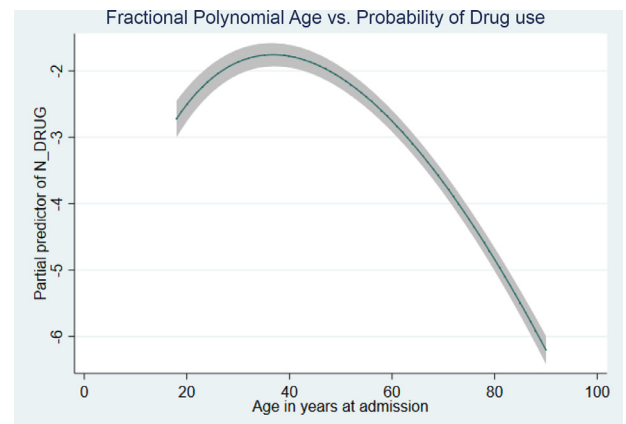Fractional Polynomial Age vs. Probability of Smoking

Supplementary Figure 1   Age as a function of probability of tobacco use disorder. Adjusted multivariable fractional polynomial models were used to demonstrate age as a function of probability of tobacco use disorder. N_SMOKE = tobacco use disorder.

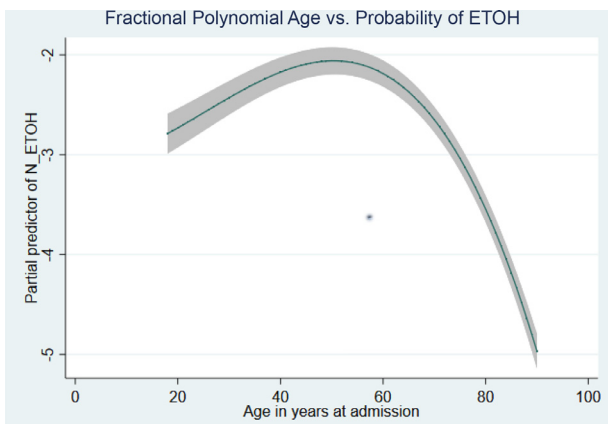Fractional Polynomial Age vs. Probability of Drug use

Supplementary Figure 3   Age as a function of probability of drug use disorder. Adjusted multivariable fractional polynomial models were used to demonstrate age as a function of probability of drug use disorder. N_DRUG = drug use disorder.

Fractional Polynomial Age vs. Probability of ETOH

Supplementary Figure 2   Age as a function of probability of alcohol use disorder. Adjusted multivariable fractional polynomial models were used to demonstrate age as a function of probability of alcohol use disorder. N_ETOH = alcohol use disorder.

Supplementary Table 1	ICD-9-CM Codes Used to Identify Heart Failure Hospitalizations
Code	Description
398.91	Rheumatic heart failure (congestive)
402.01	Malignant hypertensive heart disease with heart failure
402.11	Benign hypertensive heart disease with heart failure
402.91	Unspecified hypertensive heart disease with heart failure
404.01	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease Stage I through Stage IV, or unspecified
404.03	Hypertensive heart and chronic kidney disease, malignant, with heart failure and with chronic kidney disease Stage V or end-stage renal disease
404.11	Hypertensive heart and chronic kidney disease, benign, with heart failure and with chronic kidney disease Stage I through Stage IV, or unspecified
404.13	Hypertensive heart and chronic kidney disease, benign, with heart failure and chronic kidney disease Stage V or end-stage renal disease
404.91	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and with chronic kidney disease Stage I through Stage IV, or unspecified
404.93	Hypertensive heart and chronic kidney disease, unspecified, with heart failure and chronic kidney disease Stage V or end-stage renal disease
428.0	Congestive heart failure unspecified
428.1	Left heart failure
428.20	Unspecified systolic heart failure
428.21	Acute systolic heart failure
428.22	Chronic systolic heart failure
428.23	Acute on chronic systolic heart failure
428.30	Unspecified diastolic heart failure
428.31	Acute diastolic heart failure
428.32	Chronic diastolic heart failure
428.33	Acute on chronic diastolic heart failure
428.40	Unspecified combined systolic and diastolic heart failure
428.41	Acute combined systolic and diastolic heart failure
428.42	Chronic combined systolic and diastolic heart failure
428.43	Acute on chronic combined systolic and diastolic heart failure
428.9	Heart failure unspecified

ICD-9-CM = International Classification of Diseases = Ninth Revision-Clinical Modification.

Supplementary Table 2	ICD-9-CM and CCS Codes Used to Identify Tobacco, Alcohol, and Drug Use Disorders
Tobacco use ICD-9-CM code	
305.1	Tobacco use disorder
Alcohol use CCS code	
660	Alcohol-related disorders
Drug use CCS Code	
661	Substance-related disorders

CCS = Clinical Classifications Software; ICD-9-CM = International Classification of Diseases = Ninth Revision-Clinical Modification.

