

Supplementary Table 1. Sleep C.A.L.M. – potential contributory factors from the United States National Health and Nutrition Examination Survey

Sleep C.A.L.M. Category	NHANES data used
Sleep	<p><u>Sleep Disorders (SLQ)</u> SLQ040 - How often do you snort or stop breathing SLQ050 - Ever told doctor had trouble sleeping? SLQ060 - Ever told by doctor have sleep disorder?</p> <p><u>Prescription Medications (RXQ_RX)</u> RXDRSC (ICD10 code for reason taking medication) F30 Manic episode F31.9 Bipolar disorder, unspecified F32.9 Major depressive disorder, single episode, unspecified F33.9 Major depressive disorder, recurrent, unspecified F39 Unspecified mood [affective] disorder F41.0 Panic disorder [episodic paroxysmal anxiety] without agoraphobia F41.9 Anxiety disorder, unspecified F42 Obsessive-compulsive disorder F43.1 Post-traumatic stress disorder (PTSD) F43.9 Reaction to severe stress, unspecified F60.0 Paranoid personality disorder F90 Attention-deficit hyperactivity disorders G25.81 Restless legs syndrome G47.0 Insomnia G47.30 Sleep apnea, unspecified G47.41 Narcolepsy G47.9 Sleep disorder, unspecified</p> <p><u>Mental Health - Depression Screener (DPQ)</u> Positive if PHQ-9 score ≥ 10</p>

Comorbidities

Comorbid Conditions

Cardiovascular

Prescription Medications (RXQ_RX)

I27.9 Pulmonary heart disease, unspecified

I50.9 Heart failure, unspecified

Medical Conditions (MCQ)

MCQ160b - Ever told had congestive heart failure

Blood Pressure (BPX)

Average of 4 readings systolic ≥ 140 and/or diastolic ≥ 90

Renal

Kidney Conditions - Urology (KIQ)

KIQ025 - Received dialysis in past 12 months?

Standard Biochemistry Profile (BIOPRO)

LBXSCR - Creatinine, refrigerated serum (mg/dL)

- Used to calculate eGFR according to MDRD equation ($eGFR = 175 \times (SCr)^{-1.154} \times (\text{age})^{-0.203} \times 0.742$ [if female] $\times 1.212$ [if Black]. Those with eGFR < 30 were identified as positive for this category

Endocrine

Glycohemoglobin (GHB)

LBXGH - Glycohemoglobin (%)

- Those with hemoglobin A1c ≥ 7.0 were identified as positive for this category

Respiratory

Prescription Medications (RXQ)

J44.9 Chronic obstructive pulmonary disease, unspecified

J45 Asthma

Medical Conditions (MCQ)

MCQ035 - Still have asthma

Neurological

	<p><u>Prescription Medications (RXQ)</u> G20 Parkinson's disease G30.9 Alzheimer's disease, unspecified G31.9 Degenerative disease of nervous system, unspecified I63 Cerebral infarction</p> <p><u>Medical Conditions (MCQ)</u> MCQ160f - Ever told you had a stroke (1 yes, 2 no)</p> <p>MSK/Pain</p> <p><u>Medical Conditions (MCQ)</u> MCQ195 - Which type of arthritis was it?</p> <p><u>Prescription Medications (RXQ)</u> G43 Migraine G43.P Prevent migraine R51 Headache M06.9 Rheumatoid arthritis, unspecified M13 Other arthritis M19.9 Osteoarthritis, unspecified site</p>
<p>Actions (i.e., contributory behaviors/ lifestyle factors)</p>	<p>Actions (i.e., contributory behaviors/ lifestyle factors)</p> <p><u>Body Measures (BMX)</u> BMXBMI - Body Mass Index</p> <ul style="list-style-type: none"> - ≥ 30 kg/m² were identified as positive for this category <p><u>Alcohol Use (ALQ)</u> ALQ121 - Past 12 mo how often have alcohol drink</p> <ul style="list-style-type: none"> - Identified as positive for this category if answered "every day" or "nearly every day". <p><u>Dietary Interview - Total Nutrient Intakes, First Day & Dietary Interview - Total Nutrient Intakes, Second Day</u></p> <ul style="list-style-type: none"> - Identified as positive if total daily sodium intake was $\geq 2,300$ mg on both days

