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| **Table 4, Supplemental Digital Content 1**  Sensitivity Analyses: Cox Proportional Hazards Regression Models Examining the Association Between Baseline Insomnia Symptoms and Incident CVD Events in the HIV-Infected VACS-Survey Cohort Participants (*N* = 3,108) | | |
| **Model** | ***HR* (95% *CI*)** | ***p*-value** |
| Model 4: HIV-Specific Factors with  Efavirenz Use |  | .094 |
| No Difficulty Falling or Staying Asleep | 1.00 | --- |
| Doesn’t Bother | 1.05 (0.67-1.64) | .832 |
| Bothers a Little | 1.08 (0.77-1.51) | .653 |
| Bothers | 1.21 (0.83-1.77) | .313 |
| Bothers a Lot | 1.68\* (1.17-2.39) | .005 |
| Model 4: HIV-Specific Factors with  Protease Inhibitor Use |  | .086 |
| No Difficulty Falling or Staying Asleep | 1.00 | --- |
| Doesn’t Bother | 1.06 (0.68-1.65) | .809 |
| Bothers a Little | 1.08 (0.77-1.51) | .647 |
| Bothers | 1.22 (0.83-1.77) | .309 |
| Bothers a Lot | 1.67\* (1.17-2.39) | .004 |
| Model 5b: PHQ-9 Total Score  without Item 3 |  | .388 |
| No Difficulty Falling or Staying Asleep | 1.00 | --- |
| Doesn’t Bother | 1.04 (0.66-1.63) | .870 |
| Bothers a Little | 1.06 (0.75-1.49) | .753 |
| Bothers | 1.15 (0.78-1.71) | .475 |
| Bothers a Lot | 1.53 (1.02-2.32) | .042 |
| Model 6: All Covariates with PHQ-9 Total Score without Item 3 |  | .539 |
| No Difficulty Falling or Staying Asleep | 1.00 | --- |
| Doesn’t Bother | 1.05 (0.67-1.54) | .843 |
| Bothers a Little | 1.02 (0.73-1.44) | .897 |
| Bothers | 1.09 (0.73-1.63) | .661 |
| Bothers a Lot | 1.43 (0.94-2.17) | .093 |
| *Note*. The *p*-value for the test of overall significance across the four insomnia symptoms dummy coded variablesis displayed in respective model row. CVD = cardiovascular disease; VACS-SC = Veterans Aging Cohort Study; HIV = human immunodeficiency virus; HR = hazard ratio; CI = confidence interval; PHQ-9: Patient Health Questionnaire-9.  Model 4: HIV-Specific Factors (Model 3 + HIV-1 RNA level, CD4+ T-cell count, efavirenz use or protease inhibitor use)  Model 5b: PHQ-9 Total Score (Model 4 + PHQ-9 total score without item 3)  Model 6: All Covariates (Model 4 + non-benzodiazepine sleep medication use, PHQ-9 total score without item 3, SSRI use, TCA use, and miscellaneous other antidepressant use)  \**p* < .01 | | |

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| **Table 5, Supplemental Digital Content 2**  Variable Definitions Using Diagnostic and/or Procedural Codes | |  |
| **Variable** | **ICD-9/ICD-9-CM/CPT Codes** | **Label** |
| Pre-existing CVD | 402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91, 404.93, 428.0, 428.1, 428.2, 428.21, 428.22, 428.23, 428.3, 428.31, 428.32, 428.33, 428.4, 428.41, 428.42, 428.43, 428.9 | Heart failure |
|  | 410.x | Acute myocardial infarction |
|  | 411.x | Ischemic heart disease |
|  | 412.x | Old myocardial infarct |
|  | 413.x | Angina pectoris |
|  | 414.x | Other ischemic heart disease |
|  | 433.x1, 434.x1 (excluding 434.x0), 436, 438.x, 430.x, 431.x | Cerebrovascular disease/event |
|  | 00.66, 00.67, 36.00-36.10 | Percutaneous coronary intervention |
|  | 33510-33524, 33530-33537, 92973-92985, 92995-92999 | Coronary artery bypass graft |
| Incident CVD | 410 | Acute myocardial infarction |
|  | 433.01, 433.11, 433.91, 434.01, 434.11, 434.91, 436.00, 438.00, 438.11, 438.19, 438.20, 438.21, 438.22, 438.41, 438.50, 438.60, 438.81, 438.82, 438.84, 438.89, 438.90 | Cerebrovascular disease/event |
|  | 00.66, 00.67, 36.00-36.10 | Percutaneous coronary intervention |
|  | 33510-33524, 33530-33537, 92973-92985, 92995-92999 | Coronary artery bypass graft |
| Diabetesa | 250 | Diabetes mellitus |
|  | 357.2 | Neuropathy in diabetes |
