

The Alcohol Use Disorder and Associated Disabilities Interview Schedule—Diagnostic and Statistical Manual of Mental Disorders—Fifth Edition Version (AUDADIS-5) Alcohol and Drug Use Disorders Scoring Algorithms

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Acknowledgments

The PhenX Toolkit Alcohol Use Disorder and Associated Disabilities Interview Schedule—Diagnostic and Statistical Manual of Mental Disorders—Fifth Edition Version (AUDADIS-5; Grant et al., 2011) scoring algorithms are based on the PhenX Toolkit’s AUDADIS-IV (Grant et al., 2001) alcohol use disorder scoring algorithms. The AUDADIS-IV alcohol use disorder algorithms were constructed by Drs. Arpana Agrawal, Andrew Littlefield and Álvaro Vergés under the supervision of Dr. Kenneth J. Sher. The AUDADIS-5 substance use disorder algorithms were constructed by Yoanna McDowell, M.A, under the supervision of Dr. Sher.

Alcohol Use Disorders (AUD) Algorithms Description¹

The SAS code contained herein derives past-year, prior-to-past-year and lifetime Diagnostic and Statistical Manual 5th Ed (DSM-5; American Psychiatric Association [APA], 2013) AUD diagnoses based on interview items in the AUDADIS-5 (Grant et al., 2011). AUDADIS-5 was the data collection instrument of the 2012-2013 National Epidemiologic Survey on Alcohol and Related Conditions-III (NESARC-III; Grant et al., 2014) conducted by the National Institute on Alcohol Abuse and Alcoholism (NIAAA). The full version of the document is posted at https://www.phenxtoolkit.org/toolkit_content/supplemental_info/atos/additional_info/NESARC_III_Manual.pdf

Questions concerning “alcohol experiences” are in Section 2B of the AUDADIS-5. For the convenience of users, this section is included in Appendix A. Note that not all questions are administered to all respondents because of skip patterns in the AUDADIS-5. For example, lifetime abstainers (i.e., never had 1 or more drinks in life) skip Section 2B entirely. Ex-drinkers (i.e., had at least 1 drink in life but not in the past-year) answer prior-to-past-year and lifetime questions, whereas current drinkers are asked questions about past-year, prior-to-past-year and lifetime alcohol experiences when appropriate.

The names of the NESARC-III variables used in the SAS code for DSM-5 AUD diagnosis are affixed to their corresponding questions. The SAS code creates several dichotomous variables (with values 0 = negative and 1 = positive), including **A1–A11** (past-year AUD diagnostic criteria), **pA1–pA11** (prior-to-past-year AUD diagnostic criteria), **IA1–IA11** (lifetime AUD diagnostic criteria), **AUD** (past-year AUD diagnosis), **pAUD** (prior-to-past-year AUD diagnosis) and **IAUD** (lifetime AUD diagnosis). The SAS code also creates symptom count variables for past-year (**alcsum**), prior-to-past-year (**palcsum**) and lifetime (**lalcsum**) periods. Finally, the SAS code creates AUD severity variables (with values 0 = negative, 1 = mild AUD 2-3 symptoms, 2 = moderate AUD 4-5 symptoms and 3 = severe AUD 6+ symptoms). The severity variables include **AUDSEV** (past-year AUD severity), **pAUDSEV** (prior-to-past-year AUD severity) and **IAUDSEV** (lifetime AUD severity). The SAS code reproduces estimates provided in published NESARC-III data¹; however, users should be advised that this might not reflect the exact algorithm used by the NESARC-III team.

¹As the NESARC-III data file already has included derived variables for past-year, prior-to-past-year and lifetime DSM-5 AUD diagnoses (i.e., **pyaud5**, **ppyaud5** and **lifeaud5** respectively), NESARC-III data users are advised to use these derived variables directly. Past-year and lifetime AUD severity variables were matched to published severity estimates in Grant et al. (2015). Prior-to-past-year AUD severity was not included in published literature.

Users should also note the DSM-5 describes severity scores for past-year AUD diagnoses only (see pg. 491-492 of the DSM-5, APA, 2013). That is, although the NESARC-III group has published prior-to-past-year and lifetime severity prevalence rates (Goldstein et al., 2015; Grant et al., 2015) this construct has yet to be established in the more general literature. In addition, as documented in our code, the AUDADIS-5 only resolves temporal clustering of two or more criteria in making prior-to-past-year and lifetime diagnoses. Consequently, the grading of mild, moderate and severe prior-to-past-year and lifetime diagnoses assumes that all symptoms reported are clustered within a 12 month period or “about the same time.” Although this approach yields numbers comparable to those published by the NESARC-III group, users should know this is somewhat prudely resolved because of the way clustering is assessed (i.e., requiring only two or more about the same time).

AUD Criteria and Diagnoses Algorithm

```

/*Larger/longer*/
if N2BQ1B7=1 or N2BQ1B8=1 then A1=1; else A1=0; /*Past-year*/
Label A1='Past-year alcohol larger/longer criterion endorsement-0=negative 1=positive';
if N2BQ1C7=1 or N2BQ1C8=1 then pA1=1; else pA1=0; /*Prior-to-past-year*/
Label pA1='Prior-to-past-year alcohol larger/longer criterion endorsement-0=negative
1=positive';
if N2BQ1A7=1 or N2BQ1A8=1 then lA1=1; else lA1=0; /*Lifetime*/
Label lA1='Lifetime larger/longer alcohol criterion endorsement-0=negative 1=positive';

/*Quit or cut down*/
if N2BQ1B5=1 or N2BQ1B6=1 then A2=1; else A2=0; /*Past-year*/
Label A2='Past-year alcohol quit or cut down criterion endorsement-0=negative 1=positive';
if N2BQ1C5=1 or N2BQ1C6=1 then pA2=1; else pA2=0; /*Prior-to-past-year*/
Label pA2='Prior-to-past-year alcohol quit or cut down criterion endorsement-0=negative
1=positive';
if N2BQ1A5=1 or N2BQ1A6=1 then lA2=1; else lA2=0; /*Lifetime*/
Label lA2='Lifetime alcohol quit or cut down criterion endorsement-0=negative 1=positive';

/*Time spent*/
if N2BQ1B21=1 or N2BQ1B22=1 then A3=1; else A3=0; /*Past-year*/
Label A3='Past-year alcohol time spent criterion endorsement-0=negative 1=positive';
if N2BQ1C21=1 or N2BQ1C22=1 then pA3=1; else pA3=0; /*Prior-to-past-year*/
Label pA3='Prior-to-past-year alcohol time spent criterion endorsement-0=negative 1=positive';
if N2BQ1A21=1 or N2BQ1A22=1 then lA3=1; else lA3=0; /*Lifetime*/
Label lA3='Lifetime alcohol time spent criterion endorsement-0=negative 1=positive';

/*Craving*/
if N2BQ1B28=1 or N2BQ1B29=1 then A4=1; else A4=0; /*Past-year*/
Label A4='Past-year alcohol craving criterion endorsement-0=negative 1=positive';
if N2BQ1C28=1 or N2BQ1C29=1 then pA4=1; else pA4=0; /*Prior-to-past-year*/
Label pA4='Prior-to-past-year alcohol craving criterion endorsement-0=negative 1=positive';
if N2BQ1A28=1 or N2BQ1A29=1 then lA4=1; else lA4=0; /*Lifetime*/
Label lA4='Lifetime alcohol craving criterion endorsement-0=negative 1=positive';

/*Role interference*/
if N2BQ1B30=1 or N2BQ1B31=1 or N2BQ1B32=1 then A5=1; else A5=0; /*Past-year*/
Label A5='Past-year alcohol role interference criterion endorsement-0=negative 1=positive';
if N2BQ1C30=1 or N2BQ1C31=1 or N2BQ1C32=1 then pA5=1; else pA5=0; /*Prior-to-past-year*/
Label pA5='Prior-to-past-year alcohol role interference criterion endorsement-0=negative
1=positive';
if N2BQ1A30=1 or N2BQ1A31=1 or N2BQ1A32=1 then lA5=1; else lA5=0; /*Lifetime*/
Label lA5='Lifetime alcohol role interference criterion endorsement-0=negative 1=positive';

/*Social problems*/
if N2BQ1B37=1 or N2BQ1B38=1 or N2BQ1B39=1 then A6=1; else A6=0; /*Past-year*/
Label A6='Past-year alcohol social problems criterion endorsement-0=negative 1=positive';
if N2BQ1C37=1 or N2BQ1C38=1 or N2BQ1C39=1 then pA6=1; else pA6=0; /*Prior-to-past-year*/
Label pA6='Prior-to-past-year alcohol social problems criterion endorsement-0=negative
1=positive';
if N2BQ1A37=1 or N2BQ1A38=1 or N2BQ1A39=1 then lA6=1; else lA6=0; /*Lifetime*/
Label lA6='Lifetime alcohol social problems criterion endorsement-0=negative 1=positive';

/*Give up*/
if N2BQ1B23=1 or N2BQ1B24=1 then A7=1; else A7=0; /*Past-year*/
Label A7='Past-year alcohol give up criterion endorsement-0=negative 1=positive';
if N2BQ1C23=1 or N2BQ1C24=1 then pA7=1; else pA7=0; /*Prior-to-past-year*/
Label pA7='Prior-to-past-year alcohol give up criterion endorsement-0=negative 1=positive';

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if N2BQ1A23=1 or N2BQ1A24=1 then lA7=1; else lA7=0; /*Lifetime*/
Label lA7='Lifetime alcohol give up criterion endorsement-0=negative 1=positive';

/*Hazardous use*/
if N2BQ1B33=1 or N2BQ1B34=1 or N2BQ1B35=1 or N2BQ1B36=1 then A8=1; else A8=0; /*Past-year*/
Label A8='Past-year alcohol hazardous use criterion endorsement-0=negative 1=positive';
if N2BQ1C33=1 or N2BQ1C34=1 or N2BQ1C35=1 or N2BQ1C36=1 then pA8=1; else pA8=0; /*Prior-to-
past-year*/
Label pA8='Prior-to-past-year alcohol hazardous use criterion endorsement-0=negative
1=positive';
if N2BQ1A33=1 or N2BQ1A34=1 or N2BQ1A35=1 or N2BQ1A36=1 then lA8=1; else lA8=0; /*Lifetime*/
Label lA8='Lifetime alcohol hazardous use criterion endorsement-0=negative 1=positive';

/*Continued use despite problems*/
if N2BQ1B25=1 or N2BQ1B26=1 or N2BQ1B27=1 then A9=1; else A9=0; /*Past-year*/
Label A9='Past-year alcohol continued use despite problems criterion endorsement-0=negative
1=positive';
if N2BQ1C25=1 or N2BQ1C26=1 or N2BQ1C27=1 then pA9=1; else pA9=0; /*Prior-to-past-year*/
Label pA9='Prior-to-past-year alcohol continued use despite problems criterion endorsement-
0=negative 1=positive';
if N2BQ1A25=1 or N2BQ1A26=1 or N2BQ1A27=1 then lA9=1; else lA9=0; /*Lifetime*/
Label lA9='Lifetime alcohol continued use despite problems criterion endorsement-0=negative
1=positive';

/*Tolerance*/
if N2BQ1B1=1 or N2BQ1B2=1 or N2BQ1B3=1 or N2BQ1B4=1 then A10=1; else A10=0; /*Past-year*/
Label A10='Past-year alcohol tolerance criterion endorsement-0=negative 1=positive';
if N2BQ1C1=1 or N2BQ1C2=1 or N2BQ1C3=1 or N2BQ1C4=1 then pA10=1; else pA10=0; /*Prior-to-past-
year*/
Label pA10='Prior-to-past-year alcohol tolerance criterion endorsement-0=negative 1=positive';
if N2BQ1A1=1 or N2BQ1A2=1 or N2BQ1A3=1 or N2BQ1A4=1 then lA10=1; else lA10=0; /*Lifetime*/
Label lA10='Lifetime alcohol tolerance criterion endorsement-0=negative 1=positive';

/*Withdrawal*/
*Withdrawal subalgorithm - sum of withdrawal symptoms;
alcwith=sum(N2BQ1B9=1, N2BQ1B10=1, N2BQ1B11=1, N2BQ1B12=1, N2BQ1B13=1, N2BQ1B14=1, N2BQ1B15=1,
N2BQ1B16=1);
Label alcwith='Sum of past-year alcohol withdrawal symptoms';
palcwith=sum(N2BQ1C9=1, N2BQ1C10=1, N2BQ1C11=1, N2BQ1C12=1, N2BQ1C13=1, N2BQ1C14=1,
N2BQ1C15=1, N2BQ1C16=1);
Label palcwith='Sum of prior-to-past-year alcohol withdrawal symptoms';

*Withdrawal - using subalgorithm;
if alcwith=>2 or N2BQ1B19=1 or N2BQ1B20=1 then A11=1; else A11=0; /*Past-year*/
Label A11='Past-year alcohol withdrawal criterion endorsement-0=negative 1=positive';
if palcwith=>2 or N2BQ1C19=1 or N2BQ1C20=1 then pA11=1; else pA11=0; /*Prior-to-past-year*/
Label pA11='Prior-to-past-year alcohol withdrawal criterion endorsement-0=negative
1=positive';
if (alcwith=>2 or N2BQ1B19=1 or N2BQ1B20=1) or (palcwith=>2 or N2BQ1C19=1 or N2BQ1C20=1) then
lA11=1; else lA11=0; /*Lifetime*/
Label lA11='Lifetime alcohol withdrawal criterion endorsement-0=negative 1=positive';

/*-Past-year (A1-A11) and prior-to-past-year (pA1-pA11) symptom counts
-Prior-to-past-year symptoms counts include N2BQ2A N2BQ2B and N2BQ2C to
denote SOME AUD symptoms occurred within same 12-month period
-Lifetime symptom count takes the largest symptom count from either past-year or prior-to-
past-year*/
alcsum=sum(A1, A2, A3, A4, A5, A6, A7, A8, A9, A10, A11); /*Past-year*/

```

```

Label alclsum='Sum of past-year alcohol criteria';
if N2BQ2A=1 or N2BQ2B=1 or N2BQ2C=1 THEN palclsum=sum(pA1, pA2, pA3, pA4, pA5, pA6, pA7, pA8,
pA9, pA10, pA11); /*Prior-to-past-year*/
Label palclsum='Sum of prior-to-past-year alcohol criteria';
lalclsum=max(alclsum, palclsum); /*Lifetime*/
Label lalclsum='Maximum sum of past-year or prior-to-past-year alcohol criteria';

*AUD diagnoses;
if alclsum=>2 then AUD=1; else AUD=0; /*Past-year*/
Label AUD='Past-year AUD diagnosis-0=negative 1=positive';
if palclsum=>2 then pAUD=1; else pAUD=0; /*Prior-to-past-year*/
Label pAUD='Prior-to-past-year AUD diagnosis-0=negative 1=positive';
if lalclsum=>2 then laud=1; else laud=0; /*Lifetime*/
Label laud='Lifetime AUD diagnosis-0=negative 1=positive';

*AUD severity;
if alclsum<2 then AUDSEV =0; /*Past-year - no AUD*/
if alclsum=2 or alclsum=3 then AUDSEV=1; /*Past-year - mild AUD*/
if alclsum=4 or alclsum=5 then AUDSEV=2; /*Past-year - moderate AUD*/
if alclsum>=6 then AUDSEV =3; /*Past-year - severe AUD*/
Label AUDSEV='Past-year AUD severity grading-0=no AUD diagnosis, 1=mild AUD, 2=moderate AUD
and 3=severe AUD';

if palclsum<2 then pAUDSEV =0; /*Prior-to-past-year - no AUD*/
if palclsum=2 or palclsum=3 then pAUDSEV=1; /*Prior-to-past-year - mild AUD*/
if palclsum=4 or palclsum=5 then pAUDSEV=2; /*Prior-to-past-year - moderate AUD*/
if palclsum>=6 then pAUDSEV=3; /*Prior-to-past-year - severe AUD*/
Label pAUDSEV='Prior-to-past-year AUD severity grading-0=no AUD diagnosis, 1=mild AUD,
2=moderate AUD and 3=severe AUD';

if lalclsum<2 then laudseV=0; /*Lifetime - no AUD*/
if lalclsum=2 or lalclsum=3 then laudseV=1; /*Lifetime - mild AUD*/
if lalclsum=4 or lalclsum=5 then laudseV=2; /*Lifetime - moderate AUD*/
if lalclsum=>6 then laudseV=3; /*Lifetime - severe AUD*/
Label laudseV='Lifetime AUD severity grading-0=no AUD diagnosis, 1=mild AUD, 2=moderate AUD
and 3=severe AUD';

```


AUD Algorithms Requiring Explicit Clustering as Operationalized in the DSM-5 AUD Withdrawal Criterion Description

The present SAS code derives past-year, prior-to-past-year and lifetime DSM–5 AUD diagnoses based on interview items in the AUDADIS–5. In the previous scoring algorithms, explicit clustering of withdrawal symptoms is not required for a positive endorsement of AUD withdrawal. The current scoring algorithms require explicit clustering for AUD withdrawal. In order to have positive endorsement of AUD withdrawal based on two or more symptoms, at least 2 withdrawal symptoms must have occurred around the same time. This is consistent with DSM-5 classification of AUD withdrawal. NESARC-III variables [N2BQ1B17](#) and [N2BQ1B18](#) denote whether at least two withdrawal symptoms occurred around the same time in the past-year and prior-to-past-year, respectively. Users are advised that estimates based on this SAS code will not exactly match published NESARC-III data.

The names of the variables used in this SAS code have the same structure detailed in the “AUD Algorithms Description” section (pg. 2). The suffix “c” is appended to each variable to indicate the variable’s use in the present code.

AUD Criteria and Diagnoses Algorithms Requiring Explicit Clustering as Operationalized in the DSM-5 AUD Withdrawal Criterion

```

/*Larger/longer*/
if N2BQ1B7=1 or N2BQ1B8=1 then A1c=1; else A1c=0; /*Past-year*/
Label A1c='Past-year alcohol larger/longer criterion endorsement-0=negative 1=positive';
if N2BQ1C7=1 or N2BQ1C8=1 then pA1c=1; else pA1c=0; /*Prior-to-past-year*/
Label pA1c='Prior-to-past-year alcohol larger/longer criterion endorsement-0=negative
1=positive';
if N2BQ1A7=1 or N2BQ1A8=1 then lA1c=1; else lA1c=0; /*Lifetime*/
Label lA1c='Lifetime larger/longer alcohol criterion endorsement-0=negative 1=positive';

/*Quit or cut down*/
if N2BQ1B5=1 or N2BQ1B6=1 then A2c=1; else A2c=0; /*Past-year*/
Label A2c='Past-year alcohol quit or cut down criterion endorsement-0=negative 1=positive';
if N2BQ1C5=1 or N2BQ1C6=1 then pA2c=1; else pA2c=0; /*Prior-to-past-year*/
Label pA2c='Prior-to-past-year alcohol quit or cut down criterion endorsement-0=negative
1=positive';
if N2BQ1A5=1 or N2BQ1A6=1 then lA2c=1; else lA2c=0; /*Lifetime*/
Label lA2c='Lifetime alcohol quit or cut down criterion endorsement-0=negative 1=positive';

/*Time spent*/
if N2BQ1B21=1 or N2BQ1B22=1 then A3c=1; else A3c=0; /*Past-year*/
Label A3c='Past-year alcohol time spent criterion endorsement-0=negative 1=positive';
if N2BQ1C21=1 or N2BQ1C22=1 then pA3c=1; else pA3c=0; /*Prior-to-past-year*/
Label pA3c='Prior-to-past-year alcohol time spent criterion endorsement-0=negative
1=positive';
if N2BQ1A21=1 or N2BQ1A22=1 then lA3c=1; else lA3c=0; /*Lifetime*/
Label lA3c='Lifetime alcohol time spent criterion endorsement-0=negative 1=positive';

/*Craving*/
if N2BQ1B28=1 or N2BQ1B29=1 then A4c=1; else A4c=0; /*Past-year*/
Label A4c='Past-year alcohol craving criterion endorsement-0=negative 1=positive';
if N2BQ1C28=1 or N2BQ1C29=1 then pA4c=1; else pA4c=0; /*Prior-to-past-year*/
Label pA4c='Prior-to-past-year alcohol craving criterion endorsement-0=negative 1=positive';
if N2BQ1A28=1 or N2BQ1A29=1 then lA4c=1; else lA4c=0; /*Lifetime*/
Label lA4c='Lifetime alcohol craving criterion endorsement-0=negative 1=positive';

/*Role interference*/
if N2BQ1B30=1 or N2BQ1B31=1 or N2BQ1B32=1 then A5c=1; else A5c=0; /*Past-year*/
Label A5c='Past-year alcohol role interference criterion endorsement-0=negative 1=positive';
if N2BQ1C30=1 or N2BQ1C31=1 or N2BQ1C32=1 then pA5c=1; else pA5c=0; /*Prior-to-past-year*/
Label pA5c='Prior-to-past-year alcohol role interference criterion endorsement-0=negative
1=positive';
if N2BQ1A30=1 or N2BQ1A31=1 or N2BQ1A32=1 then lA5c=1; else lA5c=0; /*Lifetime*/
Label lA5c='Lifetime alcohol role interference criterion endorsement-0=negative 1=positive';

/*Social problems*/
if N2BQ1B37=1 or N2BQ1B38=1 or N2BQ1B39=1 then A6c=1; else A6c=0; /*Past-year*/
Label A6c='Past-year alcohol social problems criterion endorsement-0=negative 1=positive';
if N2BQ1C37=1 or N2BQ1C38=1 or N2BQ1C39=1 then pA6c=1; else pA6c=0; /*Prior-to-past-year*/
Label pA6c='Prior-to-past-year alcohol social problems criterion endorsement-0=negative
1=positive';
if N2BQ1A37=1 or N2BQ1A38=1 or N2BQ1A39=1 then lA6c=1; else lA6c=0; /*Lifetime*/
Label lA6c='Lifetime alcohol social problems criterion endorsement-0=negative 1=positive';

/*Give up*/
if N2BQ1B23=1 or N2BQ1B24=1 then A7c=1; else A7c=0; /*Past-year*/
Label A7c='Past-year alcohol give up criterion endorsement-0=negative 1=positive';

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if N2BQ1C23=1 or N2BQ1C24=1 then pA7c=1; else pA7c=0; /*Prior-to-past-year*/
Label pA7c='Prior-to-past-year alcohol give up criterion endorsement-0=negative 1=positive';
if N2BQ1A23=1 or N2BQ1A24=1 then lA7c=1; else lA7c=0; /*Lifetime*/
Label lA7c='Lifetime alcohol give up criterion endorsement-0=negative 1=positive';

/*Hazardous use*/
if N2BQ1B33=1 or N2BQ1B34=1 or N2BQ1B35=1 or N2BQ1B36=1 then A8c=1; else A8c=0; /*Past-year*/
Label A8c='Past-year alcohol hazardous use criterion endorsement-0=negative 1=positive';
if N2BQ1C33=1 or N2BQ1C34=1 or N2BQ1C35=1 or N2BQ1C36=1 then pA8c=1; else pA8c=0; /*Prior-to-
past-year*/
Label pA8c='Prior-to-past-year alcohol hazardous use criterion endorsement-0=negative
1=positive';
if N2BQ1A33=1 or N2BQ1A34=1 or N2BQ1A35=1 or N2BQ1A36=1 then lA8c=1; else lA8c=0; /*Lifetime*/
Label lA8c='Lifetime alcohol hazardous use criterion endorsement-0=negative 1=positive';

/*Continued use despite problems*/
if N2BQ1B25=1 or N2BQ1B26=1 or N2BQ1B27=1 then A9c=1; else A9c=0; /*Past-year*/
Label A9c='Past-year alcohol continued use despite problems criterion endorsement-0=negative
1=positive';
if N2BQ1C25=1 or N2BQ1C26=1 or N2BQ1C27=1 then pA9c=1; else pA9c=0; /*Prior-to-past-year*/
Label pA9c='Prior-to-past-year alcohol continued use despite problems criterion endorsement-
0=negative 1=positive';
if N2BQ1A25=1 or N2BQ1A26=1 or N2BQ1A27=1 then lA9c=1; else lA9c=0; /*Lifetime*/
Label lA9c='Lifetime alcohol continued use despite problems criterion endorsement-0=negative
1=positive';

/*Tolerance*/
if N2BQ1B1=1 or N2BQ1B2=1 or N2BQ1B3=1 or N2BQ1B4=1 then A10c=1; else A10c=0; /*Past-year*/
Label A10c='Past-year alcohol tolerance criterion endorsement-0=negative 1=positive';
if N2BQ1C1=1 or N2BQ1C2=1 or N2BQ1C3=1 or N2BQ1C4=1 then pA10c=1; else pA10c=0; /*Prior-to-
past-year*/
Label pA10c='Prior-to-past-year alcohol tolerance criterion endorsement-0=negative
1=positive';
if N2BQ1A1=1 or N2BQ1A2=1 or N2BQ1A3=1 or N2BQ1A4=1 then lA10c=1; else lA10c=0; /*Lifetime*/
Label lA10c='Lifetime alcohol tolerance criterion endorsement-0=negative 1=positive';

/*Withdrawal - Explicit withdrawal clustering*/
*Withdrawal subalgorithm - sum of withdrawal symptoms;
alcwithc=sum(N2BQ1B9=1, N2BQ1B10=1, N2BQ1B11=1, N2BQ1B12=1, N2BQ1B13=1, N2BQ1B14=1,
N2BQ1B15=1, N2BQ1B16=1);
Label alcwithc='Sum of past-year alcohol withdrawal symptoms (withdrawal cluster)';
palcwithc=sum(N2BQ1C9=1, N2BQ1C10=1, N2BQ1C11=1, N2BQ1C12=1, N2BQ1C13=1, N2BQ1C14=1,
N2BQ1C15=1, N2BQ1C16=1);
Label palcwithc='Sum of prior-to-past-year alcohol withdrawal symptoms (withdrawal cluster)';

*Withdrawal - using subalgorithm;
if (alcwithc=>2 and N2BQ1B17=1) or N2BQ1B19=1 or N2BQ1B20=1 then A11c=1; else A11c=0; /*Past-
year*/
Label A11c='Past-year alcohol withdrawal criterion endorsement (withdrawal cluster)-0=negative
1=positive';
if (palcwithc=>2 and N2BQ1B18=1) or N2BQ1C19=1 or N2BQ1C20=1 then pA11c=1; else pA11c=0;
/*Prior-to-past-year*/
Label pA11c='Prior-to-past-year alcohol withdrawal criterion endorsement (withdrawal cluster)-
0=negative 1=positive';
if ((alcwithc=>2 and N2BQ1B17=1) or N2BQ1B19=1 or N2BQ1B20=1) or ((palcwithc=>2 and
N2BQ1B18=1) or N2BQ1C19=1 or N2BQ1C20=1) then lA11c=1; else lA11c=0; /*Lifetime*/
Label lA11c='Lifetime alcohol withdrawal criterion endorsement (withdrawal cluster)-0=negative
1=positive';

```

```

/*-Past-year (A1c-A11c) and prior-to-past-year (pA1c-pA11c) symptom counts
-Prior-to-past-year symptoms counts include N2BQ2A N2BQ2B and N2BQ2C to
denote SOME AUD symptoms occurred within same 12-month period
-Lifetime symptom count takes the largest symptom count from either past-year or prior-to-
past-year*/

alcsumc=sum(A1c, A2c, A3c, A4c, A5c, A6c, A7c, A8c, A9c, A10c, A11c); /*Past-year*/
Label alcsumc='Sum of past-year alcohol criteria (withdrawal cluster)';
if N2BQ2A=1 or N2BQ2B=1 or N2BQ2C=1 THEN palcsumc=sum(pA1c, pA2c, pA3c, pA4c, pA5c, pA6c,
pA7c, pA8c, pA9c, pA10c, pA11c); /*Prior-to-past-year*/
Label palcsumc='Sum of prior-to-past-year alcohol criteria (withdrawal cluster)';
lalcsumc=max(alcsumc, palcsumc); /*Lifetime*/
Label lalcsumc='Maximum sum of past-year or prior-to-past-year alcohol criteria (withdrawal
cluster)';

*AUD diagnoses - Explicit withdrawal clustering;
if alcsumc=>2 then AUDc=1; else AUDc=0; /*Past-year*/
Label AUDc='Past-year AUD diagnosis (withdrawal cluster)-0=negative 1=positive';
if palcsumc=>2 then pAUDc=1; else pAUDc=0; /*Prior-to-past-year*/
Label pAUDc='Prior-to-past-year AUD diagnosis (withdrawal cluster)-0=negative 1=positive';
if lalcsumc=>2 then lAUDc=1; else lAUDc=0; /*Lifetime*/
Label lAUDc='Lifetime AUD diagnosis (withdrawal cluster)-0=negative 1=positive';

*AUD Severity -Explicit withdrawal clustering;
if alcsumc<2 then AUDSEVc =0; /*Past-year - no AUD*/
if alcsumc=2 or alcsumc=3 then AUDSEVc =1; /*Past-year - mild AUD*/
if alcsumc=4 or alcsumc=5 then AUDSEVc =2; /*Past-year - moderate AUD*/
if alcsumc>=6 then AUDSEVc =3; /*Past-year - severe AUD*/
Label AUDSEVc='Past-year AUD severity grading (withdrawal cluster)-0=no AUD diagnosis, 1=mild
AUD, 2=moderate AUD and 3=severe AUD';

if palcsumc<2 then pAUDSEVc =0; /*Prior-to-past-year - no AUD*/
if palcsumc=2 or palcsumc=3 then pAUDSEVc =1; /*Prior-to-past-year - mild AUD*/
if palcsumc=4 or palcsumc=5 then pAUDSEVc =2; /*Prior-to-past-year - moderate AUD*/
if palcsumc>=6 then pAUDSEVc =3; /*Prior-to-past-year - severe AUD*/
Label pAUDSEVc='Prior-to-past-year AUD severity grading (withdrawal cluster)-0=no AUD
diagnosis, 1=mild AUD, 2=moderate AUD and 3=severe AUD';

if lalcsumc<2 then lAUDSEVc=0; /*Lifetime - no AUD*/
if lalcsumc=2 or lalcsumc=3 then lAUDSEVc=1; /*Lifetime - mild AUD*/
if lalcsumc=4 or lalcsumc=5 then lAUDSEVc=2; /*Lifetime - moderate AUD*/
if lalcsumc>=6 then lAUDSEVc=3; /*Lifetime - severe AUD*/
Label lAUDSEVc='Lifetime AUD severitygrading (withdrawal cluster)-0=no AUD diagnosis, 1=mild
AUD, 2=moderate AUD and 3=severe AUD';

```

AUD Criteria and Diagnoses Missing-Tolerant Algorithms Description

The SAS code contained herein derives past-year, prior-to-past-year and lifetime DSM–5 AUD diagnoses based on interview items in the AUDADIS–5. In the previous scoring algorithms, missing data is set to 0. The current scoring algorithms accommodate limited missing data in the classification of AUD diagnostic categories. Specifically, if enough items are completed such that the presence or absence of a diagnoses can be firmly established, the diagnosis is coded as either present or absent. In conditions with uncertainty, they are coded as missing (e.g., positive endorsement of one symptom with two missing symptoms would be coded as missing due to uncertainty of a positive endorsement of AUD). Also in cases where a severity score can be unambiguously assigned it is coded as indicated, but when there is uncertainty severity is coding as missing (e.g., positive endorsement of two symptoms with two missing symptoms would be coded as missing severity due to uncertainty of mild or moderate AUD severity grading). Because of this, it is possible to have definitive diagnoses with missing severity. Missing responses are coded with “.” Users are advised that estimates based on this SAS code will not exactly match published NESARC-III data for **severity scores** in the presence of missing data; however presence of diagnoses should match published NESARC-III data.

The names of the variables used in this SAS code have the same structure detailed in the “AUD Algorithms Description” section (pg. 2). The suffix “m” is appended to each variable to indicate the variable’s use in the present code. Additionally, this code includes two new variables ([alcsumm_miss](#) and [palcsumm_miss](#)) which count the number of missing symptoms for past-year and prior-to-past-year DUDs. These variables are used to account for missing data in AUD diagnoses and severity gradings. Individuals with missing symptom endorsements who positively endorsed two to five symptoms were not given a severity grading at certain levels of missing data. Thus, as previously mentioned, “missing” in AUD severity grading variables does not necessarily constitute a negative AUD diagnosis. See code for more details.

AUD Criteria and Diagnoses Missing-Tolerant Algorithms

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/*Larger/longer - Missing-tolerant*/
A1m=.; if N2BQ1B7=1 or N2BQ1B8=1 then A1m=1; if N2BQ1B7=2 and N2BQ1B8=2 then A1m=0; /*Past-
year*/
Label A1m='Past-year alcohol larger/longer criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pA1m=.; if N2BQ1C7=1 or N2BQ1C8=1 then pA1m=1; if N2BQ1C7=2 and N2BQ1C8=2 then pA1m=0;
/*Prior-to-past-year*/
Label pA1m='Prior-to-past-year alcohol larger/longer criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
lA1m=.; if N2BQ1A7=1 or N2BQ1A8=1 then lA1m=1; if N2BQ1A7=2 and N2BQ1A8=2 then lA1m=0;
/*Lifetime*/
Label lA1m='Lifetime larger/longer alcohol criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';

/*Quit or cut down - Missing-tolerant*/
A2m=.; if N2BQ1B5=1 or N2BQ1B6=1 then A2m=1; if N2BQ1B5=2 and N2BQ1B6=2 then A2m=0; /*Past-
year*/
Label A2m='Past-year alcohol quit or cut down criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pA2m=.; if N2BQ1C5=1 or N2BQ1C6=1 then pA2m=1; if N2BQ1C5=2 and N2BQ1C6=2 then pA2m=0;
/*Prior-to-past-year*/
Label pA2m='Prior-to-past-year alcohol quit or cut down criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lA2m=.; if N2BQ1A5=1 or N2BQ1A6=1 then lA2m=1; if N2BQ1A5=2 and N2BQ1A6=2 then lA2m=0;
/*Lifetime*/
Label lA2m='Lifetime alcohol quit or cut down criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Time spent - Missing-tolerant*/
A3m=.; if N2BQ1B21=1 or N2BQ1B22=1 then A3m=1; if N2BQ1B21=2 and N2BQ1B22=2 then A3m=0;
/*Past-year*/
Label A3m='Past-year alcohol time spent criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pA3m=.; if N2BQ1C21=1 or N2BQ1C22=1 then pA3m=1; if N2BQ1C21=2 and N2BQ1C22=2 then pA3m=0;
/*Prior-to-past-year*/
Label pA3m='Prior-to-past-year alcohol time spent criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
lA3m=.; if N2BQ1A21=1 or N2BQ1A22=1 then lA3m=1; if N2BQ1A21=2 and N2BQ1A22=2 then lA3m=0;
/*Lifetime*/
Label lA3m='Lifetime alcohol time spent criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';

/*Craving - Missing-tolerant*/
A4m=.; if N2BQ1B28=1 or N2BQ1B29=1 then A4m=1; if N2BQ1B28=2 and N2BQ1B29=2 then A4m=0;
/*Past-year*/
Label A4m='Past-year alcohol craving criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pA4m=.; if N2BQ1C28=1 or N2BQ1C29=1 then pA4m=1; if N2BQ1C28=2 and N2BQ1C29=2 then pA4m=0;
/*Prior-to-past-year*/
Label pA4m='Prior-to-past-year alcohol craving criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
lA4m=.; if N2BQ1A28=1 or N2BQ1A29=1 then lA4m=1; if N2BQ1A28=2 and N2BQ1A29=2 then lA4m=0;
/*Lifetime*/
Label lA4m='Lifetime alcohol craving criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';

/*Role interference - Missing-tolerant*/

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A5m=.; if N2BQ1B30=1 or N2BQ1B31=1 or N2BQ1B32=1 then A5m=1; if N2BQ1B30=2 and N2BQ1B31=2 and
N2BQ1B32=2 then A5m=0; /*Past-year*/
Label A5m='Past-year alcohol role interference criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pA5m=.; if N2BQ1C30=1 or N2BQ1C31=1 or N2BQ1C32=1 then pA5m=1; if N2BQ1C30=2 and N2BQ1C31=2
and N2BQ1C32=2 then pA5m=0; /*Prior-to-past-year*/
Label pA5m='Prior-to-past-year alcohol role interference criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lA5m=.; if N2BQ1A30=1 or N2BQ1A31=1 or N2BQ1A32=1 then lA5m=1; if N2BQ1A30=2 and N2BQ1A31=2
and N2BQ1A32=2 then lA5m=0; /*Lifetime*/
Label lA5m='Lifetime alcohol role interference criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Social problems - Missing-tolerant*/
A6m=.; if N2BQ1B37=1 or N2BQ1B38=1 or N2BQ1B39=1 then A6m=1; if N2BQ1B37=2 and N2BQ1B38=2 and
N2BQ1B39=2 then A6m=0; /*Past-year*/
Label A6m='Past-year alcohol social problems criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pA6m=.; if N2BQ1C37=1 or N2BQ1C38=1 or N2BQ1C39=1 then pA6m=1; if N2BQ1C37=2 and N2BQ1C38=2
and N2BQ1C39=2 then pA6m=0; /*Prior-to-past-year*/
Label pA6m='Prior-to-past-year alcohol social problems criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lA6m=.; if N2BQ1A37=1 or N2BQ1A38=1 or N2BQ1A39=1 then lA6m=1; if N2BQ1A37=2 and N2BQ1A38=2
and N2BQ1A39=2 then lA6m=0; /*Lifetime*/
Label lA6m='Lifetime alcohol social problems criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Give up - Missing-tolerant*/
A7m=.; if N2BQ1B23=1 or N2BQ1B24=1 then A7m=1; if N2BQ1B23=2 and N2BQ1B24=2 then A7m=0;
/*Past-year*/
Label A7m='Past-year alcohol give up criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pA7m=.; if N2BQ1C23=1 or N2BQ1C24=1 then pA7m=1; if N2BQ1C23=2 and N2BQ1C24=2 then pA7m=0;
/*Prior-to-past-year*/
Label pA7m='Prior-to-past-year alcohol give up criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
lA7m=.; if N2BQ1A23=1 or N2BQ1A24=1 then lA7m=1; if N2BQ1A23=2 and N2BQ1A24=2 then lA7m=0;
/*Lifetime*/
Label lA7m='Lifetime alcohol give up criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';

/*Hazardous use - Missing-tolerant*/
A8m=.; if N2BQ1B33=1 or N2BQ1B34=1 or N2BQ1B35=1 or N2BQ1B36=1 then A8m=1; if N2BQ1B33=2 and
N2BQ1B34=2 and N2BQ1B35=2 and N2BQ1B36=2 then A8m=0; /*Past-year*/
Label A8m='Past-year alcohol hazardous use criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pA8m=.; if N2BQ1C33=1 or N2BQ1C34=1 or N2BQ1C35=1 or N2BQ1C36=1 then pA8m=1; if N2BQ1C33=2 and
N2BQ1C34=2 and N2BQ1C35=2 and N2BQ1C36=2 then pA8m=0; /*Prior-to-past-year*/
Label pA8m='Prior-to-past-year alcohol hazardous use criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
lA8m=.; if N2BQ1A33=1 or N2BQ1A34=1 or N2BQ1A35=1 or N2BQ1A36=1 then lA8m=1; if N2BQ1A33=2 and
N2BQ1A34=2 and N2BQ1A35=2 and N2BQ1A36=2 then lA8m=0; /*Lifetime*/
Label lA8m='Lifetime alcohol hazardous use criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';

/*Continued use despite problems - Missing-tolerant*/
A9m=.; if N2BQ1B25=1 or N2BQ1B26=1 or N2BQ1B27=1 then A9m=1; if N2BQ1B25=2 and N2BQ1B26=2 and
N2BQ1B27=2 then A9m=0; /*Past-year*/

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Label A9m='Past-year alcohol continued use despite problems criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
pA9m=.; if N2BQ1C25=1 or N2BQ1C26=1 or N2BQ1C27=1 then pA9m=1; if N2BQ1C25=2 and N2BQ1C26=2
and N2BQ1C27=2 then pA9m=0; /*Prior-to-past-year*/
Label pA9m='Prior-to-past-year alcohol continued use despite problems criterion endorsement
(missing-tolerant)-.=missing, 0=negative, 1=positive';
lA9m=.; if N2BQ1A25=1 or N2BQ1A26=1 or N2BQ1A27=1 then lA9m=1; if N2BQ1A25=2 and N2BQ1A26=2
and N2BQ1A27=2 then lA9m=0; /*Lifetime*/
Label lA9m='Lifetime alcohol continued use despite problems criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';

/*Tolerance - Missing-tolerant*/
A10m=.; if N2BQ1B1=1 or N2BQ1B2=1 or N2BQ1B3=1 or N2BQ1B4=1 then A10m=1; if N2BQ1B1=2 and
N2BQ1B2=2 and N2BQ1B3=2 and N2BQ1B4=2 then A10m=0; /*Past-year*/
Label A10m='Past-year alcohol tolerance criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pA10m=.; if N2BQ1C1=1 or N2BQ1C2=1 or N2BQ1C3=1 or N2BQ1C4=1 then pA10m=1; if N2BQ1C1=2 and
N2BQ1C2=2 and N2BQ1C3=2 and N2BQ1C4=2 then pA10m=0; /*Prior-to-past-year*/
Label pA10m='Prior-to-past-year alcohol tolerance criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
lA10m=.; if N2BQ1A1=1 or N2BQ1A2=1 or N2BQ1A3=1 or N2BQ1A4=1 then lA10m=1; if N2BQ1A1=2 and
N2BQ1A2=2 and N2BQ1A3=2 and N2BQ1A4=2 then lA10m=0; /*Lifetime*/
Label lA10m='Lifetime alcohol tolerance criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';

/*Withdrawal - Missing-tolerant*/
*Withdrawal subalgorithm - sum of withdrawal symptoms;
alcwithm=.; alcwithm=sum(N2BQ1B9=1, N2BQ1B10=1, N2BQ1B11=1, N2BQ1B12=1, N2BQ1B13=1,
N2BQ1B14=1, N2BQ1B15=1, N2BQ1B16=1);
if N2BQ1B9=2 and N2BQ1B10=2 and N2BQ1B11=2 and N2BQ1B12=2 and N2BQ1B13=2 and N2BQ1B14=2
N2BQ1B15=2 and N2BQ1B16=2 then alcwithm=0; /*Past-year*/
Label alcwithm='Sum of past-year alcohol withdrawal symptoms (missing-tolerant)';
palcwithm=.; palcwithm=sum(N2BQ1C9=1, N2BQ1C10=1, N2BQ1C11=1, N2BQ1C12=1, N2BQ1C13=1,
N2BQ1C14=1, N2BQ1C15=1, N2BQ1C16=1);
if N2BQ1C9=2 and N2BQ1C10=2 and N2BQ1C11=2 and N2BQ1C12=2 and N2BQ1C13=2 and N2BQ1C14=2
N2BQ1C15=2 and N2BQ1C16=2 then palcwithm=0; /*Prior-to-past-year*/
Label palcwithm='Sum of prior-to-past-year alcohol withdrawal symptoms (missing-tolerant)';

*Withdrawal - using subalgorithm;
Allm=.; if alcwithm=>2 or N2BQ1B19=1 or N2BQ1B20=1 then Allm=1; if (alcwithm<2 and alcwithm>.)
and N2BQ1B19=2 and N2BQ1B20=2 then Allm=0; /*Past-year*/
Label Allm='Past-year alcohol withdrawal criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pAllm=.; if palcwithm=>2 or N2BQ1C19=1 or N2BQ1C20=1 then pAllm=1; if (palcwithm<2 and
palcwithm>.) and N2BQ1C19=2 and N2BQ1C20=2 then pAllm=0; /*Prior-to-past-year*/
Label pAllm='Prior-to-past-year alcohol withdrawal criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
lAllm=.; if (alcwithm=>2 or N2BQ1B19=1 or N2BQ1B20=1) or (palcwithm=>2 or N2BQ1C19=1 or
N2BQ1C20=1) then lAllm=1;
if (alcwithm<2 and alcwithm>.) and N2BQ1B19=2 and N2BQ1B20=2 and (palcwithm<2 and palcwithm>.)
and N2BQ1C19=2 and N2BQ1C20=2 then lAllm=0; /*Lifetime*/
Label lAllm='Lifetime alcohol withdrawal criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';

/*-Past-year (Alm-Allm) and prior-to-past-year (pAlm-pAllm) symptom counts
-Prior-to-past-year symptoms counts include N2BQ2A N2BQ2B and N2BQ2C to
denote SOME AUD symptoms occurred within same 12-month period
-Lifetime symptom count takes the largest symptom count from either past-year or prior-to-
past-year*/

```



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alclsum=sum(A1m, A2m, A3m, A4m, A5m, A6m, A7m, A8m, A9m, A10m, A11m); /*Past-year*/
Label alclsum='Sum of past-year alcohol criteria (missing-tolerant)';
if N2BQ2A=1 or N2BQ2B=1 or N2BQ2C=1 THEN palclsum=sum(pA1m, pA2m, pA3m, pA4m, pA5m, pA6m,
pA7m, pA8m, pA9m, pA10m, pA11m); /*Prior-to-past-year*/
Label palclsum='Sum of prior-to-past-year alcohol criteria (missing-tolerant)';
lalclsum=max(alclsum, palclsum); /*Lifetime*/
Label lalclsum='Maximum sum of past-year or prior-to-past-year alcohol criteria (missing-
tolerant)';

/*Number of missing criteria*/
alclsum_miss=nmiss(A1m, A2m, A3m, A4m, A5m, A6m, A7m, A8m, A9m, A10m, A11m); /*Past-year*/
Label alclsum_miss='Sum of past-year missing alcohol criteria (missing-tolerant)';
palclsum_miss=nmiss(pA1m, pA2m, pA3m, pA4m, pA5m, pA6m, pA7m, pA8m, pA9m, pA10m, pA11m);
/*Prior-to-past-year*/
Label palclsum_miss='Sum of prior-to-past-year alcohol criteria (missing-tolerant)';

*AUD diagnoses - Missing-Tolerant;
AUDm=.; if alclsum=>2 then AUDm=1; if alclsum<2 and alclsum>. then AUDm=0; /*Past-year*/
Label AUDm='Past-year AUD diagnosis (missing-tolerant)-.=missing, 0=negative 1=positive';
pAUDm=.; if palclsum=>2 then pAUDm=1; if palclsum<2 and palclsum>. then pAUDm=0; /*Prior-to-
past-year*/
Label pAUDm='Prior-to-past-year AUD diagnosis (missing-tolerant)-.=missing, 0=negative
1=positive';
lAUDm=.; if lalclsum=>2 then lAUDm=1; if lalclsum<2 and lalclsum>. then lAUDm=0; /*Lifetime*/
Label lAUDm='Lifetime AUD diagnosis (missing-tolerant)-.=missing, 0=negative 1=positive';

*AUD Severity - Missing-Tolerant;
if (alclsum=2 and alclsum_miss>=2) or (alclsum=3 and alclsum_miss>=1) or (alclsum=4 and
alclsum_miss>=2)
or (alclsum=5 and alclsum_miss>=1) then AUDSEVm=.; /*Past-year - missing AUD severity*/
if (alclsum=0 and alclsum_miss<2) or (alclsum=1 and alclsum_miss=0) then AUDSEVm=0; /*Past-
year - no AUD diagnosis*/
if (alclsum=2 and alclsum_miss<2) or (alclsum=3 and alclsum_miss=0) then AUDSEVm=1; /*Past-
year - mild AUD*/
if (alclsum=4 and alclsum_miss<2) or (alclsum=5 and alclsum_miss=0) then AUDSEVm=2; /*Past-
year - moderate AUD*/
if alclsum>=6 then AUDSEVm=3; /*Past-year - severe AUD*/
Label AUDSEVm='Past-year AUD severity grading (missing-tolerant)-.=missing, 0=no AUD
diagnosis, 1=mild AUD, 2=moderate AUD and 3=severe AUD';

if (palclsum=2 and palclsum_miss>=2) or (palclsum=3 and palclsum_miss>=1) or (palclsum=4 and
palclsum_miss>=2)
or (palclsum=5 and palclsum_miss>=1) then pAUDSEVm=1; /*Prior-to-past-year - missing AUD
severity*/
if (palclsum=0 and palclsum_miss<2) or (palclsum=1 and palclsum_miss=0) then pAUDSEVm=0;
/*Prior-to-past-year - no AUD diagnosis*/
if (palclsum=2 and palclsum_miss<2) or (palclsum=3 and palclsum_miss=0) then pAUDSEVm=1;
/*Prior-to-past-year - mild AUD*/
if (palclsum=4 and palclsum_miss<2) or (palclsum=5 and palclsum_miss=0) then pAUDSEVm=2;
/*Prior-to-past-year - moderate AUD*/
if palclsum>=6 then pAUDSEVm=3; /*Prior-to-past-year - severe AUD*/
Label pAUDSEVm='Prior-to-past-year AUD severity grading (missing-tolerant)-.=missing, 0=no AUD
diagnosis, 1=mild AUD, 2=moderate AUD and 3=severe AUD';

if AUDSEVm=. or pAUDSEVm=. then lAUDSEVm=.; /*Lifetime - missing AUD severity*/
if max(AUDSEVm, pAUDSEVm)=0 and (AUDSEVm^=. and pAUDSEVm^=.) then lAUDSEVm=0; /*Lifetime - no
AUD diagnosis*/
if max(AUDSEVm, pAUDSEVm)=1 then lAUDSEVm=1; /*Lifetime - mild AUD*/
if max(AUDSEVm, pAUDSEVm)=2 then lAUDSEVm=2; /*Lifetime - moderate AUD*/

```

```
if max(AUDSEVm, pAUDSEVm)=3 then lAUDSEVm=3; /*Lifetime - severe AUD*/  
Label lAUDSEVm='Lifetime AUD severity grading (missing-tolerant)-.=missing, 0=no AUD  
diagnosis, 1=mild AUD, 2=moderate AUD and 3=severe AUD';
```

Drug Use Disorders (DUD) Algorithms Description²

The SAS code contained herein derives past-year, prior-to-past-year and lifetime DSM-5 (APA, 2013) DUD diagnoses for the following substances based on interview items in the AUDADIS-5 (Grant et al., 2011): sedatives, opioids, cannabis, cocaine, stimulants, club drugs, hallucinogens, solvents, heroin and other/unknown. AUDADIS-5 was the data collection instrument of the 2012-2013 NESARC-III (Grant et al., 2014) conducted by the NIAAA. The full version of the document is posted at

https://www.phenxtoolkit.org/toolkit_content/supplemental_info/atos/additional_info/NESARC_III_Manual.pdf

Questions concerning “medicine experiences” can be found in Section 3C of the AUDADIS-5. For the convenience of users, this section is included in Appendix B. Note that not all questions are administered to all respondents because of skip patterns in the AUDADIS-5. For example, lifetime abstainers (i.e., never used any substance in life) skip Section 3C entirely. Ex-users (i.e., used any substance in life but not in the past-year) answer column (a), (d) and (e) questions only in Section 3C, whereas current substance users are asked questions from columns (a) through (e) when appropriate.

