09 | 1.02 | 1.16 | 7.68 |
| CoH _{lag2} | 0.041095 | 0.060682 | 0.677 | 1.02 | 0.96 | 1.09 | 1.95 |
| CoH _{lag3} | 0.049326 | 0.060701 | 0.813 | 1.03 | 0.96 | 1.09 | 2.35 |
| CoH _{lag4} | -0.007251 | 0.059195 | -0.122 | 1.00 | 0.94 | 1.06 | -0.34 |
| CoH _{lag5} | 0.016965 | 0.058516 | 0.290 | 1.01 | 0.95 | 1.07 | 0.80 |
| CoH _{lag1,lag2,lag3} | 0.177260 | 0.084903 | 2.088 | 1.10 | 1.01 | 1.20 | 8.69 |
| CoH _{lag0,lag1} | 0.167628 | 0.073740 | 2.273 | 1.09 | 1.01 | 1.18 | 8.20 |
| CoH _{lag0,lag1,lag2} | 0.191629 | 0.085791 | 2.234 | 1.10 | 1.01 | 1.21 | 9.42 |
| CoH _{lag0,lag1,lag2,lag3} | 0.225931 | 0.095657 | 2.362 | 1.12 | 1.02 | 1.24 | 11.20 |
| SO ₂ lag0 | 0.000301 | 0.002161 | 0.139 | 1.002 | 0.97 | 1.04 | 0.22 |
| SO ₂ lag1 | 0.004297 | 0.002164 | 1.985 | 1.036 | 1.00 | 1.07 | 3.21 |
| SO ₂ lag2 | 0.000058 | 0.002168 | 0.027 | 1.000 | 0.97 | 1.04 | 0.04 |
| SO ₂ lag3 | 0.001114 | 0.002147 | 0.519 | 1.009 | 0.98 | 1.04 | 0.82 |
| SO ₂ lag4 | 0.003046 | 0.002088 | 1.459 | 1.025 | 0.99 | 1.06 | 2.27 |
| SO ₂ lag5 | 0.002325 | 0.002083 | 1.116 | 1.019 | 0.99 | 1.05 | 1.73 |
| SO ₂ lag1,lag2,lag3 | 0.003243 | 0.003077 | 1.054 | 1.027 | 0.98 | 1.08 | 2.42 |
| SO ₂ lag0,lag1 | 0.003059 | 0.002656 | 1.152 | 1.025 | 0.98 | 1.07 | 2.28 |
| SO ₂ lag0,lag1,lag2 | 0.002615 | 0.003107 | 0.842 | 1.021 | 0.97 | 1.07 | 1.94 |

| | | | | | Lower | Upper | Mean |
|-------------------------------------|-----------|-----------|----------|-------------|-------|-------|-------|
| Industrial North | Beta | St. Error | <i>t</i> | RR(μ) | 95% | 95% | Ch. |
| SO ₂ lag0,lag1,lag2,lag3 | 0.002844 | 0.003460 | 0.822 | 1.023 | 0.97 | 1.08 | 2.12 |
| Co-Pollutant Model | | | | | | | |
| CoH _{lag1} | -0.039920 | 0.076797 | -0.520 | 0.98 | 0.91 | 1.06 | -1.86 |
| SO ₂ lag1 | 0.004860 | 0.002424 | 2.005 | 1.040 | 1.00 | 1.08 | 3.64 |

Table A3 Results for the east end zone: estimated at the local mean of pollution

| | | | | | Lower | Upper | Mean |
|------------------------------------|-----------|-----------|----------|-------------|-------|-------|-------|
| Hamilton East | Beta | St. Error | <i>t</i> | RR(μ) | 95% | 95% | Ch. |
| CoH _{lag0} | 0.086418 | 0.072061 | 1.199 | 1.03 | 0.98 | 1.09 | 4.15 |
| CoH _{lag1} | 0.068945 | 0.074931 | 0.920 | 1.03 | 0.97 | 1.08 | 3.29 |
| CoH _{lag2} | 0.155195 | 0.071268 | 2.178 | 1.06 | 1.01 | 1.12 | 7.57 |
| CoH _{lag3} | 0.190920 | 0.071854 | 2.657 | 1.07 | 1.02 | 1.13 | 9.39 |
| CoH _{lag4} | -0.028279 | 0.073334 | -0.386 | 0.99 | 0.94 | 1.04 | -1.32 |
| CoH _{lag5} | -0.110068 | 0.073096 | -1.506 | 0.96 | 0.91 | 1.01 | -5.04 |
| CoH _{lag1,lag2,lag3} | 0.275749 | 0.098439 | 2.801 | 1.11 | 1.03 | 1.19 | 13.84 |
| CoH _{lag0,lag1} | 0.113562 | 0.088255 | 1.287 | 1.04 | 0.98 | 1.11 | 5.48 |
| CoH _{lag0,lag1,lag2} | 0.195640 | 0.100668 | 1.943 | 1.08 | 1.00 | 1.16 | 9.63 |
| CoH _{lag0,lag1,lag2,lag3} | 0.308493 | 0.111270 | 2.772 | 1.12 | 1.03 | 1.22 | 12.09 |
| SO ₂ lag0 | 0.001692 | 0.003401 | 0.497 | 1.008 | 0.98 | 1.04 | 1.25 |
| SO ₂ lag1 | 0.001561 | 0.003470 | 0.450 | 1.007 | 0.98 | 1.04 | 1.16 |
| SO ₂ lag2 | 0.001866 | 0.003350 | 0.557 | 1.009 | 0.98 | 1.04 | 1.38 |
| SO ₂ lag3 | 0.008459 | 0.003297 | 2.565 | 1.041 | 1.01 | 1.07 | 6.42 |
| SO ₂ lag4 | 0.000350 | 0.003328 | 0.105 | 1.002 | 0.97 | 1.03 | 0.26 |
| SO ₂ lag5 | 0.000187 | 0.003325 | 0.056 | 1.001 | 0.97 | 1.03 | 0.14 |