|  | 362.0 | Diabetic retinopathy |
|  | 366.41 | Diabetic cataract |
| Hepatitis C Infectionb | 070.41, 070.51 | Acute hepatitis C |
|  | 070.44, 070.54 | Chronic hepatitis C |
|  | V02.62 | Hepatitis C carrier |
| Alcohol Abuse/Dependencec | 291.0 | Alcohol withdrawal |
|  | 291.2x, 291.3, 291.5, 291.8, 291.81, 291.89, 291.9 | Alcohol-induced mental disorders |
|  | 291.4, 303.00, 303.01, 303.02, 303.03 | Alcohol intoxication |
|  | 303.90, 303.91, 303.92, 303.93 | Alcohol dependence |
|  | 305.0, 305.01, 305.02, 305.03 | Alcohol abuse |
|  | 357.5 | Alcoholic polyneuropathy |
|  | 571.1, 571.2, 571.3 | Alcohol-related liver disease/cirrhosis |
|  | V11.3 | History of alcoholism |
| Cocaine Usec | 304.20, 304.21, 304.22, 304.23 | Cocaine dependence |
|  | 305.60, 305.61, 305.62, 305.63 | Cocaine abuse |
| *Note*. CVD = cardiovascular disease; ICD-9 = International Classification of Diseases-9; ICD-9-CM = International Classification of Diseases-9 Clinical Modification; CPT = Current Procedural Terminology.  aVariable additionally incorporated glucose measurements and diabetes medication use within a validated metric (details here45,46).  bVariable additionally incorporated the use of an antibody test (details here47).  cVariable additionally incorporated the use of self-report (see Methods). | | |

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| **Table 6, Supplemental Digital Content 3**  Comprehensive Results for Cox Proportional Hazards Regression Model 4 Examining the Association Between Baseline Insomnia Symptoms and Incident CVD Events in the HIV-Infected VACS-Survey Cohort Participants (*N* = 3,108) | | |
| **Model 4: HIV-Specific Factors** | ***HR* (95%*CI*)** | ***p*-value** |
| Insomnia Symptoms |  | .104 |
| No Difficulty Falling or Staying Asleep | 1.00 | --- |
| Doesn’t Bother | 1.06 (0.68-1.67) | .787 |
| Bothers a Little | 1.08 (0.77-1.51) | .667 |
| Bothers | 1.21 (0.83-1.76) | .321 |
| Bothers a Lot | 1.66\* (1.16-2.37) | .005 |
| Age (1 *SD* increase) | 1.51\* (1.31-1.74) | <.001 |
| Sex |  |  |
| Male | 1.00 | --- |
| Female | 1.53 (0.56-4.18) | .403 |
| Race/ethnicity |  |  |
| Other | 1.00 | --- |
| African American | 1.13 (0.85-1.5) | .407 |
| Hypertension |  |  |
| None | 1.00 | --- |
| Controlled | 1.90\* (1.38-2.61) | <.001 |
| Uncontrolled | 1.83\* (1.30-2.58) | .001 |
| Diabetes |  |  |
| No | 1.00 | --- |
| Yes | 1.38 (0.98-1.94) | .062 |
| BMI (1 *SD* increase) | 0.89 (0.78-1.02) | .095 |
| Smoking |  |  |
| Never | 1.00 | --- |
| Former | 1.26 (0.85-1.87) | .253 |
| Current | 2.21\* (1.54-3.16) | <.001 |
| Total Cholesterol (1 *SD* increase) | 1.20\* (1.07-1.35) | .002 |
| Statin Use |  |  |
| No | 1.00 | --- |
| Yes | 0.73 (0.52-1.05) | .089 |
| Hepatitis C Infection |  |  |
| No | 1.00 | --- |
| Yes | 1.02 (0.77-1.34) | .915 |
| eGFR (1 *SD* increase) | 0.87 (0.77-0.99) | .036 |
| Hemoglobin (1 *SD* increase) | 0.85 (0.74-0.97) | .015 |
| Alcohol Use |  |  |
| No | 1.00 | --- |
| Yes | 0.69 (0.52-0.92) | .011 |
| Cocaine Use |  |  |
| No | 1.00 | --- |
| Yes | 1.05 (0.75-1.47) | .763 |
| HIV-1 RNAa, copies/mL (1 *SD* increase) | 1.06 (0.99-1.14) | .093 |
| CD4+ T Cell Count a (1 *SD* increase) | 0.84 (0.73-0.96) | .013 |
| ART regimen |  |  |
| No | 1.00 | --- |
| Yes | 0.91 (0.65-1.26) | .562 |
| *Note*. The *p*-value for the test of overall significance across the four insomnia symptoms dummy coded variablesis displayed in respective model row. CVD = cardiovascular disease; VACS = Veterans Aging Cohort Study; HIV = human immunodeficiency virus; HR = hazard ratio; CI = confidence interval; BMI = body mass index; SD = standard deviation.  \**p* < .01 | | |