The names of the NESARC-III variables used in the SAS code for DSM-5 DUD diagnosis are affixed to their corresponding questions. The SAS code creates several dichotomous variables (with values 0 = negative and 1 = positive) for substance-specific criterion endorsement and diagnoses. The SAS code also creates symptom count variables and severity variables (with values 0 = negative, 1 = mild 2-3 symptoms, 2 = moderate 4-5 symptoms and 3 = severe 6+ symptoms). As noted in the SAS code, variables with no prefix represent a past-year variable, “p” represents a prior-to-past-year variable and “l” represents a lifetime variable. The SAS code reproduces estimates provided in published NESARC-III data² for all substance-specific DUDs; however, users should be advised that this might not reflect the exact algorithm used by the NESARC-III team.

Users should also note the algorithms in the “Any DUD Diagnoses Algorithms” section (pg. 48) underestimates published past-year and lifetime mild DUD estimates by n=1, and overestimates published moderate-to-severe past-year and lifetime DUD estimates by n=1 (Grant et al. 2016). However, prevalence percentages for past-year and lifetime DUD severity gradings are consistent with published data from the NESARC-III team (Goldstein et al., 2015; Grant et al., 2016). No publications were available to match prior-to-past-year DUD diagnoses or DUD severity gradings.

²As the NESARC-III data file already has included derived variables for past-year, prior-to-past-year and lifetime DSM-5 DUD diagnoses, NESARC-III data users are advised to use these derived variables directly. Past-year and lifetime DUD severity variables were matched to published severity estimates in Goldstein et al. (2015) for the following substances: sedatives, opioids, cannabis, cocaine, stimulants and heroin. No publications were available to match severity prevalence for the following substances: hallucinogens, club drugs, solvents and other/unknown drugs. Prior-to-past-year DUDs’ severity were not included in published literature.

Users should also note the DSM-5 describes severity scores for past-year DUD diagnoses only. That is, although the NESARC-III group has published lifetime severity prevalence rates (Goldstein et al., 2015; Grant et al., 2016) this construct has yet to be established in the more general literature. In addition, as documented in our code, the AUDADIS-5 only resolves temporal clustering of two or more criteria in making prior-to-past-year and lifetime diagnoses. Consequently, the grading of mild, moderate and severe prior-to-past-year and lifetime diagnoses assumes that all symptoms reported are clustered within a 12 month period or “about the same time.” Although this approach yields numbers comparable to those published by the NESARC-III group, users should know this is somewhat prudely resolved because of the way clustering is assessed (i.e., requiring only two or more about the same time).

Sedative Use Disorder (SEDUD) Criteria and Diagnoses Algorithms

```

/*Sedative - Larger/longer*/
if N3CD1Q1C32=1 then SEDA1=1; else SEDA1=0; /*Past-year*/
Label SEDA1='Past-year sedative larger/longer criterion endorsement-0=negative 1=positive';
if N3CD1Q1E32=1 then pSEDA1=1; else pSEDA1=0; /*Prior-to-past-year*/
Label pSEDA1='Prior-to-past-year sedative larger/longer criterion endorsement-0=negative
1=positive';
if N3CD1Q1C32=1 or N3CD1Q1E32=1 then lSEDA1=1; else lSEDA1=0; /*Lifetime*/
Label lSEDA1='Lifetime larger/longer sedative criterion endorsement-0=negative 1=positive';

/*Sedative - Quit or cut down*/
if N3CD1Q1C30=1 or N3CD1Q1C31=1 then SEDA2=1; else SEDA2=0; /*Past-year*/
Label SEDA2='Past-year sedative quit or cut down criterion endorsement-0=negative 1=positive';
if N3CD1Q1E30=1 or N3CD1Q1E31=1 then pSEDA2=1; else pSEDA2=0; /*Prior-to-past-year*/
Label pSEDA2='Prior-to-past-year sedative quit or cut down criterion endorsement-0=negative
1=positive';
if N3CD1Q1C30=1 or N3CD1Q1E30=1 or N3CD1Q1C31=1 or N3CD1Q1E31=1 then lSEDA2=1; else lSEDA2=0;
/*Lifetime*/
Label lSEDA2='Lifetime sedative quit or cut down criterion endorsement-0=negative 1=positive';

/*Sedative - Time spent*/
if N3CD1Q1C33=1 or N3CD1Q1C34=1 then SEDA3=1; else SEDA3=0; /*Past-year*/
Label SEDA3='Past-year sedative time spent criterion endorsement-0=negative 1=positive';
if N3CD1Q1E33=1 or N3CD1Q1E34=1 then pSEDA3=1; else pSEDA3=0; /*Prior-to-past-year*/
Label pSEDA3='Prior-to-past-year sedative time spent criterion endorsement-0=negative
1=positive';
if N3CD1Q1C33=1 or N3CD1Q1E33=1 or N3CD1Q1C34=1 or N3CD1Q1E34=1 then lSEDA3=1; else lSEDA3=0;
/*Lifetime*/
Label lSEDA3='Lifetime sedative time spent criterion endorsement-0=negative 1=positive';

/*Sedative - Craving*/
if N3CD1Q1C39=1 or N3CD1Q1C40=1 then SEDA4=1; else SEDA4=0; /*Past-year*/
Label SEDA4='Past-year sedative craving criterion endorsement-0=negative 1=positive';
if N3CD1Q1E39=1 or N3CD1Q1E40=1 then pSEDA4=1; else pSEDA4=0; /*Prior-to-past-year*/
Label pSEDA4='Prior-to-past-year sedative craving criterion endorsement-0=negative
1=positive';
if N3CD1Q1C39=1 or N3CD1Q1E39=1 or N3CD1Q1C40=1 or N3CD1Q1E40=1 then lSEDA4=1; else lSEDA4=0;
/*Lifetime*/
Label lSEDA4='Lifetime sedative craving criterion endorsement-0=negative 1=positive';

/*Sedative - Role interference*/
if N3CD1Q1C44=1 or N3CD1Q1C45=1 or N3CD1Q1C46=1 then SEDA5=1; else SEDA5=0; /*Past-year*/
Label SEDA5='Past-year sedative role interference criterion endorsement-0=negative
1=positive';
if N3CD1Q1E44=1 or N3CD1Q1E45=1 or N3CD1Q1E46=1 then pSEDA5=1; else pSEDA5=0; /*Prior-to-past-
year*/
Label pSEDA5='Prior-to-past-year sedative role interference criterion endorsement-0=negative
1=positive';
if N3CD1Q1C44=1 or N3CD1Q1E44=1 or N3CD1Q1C45=1 or N3CD1Q1E45=1 or N3CD1Q1C46=1 or
N3CD1Q1E46=1 then lSEDA5=1; else lSEDA5=0; /*Lifetime*/
Label lSEDA5='Lifetime sedative role interference criterion endorsement-0=negative
1=positive';

/*Sedative - Social problems*/
if N3CD1Q1C41=1 or N3CD1Q1C42=1 or N3CD1Q1C43=1 then SEDA6=1; else SEDA6=0; /*Past-year*/
Label SEDA6='Past-year sedative social problems criterion endorsement-0=negative 1=positive';
if N3CD1Q1E41=1 or N3CD1Q1E42=1 or N3CD1Q1E43=1 then pSEDA6=1; else pSEDA6=0; /*Prior-to-past-
year*/

```

```

Label pSEDA6='Prior-to-past-year sedative social problems criterion endorsement-0=negative
1=positive';
if N3CD1Q1C41=1 or N3CD1Q1E41=1 or N3CD1Q1C42=1 or N3CD1Q1E42=1 or N3CD1Q1C43=1 or
N3CD1Q1E43=1 then lSEDA6=1; else lSEDA6=0; /*Lifetime*/
Label lSEDA6='Lifetime sedative social problems criterion endorsement-0=negative 1=positive';

/*Sedative - Give up*/
if N3CD1Q1C35=1 or N3CD1Q1C36=1 then SEDA7=1; else SEDA7=0; /*Past-year*/
Label SEDA7='Past-year sedative give up criterion endorsement-0=negative 1=positive';
if N3CD1Q1E35=1 or N3CD1Q1E36=1 then pSEDA7=1; else pSEDA7=0; /*Prior-to-past-year*/
Label pSEDA7='Prior-to-past-year sedative give up criterion endorsement-0=negative
1=positive';
if N3CD1Q1C35=1 or N3CD1Q1E35=1 or N3CD1Q1C36=1 or N3CD1Q1E36=1 then lSEDA7=1; else lSEDA7=0;
/*Lifetime*/
Label lSEDA7='Lifetime sedative give up criterion endorsement-0=negative 1=positive';

/*Sedative - Hazardous use*/
if N3CD1Q1C47=1 or N3CD1Q1C48=1 then SEDA8=1; else SEDA8=0; /*Past-year*/
Label SEDA8='Past-year sedative hazardous use criterion endorsement-0=negative 1=positive';
if N3CD1Q1E47=1 or N3CD1Q1E48=1 then pSEDA8=1; else pSEDA8=0; /*Prior-to-past-year*/
Label pSEDA8='Prior-to-past-year sedative hazardous use criterion endorsement-0=negative
1=positive';
if N3CD1Q1C47=1 or N3CD1Q1E47=1 or N3CD1Q1C48=1 or N3CD1Q1E48=1 then lSEDA8=1; else lSEDA8=0;
/*Lifetime*/
Label lSEDA8='Lifetime sedative hazardous use criterion endorsement-0=negative 1=positive';

/*Sedative - Continued use despite problems*/
if N3CD1Q1C37=1 or N3CD1Q1C38=1 then SEDA9=1; else SEDA9=0; /*Past-year*/
Label SEDA9='Past-year sedative continued use despite problems criterion endorsement-
0=negative 1=positive';
if N3CD1Q1E37=1 or N3CD1Q1E38=1 then pSEDA9=1; else pSEDA9=0; /*Prior-to-past-year*/
Label pSEDA9='Prior-to-past-year sedative continued use despite problems criterion
endorsement-0=negative 1=positive';
if N3CD1Q1C37=1 or N3CD1Q1E37=1 or N3CD1Q1C38=1 or N3CD1Q1E38=1 then lSEDA9=1; else lSEDA9=0;
/*Lifetime*/
Label lSEDA9='Lifetime sedative continued use despite problems criterion endorsement-
0=negative 1=positive';

/*Sedative - Tolerance*/
if N3CD1Q1C1=1 or N3CD1Q1C2=1 then SEDA10=1; else SEDA10=0; /*Past-year*/
Label SEDA10='Past-year sedative tolerance criterion endorsement-0=negative 1=positive';
if N3CD1Q1E1=1 or N3CD1Q1E2=1 then pSEDA10=1; else pSEDA10=0; /*Prior-to-past-year*/
Label pSEDA10='Prior-to-past-year sedative tolerance criterion endorsement-0=negative
1=positive';
if N3CD1Q1C1=1 or N3CD1Q1E1=1 or N3CD1Q1C2=1 or N3CD1Q1E2=1 then lSEDA10=1; else lSEDA10=0;
/*Lifetime*/
Label lSEDA10='Lifetime sedative tolerance criterion endorsement-0=negative 1=positive';

/*Sedative - Withdrawal*/
*Sedative - Withdrawal subalgorithm - sum of withdrawal symptoms;
sedwith=sum((N3CD1Q1C6=1 or N3CD1Q1C26=1), N3CD1Q1C7=1, N3CD1Q1C11=1, N3CD1Q1C14=1,
N3CD1Q1C18=1, N3CD1Q1C19=1, N3CD1Q1C20=1, N3CD1Q1C21=1); /*past-year withdrawal symptom
count*/
Label sedwith='Sum of past-year sedative withdrawal symptoms';
psedwith=sum((N3CD1Q1E6=1 or N3CD1Q1E26=1), N3CD1Q1E7=1, N3CD1Q1E11=1, N3CD1Q1E14=1,
N3CD1Q1E18=1, N3CD1Q1E19=1, N3CD1Q1E20=1, N3CD1Q1E21=1); /*prior-to-past-year withdrawal
symptom count*/
Label psedwith='Sum of prior-to-past-year sedative withdrawal symptoms';

```

```

*Sedative - Withdrawal - using subalgorithm;
if sedwith=>2 or N3CD1Q1C29=1 then SEDA11=1; else SEDA11=0; /*Past-year*/
Label SEDA11='Past-year sedative withdrawal criterion endorsement-0=negative 1=positive';
if pседwith=>2 or N3CD1Q1E29=1 then pSEDA11=1; else pSEDA11=0; /*Prior-to-past-year*/
Label pSEDA11='Prior-to-past-year sedative withdrawal criterion endorsement-0=negative
1=positive';
if sedwith=>2 or N3CD1Q1C29=1 or pседwith=>2 or N3CD1Q1E29=1 then lSEDA11=1; else lSEDA11=0;
/*Lifetime*/
Label lSEDA11='Lifetime sedative withdrawal criterion endorsement-0=negative 1=positive';

/*-Past-year (SEDA1-SEDA11) and prior-to-past-year (pSEDA1-pSEDA11) symptom counts
-Prior-to-past-year symptoms counts include N3CD1Q2A to
denote SOME SEDUD symptoms occurred within same 12-month period
-Lifetime symptom count takes the largest symptom count from either past-year or prior-to-
past-year;*/

sedsum=sum(SEDA1, SEDA2, SEDA3, SEDA4, SEDA5, SEDA6, SEDA7, SEDA8, SEDA9, SEDA10, SEDA11);
/*Past-year*/
Label sedsum='Sum of past-year sedative criteria';
if N3CD1Q2A=1 THEN pседsum=sum(pSEDA1, pSEDA2, pSEDA3, pSEDA4, pSEDA5, pSEDA6, pSEDA7, pSEDA8,
pSEDA9, pSEDA10, pSEDA11); /*Prior-to-past-year*/
Label pседsum='Sum of prior-to-past-year sedative criteria';
lседsum=max(sedsum, pседsum); /*Lifetime*/
Label lседsum='Maximum sum of past-year or prior-to-past-year sedative criteria';

*SEDUD diagnoses;
if sedsum=>2 then SEDUD=1; else SEDUD=0; /*Past-year*/
Label SEDUD='Past-year SEDUD diagnosis-0=negative 1=positive';
if pседsum=>2 then pSEDUD=1; else pSEDUD=0; /*Prior-to-past-year*/
Label pSEDUD='Prior-to-past-year SEDUD diagnosis-0=negative 1=positive';
if lседsum=>2 then lSEDUD=1; else lSEDUD=0; /*Lifetime*/
Label lSEDUD='Lifetime SEDUD diagnosis-0=negative 1=positive';

*SEDUD severity;
if sedsum<2 then SEDUDSEV =0; /*Past-year - no SEDUD*/
if sedsum=2 or sedsum=3 then SEDUDSEV=1; /*Past-year - mild SEDUD*/
if sedsum=4 or sedsum=5 then SEDUDSEV=2; /*Past-year - moderate SEDUD*/
if sedsum>=6 then SEDUDSEV =3; /*Past-year - severe SEDUD*/
Label SEDUDSEV='Past-year SEDUD severity grading-0=no diagnosis, 1=mild SEDUD, 2=moderate
SEDUD and 3=severe SEDUD';

if pседsum<2 then pSEDUDSEV=0; /*Prior-to-past-year - no SEDUD*/
if pседsum=2 or pседsum=3 then pSEDUDSEV=1; /*Prior-to-past-year - mild SEDUD*/
if pседsum=4 or pседsum=5 then pSEDUDSEV=2; /*Prior-to-past-year - moderate SEDUD*/
if pседsum>=6 then pSEDUDSEV=3; /*Prior-to-past-year - severe SEDUD*/
Label pSEDUDSEV='Prior-to-past-year SEDUD severity grading-0=no diagnosis, 1=mild SEDUD,
2=moderate SEDUD and 3=severe SEDUD';

if lседsum<2 then lSEDUDSEV=0; /*Lifetime - no SEDUD*/
if lседsum=2 or lседsum=3 then lSEDUDSEV=1; /*Lifetime - mild SEDUD*/
if lседsum=4 or lседsum=5 then lSEDUDSEV=2; /*Lifetime - moderate SEDUD*/
if lседsum>=6 then lSEDUDSEV=3; /*Lifetime - severe SEDUD*/
Label lSEDUDSEV='Lifetime SEDUD severity grading-0=no diagnosis, 1=mild SEDUD, 2=moderate
SEDUD and 3=severe SEDUD';

```

Opioid Use Disorder (OPUD) Criteria and Diagnoses Algorithms

```

/*Opioid - Larger/longer*/
if N3CD2Q1C32=1 then OPA1=1; else OPA1=0; /*Past-year*/
Label OPA1='Past-year opioid larger/longer criterion endorsement-0=negative 1=positive';
if N3CD2Q1E32=1 then pOPA1=1; else pOPA1=0; /*Prior-to-past-year*/
Label pOPA1='Prior-to-past-year opioid larger/longer criterion endorsement-0=negative
1=positive';
if N3CD2Q1C32=1 or N3CD2Q1E32=1 then lOPA1=1; else lOPA1=0; /*Lifetime*/
Label lOPA1='Lifetime larger/longer opioid criterion endorsement-0=negative 1=positive';

/*Opioid - Quit or cut down*/
if N3CD2Q1C30=1 or N3CD2Q1C31=1 then OPA2=1; else OPA2=0; /*Past-year*/
Label OPA2='Past-year opioid quit or cut down criterion endorsement-0=negative 1=positive';
if N3CD2Q1E30=1 or N3CD2Q1E31=1 then pOPA2=1; else pOPA2=0; /*Prior-to-past-year*/
Label pOPA2='Prior-to-past-year opioid quit or cut down criterion endorsement-0=negative
1=positive';
if N3CD2Q1C30=1 or N3CD2Q1E30=1 or N3CD2Q1C31=1 or N3CD2Q1E31=1 then lOPA2=1; else lOPA2=0;
/*Lifetime*/
Label lOPA2='Lifetime opioid quit or cut down criterion endorsement-0=negative 1=positive';

/*Opioid - Time spent*/
if N3CD2Q1C33=1 or N3CD2Q1C34=1 then OPA3=1; else OPA3=0; /*Past-year*/
Label OPA3='Past-year opioid time spent criterion endorsement-0=negative 1=positive';
if N3CD2Q1E33=1 or N3CD2Q1E34=1 then pOPA3=1; else pOPA3=0; /*Prior-to-past-year*/
Label pOPA3='Prior-to-past-year opioid time spent criterion endorsement-0=negative
1=positive';
if N3CD2Q1C33=1 or N3CD2Q1E33=1 or N3CD2Q1C34=1 or N3CD2Q1E34=1 then lOPA3=1; else lOPA3=0;
/*Lifetime*/
Label lOPA3='Lifetime opioid time spent criterion endorsement-0=negative 1=positive';

/*Opioid - Craving*/
if N3CD2Q1C39=1 or N3CD2Q1C40=1 then OPA4=1; else OPA4=0; /*Past-year*/
Label OPA4='Past-year opioid craving criterion endorsement-0=negative 1=positive';
if N3CD2Q1E39=1 or N3CD2Q1E40=1 then pOPA4=1; else pOPA4=0; /*Prior-to-past-year*/
Label pOPA4='Prior-to-past-year opioid craving criterion endorsement-0=negative 1=positive';
if N3CD2Q1C39=1 or N3CD2Q1E39=1 or N3CD2Q1C40=1 or N3CD2Q1E40=1 then lOPA4=1; else lOPA4=0;
/*Lifetime*/
Label lOPA4='Lifetime opioid craving criterion endorsement-0=negative 1=positive';

/*Opioid - Role interference*/
if N3CD2Q1C44=1 or N3CD2Q1C45=1 or N3CD2Q1C46=1 then OPA5=1; else OPA5=0; /*Past-year*/
Label OPA5='Past-year opioid role interference criterion endorsement-0=negative 1=positive';
if N3CD2Q1E44=1 or N3CD2Q1E45=1 or N3CD2Q1E46=1 then pOPA5=1; else pOPA5=0; /*Prior-to-past-
year*/
Label pOPA5='Prior-to-past-year opioid role interference criterion endorsement-0=negative
1=positive';
if N3CD2Q1C44=1 or N3CD2Q1E44=1 or N3CD2Q1C45=1 or N3CD2Q1E45=1 or N3CD2Q1C46=1 or
N3CD2Q1E46=1 then lOPA5=1; else lOPA5=0; /*Lifetime*/
Label lOPA5='Lifetime opioid role interference criterion endorsement-0=negative 1=positive';

/*Opioid - Social problems*/
if N3CD2Q1C41=1 or N3CD2Q1C42=1 or N3CD2Q1C43=1 then OPA6=1; else OPA6=0; /*Past-year*/
Label OPA6='Past-year opioid social problems criterion endorsement-0=negative 1=positive';
if N3CD2Q1E41=1 or N3CD2Q1E42=1 or N3CD2Q1E43=1 then pOPA6=1; else pOPA6=0; /*Prior-to-past-
year*/
Label pOPA6='Prior-to-past-year opioid social problems criterion endorsement-0=negative
1=positive';

