Table S2. Factors associated with COOP/WONCA† chart scores

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Predictive variables | COOP/WONCA chart | | | | | | | |
| Physical fitness | Feelings | Daily activities | Social activities | Change in health | Overall health | Pain | Quality of life |
| Crude model | OR (95% CI) | OR (95% CI) | OR (95% CI) | OR (95% CI) | OR (95% CI) | OR (95% CI) | OR (95% CI) | OR (95% CI) |
| Climate conditions |  |  |  |  |  |  |  |  |
| Ambient temperature (10℃) | 0.90 (0.77 — 1.06) | 0.94 (0.78 — 1.13) | 0.84 (0.51 — 1.38) | 1.36 (0.87 — 2.10) | 0.90 (0.75 — 1.07) | 0.87 (0.74 — 1.03) | 0.91 (0.78 — 1.07) | 0.83 (0.71 — 0.97) |
| Relative humidity (10%) | 0.89 (0.71 — 1.12) | 1.09 (0.83 — 1.42) | 1.27 (0.69 — 2.32) | 1.64 (1.01 — 2.67) | 0.96 (0.75 — 1.23) | 0.87 (0.70 — 1.07) | 0.97 (0.78 — 1.21) | 0.90 (0.75 — 1.10) |
| Concentrations |  |  |  |  |  |  |  |  |
| PM2.5 (10 μg/m3) | 1.68 (1.17 — 2.41) | 1.71 (1.05 — 2.81) | 3.22 (0.87 — 11.81) | 0.72 (0.20 — 2.59) | 0.96 (0.69 — 1.34) | 1.18 (0.79 — 1.76) | 1.01 (0.70 — 1.45) | 1.27 (0.87 — 1.84) |
| PM10 (10 μg/m3) | 1.14 (0.97 — 1.33) | 1.17 (0.98 — 1.40) | 1.47 (0.90 — 2.41) | 0.79 (0.52 — 1.21) | 1.01 (0.88 — 1.17) | 1.04 (0.90 — 1.21) | 1.04 (0.90 — 1.20) | 1.06 (0.92 — 1.21) |
| NO2 (10 ppb) | 1.13 (0.90 — 1.40) | 1.17 (0.91 — 1.49) | 1.21 (0.65 — 2.22) | 0.77 (0.44 — 1.33) | 1.08 (0.84 — 1.38) | 1.13 (0.90 — 1.40) | 1.07 (0.86 — 1.33) | 1.20 (0.97 — 1.47) |
| O3 (10 μg/m3) | 0.85 (0.74 — 0.97) | 0.99 (0.86 — 1.14) | 0.90 (0.73 — 1.13) | 1.00 (0.78 — 1.29) | 0.91 (0.79 — 1.05) | 0.89 (0.78 — 1.01) | 0.97 (0.86 — 1.10) | 0.83 (0.74 — 0.95) |
| Asian sand dust events7 | 1.68 (1.11 — 2.53) | 1.20 (0.76 — 1.91) | 1.86 (0.61 — 5.72) | 0.63 (0.25 — 1.61) | 1.04 (0.68 — 1.59) | 1.38 (0.92 — 2.07) | 1.38 (0.94 — 2.01) | 1.43 (0.99 — 2.05) |
|  |  |  |  |  |  |  |  |  |
| Adjusted model | OR (95% CI) | OR (95% CI) | OR (95% CI) | OR (95% CI) | OR (95% CI) | OR (95% CI) | OR (95% CI) | OR (95% CI) |
| Age (1 year) | 1.03 (0.99 — 1.07) | 1.02 (0.97 — 1.07) | 0.97 (0.87 — 1.09) | 1.00 (0.94 — 1.06) | 0.98 (0.95 — 1.02) | 1.00 (0.97 — 1.04) | 0.99 (0.95 — 1.03) | 1.00 (0.96 — 1.03) |
| Gender (male) | 1.39 (0.66 — 2.96) | 1.19 (0.39 — 3.69) | 1.22 (0.08 — 17.45) | 1.68 (0.34 — 8.29) | 0.72 (0.30 — 1.74) | 0.42 (0.20 — 0.89) | 0.40 (0.17 — 0.96) | 0.40 (0.18 — 0.87) |
| Body mass index (≤ median) | 0.80 (0.49 — 1.32) | 0.79 (0.41 — 1.52) | 0.54 (0.11 — 2.66) | 2.53 (0.94 — 6.79) | 0.75 (0.44 — 1.26) | 1.17 (0.70 — 1.94) | 0.84 (0.50 — 1.41) | 0.97 (0.60 — 1.57) |
| Smoking (vs. Never-smoker) |  |  |  |  |  |  |  |  |
| Ex-smoker | 0.56 (0.22 — 1.42) | 1.07 (0.34 — 3.36) | 0.51 (0.03 — 7.47) | 1.25 (0.32 — 4.84) | 1.10 (0.48 — 2.50) | 1.13 (0.52 — 2.44) | 0.96 (0.43 — 2.15) | 0.82 (0.38 — 1.77) |
| Current smoker | 1.05 (0.44 — 2.49) | 2.45 (0.72 — 8.36) | 1.93 (0.23 — 16.41) | 0.72 (0.17 — 3.07) | 2.18 (0.95 — 5.01) | 2.56 (1.12 — 5.84) | 1.26 (0.53 — 3.02) | 2.02 (0.88 — 4.61) |