| | | | | | Lower | Upper | Mean |
|-------------------------------------|-----------|-----------|----------|-------------|-------|-------|-------|
| Hamilton East | Beta | St. Error | <i>t</i> | RR(μ) | 95% | 95% | Ch. |
| SO ₂ lag1,lag2,lag3 | 0.007686 | 0.004533 | 1.695 | 1.037 | 0.99 | 1.08 | 5.82 |
| SO ₂ lag0,lag1 | 0.002654 | 0.004137 | 0.642 | 1.013 | 0.97 | 1.05 | 1.97 |
| SO ₂ lag0,lag1,lag2 | 0.003274 | 0.004576 | 0.715 | 1.016 | 0.97 | 1.06 | 2.44 |
| SO ₂ lag0,lag1,lag2,lag3 | 0.008096 | 0.004931 | 1.642 | 1.039 | 0.99 | 1.09 | 6.14 |
| Co-Pollutant Model | | | | | | | |
| CoH _{lag1,lag2,lag3} | -0.042371 | 0.103674 | -0.409 | 0.98 | 0.91 | 1.06 | -1.97 |
| SO ₂ lag3 | -0.001487 | 0.003618 | -0.411 | 0.993 | 0.96 | 1.03 | -1.09 |

Table A4 Results for the south mountain zone: estimated at the local mean of pollution

| Hamilton | | | | | Lower | Upper | Mean |
|------------------------------------|-----------|-----------|----------|-------------|-------|-------|-------|
| Mountain | Beta | St. Error | <i>t</i> | RR(μ) | 95% | 95% | Ch. |
| CoH _{lag0} | 0.062086 | 0.070038 | 0.886 | 1.02 | 0.98 | 1.06 | 2.96 |
| CoH _{lag1} | 0.110554 | 0.071347 | 1.550 | 1.03 | 0.99 | 1.08 | 5.33 |
| CoH _{lag2} | 0.030731 | 0.069022 | 0.445 | 1.01 | 0.97 | 1.05 | 1.45 |
| CoH _{lag3} | -0.056864 | 0.069754 | -0.815 | 0.98 | 0.94 | 1.02 | -2.64 |
| CoH _{lag4} | -0.035308 | 0.068728 | -0.514 | 0.99 | 0.95 | 1.03 | -1.65 |
| CoH _{lag5} | 0.015951 | 0.068454 | 0.233 | 1.00 | 0.97 | 1.05 | 0.75 |
| CoH _{lag1,lag2,lag3} | 0.063090 | 0.096283 | 0.655 | 1.02 | 0.96 | 1.08 | 3.01 |
| CoH _{lag0,lag1} | 0.140777 | 0.085621 | 1.644 | 1.04 | 0.99 | 1.10 | 6.84 |
| CoH _{lag0,lag1,lag2} | 0.148196 | 0.098082 | 1.511 | 1.05 | 0.99 | 1.11 | 7.21 |
| CoH _{lag0,lag1,lag2,lag3} | 0.122680 | 0.108747 | 1.128 | 1.04 | 0.97 | 1.11 | 5.94 |
| SO ₂ lag0 | 0.004235 | 0.002010 | 2.107 | 1.029 | 1.00 | 1.06 | 3.17 |
| SO ₂ lag1 | 0.002904 | 0.002088 | 1.391 | 1.020 | 0.99 | 1.05 | 2.16 |

| Hamilton | | | | | Lower | Upper | Mean |
|---|-----------|-----------|----------|-------------|-------|-------|-------|
| Mountain | Beta | St. Error | <i>t</i> | RR(μ) | 95% | 95% | Ch. |
| SO ₂ lag ₂ | 0.001511 | 0.002066 | 0.732 | 1.010 | 0.98 | 1.04 | 1.12 |
| SO ₂ lag ₃ | -0.000995 | 0.002080 | -0.478 | 0.993 | 0.97 | 1.02 | -0.73 |
| SO ₂ lag ₄ | -0.000012 | 0.002024 | -0.006 | 1.000 | 0.97 | 1.03 | -0.01 |
| SO ₂ lag ₅ | 0.001373 | 0.001989 | 0.690 | 1.009 | 0.98 | 1.04 | 1.02 |
| SO ₂ lag _{1,lag2,lag3} | 0.002314 | 0.002896 | 0.799 | 1.016 | 0.98 | 1.05 | 1.72 |
| SO ₂ lag _{0,lag1} | 0.005351 | 0.002486 | 2.153 | 1.037 | 1.00 | 1.07 | 4.02 |
| SO ₂ lag _{0,lag1,lag2} | 0.005690 | 0.002868 | 1.984 | 1.040 | 1.00 | 1.08 | 4.28 |
| SO ₂ lag _{0,lag1,lag2,lag3} | 0.004965 | 0.003200 | 1.551 | 1.034 | 0.99 | 1.08 | 3.72 |