```

```

if N3CD2Q1C41=1 or N3CD2Q1E41=1 or N3CD2Q1C42=1 or N3CD2Q1E42=1 or N3CD2Q1C43=1 or
N3CD2Q1E43=1 then lOPA6=1; else lOPA6=0; /*Lifetime*/
Label lOPA6='Lifetime opioid social problems criterion endorsement-0=negative 1=positive';

/*Opioid - Give up*/
if N3CD2Q1C35=1 or N3CD2Q1C36=1 then OPA7=1; else OPA7=0; /*Past-year*/
Label OPA7='Past-year opioid give up criterion endorsement-0=negative 1=positive';
if N3CD2Q1E35=1 or N3CD2Q1E36=1 then pOPA7=1; else pOPA7=0; /*Prior-to-past-year*/
Label pOPA7='Prior-to-past-year opioid give up criterion endorsement-0=negative 1=positive';
if N3CD2Q1C35=1 or N3CD2Q1E35=1 or N3CD2Q1C36=1 or N3CD2Q1E36=1 then lOPA7=1; else lOPA7=0;
/*Lifetime*/
Label lOPA7='Lifetime opioid give up criterion endorsement-0=negative 1=positive';

/*Opioid - Hazardous use*/
if N3CD2Q1C47=1 or N3CD2Q1C48=1 then OPA8=1; else OPA8=0; /*Past-year*/
Label OPA8='Past-year opioid hazardous use criterion endorsement-0=negative 1=positive';
if N3CD2Q1E47=1 or N3CD2Q1E48=1 then pOPA8=1; else pOPA8=0; /*Prior-to-past-year*/
Label pOPA8='Prior-to-past-year opioid hazardous use criterion endorsement-0=negative
1=positive';
if N3CD2Q1C47=1 or N3CD2Q1E47=1 or N3CD2Q1C48=1 or N3CD2Q1E48=1 then lOPA8=1; else lOPA8=0;
/*Lifetime*/
Label lOPA8='Lifetime opioid hazardous use criterion endorsement-0=negative 1=positive';

/*Opioid - Continued use despite problems*/
if N3CD2Q1C37=1 or N3CD2Q1C38=1 then OPA9=1; else OPA9=0; /*Past-year*/
Label OPA9='Past-year opioid continued use despite problems criterion endorsement-0=negative
1=positive';
if N3CD2Q1E37=1 or N3CD2Q1E38=1 then pOPA9=1; else pOPA9=0; /*Prior-to-past-year*/
Label pOPA9='Prior-to-past-year opioid continued use despite problems criterion endorsement-
0=negative 1=positive';
if N3CD2Q1C37=1 or N3CD2Q1E37=1 or N3CD2Q1C38=1 or N3CD2Q1E38=1 then lOPA9=1; else lOPA9=0;
/*Lifetime*/
Label lOPA9='Lifetime opioid continued use despite problems criterion endorsement-0=negative
1=positive';

/*Opioid - Tolerance*/
if N3CD2Q1C1=1 or N3CD2Q1C2=1 then OPA10=1; else OPA10=0; /*Past-year*/
Label OPA10='Past-year opioid tolerance criterion endorsement-0=negative 1=positive';
if N3CD2Q1E1=1 or N3CD2Q1E2=1 then pOPA10=1; else pOPA10=0; /*Prior-to-past-year*/
Label pOPA10='Prior-to-past-year opioid tolerance criterion endorsement-0=negative
1=positive';
if N3CD2Q1C1=1 or N3CD2Q1E1=1 or N3CD2Q1C2=1 or N3CD2Q1E2=1 then lOPA10=1; else lOPA10=0;
/*Lifetime*/
Label lOPA10='Lifetime opioid tolerance criterion endorsement-0=negative 1=positive';

/*Opioid - Withdrawal*/
*Opioid - Withdrawal subalgorithm - sum of withdrawal symptoms;
opwith=sum(N3CD2Q1C5=1, N3CD2Q1C7=1, N3CD2Q1C12=1, N3CD2Q1C9=1, (N3CD2Q1C16=1 or
N3CD2Q1C26=1), N3CD2Q1C28=1, N3CD2Q1C8=1, N3CD2Q1C13=1, N3CD2Q1C20=1); /*past-year withdrawal
symptom count*/
Label opwith='Sum of past-year opioid withdrawal symptoms';
popwith=sum(N3CD2Q1E5=1, N3CD2Q1E7=1, N3CD2Q1E12=1, N3CD2Q1E9=1, (N3CD2Q1E16=1 or
N3CD2Q1E26=1), N3CD2Q1E28=1, N3CD2Q1E8=1, N3CD2Q1E13=1, N3CD2Q1E20=1); /*prior-to-past-year
withdrawal symptom count*/
Label popwith='Sum of prior-to-past-year opioid withdrawal symptoms';

*Opioid - Withdrawal - using subalgorithm;
if opwith=>3 or N3CD2Q1C29=1 then OPA11=1; else OPA11=0; /*Past-year*/
Label OPA11='Past-year opioid withdrawal criterion endorsement-0=negative 1=positive';

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if popwith=>3 or N3CD2Q1E29=1 then pOPA11=1; else pOPA11=0; /*Prior-to-past-year*/
Label pOPA11='Prior-to-past-year opioid withdrawal criterion endorsement-0=negative
1=positive';
if opwith=>3 or N3CD2Q1C29=1 or popwith=>3 or N3CD2Q1E29=1 then lOPA11=1; else lOPA11=0;
/*Lifetime*/
Label lOPA11='Lifetime opioid withdrawal criterion endorsement-0=negative 1=positive';

/*-Past-year (OPA1-OPA11) and prior-to-past-year (pOPA1-pOPA11) symptom counts
-Prior-to-past-year symptoms counts include N3CD2Q2A to
denote SOME OPUD symptoms occurred within same 12-month period
-Lifetime symptom count takes the largest symptom count from either past-year or prior-to-
past-year*/

opsum=sum(OPA1, OPA2, OPA3, OPA4, OPA5, OPA6, OPA7, OPA8, OPA9, OPA10, OPA11); /*Past-year*/
Label opsum='Sum of past-year opioid criteria';
if N3CD2Q2A =1 THEN popsum=sum(pOPA1, pOPA2, pOPA3, pOPA4, pOPA5, pOPA6, pOPA7, pOPA8, pOPA9,
pOPA10, pOPA11); /*Prior-to-past-year*/
Label popsum='Sum of prior-to-past-year opioid criteria';
lopsum=max(opsum, popsum); /*Lifetime*/
Label lopsum='Maximum sum of past-year or prior-to-past-year opioid criteria';

*OPUD diagnoses;
if opsum=>2 then OPUD=1; else OPUD=0; /*Past-year*/
Label OPUD='Past-year OPUD diagnosis-0=negative 1=positive';
if popsum=>2 then pOPUD=1; else pOPUD=0; /*Prior-to-past-year*/
Label pOPUD='Prior-to-past-year OPUD diagnosis-0=negative 1=positive';
if lopsum=>2 then lOPUD=1; else lOPUD=0; /*Lifetime*/
Label lOPUD='Lifetime OPUD diagnosis-0=negative 1=positive';

*OPUD severity;
if opsum<2 then OPUDSEV=0; /*Past-year - no OPUD*/
if opsum=2 or opsum=3 then OPUDSEV=1; /*Past-year - mild OPUD*/
if opsum=4 or opsum=5 then OPUDSEV=2; /*Past-year - moderate OPUD*/
if opsum>=6 then OPUDSEV=3; /*Past-year - severe OPUD*/
Label OPUDSEV='Past-year OPUD severity grading-0=no diagnosis, 1=mild OPUD, 2=moderate OPUD
and 3=severe OPUD';

if popsum<2 then pOPUDSEV=0; /*Prior-to-past-year - no OPUD*/
if popsum=2 or popsum=3 then pOPUDSEV =1; /*Prior-to-past-year - mild OPUD*/
if popsum=4 or popsum=5 then pOPUDSEV =2; /*Prior-to-past-year - moderate OPUD*/
if popsum>=6 then pOPUDSEV=3; /*Prior-to-past-year - severe OPUD*/
Label pOPUDSEV='Prior-to-past-year OPUD severity grading-0=no diagnosis, 1=mild OPUD,
2=moderate OPUD and 3=severe OPUD';

if lopsum<2 then lOPUDSEV =0; /*Lifetime - no OPUD*/
if lopsum=2 or lopsum=3 then lOPUDSEV=1; /*Lifetime - mild OPUD*/
if lopsum=4 or lopsum=5 then lOPUDSEV=2; /*Lifetime - moderate OPUD*/
if lopsum>=6 then lOPUDSEV=3; /*Lifetime - severe OPUD*/
Label lOPUDSEV='Lifetime OPUD severity grading-0=no diagnosis, 1=mild OPUD, 2=moderate OPUD
and 3=severe OPUD';

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Cannabis Use Disorders (MAUD) Criteria and Diagnoses Algorithms

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/*Cannabis - Larger/longer*/
if N3CD3Q1C32=1 then MAA1=1; else MAA1=0; /*Past-year*/
Label MAA1='Past-year cannabis larger/longer criterion endorsement-0=negative 1=positive';
if N3CD3Q1E32=1 then pMAA1=1; else pMAA1=0; /*Prior-to-past-year*/
Label pMAA1='Prior-to-past-year cannabis larger/longer criterion endorsement-0=negative
1=positive';
if N3CD3Q1C32=1 or N3CD3Q1E32=1 then lMAA1=1; else lMAA1=0; /*Lifetime*/
Label lMAA1='Lifetime larger/longer cannabis criterion endorsement-0=negative 1=positive';

/*Cannabis - Quit or cut down*/
if N3CD3Q1C30=1 or N3CD3Q1C31=1 then MAA2=1; else MAA2=0; /*Past-year*/
Label MAA2='Past-year cannabis quit or cut down criterion endorsement-0=negative 1=positive';
if N3CD3Q1E30=1 or N3CD3Q1E31=1 then pMAA2=1; else pMAA2=0; /*Prior-to-past-year*/
Label pMAA2='Prior-to-past-year cannabis quit or cut down criterion endorsement-0=negative
1=positive';
if N3CD3Q1C30=1 or N3CD3Q1E30=1 or N3CD3Q1C31=1 or N3CD3Q1E31=1 then lMAA2=1; else lMAA2=0;
/*Lifetime*/
Label lMAA2='Lifetime cannabis quit or cut down criterion endorsement-0=negative 1=positive';

/*Cannabis - Time spent*/
if N3CD3Q1C33=1 or N3CD3Q1C34=1 then MAA3=1; else MAA3=0; /*Past-year*/
Label MAA3='Past-year cannabis time spent criterion endorsement-0=negative 1=positive';
if N3CD3Q1E33=1 or N3CD3Q1E34=1 then pMAA3=1; else pMAA3=0; /*Prior-to-past-year*/
Label pMAA3='Prior-to-past-year cannabis time spent criterion endorsement-0=negative
1=positive';
if N3CD3Q1C33=1 or N3CD3Q1E33=1 or N3CD3Q1C34=1 or N3CD3Q1E34=1 then lMAA3=1; else lMAA3=0;
/*Lifetime*/
Label lMAA3='Lifetime cannabis time spent criterion endorsement-0=negative 1=positive';

/*Cannabis - Craving*/
if N3CD3Q1C39=1 or N3CD3Q1C40=1 then MAA4=1; else MAA4=0; /*Past-year*/
Label MAA4='Past-year cannabis craving criterion endorsement-0=negative 1=positive';
if N3CD3Q1E39=1 or N3CD3Q1E40=1 then pMAA4=1; else pMAA4=0; /*Prior-to-past-year*/
Label pMAA4='Prior-to-past-year cannabis craving criterion endorsement-0=negative 1=positive';
if N3CD3Q1C39=1 or N3CD3Q1E39=1 or N3CD3Q1C40=1 or N3CD3Q1E40=1 then lMAA4=1; else lMAA4=0;
/*Lifetime*/
Label lMAA4='Lifetime cannabis craving criterion endorsement-0=negative 1=positive';

/*Cannabis - Role interference*/
if N3CD3Q1C44=1 or N3CD3Q1C45=1 or N3CD3Q1C46=1 then MAA5=1; else MAA5=0; /*Past-year*/
Label MAA5='Past-year cannabis role interference criterion endorsement-0=negative 1=positive';
if N3CD3Q1E44=1 or N3CD3Q1E45=1 or N3CD3Q1E46=1 then pMAA5=1; else pMAA5=0; /*Prior-to-past-
year*/
Label pMAA5='Prior-to-past-year cannabis role interference criterion endorsement-0=negative
1=positive';
if N3CD3Q1C44=1 or N3CD3Q1E44=1 or N3CD3Q1C45=1 or N3CD3Q1E45=1 or N3CD3Q1C46=1 or
N3CD3Q1E46=1 then lMAA5=1; else lMAA5=0; /*Lifetime*/
Label lMAA5='Lifetime cannabis role interference criterion endorsement-0=negative 1=positive';

/*Cannabis - Social problems*/
if N3CD3Q1C41=1 or N3CD3Q1C42=1 or N3CD3Q1C43=1 then MAA6=1; else MAA6=0; /*Past-year*/
Label MAA6='Past-year cannabis social problems criterion endorsement-0=negative 1=positive';
if N3CD3Q1E41=1 or N3CD3Q1E42=1 or N3CD3Q1E43=1 then pMAA6=1; else pMAA6=0; /*Prior-to-past-
year*/
Label pMAA6='Prior-to-past-year cannabis social problems criterion endorsement-0=negative
1=positive';

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if N3CD3Q1C41=1 or N3CD3Q1E41=1 or N3CD3Q1C42=1 or N3CD3Q1E42=1 or N3CD3Q1C43=1 or
N3CD3Q1E43=1 then lMAA6=1; else lMAA6=0; /*Lifetime*/
Label lMAA6='Lifetime cannabis social problems criterion endorsement-0=negative 1=positive';

/*Cannabis - Give up*/
if N3CD3Q1C35=1 or N3CD3Q1C36=1 then MAA7=1; else MAA7=0; /*Past-year*/
Label MAA7='Past-year cannabis give up criterion endorsement-0=negative 1=positive';
if N3CD3Q1E35=1 or N3CD3Q1E36=1 then pMAA7=1; else pMAA7=0; /*Prior-to-past-year*/
Label pMAA7='Prior-to-past-year cannabis give up criterion endorsement-0=negative 1=positive';
if N3CD3Q1C35=1 or N3CD3Q1E35=1 or N3CD3Q1C36=1 or N3CD3Q1E36=1 then lMAA7=1; else lMAA7=0;
/*Lifetime*/
Label lMAA7='Lifetime cannabis give up criterion endorsement-0=negative 1=positive';

/*Cannabis - Hazardous use*/
if N3CD3Q1C47=1 or N3CD3Q1C48=1 then MAA8=1; else MAA8=0; /*Past-year*/
Label MAA8='Past-year cannabis hazardous use criterion endorsement-0=negative 1=positive';
if N3CD3Q1E47=1 or N3CD3Q1E48=1 then pMAA8=1; else pMAA8=0; /*Prior-to-past-year*/
Label pMAA8='Prior-to-past-year cannabis hazardous use criterion endorsement-0=negative
1=positive';
if N3CD3Q1C47=1 or N3CD3Q1E47=1 or N3CD3Q1C48=1 or N3CD3Q1E48=1 then lMAA8=1; else lMAA8=0;
/*Lifetime*/
Label lMAA8='Lifetime cannabis hazardous use criterion endorsement-0=negative 1=positive';

/*Cannabis - Continued use despite problems*/
if N3CD3Q1C37=1 or N3CD3Q1C38=1 then MAA9=1; else MAA9=0; /*Past-year*/
Label MAA9='Past-year cannabis continued use despite problems criterion endorsement-0=negative
1=positive';
if N3CD3Q1E37=1 or N3CD3Q1E38=1 then pMAA9=1; else pMAA9=0; /*Prior-to-past-year*/
Label pMAA9='Prior-to-past-year cannabis continued use despite problems criterion endorsement-
0=negative 1=positive';
if N3CD3Q1C37=1 or N3CD3Q1E37=1 or N3CD3Q1C38=1 or N3CD3Q1E38=1 then lMAA9=1; else lMAA9=0;
/*Lifetime*/
Label lMAA9='Lifetime cannabis continued use despite problems criterion endorsement-0=negative
1=positive';

/*Cannabis - Tolerance*/
if N3CD3Q1C1=1 or N3CD3Q1C2=1 then MAA10=1; else MAA10=0; /*Past-year*/
Label MAA10='Past-year cannabis tolerance criterion endorsement-0=negative 1=positive';
if N3CD3Q1E1=1 or N3CD3Q1E2=1 then pMAA10=1; else pMAA10=0; /*Prior-to-past-year*/
Label pMAA10='Prior-to-past-year cannabis tolerance criterion endorsement-0=negative
1=positive';
if N3CD3Q1C1=1 or N3CD3Q1E1=1 or N3CD3Q1C2=1 or N3CD3Q1E2=1 then lMAA10=1; else lMAA10=0;
/*Lifetime*/
Label lMAA10='Lifetime cannabis tolerance criterion endorsement-0=negative 1=positive';

/*Cannabis - Withdrawal*/
*Cannabis - Withdrawal subalgorithm - sum of withdrawal symptoms;
maudwith=sum((N3CD3Q1C22=1 or N3CD3Q1C24=1), N3CD3Q1C11=1, (N3CD3Q1C20=1 or N3CD3Q1C17=1),
N3CD3Q1C23=1, N3CD3Q1C14=1, N3CD3Q1C5=1, (N3CD3Q1C13=1 or N3CD3Q1C19=1 or N3CD3Q1C25=1 or
N3CD3Q1C26=1 or N3CD3Q1C27=1 or N3CD3Q1C28=1)); /*past-year withdrawal symptom count*/
Label maudwith='Sum of past-year cannabis withdrawal symptoms';
pmaudwith=sum((N3CD3Q1E22=1 or N3CD3Q1E24=1), N3CD3Q1E11=1, (N3CD3Q1E20=1 or N3CD3Q1E17=1),
N3CD3Q1E23=1, N3CD3Q1E14=1, N3CD3Q1E5=1, (N3CD3Q1E13=1 or N3CD3Q1E19=1 or N3CD3Q1E25=1 or
N3CD3Q1E26=1 or N3CD3Q1E27=1 or N3CD3Q1E28=1)); /*prior-to-past-year withdrawal symptom
count*/
Label pmaudwith='Sum of prior-to-past-year cannabis withdrawal symptoms';

*Cannabis - Withdrawal - using subalgorithm;
if maudwith=>3 or N3CD3Q1C29=1 then MAA11=1; else MAA11=0; /*Past-year*/

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Label MAA11='Past-year cannabis withdrawal criterion endorsement-0=negative 1=positive';
if pmaudwith=>3 or N3CD3Q1E29=1 then pMAA11=1; else pMAA11=0; /*Prior-to-past-year*/
Label pMAA11='Prior-to-past-year cannabis withdrawal criterion endorsement-0=negative
1=positive';
if maudwith=>3 or N3CD3Q1C29=1 or pmaudwith=>3 or N3CD3Q1E29=1 then lMAA11=1; else lMAA11=0;
/*Lifetime*/
Label lMAA11='Lifetime cannabis withdrawal criterion endorsement-0=negative 1=positive';

/*-Past-year (MAA1-MAA11) and prior-to-past-year (pMAA1-pMAA11) symptom counts
-Prior-to-past-year symptoms counts include N3CD3Q2A to
denote SOME MAUD symptoms occurred within same 12-month period
-Lifetime symptom count takes the largest symptom count from either past-year or prior-to-
past-year*/

masum=sum(MAA1, MAA2, MAA3, MAA4, MAA5, MAA6, MAA7, MAA8, MAA9, MAA10, MAA11); /*Past-year*/
Label masum='Sum of past-year cannabis criteria';
if N3CD3Q2A=1 THEN pmasum=sum(pMAA1, pMAA2, pMAA3, pMAA4, pMAA5, pMAA6, pMAA7, pMAA8, pMAA9,
pMAA10, pMAA11); /*Prior-to-past-year*/
Label pmasum='Sum of prior-to-past-year cannabis criteria';
lmasum=max(masum, pmasum); /*Lifetime*/
Label lmasum='Maximum sum of past-year or prior-to-past-year cannabis criteria';

*MAUD diagnoses;
if masum=>2 then MAUD=1; else MAUD=0; /*Past-year*/
Label MAUD='Past-year MAUD diagnosis-0=negative 1=positive';
if pmasum=>2 then pMAUD=1; else pMAUD=0; /*Prior-to-past-year*/
Label pMAUD='Prior-to-past-year MAUD diagnosis-0=negative 1=positive';
if lmasum =>2 then lMAUD=1; else lMAUD=0; /*Lifetime*/
Label lMAUD='Lifetime MAUD diagnosis-0=negative 1=positive';

*MAUD severity;
if masum<2 then MAUDSEV=0; /*Past-year - no MAUD*/
if masum=2 or masum=3 then MAUDSEV=1; /*Past-year - mild MAUD*/
if masum=4 or masum=5 then MAUDSEV=2; /*Past-year - moderate MAUD*/
if masum>=6 then MAUDSEV=3; /*Past-year - severe MAUD*/
Label MAUDSEV='Past-year MAUD severity grading-0=no diagnosis, 1=mild MAUD, 2=moderate MAUD
and 3=severe MAUD';

if pmasum<2 then pMAUDSEV=0; /*Prior-to-past-year - no MAUD*/
if pmasum=2 or pmasum=3 then pMAUDSEV=1; /*Prior-to-past-year - mild MAUD*/
if pmasum=4 or pmasum=5 then pMAUDSEV=2; /*Prior-to-past-year - moderate MAUD*/
if pmasum>=6 then pMAUDSEV=3; /*Prior-to-past-year - severe MAUD*/
Label pMAUDSEV='Prior-to-past-year MAUD severity grading-0=no diagnosis, 1=mild MAUD,
2=moderate MAUD and 3=severe MAUD';

if lmasum<2 then lMAUDSEV=0; /*Lifetime - no MAUD*/
if lmasum=2 or lmasum=3 then lMAUDSEV=1; /*Lifetime - mild MAUD*/
if lmasum=4 or lmasum=5 then lMAUDSEV=2; /*Lifetime - moderate MAUD*/
if lmasum>=6 then lMAUDSEV=3; /*Lifetime - severe MAUD*/
Label lMAUDSEV='Lifetime MAUD severity grading-0=no diagnosis, 1=mild MAUD, 2=moderate MAUD
and 3=severe MAUD';

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Cocaine Use Disorders (COCUD) Criteria and Diagnoses Algorithms

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/*Cocaine - Larger/longer*/
if N3CD4Q1C32=1 then COCA1=1; else COCA1=0; /*Past-year*/
Label COCA1='Past-year cocaine larger/longer criterion endorsement-0=negative 1=positive';
if N3CD4Q1E32=1 then pCOCA1=1; else pCOCA1=0; /*Prior-to-past-year*/
Label pCOCA1='Prior-to-past-year cocaine larger/longer criterion endorsement-0=negative
1=positive';
if N3CD4Q1C32=1 or N3CD4Q1E32=1 then lCOCA1=1; else lCOCA1=0; /*Lifetime*/
Label lCOCA1='Lifetime larger/longer cocaine criterion endorsement-0=negative 1=positive';

/*Cocaine - Quit or cut down*/
if N3CD4Q1C30=1 or N3CD4Q1C31=1 then COCA2=1; else COCA2=0; /*Past-year*/
Label COCA2='Past-year cocaine quit or cut down criterion endorsement-0=negative 1=positive';
if N3CD4Q1E30=1 or N3CD4Q1E31=1 then pCOCA2=1; else pCOCA2=0; /*Prior-to-past-year*/
Label pCOCA2='Prior-to-past-year cocaine quit or cut down criterion endorsement-0=negative
1=positive';
if N3CD4Q1C30=1 or N3CD4Q1E30=1 or N3CD4Q1C31=1 or N3CD4Q1E31=1 then lCOCA2=1; else lCOCA2=0;
/*Lifetime*/
Label lCOCA2='Lifetime cocaine quit or cut down criterion endorsement-0=negative 1=positive';

/*Cocaine - Time spent*/
if N3CD4Q1C33=1 or N3CD4Q1C34=1 then COCA3=1; else COCA3=0; /*Past-year*/
Label COCA3='Past-year cocaine time spent criterion endorsement-0=negative 1=positive';
if N3CD4Q1E33=1 or N3CD4Q1E34=1 then pCOCA3=1; else pCOCA3=0; /*Prior-to-past-year*/
Label pCOCA3='Prior-to-past-year cocaine time spent criterion endorsement-0=negative
1=positive';
if N3CD4Q1C33=1 or N3CD4Q1E33=1 or N3CD4Q1C34=1 or N3CD4Q1E34=1 then lCOCA3=1; else lCOCA3=0;
/*Lifetime*/
Label lCOCA3='Lifetime cocaine time spent criterion endorsement-0=negative 1=positive';

/*Cocaine - Craving*/
if N3CD4Q1C39=1 or N3CD4Q1C40=1 then COCA4=1; else COCA4=0; /*Past-year*/
Label COCA4='Past-year cocaine craving criterion endorsement-0=negative 1=positive';
if N3CD4Q1E39=1 or N3CD4Q1E40=1 then pCOCA4=1; else pCOCA4=0; /*Prior-to-past-year*/
Label pCOCA4='Prior-to-past-year cocaine craving criterion endorsement-0=negative 1=positive';
if N3CD4Q1C39=1 or N3CD4Q1E39=1 or N3CD4Q1C40=1 or N3CD4Q1E40=1 then lCOCA4=1; else lCOCA4=0;
/*Lifetime*/
Label lCOCA4='Lifetime cocaine craving criterion endorsement-0=negative 1=positive';

/*Cocaine - Role interference*/
if N3CD4Q1C44=1 or N3CD4Q1C45=1 or N3CD4Q1C46=1 then COCA5=1; else COCA5=0; /*Past-year*/
Label COCA5='Past-year cocaine role interference criterion endorsement-0=negative 1=positive';
if N3CD4Q1E44=1 or N3CD4Q1E45=1 or N3CD4Q1E46=1 then pCOCA5=1; else pCOCA5=0; /*Prior-to-past-
year*/
Label pCOCA5='Prior-to-past-year cocaine role interference criterion endorsement-0=negative
1=positive';
if N3CD4Q1C44=1 or N3CD4Q1E44=1 or N3CD4Q1C45=1 or N3CD4Q1E45=1 or N3CD4Q1C46=1 or
N3CD4Q1E46=1 then lCOCA5=1; else lCOCA5=0; /*Lifetime*/
Label lCOCA5='Lifetime cocaine role interference criterion endorsement-0=negative 1=positive';

/*Cocaine - Social problems*/
if N3CD4Q1C41=1 or N3CD4Q1C42=1 or N3CD4Q1C43=1 then COCA6=1; else COCA6=0; /*Past-year*/
Label COCA6='Past-year cocaine social problems criterion endorsement-0=negative 1=positive';
if N3CD4Q1E41=1 or N3CD4Q1E42=1 or N3CD4Q1E43=1 then pCOCA6=1; else pCOCA6=0; /*Prior-to-past-
year*/
Label pCOCA6='Prior-to-past-year cocaine social problems criterion endorsement-0=negative
1=positive';

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if N3CD4Q1C41=1 or N3CD4Q1E41=1 or N3CD4Q1C42=1 or N3CD4Q1E42=1 or N3CD4Q1C43=1 or
N3CD4Q1E43=1 then lCOCA6=1; else lCOCA6=0; /*Lifetime*/
Label lCOCA6='Lifetime cocaine social problems criterion endorsement-0=negative 1=positive';

/*Cocaine - Give up*/
if N3CD4Q1C35=1 or N3CD4Q1C36=1 then COCA7=1; else COCA7=0; /*Past-year*/
Label COCA7='Past-year cocaine give up criterion endorsement-0=negative 1=positive';
if N3CD4Q1E35=1 or N3CD4Q1E36=1 then pCOCA7=1; else pCOCA7=0; /*Prior-to-past-year*/
Label pCOCA7='Prior-to-past-year cocaine give up criterion endorsement-0=negative 1=positive';
if N3CD4Q1C35=1 or N3CD4Q1E35=1 or N3CD4Q1C36=1 or N3CD4Q1E36=1 then lCOCA7=1; else lCOCA7=0;
/*Lifetime*/
Label lCOCA7='Lifetime cocaine give up criterion endorsement-0=negative 1=positive';

/*Cocaine - Hazardous use*/
if N3CD4Q1C47=1 or N3CD4Q1C48=1 then COCA8=1; else COCA8=0; /*Past-year*/
Label COCA8='Past-year cocaine hazardous use criterion endorsement-0=negative 1=positive';
if N3CD4Q1E47=1 or N3CD4Q1E48=1 then pCOCA8=1; else pCOCA8=0; /*Prior-to-past-year*/
Label pCOCA8='Prior-to-past-year cocaine hazardous use criterion endorsement-0=negative
1=positive';
if N3CD4Q1C47=1 or N3CD4Q1E47=1 or N3CD4Q1C48=1 or N3CD4Q1E48=1 then lCOCA8=1; else lCOCA8=0;
/*Lifetime*/
Label lCOCA8='Lifetime cocaine hazardous use criterion endorsement-0=negative 1=positive';

/*Cocaine - Continued use despite problems*/
if N3CD4Q1C37=1 or N3CD4Q1C38=1 then COCA9=1; else COCA9=0; /*Past-year*/
Label COCA9='Past-year cocaine continued use despite problems criterion endorsement-0=negative
1=positive';
if N3CD4Q1E37=1 or N3CD4Q1E38=1 then pCOCA9=1; else pCOCA9=0; /*Prior-to-past-year*/
Label pCOCA9='Prior-to-past-year cocaine continued use despite problems criterion endorsement-
0=negative 1=positive';
if N3CD4Q1C37=1 or N3CD4Q1E37=1 or N3CD4Q1C38=1 or N3CD4Q1E38=1 then lCOCA9=1; else lCOCA9=0;
/*Lifetime*/
Label lCOCA9='Lifetime cocaine continued use despite problems criterion endorsement-0=negative
1=positive';

/*Cocaine - Tolerance*/
if N3CD4Q1C1=1 or N3CD4Q1C2=1 then COCA10=1; else COCA10=0; /*Past-year*/
Label COCA10='Past-year cocaine tolerance criterion endorsement-0=negative 1=positive';
if N3CD4Q1E1=1 or N3CD4Q1E2=1 then pCOCA10=1; else pCOCA10=0; /*Prior-to-past-year*/
Label pCOCA10='Prior-to-past-year cocaine tolerance criterion endorsement-0=negative
1=positive';
if N3CD4Q1C1=1 or N3CD4Q1E1=1 or N3CD4Q1C2=1 or N3CD4Q1E2=1 then lCOCA10=1; else lCOCA10=0;
/*Lifetime*/
Label lCOCA10='Lifetime cocaine tolerance criterion endorsement-0=negative 1=positive';

/*Cocaine - Withdrawal*/
*Cocaine - Withdrawal subalgorithm - sum of withdrawal symptoms;
if N3CD4Q1C5=1 then cocwith=sum(N3CD4Q1C4=1, N3CD4Q1C17=1, (N3CD4Q1C20=1 or N3CD4Q1C3=1),
N3CD4Q1C10=1, (N3CD4Q1C15=1 or N3CD4Q1C14=1)); /*past-year withdrawal symptom count*/
Label cocwith='Sum of past-year cocaine withdrawal symptoms';
if N3CD4Q1E5=1 then pcocwith=sum(N3CD4Q1E4=1, N3CD4Q1E17=1, (N3CD4Q1E20=1 or N3CD4Q1E3=1),
N3CD4Q1E10=1, (N3CD4Q1E15=1 or N3CD4Q1E14=1)); /*prior-to-past-year withdrawal symptom count*/
Label pcocwith='Sum of prior-to-past-year cocaine withdrawal symptoms';

*Cocaine - Withdrawal - using subalgorithm;
if cocwith=>2 or N3CD4Q1C29=1 then COCA11=1; else COCA11=0; /*Past-year*/
Label COCA11='Past-year cocaine withdrawal criterion endorsement-0=negative 1=positive';
if pcocwith=>2 or N3CD4Q1E29=1 then pCOCA11=1; else pCOCA11=0; /*Prior-to-past-year*/

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Label pCOCA11='Prior-to-past-year cocaine withdrawal criterion endorsement-0=negative
1=positive';
if cocwith=>2 or N3CD4Q1C29=1 or pcocwith=>2 or N3CD4Q1E29=1 then lCOCA11=1; else lCOCA11=0;
/*Lifetime*/
Label lCOCA11='Lifetime cocaine withdrawal criterion endorsement-0=negative 1=positive';

/*-Past-year (COCA1-COCA11) and prior-to-past-year (pCOCA1-pCOCA11) symptom counts
-Prior-to-past-year symptoms counts include N3CD4Q2A to
denote SOME COCUD symptoms occurred within same 12-month period
-Lifetime symptom count takes the largest symptom count from either past-year or prior-to-
past-year*/

cocsum=sum(COCA1, COCA2, COCA3, COCA4, COCA5, COCA6, COCA7, COCA8, COCA9, COCA10, COCA11);
/*Past-year*/
Label cocsum='Sum of past-year cocaine criteria';
if N3CD4Q2A =1 THEN pcocsum=sum(pCOCA1, pCOCA2, pCOCA3, pCOCA4, pCOCA5, pCOCA6, pCOCA7,
pCOCA8, pCOCA9, pCOCA10, pCOCA11); /*Prior-to-past-year*/
Label pcocsum='Sum of prior-to-past-year cocaine criteria';
lcocsum=max(cocsum, pcocsum); /*Lifetime*/
Label lcocsum='Maximum sum of past-year or prior-to-past-year cocaine criteria';

*COCUD diagnoses;
if cocsum=>2 then COCUD=1; else COCUD=0; /*Past-year*/
Label COCUD='Past-year COCUD diagnosis-0=negative 1=positive';
if pcocsum=>2 then pCOCUD=1; else pCOCUD=0; /*Prior-to-past-year*/
Label pCOCUD='Prior-to-past-year COCUD diagnosis-0=negative 1=positive';
if lcocsum=>2 then lCOCUD=1; else lCOCUD=0; /*Lifetime*/
Label lCOCUD='Lifetime COCUD diagnosis-0=negative 1=positive';

*COCUD severity;
if cocsum<2 then COCUDSEV=0; /*Past-year - no COCUD*/
if cocsum=2 or cocsum=3 then COCUDSEV=1; /*Past-year - mild COCUD*/
if cocsum=4 or cocsum=5 then COCUDSEV=2; /*Past-year - moderate COCUD*/
if cocsum>=6 then COCUDSEV=3; /*Past-year - severe COCUD*/
Label COCUDSEV='Past-year COCUD severity grading-0=no diagnosis, 1=mild COCUD, 2=moderate
COCUD and 3=severe COCUD';

if pcocsum<2 then pCOCUDSEV=0; /*Prior-to-past-year - no COCUD*/
if pcocsum=2 or pcocsum=3 then pCOCUDSEV=1; /*Prior-to-past-year - mild COCUD*/
if pcocsum=4 or pcocsum=5 then pCOCUDSEV=2; /*Prior-to-past-year - moderate COCUD*/
if pcocsum>=6 then pCOCUDSEV=3; /*Prior-to-past-year - severe COCUD*/
Label pCOCUDSEV='Prior-to-past-year COCUD severity grading-0=no diagnosis, 1=mild COCUD,
2=moderate COCUD and 3=severe COCUD';

if lcocsum<2 then lCOCUDSEV=0; /*Lifetime - no COCUD*/
if lcocsum=2 or lcocsum=3 then lCOCUDSEV=1; /*Lifetime - mild COCUD*/
if lcocsum=4 or lcocsum=5 then lCOCUDSEV=2; /*Lifetime - moderate COCUD*/
if lcocsum=>6 then lCOCUDSEV=3; /*Lifetime - severe COCUD*/
Label lCOCUDSEV='Lifetime COCUD severity grading-0=no diagnosis, 1=mild COCUD, 2=moderate
COCUD and 3=severe COCUD';

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Stimulant Use Disorders (STIUD) Criteria and Diagnoses Algorithms

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/*Stimulant - Larger/longer*/
if N3CD5Q1C32=1 then STIA1=1; else STIA1=0; /*Past-year*/
Label STIA1='Past-year stimulant larger/longer criterion endorsement-0=negative 1=positive';
if N3CD5Q1E32=1 then pSTIA1=1; else pSTIA1=0; /*Prior-to-past-year*/
Label pSTIA1='Prior-to-past-year stimulant larger/longer criterion endorsement-0=negative
1=positive';
if N3CD5Q1C32=1 or N3CD5Q1E32=1 then lSTIA1=1; else lSTIA1=0; /*Lifetime*/
Label lSTIA1='Lifetime larger/longer stimulant criterion endorsement-0=negative 1=positive';

/*Stimulant - Quit or cut down*/
if N3CD5Q1C30=1 or N3CD5Q1C31=1 then STIA2=1; else STIA2=0; /*Past-year*/
Label STIA2='Past-year stimulant quit or cut down criterion endorsement-0=negative
1=positive';
if N3CD5Q1E30=1 or N3CD5Q1E31=1 then pSTIA2=1; else pSTIA2=0; /*Prior-to-past-year*/
Label pSTIA2='Prior-to-past-year stimulant quit or cut down criterion endorsement-0=negative
1=positive';
if (N3CD5Q1C30=1 or N3CD5Q1E30=1) or (N3CD5Q1C31=1 or N3CD5Q1E31=1) then lSTIA2=1; else
lSTIA2=0; /*Lifetime*/
Label lSTIA2='Lifetime stimulant quit or cut down criterion endorsement-0=negative
1=positive';

/*Stimulant - Time spent*/
if N3CD5Q1C33=1 or N3CD5Q1C34=1 then STIA3=1; else STIA3=0; /*Past-year*/
Label STIA3='Past-year stimulant time spent criterion endorsement-0=negative 1=positive';
if N3CD5Q1E33=1 or N3CD5Q1E34=1 then pSTIA3=1; else pSTIA3=0; /*Prior-to-past-year*/
Label pSTIA3='Prior-to-past-year stimulant time spent criterion endorsement-0=negative
1=positive';
if N3CD5Q1C33=1 or N3CD5Q1E33=1 or N3CD5Q1C34=1 or N3CD5Q1E34=1 then lSTIA3=1; else lSTIA3=0;
/*Lifetime*/
Label lSTIA3='Lifetime stimulant time spent criterion endorsement-0=negative 1=positive';

/*Stimulant - Craving*/
if N3CD5Q1C39=1 or N3CD5Q1C40=1 then STIA4=1; else STIA4=0; /*Past-year*/
Label STIA4='Past-year stimulant craving criterion endorsement-0=negative 1=positive';
if N3CD5Q1E39=1 or N3CD5Q1E40=1 then pSTIA4=1; else pSTIA4=0; /*Prior-to-past-year*/
Label pSTIA4='Prior-to-past-year stimulant craving criterion endorsement-0=negative
1=positive';
if N3CD5Q1C39=1 or N3CD5Q1E39=1 or N3CD5Q1C40=1 or N3CD5Q1E40=1 then lSTIA4=1; else lSTIA4=0;
/*Lifetime*/
Label lSTIA4='Lifetime stimulant craving criterion endorsement-0=negative 1=positive';

/*Stimulant - Role interference*/
if N3CD5Q1C44=1 or N3CD5Q1C45=1 or N3CD5Q1C46=1 then STIA5=1; else STIA5=0; /*Past-year*/
Label STIA5='Past-year stimulant role interference criterion endorsement-0=negative
1=positive';
if N3CD5Q1E44=1 or N3CD5Q1E45=1 or N3CD5Q1E46=1 then pSTIA5=1; else pSTIA5=0; /*Prior-to-past-
year*/
Label pSTIA5='Prior-to-past-year stimulant role interference criterion endorsement-0=negative
1=positive';
if N3CD5Q1C44=1 or N3CD5Q1E44=1 or N3CD5Q1C45=1 or N3CD5Q1E45=1 or N3CD5Q1C46=1 or
N3CD5Q1E46=1 then lSTIA5=1; else lSTIA5=0; /*Lifetime*/
Label lSTIA5='Lifetime stimulant role interference criterion endorsement-0=negative
1=positive';

/*Stimulant - Social problems*/
if N3CD5Q1C41=1 or N3CD5Q1C42=1 or N3CD5Q1C43=1 then STIA6=1; else STIA6=0; /*Past-year*/
Label STIA6='Past-year stimulant social problems criterion endorsement-0=negative 1=positive';

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if N3CD5Q1E41=1 or N3CD5Q1E42=1 or N3CD5Q1E43=1 then pSTIA6=1; else pSTIA6=0; /*Prior-to-past-year*/
Label pSTIA6='Prior-to-past-year stimulant social problems criterion endorsement-0=negative 1=positive';
if N3CD5Q1C41=1 or N3CD5Q1E41=1 or N3CD5Q1C42=1 or N3CD5Q1E42=1 or N3CD5Q1C43=1 or N3CD5Q1E43=1 then lSTIA6=1; else lSTIA6=0; /*Lifetime*/
Label lSTIA6='Lifetime stimulant social problems criterion endorsement-0=negative 1=positive';

/*Stimulant - Give up*/
if N3CD5Q1C35=1 or N3CD5Q1C36=1 then STIA7=1; else STIA7=0; /*Past-year*/
Label STIA7='Past-year stimulant give up criterion endorsement-0=negative 1=positive';
if N3CD5Q1E35=1 or N3CD5Q1E36=1 then pSTIA7=1; else pSTIA7=0; /*Prior-to-past-year*/
Label pSTIA7='Prior-to-past-year stimulant give up criterion endorsement-0=negative 1=positive';
if N3CD5Q1C35=1 or N3CD5Q1E35=1 or N3CD5Q1C36=1 or N3CD5Q1E36=1 then lSTIA7=1; else lSTIA7=0;
/*Lifetime*/
Label lSTIA7='Lifetime stimulant give up criterion endorsement-0=negative 1=positive';

/*Stimulant - Hazardous use*/
if N3CD5Q1C47=1 or N3CD5Q1C48=1 then STIA8=1; else STIA8=0; /*Past-year*/
Label STIA8='Past-year stimulant hazardous use criterion endorsement-0=negative 1=positive';
if N3CD5Q1E47=1 or N3CD5Q1E48=1 then pSTIA8=1; else pSTIA8=0; /*Prior-to-past-year*/
Label pSTIA8='Prior-to-past-year stimulant hazardous use criterion endorsement-0=negative 1=positive';
if N3CD5Q1C47=1 or N3CD5Q1E47=1 or N3CD5Q1C48=1 or N3CD5Q1E48=1 then lSTIA8=1; else lSTIA8=0;
/*Lifetime*/
Label lSTIA8='Lifetime stimulant hazardous use criterion endorsement-0=negative 1=positive';

/*Stimulant - Continued use despite problems*/
if N3CD5Q1C37=1 or N3CD5Q1C38=1 then STIA9=1; else STIA9=0; /*Past-year*/
Label STIA9='Past-year stimulant continued use despite problems criterion endorsement-0=negative 1=positive';
if N3CD5Q1E37=1 or N3CD5Q1E38=1 then pSTIA9=1; else pSTIA9=0; /*Prior-to-past-year*/
Label pSTIA9='Prior-to-past-year stimulant continued use despite problems criterion endorsement-0=negative 1=positive';
if N3CD5Q1C37=1 or N3CD5Q1E37=1 or N3CD5Q1C38=1 or N3CD5Q1E38=1 then lSTIA9=1; else lSTIA9=0;
/*Lifetime*/
Label lSTIA9='Lifetime stimulant continued use despite problems criterion endorsement-0=negative 1=positive';

/*Stimulant - Tolerance*/
if N3CD5Q1C1=1 or N3CD5Q1C2=1 then STIA10=1; else STIA10=0; /*Past-year*/
Label STIA10='Past-year stimulant tolerance criterion endorsement-0=negative 1=positive';
if N3CD5Q1E1=1 or N3CD5Q1E2=1 then pSTIA10=1; else pSTIA10=0; /*Prior-to-past-year*/
Label pSTIA10='Prior-to-past-year stimulant tolerance criterion endorsement-0=negative 1=positive';
if N3CD5Q1C1=1 or N3CD5Q1E1=1 or N3CD5Q1C2=1 or N3CD5Q1E2=1 then lSTIA10=1; else lSTIA10=0;
/*Lifetime*/
Label lSTIA10='Lifetime stimulant tolerance criterion endorsement-0=negative 1=positive';

/*Stimulant - Withdrawal*/
*Stimulant - Withdrawal subalgorithm - sum of withdrawal symptoms;
if N3CD5Q1C5=1 then stiwith=sum(N3CD5Q1C4=1, N3CD5Q1C17=1, (N3CD5Q1C20=1 or N3CD5Q1C3=1), N3CD5Q1C10=1, (N3CD5Q1C15=1 or N3CD5Q1C14=1)); /*past-year withdrawal symptom count*/
Label stiwith='Sum of past-year stimulant withdrawal symptoms';
if N3CD5Q1E5=1 then pstiwith=sum(N3CD5Q1E4=1, N3CD5Q1E17=1, (N3CD5Q1E20=1 or N3CD5Q1E3=1), N3CD5Q1E10=1, (N3CD5Q1E15=1 or N3CD5Q1E14=1)); /*prior-to-past-year withdrawal symptom count*/
Label pstiwith='Sum of prior-to-past-year stimulant withdrawal symptoms';

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*Stimulant - Withdrawal - using subalgorithm;
if stiwith=>2 or N3CD5Q1C29=1 then STIA11=1; else STIA11=0; /*Past-year*/
Label STIA11='Past-year stimulant withdrawal criterion endorsement-0=negative 1=positive';
if pstiwith=>2 or N3CD5Q1E29=1 then pSTIA11=1; else pSTIA11=0; /*Prior-to-past-year*/
Label pSTIA11='Prior-to-past-year stimulant withdrawal criterion endorsement-0=negative
1=positive';
if stiwith=>2 or N3CD5Q1C29=1 or pstiwith=>2 or N3CD5Q1E29=1 then lstIA11=1; else lstIA11=0;
/*Lifetime*/
Label lstIA11='Lifetime stimulant withdrawal criterion endorsement-0=negative 1=positive';

/*-Past-year (STIA1-STIA11) and prior-to-past-year (pSTIA1-pSTIA11) symptom counts
-Prior-to-past-year symptoms counts include N3CD5Q2A to
denote SOME STIUD symptoms occurred within same 12-month period
-Lifetime symptom count takes the largest symptom count from either past-year or prior-to-
past-year*/

stisum=sum(STIA1, STIA2, STIA3, STIA4, STIA5, STIA6, STIA7, STIA8, STIA9, STIA10, STIA11);
/*Past-year*/
Label stisum='Sum of past-year stimulant criteria';
if N3CD5Q2A=1 THEN pstisum=sum(pSTIA1, pSTIA2, pSTIA3, pSTIA4, pSTIA5, pSTIA6, pSTIA7, pSTIA8,
pSTIA9, pSTIA10, pSTIA11); /*Prior-to-past-year*/
Label pstisum='Sum of prior-to-past-year stimulant criteria';
lstisum=max(stisum, pstisum); /*Lifetime*/
Label lstisum='Maximum sum of past-year or prior-to-past-year stimulant criteria';

*STIUD diagnoses;
if stisum=>2 then STIUD=1; else STIUD=0; /*Past-year*/
Label STIUD='Past-year STIUD diagnosis-0=negative 1=positive';
if pstisum=>2 then pSTIUD=1; else pSTIUD=0; /*Prior-to-past-year*/
Label pSTIUD='Prior-to-past-year STIUD diagnosis-0=negative 1=positive';
if lstisum=>2 then lstIUD=1; else lstIUD=0; /*Lifetime*/
Label lstIUD='Lifetime STIUD diagnosis-0=negative 1=positive';

*STIUD severity;
if stisum<2 then STIUDSEV=0; /*Past-year - no STIUD*/
if stisum=2 or stisum=3 then STIUDSEV=1; /*Past-year - mild STIUD*/
if stisum=4 or stisum=5 then STIUDSEV=2; /*Past-year - moderate STIUD*/
if stisum>=6 then STIUDSEV=3; /*Past-year - severe STIUD*/
Label STIUDSEV='Past-year STIUD severity grading-0=no diagnosis, 1=mild STIUD, 2=moderate
STIUD and 3=severe STIUD';

if pstisum<2 then pSTIUDSEV=0; /*Prior-to-past-year - no STIUD*/
if pstisum=2 or pstisum=3 then pSTIUDSEV=1; /*Prior-to-past-year - mild STIUD*/
if pstisum=4 or pstisum=5 then pSTIUDSEV=2; /*Prior-to-past-year - moderate STIUD*/
if pstisum>=6 then pSTIUDSEV=3; /*Prior-to-past-year - severe STIUD*/
Label pSTIUDSEV='Prior-to-past-year STIUD severity grading-0=no diagnosis, 1=mild STIUD,
2=moderate STIUD and 3=severe STIUD';

if lstisum<2 then lstIUDSEV=0; /*Lifetime - no STIUD*/
if lstisum=2 or lstisum=3 then lstIUDSEV =1; /*Lifetime - mild STIUD*/
if lstisum=4 or lstisum=5 then lstIUDSEV =2; /*Lifetime - moderate STIUD*/
if lstisum=>6 then lstIUDSEV=3; /*Lifetime - severe STIUD*/
Label lstIUDSEV='Lifetime STIUD severity grading-0=no diagnosis, 1=mild STIUD, 2=moderate
STIUD and 3=severe STIUD';

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Club Drug Use Disorders (CLBUD) Criteria and Diagnoses Algorithms

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/*Club Drug - Larger/longer*/
if N3CD6Q1C32=1 then CLBA1=1; else CLBA1=0; /*Past-year*/
Label CLBA1='Past-year club drug larger/longer criterion endorsement-0=negative 1=positive';
if N3CD6Q1E32=1 then pCLBA1=1; else pCLBA1=0; /*Prior-to-past-year*/
Label pCLBA1='Prior-to-past-year club drug larger/longer criterion endorsement-0=negative
1=positive';
if N3CD6Q1C32=1 or N3CD6Q1E32=1 then lCLBA1=1; else lCLBA1=0; /*Lifetime*/
Label lCLBA1='Lifetime larger/longer club drug criterion endorsement-0=negative 1=positive';

/*Club Drug - Quit or cut down*/
if N3CD6Q1C30=1 or N3CD6Q1C31=1 then CLBA2=1; else CLBA2=0; /*Past-year*/
Label CLBA2='Past-year club drug quit or cut down criterion endorsement-0=negative
1=positive';
if N3CD6Q1E30=1 or N3CD6Q1E31=1 then pCLBA2=1; else pCLBA2=0; /*Prior-to-past-year*/
Label pCLBA2='Prior-to-past-year club drug quit or cut down criterion endorsement-0=negative
1=positive';
if N3CD6Q1C30=1 or N3CD6Q1E30=1 or N3CD6Q1C31=1 or N3CD6Q1E31=1 then lCLBA2=1; else lCLBA2=0;
/*Lifetime*/
Label lCLBA2='Lifetime club drug quit or cut down criterion endorsement-0=negative
1=positive';

/*Club Drug - Time spent*/
if N3CD6Q1C33=1 or N3CD6Q1C34=1 then CLBA3=1; else CLBA3=0; /*Past-year*/
Label CLBA3='Past-year club drug time spent criterion endorsement-0=negative 1=positive';
if N3CD6Q1E33=1 or N3CD6Q1E34=1 then pCLBA3=1; else pCLBA3=0; /*Prior-to-past-year*/
Label pCLBA3='Prior-to-past-year club drug time spent criterion endorsement-0=negative
1=positive';
if N3CD6Q1C33=1 or N3CD6Q1E33=1 or N3CD6Q1C34=1 or N3CD6Q1E34=1 then lCLBA3=1; else lCLBA3=0;
/*Lifetime*/
Label lCLBA3='Lifetime club drug time spent criterion endorsement-0=negative 1=positive';

/*Club Drug - Craving*/
if N3CD6Q1C39=1 or N3CD6Q1C40=1 then CLBA4=1; else CLBA4=0; /*Past-year*/
Label CLBA4='Past-year club drug craving criterion endorsement-0=negative 1=positive';
if N3CD6Q1E39=1 or N3CD6Q1E40=1 then pCLBA4=1; else pCLBA4=0; /*Prior-to-past-year*/
Label pCLBA4='Prior-to-past-year club drug craving criterion endorsement-0=negative
1=positive';
if N3CD6Q1C39=1 or N3CD6Q1E39=1 or N3CD6Q1C40=1 or N3CD6Q1E40=1 then lCLBA4=1; else lCLBA4=0;
/*Lifetime*/
Label lCLBA4='Lifetime club drug craving criterion endorsement-0=negative 1=positive';

/*Club Drug - Role interference*/
if N3CD6Q1C44=1 or N3CD6Q1C45=1 or N3CD6Q1C46=1 then CLBA5=1; else CLBA5=0; /*Past-year*/
Label CLBA5='Past-year club drug role interference criterion endorsement-0=negative
1=positive';
if N3CD6Q1E44=1 or N3CD6Q1E45=1 or N3CD6Q1E46=1 then pCLBA5=1; else pCLBA5=0; /*Prior-to-past-
year*/
Label pCLBA5='Prior-to-past-year club drug role interference criterion endorsement-0=negative
1=positive';
if N3CD6Q1C44=1 or N3CD6Q1E44=1 or N3CD6Q1C45=1 or N3CD6Q1E45=1 or N3CD6Q1C46=1 or
N3CD6Q1E46=1 then lCLBA5=1; else lCLBA5=0; /*Lifetime*/
Label lCLBA5='Lifetime club drug role interference criterion endorsement-0=negative
1=positive';

/*Club Drug - Social problems*/
if N3CD6Q1C41=1 or N3CD6Q1C42=1 or N3CD6Q1C43=1 then CLBA6=1; else CLBA6=0; /*Past-year*/
Label CLBA6='Past-year club drug social problems criterion endorsement-0=negative 1=positive';

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if N3CD6Q1E41=1 or N3CD6Q1E42=1 or N3CD6Q1E43=1 then pCLBA6=1; else pCLBA6=0; /*Prior-to-past-year*/
Label pCLBA6='Prior-to-past-year club drug social problems criterion endorsement-0=negative 1=positive';
if N3CD6Q1C41=1 or N3CD6Q1E41=1 or N3CD6Q1C42=1 or N3CD6Q1E42=1 or N3CD6Q1C43=1 or N3CD6Q1E43=1 then lCLBA6=1; else lCLBA6=0; /*Lifetime*/
Label lCLBA6='Lifetime club drug social problems criterion endorsement-0=negative 1=positive';

/*Club Drug - Give up*/
if N3CD6Q1C35=1 or N3CD6Q1C36=1 then CLBA7=1; else CLBA7=0; /*Past-year*/
Label CLBA7='Past-year club drug give up criterion endorsement-0=negative 1=positive';
if N3CD6Q1E35=1 or N3CD6Q1E36=1 then pCLBA7=1; else pCLBA7=0; /*Prior-to-past-year*/
Label pCLBA7='Prior-to-past-year club drug give up criterion endorsement-0=negative 1=positive';
if N3CD6Q1C35=1 or N3CD6Q1E35=1 or N3CD6Q1C36=1 or N3CD6Q1E36=1 then lCLBA7=1; else lCLBA7=0;
/*Lifetime*/
Label lCLBA7='Lifetime club drug give up criterion endorsement-0=negative 1=positive';

/*Club Drug - Hazardous use*/
if N3CD6Q1C47=1 or N3CD6Q1C48=1 then CLBA8=1; else CLBA8=0; /*Past-year*/
Label CLBA8='Past-year club drug hazardous use criterion endorsement-0=negative 1=positive';
if N3CD6Q1E47=1 or N3CD6Q1E48=1 then pCLBA8=1; else pCLBA8=0; /*Prior-to-past-year*/
Label pCLBA8='Prior-to-past-year club drug hazardous use criterion endorsement-0=negative 1=positive';
if N3CD6Q1C47=1 or N3CD6Q1E47=1 or N3CD6Q1C48=1 or N3CD6Q1E48=1 then lCLBA8=1; else lCLBA8=0;
/*Lifetime*/
Label lCLBA8='Lifetime club drug hazardous use criterion endorsement-0=negative 1=positive';

/*Club Drug - Continued use despite problems*/
if N3CD6Q1C37=1 or N3CD6Q1C38=1 then CLBA9=1; else CLBA9=0; /*Past-year*/
Label CLBA9='Past-year club drug continued use despite problems criterion endorsement-0=negative 1=positive';
if N3CD6Q1E37=1 or N3CD6Q1E38=1 then pCLBA9=1; else pCLBA9=0; /*Prior-to-past-year*/
Label pCLBA9='Prior-to-past-year club drug continued use despite problems criterion endorsement-0=negative 1=positive';
if N3CD6Q1C37=1 or N3CD6Q1E37=1 or N3CD6Q1C38=1 or N3CD6Q1E38=1 then lCLBA9=1; else lCLBA9=0;
/*Lifetime*/
Label lCLBA9='Lifetime club drug continued use despite problems criterion endorsement-0=negative 1=positive';

/*Club Drug - Tolerance*/
if N3CD6Q1C1=1 or N3CD6Q1C2=1 then CLBA10=1; else CLBA10=0; /*Past-year*/
Label CLBA10='Past-year club drug tolerance criterion endorsement-0=negative 1=positive';
if N3CD6Q1E1=1 or N3CD6Q1E2=1 then pCLBA10=1; else pCLBA10=0; /*Prior-to-past-year*/
Label pCLBA10='Prior-to-past-year club drug tolerance criterion endorsement-0=negative 1=positive';
if N3CD6Q1C1=1 or N3CD6Q1E1=1 or N3CD6Q1C2=1 or N3CD6Q1E2=1 then lCLBA10=1; else lCLBA10=0;
/*Lifetime*/
Label lCLBA10='Lifetime club drug tolerance criterion endorsement-0=negative 1=positive';

/*-Past-year (CLBA1-CLBA10) and prior-to-past-year (pCLBA1-pCLBA10) symptom counts
-Prior-to-past-year symptoms counts include N3CD6Q2A to
denote SOME CLBUD symptoms occurred within same 12-month period
-Lifetime symptom count takes the largest symptom count from either past-year or prior-to-past-year*/

clbsum=sum(CLBA1, CLBA2, CLBA3, CLBA4, CLBA5, CLBA6, CLBA7, CLBA8, CLBA9, CLBA10); /*Past-year*/
Label clbsum='Sum of past-year club drug criteria';

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if N3CD6Q2A =1 THEN pclbsum=sum(pCLBA1, pCLBA2, pCLBA3, pCLBA4, pCLBA5, pCLBA6, pCLBA7,
pCLBA8, pCLBA9, pCLBA10); /*Prior-to-past-year*/
Label pclbsum='Sum of prior-to-past-year club drug criteria';
lclbsum=max(clbsum, pclbsum); /*Lifetime*/
Label lclbsum='Maximum sum of past-year or prior-to-past-year club drug criteria';

*CLBUD diagnoses;
if clbsum=>2 then CLBUD=1; else CLBUD=0; /*Past-year*/
Label CLBUD='Past-year CLBUD diagnosis-0=negative 1=positive';
if pclbsum=>2 then pCLBUD=1; else pCLBUD=0; /*Prior-to-past-year*/
Label pCLBUD='Prior-to-past-year CLBUD diagnosis-0=negative 1=positive';
if lclbsum=>2 then lCLBUD=1; else lCLBUD=0; /*Lifetime*/
Label lCLBUD='Lifetime CLBUD diagnosis-0=negative 1=positive';

*CLBUD severity;
if clbsum<2 then CLBUDSEV=0; /*Past-year - no CLBUD*/
if clbsum=2 or clbsum=3 then CLBUDSEV=1; /*Past-year - mild CLBUD*/
if clbsum=4 or clbsum=5 then CLBUDSEV=2; /*Past-year - moderate CLBUD*/
if clbsum>=6 then CLBUDSEV=3; /*Past-year - severe CLBUD*/
Label CLBUDSEV='Past-year CLBUD severity grading-0=no diagnosis, 1=mild CLBUD, 2=moderate
CLBUD and 3=severe CLBUD';

if pclbsum<2 then pCLBUDSEV=0; /*Prior-to-past-year - no CLBUD*/
if pclbsum=2 or pclbsum=3 then pCLBUDSEV=1; /*Prior-to-past-year - mild CLBUD*/
if pclbsum=4 or pclbsum=5 then pCLBUDSEV=2; /*Prior-to-past-year - moderate CLBUD*/
if pclbsum>=6 then pCLBUDSEV=3; /*Prior-to-past-year - severe CLBUD*/
Label pCLBUDSEV='Prior-to-past-year CLBUD severity grading-0=no diagnosis, 1=mild CLBUD,
2=moderate CLBUD and 3=severe CLBUD';

if lclbsum<2 then lCLBUDSEV=0; /*Lifetime - no CLBUD*/
if lclbsum=2 or lclbsum=3 then lCLBUDSEV=1; /*Lifetime - mild CLBUD*/
if lclbsum=4 or lclbsum=5 then lCLBUDSEV=2; /*Lifetime - moderate CLBUD*/
if lclbsum=>6 then lCLBUDSEV=3; /*Lifetime - severe CLBUD*/
Label lCLBUDSEV='Lifetime CLBUD severity grading-0=no diagnosis, 1=mild CLBUD, 2=moderate
CLBUD and 3=severe CLBUD';

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Hallucinogen Use Disorders (HALUD) Criteria and Diagnoses Algorithms

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/*Hallucinogen - Larger/longer*/
if N3CD7Q1C32=1 then HALA1=1; else HALA1=0; /*Past-year*/
Label HALA1='Past-year hallucinogen larger/longer criterion endorsement-0=negative
1=positive';
if N3CD7Q1E32=1 then pHALA1=1; else pHALA1=0; /*Prior-to-past-year*/
Label pHALA1='Prior-to-past-year hallucinogen larger/longer criterion endorsement-0=negative
1=positive';
if N3CD7Q1C32=1 or N3CD7Q1E32=1 then lHALA1=1; else lHALA1=0; /*Lifetime*/
Label lHALA1='Lifetime larger/longer hallucinogen criterion endorsement-0=negative
1=positive';

/*Hallucinogen - Quit or cut down*/
if N3CD7Q1C30=1 or N3CD7Q1C31=1 then HALA2=1; else HALA2=0; /*Past-year*/
Label HALA2='Past-year hallucinogen quit or cut down criterion endorsement-0=negative
1=positive';
if N3CD7Q1E30=1 or N3CD7Q1E31=1 then pHALA2=1; else pHALA2=0; /*Prior-to-past-year*/
Label pHALA2='Prior-to-past-year hallucinogen quit or cut down criterion endorsement-
0=negative 1=positive';
if N3CD7Q1C30=1 or N3CD7Q1E30=1 or N3CD7Q1C31=1 or N3CD7Q1E31=1 then lHALA2=1; else lHALA2=0;
/*Lifetime*/
Label lHALA2='Lifetime hallucinogen quit or cut down criterion endorsement-0=negative
1=positive';

/*Hallucinogen - Time spent*/
if N3CD7Q1C33=1 or N3CD7Q1C34=1 then HALA3=1; else HALA3=0; /*Past-year*/
Label HALA3='Past-year hallucinogen time spent criterion endorsement-0=negative 1=positive';
if N3CD7Q1E33=1 or N3CD7Q1E34=1 then pHALA3=1; else pHALA3=0; /*Prior-to-past-year*/
Label pHALA3='Prior-to-past-year hallucinogen time spent criterion endorsement-0=negative
1=positive';
if N3CD7Q1C33=1 or N3CD7Q1E33=1 or N3CD7Q1C34=1 or N3CD7Q1E34=1 then lHALA3=1; else lHALA3=0;
/*Lifetime*/
Label lHALA3='Lifetime hallucinogen time spent criterion endorsement-0=negative 1=positive';

/*Hallucinogen - Craving*/
if N3CD7Q1C39=1 or N3CD7Q1C40=1 then HALA4=1; else HALA4=0; /*Past-year*/
Label HALA4='Past-year hallucinogen craving criterion endorsement-0=negative 1=positive';
if N3CD7Q1E39=1 or N3CD7Q1E40=1 then pHALA4=1; else pHALA4=0; /*Prior-to-past-year*/
Label pHALA4='Prior-to-past-year hallucinogen craving criterion endorsement-0=negative
1=positive';
if N3CD7Q1C39=1 or N3CD7Q1E39=1 or N3CD7Q1C40=1 or N3CD7Q1E40=1 then lHALA4=1; else lHALA4=0;
/*Lifetime*/
Label lHALA4='Lifetime hallucinogen craving criterion endorsement-0=negative 1=positive';

/*Hallucinogen - Role interference*/
if N3CD7Q1C44=1 or N3CD7Q1C45=1 or N3CD7Q1C46=1 then HALA5=1; else HALA5=0; /*Past-year*/
Label HALA5='Past-year hallucinogen role interference criterion endorsement-0=negative
1=positive';
if N3CD7Q1E44=1 or N3CD7Q1E45=1 or N3CD7Q1E46=1 then pHALA5=1; else pHALA5=0; /*Prior-to-past-
year*/
Label pHALA5='Prior-to-past-year hallucinogen role interference criterion endorsement-
0=negative 1=positive';
if N3CD7Q1C44=1 or N3CD7Q1E44=1 or N3CD7Q1C45=1 or N3CD7Q1E45=1 or N3CD7Q1C46=1 or
N3CD7Q1E46=1 then lHALA5=1; else lHALA5=0; /*Lifetime*/
Label lHALA5='Lifetime hallucinogen role interference criterion endorsement-0=negative
1=positive';

/*Hallucinogen - Social problems*/

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if N3CD7Q1C41=1 or N3CD7Q1C42=1 or N3CD7Q1C43=1 then HALA6=1; else HALA6=0; /*Past-year*/
Label HALA6='Past-year hallucinogen social problems criterion endorsement-0=negative
1=positive';
if N3CD7Q1E41=1 or N3CD7Q1E42=1 or N3CD7Q1E43=1 then pHALA6=1; else pHALA6=0; /*Prior-to-past-
year*/
Label pHALA6='Prior-to-past-year hallucinogen social problems criterion endorsement-0=negative
1=positive';
if N3CD7Q1C41=1 or N3CD7Q1E41=1 or N3CD7Q1C42=1 or N3CD7Q1E42=1 or N3CD7Q1C43=1 or
N3CD7Q1E43=1 then lHALA6=1; else lHALA6=0; /*Lifetime*/
Label lHALA6='Lifetime hallucinogen social problems criterion endorsement-0=negative
1=positive';

/*Hallucinogen - Give up*/
if N3CD7Q1C35=1 or N3CD7Q1C36=1 then HALA7=1; else HALA7=0; /*Past-year*/
Label HALA7='Past-year hallucinogen give up criterion endorsement-0=negative 1=positive';
if N3CD7Q1E35=1 or N3CD7Q1E36=1 then pHALA7=1; else pHALA7=0; /*Prior-to-past-year*/
Label pHALA7='Prior-to-past-year hallucinogen give up criterion endorsement-0=negative
1=positive';
if N3CD7Q1C35=1 or N3CD7Q1E35=1 or N3CD7Q1C36=1 or N3CD7Q1E36=1 then lHALA7=1; else lHALA7=0;
/*Lifetime*/
Label lHALA7='Lifetime hallucinogen give up criterion endorsement-0=negative 1=positive';

/*Hallucinogen - Hazardous use*/
if N3CD7Q1C47=1 or N3CD7Q1C48=1 then HALA8=1; else HALA8=0; /*Past-year*/
Label HALA8='Past-year hallucinogen hazardous use criterion endorsement-0=negative
1=positive';
if N3CD7Q1E47=1 or N3CD7Q1E48=1 then pHALA8=1; else pHALA8=0; /*Prior-to-past-year*/
Label pHALA8='Prior-to-past-year hallucinogen hazardous use criterion endorsement-0=negative
1=positive';
if N3CD7Q1C47=1 or N3CD7Q1E47=1 or N3CD7Q1C48=1 or N3CD7Q1E48=1 then lHALA8=1; else lHALA8=0;
/*Lifetime*/
Label lHALA8='Lifetime hallucinogen hazardous use criterion endorsement-0=negative
1=positive';

/*Hallucinogen - Continued use despite problems*/
if N3CD7Q1C37=1 or N3CD7Q1C38=1 then HALA9=1; else HALA9=0; /*Past-year*/
Label HALA9='Past-year hallucinogen continued use despite problems criterion endorsement-
0=negative 1=positive';
if N3CD7Q1E37=1 or N3CD7Q1E38=1 then pHALA9=1; else pHALA9=0; /*Prior-to-past-year*/
Label pHALA9='Prior-to-past-year hallucinogen continued use despite problems criterion
endorsement-0=negative 1=positive';
if N3CD7Q1C37=1 or N3CD7Q1E37=1 or N3CD7Q1C38=1 or N3CD7Q1E38=1 then lHALA9=1; else lHALA9=0;
/*Lifetime*/
Label lHALA9='Lifetime hallucinogen continued use despite problems criterion endorsement-
0=negative 1=positive';

/*Hallucinogen - Tolerance*/
if N3CD7Q1C1=1 or N3CD7Q1C2=1 then HALA10=1; else HALA10=0; /*Past-year*/
Label HALA10='Past-year hallucinogen tolerance criterion endorsement-0=negative 1=positive';
if N3CD7Q1E1=1 or N3CD7Q1E2=1 then pHALA10=1; else pHALA10=0; /*Prior-to-past-year*/
Label pHALA10='Prior-to-past-year hallucinogen tolerance criterion endorsement-0=negative
1=positive';
if N3CD7Q1C1=1 or N3CD7Q1E1=1 or N3CD7Q1C2=1 or N3CD7Q1E2=1 then lHALA10=1; else lHALA10=0;
/*Lifetime*/
Label lHALA10='Lifetime hallucinogen tolerance criterion endorsement-0=negative 1=positive';

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/*-Past-year (HALA1-HALA10) and prior-to-past-year (pHALA1-pHALA10) symptom counts
-Prior-to-past-year symptoms counts include N3CD7Q2A to
denote SOME HALUD symptoms occurred within same 12-month period
-Lifetime symptom count takes the largest symptom count from either past-year or prior-to-
past-year*/

halsum=sum(HALA1, HALA2, HALA3, HALA4, HALA5, HALA6, HALA7, HALA8, HALA9, HALA10); /*Past-
year*/
Label halsum='Sum of past-year hallucinogen criteria';
if N3CD7Q2A=1 THEN phalsum=sum(pHALA1, pHALA2, pHALA3, pHALA4, pHALA5, pHALA6, pHALA7, pHALA8,
pHALA9, pHALA10); /*Prior-to-past-year*/
Label phalsum='Sum of prior-to-past-year hallucinogen criteria';
lhalsum=max(halsum, phalsum); /*Lifetime*/
Label lhalsum='Maximum sum of past-year or prior-to-past-year hallucinogen criteria';

*HALUD diagnoses;
if halsum=>2 then HALUD=1; else HALUD=0; /*Past-year*/
Label HALUD='Past-year HALUD diagnosis-0=negative 1=positive';
if phalsum=>2 then pHALUD=1; else pHALUD=0; /*Prior-to-past-year*/
Label pHALUD='Prior-to-past-year HALUD diagnosis-0=negative 1=positive';
if lhalsum=>2 then lHALUD=1; else lHALUD=0; /*Lifetime*/
Label lHALUD='Lifetime HALUD diagnosis-0=negative 1=positive';

*HALUD severity;
/*Past-year*/
if halsum<2 then HALUDSEV=0; /*Past-year - no HALUD*/
if halsum=2 or halsum=3 then HALUDSEV=1; /*Past-year - mild HALUD*/
if halsum=4 or halsum=5 then HALUDSEV=2; /*Past-year - moderate HALUD*/
if halsum>=6 then HALUDSEV=3; /*Past-year - severe HALUD*/
Label HALUDSEV='Past-year HALUD severity grading-0=no diagnosis, 1=mild HALUD, 2=moderate
HALUD and 3=severe HALUD';

/*Prior-to-past-year*/
if phalsum<2 then pHALUDSEV=0; /*Prior-to-past-year - no HALUD*/
if phalsum=2 or phalsum=3 then pHALUDSEV=1; /*Prior-to-past-year - mild HALUD*/
if phalsum=4 or phalsum=5 then pHALUDSEV=2; /*Prior-to-past-year - moderate HALUD*/
if phalsum>=6 then pHALUDSEV=3; /*Prior-to-past-year - severe HALUD*/
Label pHALUDSEV='Prior-to-past-year HALUD severity grading-0=no diagnosis, 1=mild HALUD,
2=moderate HALUD and 3=severe HALUD';

/*Lifetime*/
if lhalsum<2 then lHALUDSEV=0; /*Lifetime - no HALUD*/
if lhalsum=2 or lhalsum=3 then lHALUDSEV=1; /*Lifetime - mild HALUD*/
if lhalsum=4 or lhalsum=5 then lHALUDSEV=2; /*Lifetime - moderate HALUD*/
if lhalsum>=6 then lHALUDSEV=3; /*Lifetime - severe HALUD*/
Label lHALUDSEV='Lifetime HALUD severity grading-0=no diagnosis, 1=mild HALUD, 2=moderate
HALUD and 3=severe HALUD';

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Solvent Use Disorders (SOLUD) Criteria and Diagnoses Algorithms

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/*Solvent - Larger/longer*/
if N3CD8Q1C32=1 then SOLA1=1; else SOLA1=0; /*Past-year*/
Label SOLA1='Past-year solvent larger/longer criterion endorsement-0=negative 1=positive';
if N3CD8Q1E32=1 then pSOLA1=1; else pSOLA1=0; /*Prior-to-past-year*/
Label pSOLA1='Prior-to-past-year solvent larger/longer criterion endorsement-0=negative
1=positive';
if N3CD8Q1C32=1 or N3CD8Q1E32=1 then lSOLA1=1; else lSOLA1=0; /*Lifetime*/
Label lSOLA1='Lifetime larger/longer solvent criterion endorsement-0=negative 1=positive';

/*Solvent - Quit or cut down*/
if N3CD8Q1C30=1 or N3CD8Q1C31=1 then SOLA2=1; else SOLA2=0; /*Past-year*/
Label SOLA2='Past-year solvent quit or cut down criterion endorsement-0=negative 1=positive';
if N3CD8Q1E30=1 or N3CD8Q1E31=1 then pSOLA2=1; else pSOLA2=0; /*Prior-to-past-year*/
Label pSOLA2='Prior-to-past-year solvent quit or cut down criterion endorsement-0=negative
1=positive';
if N3CD8Q1C30=1 or N3CD8Q1E30=1 or N3CD8Q1C31=1 or N3CD8Q1E31=1 then lSOLA2=1; else lSOLA2=0;
/*Lifetime*/
Label lSOLA2='Lifetime solvent quit or cut down criterion endorsement-0=negative 1=positive';

/*Solvent - Time spent*/
if N3CD8Q1C33=1 or N3CD8Q1C34=1 then SOLA3=1; else SOLA3=0; /*Past-year*/
Label SOLA3='Past-year solvent time spent criterion endorsement-0=negative 1=positive';
if N3CD8Q1E33=1 or N3CD8Q1E34=1 then pSOLA3=1; else pSOLA3=0; /*Prior-to-past-year*/
Label pSOLA3='Prior-to-past-year solvent time spent criterion endorsement-0=negative
1=positive';
if N3CD8Q1C33=1 or N3CD8Q1E33=1 or N3CD8Q1C34=1 or N3CD8Q1E34=1 then lSOLA3=1; else lSOLA3=0;
/*Lifetime*/
Label lSOLA3='Lifetime solvent time spent criterion endorsement-0=negative 1=positive';

/*Solvent - Craving*/
if N3CD8Q1C39=1 or N3CD8Q1C40=1 then SOLA4=1; else SOLA4=0; /*Past-year*/
Label SOLA4='Past-year solvent craving criterion endorsement-0=negative 1=positive';
if N3CD8Q1E39=1 or N3CD8Q1E40=1 then pSOLA4=1; else pSOLA4=0; /*Prior-to-past-year*/
Label pSOLA4='Prior-to-past-year solvent craving criterion endorsement-0=negative 1=positive';
if N3CD8Q1C39=1 or N3CD8Q1E39=1 or N3CD8Q1C40=1 or N3CD8Q1E40=1 then lSOLA4=1; else lSOLA4=0;
/*Lifetime*/
Label lSOLA4='Lifetime solvent craving criterion endorsement-0=negative 1=positive';

/*Solvent - Role interference*/
if N3CD8Q1C44=1 or N3CD8Q1C45=1 or N3CD8Q1C46=1 then SOLA5=1; else SOLA5=0; /*Past-year*/
Label SOLA5='Past-year solvent role interference criterion endorsement-0=negative 1=positive';
if N3CD8Q1E44=1 or N3CD8Q1E45=1 or N3CD8Q1E46=1 then pSOLA5=1; else pSOLA5=0; /*Prior-to-past-
year*/
Label pSOLA5='Prior-to-past-year solvent role interference criterion endorsement-0=negative
1=positive';
if N3CD8Q1C44=1 or N3CD8Q1E44=1 or N3CD8Q1C45=1 or N3CD8Q1E45=1 or N3CD8Q1C46=1 or
N3CD8Q1E46=1 then lSOLA5=1; else lSOLA5=0; /*Lifetime*/
Label lSOLA5='Lifetime solvent role interference criterion endorsement-0=negative 1=positive';

/*Solvent - Social problems*/
if N3CD8Q1C41=1 or N3CD8Q1C42=1 or N3CD8Q1C43=1 then SOLA6=1; else SOLA6=0; /*Past-year*/
Label SOLA6='Past-year solvent social problems criterion endorsement-0=negative 1=positive';
if N3CD8Q1E41=1 or N3CD8Q1E42=1 or N3CD8Q1E43=1 then pSOLA6=1; else pSOLA6=0; /*Prior-to-past-
year*/
Label pSOLA6='Prior-to-past-year solvent social problems criterion endorsement-0=negative
1=positive';

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if N3CD8Q1C41=1 or N3CD8Q1E41=1 or N3CD8Q1C42=1 or N3CD8Q1E42=1 or N3CD8Q1C43=1 or
N3CD8Q1E43=1 then lSOLA6=1; else lSOLA6=0; /*Lifetime*/
Label lSOLA6='Lifetime solvent social problems criterion endorsement-0=negative 1=positive';

/*Solvent - Give up*/
if N3CD8Q1C35=1 or N3CD8Q1C36=1 then SOLA7=1; else SOLA7=0; /*Past-year*/
Label SOLA7='Past-year solvent give up criterion endorsement-0=negative 1=positive';
if N3CD8Q1E35=1 or N3CD8Q1E36=1 then pSOLA7=1; else pSOLA7=0; /*Prior-to-past-year*/
Label pSOLA7='Prior-to-past-year solvent give up criterion endorsement-0=negative 1=positive';
if N3CD8Q1C35=1 or N3CD8Q1E35=1 or N3CD8Q1C36=1 or N3CD8Q1E36=1 then lSOLA7=1; else lSOLA7=0;
/*Lifetime*/
Label lSOLA7='Lifetime solvent give up criterion endorsement-0=negative 1=positive';

/*Solvent - Hazardous use*/
if N3CD8Q1C47=1 or N3CD8Q1C48=1 then SOLA8=1; else SOLA8=0; /*Past-year*/
Label SOLA8='Past-year solvent hazardous use criterion endorsement-0=negative 1=positive';
if N3CD8Q1E47=1 or N3CD8Q1E48=1 then pSOLA8=1; else pSOLA8=0; /*Prior-to-past-year*/
Label pSOLA8='Prior-to-past-year solvent hazardous use criterion endorsement-0=negative
1=positive';
if N3CD8Q1C47=1 or N3CD8Q1E47=1 or N3CD8Q1C48=1 or N3CD8Q1E48=1 then lSOLA8=1; else lSOLA8=0;
/*Lifetime*/
Label lSOLA8='Lifetime solvent hazardous use criterion endorsement-0=negative 1=positive';

/*Solvent - Continued use despite problems*/
if N3CD8Q1C37=1 or N3CD8Q1C38=1 then SOLA9=1; else SOLA9=0; /*Past-year*/
Label SOLA9='Past-year solvent continued use despite problems criterion endorsement-0=negative
1=positive';
if N3CD8Q1E37=1 or N3CD8Q1E38=1 then pSOLA9=1; else pSOLA9=0; /*Prior-to-past-year*/
Label pSOLA9='Prior-to-past-year solvent continued use despite problems criterion endorsement-
0=negative 1=positive';
if N3CD8Q1C37=1 or N3CD8Q1E37=1 or N3CD8Q1C38=1 or N3CD8Q1E38=1 then lSOLA9=1; else lSOLA9=0;
/*Lifetime*/
Label lSOLA9='Lifetime solvent continued use despite problems criterion endorsement-0=negative
1=positive';

/*Solvent - Tolerance*/
if N3CD8Q1C1=1 or N3CD8Q1C2=1 then SOLA10=1; else SOLA10=0; /*Past-year*/
Label SOLA10='Past-year solvent tolerance criterion endorsement-0=negative 1=positive';
if N3CD8Q1E1=1 or N3CD8Q1E2=1 then pSOLA10=1; else pSOLA10=0; /*Prior-to-past-year*/
Label pSOLA10='Prior-to-past-year solvent tolerance criterion endorsement-0=negative
1=positive';
if N3CD8Q1C1=1 or N3CD8Q1E1=1 or N3CD8Q1C2=1 or N3CD8Q1E2=1 then lSOLA10=1; else lSOLA10=0;
/*Lifetime*/
Label lSOLA10='Lifetime solvent tolerance criterion endorsement-0=negative 1=positive';

/*-Past-year (SOLA1-SOLA10) and prior-to-past-year (pSOLA1-pSOLA10) symptom counts
-Prior-to-past-year symptoms counts include N3CD8Q2A to
denote SOME SOLUD symptoms occurred within same 12-month period
-Lifetime symptom count takes the largest symptom count from either past-year or prior-to-
past-year*/

solsum=sum(SOLA1, SOLA2, SOLA3, SOLA4, SOLA5, SOLA6, SOLA7, SOLA8, SOLA9, SOLA10); /*Past-
year*/
Label solsum='Sum of past-year solvent criteria';
if N3CD8Q2A=1 THEN psolsum=sum(pSOLA1, pSOLA2, pSOLA3, pSOLA4, pSOLA5, pSOLA6, pSOLA7, pSOLA8,
pSOLA9, pSOLA10); /*Prior-to-past-year*/
Label psolsum='Sum of prior-to-past-year solvent criteria';
lsolsum=max(solsum, psolsum); /*Lifetime*/
Label lsolsum='Maximum sum of past-year or prior-to-past-year solvent criteria';

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```

*SOLUD diagnoses;
if solsum=>2 then SOLUD=1; else SOLUD=0; /*Past-year*/
Label SOLUD='Past-year SOLUD diagnosis-0=negative 1=positive';
if psolsum=>2 then pSOLUD=1; else pSOLUD=0; /*Prior-to-past-year*/
Label pSOLUD='Prior-to-past-year SOLUD diagnosis-0=negative 1=positive';
if lsolsum=>2 then lSOLUD=1; else lSOLUD=0; /*Lifetime*/
Label lSOLUD='Lifetime SOLUD diagnosis-0=negative 1=positive';

*SOLUD severity;
if solsum<2 then SOLUDSEV=0; /*Past-year - no SOLUD*/
if solsum=2 or solsum=3 then SOLUDSEV=1; /*Past-year - mild SOLUD*/
if solsum=4 or solsum=5 then SOLUDSEV=2; /*Past-year - moderate SOLUD*/
if solsum>=6 then SOLUDSEV=3; /*Past-year - severe SOLUD*/
Label SOLUDSEV='Past-year SOLUD severity grading-0=no diagnosis, 1=mild SOLUD, 2=moderate
SOLUD and 3=severe SOLUD';

if psolsum<2 then pSOLUDSEV=0; /*Prior-to-past-year - no SOLUD*/
if psolsum=2 or psolsum=3 then pSOLUDSEV=1; /*Prior-to-past-year - mild SOLUD*/
if psolsum=4 or psolsum=5 then pSOLUDSEV=2; /*Prior-to-past-year - moderate SOLUD*/
if psolsum>=6 then pSOLUDSEV=3; /*Prior-to-past-year - severe SOLUD*/
Label pSOLUDSEV='Prior-to-past-year SOLUD severity grading-0=no diagnosis, 1=mild SOLUD,
2=moderate SOLUD and 3=severe SOLUD';

if lsolsum<2 then lSOLUDSEV=0; /*Lifetime - no SOLUD*/
if lsolsum=2 or lsolsum=3 then lSOLUDSEV=1; /*Lifetime - mild SOLUD*/
if lsolsum=4 or lsolsum=5 then lSOLUDSEV=2; /*Lifetime - moderate SOLUD*/
if lsolsum>=6 then lSOLUDSEV=3; /*Lifetime - severe SOLUD*/
Label lSOLUDSEV='Lifetime SOLUD severity grading-0=no diagnosis, 1=mild SOLUD, 2=moderate
SOLUD and 3=severe SOLUD';

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Heroin Use Disorders (HERUD) Criteria and Diagnoses Algorithms

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/*Heroin - Larger/longer*/
if N3CD9Q1C32=1 then HERA1=1; else HERA1=0; /*Past-year*/
Label HERA1='Past-year heroin larger/longer criterion endorsement-0=negative 1=positive';
if N3CD9Q1E32=1 then pHERA1=1; else pHERA1=0; /*Prior-to-past-year*/
Label pHERA1='Prior-to-past-year heroin larger/longer criterion endorsement-0=negative
1=positive';
if N3CD9Q1C32=1 or N3CD9Q1E32=1 then lHERA1=1; else lHERA1=0; /*Lifetime*/
Label lHERA1='Lifetime larger/longer heroin criterion endorsement-0=negative 1=positive';

/*Heroin - Quit or cut down*/
if N3CD9Q1C30=1 or N3CD9Q1C31=1 then HERA2=1; else HERA2=0; /*Past-year*/
Label HERA2='Past-year heroin quit or cut down criterion endorsement-0=negative 1=positive';
if N3CD9Q1E30=1 or N3CD9Q1E31=1 then pHERA2=1; else pHERA2=0; /*Prior-to-past-year*/
Label pHERA2='Prior-to-past-year heroin quit or cut down criterion endorsement-0=negative
1=positive';
if N3CD9Q1C30=1 or N3CD9Q1E30=1 or N3CD9Q1C31=1 or N3CD9Q1E31=1 then lHERA2=1; else lHERA2=0;
/*Lifetime*/
Label lHERA2='Lifetime heroin quit or cut down criterion endorsement-0=negative 1=positive';

/*Heroin - Time spent*/
if N3CD9Q1C33=1 or N3CD9Q1C34=1 then HERA3=1; else HERA3=0; /*Past-year*/
Label HERA3='Past-year heroin time spent criterion endorsement-0=negative 1=positive';
if N3CD9Q1E33=1 or N3CD9Q1E34=1 then pHERA3=1; else pHERA3=0; /*Prior-to-past-year*/
Label pHERA3='Prior-to-past-year heroin time spent criterion endorsement-0=negative
1=positive';
if N3CD9Q1C33=1 or N3CD9Q1E33=1 or N3CD9Q1C34=1 or N3CD9Q1E34=1 then lHERA3=1; else lHERA3=0;
/*Lifetime*/
Label lHERA3='Lifetime heroin time spent criterion endorsement-0=negative 1=positive';

/*Heroin - Craving*/
if N3CD9Q1C39=1 or N3CD9Q1C40=1 then HERA4=1; else HERA4=0; /*Past-year*/
Label HERA4='Past-year heroin craving criterion endorsement-0=negative 1=positive';
if N3CD9Q1E39=1 or N3CD9Q1E40=1 then pHERA4=1; else pHERA4=0; /*Prior-to-past-year*/
Label pHERA4='Prior-to-past-year heroin craving criterion endorsement-0=negative 1=positive';
if N3CD9Q1C39=1 or N3CD9Q1E39=1 or N3CD9Q1C40=1 or N3CD9Q1E40=1 then lHERA4=1; else lHERA4=0;
/*Lifetime*/
Label lHERA4='Lifetime heroin craving criterion endorsement-0=negative 1=positive';

/*Heroin - Role interference*/
if N3CD9Q1C44=1 or N3CD9Q1C45=1 or N3CD9Q1C46=1 then HERA5=1; else HERA5=0; /*Past-year*/
Label HERA5='Past-year heroin role interference criterion endorsement-0=negative 1=positive';
if N3CD9Q1E44=1 or N3CD9Q1E45=1 or N3CD9Q1E46=1 then pHERA5=1; else pHERA5=0; /*Prior-to-past-
year*/
Label pHERA5='Prior-to-past-year heroin role interference criterion endorsement-0=negative
1=positive';
if N3CD9Q1C44=1 or N3CD9Q1E44=1 or N3CD9Q1C45=1 or N3CD9Q1E45=1 or N3CD9Q1C46=1 or
N3CD9Q1E46=1 then lHERA5=1; else lHERA5=0; /*Lifetime*/
Label lHERA5='Lifetime heroin role interference criterion endorsement-0=negative 1=positive';

/*Heroin - Social problems*/
if N3CD9Q1C41=1 or N3CD9Q1C42=1 or N3CD9Q1C43=1 then HERA6=1; else HERA6=0; /*Past-year*/
Label HERA6='Past-year heroin social problems criterion endorsement-0=negative 1=positive';
if N3CD9Q1E41=1 or N3CD9Q1E42=1 or N3CD9Q1E43=1 then pHERA6=1; else pHERA6=0; /*Prior-to-past-
year*/
Label pHERA6='Prior-to-past-year heroin social problems criterion endorsement-0=negative
1=positive';

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if N3CD9Q1C41=1 or N3CD9Q1E41=1 or N3CD9Q1C42=1 or N3CD9Q1E42=1 or N3CD9Q1C43=1 or
N3CD9Q1E43=1 then lHERA6=1; else lHERA6=0; /*Lifetime*/
Label lHERA6='Lifetime heroin social problems criterion endorsement-0=negative 1=positive';

/*Heroin - Give up*/
if N3CD9Q1C35=1 or N3CD9Q1C36=1 then HERA7=1; else HERA7=0; /*Past-year*/
Label HERA7='Past-year heroin give up criterion endorsement-0=negative 1=positive';
if N3CD9Q1E35=1 or N3CD9Q1E36=1 then pHERA7=1; else pHERA7=0; /*Prior-to-past-year*/
Label pHERA7='Prior-to-past-year heroin give up criterion endorsement-0=negative 1=positive';
if N3CD9Q1C35=1 or N3CD9Q1E35=1 or N3CD9Q1C36=1 or N3CD9Q1E36=1 then lHERA7=1; else lHERA7=0;
/*Lifetime*/
Label lHERA7='Lifetime heroin give up criterion endorsement-0=negative 1=positive';

/*Heroin - Hazardous use*/
if N3CD9Q1C47=1 or N3CD9Q1C48=1 then HERA8=1; else HERA8=0; /*Past-year*/
Label HERA8='Past-year heroin hazardous use criterion endorsement-0=negative 1=positive';
if N3CD9Q1E47=1 or N3CD9Q1E48=1 then pHERA8=1; else pHERA8=0; /*Prior-to-past-year*/
Label pHERA8='Prior-to-past-year heroin hazardous use criterion endorsement-0=negative
1=positive';
if N3CD9Q1C47=1 or N3CD9Q1E47=1 or N3CD9Q1C48=1 or N3CD9Q1E48=1 then lHERA8=1; else lHERA8=0;
/*Lifetime*/
Label lHERA8='Lifetime heroin hazardous use criterion endorsement-0=negative 1=positive';

/*Heroin - Continued use despite problems*/
if N3CD9Q1C37=1 or N3CD9Q1C38=1 then HERA9=1; else HERA9=0; /*Past-year*/
Label HERA9='Past-year heroin continued use despite problems criterion endorsement-0=negative
1=positive';
if N3CD9Q1E37=1 or N3CD9Q1E38=1 then pHERA9=1; else pHERA9=0; /*Prior-to-past-year*/
Label pHERA9='Prior-to-past-year heroin continued use despite problems criterion endorsement-
0=negative 1=positive';
if N3CD9Q1C37=1 or N3CD9Q1E37=1 or N3CD9Q1C38=1 or N3CD9Q1E38=1 then lHERA9=1; else lHERA9=0;
/*Lifetime*/
Label lHERA9='Lifetime heroin continued use despite problems criterion endorsement-0=negative
1=positive';

/*Heroin - Tolerance*/
if N3CD9Q1C1=1 or N3CD9Q1C2=1 then HERA10=1; else HERA10=0; /*Past-year*/
Label HERA10='Past-year heroin tolerance criterion endorsement-0=negative 1=positive';
if N3CD9Q1E1=1 or N3CD9Q1E2=1 then pHERA10=1; else pHERA10=0; /*Prior-to-past-year*/
Label pHERA10='Prior-to-past-year heroin tolerance criterion endorsement-0=negative
1=positive';
if N3CD9Q1C1=1 or N3CD9Q1E1=1 or N3CD9Q1C2=1 or N3CD9Q1E2=1 then lHERA10=1; else lHERA10=0;
/*Lifetime*/
Label lHERA10='Lifetime heroin tolerance criterion endorsement-0=negative 1=positive';

/*Heroin - Withdrawal*/
*Heroin - Withdrawal subalgorithm - sum of withdrawal symptoms;
herwith=sum(N3CD9Q1C5=1, N3CD9Q1C7=1, N3CD9Q1C12=1, N3CD9Q1C9=1, (N3CD9Q1C16=1 or
N3CD9Q1C26=1), N3CD9Q1C28=1, N3CD9Q1C8=1, N3CD9Q1C13=1, N3CD9Q1C20=1); /*past-year withdrawal
symptom count*/
Label herwith='Sum of past-year heroin withdrawal symptoms';
pherwith=sum(N3CD9Q1E5=1, N3CD9Q1E7=1, N3CD9Q1E12=1, N3CD9Q1E9=1, (N3CD9Q1E16=1 or
N3CD9Q1E26=1), N3CD9Q1E28=1, N3CD9Q1E8=1, N3CD9Q1E13=1, N3CD9Q1E20=1); /*prior-to-past-year
withdrawal symptom count*/
Label pherwith='Sum of prior-to-past-year heroin withdrawal symptoms';

*Heroin - Withdrawal - using subalgorithm;
if herwith=>3 or N3CD9Q1C29=1 then HERA11=1; else HERA11=0; /*Past-year*/
Label HERA11='Past-year heroin withdrawal criterion endorsement-0=negative 1=positive';

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if pherwith=>3 or N3CD9Q1E29=1 then pHERA11=1; else pHERA11=0; /*Prior-to-past-year*/
Label pHERA11='Prior-to-past-year heroin withdrawal criterion endorsement-0=negative
1=positive';
if herwith=>3 or N3CD9Q1C29=1 or pherwith=>3 or N3CD9Q1E29=1 then lHERA11=1; else lHERA11=0;
/*Lifetime*/
Label lHERA11='Lifetime heroin withdrawal criterion endorsement-0=negative 1=positive';

/*-Past-year (HERA1-HERA11) and prior-to-past-year (pHERA1-pHERA11) symptom counts
-Prior-to-past-year symptoms counts include N3CD9Q2A to
denote SOME HERUD symptoms occurred within same 12-month period
-Lifetime symptom count takes the largest symptom count from either past-year or prior-to-
past-year*/

hersum=sum(HERA1, HERA2, HERA3, HERA4, HERA5, HERA6, HERA7, HERA8, HERA9, HERA10, HERA11);
/*Past-year*/
Label hersum='Sum of past-year heroin criteria';
if N3CD9Q2A=1 THEN phersum=sum(pHERA1, pHERA2, pHERA3, pHERA4, pHERA5, pHERA6, pHERA7, pHERA8,
pHERA9, pHERA10, pHERA11);
Label phersum='Sum of prior-to-past-year heroin criteria';
lhersum=max(hersum, phersum);
Label lhersum='Maximum sum of past-year or prior-to-past-year heroin criteria';

*HERUD diagnoses;
if hersum>=2 then HERUD=1; else HERUD=0; /*Past-year*/
Label HERUD='Past-year HERUD diagnosis-0=negative 1=positive';
if phersum>=2 then pHERUD=1; else pHERUD=0; /*Prior-to-past-year*/
Label pHERUD='Prior-to-past-year HERUD diagnosis-0=negative 1=positive';
if lhersum>=2 then lHERUD=1; else lHERUD=0; /*Lifetime*/
Label lHERUD='Lifetime HERUD diagnosis-0=negative 1=positive';

*HERUD severity;
/*Past-year*/
if hersum<2 then HERUDSEV=0; /*Past-year - no HERUD*/
if hersum=2 or hersum=3 then HERUDSEV=1; /*Past-year - mild HERUD*/
if hersum=4 or hersum=5 then HERUDSEV=2; /*Past-year - moderate HERUD*/
if hersum>=6 then HERUDSEV=3; /*Past-year - severe HERUD*/
Label HERUDSEV='Past-year HERUD severity grading-0=no diagnosis, 1=mild HERUD, 2=moderate
HERUD and 3=severe HERUD';

/*Prior-to-past-year*/
if phersum<2 then pHERUDSEV=0; /*Prior-to-past-year - no HERUD*/
if phersum=2 or phersum=3 then pHERUDSEV=1; /*Prior-to-past-year - mild HERUD*/
if phersum=4 or phersum=5 then pHERUDSEV=2; /*Prior-to-past-year - moderate HERUD*/
if phersum>=6 then pHERUDSEV=3; /*Prior-to-past-year - severe HERUD*/
Label pHERUDSEV='Prior-to-past-year HERUD severity grading-0=no diagnosis, 1=mild HERUD,
2=moderate HERUD and 3=severe HERUD';

/*Lifetime*/
if lhersum<2 then lHERUDSEV=0; /*Lifetime - no HERUD*/
if lhersum=2 or lhersum=3 then lHERUDSEV=1; /*Lifetime - mild HERUD*/
if lhersum=4 or lhersum=5 then lHERUDSEV=2; /*Lifetime - moderate HERUD*/
if lhersum>=6 then lHERUDSEV=3; /*Lifetime - severe HERUD*/
Label lHERUDSEV='Lifetime HERUD severity grading-0=no diagnosis, 1=mild HERUD, 2=moderate
HERUD and 3=severe HERUD';