	<ul style="list-style-type: none"> - Identified as positive if total daily caffeine intake was ≥ 400 mg on both days assessed - Identified as positive if total daily water intake was $\geq 3,000$ mL on both days assessed - Identified as positive if alcohol intake was ≥ 14 grams for women and ≥ 28 grams for men on both days assessed
LUTD	<p><u>Lower Urinary Tract Dysfunction</u> <u>Prescription Medications (RXQ)</u></p> <p>d04121 TAMSULOSIN d07354 SILODOSIN d04797 ALFUZOSIN d00386 TERAZOSIN d00726 DOXAZOSIN d04788 DUTASTERIDE d07634 DUTASTERIDE; TAMSULOSIN d00563 FINASTERIDE d00328 OXYBUTYNIN d07876 MIRABEGRON d04294 TOLTERODINE d05413 SOLIFENACIN d04294 TOLTERODINE d07162 FESOTERODINE d04929 TROSPIUM</p> <p>F98.0 Enuresis not due to a substance or known physiological condition (zero patients) N30 Cystitis N30.1 Interstitial cystitis N31.9 Neuromuscular dysfunction of bladder, unspecified N32.81 Overactive bladder N32.9 Bladder disorder, unspecified N40 Enlarged prostate N41 Inflammatory diseases of the prostate. N42.9 Disorder of prostate, unspecified R32 Unspecified urinary incontinence R39.11 for Hesitancy of micturition R39.12 for Poor urinary stream</p>

	<p>R39.15 Urgency of urination R39.9 Unspecified symptoms and signs involving the genitourinary system</p>
	<p><u>Medications</u> <u>Prescription Medications (RXQ)</u> <u>Increased urine output</u> Diuretics d00161 ACETAZOLAMIDE d00639 DICHLORPHENAMIDE d00640 METHAZOLAMIDE d00070 FUROSEMIDE d00179 BUMETANIDE d00649 ETHACRYNIC ACID d03189 TORSEMIDE d00373 SPIRONOLACTONE d04815 EPLERENONE d00396 TRIAMTERENE d00169 AMILORIDE d03193 AMILORIDE; HYDROCHLOROTHIAZIDE d00299 METOLAZONE d07077 ALISKIREN; HYDROCHLOROTHIAZIDE d07668 AMLODIPINE; HYDROCHLOROTHIAZIDE; OLMESARTAN d07440 AMLODIPINE; HYDROCHLOROTHIAZIDE; VALSARTAN d03265 BENAZEPRIL; HYDROCHLOROTHIAZIDE d04711 CANDESARTAN; HYDROCHLOROTHIAZIDE d03566 CAPTOPRIL; HYDROCHLOROTHIAZIDE d03740 ENALAPRIL; HYDROCHLOROTHIAZIDE d04837 EPROSARTAN; HYDROCHLOROTHIAZIDE d04539 FOSINOPRIL; HYDROCHLOROTHIAZIDE d03257 HYDRALAZINE; HYDROCHLOROTHIAZIDE</p>