Supplementary Table 3   ICD-9-CM Definitions Used for Drug Use Disorder Subcategories

Cocaine use by ICD-9-CM
30420	Cocaine dependence, unspecified
30421	Cocaine dependence, continuous
30422	Cocaine dependence, episodic
30423	Cocaine dependence, in remission

Cannabis use by ICD-9-CM
30430	Cannabis dependence, unspecified
30431	Cannabis dependence, continuous
30432	Cannabis dependence, episodic
30433	Cannabis dependence, in remission
30520	Cannabis abuse, unspecified
30521	Cannabis abuse, continuous
30522	Cannabis abuse, episodic
30523	Cannabis abuse, in remission

Opioid use by ICD-9-CM
30400	Opioid type dependence, unspecified
30401	Opioid type dependence, continuous
30402	Opioid type dependence, episodic
30403	Opioid type dependence, in remission
30470	Combinations of opioid type drug with any other drug dependence, unspecified
30471	Combinations of opioid type drug with any other drug dependence, continuous
30472	Combinations of opioid type drug with any other drug dependence, episodic
30473	Combinations of opioid type drug with any other drug dependence, in remission
30550	Opioid abuse, unspecified
30551	Opioid abuse, continuous
30552	Opioid abuse, episodic
30553	Opioid abuse, in remission
76072	Narcotics affecting fetus or newborn via placenta or breast milk
96500	Poisoning by opium (alkaloids), unspecified
96501	Poisoning by heroin
96502	Poisoning by methadone
96509	Poisoning by other opiates and related narcotics

Amphetamine use by ICD-9-CM
30440	Amphetamine and other psychostimulant dependence, unspecified
30441	Amphetamine and other psychostimulant dependence, continuous
30442	Amphetamine and other psychostimulant dependence, episodic
30443	Amphetamine and other psychostimulant dependence, in remission
30570	Amphetamine or related acting sympathomimetic abuse, unspecified
30571	Amphetamine or related acting sympathomimetic abuse, continuous
30572	Amphetamine or related acting sympathomimetic abuse, episodic
30573	Amphetamine or related acting sympathomimetic abuse, in remission

Psychotherapeutic use by ICD-9-CM
30410	Sedative, hypnotic or anxiolytic dependence, unspecified
30411	Sedative, hypnotic or anxiolytic dependence, continuous
30412	Sedative, hypnotic or anxiolytic dependence, episodic
30413	Sedative, hypnotic or anxiolytic dependence, in remission
30540	Sedative, hypnotic or anxiolytic abuse, unspecified
30541	Sedative, hypnotic or anxiolytic abuse, continuous
30542	Sedative, hypnotic or anxiolytic abuse, episodic
30543	Sedative, hypnotic or anxiolytic abuse, in remission
30580	Antidepressant type abuse, unspecified
30581	Antidepressant type abuse, continuous
30582	Antidepressant type abuse, episodic
30583	Antidepressant type abuse, in remission

Hallucinogen use by ICD-9-CM
30450	Hallucinogen dependence, unspecified
30451	Hallucinogen dependence, continuous

30452	Hallucinogen dependence, episodic
30453	Hallucinogen dependence, in remission
30530	Hallucinogen abuse, unspecified
30531	Hallucinogen abuse, continuous
30532	Hallucinogen abuse, episodic
30533	Hallucinogen abuse, in remission
76073	Hallucinogenic agents affecting fetus or newborn via placenta or breast milk
Other use by ICD-9-CM	
2920	Drug withdrawal
29282	Drug-induced persisting dementia
29283	Drug-induced persisting amnestic disorder
29284	Drug-induced mood disorder
29285	Drug induced sleep disorders
29289	Other specified drug-induced mental disorders
2929	Unspecified drug-induced mental disorder
30460	Other specified drug dependence, unspecified
30461	Other specified drug dependence, continuous
30462	Other specified drug dependence, episodic
30463	Other specified drug dependence, in remission
30480	Combinations of drug dependence excluding opioid type drug, unspecified
30481	Combinations of drug dependence excluding opioid type drug, continuous
30482	Combinations of drug dependence excluding opioid type drug, episodic
30483	Combinations of drug dependence excluding opioid type drug, in remission
30490	Unspecified drug dependence, unspecified
30491	Unspecified drug dependence, continuous
30492	Unspecified drug dependence, episodic
30493	Unspecified drug dependence, in remission
30590	Other, mixed, or unspecified drug abuse, unspecified
30591	Other, mixed, or unspecified drug abuse, continuous
30592	Other, mixed, or unspecified drug abuse, episodic
30593	Other, mixed, or unspecified drug abuse, in remission
64830	Drug dependence of mother, unspecified as to episode of care or not applicable
64831	Drug dependence of mother, delivered, with or without mention of antepartum condition
64832	Drug dependence of mother, delivered, with mention of postpartum complication
64833	Drug dependence of mother, antepartum condition or complication
64834	Drug dependence of mother, postpartum condition or complication
29211	Drug-induced psychotic disorder with delusions
29212	Drug-induced psychotic disorder with hallucinations
2922	Pathological drug intoxication
29281	Drug-induced delirium
65550	Suspected damage to fetus from drugs, affecting management of mother, unspecified as to episode of care or not applicable
65551	Suspected damage to fetus from drugs, affecting management of mother, delivered, with or without mention of antepartum condition
65553	Suspected damage to fetus from drugs, affecting management of mother, antepartum condition or complication
7795	Drug withdrawal syndrome in newborn
V6542	Counseling on substance use and abuse

ICD-9-CM = International Classification of Diseases = Ninth Revision-Clinical Modification.