```

Other/Unknown Drug Use Disorders (OTHUD) Criteria and Diagnoses Algorithms³

```

/*Other/Unknown - Larger/longer*/
if N3CD10Q1C32=1 then OTHA1=1; else OTHA1=0; /*Past-year*/
Label OTHA1='Past-year other/unknown larger/longer criterion endorsement-0=negative
1=positive';
if N3CD10Q1E32=1 then pOTHA1=1; else pOTHA1=0; /*Prior-to-past-year*/
Label pOTHA1='Prior-to-past-year other/unknown larger/longer criterion endorsement-0=negative
1=positive';
if N3CD10Q1C32=1 or N3CD10Q1E32=1 then lOTHA1=1; else lOTHA1=0; /*Lifetime*/
Label lOTHA1='Lifetime larger/longer other/unknown criterion endorsement-0=negative
1=positive';

/*Other/Unknown - Quit or cut down*/
if N3CD10Q1C30=1 or N3CD10Q1C31=1 then OTHA2=1; else OTHA2=0; /*Past-year*/
Label OTHA2='Past-year other/unknown quit or cut down criterion endorsement-0=negative
1=positive';
if N3CD10Q1E30=1 or N3CD10Q1E31=1 then pOTHA2=1; else pOTHA2=0; /*Prior-to-past-year*/
Label pOTHA2='Prior-to-past-year other/unknown quit or cut down criterion endorsement-
0=negative 1=positive';
if N3CD10Q1C30=1 or N3CD10Q1E30=1 or N3CD10Q1C31=1 or N3CD10Q1E31=1 then lOTHA2=1; else
lOTHA2=0; /*Lifetime*/
Label lOTHA2='Lifetime other/unknown quit or cut down criterion endorsement-0=negative
1=positive';

/*Other/Unknown - Time spent*/
if N3CD10Q1C33=1 or N3CD10Q1C34=1 then OTHA3=1; else OTHA3=0; /*Past-year*/
Label OTHA3='Past-year other/unknown time spent criterion endorsement-0=negative 1=positive';
if N3CD10Q1E33=1 or N3CD10Q1E34=1 then pOTHA3=1; else pOTHA3=0; /*Prior-to-past-year*/
Label pOTHA3='Prior-to-past-year other/unknown time spent criterion endorsement-0=negative
1=positive';
if N3CD10Q1C33=1 or N3CD10Q1E33=1 or N3CD10Q1C34=1 or N3CD10Q1E34=1 then lOTHA3=1; else
lOTHA3=0; /*Lifetime*/
Label lOTHA3='Lifetime other/unknown time spent criterion endorsement-0=negative 1=positive';

/*Other/Unknown - Craving*/
if N3CD10Q1C39=1 or N3CD10Q1C40=1 then OTHA4=1; else OTHA4=0; /*Past-year*/
Label OTHA4='Past-year other/unknown craving criterion endorsement-0=negative 1=positive';
if N3CD10Q1E39=1 or N3CD10Q1E40=1 then pOTHA4=1; else pOTHA4=0; /*Prior-to-past-year*/
Label pOTHA4='Prior-to-past-year other/unknown craving criterion endorsement-0=negative
1=positive';
if N3CD10Q1C39=1 or N3CD10Q1E39=1 or N3CD10Q1C40=1 or N3CD10Q1E40=1 then lOTHA4=1; else
lOTHA4=0; /*Lifetime*/
Label lOTHA4='Lifetime other/unknown craving criterion endorsement-0=negative 1=positive';

/*Other/Unknown - Role interference*/
if N3CD10Q1C44=1 or N3CD10Q1C45=1 or N3CD10Q1C46=1 then OTHA5=1; else OTHA5=0; /*Past-year*/
Label OTHA5='Past-year other/unknown role interference criterion endorsement-0=negative
1=positive';

```

³The DSM-5 defines other/unknown substance withdrawal syndrome as “the development of a substance-specific syndrome shortly after the cessation of (or reduction in) substance use” (pg. 583). Because there is no specific withdrawal criteria set for other/unknown drug classes, for the other/unknown drug class we examined the withdrawal sub-criteria set for each substance as defined in the DSM; however, in all cases except for one (i.e., sedative-withdrawal syndrome) the subalgorithm for withdrawal appeared to correspond to the rules for each major drug class. For sedative-specific withdrawal the present code require three or more (instead of two or more) withdrawal symptoms for positive endorsement of other/unknown withdrawal. The three or more cut-off appropriately classified individuals according to the NESARC-III derived variables. Thus, we have included the three or more cut-off in the present code. We have also included an alternative two or more sedative-specific other/unknown withdrawal symptom operationalization in the “OTHUD Criteria and Diagnoses Algorithms (Withdrawal Clustering)” section (pg. 80) to be more consistent with the DSM-5.

```

if N3CD10Q1E44=1 or N3CD10Q1E45=1 or N3CD10Q1E46=1 then pOTHA5=1; else pOTHA5=0; /*Prior-to-past-year*/
Label pOTHA5='Prior-to-past-year other/unknown role interference criterion endorsement-0=negative 1=positive';
if N3CD10Q1C44=1 or N3CD10Q1E44=1 or N3CD10Q1C45=1 or N3CD10Q1E45=1 or N3CD10Q1C46=1 or N3CD10Q1E46=1 then lOTHA5=1; else lOTHA5=0; /*Lifetime*/
Label lOTHA5='Lifetime other/unknown role interference criterion endorsement-0=negative 1=positive';

/*Other/Unknown - Social problems*/
if N3CD10Q1C41=1 or N3CD10Q1C42=1 or N3CD10Q1C43=1 then OTHA6=1; else OTHA6=0; /*Past-year*/
Label OTHA6='Past-year other/unknown social problems criterion endorsement-0=negative 1=positive';
if N3CD10Q1E41=1 or N3CD10Q1E42=1 or N3CD10Q1E43=1 then pOTHA6=1; else pOTHA6=0; /*Prior-to-past-year*/
Label pOTHA6='Prior-to-past-year other/unknown social problems criterion endorsement-0=negative 1=positive';
if N3CD10Q1C41=1 or N3CD10Q1E41=1 or N3CD10Q1C42=1 or N3CD10Q1E42=1 or N3CD10Q1C43=1 or N3CD10Q1E43=1 then lOTHA6=1; else lOTHA6=0; /*Lifetime*/
Label lOTHA6='Lifetime other/unknown social problems criterion endorsement-0=negative 1=positive';

/*Other/Unknown - Give up*/
if N3CD10Q1C35=1 or N3CD10Q1C36=1 then OTHA7=1; else OTHA7=0; /*Past-year*/
Label OTHA7='Past-year other/unknown give up criterion endorsement-0=negative 1=positive';
if N3CD10Q1E35=1 or N3CD10Q1E36=1 then pOTHA7=1; else pOTHA7=0; /*Prior-to-past-year*/
Label pOTHA7='Prior-to-past-year other/unknown give up criterion endorsement-0=negative 1=positive';
if N3CD10Q1C35=1 or N3CD10Q1E35=1 or N3CD10Q1C36=1 or N3CD10Q1E36=1 then lOTHA7=1; else lOTHA7=0; /*Lifetime*/
Label lOTHA7='Lifetime other/unknown give up criterion endorsement-0=negative 1=positive';

/*Other/Unknown - Hazardous use*/
if N3CD10Q1C47=1 or N3CD10Q1C48=1 then OTHA8=1; else OTHA8=0; /*Past-year*/
Label OTHA8='Past-year other/unknown hazardous use criterion endorsement-0=negative 1=positive';
if N3CD10Q1E47=1 or N3CD10Q1E48=1 then pOTHA8=1; else pOTHA8=0; /*Prior-to-past-year*/
Label pOTHA8='Prior-to-past-year other/unknown hazardous use criterion endorsement-0=negative 1=positive';
if N3CD10Q1C47=1 or N3CD10Q1E47=1 or N3CD10Q1C48=1 or N3CD10Q1E48=1 then lOTHA8=1; else lOTHA8=0; /*Lifetime*/
Label lOTHA8='Lifetime other/unknown hazardous use criterion endorsement-0=negative 1=positive';

/*Other/Unknown - Continued use despite problems*/
if N3CD10Q1C37=1 or N3CD10Q1C38=1 then OTHA9=1; else OTHA9=0; /*Past-year*/
Label OTHA9='Past-year other/unknown continued use despite problems criterion endorsement-0=negative 1=positive';
if N3CD10Q1E37=1 or N3CD10Q1E38=1 then pOTHA9=1; else pOTHA9=0; /*Prior-to-past-year*/
Label pOTHA9='Prior-to-past-year other/unknown continued use despite problems criterion endorsement-0=negative 1=positive';
if N3CD10Q1C37=1 or N3CD10Q1E37=1 or N3CD10Q1C38=1 or N3CD10Q1E38=1 then lOTHA9=1; else lOTHA9=0; /*Lifetime*/
Label lOTHA9='Lifetime other/unknown continued use despite problems criterion endorsement-0=negative 1=positive';

/*Other/Unknown - Tolerance*/
if N3CD10Q1C1=1 or N3CD10Q1C2=1 then OTHA10=1; else OTHA10=0; /*Past-year*/
Label OTHA10='Past-year other/unknown tolerance criterion endorsement-0=negative 1=positive';

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if N3CD10Q1E1=1 or N3CD10Q1E2=1 then pOTHA10=1; else pOTHA10=0; /*Prior-to-past-year*/
Label pOTHA10='Prior-to-past-year other/unknown tolerance criterion endorsement-0=negative
1=positive';
if N3CD10Q1C1=1 or N3CD10Q1E1=1 or N3CD10Q1C2=1 or N3CD10Q1E2=1 then lOTHA10=1; else
lOTHA10=0; /*Lifetime*/
Label lOTHA10='Lifetime other/unknown tolerance criterion endorsement-0=negative 1=positive';

/*Other/Unknown - Withdrawal*/
/*Withdrawal subalgorithm - sum of each substance-specific withdrawal symptom set (4 classes
total)*/
othwithsed=sum((N3CD10Q1C6=1 or N3CD10Q1C26=1), N3CD10Q1C7=1, N3CD10Q1C11=1, N3CD10Q1C14=1,
N3CD10Q1C18=1, N3CD10Q1C19=1, N3CD10Q1C20=1, N3CD10Q1C21=1); /*past-year sedative-wtihdrawal
symptom count */
Label othwithsed='Sum of past-year other/unknown sedative-specific withdrawal symptoms';
pothwithsed=sum((N3CD10Q1E6=1 or N3CD10Q1E26=1), N3CD10Q1E7=1, N3CD10Q1E11=1, N3CD10Q1E14=1,
N3CD10Q1E18=1, N3CD10Q1E19=1, N3CD10Q1E20=1, N3CD10Q1E21=1);
/*prior-to-past-year sedative-wtihdrawal symptom count*/
Label pothwithsed='Sum of past-year other/unknown sedative-specific withdrawal symptoms';

othwithop=sum(N3CD10Q1C5=1, N3CD10Q1C7=1, N3CD10Q1C12=1, N3CD10Q1C9=1, (N3CD10Q1C16=1 or
N3CD10Q1C26=1), N3CD10Q1C28=1, N3CD10Q1C8=1, N3CD10Q1C13=1, N3CD10Q1C20=1);
/*past-year opioid-wtihdrawal symptom count*/
Label othwithop='Sum of past-year other/unknown opioid-specific withdrawal symptoms';
pothwithop=sum(N3CD10Q1E5=1, N3CD10Q1E7=1, N3CD10Q1E12=1, N3CD10Q1E9=1, (N3CD10Q1E16=1 or
N3CD10Q1E26=1), N3CD10Q1E28=1, N3CD10Q1E8=1, N3CD10Q1E13=1, N3CD10Q1E20=1);
/*prior-to-past-year opioid-wtihdrawal symptom count*/
Label pothwithop='Sum of past-year other/unknown opioid-specific withdrawal symptoms';

othwithma=sum((N3CD10Q1C22=1 or N3CD10Q1C24=1), N3CD10Q1C11=1, (N3CD10Q1C20=1 or
N3CD10Q1C17=1), N3CD10Q1C23=1, N3CD10Q1C14=1, N3CD10Q1C5=1, (N3CD10Q1C13=1 or N3CD10Q1C19=1 or
N3CD10Q1C25=1 or N3CD10Q1C26=1 or N3CD10Q1C27=1 or N3CD10Q1C28=1));
/*past-year cannabis-wtihdrawal symptom count*/
Label othwithma='Sum of past-year other/unknown cannabis-specific withdrawal symptoms';
pothwithma=sum((N3CD10Q1E22=1 or N3CD10Q1E24=1), N3CD10Q1E11=1, (N3CD10Q1E20=1 or
N3CD10Q1E17=1), N3CD10Q1E23=1, N3CD10Q1E14=1, N3CD10Q1E5=1, (N3CD10Q1E13=1 or N3CD10Q1E19=1 or
N3CD10Q1E25=1 or N3CD10Q1E26=1 or N3CD10Q1E27=1 or N3CD10Q1E28=1));
/*prior-to-past-year cannabis-wtihdrawal symptom count*/
Label pothwithma='Sum of past-year other/unknown cannabis-specific withdrawal symptoms';

if N3CD10Q1C5=1 then othwithsti=sum(N3CD10Q1C4=1, N3CD10Q1C17=1, (N3CD10Q1C20=1 or
N3CD10Q1C3=1), N3CD10Q1C10=1, (N3CD10Q1C15=1 or N3CD10Q1C14=1));
/*past-year stimulant-wtihdrawal symptom count*/
Label othwithsti='Sum of past-year other/unknown stimulant-specific withdrawal symptoms';
if N3CD10Q1E5=1 then pothwithsti=sum(N3CD10Q1E4=1, N3CD10Q1E17=1, (N3CD10Q1E20=1 or
N3CD10Q1E3=1), N3CD10Q1E10=1, (N3CD10Q1E15=1 or N3CD10Q1E14=1));
/*prior-to-past-year stimulant-wtihdrawal symptom count*/
Label pothwithsti='Sum of past-year other/unknown stimulant-specific withdrawal symptoms';

/*Withdrawal - using each substance-specific subalgorithm*/
if othwithsed=>3 or othwithop=>3 or othwithma=>3 or othwithsti=>2 or N3CD10Q1C29=1 then
OTHA11=1; else OTHA11=0; /*Past-year*/
Label OTHA11='Past-year other/unknown withdrawal criterion endorsement-0=negative 1=positive';
if pothwithsed=>3 or pothwithop=>3 or pothwithma=>3 or pothwithsti=>2 or N3CD10Q1E29=1 then
pOTHA11=1; else pOTHA11=0; /*Prior-to-past-year*/
Label pOTHA11='Prior-to-past-year other/unknown withdrawal criterion endorsement-0=negative
1=positive';
if othwithsed=>3 or othwithop=>3 or othwithma=>3 or othwithsti=>2 or N3CD10Q1C29=1 or
pothwithsed=>3 or pothwithop=>3 or pothwithma=>3 or pothwithsti=>2 or N3CD10Q1E29=1 then
lOTHA11=1; else lOTHA11=0; /*Lifetime*/

```

```

Label lOTHA11='Lifetime other/unknown withdrawal criterion endorsement-0=negative 1=positive';

/*-Past-year (OTHA1-OTHA11) and prior-to-past-year (pOTHA1-pOTHA11) symptom counts
-Prior-to-past-year symptoms counts include N3CD10Q2A to
denote SOME OTHUD symptoms occurred within same 12-month period
-Lifetime symptom count takes the largest symptom count from either past-year or prior-to-
past-year*/

othsum=sum(OTHA1, OTHA2, OTHA3, OTHA4, OTHA5, OTHA6, OTHA7, OTHA8, OTHA9, OTHA10, OTHA11);
/*Past-year*/
Label othsum='Sum of past-year other/unknown criteria';
if N3CD10Q2A=1 THEN pothsum=sum(pOTHA1, pOTHA2, pOTHA3, pOTHA4, pOTHA5, pOTHA6, pOTHA7,
pOTHA8, pOTHA9, pOTHA10, pOTHA11); /*Prior-to-past-year*/
Label pothsum='Sum of prior-to-past-year other/unknown criteria';
lothsum=max(othsum, pothsum); /*Lifetime*/
Label lothsum='Maximum sum of past-year or prior-to-past-year other/unknown criteria';

*OTHUD diagnoses;
if othsum=>2 then OTHUD=1; else OTHUD=0; /*Past-year*/
Label OTHUD='Past-year OTHUD diagnosis-0=negative 1=positive';
if pothsum=>2 then pOTHUD=1; else pOTHUD=0; /*Prior-to-past-year*/
Label pOTHUD='Prior-to-past-year OTHUD diagnosis-0=negative 1=positive';
if lothsum=>2 then lOTHUD=1; else lOTHUD=0; /*Lifetime*/
Label lOTHUD='Lifetime OTHUD diagnosis-0=negative 1=positive';

*OTHUD severity;
if othsum<2 then OTHUDSEV=0; /*Past-year - no OTHUD*/
if othsum=2 or othsum=3 then OTHUDSEV=1; /*Past-year - mild OTHUD*/
if othsum=4 or othsum=5 then OTHUDSEV=2; /*Past-year - moderate OTHUD*/
if othsum>=6 then OTHUDSEV=3; /*Past-year - severe OTHUD*/
Label OTHUDSEV='Past-year OTHUD severity grading-0=no OTHUD diagnosis, 1=mild OTHUD,
2=moderate OTHUD and 3=severe OTHUD';

if pothsum<2 then pOTHUDSEV=0; /*Prior-to-past-year - no OTHUD*/
if pothsum=2 or pothsum=3 then pOTHUDSEV=1; /*Prior-to-past-year - mild OTHUD*/
if pothsum=4 or pothsum=5 then pOTHUDSEV=2; /*Prior-to-past-year - moderate OTHUD*/
if pothsum>=6 then pOTHUDSEV=3; /*Prior-to-past-year - severe OTHUD*/
Label pOTHUDSEV='Prior-to-past-year OTHUD severity grading-0=no OTHUD diagnosis, 1=mild OTHUD,
2=moderate OTHUD and 3=severe OTHUD';

if lothsum<2 then lOTHUDSEV=0; /*Lifetime - no OTHUD*/
if lothsum=2 or lothsum=3 then lOTHUDSEV=1; /*Lifetime - mild OTHUD*/
if lothsum=4 or lothsum=5 then lOTHUDSEV=2; /*Lifetime - moderate OTHUD*/
if lothsum>=6 then lOTHUDSEV=3; /*Lifetime - severe OTHUD*/
Label lOTHUDSEV='Lifetime OTHUD severity grading-0=no OTHUD diagnosis, 1=mild OTHUD,
2=moderate OTHUD and 3=severe OTHUD';

```

Any DUD Diagnoses Algorithms

```

/*-Symptom counts are based on the highest-severity substance-specific DUD*/
dudsum=max(sedsum, opsum, masum, cocsum, stisum, clbsum, halsum, solsum, hersum, othsum);
/*Past-year*/
Label dudsum='Past-year highest-severity substance-specific DUD symptom count';
pdudsum=max(psedsum, popsum, pmasum, pcocsum, pstisum, pclbsum, phalsum, psolsum, phersum,
pothsum); /*Prior-to-past-year*/
Label pdudsum='Prior-to-past-year highest-severity substance-specific DUD symptom count';
ldudsum=max(lsedsum, lopusum, lmasum, lcocsum, lstisum, lclbsum, lhalsum, lsolsum, lhersum,
lothsum); /*Lifetime*/
Label ldudsum='Lifetime highest-severity substance-specific DUD symptom count';;

*DUD diagnoses;
if dudsum=>2 then DUD=1; else DUD=0; /*Past-year*/
Label DUD='Past-year DUD diagnosis-0=negative 1=positive';
if pdudsum=>2 then pDUD=1; else pDUD=0; /*Prior-to-past-year*/
Label pDUD='Prior-to-past-year DUD diagnosis-0=negative 1=positive';
if ldudsum=>2 then lDUD=1; else lDUD=0; /*Lifetime*/
Label lDUD='Lifetime DUD diagnosis-0=negative 1=positive';

*DUD severity;
if dudsum<2 then DUDSEV=0; /*Past-year - no DUD*/
if dudsum=2 or dudsum=3 then DUDSEV=1; /*Past-year - mild DUD*/
if dudsum=4 or dudsum=5 then DUDSEV=2; /*Past-year - moderate DUD*/
if dudsum>=6 then DUDSEV=3; /*Past-year - severe DUD*/
Label DUDSEV='Past-year DUD severity grading-0=no DUD diagnosis, 1=mild DUD, 2=moderate DUD
and 3=severe DUD';

if pdudsum<2 then pDUDSEV=0; /*Prior-to-past-year - no DUD*/
if pdudsum=2 or pdudsum=3 then pDUDSEV=1; /*Prior-to-past-year - mild DUD*/
if pdudsum=4 or pdudsum=5 then pDUDSEV=2; /*Prior-to-past-year - moderate DUD*/
if pdudsum>=6 then pDUDSEV=3; /*Prior-to-past-year - severe DUD*/
Label pDUDSEV='Prior-to-past-year DUD severity grading-0=no DUD diagnosis, 1=mild DUD,
2=moderate DUD and 3=severe DUD';

if ldudsum<2 then lDUDSEV=0; /*Lifetime - no DUD*/
if ldudsum=2 or ldudsum=3 then lDUDSEV=1; /*Lifetime - mild DUD*/
if ldudsum=4 or ldudsum=5 then lDUDSEV=2; /*Lifetime - moderate DUD*/
if ldudsum>=6 then lDUDSEV=3; /*Lifetime - severe DUD*/
Label lDUDSEV='Lifetime DUD severity grading-0=no DUD diagnosis, 1=mild DUD, 2=moderate DUD
and 3=severe DUD';

```

DUD Algorithms Requiring Explicit Clustering as Operationalized in the DSM-5 AUD Withdrawal Criterion Description

The present SAS code derives past-year, prior-to-past-year and lifetime DSM–5 DUD diagnoses based on interview items in the AUDADIS–5. In order to have positive endorsement of DUD withdrawal based on two or more symptoms (in the case of sedatives), or three or more symptoms (in the case of cannabis, stimulants, cocaine, opioids and heroin) , at least two withdrawal symptoms must have occurred around the same time. This is consistent with DSM-5 classification of DUD withdrawal.