| COPD†† status (vs. No COPD) |  |  |  |  |  |  |  |  |
| GOLD‡ stage I | 2.47 (0.89 — 6.85) | 1.00 (0.23 — 4.41) | 4.65 (0.44 — 48.77) | 4.71 (1.00 — 22.22) | 1.21 (0.42 — 3.47) | 5.11 (1.90 — 13.74) | 1.81 (0.60 — 5.45) | 5.14 (2.03 — 13.03) |
| GOLD stage II | 2.56 (1.02 — 6.44) | 2.08 (0.67 — 6.50) | 3.59 (0.39 — 33.03) | 3.77 (1.06 — 13.41) | 1.08 (0.50 — 2.32) | 3.56 (1.58 — 7.98) | 2.48 (1.09 — 5.62) | 4.69 (2.01 — 10.91) |
| GOLD stage III, IV | 8.65 (3.20 — 23.40) | 3.13 (0.91 — 10.73) | 12.88 (0.77 — 214.34) | 1.59 (0.28 — 9.04) | 1.97 (0.76 — 5.13) | 7.81 (2.72 — 22.43) | 2.63 (0.98 — 7.11) | 6.89 (2.42 — 19.62) |
| Using air cleaner | 0.70 (0.34 — 1.43) | 1.84 (0.87 — 3.90) | 0.65 (0.07 — 5.87) | 1.79 (0.52 — 6.11) | 1.38 (0.74 — 2.58) | 1.10 (0.59 — 2.05) | 1.17 (0.62 — 2.21) | 1.13 (0.65 — 1.95) |
| Time spent outdoors (hours/day) | 0.91 (0.82 — 1.00) | 0.89 (0.79 — 1.01) | 0.84 (0.68 — 1.04) | 1.00 (0.83 — 1.21) | 0.99 (0.89 — 1.09) | 0.96 (0.88 — 1.06) | 0.95 (0.86 — 1.04) | 0.98 (0.90 — 1.06) |
| Climate conditions |  |  |  |  |  |  |  |  |
| Ambient temperature (℃) ‡‡ | 0.88 (0.66 — 1.16) | 0.76 (0.54 — 1.06) | 0.48 (0.29 — 0.82) | 1.04 (0.53 — 2.07) | 0.80 (0.60 — 1.07) | 0.82 (0.61 — 1.10) | 0.82 (0.63 — 1.08) | 0.70 (0.53 — 0.92) |
| Relative humidity (%) ‡‡ | 1.00 (0.68 — 1.47) | 1.41 (0.88 — 2.28) | 2.98 (1.30 — 6.83) | 1.60 (0.75 — 3.40) | 1.24 (0.84 — 1.83) | 1.09 (0.75 — 1.59) | 1.19 (0.83 — 1.72) | 1.37 (0.97 — 1.93) |
| Concentrations§ |  |  |  |  |  |  |  |  |
| PM2.5 (10 μg/m3) | 1.42 (0.75 — 2.68) | 2.16 (0.99 — 4.68) | – | 2.43 (0.42 — 14.05) | 1.05 (0.60 — 1.83) | 1.07 (0.62 — 1.86) | 0.86 (0.50 — 1.46) | 1.00 (0.59 — 1.69) |
| PM10 (10 μg/m3) | 1.03 (0.81 — 1.30) | 1.32 (0.99 — 1.77) | 2.36 (1.13 — 4.95) | 0.97 (0.53 — 1.79) | 0.98 (0.78 — 1.23) | 0.90 (0.72 — 1.12) | 0.99 (0.80 — 1.23) | 0.95 (0.76 — 1.18) |
| NO2 (10 ppb) | 0.85 (0.48 — 1.53) | 1.44 (0.70 — 2.93) | 0.99 (0.27 — 3.61) | 0.93 (0.27 — 3.23) | 0.97 (0.50 — 1.87) | 0.77 (0.43 — 1.38) | 0.90 (0.50 — 1.63) | 0.78 (0.44 — 1.39) |
| O3 (10 μg/m3) | 0.63 (0.46 — 0.87) | 1.24 (0.92 — 1.67) | 1.58 (0.82 — 3.05) | 0.94 (0.62 — 1.44) | 0.97 (0.74 — 1.27) | 0.87 (0.69 — 1.10) | 1.17 (0.92 — 1.48) | 0.88 (0.69 — 1.13) |
| Asian sand dust events§§ | 1.92 (1.05 — 3.48) | 1.20 (0.56 — 2.60) | 3.43 (0.40 — 29.30) | 0.83 (0.21 — 3.26) | 0.87 (0.47 — 1.61) | 1.08 (0.61 — 1.91) | 1.38 (0.77 — 2.48) | 1.11 (0.62 — 1.99) |

† Dartmouth Coop Functional Health Assessment/World Organization of National Colleges, Academies, and Academic Association of General Practitioners

†† chronic obstructive pulmonary disease

‡ Global Initiative for Chronic Obstructive Lung Disease

‡‡ Temperature and relative humidity were included in each pollutant model

§ Exposures were included in the adjusted model separately

§§ Asian sand dust events: occurrence of Asian sand dust events during the 4 weeks before each survey