d03256	HYDRALAZINE;
	HYDROCHLOROTHIAZIDE; RESERPINE
d00253	HYDROCHLOROTHIAZIDE
d04245	HYDROCHLOROTHIAZIDE;
	IRBESARTAN
a11077	HYDROCHLOROTHIAZIDE;
	LABETALOL
d03266	HYDROCHLOROTHIAZIDE;
	LISINOPRIL
d03830	HYDROCHLOROTHIAZIDE;
	LOSARTAN
d03263	HYDROCHLOROTHIAZIDE;
	METHYLDOPA
d03264	HYDROCHLOROTHIAZIDE;
	METOPROLOL
d04141	HYDROCHLOROTHIAZIDE;
	MOEXIPRIL
d04878	HYDROCHLOROTHIAZIDE;
	OLMESARTAN
d03261	HYDROCHLOROTHIAZIDE;
	PROPRANOLOL
d04509	HYDROCHLOROTHIAZIDE;
	QUINAPRIL
d03251	HYDROCHLOROTHIAZIDE;
	RESERPINE
d03247	HYDROCHLOROTHIAZIDE;
	SPIRONOLACTONE
d04737	HYDROCHLOROTHIAZIDE;
	TELMISARTAN
d03260	HYDROCHLOROTHIAZIDE;
	TIMOLOL
d03052	HYDROCHLOROTHIAZIDE;
	TRIAMTERENE
d04293	HYDROCHLOROTHIAZIDE;
	VALSARTAN
d00190	CHLOROTHIAZIDE
d03778	CHLOROTHIAZIDE;
	METHYLDOPA
d03250	CHLOROTHIAZIDE;
	RESERPINE
	SSRIs (blocks antidiuretic hormone secretion)
d04812	ESCITALOPRAM

d00880	SERTRALINE
d00236	FLUOXETINE
d04917	FLUOXETINE; OLANZAPINE
d03157	PAROXETINE
d04332	CITALOPRAM
d03804	FLUVOXAMINE
d03157	PAROXETINE
Calcium channel blockers	
d00689	AMLODIPINE
d05048	AMLODIPINE;
ATORVASTATIN	
d03829	AMLODIPINE; BENAZEPRIL
d07668	AMLODIPINE;
HYDROCHLOROTHIAZIDE; OLMESARTAN	
d07440	AMLODIPINE;
HYDROCHLOROTHIAZIDE; VALSARTAN	
d06905	AMLODIPINE; OLMESARTAN
d07533	AMLODIPINE; PERINDOPRIL
d07498	AMLODIPINE; TELMISARTAN
d06662	AMLODIPINE; VALSARTAN
d00045	DILTIAZEM
d04065	TRANDOLAPRIL;
VERAPAMIL	
d00048	VERAPAMIL
d00051	NIFEDIPINE
d03825	NISOLDIPINE
d00231	FELODIPINE
d00318	NIMODIPINE
d00270	ISRADIPINE
d00315	NICARDIPINE
Tetracycline	
d00041	TETRACYCLINE
d04061	BISMUTH SUBSALICYLATE;
METRONIDAZOLE; TETRACYCLINE	
Lithium	
d00061	LITHIUM
SGLT-2 Inhibitors (glycosuria)	
d08080	CANAGLIFLOZIN
d08280	CANAGLIFLOZIN;
METFORMIN	
d08275	EMPAGLIFLOZIN
d08344	EMPAGLIFLOZIN;
LINAGLIPTIN	

d08384	EMPAGLIFLOZIN; METFORMIN
d07928	DAPAGLIFLOZIN
d08245	DAPAGLIFLOZIN; METFORMIN
d08275	EMPAGLIFLOZIN
d08344	EMPAGLIFLOZIN; LINAGLIPTIN
d08384	EMPAGLIFLOZIN; METFORMIN
	Insomnia and CNS effects
	CNS stimulants
d00803	AMPHETAMINE
d04035	AMPHETAMINE; DEXTROAMPHETAMINE
d04777	DEXMETHYLPHENIDATE
	Dextroamphetamine
d04035	AMPHETAMINE; DEXTROAMPHETAMINE
d00804	DEXTROAMPHETAMINE
d00900	METHYLPHENIDATE
	Antihypertensives
	α -Blockers
d00734	PHENOXYBENZAMINE
d00395	TRAZODONE
	β -Blockers
d05265	NEBIVOLOL
d00134	METOPROLOL
d00004	ATENOLOL
d03258	ATENOLOL; CHLORTHALIDONE
d00709	BISOPROLOL
d03744	BISOPROLOL; HYDROCHLOROTHIAZIDE
d00128	ACEBUTOLOL
d00176	BETAXOLOL
d00032	PROPRANOLOL
d03847	CARVEDILOL
d03259	BENDROFLUMETHIAZIDE; NADOLOL
d00018	NADOLOL
d03847	CARVEDILOL
d00371	SOTALOL