For the other/unknown drug use withdrawal symptom, withdrawal was calculated such that individuals endorsing sedative-specific other/unknown withdrawal symptoms must endorse two or more symptoms to constitute other/unknown withdrawal. As noted above, the “OTHUD Criteria and Diagnoses Algorithms” code (pg. 44) requires three or more symptoms for positive endorsement of other/unknown sedative-specific withdrawal. Although the three or more cut-off appropriately classified individuals according to the NESARC-III derived variables, we included the alternative two or more operationalization to be consistent with the DSM-5. Users are advised that estimates based on this SAS code will not exactly match published NESARC-III data.

The names of the variables used in this SAS code have the same structure detailed in the “DUD Algorithms Description” section (pg. 16). The suffix “c” is appended to each variable to indicate the variable’s use in the present code.

SEDUD Criteria and Diagnoses Algorithms (Withdrawal Clustering)

```

/*Sedative - Larger/longer */
if N3CD1Q1C32=1 then SEDA1c=1; else SEDA1c=0; /*Past-year*/
Label SEDA1c='Past-year sedative larger/longer criterion endorsement-0=negative 1=positive';
if N3CD1Q1E32=1 then pSEDA1c=1; else pSEDA1c=0; /*Prior-to-past-year*/
Label pSEDA1c='Prior-to-past-year sedative larger/longer criterion endorsement-0=negative
1=positive';
if N3CD1Q1C32=1 or N3CD1Q1E32=1 then lSEDA1c=1; else lSEDA1c=0; /*Lifetime*/
Label lSEDA1c='Lifetime larger/longer sedative criterion endorsement-0=negative 1=positive';

/*Sedative - Quit or cut down */
if N3CD1Q1C30=1 or N3CD1Q1C31=1 then SEDA2c=1; else SEDA2c=0; /*Past-year*/
Label SEDA2c='Past-year sedative quit or cut down criterion endorsement-0=negative
1=positive';
if N3CD1Q1E30=1 or N3CD1Q1E31=1 then pSEDA2c=1; else pSEDA2c=0; /*Prior-to-past-year*/
Label pSEDA2c='Prior-to-past-year sedative quit or cut down criterion endorsement-0=negative
1=positive';
if N3CD1Q1C30=1 or N3CD1Q1E30=1 or N3CD1Q1C31=1 or N3CD1Q1E31=1 then lSEDA2c=1; else
lSEDA2c=0; /*Lifetime*/
Label lSEDA2c='Lifetime sedative quit or cut down criterion endorsement-0=negative
1=positive';

/*Sedative - Time spent */
if N3CD1Q1C33=1 or N3CD1Q1C34=1 then SEDA3c=1; else SEDA3c=0; /*Past-year*/
Label SEDA3c='Past-year sedative time spent criterion endorsement-0=negative 1=positive';
if N3CD1Q1E33=1 or N3CD1Q1E34=1 then pSEDA3c=1; else pSEDA3c=0; /*Prior-to-past-year*/
Label pSEDA3c='Prior-to-past-year sedative time spent criterion endorsement-0=negative
1=positive';
if N3CD1Q1C33=1 or N3CD1Q1E33=1 or N3CD1Q1C34=1 or N3CD1Q1E34=1 then lSEDA3c=1; else
lSEDA3c=0; /*Lifetime*/
Label lSEDA3c='Lifetime sedative time spent criterion endorsement-0=negative 1=positive';

/*Sedative - Craving */
if N3CD1Q1C39=1 or N3CD1Q1C40=1 then SEDA4c=1; else SEDA4c=0; /*Past-year*/
Label SEDA4c='Past-year sedative craving criterion endorsement-0=negative 1=positive';
if N3CD1Q1E39=1 or N3CD1Q1E40=1 then pSEDA4c=1; else pSEDA4c=0; /*Prior-to-past-year*/
Label pSEDA4c='Prior-to-past-year sedative craving criterion endorsement-0=negative
1=positive';
if N3CD1Q1C39=1 or N3CD1Q1E39=1 or N3CD1Q1C40=1 or N3CD1Q1E40=1 then lSEDA4c=1; else
lSEDA4c=0; /*Lifetime*/
Label lSEDA4c='Lifetime sedative craving criterion endorsement-0=negative 1=positive';

/*Sedative - Role interference */
if N3CD1Q1C44=1 or N3CD1Q1C45=1 or N3CD1Q1C46=1 then SEDA5c=1; else SEDA5c=0; /*Past-year*/
Label SEDA5c='Past-year sedative role interference criterion endorsement-0=negative
1=positive';
if N3CD1Q1E44=1 or N3CD1Q1E45=1 or N3CD1Q1E46=1 then pSEDA5c=1; else pSEDA5c=0; /*Prior-to-
past-year*/
Label pSEDA5c='Prior-to-past-year sedative role interference criterion endorsement-0=negative
1=positive';
if N3CD1Q1C44=1 or N3CD1Q1E44=1 or N3CD1Q1C45=1 or N3CD1Q1E45=1 or N3CD1Q1C46=1 or
N3CD1Q1E46=1 then lSEDA5c=1; else lSEDA5c=0; /*Lifetime*/
Label lSEDA5c='Lifetime sedative role interference criterion endorsement-0=negative
1=positive';

/*Sedative - Social problems */
if N3CD1Q1C41=1 or N3CD1Q1C42=1 or N3CD1Q1C43=1 then SEDA6c=1; else SEDA6c=0; /*Past-year*/
Label SEDA6c='Past-year sedative social problems criterion endorsement-0=negative 1=positive';

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if N3CD1Q1E41=1 or N3CD1Q1E42=1 or N3CD1Q1E43=1 then pSEDA6c=1; else pSEDA6c=0; /*Prior-to-
past-year*/
Label pSEDA6c='Prior-to-past-year sedative social problems criterion endorsement-0=negative
1=positive';
if N3CD1Q1C41=1 or N3CD1Q1E41=1 or N3CD1Q1C42=1 or N3CD1Q1E42=1 or N3CD1Q1C43=1 or
N3CD1Q1E43=1 then lSEDA6c=1; else lSEDA6c=0; /*Lifetime*/
Label lSEDA6c='Lifetime sedative social problems criterion endorsement-0=negative 1=positive';

/*Sedative - Give up */
if N3CD1Q1C35=1 or N3CD1Q1C36=1 then SEDA7c=1; else SEDA7c=0; /*Past-year*/
Label SEDA7c='Past-year sedative give up criterion endorsement-0=negative 1=positive';
if N3CD1Q1E35=1 or N3CD1Q1E36=1 then pSEDA7c=1; else pSEDA7c=0; /*Prior-to-past-year*/
Label pSEDA7c='Prior-to-past-year sedative give up criterion endorsement-0=negative
1=positive';
if N3CD1Q1C35=1 or N3CD1Q1E35=1 or N3CD1Q1C36=1 or N3CD1Q1E36=1 then lSEDA7c=1; else
lSEDA7c=0; /*Lifetime*/
Label lSEDA7c='Lifetime sedative give up criterion endorsement-0=negative 1=positive';

/*Sedative - Hazardous use */
if N3CD1Q1C47=1 or N3CD1Q1C48=1 then SEDA8c=1; else SEDA8c=0; /*Past-year*/
Label SEDA8c='Past-year sedative hazardous use criterion endorsement-0=negative 1=positive';
if N3CD1Q1E47=1 or N3CD1Q1E48=1 then pSEDA8c=1; else pSEDA8c=0; /*Prior-to-past-year*/
Label pSEDA8c='Prior-to-past-year sedative hazardous use criterion endorsement-0=negative
1=positive';
if N3CD1Q1C47=1 or N3CD1Q1E47=1 or N3CD1Q1C48=1 or N3CD1Q1E48=1 then lSEDA8c=1; else
lSEDA8c=0; /*Lifetime*/
Label lSEDA8c='Lifetime sedative hazardous use criterion endorsement-0=negative 1=positive';

/*Sedative - Continued use despite problems */
if N3CD1Q1C37=1 or N3CD1Q1C38=1 then SEDA9c=1; else SEDA9c=0; /*Past-year*/
Label SEDA9c='Past-year sedative continued use despite problems criterion endorsement-
0=negative 1=positive';
if N3CD1Q1E37=1 or N3CD1Q1E38=1 then pSEDA9c=1; else pSEDA9c=0; /*Prior-to-past-year*/
Label pSEDA9c='Prior-to-past-year sedative continued use despite problems criterion
endorsement-0=negative 1=positive';
if N3CD1Q1C37=1 or N3CD1Q1E37=1 or N3CD1Q1C38=1 or N3CD1Q1E38=1 then lSEDA9c=1; else
lSEDA9c=0; /*Lifetime*/
Label lSEDA9c='Lifetime sedative continued use despite problems criterion endorsement-
0=negative 1=positive';

/*Sedative - Tolerance */
if N3CD1Q1C1=1 or N3CD1Q1C2=1 then SEDA10c=1; else SEDA10c=0; /*Past-year*/
Label SEDA10c='Past-year sedative tolerance criterion endorsement-0=negative 1=positive';
if N3CD1Q1E1=1 or N3CD1Q1E2=1 then pSEDA10c=1; else pSEDA10c=0; /*Prior-to-past-year*/
Label pSEDA10c='Prior-to-past-year sedative tolerance criterion endorsement-0=negative
1=positive';
if N3CD1Q1C1=1 or N3CD1Q1E1=1 or N3CD1Q1C2=1 or N3CD1Q1E2=1 then lSEDA10c=1; else lSEDA10c=0;
/*Lifetime*/
Label lSEDA10c='Lifetime sedative tolerance criterion endorsement-0=negative 1=positive';

/*Sedative - Withdrawal - Explicit withdrawal clustering*/
*Sedative - Withdrawal subalgorithm - sum of withdrawal symptoms;
sedwithc=sum((N3CD1Q1C6=1 or N3CD1Q1C26=1), N3CD1Q1C7=1, N3CD1Q1C11=1, N3CD1Q1C14=1,
N3CD1Q1C18=1, N3CD1Q1C19=1, N3CD1Q1C20=1, N3CD1Q1C21=1); /*past-year withdrawal symptom
count*/
Label sedwithc='Sum of past-year sedative withdrawal symptoms (withdrawal cluster)';
psedwithc=sum((N3CD1Q1E6=1 or N3CD1Q1E26=1), N3CD1Q1E7=1, N3CD1Q1E11=1, N3CD1Q1E14=1,
N3CD1Q1E18=1, N3CD1Q1E19=1, N3CD1Q1E20=1, N3CD1Q1E21=1); /*prior-to-past-year withdrawal
symptom count*/

