**Supplementary Material**

**Appendix 1.** Cardiovascular health components by EMT and paramedics. All respondents with a score for that component were included.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **EMT, n (%)** | **Paramedic, n (%)** | **p-valuea** |
| **Smoking** |  |  | <0.001 |
| Ideal | 8901 (84.5) | 9,473 (86.5) |
| Intermediate | 491 (4.7) | 430 (3.9) |
| Poor | 1143 (10.9) | 1,048 (9.6) |
| *Missing* | *1,926* | *1,296* |  |
| **BMI** |  |  | <0.001 |
| Ideal | 3,208 (30.6) | 2,182 (20.0) |
| Intermediate | 4,199 (40.1) | 4,434 (40.6) |
| Poor | 3,063 (29.3) | 4,298 (39.4) |
| *Missing* | *1,991* | *1,333* |  |
| **Diet** |  |  | <0.001 |
| Ideal | 1,658 (16.0) | 1,452 (13.4) |
| Intermediate | 6,584 (63.4) | 6,707 (61.7) |
| Poor | 2,140 (20.6) | 2,708 (24.9) |
| *Missing* | *2,079* | *1,380* |  |
| **Physical Activity** |  |  | <0.001 |
| Ideal | 4,929 (46.8) | 4,454 (40.7) |
| Intermediate | 4,839 (46.0) | 5,412 (49.4) |
| Poor | 761 (7.2) | 1,085 (9.9) |
| *Missing* | *1,932* | *1,296* |  |
| **Blood Pressure** |  |  | 0.094 |
| Ideal | 3,247 (31.4) | 3,507 (32.2) |
| Intermediate | 6,491 (62.8) | 6,699 (61.5) |
| Poor | 592 (5.7) | 679 (6.2) |
| *Missing* | *2,131* | *1,362* |  |
| **Cholesterol** |  |  | 0.001 |
| Ideal | 3,462 (62.0) | 4,646 (59.3) |
| Intermediate | 1,919 (34.4) | 2,841 (36.3) |
| Poor | 200 (3.6) | 351 (4.5) |
| *Missing* | *6,880* | *4,409* |  |
| **Glucose** |  |  | <0.001 |
| Ideal | 3,943 (63.9) | 6,112 (70.0) |
| Intermediate | 2,015 (32.6) | 2,318 (26.5) |
| Poor | 216 (3.5) | 304 (3.5) |
| *Missing* | *6,287* | *3,513* |  |