d00137	PINDOLOL
d00016	LABETALOL
d00332	PENBUTOLOL
d00139	TIMOLOL
Methyldopa	
d00133	METHYLDOPA
Respiratory	
Albuterol	
d00749	ALBUTEROL
d04066	ALBUTEROL; IPRATROPIUM
d04427	LEVALBUTEROL
Theophylline	
d00142	THEOPHYLLINE
d03283	EPHEDRINE; HYDROXYZINE; THEOPHYLLINE
d03287	EPHEDRINE; PHENOBARBITAL; POTASSIUM IODIDE; THEOPHYLLINE
d03280	EPHEDRINE; PHENOBARBITAL; THEOPHYLLINE
h00017	GUAIFENESIN; PSEUDOEPHEDRINE; THEOPHYLLINE
d03273	GUAIFENESIN; THEOPHYLLINE
a11179	IODINATED GLYCEROL; THEOPHYLLINE
d03277	POTASSIUM IODIDE; THEOPHYLLINE
Decongestants	
h00031	ACETAMINOPHEN; AMANTADINE; CHLORPHENIRAMINE; PHENYLEPHRINE
d03346	ACETAMINOPHEN; CAFFEINE; CHLORPHENIRAMINE; HYDROCODONE; PHENYLEPHRINE
h00003	ACETAMINOPHEN; CHLORPHENIRAMINE; PHENYLEPHRINE; PHENYLPROPANOLAMINE
d06872	ACETAMINOPHEN; CHLORPHENIRAMINE; PHENYLEPHRINE; PHENYLTOLOXAMINE
d05434	BROMPHENIRAMINE; CARBETAPENTANE; PHENYLEPHRINE

d05106 BROMPHENIRAMINE;
DEXTROMETHORPHAN; GUAIFENESIN;
PHENYLEPHRINE
d04905 BROMPHENIRAMINE;
DEXTROMETHORPHAN; PHENYLEPHRINE
d07064 BROMPHENIRAMINE;
DIPHENHYDRAMINE; PHENYLEPHRINE
d05426 BROMPHENIRAMINE;
HYDROCODONE; PHENYLEPHRINE
d03311 BROMPHENIRAMINE;
PHENYLEPHRINE
h00010 BROMPHENIRAMINE;
PHENYLEPHRINE; PHENYLTOLOXAMINE
h00011 CARBETAPENTANE
CITRATE; GUAIFENESIN;
PHENYLEPHRINE;
PHENYLPROPANOLAMINE
d03574 CARBETAPENTANE;
CHLORPHENIRAMINE; EPHEDRINE;
PHENYLEPHRINE
d04445 CARBETAPENTANE;
CHLORPHENIRAMINE; PHENYLEPHRINE
d04741 CARBETAPENTANE;
GUAIFENESIN; PHENYLEPHRINE
d04850 CARBETAPENTANE;
PHENYLEPHRINE; PYRILAMINE
d03399 CHLORPHENIRAMINE;
CODEINE; PHENYLEPHRINE; POTASSIUM
IODIDE
d03419 CHLORPHENIRAMINE;
DEXTROMETHORPHAN; GUAIFENESIN;
PHENYLEPHRINE
d03369 CHLORPHENIRAMINE;
DEXTROMETHORPHAN; PHENYLEPHRINE
d04904 CHLORPHENIRAMINE;
DIHYDROCODEINE; PHENYLEPHRINE
d03361 CHLORPHENIRAMINE;
HYDROCODONE; PHENYLEPHRINE
d03338 CHLORPHENIRAMINE;
METHSCOPOLAMINE; PHENYLEPHRINE
d03300 CHLORPHENIRAMINE;
PHENYLEPHRINE