```

```

Label psedwithc='Sum of prior-to-past-year sedative withdrawal symptoms (withdrawal cluster)';

*Sedative - Withdrawal - using subalgorithm;
if (sedwithc=>2 and N3CD1Q1C281=1) or N3CD1Q1C29=1 then SEDA11c=1; else SEDA11c=0; /*Past-
year*/
Label SEDA11c='Past-year sedative withdrawal criterion endorsement (withdrawal cluster)-
0=negative 1=positive';
if (psedwithc=>2 and N3CD1Q1E282=1) or N3CD1Q1E29=1 then pSEDA11c=1; else pSEDA11c=0; /*Prior-
to-past-year*/
Label pSEDA11c='Prior-to-past-year sedative withdrawal criterion endorsement (withdrawal
cluster)-0=negative 1=positive';
if ((sedwithc=>2 and N3CD1Q1C281=1) or N3CD1Q1C29=1) or ((psedwithc=>2 and N3CD1Q1E282=1) or
N3CD1Q1E29=1) then lSEDA11c=1; else lSEDA11c=0; /*Lifetime*/
Label lSEDA11c='Lifetime sedative withdrawal criterion endorsement (withdrawal cluster)-
0=negative 1=positive';

/*-Past-year (SEDA1c-SEDA11c) and prior-to-past-year (pSEDA1c-pSEDA11c) symptom counts
-Prior-to-past-year symptoms counts include N3CD1Q2A to
denote SOME SEDUD symptoms occurred within same 12-month period
-Lifetime symptom count takes the largest symptom count from either past-year or prior-to-
past-year;*/

sedsumc=sum(SEDA1c, SEDA2c, SEDA3c, SEDA4c, SEDA5c, SEDA6c, SEDA7c, SEDA8c, SEDA9c, SEDA10c,
SEDA11c); /*Past-year*/
Label sedsumc='Sum of past-year sedative criteria (withdrawal cluster)';
if N3CD1Q2A=1 THEN psedsumc=sum(pSEDA1c, pSEDA2c, pSEDA3c, pSEDA4c, pSEDA5c, pSEDA6c, pSEDA7c,
pSEDA8c, pSEDA9c, pSEDA10c, pSEDA11c); /*Prior-to-past-year*/
Label psedsumc='Sum of prior-to-past-year sedative criteria (withdrawal cluster)';
lstedsumc=max(sedsumc, psedsumc); /*Lifetime*/
Label lstedsumc='Maximum sum of past-year or prior-to-past-year sedative criteria (withdrawal
cluster)';

*SEDUD diagnoses;
if sedsumc=>2 then SEDUDc=1; else SEDUDc=0; /*Past-year*/
Label SEDUDc='Past-year SEDUD diagnosis (withdrawal cluster)-0=negative 1=positive';
if psedsumc=>2 then pSEDUDc=1; else pSEDUDc=0; /*Prior-to-past-year*/
Label pSEDUDc='Prior-to-past-year SEDUD diagnosis (withdrawal cluster)-0=negative 1=positive';
if lstedsumc=>2 then lSEDUDc=1; else lSEDUDc=0; /*Lifetime*/
Label lSEDUDc='Lifetime SEDUD diagnosis (withdrawal cluster)-0=negative 1=positive';

*SEDUD severity;
if sedsumc<2 then SEDUDSEVc=0; /*Past-year - no SEDUD*/
if sedsumc=2 or sedsumc=3 then SEDUDSEVc =1; /*Past-year - mild SEDUD*/
if sedsumc=4 or sedsumc=5 then SEDUDSEVc =2; /*Past-year - moderate SEDUD*/
if sedsumc>=6 then SEDUDSEVc =3; /*Past-year - severe SEDUD*/
Label SEDUDSEVc = 'Past-year SEDUD severity grading (withdrawal cluster)-0=no diagnosis, 1=mild
SEDUD, 2=moderate SEDUD and 3=severe SEDUD';

if psedsumc<2 then pSEDUDSEVc=0; /*Prior-to-past-year - no SEDUD*/
if psedsumc=2 or psedsumc=3 then pSEDUDSEVc=1; /*Prior-to-past-year - mild SEDUD*/
if psedsumc=4 or psedsumc=5 then pSEDUDSEVc=2; /*Prior-to-past-year - moderate SEDUD*/
if psedsumc>=6 then pSEDUDSEVc=3; /*Prior-to-past-year - severe SEDUD*/
Label pSEDUDSEVc='Prior-to-past-year SEDUD severity grading (withdrawal cluster)-0=no
diagnosis, 1=mild SEDUD, 2=moderate SEDUD and 3=severe SEDUD';

if lstedsumc<2 then lSEDUDSEVc=0; /*Lifetime - no SEDUD*/
if lstedsumc=2 or lstedsumc=3 then lSEDUDSEVc=1; /*Lifetime - mild SEDUD*/
if lstedsumc=4 or lstedsumc=5 then lSEDUDSEVc=2; /*Lifetime - moderate SEDUD*/
if lstedsumc>=6 then lSEDUDSEVc=3; /*Lifetime - severe SEDUD*/

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Label 1SEDUDSEVc='Lifetime SEDUD severity grading (withdrawal cluster)-0=no diagnosis, 1=mild  
SEDUD, 2=moderate SEDUD and 3=severe SEDUD';
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OPUD Criteria and Diagnoses Algorithms (Withdrawal Clustering)

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/*Opioid - Larger/longer*/
if N3CD2Q1C32=1 then OPA1c=1; else OPA1c=0; /*Past-year*/
Label OPA1c='Past-year opioid larger/longer criterion endorsement-0=negative 1=positive';
if N3CD2Q1E32=1 then pOPA1c=1; else pOPA1c=0; /*Prior-to-past-year*/
Label pOPA1c='Prior-to-past-year opioid larger/longer criterion endorsement-0=negative
1=positive';
if N3CD2Q1C32=1 or N3CD2Q1E32=1 then lOPA1c=1; else lOPA1c=0; /*Lifetime*/
Label lOPA1c='Lifetime larger/longer opioid criterion endorsement-0=negative 1=positive';

/*Opioid - Quit or cut down*/
if N3CD2Q1C30=1 or N3CD2Q1C31=1 then OPA2c=1; else OPA2c=0; /*Past-year*/
Label OPA2c='Past-year opioid quit or cut down criterion endorsement-0=negative 1=positive';
if N3CD2Q1E30=1 or N3CD2Q1E31=1 then pOPA2c=1; else pOPA2c=0; /*Prior-to-past-year*/
Label pOPA2c='Prior-to-past-year opioid quit or cut down criterion endorsement-0=negative
1=positive';
if N3CD2Q1C30=1 or N3CD2Q1E30=1 or N3CD2Q1C31=1 or N3CD2Q1E31=1 then lOPA2c=1; else lOPA2c=0;
/*Lifetime*/
Label lOPA2c='Lifetime opioid quit or cut down criterion endorsement-0=negative 1=positive';

/*Opioid - Time spent*/
if N3CD2Q1C33=1 or N3CD2Q1C34=1 then OPA3c=1; else OPA3c=0; /*Past-year*/
Label OPA3c='Past-year opioid time spent criterion endorsement-0=negative 1=positive';
if N3CD2Q1E33=1 or N3CD2Q1E34=1 then pOPA3c=1; else pOPA3c=0; /*Prior-to-past-year*/
Label pOPA3c='Prior-to-past-year opioid time spent criterion endorsement-0=negative
1=positive';
if N3CD2Q1C33=1 or N3CD2Q1E33=1 or N3CD2Q1C34=1 or N3CD2Q1E34=1 then lOPA3c=1; else lOPA3c=0;
/*Lifetime*/
Label lOPA3c='Lifetime opioid time spent criterion endorsement-0=negative 1=positive';

/*Opioid - Craving*/
if N3CD2Q1C39=1 or N3CD2Q1C40=1 then OPA4c=1; else OPA4c=0; /*Past-year*/
Label OPA4c='Past-year opioid craving criterion endorsement-0=negative 1=positive';
if N3CD2Q1E39=1 or N3CD2Q1E40=1 then pOPA4c=1; else pOPA4c=0; /*Prior-to-past-year*/
Label pOPA4c='Prior-to-past-year opioid craving criterion endorsement-0=negative 1=positive';
if N3CD2Q1C39=1 or N3CD2Q1E39=1 or N3CD2Q1C40=1 or N3CD2Q1E40=1 then lOPA4c=1; else lOPA4c=0;
/*Lifetime*/
Label lOPA4c='Lifetime opioid craving criterion endorsement-0=negative 1=positive';

/*Opioid - Role interference*/
if N3CD2Q1C44=1 or N3CD2Q1C45=1 or N3CD2Q1C46=1 then OPA5=1; else OPA5=0; /*Past-year*/
Label OPA5='Past-year opioid role interference criterion endorsement-0=negative 1=positive';
if N3CD2Q1E44=1 or N3CD2Q1E45=1 or N3CD2Q1E46=1 then pOPA5=1; else pOPA5=0; /*Prior-to-past-
year*/
Label pOPA5='Prior-to-past-year opioid role interference criterion endorsement-0=negative
1=positive';
if N3CD2Q1C44=1 or N3CD2Q1E44=1 or N3CD2Q1C45=1 or N3CD2Q1E45=1 or N3CD2Q1C46=1 or
N3CD2Q1E46=1 then lOPA5=1; else lOPA5=0; /*Lifetime*/
Label lOPA5='Lifetime opioid role interference criterion endorsement-0=negative 1=positive';

/*Opioid - Social problems*/
if N3CD2Q1C41=1 or N3CD2Q1C42=1 or N3CD2Q1C43=1 then OPA6c=1; else OPA6c=0; /*Past-year*/
Label OPA6c='Past-year opioid social problems criterion endorsement-0=negative 1=positive';
if N3CD2Q1E41=1 or N3CD2Q1E42=1 or N3CD2Q1E43=1 then pOPA6c=1; else pOPA6c=0; /*Prior-to-past-
year*/
Label pOPA6c='Prior-to-past-year opioid social problems criterion endorsement-0=negative
1=positive';

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if N3CD2Q1C41=1 or N3CD2Q1E41=1 or N3CD2Q1C42=1 or N3CD2Q1E42=1 or N3CD2Q1C43=1 or
N3CD2Q1E43=1 then lOPA6c=1; else lOPA6c=0; /*Lifetime*/
Label lOPA6c='Lifetime opioid social problems criterion endorsement-0=negative 1=positive';

/*Opioid - Give up*/
if N3CD2Q1C35=1 or N3CD2Q1C36=1 then OPA7c=1; else OPA7c=0; /*Past-year*/
Label OPA7c='Past-year opioid give up criterion endorsement-0=negative 1=positive';
if N3CD2Q1E35=1 or N3CD2Q1E36=1 then pOPA7c=1; else pOPA7c=0; /*Prior-to-past-year*/
Label pOPA7c='Prior-to-past-year opioid give up criterion endorsement-0=negative 1=positive';
if N3CD2Q1C35=1 or N3CD2Q1E35=1 or N3CD2Q1C36=1 or N3CD2Q1E36=1 then lOPA7c=1; else lOPA7c=0;
/*Lifetime*/
Label lOPA7c='Lifetime opioid give up criterion endorsement-0=negative 1=positive';

/*Opioid - Hazardous use*/
if N3CD2Q1C47=1 or N3CD2Q1C48=1 then OPA8c=1; else OPA8c=0; /*Past-year*/
Label OPA8c='Past-year opioid hazardous use criterion endorsement-0=negative 1=positive';
if N3CD2Q1E47=1 or N3CD2Q1E48=1 then pOPA8c=1; else pOPA8c=0; /*Prior-to-past-year*/
Label pOPA8c='Prior-to-past-year opioid hazardous use criterion endorsement-0=negative
1=positive';
if N3CD2Q1C47=1 or N3CD2Q1E47=1 or N3CD2Q1C48=1 or N3CD2Q1E48=1 then lOPA8c=1; else lOPA8c=0;
/*Lifetime*/
Label lOPA8c='Lifetime opioid hazardous use criterion endorsement-0=negative 1=positive';

/*Opioid - Continued use despite problems*/
if N3CD2Q1C37=1 or N3CD2Q1C38=1 then OPA9c=1; else OPA9c=0; /*Past-year*/
Label OPA9c='Past-year opioid continued use despite problems criterion endorsement-0=negative
1=positive';
if N3CD2Q1E37=1 or N3CD2Q1E38=1 then pOPA9c=1; else pOPA9c=0; /*Prior-to-past-year*/
Label pOPA9c='Prior-to-past-year opioid continued use despite problems criterion endorsement-
0=negative 1=positive';
if N3CD2Q1C37=1 or N3CD2Q1E37=1 or N3CD2Q1C38=1 or N3CD2Q1E38=1 then lOPA9c=1; else lOPA9c=0;
/*Lifetime*/
Label lOPA9c='Lifetime opioid continued use despite problems criterion endorsement-0=negative
1=positive';

/*Opioid - Tolerance*/
if N3CD2Q1C1=1 or N3CD2Q1C2=1 then OPA10c=1; else OPA10c=0; /*Past-year*/
Label OPA10c='Past-year opioid tolerance criterion endorsement-0=negative 1=positive';
if N3CD2Q1E1=1 or N3CD2Q1E2=1 then pOPA10c=1; else pOPA10c=0; /*Prior-to-past-year*/
Label pOPA10c='Prior-to-past-year opioid tolerance criterion endorsement-0=negative
1=positive';
if N3CD2Q1C1=1 or N3CD2Q1E1=1 or N3CD2Q1C2=1 or N3CD2Q1E2=1 then lOPA10c=1; else lOPA10c=0;
/*Lifetime*/
Label lOPA10c='Lifetime opioid tolerance criterion endorsement-0=negative 1=positive';

/*Opioid - Withdrawal - Explicit withdrawal clustering*/
*Opioid - Withdrawal subalgorithm - sum of withdrawal symptoms;
opwithc=sum(N3CD2Q1C5=1, N3CD2Q1C7=1, N3CD2Q1C12=1, N3CD2Q1C9=1, (N3CD2Q1C16=1 or
N3CD2Q1C26=1), N3CD2Q1C28=1, N3CD2Q1C8=1, N3CD2Q1C13=1, N3CD2Q1C20=1); /*past-year withdrawal
symptom count*/
Label opwithc='Sum of past-year opioid withdrawal symptoms (withdrawal cluster)';
popwithc=sum(N3CD2Q1E5=1, N3CD2Q1E7=1, N3CD2Q1E12=1, N3CD2Q1E9=1, (N3CD2Q1E16=1 or
N3CD2Q1E26=1), N3CD2Q1E28=1, N3CD2Q1E8=1, N3CD2Q1E13=1, N3CD2Q1E20=1); /*prior-to-past-year
withdrawal symptom count*/
Label popwithc='Sum of prior-to-past-year opioid withdrawal symptoms (withdrawal cluster)';

*Opioid - Withdrawal - using subalgorithm;
if (opwithc=>3 and N3CD2Q1C281=1) or N3CD2Q1C29=1 then OPA11c=1; else OPA11c=0; /*Past-year*/

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Label OPA11c='Past-year opioid withdrawal criterion endorsement (withdrawal cluster)-
0=negative 1=positive';
if (popwithc=>3 and N3CD2Q1E282=1) or N3CD2Q1E29=1 then pOPA11c=1; else pOPA11c=0; /*Prior-to-
past-year*/
Label pOPA11c='Prior-to-past-year opioid withdrawal criterion endorsement (withdrawal
cluster)-0=negative 1=positive';
if ((opwithc=>3 and N3CD2Q1C281=1) or N3CD2Q1C29=1) or ((popwithc=>3 and N3CD2Q1E282=1) or
N3CD2Q1E29=1) then lOPA11c=1; else lOPA11c=0; /*Lifetime*/
Label lOPA11c='Lifetime opioid withdrawal criterion endorsement (withdrawal cluster)-
0=negative 1=positive';

/*-Past-year (OPA1c-OPA11c) and prior-to-past-year (pOPA1c-pOPA11c) symptom counts
-Prior-to-past-year symptoms counts include N3CD2Q2A to
denote SOME OPUD symptoms occurred within same 12-month period
-Lifetime symptom count takes the largest symptom count from either past-year or prior-to-
past-year*/

opsumc=sum(OPA1c, OPA2c, OPA3c, OPA4c, OPA5c, OPA6c, OPA7c, OPA8c, OPA9c, OPA10c, OPA11c);
/*Past-year*/
Label opsumc='Sum of past-year opioid criteria (withdrawal cluster)';
if N3CD2Q2A=1 THEN popsumc=sum(pOPA1c, pOPA2c, pOPA3c, pOPA4c, pOPA5c, pOPA6c, pOPA7c, pOPA8c,
pOPA9c, pOPA10c, pOPA11c); /*Prior-to-past-year*/
Label popsumc='Sum of prior-to-past-year opioid criteria (withdrawal cluster)';
lopsumc=max(opsumc, popsumc); /*Lifetime*/
Label lopsumc='Maximum sum of past-year or prior-to-past-year opioid criteria (withdrawal
cluster)';

*OPUD diagnoses;
if opsumc=>2 then OPUDc=1; else OPUDc=0; /*Past-year*/
Label OPUDc='Past-year OPUD diagnosis (withdrawal cluster)-0=negative 1=positive';
if popsumc=>2 then pOPUDc=1; else pOPUDc=0; /*Prior-to-past-year*/
Label pOPUDc='Prior-to-past-year OPUD diagnosis (withdrawal cluster)-0=negative 1=positive';
if lopsumc=>2 then lOPUDc=1; else lOPUDc=0; /*Lifetime*/
Label lOPUDc='Lifetime OPUD diagnosis (withdrawal cluster)-0=negative 1=positive';

*OPUD severity;
if opsumc<2 then OPUDSEVc=0; /*Past-year - no OPUD*/
if opsumc=2 or opsumc=3 then OPUDSEVc=1; /*Past-year - mild OPUD*/
if opsumc=4 or opsumc=5 then OPUDSEVc=2; /*Past-year - moderate OPUD*/
if opsumc>=6 then OPUDSEVc=3; /*Past-year - severe OPUD*/
Label OPUDSEVc='Past-year OPUD severity grading (withdrawal cluster)-0=no diagnosis, 1=mild
OPUD, 2=moderate OPUD and 3=severe OPUD';

if popsumc<2 then pOPUDSEVc=0; /*Prior-to-past-year - no OPUD*/
if popsumc=2 or popsumc=3 then pOPUDSEVc=1; /*Prior-to-past-year - mild OPUD*/
if popsumc=4 or popsumc=5 then pOPUDSEVc=2; /*Prior-to-past-year - moderate OPUD*/
if popsumc>=6 then pOPUDSEVc=3; /*Prior-to-past-year - severe OPUD*/
Label pOPUDSEVc='Prior-to-past-year OPUD severity grading (withdrawal cluster)-0=no diagnosis,
1=mild OPUD, 2=moderate OPUD and 3=severe OPUD';

if lopsumc<2 then lOPUDSEVc=0; /*Lifetime - no OPUD*/
if lopsumc=2 or lopsumc=3 then lOPUDSEVc=1; /*Lifetime - mild OPUD*/
if lopsumc=4 or lopsumc=5 then lOPUDSEVc=2; /*Lifetime - moderate OPUD*/
if lopsumc>=6 then lOPUDSEVc=3; /*Lifetime - severe OPUD*/
Label lOPUDSEVc='Lifetime OPUD severity grading (withdrawal cluster)-0=no diagnosis, 1=mild
OPUD, 2=moderate OPUD and 3=severe OPUD';

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MAUD Criteria and Diagnoses Algorithms (Withdrawal Clustering)

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/*Cannabis - Larger/longer*/
if N3CD3Q1C32=1 then MAA1c=1; else MAA1c=0; /*Past-year*/
Label MAA1c='Past-year cannabis larger/longer criterion endorsement-0=negative 1=positive';
if N3CD3Q1E32=1 then pMAA1c=1; else pMAA1c=0; /*Prior-to-past-year*/
Label pMAA1c='Prior-to-past-year cannabis larger/longer criterion endorsement-0=negative
1=positive';
if N3CD3Q1C32=1 or N3CD3Q1E32=1 then lMAA1c=1; else lMAA1c=0; /*Lifetime*/
Label lMAA1c='Lifetime larger/longer cannabis criterion endorsement-0=negative 1=positive';

/*Cannabis - Quit or cut down*/
if N3CD3Q1C30=1 or N3CD3Q1C31=1 then MAA2c=1; else MAA2c=0; /*Past-year*/
Label MAA2c='Past-year cannabis quit or cut down criterion endorsement-0=negative 1=positive';
if N3CD3Q1E30=1 or N3CD3Q1E31=1 then pMAA2c=1; else pMAA2c=0; /*Prior-to-past-year*/
Label pMAA2c='Prior-to-past-year cannabis quit or cut down criterion endorsement-0=negative
1=positive';
if N3CD3Q1C30=1 or N3CD3Q1E30=1 or N3CD3Q1C31=1 or N3CD3Q1E31=1 then lMAA2c=1; else lMAA2c=0;
/*Lifetime*/
Label lMAA2c='Lifetime cannabis quit or cut down criterion endorsement-0=negative 1=positive';

/*Cannabis - Time spent*/
if N3CD3Q1C33=1 or N3CD3Q1C34=1 then MAA3c=1; else MAA3c=0; /*Past-year*/
Label MAA3c='Past-year cannabis time spent criterion endorsement-0=negative 1=positive';
if N3CD3Q1E33=1 or N3CD3Q1E34=1 then pMAA3c=1; else pMAA3c=0; /*Prior-to-past-year*/
Label pMAA3c='Prior-to-past-year cannabis time spent criterion endorsement-0=negative
1=positive';
if N3CD3Q1C33=1 or N3CD3Q1E33=1 or N3CD3Q1C34=1 or N3CD3Q1E34=1 then lMAA3c=1; else lMAA3c=0;
/*Lifetime*/
Label lMAA3c='Lifetime cannabis time spent criterion endorsement-0=negative 1=positive';

/*Cannabis - Craving*/
if N3CD3Q1C39=1 or N3CD3Q1C40=1 then MAA4c=1; else MAA4c=0; /*Past-year*/
Label MAA4c='Past-year cannabis craving criterion endorsement-0=negative 1=positive';
if N3CD3Q1E39=1 or N3CD3Q1E40=1 then pMAA4c=1; else pMAA4c=0; /*Prior-to-past-year*/
Label pMAA4c='Prior-to-past-year cannabis craving criterion endorsement-0=negative
1=positive';
if N3CD3Q1C39=1 or N3CD3Q1E39=1 or N3CD3Q1C40=1 or N3CD3Q1E40=1 then lMAA4c=1; else lMAA4c=0;
/*Lifetime*/
Label lMAA4c='Lifetime cannabis craving criterion endorsement-0=negative 1=positive';

/*Cannabis - Role interference*/
if N3CD3Q1C44=1 or N3CD3Q1C45=1 or N3CD3Q1C46=1 then MAA5c=1; else MAA5c=0; /*Past-year*/
Label MAA5c='Past-year cannabis role interference criterion endorsement-0=negative
1=positive';
if N3CD3Q1E44=1 or N3CD3Q1E45=1 or N3CD3Q1E46=1 then pMAA5c=1; else pMAA5c=0; /*Prior-to-past-
year*/
Label pMAA5c='Prior-to-past-year cannabis role interference criterion endorsement-0=negative
1=positive';
if N3CD3Q1C44=1 or N3CD3Q1E44=1 or N3CD3Q1C45=1 or N3CD3Q1E45=1 or N3CD3Q1C46=1 or
N3CD3Q1E46=1 then lMAA5c=1; else lMAA5c=0; /*Lifetime*/
Label lMAA5c='Lifetime cannabis role interference criterion endorsement-0=negative
1=positive';

/*Cannabis - Social problems*/
if N3CD3Q1C41=1 or N3CD3Q1C42=1 or N3CD3Q1C43=1 then MAA6c=1; else MAA6c=0; /*Past-year*/
Label MAA6c='Past-year cannabis social problems criterion endorsement-0=negative 1=positive';
if N3CD3Q1E41=1 or N3CD3Q1E42=1 or N3CD3Q1E43=1 then pMAA6c=1; else pMAA6c=0; /*Prior-to-past-
year*/

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Label pMAA6c='Prior-to-past-year cannabis social problems criterion endorsement-0=negative
1=positive';
if N3CD3Q1C41=1 or N3CD3Q1E41=1 or N3CD3Q1C42=1 or N3CD3Q1E42=1 or N3CD3Q1C43=1 or
N3CD3Q1E43=1 then lMAA6c=1; else lMAA6c=0; /*Lifetime*/
Label lMAA6c='Lifetime cannabis social problems criterion endorsement-0=negative 1=positive';

/*Cannabis - Give up*/
if N3CD3Q1C35=1 or N3CD3Q1C36=1 then MAA7c=1; else MAA7c=0; /*Past-year*/
Label MAA7c='Past-year cannabis give up criterion endorsement-0=negative 1=positive';
if N3CD3Q1E35=1 or N3CD3Q1E36=1 then pMAA7c=1; else pMAA7c=0; /*Prior-to-past-year*/
Label pMAA7c='Prior-to-past-year cannabis give up criterion endorsement-0=negative
1=positive';
if N3CD3Q1C35=1 or N3CD3Q1E35=1 or N3CD3Q1C36=1 or N3CD3Q1E36=1 then lMAA7c=1; else lMAA7c=0;
/*Lifetime*/
Label lMAA7c='Lifetime cannabis give up criterion endorsement-0=negative 1=positive';

/*Cannabis - Hazardous use*/
if N3CD3Q1C47=1 or N3CD3Q1C48=1 then MAA8c=1; else MAA8c=0; /*Past-year*/
Label MAA8c='Past-year cannabis hazardous use criterion endorsement-0=negative 1=positive';
if N3CD3Q1E47=1 or N3CD3Q1E48=1 then pMAA8c=1; else pMAA8c=0; /*Prior-to-past-year*/
Label pMAA8c='Prior-to-past-year cannabis hazardous use criterion endorsement-0=negative
1=positive';
if N3CD3Q1C47=1 or N3CD3Q1E47=1 or N3CD3Q1C48=1 or N3CD3Q1E48=1 then lMAA8c=1; else lMAA8c=0;
/*Lifetime*/
Label lMAA8c='Lifetime cannabis hazardous use criterion endorsement-0=negative 1=positive';

/*Cannabis - Continued use despite problems*/
if N3CD3Q1C37=1 or N3CD3Q1C38=1 then MAA9c=1; else MAA9c=0; /*Past-year*/
Label MAA9c='Past-year cannabis continued use despite problems criterion endorsement-
0=negative 1=positive';
if N3CD3Q1E37=1 or N3CD3Q1E38=1 then pMAA9c=1; else pMAA9c=0; /*Prior-to-past-year*/
Label pMAA9c='Prior-to-past-year cannabis continued use despite problems criterion
endorsement-0=negative 1=positive';
if N3CD3Q1C37=1 or N3CD3Q1E37=1 or N3CD3Q1C38=1 or N3CD3Q1E38=1 then lMAA9c=1; else lMAA9c=0;
/*Lifetime*/
Label lMAA9c='Lifetime cannabis continued use despite problems criterion endorsement-
0=negative 1=positive';

/*Cannabis - Tolerance*/
if N3CD3Q1C1=1 or N3CD3Q1C2=1 then MAA10c=1; else MAA10c=0; /*Past-year*/
Label MAA10c='Past-year cannabis tolerance criterion endorsement-0=negative 1=positive';
if N3CD3Q1E1=1 or N3CD3Q1E2=1 then pMAA10c=1; else pMAA10c=0; /*Prior-to-past-year*/
Label pMAA10c='Prior-to-past-year cannabis tolerance criterion endorsement-0=negative
1=positive';
if N3CD3Q1C1=1 or N3CD3Q1E1=1 or N3CD3Q1C2=1 or N3CD3Q1E2=1 then lMAA10c=1; else lMAA10c=0;
/*Lifetime*/
Label lMAA10c='Lifetime cannabis tolerance criterion endorsement-0=negative 1=positive';

/*Cannabis - Withdrawal - Explicit withdrawal clustering*/
*Cannabis - Withdrawal subalgorithm - sum of withdrawal symptoms;
maudwithc=sum((N3CD3Q1C22=1 or N3CD3Q1C24=1), N3CD3Q1C11=1, (N3CD3Q1C20=1 or N3CD3Q1C17=1),
N3CD3Q1C23=1, N3CD3Q1C14=1, N3CD3Q1C5=1, (N3CD3Q1C13=1 or N3CD3Q1C19=1 or N3CD3Q1C25=1 or
N3CD3Q1C26=1 or N3CD3Q1C27=1 or N3CD3Q1C28=1)); /*past-year withdrawal symptom count*/
Label maudwithc='Sum of past-year cannabis withdrawal symptoms (withdrawal cluster)';
pmaudwithc=sum((N3CD3Q1E22=1 or N3CD3Q1E24=1), N3CD3Q1E11=1, (N3CD3Q1E20=1 or N3CD3Q1E17=1),
N3CD3Q1E23=1, N3CD3Q1E14=1, N3CD3Q1E5=1, (N3CD3Q1E13=1 or N3CD3Q1E19=1 or N3CD3Q1E25=1
or
N3CD3Q1E26=1 or N3CD3Q1E27=1 or N3CD3Q1E28=1)); /*prior-to-past-year withdrawal symptom
count*/

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Label pmaudwithc='Sum of prior-to-past-year cannabis withdrawal symptoms (withdrawal
cluster)';

*Cannabis - Withdrawal - using subalgorithm;
if (maudwithc=>3 and N3CD3Q1C281=1) or N3CD3Q1C29=1 then MAA11c=1; else MAA11c=0; /*Past-
year*/
Label MAA11c='Past-year cannabis withdrawal criterion endorsement (withdrawal cluster)-
0=negative 1=positive';
if (pmaudwithc=>3 and N3CD3Q1E282=1) or N3CD3Q1E29=1 then pMAA11c=1; else pMAA11c=0; /*Prior-
to-past-year*/
Label pMAA11c='Prior-to-past-year cannabis withdrawal criterion endorsement (withdrawal
cluster)-0=negative 1=positive';
if ((maudwithc=>3 and N3CD3Q1C281=1) or N3CD3Q1C29=1) or ((pmaudwithc=>3 and N3CD3Q1E282=1) or
N3CD3Q1E29=1) then lMAA11c=1; else lMAA11c=0; /*Lifetime*/
Label lMAA11c='Lifetime cannabis withdrawal criterion endorsement (withdrawal cluster)-
0=negative 1=positive';

/*-Past-year (MAA1c-MAA11c) and prior-to-past-year (pMAA1c-pMAA11c) symptom counts
-Prior-to-past-year symptoms counts include N3CD3Q2A to
denote SOME MAUD symptoms occurred within same 12-month period
-Lifetime symptom count takes the largest symptom count from either past-year or prior-to-
past-year*/

masumc=sum(MAA1c, MAA2c, MAA3c, MAA4c, MAA5c, MAA6c, MAA7c, MAA8c, MAA9c, MAA10c, MAA11c);
/*Past-year*/
Label masumc='Sum of past-year cannabis criteria (withdrawal cluster)';
if N3CD3Q2A=1 THEN pmasumc=sum(pMAA1c, pMAA2c, pMAA3c, pMAA4c, pMAA5c, pMAA6c, pMAA7c, pMAA8c,
pMAA9c, pMAA10c, pMAA11c); /*Prior-to-past-year*/
Label pmasumc='Sum of prior-to-past-year cannabis criteria (withdrawal cluster)';
lmasumc=max(masumc, pmasumc); /*Lifetime*/
Label lmasumc='Maximum sum of past-year or prior-to-past-year cannabis criteria (withdrawal
cluster)';

*MAUD diagnoses;
if masumc=>2 then MAUDc=1; else MAUDc=0; /*Past-year*/
Label MAUDc='Past-year MAUD diagnosis (withdrawal cluster)-0=negative 1=positive';
if pmasumc=>2 then pMAUDc=1; else pMAUDc=0; /*Prior-to-past-year*/
Label pMAUDc='Prior-to-past-year MAUD diagnosis (withdrawal cluster)-0=negative 1=positive';
if lmasumc=>2 then lMAUDc=1; else lMAUDc=0; /*Lifetime*/
Label lMAUDc='Lifetime MAUD diagnosis (withdrawal cluster)-0=negative 1=positive';

*MAUD severity;
if masumc<2 then MAUDSEVc=0; /*Past-year - no MAUD*/
if masumc=2 or masumc=3 then MAUDSEVc=1; /*Past-year - mild MAUD*/
if masumc=4 or masumc=5 then MAUDSEVc=2; /*Past-year - moderate MAUD*/
if masumc>=6 then MAUDSEVc=3; /*Past-year - severe MAUD*/
Label MAUDSEVc='Past-year MAUD severity grading (withdrawal cluster)-0=no diagnosis, 1=mild
MAUD, 2=moderate MAUD and 3=severe MAUD';

if pmasumc<2 then pMAUDSEVc=0; /*Prior-to-past-year - no MAUD*/
if pmasumc=2 or pmasumc=3 then pMAUDSEVc=1; /*Prior-to-past-year - mild MAUD*/
if pmasumc=4 or pmasumc=5 then pMAUDSEVc=2; /*Prior-to-past-year - moderate MAUD*/
if pmasumc>=6 then pMAUDSEVc=3; /*Prior-to-past-year - severe MAUD*/
Label pMAUDSEVc='Prior-to-past-year MAUD severity grading (withdrawal cluster)-0=no diagnosis,
1=mild MAUD, 2=moderate MAUD and 3=severe MAUD';

if lmasumc<2 then lMAUDSEVc=0; /*Lifetime - no MAUD*/
if lmasumc=2 or lmasumc=3 then lMAUDSEVc=1; /*Lifetime - mild MAUD*/
if lmasumc=4 or lmasumc=5 then lMAUDSEVc=2; /*Lifetime - moderate MAUD*/

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if lmasumc=>6 then lMAUDSEVc=3; /*Lifetime - severe MAUD*/  
Label lMAUDSEVc='Lifetime MAUD severity grading (withdrawal cluster)-0=no diagnosis, 1=mild  
MAUD, 2=moderate MAUD and 3=severe MAUD';
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COCUD Criteria and Diagnoses Algorithms (Withdrawal Clustering)

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/*Cocaine - Larger/longer*/
if N3CD4Q1C32=1 then COCA1c=1; else COCA1c=0; /*Past-year*/
Label COCA1c='Past-year cocaine larger/longer criterion endorsement-0=negative 1=positive';
if N3CD4Q1E32=1 then pCOCA1c=1; else pCOCA1c=0; /*Prior-to-past-year*/
Label pCOCA1c='Prior-to-past-year cocaine larger/longer criterion endorsement-0=negative
1=positive';
if N3CD4Q1C32=1 or N3CD4Q1E32=1 then lCOCA1c=1; else lCOCA1c=0; /*Lifetime*/
Label lCOCA1c='Lifetime larger/longer cocaine criterion endorsement-0=negative 1=positive';

/*Cocaine - Quit or cut down*/
if N3CD4Q1C30=1 or N3CD4Q1C31=1 then COCA2c=1; else COCA2c=0; /*Past-year*/
Label COCA2c='Past-year cocaine quit or cut down criterion endorsement-0=negative 1=positive';
if N3CD4Q1E30=1 or N3CD4Q1E31=1 then pCOCA2c=1; else pCOCA2c=0; /*Prior-to-past-year*/
Label pCOCA2c='Prior-to-past-year cocaine quit or cut down criterion endorsement-0=negative
1=positive';
if N3CD4Q1C30=1 or N3CD4Q1E30=1 or N3CD4Q1C31=1 or N3CD4Q1E31=1 then lCOCA2c=1; else
lCOCA2c=0; /*Lifetime*/
Label lCOCA2c='Lifetime cocaine quit or cut down criterion endorsement-0=negative 1=positive';

/*Cocaine - Time spent*/
if N3CD4Q1C33=1 or N3CD4Q1C34=1 then COCA3c=1; else COCA3c=0; /*Past-year*/
Label COCA3c='Past-year cocaine time spent criterion endorsement-0=negative 1=positive';
if N3CD4Q1E33=1 or N3CD4Q1E34=1 then pCOCA3c=1; else pCOCA3c=0; /*Prior-to-past-year*/
Label pCOCA3c='Prior-to-past-year cocaine time spent criterion endorsement-0=negative
1=positive';
if N3CD4Q1C33=1 or N3CD4Q1E33=1 or N3CD4Q1C34=1 or N3CD4Q1E34=1 then lCOCA3c=1; else
lCOCA3c=0; /*Lifetime*/
Label lCOCA3c='Lifetime cocaine time spent criterion endorsement-0=negative 1=positive';

/*Cocaine - Craving*/
if N3CD4Q1C39=1 or N3CD4Q1C40=1 then COCA4c=1; else COCA4c=0; /*Past-year*/
Label COCA4c='Past-year cocaine craving criterion endorsement-0=negative 1=positive';
if N3CD4Q1E39=1 or N3CD4Q1E40=1 then pCOCA4c=1; else pCOCA4c=0; /*Prior-to-past-year*/
Label pCOCA4c='Prior-to-past-year cocaine craving criterion endorsement-0=negative
1=positive';
if N3CD4Q1C39=1 or N3CD4Q1E39=1 or N3CD4Q1C40=1 or N3CD4Q1E40=1 then lCOCA4c=1; else
lCOCA4c=0; /*Lifetime*/
Label lCOCA4c='Lifetime cocaine craving criterion endorsement-0=negative 1=positive';

/*Cocaine - Role interference*/
if N3CD4Q1C44=1 or N3CD4Q1C45=1 or N3CD4Q1C46=1 then COCA5c=1; else COCA5c=0; /*Past-year*/
Label COCA5c='Past-year cocaine role interference criterion endorsement-0=negative
1=positive';
if N3CD4Q1E44=1 or N3CD4Q1E45=1 or N3CD4Q1E46=1 then pCOCA5c=1; else pCOCA5c=0; /*Prior-to-
past-year*/
Label pCOCA5c='Prior-to-past-year cocaine role interference criterion endorsement-0=negative
1=positive';
if N3CD4Q1C44=1 or N3CD4Q1E44=1 or N3CD4Q1C45=1 or N3CD4Q1E45=1 or N3CD4Q1C46=1 or
N3CD4Q1E46=1 then lCOCA5c=1; else lCOCA5c=0; /*Lifetime*/
Label lCOCA5c='Lifetime cocaine role interference criterion endorsement-0=negative
1=positive';

/*Cocaine - Social problems*/
if N3CD4Q1C41=1 or N3CD4Q1C42=1 or N3CD4Q1C43=1 then COCA6c=1; else COCA6c=0; /*Past-year*/
Label COCA6c='Past-year cocaine social problems criterion endorsement-0=negative 1=positive';
if N3CD4Q1E41=1 or N3CD4Q1E42=1 or N3CD4Q1E43=1 then pCOCA6c=1; else pCOCA6c=0; /*Prior-to-
past-year*/

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Label pCOCA6c='Prior-to-past-year cocaine social problems criterion endorsement-0=negative
1=positive';
if N3CD4Q1C41=1 or N3CD4Q1E41=1 or N3CD4Q1C42=1 or N3CD4Q1E42=1 or N3CD4Q1C43=1 or
N3CD4Q1E43=1 then lCOCA6c=1; else lCOCA6c=0; /*Lifetime*/
Label lCOCA6c='Lifetime cocaine social problems criterion endorsement-0=negative 1=positive';

/*Cocaine - Give up*/
if N3CD4Q1C35=1 or N3CD4Q1C36=1 then COCA7c=1; else COCA7c=0; /*Past-year*/
Label COCA7c='Past-year cocaine give up criterion endorsement-0=negative 1=positive';
if N3CD4Q1E35=1 or N3CD4Q1E36=1 then pCOCA7c=1; else pCOCA7c=0; /*Prior-to-past-year*/
Label pCOCA7c='Prior-to-past-year cocaine give up criterion endorsement-0=negative
1=positive';
if N3CD4Q1C35=1 or N3CD4Q1E35=1 or N3CD4Q1C36=1 or N3CD4Q1E36=1 then lCOCA7c=1; else
lCOCA7c=0; /*Lifetime*/
Label lCOCA7c='Lifetime cocaine give up criterion endorsement-0=negative 1=positive';

/*Cocaine - Hazardous use*/
if N3CD4Q1C47=1 or N3CD4Q1C48=1 then COCA8c=1; else COCA8c=0; /*Past-year*/
Label COCA8c='Past-year cocaine hazardous use criterion endorsement-0=negative 1=positive';
if N3CD4Q1E47=1 or N3CD4Q1E48=1 then pCOCA8c=1; else pCOCA8c=0; /*Prior-to-past-year*/
Label pCOCA8c='Prior-to-past-year cocaine hazardous use criterion endorsement-0=negative
1=positive';
if N3CD4Q1C47=1 or N3CD4Q1E47=1 or N3CD4Q1C48=1 or N3CD4Q1E48=1 then lCOCA8c=1; else
lCOCA8c=0; /*Lifetime*/
Label lCOCA8c='Lifetime cocaine hazardous use criterion endorsement-0=negative 1=positive';

/*Cocaine - Continued use despite problems*/
if N3CD4Q1C37=1 or N3CD4Q1C38=1 then COCA9c=1; else COCA9c=0; /*Past-year*/
Label COCA9c='Past-year cocaine continued use despite problems criterion endorsement-
0=negative 1=positive';
if N3CD4Q1E37=1 or N3CD4Q1E38=1 then pCOCA9c=1; else pCOCA9c=0; /*Prior-to-past-year*/
Label pCOCA9c='Prior-to-past-year cocaine continued use despite problems criterion
endorsement-0=negative 1=positive';
if N3CD4Q1C37=1 or N3CD4Q1E37=1 or N3CD4Q1C38=1 or N3CD4Q1E38=1 then lCOCA9c=1; else
lCOCA9c=0; /*Lifetime*/
Label lCOCA9c='Lifetime cocaine continued use despite problems criterion endorsement-
0=negative 1=positive';

/*Cocaine - Tolerance*/
if N3CD4Q1C1=1 or N3CD4Q1C2=1 then COCA10c=1; else COCA10c=0; /*Past-year*/
Label COCA10c='Past-year cocaine tolerance criterion endorsement-0=negative 1=positive';
if N3CD4Q1E1=1 or N3CD4Q1E2=1 then pCOCA10c=1; else pCOCA10c=0; /*Prior-to-past-year*/
Label pCOCA10c='Prior-to-past-year cocaine tolerance criterion endorsement-0=negative
1=positive';
if N3CD4Q1C1=1 or N3CD4Q1E1=1 or N3CD4Q1C2=1 or N3CD4Q1E2=1 then lCOCA10c=1; else lCOCA10c=0;
/*Lifetime*/
Label lCOCA10c='Lifetime cocaine tolerance criterion endorsement-0=negative 1=positive';

/*Cocaine - Withdrawal - Explicit withdrawal clustering*/
*Cocaine - Withdrawal subalgorithm - sum of withdrawal symptoms;
if N3CD4Q1C5=1 then cocwithc=sum(N3CD4Q1C4=1, N3CD4Q1C17=1, (N3CD4Q1C20=1 or N3CD4Q1C3=1),
N3CD4Q1C10=1, (N3CD4Q1C15=1 or N3CD4Q1C14=1)); /*past-year withdrawal symptom count*/
Label cocwithc='Sum of past-year cocaine withdrawal symptoms (withdrawal cluster)';
if N3CD4Q1E5=1 then pcocwithc=sum(N3CD4Q1E4=1, N3CD4Q1E17=1, (N3CD4Q1E20=1 or N3CD4Q1E3=1),
N3CD4Q1E10=1, (N3CD4Q1E15=1 or N3CD4Q1E14=1)); /*prior-to-past-year withdrawal symptom count*/
Label pcocwithc='Sum of prior-to-past-year cocaine withdrawal symptoms (withdrawal cluster)';

*Cocaine - Withdrawal - using subalgorithm;

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if (cocwithc=>2 and N3CD4Q1C281=1) or N3CD4Q1C29=1 then COCA11c=1; else COCA11c=0; /*Past-
year*/
Label COCA11c='Past-year cocaine withdrawal criterion endorsement (withdrawal cluster)-
0=negative 1=positive';
if (pcocwithc=>2 and N3CD4Q1E282=1) or N3CD4Q1E29=1 then pCOCA11c=1; else pCOCA11c=0; /*Prior-
to-past-year*/
Label pCOCA11c='Prior-to-past-year cocaine withdrawal criterion endorsement (withdrawal
cluster)-0=negative 1=positive';
if ((cocwithc=>2 and N3CD4Q1C281=1) or N3CD4Q1C29=1) or ((pcocwithc=>2 and N3CD4Q1E282=1) or
N3CD4Q1E29=1) then lCOCA11c=1; else lCOCA11c=0; /*Lifetime*/
Label lCOCA11c='Lifetime cocaine withdrawal criterion endorsement (withdrawal cluster)-
0=negative 1=positive';

/*-Past-year (COCA1c-COCA11c) and prior-to-past-year (pCOCA1c-pCOCA11c) symptom counts
-Prior-to-past-year symptoms counts include N3CD4Q2A to
denote SOME COCUD symptoms occurred within same 12-month period
-Lifetime symptom count takes the largest symptom count from either past-year or prior-to-
past-year*/

cocsumc=sum(COCA1c, COCA2c, COCA3c, COCA4c, COCA5c, COCA6c, COCA7c, COCA8c, COCA9c, COCA10c,
COCA11c); /*Past-year*/
Label cocsumc='Sum of past-year cocaine criteria (withdrawal cluster)';
if N3CD4Q2A =1 THEN pcocsumc=sum(pCOCA1c, pCOCA2c, pCOCA3c, pCOCA4c, pCOCA5c, pCOCA6c,
pCOCA7c, pCOCA8c, pCOCA9c, pCOCA10c, pCOCA11c); /*Prior-to-past-year*/
Label pcocsumc='Sum of prior-to-past-year cocaine criteria (withdrawal cluster)';
lcocsumc=max(cocsumc, pcocsumc); /*Lifetime*/
Label lcocsumc='Maximum sum of past-year or prior-to-past-year cocaine criteria (withdrawal
cluster)';

*COCUD diagnoses;
if cocsumc=>2 then COCUDc=1; else COCUDc=0; /*Past-year*/
Label COCUDc='Past-year COCUD diagnosis (withdrawal cluster)-0=negative 1=positive';
if pcocsumc=>2 then pCOCUDc=1; else pCOCUDc=0; /*Prior-to-past-year*/
Label pCOCUDc='Prior-to-past-year COCUD diagnosis (withdrawal cluster)-0=negative 1=positive';
if lcocsumc=>2 then lCOCUDc=1; else lCOCUDc=0; /*Lifetime*/
Label lCOCUDc='Lifetime COCUD diagnosis (withdrawal cluster)-0=negative 1=positive';

*COCUD severity;
if cocsumc<2 then COCUDSEVc=0; /*Past-year - no COCUD*/
if cocsumc=2 or cocsumc=3 then COCUDSEVc=1; /*Past-year - mild COCUD*/
if cocsumc=4 or cocsumc=5 then COCUDSEVc=2; /*Past-year - moderate COCUD*/
if cocsumc>=6 then COCUDSEVc=3; /*Past-year - severe COCUD*/
Label COCUDSEVc='Past-year COCUD severity grading (withdrawal cluster)-0=no diagnosis, 1=mild
COCUD, 2=moderate COCUD and 3=severe COCUD';

if pcocsumc<2 then pCOCUDSEVc=0; /*Prior-to-past-year - no COCUD*/
if pcocsumc=2 or pcocsumc=3 then pCOCUDSEVc=1; /*Prior-to-past-year - mild COCUD*/
if pcocsumc=4 or pcocsumc=5 then pCOCUDSEVc=2; /*Prior-to-past-year - moderate COCUD*/
if pcocsumc>=6 then pCOCUDSEVc=3; /*Prior-to-past-year - severe COCUD*/
Label pCOCUDSEVc='Prior-to-past-year COCUD severity grading (withdrawal cluster)-0=no
diagnosis, 1=mild COCUD, 2=moderate COCUD and 3=severe COCUD';

if lcocsumc<2 then lCOCUDSEVc=0; /*Lifetime - no COCUD*/
if lcocsumc=2 or lcocsumc=3 then lCOCUDSEVc=1; /*Lifetime - mild COCUD*/
if lcocsumc=4 or lcocsumc=5 then lCOCUDSEVc=2; /*Lifetime - moderate COCUD*/
if lcocsumc>=6 then lCOCUDSEVc=3; /*Lifetime - severe COCUD*/
Label lCOCUDSEVc='Lifetime COCUD severity grading (withdrawal cluster)-0=no diagnosis, 1=mild
COCUD, 2=moderate COCUD and 3=severe COCUD';

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STIUD Criteria and Diagnoses Algorithms (Withdrawal Clustering)

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/*Stimulant - Larger/longer*/
if N3CD5Q1C32=1 then STIA1c=1; else STIA1c=0; /*Past-year*/
Label STIA1c='Past-year stimulant larger/longer criterion endorsement-0=negative 1=positive';
if N3CD5Q1E32=1 then pSTIA1c=1; else pSTIA1c=0; /*Prior-to-past-year*/
Label pSTIA1c='Prior-to-past-year stimulant larger/longer criterion endorsement-0=negative
1=positive';
if N3CD5Q1C32=1 or N3CD5Q1E32=1 then lSTIA1c=1; else lSTIA1c=0; /*Lifetime*/
Label lSTIA1c='Lifetime larger/longer stimulant criterion endorsement-0=negative 1=positive';

/*Stimulant - Quit or cut down*/
if N3CD5Q1C30=1 or N3CD5Q1C31=1 then STIA2c=1; else STIA2c=0; /*Past-year*/
Label STIA2c='Past-year stimulant quit or cut down criterion endorsement-0=negative
1=positive';
if N3CD5Q1E30=1 or N3CD5Q1E31=1 then pSTIA2c=1; else pSTIA2c=0; /*Prior-to-past-year*/
Label pSTIA2c='Prior-to-past-year stimulant quit or cut down criterion endorsement-0=negative
1=positive';
if N3CD5Q1C30=1 or N3CD5Q1E30=1 or N3CD5Q1C31=1 or N3CD5Q1E31=1 then lSTIA2c=1; else
lSTIA2c=0; /*Lifetime*/
Label lSTIA2c='Lifetime stimulant quit or cut down criterion endorsement-0=negative
1=positive';

/*Stimulant - Time spent*/
if N3CD5Q1C33=1 or N3CD5Q1C34=1 then STIA3c=1; else STIA3c=0; /*Past-year*/
Label STIA3c='Past-year stimulant time spent criterion endorsement-0=negative 1=positive';
if N3CD5Q1E33=1 or N3CD5Q1E34=1 then pSTIA3c=1; else pSTIA3c=0; /*Prior-to-past-year*/
Label pSTIA3c='Prior-to-past-year stimulant time spent criterion endorsement-0=negative
1=positive';
if N3CD5Q1C33=1 or N3CD5Q1E33=1 or N3CD5Q1C34=1 or N3CD5Q1E34=1 then lSTIA3c=1; else
lSTIA3c=0; /*Lifetime*/
Label lSTIA3c='Lifetime stimulant time spent criterion endorsement-0=negative 1=positive';

/*Stimulant - Craving*/
if N3CD5Q1C39=1 or N3CD5Q1C40=1 then STIA4c=1; else STIA4c=0; /*Past-year*/
Label STIA4c='Past-year stimulant craving criterion endorsement-0=negative 1=positive';
if N3CD5Q1E39=1 or N3CD5Q1E40=1 then pSTIA4c=1; else pSTIA4c=0; /*Prior-to-past-year*/
Label pSTIA4c='Prior-to-past-year stimulant craving criterion endorsement-0=negative
1=positive';
if N3CD5Q1C39=1 or N3CD5Q1E39=1 or N3CD5Q1C40=1 or N3CD5Q1E40=1 then lSTIA4c=1; else
lSTIA4c=0; /*Lifetime*/
Label lSTIA4c='Lifetime stimulant craving criterion endorsement-0=negative 1=positive';

/*Stimulant - Role interference*/
if N3CD5Q1C44=1 or N3CD5Q1C45=1 or N3CD5Q1C46=1 then STIA5c=1; else STIA5c=0; /*Past-year*/
Label STIA5c='Past-year stimulant role interference criterion endorsement-0=negative
1=positive';
if N3CD5Q1E44=1 or N3CD5Q1E45=1 or N3CD5Q1E46=1 then pSTIA5c=1; else pSTIA5c=0; /*Prior-to-
past-year*/
Label pSTIA5c='Prior-to-past-year stimulant role interference criterion endorsement-0=negative
1=positive';
if (N3CD5Q1C44=1 or N3CD5Q1E44=1) or (N3CD5Q1C45=1 or N3CD5Q1E45=1) or (N3CD5Q1C46=1 or
N3CD5Q1E46=1) then lSTIA5c=1; else lSTIA5c=0; /*Lifetime*/
Label lSTIA5c='Lifetime stimulant role interference criterion endorsement-0=negative
1=positive';

/*Stimulant - Social problems*/
if N3CD5Q1C41=1 or N3CD5Q1C42=1 or N3CD5Q1C43=1 then STIA6c=1; else STIA6c=0; /*Past-year*/

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Label STIA6c='Past-year stimulant social problems criterion endorsement-0=negative
l=positive';
if N3CD5Q1E41=1 or N3CD5Q1E42=1 or N3CD5Q1E43=1 then pSTIA6c=1; else pSTIA6c=0; /*Prior-to-
past-year*/
Label pSTIA6c='Prior-to-past-year stimulant social problems criterion endorsement-0=negative
l=positive';
if N3CD5Q1C41=1 or N3CD5Q1E41=1 or N3CD5Q1C42=1 or N3CD5Q1E42=1 or N3CD5Q1C43=1 or
N3CD5Q1E43=1 then lSTIA6c=1; else lSTIA6c=0; /*Lifetime*/
Label lSTIA6c='Lifetime stimulant social problems criterion endorsement-0=negative
l=positive';

/*Stimulant - Give up*/
if N3CD5Q1C35=1 or N3CD5Q1C36=1 then STIA7c=1; else STIA7c=0; /*Past-year*/
Label STIA7c='Past-year stimulant give up criterion endorsement-0=negative l=positive';
if N3CD5Q1E35=1 or N3CD5Q1E36=1 then pSTIA7c=1; else pSTIA7c=0; /*Prior-to-past-year*/
Label pSTIA7c='Prior-to-past-year stimulant give up criterion endorsement-0=negative
l=positive';
if N3CD5Q1C35=1 or N3CD5Q1E35=1 or N3CD5Q1C36=1 or N3CD5Q1E36=1 then lSTIA7c=1; else
lSTIA7c=0; /*Lifetime*/
Label lSTIA7c='Lifetime stimulant give up criterion endorsement-0=negative l=positive';

/*Stimulant - Hazardous use*/
if N3CD5Q1C47=1 or N3CD5Q1C48=1 then STIA8c=1; else STIA8c=0; /*Past-year*/
Label STIA8c='Past-year stimulant hazardous use criterion endorsement-0=negative l=positive';
if N3CD5Q1E47=1 or N3CD5Q1E48=1 then pSTIA8c=1; else pSTIA8c=0; /*Prior-to-past-year*/
Label pSTIA8c='Prior-to-past-year stimulant hazardous use criterion endorsement-0=negative
l=positive';
if N3CD5Q1C47=1 or N3CD5Q1E47=1 or N3CD5Q1C48=1 or N3CD5Q1E48=1 then lSTIA8c=1; else
lSTIA8c=0; /*Lifetime*/
Label lSTIA8c='Lifetime stimulant hazardous use criterion endorsement-0=negative l=positive';

/*Stimulant - Continued use despite problems*/
if N3CD5Q1C37=1 or N3CD5Q1C38=1 then STIA9c=1; else STIA9c=0; /*Past-year*/
Label STIA9c='Past-year stimulant continued use despite problems criterion endorsement-
0=negative l=positive';
if N3CD5Q1E37=1 or N3CD5Q1E38=1 then pSTIA9c=1; else pSTIA9c=0; /*Prior-to-past-year*/
Label pSTIA9c='Prior-to-past-year stimulant continued use despite problems criterion
endorsement-0=negative l=positive';
if N3CD5Q1C37=1 or N3CD5Q1E37=1 or N3CD5Q1C38=1 or N3CD5Q1E38=1 then lSTIA9c=1; else
lSTIA9c=0; /*Lifetime*/
Label lSTIA9c='Lifetime stimulant continued use despite problems criterion endorsement-
0=negative l=positive';

/*Stimulant - Tolerance*/
if N3CD5Q1C1=1 or N3CD5Q1C2=1 then STIA10c=1; else STIA10c=0; /*Past-year*/
Label STIA10c='Past-year stimulant tolerance criterion endorsement-0=negative l=positive';
if N3CD5Q1E1=1 or N3CD5Q1E2=1 then pSTIA10c=1; else pSTIA10c=0; /*Prior-to-past-year*/
Label pSTIA10c='Prior-to-past-year stimulant tolerance criterion endorsement-0=negative
l=positive';
if N3CD5Q1C1=1 or N3CD5Q1E1=1 or N3CD5Q1C2=1 or N3CD5Q1E2=1 then lSTIA10c=1; else lSTIA10c=0;
/*Lifetime*/
Label lSTIA10c='Lifetime stimulant tolerance criterion endorsement-0=negative l=positive';

/*Stimulant - Withdrawal - Explicit withdrawal clustering*/
*Stimulant - Withdrawal subalgorithm - sum of withdrawal symptoms;
if N3CD5Q1C5=1 then stiwithc=sum(N3CD5Q1C4=1, N3CD5Q1C17=1, (N3CD5Q1C20=1 or N3CD5Q1C3=1),
N3CD5Q1C10=1, (N3CD5Q1C15=1 or N3CD5Q1C14=1)); /*past-year withdrawal symptom count*/
Label stiwithc='Sum of past-year stimulant withdrawal symptoms (withdrawal cluster)';

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if N3CD5Q1E5=1 then pstiwithc=sum(N3CD5Q1E4=1, N3CD5Q1E17=1, (N3CD5Q1E20=1 or N3CD5Q1E3=1),
N3CD5Q1E10=1, (N3CD5Q1E15=1 or N3CD5Q1E14=1)); /*prior-to-past-year withdrawal symptom count*/
Label pstiwithc='Sum of prior-to-past-year stimulant withdrawal symptoms (withdrawal
cluster)';

*Stimulant - Withdrawal - using subalgorithm;
if (stiwithc=>2 and N3CD5Q1C281=1) or N3CD5Q1C29=1 then STIA11c=1; else STIA11c=0; /*Past-
year*/
Label STIA11c='Past-year stimulant withdrawal criterion endorsement (withdrawal cluster)-
0=negative 1=positive';
if (pstiwithc=>2 and N3CD5Q1E282=1) or N3CD5Q1E29=1 then pSTIA11c=1; else pSTIA11c=0; /*Prior-
to-past-year*/
Label pSTIA11c='Prior-to-past-year stimulant withdrawal criterion endorsement (withdrawal
cluster)-0=negative 1=positive';
if ((stiwithc=>2 and N3CD5Q1C281=1) or N3CD5Q1C29=1) or ((pstiwithc=>2 and N3CD5Q1E282=1) or
N3CD5Q1E29=1) then lSTIA11c=1; else lSTIA11c=0; /*Lifetime*/
Label lSTIA11c='Lifetime stimulant withdrawal criterion endorsement (withdrawal cluster)-
0=negative 1=positive';

/*-Past-year (STIA1c-STIA11c) and prior-to-past-year (pSTIA1c-pSTIA11c) symptom counts
-Prior-to-past-year symptoms counts include N3CD5Q2A to
denote SOME STIUD symptoms occurred within same 12-month period
-Lifetime symptom count takes the largest symptom count from either past-year or prior-to-
past-year*/

stisumc=sum(STIA1c, STIA2c, STIA3c, STIA4c, STIA5c, STIA6c, STIA7c, STIA8c, STIA9c, STIA10c,
STIA11c); /*Past-year*/
Label stisumc='Sum of past-year stimulant criteria (withdrawal cluster)';
if N3CD5Q2A=1 THEN pstisumc=sum(pSTIA1c, pSTIA2c, pSTIA3c, pSTIA4c, pSTIA5c, pSTIA6c, pSTIA7c,
pSTIA8c, pSTIA9c, pSTIA10c, pSTIA11c); /*Prior-to-past-year*/
Label pstisumc='Sum of prior-to-past-year stimulant criteria (withdrawal cluster)';
lstisumc=max(stisumc, pstisumc); /*Lifetime*/
Label lstisumc='Maximum sum of past-year or prior-to-past-year stimulant criteria (withdrawal
cluster)';

*STIUD diagnoses;
if stisumc=>2 then STIUDc=1; else STIUDc=0; /*Past-year*/
Label STIUDc='Past-year STIUD diagnosis (withdrawal cluster)-0=negative 1=positive';
if pstisumc=>2 then pSTIUDc=1; else pSTIUDc=0; /*Prior-to-past-year*/
Label pSTIUDc='Prior-to-past-year STIUD diagnosis (withdrawal cluster)-0=negative 1=positive';
if lstisumc=>2 then lSTIUDc=1; else lSTIUDc=0; /*Lifetime*/
Label lSTIUDc='Lifetime STIUD diagnosis (withdrawal cluster)-0=negative 1=positive';

*STIUD severity;
if stisumc<2 then STIUDSEVc=0; /*Past-year - no STIUD*/
if stisumc=2 or stisumc=3 then STIUDSEVc=1; /*Past-year - mild STIUD*/
if stisumc=4 or stisumc=5 then STIUDSEVc=2; /*Past-year - moderate STIUD*/
if stisumc>=6 then STIUDSEVc=3; /*Past-year - severe STIUD*/
Label STIUDSEVc='Past-year STIUD severity grading (withdrawal cluster)-0=no diagnosis, 1=mild
STIUD, 2=moderate STIUD and 3=severe STIUD';

if pstisumc<2 then pSTIUDSEVc=0; /*Prior-to-past-year - no STIUD*/
if pstisumc=2 or pstisumc=3 then pSTIUDSEVc=1; /*Prior-to-past-year - mild STIUD*/
if pstisumc=4 or pstisumc=5 then pSTIUDSEVc=2; /*Prior-to-past-year - moderate STIUD*/
if pstisumc>=6 then pSTIUDSEVc=3; /*Prior-to-past-year - severe STIUD*/
Label pSTIUDSEVc='Prior-to-past-year STIUD severity grading (withdrawal cluster)-0=no
diagnosis, 1=mild STIUD, 2=moderate STIUD and 3=severe STIUD';

if lstisumc<2 then lSTIUDSEVc=0; /*Lifetime - no STIUD*/

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if lstisumc=2 or lstisumc=3 then lSTIUDSEVc=1; /*Lifetime - mild STIUD*/  
if lstisumc=4 or lstisumc=5 then lSTIUDSEVc=2; /*Lifetime - moderate STIUD*/  
if lstisumc=>6 then lSTIUDSEVc=3; /*Lifetime - severe STIUD*/  
Label lSTIUDSEVc='Lifetime STIUD severity grading (withdrawal cluster)-0=no diagnosis, 1=mild  
STIUD, 2=moderate STIUD and 3=severe STIUD';
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CLBUD Criteria and Diagnoses Algorithms (Withdrawal Clustering)

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/*Club Drug - Larger/longer*/
if N3CD6Q1C32=1 then CLBA1c=1; else CLBA1c=0; /*Past-year*/
Label CLBA1c='Past-year club drug larger/longer criterion endorsement-0=negative 1=positive';
if N3CD6Q1E32=1 then pCLBA1c=1; else pCLBA1c=0; /*Prior-to-past-year*/
Label pCLBA1c='Prior-to-past-year club drug larger/longer criterion endorsement-0=negative
1=positive';
if N3CD6Q1C32=1 or N3CD6Q1E32=1 then lCLBA1c=1; else lCLBA1c=0; /*Lifetime*/
Label lCLBA1c='Lifetime larger/longer club drug criterion endorsement-0=negative 1=positive';

/*Club Drug - Quit or cut down*/
if N3CD6Q1C30=1 or N3CD6Q1C31=1 then CLBA2c=1; else CLBA2c=0; /*Past-year*/
Label CLBA2c='Past-year club drug quit or cut down criterion endorsement-0=negative
1=positive';
if N3CD6Q1E30=1 or N3CD6Q1E31=1 then pCLBA2c=1; else pCLBA2c=0; /*Prior-to-past-year*/
Label pCLBA2c='Prior-to-past-year club drug quit or cut down criterion endorsement-0=negative
1=positive';
if N3CD6Q1C30=1 or N3CD6Q1E30=1 or N3CD6Q1C31=1 or N3CD6Q1E31=1 then lCLBA2c=1; else
lCLBA2c=0; /*Lifetime*/
Label lCLBA2c='Lifetime club drug quit or cut down criterion endorsement-0=negative
1=positive';

/*Club Drug - Time spent*/
if N3CD6Q1C33=1 or N3CD6Q1C34=1 then CLBA3c=1; else CLBA3c=0; /*Past-year*/
Label CLBA3c='Past-year club drug time spent criterion endorsement-0=negative 1=positive';
if N3CD6Q1E33=1 or N3CD6Q1E34=1 then pCLBA3c=1; else pCLBA3c=0; /*Prior-to-past-year*/
Label pCLBA3c='Prior-to-past-year club drug time spent criterion endorsement-0=negative
1=positive';
if N3CD6Q1C33=1 or N3CD6Q1E33=1 or N3CD6Q1C34=1 or N3CD6Q1E34=1 then lCLBA3c=1; else
lCLBA3c=0; /*Lifetime*/
Label lCLBA3c='Lifetime club drug time spent criterion endorsement-0=negative 1=positive';

/*Club Drug - Craving*/
if N3CD6Q1C39=1 or N3CD6Q1C40=1 then CLBA4c=1; else CLBA4c=0; /*Past-year*/
Label CLBA4c='Past-year club drug craving criterion endorsement-0=negative 1=positive';
if N3CD6Q1E39=1 or N3CD6Q1E40=1 then pCLBA4c=1; else pCLBA4c=0; /*Prior-to-past-year*/
Label pCLBA4c='Prior-to-past-year club drug craving criterion endorsement-0=negative
1=positive';
if N3CD6Q1C39=1 or N3CD6Q1E39=1 or N3CD6Q1C40=1 or N3CD6Q1E40=1 then lCLBA4c=1; else
lCLBA4c=0; /*Lifetime*/
Label lCLBA4c='Lifetime club drug craving criterion endorsement-0=negative 1=positive';

/*Club Drug - Role interference*/
if N3CD6Q1C44=1 or N3CD6Q1C45=1 or N3CD6Q1C46=1 then CLBA5c=1; else CLBA5c=0; /*Past-year*/
Label CLBA5c='Past-year club drug role interference criterion endorsement-0=negative
1=positive';
if N3CD6Q1E44=1 or N3CD6Q1E45=1 or N3CD6Q1E46=1 then pCLBA5c=1; else pCLBA5c=0; /*Prior-to-
past-year*/
Label pCLBA5c='Prior-to-past-year club drug role interference criterion endorsement-0=negative
1=positive';
if N3CD6Q1C44=1 or N3CD6Q1E44=1 or N3CD6Q1C45=1 or N3CD6Q1E45=1 or N3CD6Q1C46=1 or
N3CD6Q1E46=1 then lCLBA5c=1; else lCLBA5c=0; /*Lifetime*/
Label lCLBA5c='Lifetime club drug role interference criterion endorsement-0=negative
1=positive';

/*Club Drug - Social problems*/
if N3CD6Q1C41=1 or N3CD6Q1C42=1 or N3CD6Q1C43=1 then CLBA6c=1; else CLBA6c=0; /*Past-year*/

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Label CLBA6c='Past-year club drug social problems criterion endorsement-0=negative
1=positive';
if N3CD6Q1E41=1 or N3CD6Q1E42=1 or N3CD6Q1E43=1 then pCLBA6c=1; else pCLBA6c=0; /*Prior-to-
past-year*/
Label pCLBA6c='Prior-to-past-year club drug social problems criterion endorsement-0=negative
1=positive';
if N3CD6Q1C41=1 or N3CD6Q1E41=1 or N3CD6Q1C42=1 or N3CD6Q1E42=1 or N3CD6Q1C43=1 or
N3CD6Q1E43=1 then lCLBA6c=1; else lCLBA6c=0; /*Lifetime*/
Label lCLBA6c='Lifetime club drug social problems criterion endorsement-0=negative
1=positive';

/*Club Drug - Give up*/
if N3CD6Q1C35=1 or N3CD6Q1C36=1 then CLBA7c=1; else CLBA7c=0; /*Past-year*/
Label CLBA7c='Past-year club drug give up criterion endorsement-0=negative 1=positive';
if N3CD6Q1E35=1 or N3CD6Q1E36=1 then pCLBA7c=1; else pCLBA7c=0; /*Prior-to-past-year*/
Label pCLBA7c='Prior-to-past-year club drug give up criterion endorsement-0=negative
1=positive';
if N3CD6Q1C35=1 or N3CD6Q1E35=1 or N3CD6Q1C36=1 or N3CD6Q1E36=1 then lCLBA7c=1; else
lCLBA7c=0; /*Lifetime*/
Label lCLBA7c='Lifetime club drug give up criterion endorsement-0=negative 1=positive';

/*Club Drug - Hazardous use*/
if N3CD6Q1C47=1 or N3CD6Q1C48=1 then CLBA8c=1; else CLBA8c=0; /*Past-year*/
Label CLBA8c='Past-year club drug hazardous use criterion endorsement-0=negative 1=positive';
if N3CD6Q1E47=1 or N3CD6Q1E48=1 then pCLBA8c=1; else pCLBA8c=0; /*Prior-to-past-year*/
Label pCLBA8c='Prior-to-past-year club drug hazardous use criterion endorsement-0=negative
1=positive';
if N3CD6Q1C47=1 or N3CD6Q1E47=1 or N3CD6Q1C48=1 or N3CD6Q1E48=1 then lCLBA8c=1; else
lCLBA8c=0; /*Lifetime*/
Label lCLBA8c='Lifetime club drug hazardous use criterion endorsement-0=negative 1=positive';

/*Club Drug - Continued use despite problems*/
if N3CD6Q1C37=1 or N3CD6Q1C38=1 then CLBA9c=1; else CLBA9c=0; /*Past-year*/
Label CLBA9c='Past-year club drug continued use despite problems criterion endorsement-
0=negative 1=positive';
if N3CD6Q1E37=1 or N3CD6Q1E38=1 then pCLBA9c=1; else pCLBA9c=0; /*Prior-to-past-year*/
Label pCLBA9c='Prior-to-past-year club drug continued use despite problems criterion
endorsement-0=negative 1=positive';
if N3CD6Q1C37=1 or N3CD6Q1E37=1 or N3CD6Q1C38=1 or N3CD6Q1E38=1 then lCLBA9c=1; else
lCLBA9c=0; /*Lifetime*/
Label lCLBA9c='Lifetime club drug continued use despite problems criterion endorsement-
0=negative 1=positive';

/*Club Drug - Tolerance*/
if N3CD6Q1C1=1 or N3CD6Q1C2=1 then CLBA10c=1; else CLBA10c=0; /*Past-year*/
Label CLBA10c='Past-year club drug tolerance criterion endorsement-0=negative 1=positive';
if N3CD6Q1E1=1 or N3CD6Q1E2=1 then pCLBA10c=1; else pCLBA10c=0; /*Prior-to-past-year*/
Label pCLBA10c='Prior-to-past-year club drug tolerance criterion endorsement-0=negative
1=positive';
if N3CD6Q1C1=1 or N3CD6Q1E1=1 or N3CD6Q1C2=1 or N3CD6Q1E2=1 then lCLBA10c=1; else lCLBA10c=0;
/*Lifetime*/
Label lCLBA10c='Lifetime club drug tolerance criterion endorsement-0=negative 1=positive';

/*--Past-year (CLBA1c-CLBA10c) and prior-to-past-year (pCLBA1c-pCLBA10c) symptom counts
-Prior-to-past-year symptoms counts include N3CD6Q2A to
denote SOME CLBUD symptoms occurred within same 12-month period
-Lifetime symptom count takes the largest symptom count from either past-year or prior-to-
past-year*/

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clbsumc=sum(CLBA1c, CLBA2c, CLBA3c, CLBA4c, CLBA5c, CLBA6c, CLBA7c, CLBA8c, CLBA9c, CLBA10c);
/*Past-year*/
Label clbsumc='Sum of past-year club drug criteria (withdrawal cluster)';
if N3CD6Q2A=1 THEN pclbsumc=sum(pCLBA1c, pCLBA2c, pCLBA3c, pCLBA4c, pCLBA5c, pCLBA6c, pCLBA7c,
pCLBA8c, pCLBA9c, pCLBA10c); /*Prior-to-past-year*/
Label pclbsumc='Sum of prior-to-past-year club drug criteria (withdrawal cluster)';
lclbsumc=max(clbsumc, pclbsumc); /*Lifetime*/
Label lclbsumc='Maximum sum of past-year or prior-to-past-year club drug criteria (withdrawal
cluster)';

*CLBUD diagnoses;
if clbsumc=>2 then CLBUDc=1; else CLBUDc=0; /*Past-year*/
Label CLBUDc='Past-year CLBUD diagnosis (withdrawal cluster)-0=negative 1=positive';
if pclbsumc=>2 then pCLBUDc=1; else pCLBUDc=0; /*Prior-to-past-year*/
Label pCLBUDc='Prior-to-past-year CLBUD diagnosis (withdrawal cluster)-0=negative 1=positive';
if lclbsumc=>2 then lCLBUDc=1; else lCLBUDc=0; /*Lifetime*/
Label lCLBUDc='Lifetime CLBUD diagnosis (withdrawal cluster)-0=negative 1=positive';

*CLBUD severity;
if clbsumc<2 then CLBUDSEVc=0; /*Past-year - no CLBUD*/
if clbsumc=2 or clbsumc=3 then CLBUDSEVc=1; /*Past-year - mild CLBUD*/
if clbsumc=4 or clbsumc=5 then CLBUDSEVc=2; /*Past-year - moderate CLBUD*/
if clbsumc>=6 then CLBUDSEVc=3; /*Past-year - severe CLBUD*/
Label CLBUDSEVc='Past-year CLBUD severity grading (withdrawal cluster)-0=no diagnosis, 1=mild
CLBUD, 2=moderate CLBUD and 3=severe CLBUD';

if pclbsumc<2 then pCLBUDSEVc=0; /*Prior-to-past-year - no CLBUD*/
if pclbsumc=2 or pclbsumc=3 then pCLBUDSEVc=1; /*Prior-to-past-year - mild CLBUD*/
if pclbsumc=4 or pclbsumc=5 then pCLBUDSEVc=2; /*Prior-to-past-year - moderate CLBUD*/
if pclbsumc>=6 then pCLBUDSEVc=3; /*Prior-to-past-year - severe CLBUD*/
Label pCLBUDSEVc='Prior-to-past-year CLBUD severity grading (withdrawal cluster)-0=no
diagnosis, 1=mild CLBUD, 2=moderate CLBUD and 3=severe CLBUD';

if lclbsumc<2 then lCLBUDSEVc=0; /*Lifetime - no CLBUD*/
if lclbsumc=2 or lclbsumc=3 then lCLBUDSEVc=1; /*Lifetime - mild CLBUD*/
if lclbsumc=4 or lclbsumc=5 then lCLBUDSEVc=2; /*Lifetime - moderate CLBUD*/
if lclbsumc>=6 then lCLBUDSEVc=3; /*Lifetime - severe CLBUD*/
Label lCLBUDSEVc='Lifetime CLBUD severity grading (withdrawal cluster)-0=no diagnosis, 1=mild
CLBUD, 2=moderate CLBUD and 3=severe CLBUD';

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HALUD Criteria and Diagnoses Algorithms (Withdrawal Clustering)

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/*Hallucinogen - Larger/longer*/
if N3CD7Q1C32=1 then HALA1c=1; else HALA1c=0; /*Past-year*/
Label HALA1c='Past-year hallucinogen larger/longer criterion endorsement-0=negative
1=positive';
if N3CD7Q1E32=1 then pHALA1c=1; else pHALA1c=0; /*Prior-to-past-year*/
Label pHALA1c='Prior-to-past-year hallucinogen larger/longer criterion endorsement-0=negative
1=positive';
if N3CD7Q1C32=1 or N3CD7Q1E32=1 then lHALA1c=1; else lHALA1c=0; /*Lifetime*/
Label lHALA1c='Lifetime larger/longer hallucinogen criterion endorsement-0=negative
1=positive';

/*Hallucinogen - Quit or cut down*/
if N3CD7Q1C30=1 or N3CD7Q1C31=1 then HALA2c=1; else HALA2c=0; /*Past-year*/
Label HALA2c='Past-year hallucinogen quit or cut down criterion endorsement-0=negative
1=positive';
if N3CD7Q1E30=1 or N3CD7Q1E31=1 then pHALA2c=1; else pHALA2c=0; /*Prior-to-past-year*/
Label pHALA2c='Prior-to-past-year hallucinogen quit or cut down criterion endorsement-
0=negative 1=positive';
if N3CD7Q1C30=1 or N3CD7Q1E30=1 or N3CD7Q1C31=1 or N3CD7Q1E31=1 then lHALA2c=1; else
lHALA2c=0; /*Lifetime*/
Label lHALA2c='Lifetime hallucinogen quit or cut down criterion endorsement-0=negative
1=positive';

/*Hallucinogen - Time spent*/
if N3CD7Q1C33=1 or N3CD7Q1C34=1 then HALA3c=1; else HALA3c=0; /*Past-year*/
Label HALA3c='Past-year hallucinogen time spent criterion endorsement-0=negative 1=positive';
if N3CD7Q1E33=1 or N3CD7Q1E34=1 then pHALA3c=1; else pHALA3c=0; /*Prior-to-past-year*/
Label pHALA3c='Prior-to-past-year hallucinogen time spent criterion endorsement-0=negative
1=positive';
if N3CD7Q1C33=1 or N3CD7Q1E33=1 or N3CD7Q1C34=1 or N3CD7Q1E34=1 then lHALA3c=1; else
lHALA3c=0; /*Lifetime*/
Label lHALA3c='Lifetime hallucinogen time spent criterion endorsement-0=negative 1=positive';

/*Hallucinogen - Craving*/
if N3CD7Q1C39=1 or N3CD7Q1C40=1 then HALA4c=1; else HALA4c=0; /*Past-year*/
Label HALA4c='Past-year hallucinogen craving criterion endorsement-0=negative 1=positive';
if N3CD7Q1E39=1 or N3CD7Q1E40=1 then pHALA4c=1; else pHALA4c=0; /*Prior-to-past-year*/
Label pHALA4c='Prior-to-past-year hallucinogen craving criterion endorsement-0=negative
1=positive';
if N3CD7Q1C39=1 or N3CD7Q1E39=1 or N3CD7Q1C40=1 or N3CD7Q1E40=1 then lHALA4c=1; else
lHALA4c=0; /*Lifetime*/
Label lHALA4c='Lifetime hallucinogen craving criterion endorsement-0=negative 1=positive';

/*Hallucinogen - Role interference*/
if N3CD7Q1C44=1 or N3CD7Q1C45=1 or N3CD7Q1C46=1 then HALA5c=1; else HALA5c=0; /*Past-year*/
Label HALA5c='Past-year hallucinogen role interference criterion endorsement-0=negative
1=positive';
if N3CD7Q1E44=1 or N3CD7Q1E45=1 or N3CD7Q1E46=1 then pHALA5c=1; else pHALA5c=0; /*Prior-to-
past-year*/
Label pHALA5c='Prior-to-past-year hallucinogen role interference criterion endorsement-
0=negative 1=positive';
if N3CD7Q1C44=1 or N3CD7Q1E44=1 or N3CD7Q1C45=1 or N3CD7Q1E45=1 or N3CD7Q1C46=1 or
N3CD7Q1E46=1 then lHALA5c=1; else lHALA5c=0; /*Lifetime*/
Label lHALA5c='Lifetime hallucinogen role interference criterion endorsement-0=negative
1=positive';

/*Hallucinogen - Social problems*/

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if N3CD7Q1C41=1 or N3CD7Q1C42=1 or N3CD7Q1C43=1 then HALA6c=1; else HALA6c=0; /*Past-year*/
Label HALA6c='Past-year hallucinogen social problems criterion endorsement-0=negative
1=positive';
if N3CD7Q1E41=1 or N3CD7Q1E42=1 or N3CD7Q1E43=1 then pHALA6c=1; else pHALA6c=0; /*Prior-to-
past-year*/
Label pHALA6c='Prior-to-past-year hallucinogen social problems criterion endorsement-
0=negative 1=positive';
if N3CD7Q1C41=1 or N3CD7Q1E41=1 or N3CD7Q1C42=1 or N3CD7Q1E42=1 or N3CD7Q1C43=1 or
N3CD7Q1E43=1 then lHALA6c=1; else lHALA6c=0; /*Lifetime*/
Label lHALA6c='Lifetime hallucinogen social problems criterion endorsement-0=negative
1=positive';

/*Hallucinogen - Give up*/
if N3CD7Q1C35=1 or N3CD7Q1C36=1 then HALA7c=1; else HALA7c=0; /*Past-year*/
Label HALA7c='Past-year hallucinogen give up criterion endorsement-0=negative 1=positive';
if N3CD7Q1E35=1 or N3CD7Q1E36=1 then pHALA7c=1; else pHALA7c=0; /*Prior-to-past-year*/
Label pHALA7c='Prior-to-past-year hallucinogen give up criterion endorsement-0=negative
1=positive';
if N3CD7Q1C35=1 or N3CD7Q1E35=1 or N3CD7Q1C36=1 or N3CD7Q1E36=1 then lHALA7c=1; else
lHALA7c=0; /*Lifetime*/
Label lHALA7c='Lifetime hallucinogen give up criterion endorsement-0=negative 1=positive';

/*Hallucinogen - Hazardous use*/
if N3CD7Q1C47=1 or N3CD7Q1C48=1 then HALA8c=1; else HALA8c=0; /*Past-year*/
Label HALA8c='Past-year hallucinogen hazardous use criterion endorsement-0=negative
1=positive';
if N3CD7Q1E47=1 or N3CD7Q1E48=1 then pHALA8c=1; else pHALA8c=0; /*Prior-to-past-year*/
Label pHALA8c='Prior-to-past-year hallucinogen hazardous use criterion endorsement-0=negative
1=positive';
if N3CD7Q1C47=1 or N3CD7Q1E47=1 or N3CD7Q1C48=1 or N3CD7Q1E48=1 then lHALA8c=1; else
lHALA8c=0; /*Lifetime*/
Label lHALA8c='Lifetime hallucinogen hazardous use criterion endorsement-0=negative
1=positive';

/*Hallucinogen - Continued use despite problems*/
if N3CD7Q1C37=1 or N3CD7Q1C38=1 then HALA9c=1; else HALA9c=0; /*Past-year*/
Label HALA9c='Past-year hallucinogen continued use despite problems criterion endorsement-
0=negative 1=positive';
if N3CD7Q1E37=1 or N3CD7Q1E38=1 then pHALA9c=1; else pHALA9c=0; /*Prior-to-past-year*/
Label pHALA9c='Prior-to-past-year hallucinogen continued use despite problems criterion
endorsement-0=negative 1=positive';
if N3CD7Q1C37=1 or N3CD7Q1E37=1 or N3CD7Q1C38=1 or N3CD7Q1E38=1 then lHALA9c=1; else
lHALA9c=0; /*Lifetime*/
Label lHALA9c='Lifetime hallucinogen continued use despite problems criterion endorsement-
0=negative 1=positive';

/*Hallucinogen - Tolerance*/
if N3CD7Q1C1=1 or N3CD7Q1C2=1 then HALA10c=1; else HALA10c=0; /*Past-year*/
Label HALA10c='Past-year hallucinogen tolerance criterion endorsement-0=negative 1=positive';
if N3CD7Q1E1=1 or N3CD7Q1E2=1 then pHALA10c=1; else pHALA10c=0; /*Prior-to-past-year*/
Label pHALA10c='Prior-to-past-year hallucinogen tolerance criterion endorsement-0=negative
1=positive';
if N3CD7Q1C1=1 or N3CD7Q1E1=1 or N3CD7Q1C2=1 or N3CD7Q1E2=1 then lHALA10c=1; else lHALA10c=0;
/*Lifetime*/
Label lHALA10c='Lifetime hallucinogen tolerance criterion endorsement-0=negative 1=positive';

/*-Past-year (HALA1c-HALA10c) and prior-to-past-year (pHALA1c-pHALA10c) symptom counts
-Prior-to-past-year symptoms counts include N3CD7Q2A to
denote SOME HALUD symptoms occurred within same 12-month period

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-Lifetime symptom count takes the largest symptom count from either past-year or prior-to-
past-year*/

halsumc=sum(HALA1c, HALA2c, HALA3c, HALA4c, HALA5c, HALA6c, HALA7c, HALA8c, HALA9c, HALA10c);
/*Past-year*/
Label halsumc='Sum of past-year hallucinogen criteria (withdrawal cluster)';
if N3CD7Q2A=1 THEN phalsumc=sum(pHALA1c, pHALA2c, pHALA3c, pHALA4c, pHALA5c, pHALA6c, pHALA7c,
pHALA8c, pHALA9c, pHALA10c); /*Prior-to-past-year*/
Label phalsumc='Sum of prior-to-past-year hallucinogen criteria (withdrawal cluster)';
lhalsumc=max(halsumc, phalsumc); /*Lifetime*/
Label lhalsumc='Maximum sum of past-year or prior-to-past-year hallucinogen criteria
(withdrawal cluster)';

*HALUD diagnoses;
if halsumc=>2 then HALUDc=1; else HALUDc=0; /*Past-year*/
Label HALUDc='Past-year HALUD diagnosis (withdrawal cluster)-0=negative 1=positive';
if phalsumc=>2 then pHALUDc=1; else pHALUDc=0; /*Prior-to-past-year*/
Label pHALUDc='Prior-to-past-year HALUD diagnosis (withdrawal cluster)-0=negative 1=positive';
if lhalsumc=>2 then lHALUDc=1; else lHALUDc=0; /*Lifetime*/
Label lHALUDc='Lifetime HALUD diagnosis (withdrawal cluster)-0=negative 1=positive';

*HALUD severity;
/*Past-year*/
if halsumc<2 then HALUDSEVc=0; /*Past-year - no HALUD*/
if halsumc=2 or halsumc=3 then HALUDSEVc=1; /*Past-year - mild HALUD*/
if halsumc=4 or halsumc=5 then HALUDSEVc=2; /*Past-year - moderate HALUD*/
if halsumc>=6 then HALUDSEVc=3; /*Past-year - severe HALUD*/
Label HALUDSEVc='Past-year HALUD severity grading (withdrawal cluster)-0=no diagnosis, 1=mild
HALUD, 2=moderate HALUD and 3=severe HALUD';

/*Prior-to-past-year*/
if phalsumc<2 then pHALUDSEVc=0; /*Prior-to-past-year - no HALUD*/
if phalsumc=2 or phalsumc=3 then pHALUDSEVc=1; /*Prior-to-past-year - mild HALUD*/
if phalsumc=4 or phalsumc=5 then pHALUDSEVc=2; /*Prior-to-past-year - moderate HALUD*/
if phalsumc>=6 then pHALUDSEVc=3; /*Prior-to-past-year - severe HALUD*/
Label pHALUDSEVc='Prior-to-past-year HALUD severity grading (withdrawal cluster)-0=no
diagnosis, 1=mild HALUD, 2=moderate HALUD and 3=severe HALUD';

/*Lifetime*/
if lhalsumc<2 then lHALUDSEVc=0; /*Lifetime - no HALUD*/
if lhalsumc=2 or lhalsumc=3 then lHALUDSEVc=1; /*Lifetime - mild HALUD*/
if lhalsumc=4 or lhalsumc=5 then lHALUDSEVc=2; /*Lifetime - moderate HALUD*/
if lhalsumc>=6 then lHALUDSEVc=3; /*Lifetime - severe HALUD*/
Label lHALUDSEVc='Lifetime HALUD severity grading (withdrawal cluster)-0=no diagnosis, 1=mild
HALUD, 2=moderate HALUD and 3=severe HALUD';

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SOLUD Criteria and Diagnoses Algorithms (Withdrawal Clustering)

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/*Solvent - Larger/longer*/
if N3CD8Q1C32=1 then SOLA1c=1; else SOLA1c=0; /*Past-year*/
Label SOLA1c='Past-year solvent larger/longer criterion endorsement-0=negative 1=positive';
if N3CD8Q1E32=1 then pSOLA1c=1; else pSOLA1c=0; /*Prior-to-past-year*/
Label pSOLA1c='Prior-to-past-year solvent larger/longer criterion endorsement-0=negative
1=positive';
if N3CD8Q1C32=1 or N3CD8Q1E32=1 then lSOLA1c=1; else lSOLA1c=0; /*Lifetime*/
Label lSOLA1c='Lifetime larger/longer solvent criterion endorsement-0=negative 1=positive';

/*Solvent - Quit or cut down*/
if N3CD8Q1C30=1 or N3CD8Q1C31=1 then SOLA2c=1; else SOLA2c=0; /*Past-year*/
Label SOLA2c='Past-year solvent quit or cut down criterion endorsement-0=negative 1=positive';
if N3CD8Q1E30=1 or N3CD8Q1E31=1 then pSOLA2c=1; else pSOLA2c=0; /*Prior-to-past-year*/
Label pSOLA2c='Prior-to-past-year solvent quit or cut down criterion endorsement-0=negative
1=positive';
if N3CD8Q1C30=1 or N3CD8Q1E30=1 or N3CD8Q1C31=1 or N3CD8Q1E31=1 then lSOLA2c=1; else
lSOLA2c=0; /*Lifetime*/
Label lSOLA2c='Lifetime solvent quit or cut down criterion endorsement-0=negative 1=positive';

/*Solvent - Time spent*/
if N3CD8Q1C33=1 or N3CD8Q1C34=1 then SOLA3c=1; else SOLA3c=0; /*Past-year*/
Label SOLA3c='Past-year solvent time spent criterion endorsement-0=negative 1=positive';
if N3CD8Q1E33=1 or N3CD8Q1E34=1 then pSOLA3c=1; else pSOLA3c=0; /*Prior-to-past-year*/
Label pSOLA3c='Prior-to-past-year solvent time spent criterion endorsement-0=negative
1=positive';
if N3CD8Q1C33=1 or N3CD8Q1E33=1 or N3CD8Q1C34=1 or N3CD8Q1E34=1 then lSOLA3c=1; else
lSOLA3c=0; /*Lifetime*/
Label lSOLA3c='Lifetime solvent time spent criterion endorsement-0=negative 1=positive';

/*Solvent - Craving*/
if N3CD8Q1C39=1 or N3CD8Q1C40=1 then SOLA4c=1; else SOLA4c=0; /*Past-year*/
Label SOLA4c='Past-year solvent craving criterion endorsement-0=negative 1=positive';
if N3CD8Q1E39=1 or N3CD8Q1E40=1 then pSOLA4c=1; else pSOLA4c=0; /*Prior-to-past-year*/
Label pSOLA4c='Prior-to-past-year solvent craving criterion endorsement-0=negative
1=positive';
if N3CD8Q1C39=1 or N3CD8Q1E39=1 or N3CD8Q1C40=1 or N3CD8Q1E40=1 then lSOLA4c=1; else
lSOLA4c=0; /*Lifetime*/
Label lSOLA4c='Lifetime solvent craving criterion endorsement-0=negative 1=positive';

/*Solvent - Role interference*/
if N3CD8Q1C44=1 or N3CD8Q1C45=1 or N3CD8Q1C46=1 then SOLA5c=1; else SOLA5c=0; /*Past-year*/
Label SOLA5c='Past-year solvent role interference criterion endorsement-0=negative
1=positive';
if N3CD8Q1E44=1 or N3CD8Q1E45=1 or N3CD8Q1E46=1 then pSOLA5c=1; else pSOLA5c=0; /*Prior-to-
past-year*/
Label pSOLA5c='Prior-to-past-year solvent role interference criterion endorsement-0=negative
1=positive';
if N3CD8Q1C44=1 or N3CD8Q1E44=1 or N3CD8Q1C45=1 or N3CD8Q1E45=1 or N3CD8Q1C46=1 or
N3CD8Q1E46=1 then lSOLA5c=1; else lSOLA5c=0; /*Lifetime*/
Label lSOLA5c='Lifetime solvent role interference criterion endorsement-0=negative
1=positive';

/*Solvent - Social problems*/
if N3CD8Q1C41=1 or N3CD8Q1C42=1 or N3CD8Q1C43=1 then SOLA6c=1; else SOLA6c=0; /*Past-year*/
Label SOLA6c='Past-year solvent social problems criterion endorsement-0=negative 1=positive';
if N3CD8Q1E41=1 or N3CD8Q1E42=1 or N3CD8Q1E43=1 then pSOLA6c=1; else pSOLA6c=0; /*Prior-to-
past-year*/

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Label pSOLA6c='Prior-to-past-year solvent social problems criterion endorsement-0=negative
1=positive';
if N3CD8Q1C41=1 or N3CD8Q1E41=1 or N3CD8Q1C42=1 or N3CD8Q1E42=1 or N3CD8Q1C43=1 or
N3CD8Q1E43=1 then lSOLA6c=1; else lSOLA6c=0; /*Lifetime*/
Label lSOLA6c='Lifetime solvent social problems criterion endorsement-0=negative 1=positive';

/*Solvent - Give up*/
if N3CD8Q1C35=1 or N3CD8Q1C36=1 then SOLA7c=1; else SOLA7c=0; /*Past-year*/
Label SOLA7c='Past-year solvent give up criterion endorsement-0=negative 1=positive';
if N3CD8Q1E35=1 or N3CD8Q1E36=1 then pSOLA7c=1; else pSOLA7c=0; /*Prior-to-past-year*/
Label pSOLA7c='Prior-to-past-year solvent give up criterion endorsement-0=negative
1=positive';
if N3CD8Q1C35=1 or N3CD8Q1E35=1 or N3CD8Q1C36=1 or N3CD8Q1E36=1 then lSOLA7c=1; else
lSOLA7c=0; /*Lifetime*/
Label lSOLA7c='Lifetime solvent give up criterion endorsement-0=negative 1=positive';

/*Solvent - Hazardous use*/
if N3CD8Q1C47=1 or N3CD8Q1C48=1 then SOLA8c=1; else SOLA8c=0; /*Past-year*/
Label SOLA8c='Past-year solvent hazardous use criterion endorsement-0=negative 1=positive';
if N3CD8Q1E47=1 or N3CD8Q1E48=1 then pSOLA8c=1; else pSOLA8c=0; /*Prior-to-past-year*/
Label pSOLA8c='Prior-to-past-year solvent hazardous use criterion endorsement-0=negative
1=positive';
if N3CD8Q1C47=1 or N3CD8Q1E47=1 or N3CD8Q1C48=1 or N3CD8Q1E48=1 then lSOLA8c=1; else
lSOLA8c=0; /*Lifetime*/
Label lSOLA8c='Lifetime solvent hazardous use criterion endorsement-0=negative 1=positive';

/*Solvent - Continued use despite problems*/
if N3CD8Q1C37=1 or N3CD8Q1C38=1 then SOLA9c=1; else SOLA9c=0; /*Past-year*/
Label SOLA9c='Past-year solvent continued use despite problems criterion endorsement-
0=negative 1=positive';
if N3CD8Q1E37=1 or N3CD8Q1E38=1 then pSOLA9c=1; else pSOLA9c=0; /*Prior-to-past-year*/
Label pSOLA9c='Prior-to-past-year solvent continued use despite problems criterion
endorsement-0=negative 1=positive';
if N3CD8Q1C37=1 or N3CD8Q1E37=1 or N3CD8Q1C38=1 or N3CD8Q1E38=1 then lSOLA9c=1; else
lSOLA9c=0; /*Lifetime*/
Label lSOLA9c='Lifetime solvent continued use despite problems criterion endorsement-
0=negative 1=positive';

/*Solvent - Tolerance*/
if N3CD8Q1C1=1 or N3CD8Q1C2=1 then SOLA10c=1; else SOLA10c=0; /*Past-year*/
Label SOLA10c='Past-year solvent tolerance criterion endorsement-0=negative 1=positive';
if N3CD8Q1E1=1 or N3CD8Q1E2=1 then pSOLA10c=1; else pSOLA10c=0; /*Prior-to-past-year*/
Label pSOLA10c='Prior-to-past-year solvent tolerance criterion endorsement-0=negative
1=positive';
if N3CD8Q1C1=1 or N3CD8Q1E1=1 or N3CD8Q1C2=1 or N3CD8Q1E2=1 then lSOLA10c=1; else lSOLA10c=0;
/*Lifetime*/
Label lSOLA10c='Lifetime solvent tolerance criterion endorsement-0=negative 1=positive';

/*-Past-year (SOLA1c-SOLA10c) and prior-to-past-year (pSOLA1c-pSOLA10c) symptom counts
-Prior-to-past-year symptoms counts include N3CD8Q2A to
denote SOME SOLUD symptoms occurred within same 12-month period
-Lifetime symptom count takes the largest symptom count from either past-year or prior-to-
past-year*/

solsumc=sum(SOLA1c, SOLA2c, SOLA3c, SOLA4c, SOLA5c, SOLA6c, SOLA7c, SOLA8c, SOLA9c, SOLA10c);
/*Past-year*/
Label solsumc='Sum of past-year solvent criteria (withdrawal cluster)';
if N3CD8Q2A=1 THEN psolsumc=sum(pSOLA1c, pSOLA2c, pSOLA3c, solvent, pSOLA5c, pSOLA6c, pSOLA7c,
pSOLA8c, pSOLA9c, pSOLA10c); /*Prior-to-past-year*/

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Label psolsumc='Sum of prior-to-past-year solvent criteria (withdrawal cluster)';
lsolsumc=max(solsumc, psolsumc); /*Lifetime*/
Label lsolsumc='Maximum sum of past-year or prior-to-past-year solvent criteria (withdrawal
cluster)';

*SOLUD diagnoses;
if solsumc=>2 then SOLUDc=1; else SOLUDc=0; /*Past-year*/
Label SOLUDc='Past-year SOLUD diagnosis (withdrawal cluster)-0=negative 1=positive';
if psolsumc=>2 then pSOLUDc=1; else pSOLUDc=0; /*Prior-to-past-year*/
Label pSOLUDc='Prior-to-past-year SOLUD diagnosis (withdrawal cluster)-0=negative 1=positive';
if lsolsumc=>2 then lSOLUDc=1; else lSOLUDc=0; /*Lifetime*/
Label lSOLUDc='Lifetime SOLUD diagnosis (withdrawal cluster)-0=negative 1=positive';

*SOLUD severity;
if solsumc<2 then SOLUDSEVc=0; /*Past-year - no SOLUD*/
if solsumc=2 or solsumc=3 then SOLUDSEVc=1; /*Past-year - mild SOLUD*/
if solsumc=4 or solsumc=5 then SOLUDSEVc=2; /*Past-year - moderate SOLUD*/
if solsumc>=6 then SOLUDSEVc=3; /*Past-year - severe SOLUD*/
Label SOLUDSEVc='Past-year SOLUD severity grading (withdrawal cluster)-0=no diagnosis, 1=mild
SOLUD, 2=moderate SOLUD and 3=severe SOLUD';

if psolsumc<2 then pSOLUDSEVc=0; /*Prior-to-past-year - no SOLUC*/
if psolsumc=2 or psolsumc=3 then pSOLUDSEVc=1; /*Prior-to-past-year - mild SOLUD*/
if psolsumc=4 or psolsumc=5 then pSOLUDSEVc=2; /*Prior-to-past-year - moderate SOLUD*/
if psolsumc>=6 then pSOLUDSEVc=3; /*Prior-to-past-year - severe SOLUD*/
Label pSOLUDSEVc='Prior-to-past-year SOLUD severity grading (withdrawal cluster)-0=no
diagnosis, 1=mild SOLUD, 2=moderate SOLUD and 3=severe SOLUD';

if lsolsumc<2 then lSOLUDSEVc=0; /*Lifetime - no SOLUD*/
if lsolsumc=2 or lsolsumc=3 then lSOLUDSEVc=1; /*Lifetime - mild SOLUD*/
if lsolsumc=4 or lsolsumc=5 then lSOLUDSEVc=2; /*Lifetime - moderate SOLUD*/
if lsolsumc>=6 then lSOLUDSEVc=3; /*Lifetime - severe SOLUD*/
Label lSOLUDSEVc='Lifetime SOLUD severity grading (withdrawal cluster)-0=no diagnosis, 1=mild
SOLUD, 2=moderate SOLUD and 3=severe SOLUD';

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HERUD Criteria and Diagnoses Algorithms (Withdrawal Clustering)

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/*Heroin - Larger/longer*/
if N3CD9Q1C32=1 then HERA1c=1; else HERA1c=0; /*Past-year*/
Label HERA1c='Past-year heroin larger/longer criterion endorsement-0=negative 1=positive';
if N3CD9Q1E32=1 then pHERA1c=1; else pHERA1c=0; /*Prior-to-past-year*/
Label pHERA1c='Prior-to-past-year heroin larger/longer criterion endorsement-0=negative
1=positive';
if N3CD9Q1C32=1 or N3CD9Q1E32=1 then lHERA1c=1; else lHERA1c=0; /*Lifetime*/
Label lHERA1c='Lifetime larger/longer heroin criterion endorsement-0=negative 1=positive';

/*Heroin - Quit or cut down*/
if N3CD9Q1C30=1 or N3CD9Q1C31=1 then HERA2c=1; else HERA2c=0; /*Past-year*/
Label HERA2c='Past-year heroin quit or cut down criterion endorsement-0=negative 1=positive';
if N3CD9Q1E30=1 or N3CD9Q1E31=1 then pHERA2c=1; else pHERA2c=0; /*Prior-to-past-year*/
Label pHERA2c='Prior-to-past-year heroin quit or cut down criterion endorsement-0=negative
1=positive';
if N3CD9Q1C30=1 or N3CD9Q1E30=1 or N3CD9Q1C31=1 or N3CD9Q1E31=1 then lHERA2c=1; else
lHERA2c=0; /*Lifetime*/
Label lHERA2c='Lifetime heroin quit or cut down criterion endorsement-0=negative 1=positive';

/*Heroin - Time spent*/
if N3CD9Q1C33=1 or N3CD9Q1C34=1 then HERA3c=1; else HERA3c=0; /*Past-year*/
Label HERA3c='Past-year heroin time spent criterion endorsement-0=negative 1=positive';
if N3CD9Q1E33=1 or N3CD9Q1E34=1 then pHERA3c=1; else pHERA3c=0; /*Prior-to-past-year*/
Label pHERA3c='Prior-to-past-year heroin time spent criterion endorsement-0=negative
1=positive';
if N3CD9Q1C33=1 or N3CD9Q1E33=1 or N3CD9Q1C34=1 or N3CD9Q1E34=1 then lHERA3c=1; else
lHERA3c=0; /*Lifetime*/
Label lHERA3c='Lifetime heroin time spent criterion endorsement-0=negative 1=positive';

/*Heroin - Craving*/
if N3CD9Q1C39=1 or N3CD9Q1C40=1 then HERA4c=1; else HERA4c=0; /*Past-year*/
Label HERA4c='Past-year heroin craving criterion endorsement-0=negative 1=positive';
if N3CD9Q1E39=1 or N3CD9Q1E40=1 then pHERA4c=1; else pHERA4c=0; /*Prior-to-past-year*/
Label pHERA4c='Prior-to-past-year heroin craving criterion endorsement-0=negative 1=positive';
if N3CD9Q1C39=1 or N3CD9Q1E39=1 or N3CD9Q1C40=1 or N3CD9Q1E40=1 then lHERA4c=1; else
lHERA4c=0; /*Lifetime*/
Label lHERA4c='Lifetime heroin craving criterion endorsement-0=negative 1=positive';

/*Heroin - Role interference*/
if N3CD9Q1C44=1 or N3CD9Q1C45=1 or N3CD9Q1C46=1 then HERA5c=1; else HERA5c=0; /*Past-year*/
Label HERA5c='Past-year heroin role interference criterion endorsement-0=negative 1=positive';
if N3CD9Q1E44=1 or N3CD9Q1E45=1 or N3CD9Q1E46=1 then pHERA5c=1; else pHERA5c=0; /*Prior-to-
past-year*/
Label pHERA5c='Prior-to-past-year heroin role interference criterion endorsement-0=negative
1=positive';
if N3CD9Q1C44=1 or N3CD9Q1E44=1 or N3CD9Q1C45=1 or N3CD9Q1E45=1 or N3CD9Q1C46=1 or
N3CD9Q1E46=1 then lHERA5c=1; else lHERA5c=0; /*Lifetime*/
Label lHERA5c='Lifetime heroin role interference criterion endorsement-0=negative 1=positive';

/*Heroin - Social problems*/
if N3CD9Q1C41=1 or N3CD9Q1C42=1 or N3CD9Q1C43=1 then HERA6c=1; else HERA6c=0; /*Past-year*/
Label HERA6c='Past-year heroin social problems criterion endorsement-0=negative 1=positive';
if N3CD9Q1E41=1 or N3CD9Q1E42=1 or N3CD9Q1E43=1 then pHERA6c=1; else pHERA6c=0; /*Prior-to-
past-year*/
Label pHERA6c='Prior-to-past-year heroin social problems criterion endorsement-0=negative
1=positive';

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if N3CD9Q1C41=1 or N3CD9Q1E41=1 or N3CD9Q1C42=1 or N3CD9Q1E42=1 or N3CD9Q1C43=1 or
N3CD9Q1E43=1 then lHERA6c=1; else lHERA6c=0; /*Lifetime*/
Label lHERA6c='Lifetime heroin social problems criterion endorsement-0=negative 1=positive';

/*Heroin - Give up*/
if N3CD9Q1C35=1 or N3CD9Q1C36=1 then HERA7c=1; else HERA7c=0; /*Past-year*/
Label HERA7c='Past-year heroin give up criterion endorsement-0=negative 1=positive';
if N3CD9Q1E35=1 or N3CD9Q1E36=1 then pHERA7c=1; else pHERA7c=0; /*Prior-to-past-year*/
Label pHERA7c='Prior-to-past-year heroin give up criterion endorsement-0=negative 1=positive';
if N3CD9Q1C35=1 or N3CD9Q1E35=1 or N3CD9Q1C36=1 or N3CD9Q1E36=1 then lHERA7c=1; else
lHERA7c=0; /*Lifetime*/
Label lHERA7c='Lifetime heroin give up criterion endorsement-0=negative 1=positive';

/*Heroin - Hazardous use*/
if N3CD9Q1C47=1 or N3CD9Q1C48=1 then HERA8c=1; else HERA8c=0; /*Past-year*/
Label HERA8c='Past-year heroin hazardous use criterion endorsement-0=negative 1=positive';
if N3CD9Q1E47=1 or N3CD9Q1E48=1 then pHERA8c=1; else pHERA8c=0; /*Prior-to-past-year*/
Label pHERA8c='Prior-to-past-year heroin hazardous use criterion endorsement-0=negative
1=positive';
if N3CD9Q1C47=1 or N3CD9Q1E47=1 or N3CD9Q1C48=1 or N3CD9Q1E48=1 then lHERA8c=1; else
lHERA8c=0; /*Lifetime*/
Label lHERA8c='Lifetime heroin hazardous use criterion endorsement-0=negative 1=positive';

/*Heroin - Continued use despite problems*/
if N3CD9Q1C37=1 or N3CD9Q1C38=1 then HERA9c=1; else HERA9c=0; /*Past-year*/
Label HERA9c='Past-year heroin continued use despite problems criterion endorsement-0=negative
1=positive';
if N3CD9Q1E37=1 or N3CD9Q1E38=1 then pHERA9c=1; else pHERA9c=0; /*Prior-to-past-year*/
Label pHERA9c='Prior-to-past-year heroin continued use despite problems criterion endorsement-
0=negative 1=positive';
if N3CD9Q1C37=1 or N3CD9Q1E37=1 or N3CD9Q1C38=1 or N3CD9Q1E38=1 then lHERA9c=1; else
lHERA9c=0; /*Lifetime*/
Label lHERA9c='Lifetime heroin continued use despite problems criterion endorsement-0=negative
1=positive';

/*Heroin - Tolerance*/
if N3CD9Q1C1=1 or N3CD9Q1C2=1 then HERA10c=1; else HERA10c=0; /*Past-year*/
Label HERA10c='Past-year heroin tolerance criterion endorsement-0=negative 1=positive';
if N3CD9Q1E1=1 or N3CD9Q1E2=1 then pHERA10c=1; else pHERA10c=0; /*Prior-to-past-year*/
Label pHERA10c='Prior-to-past-year heroin tolerance criterion endorsement-0=negative
1=positive';
if N3CD9Q1C1=1 or N3CD9Q1E1=1 or N3CD9Q1C2=1 or N3CD9Q1E2=1 then lHERA10c=1; else lHERA10c=0;
/*Lifetime*/
Label lHERA10c='Lifetime heroin tolerance criterion endorsement-0=negative 1=positive';

/*Heroin - Withdrawal - Explicit withdrawal clustering*/
*Heroin - Withdrawal subalgorithm - sum of withdrawal symptoms;
herwithc=sum(N3CD9Q1C5=1, N3CD9Q1C7=1, N3CD9Q1C12=1, N3CD9Q1C9=1, (N3CD9Q1C16=1 or
N3CD9Q1C26=1), N3CD9Q1C28=1, N3CD9Q1C8=1, N3CD9Q1C13=1, N3CD9Q1C20=1); /*past-year withdrawal
symptom count*/
Label herwithc='Sum of past-year heroin withdrawal symptoms (withdrawal cluster)';
pherwithc=sum(N3CD9Q1E5=1, N3CD9Q1E7=1, N3CD9Q1E12=1, N3CD9Q1E9=1, (N3CD9Q1E16=1 or
N3CD9Q1E26=1), N3CD9Q1E28=1, N3CD9Q1E8=1, N3CD9Q1E13=1, N3CD9Q1E20=1); /*prior-to-past-year
withdrawal symptom count*/
Label pherwithc='Sum of prior-to-past-year heroin withdrawal symptoms (withdrawal cluster)';

*Heroin - Withdrawal - using subalgorithm;
if (herwithc=>3 and N3CD9Q1C281=1) or N3CD9Q1C29=1 then HERA11c=1; else HERA11c=0; /*Past-
year*/