Abbreviations: EMT = emergency medical technician; BMI = body mass index

a P-value from χ2 tests

**Appendix 2.** Results of multivariable logistic regression sensitive analyses to assess bias due to misclassification and missing data. Main analysis was complete case with five component CVH score (n=17,908), compared to 1) complete case analysis with seven component overall CVH score (n=9,766); 2) assumption of all missing components (five component CVH score) scored as ideal (n=18,219); 3) assumption of all missing components scored as adequate (n=18,219); and 4) assumption of all missing components scored as poor (n=18,219).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Main: Complete Case Five Component** | **1. Complete Case Seven Component** | **2. Ideal assumption** | **3. Adequate assumption** | **4. Poor assumption** |
|  | **Adjusted OR (95% CI)** | **Adjusted OR (95% CI)** | **Adjusted OR (95% CI)** | **Adjusted OR (95% CI)** | **Adjusted OR (95% CI)** |
| **Age** |  |  |  |  |  |
| Less than 30 years | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 30-39 years | 0.68 (0.61, 0.74) | 0.59 (0.51, 0.69) | 0.68 (0.62, 0.74) | 0.68 (0.61, 0.74) | 0.67 (0.61, 0.74) |
| 40-49 years | 0.56 (0.51, 0.63) | 0.42 (0.36, 0.50) | 0.57 (0.51, 0.63) | 0.56 (0.51, 0.63) | 0.56 (0.51, 0.63) |
| 50 years or older | 0.65 (0.58, 0.73) | 0.42 (0.35, 0.50) | 0.66 (0.59, 0.74) | 0.66 (0.59, 0.74) | 0.65 (0.58, 0.73) |
| **Sex** |  |  |  |  |  |
| Female | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Male | 0.54 (0.50, 0.56) | 0.41 (0.37, 0.46) | 0.54 (0.50, 0.58) | 0.55 (0.51, 0.59) | 0.55 (0.51, 0.59) |
| **Marital Status** |  |  |  |  |  |
| Married or coupled | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Single | 1.17 (1.07, 1.28) | 1.06 (0.92, 1.22) | 1.18 (1.08, 1.29) | 1.17 (1.08, 1.28) | 1.15 (1.06, 1.26) |
| Divorced/widowed | 0.94 (0.85, 1.04) | 0.97 (0.86, 1.10) | 0.94 (0.85, 1.04) | 0.94 (0.85, 1.04) | 0.94 (0.85, 1.04) |
| **Personal Income** |  |  |  |  |  |
| Less than $50,000 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| $50,000 or more | 1.26 (1.17, 1.37) | 1.21 (1.09, 1.34) | 1.27 (1.17, 1.37) | 1.27 (1.18, 1.34) | 1.28 (1.18, 1.38) |
| **Urbanicity** |  |  |  |  |  |
| Rural | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Urban | 1.31 (1.23, 1.40) | 1.49 (1.37, 1.63) | 1.31 (1.23, 1.39) | 1.32 (1.24, 1.41) | 1.32 (1.24, 1.41) |
| **Educational Level** |  |  |  |  |  |
| High school/GED or less | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Some college | 1.32 (1.15, 1.52) | 1.41 (1.15, 1.72) | 1.32 (1.15, 1.51) | 1.37 (1.20, 1.57) | 1.36 (1.19, 1.56) |
| College graduate or more | 2.26 (1.97, 2.59) | 2.16 (1.77, 2.63) | 2.24 (1.96, 2.56) | 2.32 (2.03, 2.66) | 2.31 (2.02, 2.64) |
| **Number of Jobs**  |  |  |  |  |  |
| 1 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 2 or more | 0.94 (0.88, 0.99) | 0.95 (0.88, 1.04) | 0.93 (0.88, 0.99) | 0.94 (0.88, 0.99) | 0.94 (0.88, 0.99) |
| **Certification Level** |  |  |  |  |  |
| EMT | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Paramedic | 0.84 (0.78, 0.91) | 0.98 (0.88, 1.09) | 0.83 (0.77, 0.89) | 0.85 (0.79, 0.91) | 0.85 (0.79, 0.91) |
| **Years of EMS Experience** |  |  |  |  |  |
| 2 or less years | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| 3-7 years | 0.84 (0.76, 0.93) | 0.97 (0.83, 1.14) | 0.84 (0.76, 0.92) | 0.83 (0.76, 0.91) | 0.85 (0.77, 0.93) |
| 8-15 years | 0.76 (0.68, 0.85) | 0.83 (0.70, 0.97) | 0.76 (0.68, 0.84) | 0.75 (0.67, 0.84) | 0.77 (0.69, 0.85) |
| 16 or more years | 0.64 (0.56, 0.72) | 0.68 (0.57, 0.81) | 0.63 (0.56, 0.72) | 0.63 (0.56, 0.71) | 0.64 (0.57, 0.73) |
| **Agency Type** |  |  |  |  |  |
| Fire | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Private service | 0.68 (0.62, 0.74) | 0.62 (0.55, 0.69) | 0.68 (0.62, 0.73) | 0.68 (0.63, 0.74) | 0.68 (0.63, 0.74) |
| Othera | 0.77 (0.71, 0.84) | 0.71 (0.64, 0.79) | 0.77 (0.71, 0.83) | 0.77 (0.71, 0.84) | 0.78 (0.72, 0.84) |
| **Primary Service Provided** |  |  |  |  |  |
| 911 response | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Medical transport | 0.81 (0.69, 0.94) | 0.79 (0.62, 1.01) | 0.82 (0.71, 0.96) | 0.82 (0.71, 0.95) | 0.92 (0.71, 0.95) |
| Otherb | 1.44 (1.32, 1.58) | 1.36 (1.21, 1.54) | 1.44 (1.32, 1.58) | 1.47 (1.34, 1.61) | 1.46 (1.33, 1.59) |
| **Primary EMS Role** |  |  |  |  |  |
| Patient care provider | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Administrator/supervisor | 0.86 (0.78, 0.95) | 0.87 (0.77, 0.98) | 0.86 (0.78, 0.95) | 0.86 (0.78, 0.95) | 0.86 (0.78, 0.95) |
| Otherc | 0.82 (0.73, 0.92) | 0.76 (0.65, 0.88) | 0.82 (0.73, 0.92) | 0.82 (0.73, 0.93) | 0.82 (0.73, 0.92) |

Abbreviations: CVH = cardiovascular health; OR = odds ratio; GED = general equivalency diploma; EMS = emergency medical services; EMT = emergency medical technology.

a Other agency types included hospital-based, municipal/third service, military, and tribal

b Other primary service included hazardous materials response, specialty care transport, rescue, paramedic intercept, air medical, other (free entry)

c Other roles included educator, preceptor, other (free entry)