d03310 CHLORPHENIRAMINE;
PHENYLEPHRINE;
PHENYLPROPANOLAMINE;
PHENYLTOLOXAMINE
d03315 CHLORPHENIRAMINE;
PHENYLEPHRINE;
PHENYLPROPANOLAMINE; PYRILAMINE
d03306 CHLORPHENIRAMINE;
PHENYLEPHRINE; PHENYLTOLOXAMINE
d03313 CHLORPHENIRAMINE;
PHENYLEPHRINE; PYRILAMINE
d03364 CODEINE;
PHENYLEPHRINE; PROMETHAZINE
d06058 DEXBROMPHENIRAMINE;
HYDROCODONE; PHENYLEPHRINE
d05876 DEXCHLORPHENIRAMINE;
DEXTROMETHORPHAN; PHENYLEPHRINE
d05877 DEXTROMETHORPHAN;
DIPHENHYDRAMINE; PHENYLEPHRINE
d03408 DEXTROMETHORPHAN;
GUAIFENESIN; PHENYLEPHRINE
d03371 DEXTROMETHORPHAN;
PHENYLEPHRINE; PYRILAMINE
d08112 DEXTROMETHORPHAN;
PHENYLEPHRINE; THONZYLAMINE
d04925 DIPHENHYDRAMINE;
HYDROCODONE; PHENYLEPHRINE
d04861 DIPHENHYDRAMINE;
PHENYLEPHRINE
d03403 GUAIFENESIN;
HYDROCODONE; PHENYLEPHRINE
d03381 GUAIFENESIN;
PHENYLEPHRINE
d03383 GUAIFENESIN;
PHENYLEPHRINE;
PHENYLPROPANOLAMINE
d04903 GUAIFENESIN;
PHENYLEPHRINE; PYRILAMINE
d03375 HYDROCODONE;
PHENIRAMINE; PHENYLEPHRINE;
PHENYLPROPANOLAMINE; PYRILAMINE
d04152 HYDROCODONE;
PHENYLEPHRINE

d03366 HYDROCODONE;
PHENYLEPHRINE; PYRILAMINE
d00704 PHENYLEPHRINE
d04186 PHENYLEPHRINE NASAL
d04298 PHENYLEPHRINE TOPICAL
d03317 PHENYLEPHRINE;
PROMETHAZINE
d04446 PHENYLEPHRINE;
PYRILAMINE
d08091 PHENYLEPHRINE;
THONZYLAMINE
d03342 ACETAMINOPHEN;
DEXTROMETHORPHAN;
PSEUDOEPHEDRINE
d03289 ACETAMINOPHEN;
PSEUDOEPHEDRINE
d03754 ACRIVASTINE;
PSEUDOEPHEDRINE
d03291 ASPIRIN;
PSEUDOEPHEDRINE
d03304 AZATADINE;
PSEUDOEPHEDRINE
d04862 BROMPHENIRAMINE;
DEXTROMETHORPHAN; GUAIFENESIN;
PSEUDOEPHEDRINE
d03368 BROMPHENIRAMINE;
DEXTROMETHORPHAN;
PSEUDOEPHEDRINE
d04880 BROMPHENIRAMINE;
HYDROCODONE; PSEUDOEPHEDRINE
d03301 BROMPHENIRAMINE;
PSEUDOEPHEDRINE
d04864 CARBETAPENTANE;
PSEUDOEPHEDRINE
d07351 CARBETAPENTANE;
PSEUDOEPHEDRINE; PYRILAMINE
d03577 CARBINOXAMINE;
DEXTROMETHORPHAN;
PSEUDOEPHEDRINE
d04752 CARBINOXAMINE;
HYDROCODONE; PSEUDOEPHEDRINE
d03570 CARBINOXAMINE;
PSEUDOEPHEDRINE