```

```

Label HERA11c='Past-year heroin withdrawal criterion endorsement (withdrawal cluster)-
0=negative 1=positive';
if (pherwithc=>3 and N3CD9Q1E282=1) or N3CD9Q1E29=1 then pHERA11c=1; else pHERA11c=0; /*Prior-
to-past-year*/
Label pHERA11c='Prior-to-past-year heroin withdrawal criterion endorsement (withdrawal
cluster)-0=negative 1=positive';
if ((herwithc=>3 and N3CD9Q1C281=1) or N3CD9Q1C29=1) or ((pherwithc=>3 and N3CD9Q1E282=1) or
N3CD9Q1E29=1) then lHERA11c=1; else lHERA11c=0; /*Lifetime*/
Label lHERA11c='Lifetime heroin withdrawal criterion endorsement (withdrawal cluster)-
0=negative 1=positive';

/*-Past-year (HERA1c-HERA11c) and prior-to-past-year (pHERA1c-pHERA11c) symptom counts
-Prior-to-past-year symptoms counts include N3CD9Q2A to
denote SOME HERUD symptoms occurred within same 12-month period
-Lifetime symptom count takes the largest symptom count from either past-year or prior-to-
past-year*/

hersumc=sum(HERA1c, HERA2c, HERA3c, HERA4c, HERA5c, HERA6c, HERA7c, HERA8c, HERA9c, HERA10c,
HERA11c); /*Past-year*/
Label hersumc='Sum of past-year heroin criteria (withdrawal cluster)';
if N3CD9Q2A=1 THEN phersumc=sum(pHERA1c, pHERA2c, pHERA3c, pHERA4c, pHERA5c, pHERA6c, pHERA7c,
pHERA8c, pHERA9c, pHERA10c, pHERA11c);
Label phersumc='Sum of prior-to-past-year heroin criteria (withdrawal cluster)';
lhersumc=max(hersumc, phersumc);
Label lhersumc='Maximum sum of past-year or prior-to-past-year heroin criteria (withdrawal
cluster)';

*HERUD diagnoses;
if hersumc=>2 then HERUDc=1; else HERUDc=0; /*Past-year*/
Label HERUDc='Past-year HERUD diagnosis (withdrawal cluster)-0=negative 1=positive';
if phersumc=>2 then pHERUDc=1; else pHERUDc=0; /*Prior-to-past-year*/
Label pHERUDc='Prior-to-past-year HERUD diagnosis (withdrawal cluster)-0=negative 1=positive';
if lhersumc=>2 then lHERUDc=1; else lHERUDc=0; /*Lifetime*/
Label lHERUDc='Lifetime HERUD diagnosis (withdrawal cluster)-0=negative 1=positive';

*HERUD severity;
/*Past-year*/
if hersumc<2 then HERUDSEVc=0; /*Past-year - no HERUD*/
if hersumc=2 or hersumc=3 then HERUDSEVc=1; /*Past-year - mild HERUD*/
if hersumc=4 or hersumc=5 then HERUDSEVc=2; /*Past-year - moderate HERUD*/
if hersumc>=6 then HERUDSEVc=3; /*Past-year - severe HERUD*/
Label HERUDSEVc='Past-year HERUD severity grading (withdrawal cluster)-0=no diagnosis, 1=mild
HERUD, 2=moderate HERUD and 3=severe HERUD';

/*Prior-to-past-year*/
if phersumc<2 then pHERUDSEVc=0; /*Prior-to-past-year - no HERUD*/
if phersumc=2 or phersumc=3 then pHERUDSEVc=1; /*Prior-to-past-year - mild HERUD*/
if phersumc=4 or phersumc=5 then pHERUDSEVc=2; /*Prior-to-past-year - moderate HERUD*/
if phersumc>=6 then pHERUDSEVc=3; /*Prior-to-past-year - severe HERUD*/
Label pHERUDSEVc='Prior-to-past-year HERUD severity grading (withdrawal cluster)-0=no
diagnosis, 1=mild HERUD, 2=moderate HERUD and 3=severe HERUD';

/*Lifetime*/
if lhersumc<2 then lHERUDSEVc=0; /*Lifetime - no HERUD*/
if lhersumc=2 or lhersumc=3 then lHERUDSEVc=1; /*Lifetime - mild HERUD*/
if lhersumc=4 or lhersumc=5 then lHERUDSEVc=2; /*Lifetime - moderate HERUD*/
if lhersumc>=6 then lHERUDSEVc=3; /*Lifetime - severe HERUD*/
Label lHERUDSEVc='Lifetime HERUD severity grading (withdrawal cluster)-0=no diagnosis, 1=mild
HERUD, 2=moderate HERUD and 3=severe HERUD';

```

OTHUD Criteria and Diagnoses Algorithms (Withdrawal Clustering)

```

/*Other/Unknown - Larger/longer*/
if N3CD10Q1C32=1 then OTHA1c=1; else OTHA1c=0; /*Past-year*/
Label OTHA1c='Past-year other/unknown larger/longer criterion endorsement-0=negative
1=positive';
if N3CD10Q1E32=1 then pOTHA1c=1; else pOTHA1c=0; /*Prior-to-past-year*/
Label pOTHA1c='Prior-to-past-year other/unknown larger/longer criterion endorsement-0=negative
1=positive';
if N3CD10Q1C32=1 or N3CD10Q1E32=1 then lOTHA1c=1; else lOTHA1c=0; /*Lifetime*/
Label lOTHA1c='Lifetime larger/longer other/unknown criterion endorsement-0=negative
1=positive';

/*Other/Unknown - Quit or cut down*/
if N3CD10Q1C30=1 or N3CD10Q1C31=1 then OTHA2c=1; else OTHA2c=0; /*Past-year*/
Label OTHA2c='Past-year other/unknown quit or cut down criterion endorsement-0=negative
1=positive';
if N3CD10Q1E30=1 or N3CD10Q1E31=1 then pOTHA2c=1; else pOTHA2c=0; /*Prior-to-past-year*/
Label pOTHA2c='Prior-to-past-year other/unknown quit or cut down criterion endorsement-
0=negative 1=positive';
if N3CD10Q1C30=1 or N3CD10Q1E30=1 or N3CD10Q1C31=1 or N3CD10Q1E31=1 then lOTHA2c=1; else
lOTHA2c=0; /*Lifetime*/
Label lOTHA2c='Lifetime other/unknown quit or cut down criterion endorsement-0=negative
1=positive';

/*Other/Unknown - Time spent*/
if N3CD10Q1C33=1 or N3CD10Q1C34=1 then OTHA3c=1; else OTHA3c=0; /*Past-year*/
Label OTHA3c='Past-year other/unknown time spent criterion endorsement-0=negative 1=positive';
if N3CD10Q1E33=1 or N3CD10Q1E34=1 then pOTHA3c=1; else pOTHA3c=0; /*Prior-to-past-year*/
Label pOTHA3c='Prior-to-past-year other/unknown time spent criterion endorsement-0=negative
1=positive';
if N3CD10Q1C33=1 or N3CD10Q1E33=1 or N3CD10Q1C34=1 or N3CD10Q1E34=1 then lOTHA3c=1; else
lOTHA3c=0; /*Lifetime*/
Label lOTHA3c='Lifetime other/unknown time spent criterion endorsement-0=negative 1=positive';

/*Other/Unknown - Craving*/
if N3CD10Q1C39=1 or N3CD10Q1C40=1 then OTHA4c=1; else OTHA4c=0; /*Past-year*/
Label OTHA4c='Past-year other/unknown craving criterion endorsement-0=negative 1=positive';
if N3CD10Q1E39=1 or N3CD10Q1E40=1 then pOTHA4c=1; else pOTHA4c=0; /*Prior-to-past-year*/
Label pOTHA4c='Prior-to-past-year other/unknown craving criterion endorsement-0=negative
1=positive';
if N3CD10Q1C39=1 or N3CD10Q1E39=1 or N3CD10Q1C40=1 or N3CD10Q1E40=1 then lOTHA4c=1; else
lOTHA4c=0; /*Lifetime*/
Label lOTHA4c='Lifetime other/unknown craving criterion endorsement-0=negative 1=positive';

/*Other/Unknown - Role interference*/
if N3CD10Q1C44=1 or N3CD10Q1C45=1 or N3CD10Q1C46=1 then OTHA5c=1; else OTHA5c=0; /*Past-year*/
Label OTHA5c='Past-year other/unknown role interference criterion endorsement-0=negative
1=positive';
if N3CD10Q1E44=1 or N3CD10Q1E45=1 or N3CD10Q1E46=1 then pOTHA5c=1; else pOTHA5c=0; /*Prior-to-
past-year*/
Label pOTHA5c='Prior-to-past-year other/unknown role interference criterion endorsement-
0=negative 1=positive';
if N3CD10Q1C44=1 or N3CD10Q1E44=1 or N3CD10Q1C45=1 or N3CD10Q1E45=1 or N3CD10Q1C46=1 or
N3CD10Q1E46=1 then lOTHA5c=1; else lOTHA5c=0; /*Lifetime*/
Label lOTHA5c='Lifetime other/unknown role interference criterion endorsement-0=negative
1=positive';

/*Other/Unknown - Social problems*/

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if N3CD10Q1C41=1 or N3CD10Q1C42=1 or N3CD10Q1C43=1 then OTHA6c=1; else OTHA6c=0; /*Past-year*/
Label OTHA6c='Past-year other/unknown social problems criterion endorsement-0=negative
1=positive';
if N3CD10Q1E41=1 or N3CD10Q1E42=1 or N3CD10Q1E43=1 then pOTHA6c=1; else pOTHA6c=0; /*Prior-to-
past-year*/
Label pOTHA6c='Prior-to-past-year other/unknown social problems criterion endorsement-
0=negative 1=positive';
if N3CD10Q1C41=1 or N3CD10Q1E41=1 or N3CD10Q1C42=1 or N3CD10Q1E42=1 or N3CD10Q1C43=1 or
N3CD10Q1E43=1 then lOTHA6c=1; else lOTHA6c=0; /*Lifetime*/
Label lOTHA6c='Lifetime other/unknown social problems criterion endorsement-0=negative
1=positive';

/*Other/Unknown - Give up*/
if N3CD10Q1C35=1 or N3CD10Q1C36=1 then OTHA7c=1; else OTHA7c=0; /*Past-year*/
Label OTHA7c='Past-year other/unknown give up criterion endorsement-0=negative 1=positive';
if N3CD10Q1E35=1 or N3CD10Q1E36=1 then pOTHA7c=1; else pOTHA7c=0; /*Prior-to-past-year*/
Label pOTHA7c='Prior-to-past-year other/unknown give up criterion endorsement-0=negative
1=positive';
if N3CD10Q1C35=1 or N3CD10Q1E35=1 or N3CD10Q1C36=1 or N3CD10Q1E36=1 then lOTHA7c=1; else
lOTHA7c=0; /*Lifetime*/
Label lOTHA7c='Lifetime other/unknown give up criterion endorsement-0=negative 1=positive';

/*Other/Unknown - Hazardous use*/
if N3CD10Q1C47=1 or N3CD10Q1C48=1 then OTHA8c=1; else OTHA8c=0; /*Past-year*/
Label OTHA8c='Past-year other/unknown hazardous use criterion endorsement-0=negative
1=positive';
if N3CD10Q1E47=1 or N3CD10Q1E48=1 then pOTHA8c=1; else pOTHA8c=0; /*Prior-to-past-year*/
Label pOTHA8c='Prior-to-past-year other/unknown hazardous use criterion endorsement-0=negative
1=positive';
if N3CD10Q1C47=1 or N3CD10Q1E47=1 or N3CD10Q1C48=1 or N3CD10Q1E48=1 then lOTHA8c=1; else
lOTHA8c=0; /*Lifetime*/
Label lOTHA8c='Lifetime other/unknown hazardous use criterion endorsement-0=negative
1=positive';

/*Other/Unknown - Continued use despite problems*/
if N3CD10Q1C37=1 or N3CD10Q1C38=1 then OTHA9c=1; else OTHA9c=0; /*Past-year*/
Label OTHA9c='Past-year other/unknown continued use despite problems criterion endorsement-
0=negative 1=positive';
if N3CD10Q1E37=1 or N3CD10Q1E38=1 then pOTHA9c=1; else pOTHA9c=0; /*Prior-to-past-year*/
Label pOTHA9c='Prior-to-past-year other/unknown continued use despite problems criterion
endorsement-0=negative 1=positive';
if N3CD10Q1C37=1 or N3CD10Q1E37=1 or N3CD10Q1C38=1 or N3CD10Q1E38=1 then lOTHA9c=1; else
lOTHA9c=0; /*Lifetime*/
Label lOTHA9c='Lifetime other/unknown continued use despite problems criterion endorsement-
0=negative 1=positive';

/*Other/Unknown - Tolerance*/
if N3CD10Q1C1=1 or N3CD10Q1C2=1 then OTHA10c=1; else OTHA10c=0; /*Past-year*/
Label OTHA10c='Past-year other/unknown tolerance criterion endorsement-0=negative 1=positive';
if N3CD10Q1E1=1 or N3CD10Q1E2=1 then pOTHA10c=1; else pOTHA10c=0; /*Prior-to-past-year*/
Label pOTHA10c='Prior-to-past-year other/unknown tolerance criterion endorsement-0=negative
1=positive';
if N3CD10Q1C1=1 or N3CD10Q1E1=1 or N3CD10Q1C2=1 or N3CD10Q1E2=1 then lOTHA10c=1; else
lOTHA10c=0; /*Lifetime*/
Label lOTHA10c='Lifetime other/unknown tolerance criterion endorsement-0=negative 1=positive';

/*Other/Unknown - Withdrawal - Explicit withdrawal clustering*/
/*Withdrawal subalgorithm - sum of each substance-specific withdrawal symptom set (4 classes
total)*/