Co-Pollutant

Model

| | | | | | | | |
|---------------------------------------|-----------|----------|--------|-------|------|------|-------|
| CoH _{lag0,lag1} | -0.060181 | 0.125697 | -0.479 | 0.98 | 0.91 | 1.06 | -2.79 |
| SO ₂ lag _{0,lag1} | 0.002548 | 0.003615 | 0.705 | 1.018 | 0.97 | 1.07 | 1.89 |

Table A5 Results for the west end zone: estimated at the local mean of pollution

| | | | | | Lower | Upper | Mean |
|-------------------------------|-----------|-----------|----------|-------------|-------|-------|-------|
| Hamilton West | Beta | St. Error | <i>t</i> | RR(μ) | 95% | 95% | Ch. |
| CoH _{lag0} | -0.032205 | 0.058477 | -0.551 | 0.99 | 0.94 | 1.03 | -1.50 |
| CoH _{lag1} | -0.039984 | 0.062089 | -0.644 | 0.98 | 0.94 | 1.03 | -1.86 |
| CoH _{lag2} | 0.041541 | 0.059066 | 0.703 | 1.02 | 0.97 | 1.06 | 1.97 |
| CoH _{lag3} | 0.104348 | 0.058596 | 1.781 | 1.04 | 1.00 | 1.09 | 5.03 |
| CoH _{lag4} | 0.073843 | 0.057467 | 1.285 | 1.03 | 0.98 | 1.08 | 3.53 |
| CoH _{lag5} | -0.006490 | 0.057666 | -0.113 | 1.00 | 0.95 | 1.04 | -0.30 |
| CoH _{lag1,lag2,lag3} | 0.063446 | 0.082952 | 0.765 | 1.03 | 0.96 | 1.09 | 3.03 |
| CoH _{lag0,lag1} | -0.043448 | 0.072280 | -0.601 | 0.98 | 0.93 | 1.04 | -2.02 |

| | | | | Lower | Upper | Mean | |
|------------------------------------|-----------|-----------|----------|-------------|-------|------|-------|
| Hamilton West | Beta | St. Error | <i>t</i> | RR(μ) | 95% | 95% | Ch. |
| CoH _{lag0,lag1,lag2} | -0.015393 | 0.083756 | -0.184 | 0.99 | 0.93 | 1.06 | -0.72 |
| CoH _{lag0,lag1,lag2,lag3} | 0.048472 | 0.093934 | 0.516 | 1.02 | 0.95 | 1.10 | 2.30 |
| SO _{2lag0} | -0.004154 | 0.003407 | -1.219 | 0.979 | 0.95 | 1.01 | -3.01 |
| SO _{2lag1} | -0.000310 | 0.003594 | -0.086 | 0.998 | 0.96 | 1.04 | -0.23 |
| SO _{2lag2} | 0.001010 | 0.003451 | 0.293 | 1.005 | 0.97 | 1.04 | 0.75 |
| SO _{2lag3} | 0.001853 | 0.003438 | 0.539 | 1.010 | 0.98 | 1.05 | 1.37 |
| SO _{2lag4} | 0.003676 | 0.003323 | 1.106 | 1.019 | 0.99 | 1.05 | 2.74 |
| SO _{2lag5} | -0.000660 | 0.003334 | -0.198 | 0.997 | 0.96 | 1.03 | -0.48 |
| SO _{2lag1,lag2,lag3} | 0.002696 | 0.004858 | 0.555 | 1.014 | 0.97 | 1.07 | 2.00 |
| SO _{2lag0,lag1} | -0.003588 | 0.004224 | -0.849 | 0.982 | 0.94 | 1.02 | -2.61 |
| SO _{2lag0,lag1,lag2} | -0.001998 | 0.004818 | -0.415 | 0.990 | 0.94 | 1.04 | -1.46 |
| SO _{2lag0,lag1,lag2,lag3} | 0.000304 | 0.005333 | 0.057 | 1.002 | 0.95 | 1.06 | 0.22 |
| Co-Pollutant | | | | | | | |
| Model | | | | | | | |
| CoH _{lag3} | -0.000440 | 0.066227 | -0.007 | 1.00 | 0.95 | 1.05 | -0.02 |
| SO _{2lag4} | -0.001023 | 0.003370 | -0.303 | 0.995 | 0.96 | 1.03 | -0.75 |