d04764 CETIRIZINE;
PSEUDOEPHEDRINE
d03362 CHLORPHENIRAMINE;
CODEINE; PSEUDOEPHEDRINE
d03370 CHLORPHENIRAMINE;
DXTROMETHORPHAN;
PSEUDOEPHEDRINE
d03416 CHLORPHENIRAMINE;
HYDROCODONE; PSEUDOEPHEDRINE
d03911 CHLORPHENIRAMINE;
METHSCOPOLAMINE;
PSEUDOEPHEDRINE
d03298 CHLORPHENIRAMINE;
PSEUDOEPHEDRINE
d03398 CODEINE; GUAIFENESIN;
PSEUDOEPHEDRINE
d03363 CODEINE;
PSEUDOEPHEDRINE; TRIPROLIDINE
d05473 DESLORATADINE;
PSEUDOEPHEDRINE
d03751 DEXBROMPHENIRAMINE;
PSEUDOEPHEDRINE
d04818 DEXCHLORPHENIRAMINE;
DXTROMETHORPHAN;
PSEUDOEPHEDRINE
d03409 DXTROMETHORPHAN;
GUAIFENESIN; PSEUDOEPHEDRINE
d03354 DXTROMETHORPHAN;
PSEUDOEPHEDRINE
d04870 DIHYDROCODEINE;
GUAIFENESIN; PSEUDOEPHEDRINE
d03312 DIPHENHYDRAMINE;
PSEUDOEPHEDRINE
d04270 FEXOFENADINE;
PSEUDOEPHEDRINE
d03404 GUAIFENESIN;
HYDROCODONE; PSEUDOEPHEDRINE
d03379 GUAIFENESIN;
PSEUDOEPHEDRINE
h00017 GUAIFENESIN;
PSEUDOEPHEDRINE; THEOPHYLLINE
d03352 HYDROCODONE;
PSEUDOEPHEDRINE

d06669 HYDROCODONE;
PSEUDOEPHEDRINE; TRIPROLIDINE
d03818 LORATADINE;
PSEUDOEPHEDRINE
d04762 METHSCOPOLAMINE;
PSEUDOEPHEDRINE
d00769 PSEUDOEPHEDRINE
d03305 PSEUDOEPHEDRINE;
TERFENADINE
d03316 PSEUDOEPHEDRINE;
TRIPROLIDINE
d03342 ACETAMINOPHEN;
DEXTROMETHORPHAN;
PSEUDOEPHEDRINE
d03289 ACETAMINOPHEN;
PSEUDOEPHEDRINE
Hormones (corticosteroids, thyroid)
d00604 CORTICOTROPIN
d00620 TRIAMCINOLONE
d00293 METHYLPREDNISOLONE
d04276 BUDESONIDE
d03640 BUDESONIDE NASAL
d04795 BUDESONIDE;
FORMOTEROL
d00206 DEXAMETHASONE
h00038 DEXAMETHASONE;
DICLOFENAC; METHOCARBAMOL
d00350 PREDNISONE
d00254 HYDROCORTISONE
d00628 BETAMETHASONE
h00009 BETAMETHASONE;
INDOMETHACIN; METHOCARBAMOL
d00608 FLUDROCORTISONE
d00278 LEVOTHYROXINE
h00019 LEVOTHYROXINE;
LIOETHYRONINE
d00658 LIOETHYRONINE
d00655 THYROID DESICCATED
c00103 THYROID HORMONES -
UNSPECIFIED
Psychotropics
MAOIs
d00883 PHENELZINE

d00884	TRANLYCYPROMINE
d00976	SELEGILINE
d00882	ISOCARBOXAZID
Atypical antidepressants	
d00181	BUPROPION
d08288	BUPROPION; NALTREXONE
d04025	MIRTAZAPINE
d03808	NEFAZODONE
d07740	VILAZODONE
d08125	VORTIOXETINE
Dopaminergic agonists	
d00184	CARBIDOPA
d04877	CARBIDOPA; ENTACAPONE; LEVODOPA
d03473	CARBIDOPA; LEVODOPA
d04215	ROPINIROLE
d00976	SELEGILINE
d00178	BROMOCRIPTINE
d05612	RASAGILINE
d04460	ENTACAPONE
d04145	PRAMIPEXOLE
h00026	ACETAMINOPHEN; AMANTADINE; CHLORPHENIRAMINE
d00086	AMANTADINE
Antiepileptics (phenytoin)	
d00143	PHENYTOIN
Direct lower urinary tract effects	
Ketamine (direct bladder toxin)	
d00272	KETAMINE
Tiaprofenic acid (Surgam) (toxic cystitis)	
h00022	TIAPROFENIC ACID
Cyclophosphamide	
d00036	CYCLOPHOSPHAMIDE