```

```

othwithsedc=sum((N3CD10Q1C6=1 or N3CD10Q1C26=1), N3CD10Q1C7=1, N3CD10Q1C11=1, N3CD10Q1C14=1,
N3CD10Q1C18=1, N3CD10Q1C19=1, N3CD10Q1C20=1, N3CD10Q1C21=1); /*past-year sedative-wtihdrawal
symptom count */
Label othwithsedc='Sum of past-year other/unknown sedative-specific withdrawal symptoms
(withdrawal cluster)';
pothwithsedc=sum((N3CD10Q1E6=1 or N3CD10Q1E26=1), N3CD10Q1E7=1, N3CD10Q1E11=1, N3CD10Q1E14=1,
N3CD10Q1E18=1, N3CD10Q1E19=1, N3CD10Q1E20=1, N3CD10Q1E21=1);
/*prior-to-past-year sedative-wtihdrawal symptom count*/
Label pothwithsedc='Sum of past-year other/unknown sedative-specific withdrawal symptoms
(withdrawal cluster)';

othwithopc=sum(N3CD10Q1C5=1, N3CD10Q1C7=1, N3CD10Q1C12=1, N3CD10Q1C9=1, (N3CD10Q1C16=1 or
N3CD10Q1C26=1), N3CD10Q1C28=1, N3CD10Q1C8=1, N3CD10Q1C13=1, N3CD10Q1C20=1);
/*past-year opioid-wtihdrawal symptom count*/
Label othwithopc='Sum of past-year other/unknown opioid-specific withdrawal symptoms
(withdrawal cluster)';
pothwithopc=sum(N3CD10Q1E5=1, N3CD10Q1E7=1, N3CD10Q1E12=1, N3CD10Q1E9=1, (N3CD10Q1E16=1 or
N3CD10Q1E26=1), N3CD10Q1E28=1, N3CD10Q1E8=1, N3CD10Q1E13=1, N3CD10Q1E20=1);
/*prior-to-past-year opioid-wtihdrawal symptom count*/
Label pothwithopc='Sum of past-year other/unknown opioid-specific withdrawal symptoms
(withdrawal cluster)';

othwithmac=sum((N3CD10Q1C22=1 or N3CD10Q1C24=1), N3CD10Q1C11=1, (N3CD10Q1C20=1 or
N3CD10Q1C17=1), N3CD10Q1C23=1, N3CD10Q1C14=1, N3CD10Q1C5=1, (N3CD10Q1C13=1 or N3CD10Q1C19=1 or
N3CD10Q1C25=1 or N3CD10Q1C26=1 or N3CD10Q1C27=1 or N3CD10Q1C28=1));
/*past-year cannabis-wtihdrawal symptom count*/
Label othwithmac='Sum of past-year other/unknown cannabis-specific withdrawal symptoms
(withdrawal cluster)';
pothwithmac=sum((N3CD10Q1E22=1 or N3CD10Q1E24=1), N3CD10Q1E11=1, (N3CD10Q1E20=1 or
N3CD10Q1E17=1), N3CD10Q1E23=1, N3CD10Q1E14=1, N3CD10Q1E5=1, (N3CD10Q1E13=1 or N3CD10Q1E19=1 or
N3CD10Q1E25=1 or N3CD10Q1E26=1 or N3CD10Q1E27=1 or N3CD10Q1E28=1));
/*prior-to-past-year cannabis-wtihdrawal symptom count*/
Label pothwithmac='Sum of past-year other/unknown cannabis-specific withdrawal symptoms
(withdrawal cluster)';

if N3CD10Q1C5=1 then othwithstic=sum(N3CD10Q1C4=1, N3CD10Q1C17=1, (N3CD10Q1C20=1 or
N3CD10Q1C3=1), N3CD10Q1C10=1, (N3CD10Q1C15=1 or N3CD10Q1C14=1));
/*past-year stimulant-wtihdrawal symptom count*/
Label othwithstic='Sum of past-year other/unknown stimulant-specific withdrawal symptoms
(withdrawal cluster)';
if N3CD10Q1E5=1 then pothwithstic=sum(N3CD10Q1E4=1, N3CD10Q1E17=1, (N3CD10Q1E20=1 or
N3CD10Q1E3=1), N3CD10Q1E10=1, (N3CD10Q1E15=1 or N3CD10Q1E14=1));
/*prior-to-past-year stimulant-wtihdrawal symptom count*/
Label pothwithstic='Sum of past-year other/unknown stimulant-specific withdrawal symptoms
(withdrawal cluster)';

/*Withdrawal - using each substance-specific subalgorithm*/
if (othwithsed=>2 or othwithop=>3 or othwithma=>3 or othwithsti=>2 and N3CD10Q1C281=1) or
N3CD10Q1C29=1 then OTHA11=1; else OTHA11=0; /*Past-year*/
Label OTHA11='Past-year other/unknown withdrawal criterion endorsement (withdrawal cluster)-
0=negative 1=positive';
if (pothwithsed=>2 or pothwithop=>3 or pothwithma=>3 or pothwithsti=>2 and N3CD10Q1E282=1) or
N3CD10Q1E29=1 then pOTHA11=1; else pOTHA11=0; /*Prior-to-past-year*/
Label pOTHA11='Prior-to-past-year other/unknown withdrawal criterion endorsement (withdrawal
cluster)-0=negative 1=positive';
if (othwithsed=>2 or othwithop=>3 or othwithma=>3 or othwithsti=>2 and N3CD10Q1C281=1) or
N3CD10Q1C29=1 or (pothwithsed=>2 or pothwithop=>3 or pothwithma=>3 or pothwithsti=>2 and
N3CD10Q1E282=1) or N3CD10Q1E29=1 then lOTHA11=1; else lOTHA11=0; /*Lifetime*/

```

```

Label lOTHA11='Lifetime other/unknown withdrawal criterion endorsement (withdrawal cluster)-
0=negative 1=positive';

/*-Past-year (OTHA1c-OTHA11c) and prior-to-past-year (pOTHA1c-pOTHA11c) symptom counts
-Prior-to-past-year symptoms counts include N3CD10Q2A to
denote SOME OTHUD symptoms occurred within same 12-month period
-Lifetime symptom count takes the largest symptom count from either past-year or prior-to-
past-year*/

othsumc=sum(OTHA1c, OTHA2c, OTHA3c, OTHA4c, OTHA5c, OTHA6c, OTHA7c, OTHA8c, OTHA9c, OTHA10c,
OTHA11c); /*Past-year*/
Label othsumc='Sum of past-year other/unknown criteria (withdrawal cluster)';
if N3CD10Q2A=1 THEN pothsumc=sum(pOTHA1c, pOTHA2c, pOTHA3c, pOTHA4c, pOTHA5c, pOTHA6c,
pOTHA7c, pOTHA8c, pOTHA9c, pOTHA10c, pOTHA11c); /*Prior-to-past-year*/
Label pothsumc='Sum of prior-to-past-year other/unknown criteria (withdrawal cluster)';
lothsumc=max(othsumc, pothsumc); /*Lifetime*/
Label lothsumc='Maximum sum of past-year or prior-to-past-year other/unknown criteria
(withdrawal cluster)';

*OTHUD diagnoses;
if othsumc=>2 then OTHUDc=1; else OTHUDc=0; /*Past-year*/
Label OTHUDc='Past-year OTHUD diagnosis (withdrawal cluster)-0=negative 1=positive';
if pothsumc=>2 then pOTHUDc=1; else pOTHUDc=0; /*Prior-to-past-year*/
Label pOTHUDc='Prior-to-past-year OTHUD diagnosis (withdrawal cluster)-0=negative 1=positive';
if lothsumc=>2 then lOTHUDc=1; else lOTHUDc=0; /*Lifetime*/
Label lOTHUDc='Lifetime OTHUD diagnosis (withdrawal cluster)-0=negative 1=positive';

*OTHUD severity;
if othsumc<2 then OTHUDSEVc=0; /*Past-year - no OTHUD*/
if othsumc=2 or othsumc=3 then OTHUDSEVc=1; /*Past-year - mild OTHUD*/
if othsumc=4 or othsumc=5 then OTHUDSEVc=2; /*Past-year - moderate OTHUD*/
if othsumc>=6 then OTHUDSEVc=3; /*Past-year - severe OTHUD*/
Label OTHUDSEVc='Past-year OTHUD severity grading (withdrawal cluster)-0=no OTHUD diagnosis,
1=mild OTHUD, 2=moderate OTHUD and 3=severe OTHUD';

if pothsumc<2 then pOTHUDSEVc=0; /*Prior-to-past-year - no OTHUD*/
if pothsumc=2 or pothsumc=3 then pOTHUDSEVc=1; /*Prior-to-past-year - mild OTHUD*/
if pothsumc=4 or pothsumc=5 then pOTHUDSEVc=2; /*Prior-to-past-year - moderate OTHUD*/
if pothsumc>=6 then pOTHUDSEVc=3; /*Prior-to-past-year - severe OTHUD*/
Label pOTHUDSEVc='Prior-to-past-year OTHUD severity grading (withdrawal cluster)-0=no OTHUD
diagnosis, 1=mild OTHUD, 2=moderate OTHUD and 3=severe OTHUD';

if lothsumc<2 then lOTHUDSEVc=0; /*Lifetime - no OTHUD*/
if lothsumc=2 or lothsumc=3 then lOTHUDSEVc=1; /*Lifetime - mild OTHUD*/
if lothsumc=4 or lothsumc=5 then lOTHUDSEVc=2; /*Lifetime - moderate OTHUD*/
if lothsumc>=6 then lOTHUDSEVc=3; /*Lifetime - severe OTHUD*/
Label lOTHUDSEVc='Lifetime OTHUD severity grading (withdrawal cluster)-0=no OTHUD diagnosis,
1=mild OTHUD, 2=moderate OTHUD and 3=severe OTHUD';

```

DUD Criteria and Diagnoses Missing-Tolerant Algorithms Description

The SAS code contained herein derives past-year, prior-to-past-year and lifetime DSM–5 DUD diagnoses based on interview items in the AUDADIS–5. In the previous scoring algorithms, missing data is set to 0. The current scoring algorithms accommodate limited missing data in the classification of DUD diagnostic categories. Specifically, if enough items are completed such that the presence or absence of a diagnoses can be firmly established, the diagnosis is coded as either present or absent. In conditions with uncertainty, they are coded as missing (e.g., positive endorsement of one symptom with two missing symptoms would be coded as missing due to uncertainty of a positive endorsement of AUD). Also in cases where a severity score can be unambiguously assigned it is coded as indicated, but when there is uncertainty severity is coding as missing (e.g., positive endorsement of two symptoms with two missing symptoms would be coded as missing severity due to uncertainty of mild or moderate AUD severity grading). Because of this, it is possible to have definitive diagnoses with missing severity. Missing responses are coded with “.” Users are advised that estimates based on this SAS code will not exactly match published NESARC-III data for **severity scores** in the presence of missing data; however presence of diagnoses should match published NESARC-III data.

The names of the variables used in this SAS code have the same structure detailed in the “DUD Algorithms Description” section (pg. 16). The suffix “m” is appended to each variable to indicate the variable’s use in the present code. Additionally, this code includes new count variables (e.g., [sedsumm_miss](#) and [psedsumm_miss](#)) which count the number of missing symptoms for past-year and prior-to-past-year DUDs. These variables are used to account for missing data in DUD diagnoses and severity gradings. Individuals with missing symptom endorsements who positively endorsed two to five symptoms were not given a severity grading at certain levels of missing data. Thus, as previously mentioned, “missing” in DUD severity grading variables does not necessarily constitute a negative DUD diagnosis. See code for more details.

SEDUD Criteria and Diagnoses Algorithms (Missing-Tolerant)

```

/*Sedative - Larger/longer - Missing-tolerant*/
SEDA1m=.; if N3CD1Q1C32=1 then SEDA1m=1; if N3CD1Q1C32=2 then SEDA1m=0; /*Past-year*/
Label SEDA1m='Past-year sedative larger/longer criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pSEDA1m=.; if N3CD1Q1E32=1 then pSEDA1m=1; if N3CD1Q1E32=2 then pSEDA1m=0; /*Prior-to-past-
year*/
Label pSEDA1m='Prior-to-past-year sedative larger/longer criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lSEDA1m=.; if N3CD1Q1C32=1 or N3CD1Q1E32=1 then lSEDA1m=1; if N3CD1Q1C32=2 and N3CD1Q1E32=2
then lSEDA1m=0; /*Lifetime*/
Label lSEDA1m='Lifetime sedative larger/longer criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Sedative - Quit or cut down - Missing-tolerant*/
SEDA2m=.; if N3CD1Q1C30=1 or N3CD1Q1C31=1 then SEDA2m=1; if N3CD1Q1C30=2 and N3CD1Q1C31=2 then
SEDA2m=0; /*Past-year*/
Label SEDA2m='Past-year sedative quit or cut down criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pSEDA2m=.; if N3CD1Q1E30=1 or N3CD1Q1E31=1 then pSEDA2m=1; if N3CD1Q1E30=2 and N3CD1Q1E31=2
then pSEDA2m=0; /*Prior-to-past-year*/
Label pSEDA2m='Prior-to-past-year sedative quit or cut down criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lSEDA2m=.; if N3CD1Q1C30=1 or N3CD1Q1E30=1 or N3CD1Q1C31=1 or N3CD1Q1E31=1 then lSEDA2m=1;
if N3CD1Q1C30=2 and N3CD1Q1E30=2 and N3CD1Q1C31=2 and N3CD1Q1E31=2 then lSEDA2m=0;
/*Lifetime*/
Label lSEDA2m='Lifetime sedative quit or cut down criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Sedative - Time spent - Missing-tolerant*/
SEDA3m=.; if N3CD1Q1C33=1 or N3CD1Q1C34=1 then SEDA3m=1; if N3CD1Q1C33=2 and N3CD1Q1C34=2 then
SEDA3m=0; /*Past-year*/
Label SEDA3m='Past-year sedative time spent criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pSEDA3m=.; if N3CD1Q1E33=1 or N3CD1Q1E34=1 then pSEDA3m=1; if N3CD1Q1E33=2 and N3CD1Q1E34=2
then pSEDA3m=0; /*Prior-to-past-year*/
Label pSEDA3m='Prior-to-past-year sedative time spent criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lSEDA3m=.; if N3CD1Q1C33=1 or N3CD1Q1E33=1 or N3CD1Q1C34=1 or N3CD1Q1E34=1 then lSEDA3m=1;
if N3CD1Q1C33=2 and N3CD1Q1E33=2 and N3CD1Q1C34=2 and N3CD1Q1E34=2 then lSEDA3m=0;
/*Lifetime*/
Label lSEDA3m='Lifetime sedative time spent criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Sedative - Craving - Missing-tolerant*/
SEDA4m=.; if N3CD1Q1C39=1 or N3CD1Q1C40=1 then SEDA4m=1; if N3CD1Q1C39=2 and N3CD1Q1C40=2 then
SEDA4m=0; /*Past-year*/
Label SEDA4m='Past-year sedative craving criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pSEDA4m=.; if N3CD1Q1E39=1 or N3CD1Q1E40=1 then pSEDA4m=1; if N3CD1Q1E39=2 and N3CD1Q1E40=2
then pSEDA4m=0; /*Prior-to-past-year*/
Label pSEDA4m='Prior-to-past-year sedative craving criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
lSEDA4m=.; if N3CD1Q1C39=1 or N3CD1Q1E39=1 or N3CD1Q1C40=1 or N3CD1Q1E40=1 then lSEDA4m=1;
if N3CD1Q1C39=2 and N3CD1Q1E39=2 and N3CD1Q1C40=2 and N3CD1Q1E40=2 then lSEDA4m=0;
/*Lifetime*/
Label lSEDA4m='Lifetime sedative craving criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';

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/*Sedative - Role interference - Missing-tolerant*/
SEDA5m=.; if N3CD1Q1C44=1 or N3CD1Q1C45=1 or N3CD1Q1C46=1 then SEDA5m=1; if N3CD1Q1C44=2 and
N3CD1Q1C45=2 and N3CD1Q1C46=2 then SEDA5m=0; /*Past-year*/
Label SEDA5m='Past-year sedative role interference criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pSEDA5m=.; if N3CD1Q1E44=1 or N3CD1Q1E45=1 or N3CD1Q1E46=1 then pSEDA5m=1; if N3CD1Q1E44=2 and
N3CD1Q1E45=2 and N3CD1Q1E46=2 then pSEDA5m=0; /*Prior-to-past-year*/
Label pSEDA5m='Prior-to-past-year sedative role interference criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lSEDA5m=.; if N3CD1Q1C44=1 or N3CD1Q1E44=1 or N3CD1Q1C45=1 or N3CD1Q1E45=1 or N3CD1Q1C46=1 or
N3CD1Q1E46=1 then lSEDA5m=1;
if N3CD1Q1C44=2 and N3CD1Q1E44=2 and N3CD1Q1C45=2 and N3CD1Q1E45=2 and N3CD1Q1C46=2 and
N3CD1Q1E46=2 then lSEDA5m=0; /*Lifetime*/
Label lSEDA5m='Lifetime sedative role interference criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Sedative - Social problems - Missing-tolerant*/
SEDA6m=.; if N3CD1Q1C41=1 or N3CD1Q1C42=1 or N3CD1Q1C43=1 then SEDA6m=1; if N3CD1Q1C41=2 and
N3CD1Q1C42=2 and N3CD1Q1C43=2 then SEDA6m=0; /*Past-year*/
Label SEDA6m='Past-year sedative social problems criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pSEDA6m=.; if N3CD1Q1E41=1 or N3CD1Q1E42=1 or N3CD1Q1E43=1 then pSEDA6m=1; if N3CD1Q1E41=2 and
N3CD1Q1E42=2 and N3CD1Q1E43=2 then pSEDA6m=0; /*Prior-to-past-year*/
Label pSEDA6m='Prior-to-past-year sedative social problems criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lSEDA6m=.; if N3CD1Q1C41=1 or N3CD1Q1E41=1 or N3CD1Q1C42=1 or N3CD1Q1E42=1 or N3CD1Q1C43=1 or
N3CD1Q1E43=1 then lSEDA6m=1;
if N3CD1Q1C41=2 and N3CD1Q1E41=2 and N3CD1Q1C42=2 and N3CD1Q1E42=2 and N3CD1Q1C43=2 and
N3CD1Q1E43=2 then lSEDA6m=0; /*Lifetime*/
Label lSEDA6m='Lifetime sedative social problems criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Sedative - Give up - Missing-tolerant*/
SEDA7m=.; if N3CD1Q1C35=1 or N3CD1Q1C36=1 then SEDA7m=1; if N3CD1Q1C35=2 and N3CD1Q1C36=2 then
SEDA7m=0; /*Past-year*/
Label SEDA7m='Past-year sedative give up criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pSEDA7m=.; if N3CD1Q1E35=1 or N3CD1Q1E36=1 then pSEDA7m=1; if N3CD1Q1E35=2 and N3CD1Q1E36=2
then pSEDA7m=0; /*Prior-to-past-year*/
Label pSEDA7m='Prior-to-past-year sedative give up criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
lSEDA7m=.; if N3CD1Q1C35=1 or N3CD1Q1E35=1 or N3CD1Q1C36=1 or N3CD1Q1E36=1 then lSEDA7m=1;
if N3CD1Q1C35=2 and N3CD1Q1E35=2 and N3CD1Q1C36=2 and N3CD1Q1E36=2 then lSEDA7m=0;
/*Lifetime*/
Label lSEDA7m='Lifetime sedative give up criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';

/*Sedative - Hazardous use - Missing-tolerant*/
SEDA8m=.; if N3CD1Q1C47=1 or N3CD1Q1C48=1 then SEDA8m=1; if N3CD1Q1C47=2 and N3CD1Q1C48=2 then
SEDA8m=0; /*Past-year*/
Label SEDA8m='Past-year sedative hazardous use criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pSEDA8m=.; if N3CD1Q1E47=1 or N3CD1Q1E48=1 then pSEDA8m=1; if N3CD1Q1E47=2 and N3CD1Q1E48=2
then pSEDA8m=0; /*Prior-to-past-year*/
Label pSEDA8m='Prior-to-past-year sedative hazardous use criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lSEDA8m=.; if N3CD1Q1C47=1 or N3CD1Q1E47=1 or N3CD1Q1C48=1 or N3CD1Q1E48=1 then lSEDA8m=1;

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if N3CD1Q1C47=2 and N3CD1Q1E47=2 and N3CD1Q1C48=2 and N3CD1Q1E48=2 then lSEDA8m=0;
/*Lifetime*/
Label lSEDA8m='Lifetime sedative hazardous use criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Sedative - Continued use despite problems - Missing-tolerant*/
SEDA9m=.; if N3CD1Q1C37=1 or N3CD1Q1C38=1 then SEDA9m=1; if N3CD1Q1C37=2 and N3CD1Q1C38=2 then
SEDA9m=0; /*Past-year*/
Label SEDA9m='Past-year sedative continued use despite problems criterion endorsement
(missing-tolerant)-.=missing, 0=negative, 1=positive';
pSEDA9m=.; if N3CD1Q1E37=1 or N3CD1Q1E38=1 then pSEDA9m=1; if N3CD1Q1E37=2 and N3CD1Q1E38=2
then pSEDA9m=0; /*Prior-to-past-year*/
Label pSEDA9m='Prior-to-past-year sedative continued use despite problems criterion
endorsement (missing-tolerant)-.=missing, 0=negative, 1=positive';
lSEDA9m=.; if N3CD1Q1C37=1 or N3CD1Q1E37=1 or N3CD1Q1C38=1 or N3CD1Q1E38=1 then lSEDA9m=1;
if N3CD1Q1C37=2 and N3CD1Q1E37=2 and N3CD1Q1C38=2 and N3CD1Q1E38=2 then lSEDA9m=0;
/*Lifetime*/
Label lSEDA9m='Lifetime sedative continued use despite problems criterion endorsement
(missing-tolerant)-.=missing, 0=negative, 1=positive';

/*Sedative - Tolerance - Missing-tolerant*/
SEDA10m=.; if N3CD1Q1C1=1 or N3CD1Q1C2=1 then SEDA10m=1; if N3CD1Q1C1=2 and N3CD1Q1C2=2 then
SEDA10m=0; /*Past-year*/
Label SEDA10m='Past-year sedative tolerance criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pSEDA10m=.; if N3CD1Q1E1=1 or N3CD1Q1E2=1 then pSEDA10m=1; if N3CD1Q1E1=2 and N3CD1Q1E2=2 then
pSEDA10m=0; /*Prior-to-past-year*/
Label pSEDA10m='Prior-to-past-year sedative tolerance criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lSEDA10m=.;if N3CD1Q1C1=1 or N3CD1Q1E1=1 or N3CD1Q1C2=1 or N3CD1Q1E2=1 then lSEDA10m=1;
if N3CD1Q1C1=2 and N3CD1Q1E1=2 and N3CD1Q1C2=2 and N3CD1Q1E2=2 then lSEDA10m=0; /*Lifetime*/
Label lSEDA10m='Lifetime sedative tolerance criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Sedative - Withdrawal - Missing-tolerant*/
*Sedative - Withdrawal subalgorithm - sum of withdrawal symptoms;
sedwithm=.; sedwithm=sum((N3CD1Q1C6=1 or N3CD1Q1C26=1), N3CD1Q1C7=1, N3CD1Q1C11=1,
N3CD1Q1C14=1, N3CD1Q1C18=1, N3CD1Q1C19=1, N3CD1Q1C20=1, N3CD1Q1C21=1);
if N3CD1Q1C6=2 and N3CD1Q1C26=2 and N3CD1Q1C7=2 and N3CD1Q1C11=2 and N3CD1Q1C14=2 and
N3CD1Q1C18=2 and N3CD1Q1C19=2 and N3CD1Q1C20=2 and N3CD1Q1C21=2 then sedwithm=0; /*past-year
withdrawal symptom count*/
Label sedwithm='Sum of past-year sedative withdrawal symptoms (Missing-Tolerant)';
psedwithm=.; psedwithm=sum((N3CD1Q1E6=1 or N3CD1Q1E26=1), N3CD1Q1E7=1, N3CD1Q1E11=1,
N3CD1Q1E14=1, N3CD1Q1E18=1, N3CD1Q1E19=1, N3CD1Q1E20=1, N3CD1Q1E21=1);
if N3CD1Q1E6=2 and N3CD1Q1E26=2 and N3CD1Q1E7=2 and N3CD1Q1E11=2 and N3CD1Q1E14=2 and
N3CD1Q1E18=2 and N3CD1Q1E19=2 and N3CD1Q1E20=2 and N3CD1Q1E21=2 then psedwithm=0; /*prior-to-
past-year withdrawal symptom count*/
Label psedwithm='Sum of prior-to-past-year sedative withdrawal symptoms (Missing-Tolerant)';

*Sedative - Withdrawal - using subalgorithm;
SEDA11m=.; if sedwithm=>2 or N3CD1Q1C29=1 then SEDA11m=1; if sedwithm<2 and sedwithm>. and
N3CD1Q1C29=2 then SEDA11m=0; /*Past-year*/
Label SEDA11m='Past-year sedative withdrawal criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pSEDA11m=.; if psedwithm=>2 or N3CD1Q1E29=1 then pSEDA11m=1; if psedwithm<2 and psedwithm>.
and N3CD1Q1E29=2 then pSEDA11m=0; /*Prior-to-past-year*/
Label pSEDA11m='Prior-to-past-year sedative withdrawal criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lSEDA11m=.; if sedwithm=>2 or N3CD1Q1C29=1 or psedwithm=>2 or N3CD1Q1E29=1 then lSEDA11m=1;

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if sedwithm<2 and sedwithm>. and N3CD1Q1C29=2 and psedwithm<2 and psedwithm>. and N3CD1Q1E29=2
then lSEDA11m=0; /*Lifetime*/
Label lSEDA11m='Lifetime sedative withdrawal criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*-Past-year (SEDA1m-SEDA11m) and prior-to-past-year (pSEDA1m-pSEDA11m) symptom counts
-Prior-to-past-year symptoms counts include N3CD1Q2A to
denote SOME SEDUD symptoms occurred within same 12-month period
-Lifetime symptom count takes the largest symptom count from either past-year or prior-to-
past-year;*/

sedsumm=sum(SEDA1m, SEDA2m, SEDA3m, SEDA4m, SEDA5m, SEDA6m, SEDA7m, SEDA8m, SEDA9m, SEDA10m,
SEDA11m); /*Past-year*/
Label sedsumm='Sum of past-year sedative criteria (Missing-Tolerant)';
if N3CD1Q2A=1 THEN psedsumm=sum(pSEDA1m, pSEDA2m, pSEDA3m, pSEDA4m, pSEDA5m, pSEDA6m, pSEDA7m,
pSEDA8m, pSEDA9m, pSEDA10m, pSEDA11m); /*Prior-to-past-year*/
Label psedsumm='Sum of prior-to-past-year sedative criteria (Missing-Tolerant)';
lседsumm=max(sedsumm, psedsumm); /*Lifetime*/
Label lседsumm='Maximum sum of past-year or prior-to-past-year sedative criteria (Missing-
Tolerant)';

/*Number of missing criteria*/
sedsumm_miss=nmiss(SEDA1m, SEDA2m, SEDA3m, SEDA4m, SEDA5m, SEDA6m, SEDA7m, SEDA8m, SEDA9m,
SEDA10m, SEDA11m); /*Past-year*/
Label sedsumm_miss='Sum of past-year missing sedative criteria (Missing-Tolerant)';
psedsumm_miss=nmiss(pSEDA1m, pSEDA2m, pSEDA3m, pSEDA4m, pSEDA5m, pSEDA6m, pSEDA7m, pSEDA8m,
pSEDA9m, pSEDA10m, pSEDA11m); /*Prior-to-past-year*/
Label psedsumm_miss='Sum of prior-to-past-year sedative criteria (Missing-Tolerant)';

*SEDUD diagnoses - Missing tolerant;
SEDUDm=.; if sedsumm=>2 then SEDUDm=1; if sedsumm<2 and sedsumm>. then SEDUDm=0; /*Past-year*/
Label SEDUDm='Past-year SEDUD diagnosis (missing-tolerant)-.=missing, 0=negative, 1=positive';
pSEDUDm=.; if psedsumm=>2 then pSEDUDm=1; if psedsumm<2 and psedsumm>. then pSEDUDm=0;
/*Prior-to-past-year*/
Label pSEDUDm='Prior-to-past-year SEDUD diagnosis (missing-tolerant)-.=missing, 0=negative,
1=positive';
lSEDUDm=.; if lседsumm=>2 then lSEDUDm=1; if lседsumm<2 and lседsumm>. then lSEDUDm=0;
/*Lifetime*/
Label lSEDUDm='Lifetime SEDUD diagnosis (missing-tolerant)-.=missing, 0=negative, 1=positive';

*SEDUD severity - Missing tolerant;
if (sedsumm=2 and sedsumm_miss>=2) or (sedsumm=3 and sedsumm_miss>=1) or (sedsumm=4 and
sedsumm_miss>=2)
or (sedsumm=5 and sedsumm_miss>=1) then SEDUDSEVm=.; /*Past-year - missing SEDUD severity*/
if (sedsumm=0 and sedsumm_miss<2) or (sedsumm=1 and sedsumm_miss=0) then SEDUDSEVm=0; /*Past-
year - no SEDUD diagnosis*/
if (sedsumm=2 and sedsumm_miss<2) or (sedsumm=3 and sedsumm_miss=0) then SEDUDSEVm=1; /*Past-
year - mild SEDUD*/
if (sedsumm=4 and sedsumm_miss<2) or (sedsumm=5 and sedsumm_miss=0) then SEDUDSEVm=2; /*Past-
year - moderate SEDUD*/
if sedsumm>=6 then SEDUDSEVm=3; /*Past-year - severe SEDUD*/
Label SEDUDSEVm='Past-year SEDUD severity grading (missing-tolerant)-.=missing, 0=no SEDUD
diagnosis, 1=mild SEDUD, 2=moderate SEDUD and 3=severe SEDUD';

if (psedsumm=2 and psedsumm_miss>=2) or (psedsumm=3 and psedsumm_miss>=1) or (psedsumm=4 and
psedsumm_miss>=2)
or (psedsumm=5 and psedsumm_miss>=1) then pSEDUDSEVm=.; /*Prior-to-past-year - missing SEDUD
severity*/

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if (psedsumm=0 and psedsumm_miss<2) or (psedsumm=1 and psedsumm_miss=0) then pSEDUDSEVm=0;
/*Prior-to-past-year - no SEDUD diagnosis*/
if (psedsumm=2 and psedsumm_miss<2) or (psedsumm=3 and psedsumm_miss=0) then pSEDUDSEVm=1;
/*Prior-to-past-year - mild SEDUD*/
if (psedsumm=4 and psedsumm_miss<2) or (psedsumm=5 and psedsumm_miss=0) then pSEDUDSEVm=2;
/*Prior-to-past-year - moderate SEDUD*/
if psedsumm>=6 then pSEDUDSEVm=3; /*Prior-to-past-year - severe AUD*/
Label pSEDUDSEVm='Prior-to-past-year SEDUD severity grading (missing-tolerant)-.=missing, 0=no
SEDUD diagnosis, 1=mild SEDUD, 2=moderate SEDUD and 3=severe SEDUD';

if SEDUDSEVm=. or pSEDUDSEVm=. then lSEDUDSEVm=.; /*Lifetime - missing SEDUD severity*/
if max(SEDUDSEVm, pSEDUDSEVm)=0 and (SEDUDSEVm^=. and pSEDUDSEVm^=.) then lSEDUDSEVm=0;
/*Lifetime - no SEDUD diagnosis*/
if max(SEDUDSEVm, pSEDUDSEVm)=1 then lSEDUDSEVm=1; /*Lifetime - mild SEDUD*/
if max(SEDUDSEVm, pSEDUDSEVm)=2 then lSEDUDSEVm=2; /*Lifetime - moderate SEDUD*/
if max(SEDUDSEVm, pSEDUDSEVm)=3 then lSEDUDSEVm=3; /*Lifetime - severe SEDUD*/
Label lSEDUDSEVm='Lifetime SEDUD severity grading (missing-tolerant)-.=missing, 0=no SEDUD
diagnosis, 1=mild SEDUD, 2=moderate SEDUD and 3=severe SEDUD';

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OPUD Criteria and Diagnoses Algorithms (Missing-Tolerant)

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/*Opioid - Larger/longer - Missing-tolerant*/
OPA1m=.; if N3CD2Q1C32=1 then OPA1m=1; if N3CD2Q1C32=2 then OPA1m=0; /*Past-year*/
Label OPA1m='Past-year opioid larger/longer criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pOPA1m=.; if N3CD2Q1E32=1 then pOPA1m=1; if N3CD2Q1E32=2 then pOPA1m=0; /*Prior-to-past-year*/
Label pOPA1m='Prior-to-past-year opioid larger/longer criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
LOPA1m=.; if N3CD2Q1C32=1 or N3CD2Q1E32=1 then LOPA1m=1; if N3CD2Q1C32=2 and N3CD2Q1E32=2 then
LOPA1m=0; /*Lifetime*/
Label LOPA1m='Lifetime opioid larger/longer criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Opioid - Quit or cut down - Missing-tolerant*/
OPA2m=.; if N3CD2Q1C30=1 or N3CD2Q1C31=1 then OPA2m=1; if N3CD2Q1C30=2 and N3CD2Q1C31=2 then
OPA2m=0; /*Past-year*/
Label OPA2m='Past-year opioid quit or cut down criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pOPA2m=.; if N3CD2Q1E30=1 or N3CD2Q1E31=1 then pOPA2m=1; if N3CD2Q1E30=2 and N3CD2Q1E31=2 then
pOPA2m=0; /*Prior-to-past-year*/
Label pOPA2m='Prior-to-past-year opioid quit or cut down criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
LOPA2m=.; if N3CD2Q1C30=1 or N3CD2Q1E30=1 or N3CD2Q1C31=1 or N3CD2Q1E31=1 then LOPA2m=1;
if N3CD2Q1C30=2 and N3CD2Q1E30=2 and N3CD2Q1C31=2 and N3CD2Q1E31=2 then LOPA2m=0; /*Lifetime*/
Label LOPA2m='Lifetime opioid quit or cut down criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Opioid - Time spent - Missing-tolerant*/
OPA3m=.; if N3CD2Q1C33=1 or N3CD2Q1C34=1 then OPA3m=1; if N3CD2Q1C33=2 and N3CD2Q1C34=2 then
OPA3m=0; /*Past-year*/
Label OPA3m='Past-year opioid time spent criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pOPA3m=.; if N3CD2Q1E33=1 or N3CD2Q1E34=1 then pOPA3m=1; if N3CD2Q1E33=2 and N3CD2Q1E34=2 then
pOPA3m=0; /*Prior-to-past-year*/
Label pOPA3m='Prior-to-past-year opioid time spent criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
LOPA3m=.; if N3CD2Q1C33=1 or N3CD2Q1E33=1 or N3CD2Q1C34=1 or N3CD2Q1E34=1 then LOPA3m=1;
if N3CD2Q1C33=2 and N3CD2Q1E33=2 and N3CD2Q1C34=2 and N3CD2Q1E34=2 then LOPA3m=0; /*Lifetime*/
Label LOPA3m='Lifetime opioid time spent criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';

/*Opioid - Craving - Missing-tolerant*/
OPA4m=.; if N3CD2Q1C39=1 or N3CD2Q1C40=1 then OPA4m=1; if N3CD2Q1C39=2 and N3CD2Q1C40=2 then
OPA4m=0; /*Past-year*/
Label OPA4m='Past-year opioid craving criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pOPA4m=.; if N3CD2Q1E39=1 or N3CD2Q1E40=1 then pOPA4m=1; if N3CD2Q1E39=2 and N3CD2Q1E40=2 then
pOPA4m=0; /*Prior-to-past-year*/
Label pOPA4m='Prior-to-past-year opioid craving criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
LOPA4m=.; if N3CD2Q1C39=1 or N3CD2Q1E39=1 or N3CD2Q1C40=1 or N3CD2Q1E40=1 then LOPA4m=1;
if N3CD2Q1C39=2 and N3CD2Q1E39=2 and N3CD2Q1C40=2 and N3CD2Q1E40=2 then LOPA4m=0; /*Lifetime*/
Label LOPA4m='Lifetime opioid craving criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';

/*Opioid - Role interference - Missing-tolerant*/
OPA5m=.; if N3CD2Q1C44=1 or N3CD2Q1C45=1 or N3CD2Q1C46=1 then OPA5m=1; if N3CD2Q1C44=2 and
N3CD2Q1C45=2 and N3CD2Q1C46=2 then OPA5m=0; /*Past-year*/

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Label OPA5m='Past-year opioid role interference criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pOPA5m=.; if N3CD2Q1E44=1 or N3CD2Q1E45=1 or N3CD2Q1E46=1 then pOPA5m=1; if N3CD2Q1E44=2 and
N3CD2Q1E45=2 and N3CD2Q1E46=2 then pOPA5m=0; /*Prior-to-past-year*/
Label pOPA5m='Prior-to-past-year opioid role interference criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
LOPA5m=.; if N3CD2Q1C44=1 or N3CD2Q1E44=1 or N3CD2Q1C45=1 or N3CD2Q1E45=1 or N3CD2Q1C46=1 or
N3CD2Q1E46=1 then LOPA5m=1;
if N3CD2Q1C44=2 and N3CD2Q1E44=2 and N3CD2Q1C45=2 and N3CD2Q1E45=2 and N3CD2Q1C46=2 and
N3CD2Q1E46=2 then LOPA5m=0; /*Lifetime*/
Label LOPA5m='Lifetime opioid role interference criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Opioid - Social problems - Missing-tolerant*/
OPA6m=.; if N3CD2Q1C41=1 or N3CD2Q1C42=1 or N3CD2Q1C43=1 then OPA6m=1; if N3CD2Q1C41=2 and
N3CD2Q1C42=2 and N3CD2Q1C43=2 then OPA6m=0; /*Past-year*/
Label OPA6m='Past-year opioid social problems criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pOPA6m=.; if N3CD2Q1E41=1 or N3CD2Q1E42=1 or N3CD2Q1E43=1 then pOPA6m=1; if N3CD2Q1E41=2 and
N3CD2Q1E42=2 and N3CD2Q1E43=2 then pOPA6m=0; /*Prior-to-past-year*/
Label pOPA6m='Prior-to-past-year opioid social problems criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
LOPA6m=.; if N3CD2Q1C41=1 or N3CD2Q1E41=1 or N3CD2Q1C42=1 or N3CD2Q1E42=1 or N3CD2Q1C43=1 or
N3CD2Q1E43=1 then LOPA6m=1;
if N3CD2Q1C41=2 and N3CD2Q1E41=2 and N3CD2Q1C42=2 and N3CD2Q1E42=2 and N3CD2Q1C43=2 and
N3CD2Q1E43=2 then LOPA6m=0; /*Lifetime*/
Label LOPA6m='Lifetime opioid social problems criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Opioid - Give up - Missing-tolerant*/
OPA7m=.; if N3CD2Q1C35=1 or N3CD2Q1C36=1 then OPA7m=1; if N3CD2Q1C35=2 and N3CD2Q1C36=2 then
OPA7m=0; /*Past-year*/
Label OPA7m='Past-year opioid give up criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pOPA7m=.; if N3CD2Q1E35=1 or N3CD2Q1E36=1 then pOPA7m=1; if N3CD2Q1E35=2 and N3CD2Q1E36=2 then
pOPA7m=0; /*Prior-to-past-year*/
Label pOPA7m='Prior-to-past-year opioid give up criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
LOPA7m=.; if N3CD2Q1C35=1 or N3CD2Q1E35=1 or N3CD2Q1C36=1 or N3CD2Q1E36=1 then LOPA7m=1;
if N3CD2Q1C35=2 and N3CD2Q1E35=2 and N3CD2Q1C36=2 and N3CD2Q1E36=2 then LOPA7m=0; /*Lifetime*/
Label LOPA7m='Lifetime opioid give up criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';

/*Opioid - Hazardous use - Missing-tolerant*/
OPA8m=.; if N3CD2Q1C47=1 or N3CD2Q1C48=1 then OPA8m=1; if N3CD2Q1C47=2 and N3CD2Q1C48=2 then
OPA8m=0; /*Past-year*/
Label OPA8m='Past-year opioid hazardous use criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pOPA8m=.; if N3CD2Q1E47=1 or N3CD2Q1E48=1 then pOPA8m=1; if N3CD2Q1E47=2 and N3CD2Q1E48=2 then
pOPA8m=0; /*Prior-to-past-year*/
Label pOPA8m='Prior-to-past-year opioid hazardous use criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
LOPA8m=.; if N3CD2Q1C47=1 or N3CD2Q1E47=1 or N3CD2Q1C48=1 or N3CD2Q1E48=1 then LOPA8m=1;
if N3CD2Q1C47=2 and N3CD2Q1E47=2 and N3CD2Q1C48=2 and N3CD2Q1E48=2 then LOPA8m=0; /*Lifetime*/
Label LOPA8m='Lifetime opioid hazardous use criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Opioid - Continued use despite problems - Missing-tolerant*/

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OPA9m=.; if N3CD2Q1C37=1 or N3CD2Q1C38=1 then OPA9m=1; if N3CD2Q1C37=2 and N3CD2Q1C38=2 then
OPA9m=0; /*Past-year*/
Label OPA9m='Past-year opioid continued use despite problems criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
pOPA9m=.; if N3CD2Q1E37=1 or N3CD2Q1E38=1 then pOPA9m=1; if N3CD2Q1E37=2 and N3CD2Q1E38=2 then
pOPA9m=0; /*Prior-to-past-year*/
Label pOPA9m='Prior-to-past-year opioid continued use despite problems criterion endorsement
(missing-tolerant)-.=missing, 0=negative, 1=positive';
LOPA9m=.; if N3CD2Q1C37=1 or N3CD2Q1E37=1 or N3CD2Q1C38=1 or N3CD2Q1E38=1 then LOPA9m=1;
if N3CD2Q1C37=2 and N3CD2Q1E37=2 and N3CD2Q1C38=2 and N3CD2Q1E38=2 then LOPA9m=0; /*Lifetime*/
Label LOPA9m='Lifetime opioid continued use despite problems criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';

/*Opioid - Tolerance - Missing-tolerant*/
OPA10m=.; if N3CD2Q1C1=1 or N3CD2Q1C2=1 then OPA10m=1; if N3CD2Q1C1=2 and N3CD2Q1C2=2 then
OPA10m=0; /*Past-year*/
Label OPA10m='Past-year opioid tolerance criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pOPA10m=.; if N3CD2Q1E1=1 or N3CD2Q1E2=1 then pOPA10m=1; if N3CD2Q1E1=2 and N3CD2Q1E2=2 then
pOPA10m=0; /*Prior-to-past-year*/
Label pOPA10m='Prior-to-past-year opioid tolerance criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
LOPA10m=.; if N3CD2Q1C1=1 or N3CD2Q1E1=1 or N3CD2Q1C2=1 or N3CD2Q1E2=1 then LOPA10m=1;
if N3CD2Q1C1=2 and N3CD2Q1E1=2 and N3CD2Q1C2=2 and N3CD2Q1E2=2 then LOPA10m=0; /*Lifetime*/
Label LOPA10m='Lifetime opioid tolerance criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';

/*Opioid - Withdrawal - Missing-tolerant*/
*Opioid - Withdrawal subalgorithm - sum of withdrawal symptoms;
opwithm=.; opwithm=sum(N3CD2Q1C5=1, N3CD2Q1C7=1, N3CD2Q1C12=1, N3CD2Q1C9=1, (N3CD2Q1C16=1 or
N3CD2Q1C26=1), N3CD2Q1C28=1, N3CD2Q1C8=1, N3CD2Q1C13=1, N3CD2Q1C20=1);
if N3CD2Q1C5=2 and N3CD2Q1C7=2 and N3CD2Q1C12=2 and N3CD2Q1C9=2 and N3CD2Q1C16=2 and
N3CD2Q1C26=2 and N3CD2Q1C28=2 and N3CD2Q1C8=2 and N3CD2Q1C13=2 and N3CD2Q1C20=2 then
opwithm=0; /*past-year withdrawal symptom count*/
Label opwithm='Sum of past-year opioid withdrawal symptoms (Missing-Tolerant)';
popwithm=.; popwithm=sum(N3CD2Q1E5=1, N3CD2Q1E7=1, N3CD2Q1E12=1, N3CD2Q1E9=1, (N3CD2Q1E16=1 or
N3CD2Q1E26=1), N3CD2Q1E28=1, N3CD2Q1E8=1, N3CD2Q1E13=1, N3CD2Q1E20=1);
if N3CD2Q1E5=2 and N3CD2Q1E7=2 and N3CD2Q1E12=2 and N3CD2Q1E9=2 and N3CD2Q1E16=2 and
N3CD2Q1E26=2 and N3CD2Q1E28=2 and N3CD2Q1E8=2 and N3CD2Q1E13=2 and N3CD2Q1E20=2 then
popwithm=0; /*prior-to-past-year withdrawal symptom count*/
Label popwithm='Sum of prior-to-past-year opioid withdrawal symptoms (Missing-Tolerant)';

*Opioid - Withdrawal - using subalgorithm;
OPA11m=.; if opwithm=>3 or N3CD2Q1C29=1 then OPA11m=1; if opwithm<3 and opwithm>. and
N3CD2Q1C29=2 then OPA11m=0; /*Past-year*/
Label OPA11m='Past-year opioid withdrawal criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pOPA11m=.; if popwithm=>3 or N3CD2Q1E29=1 then pOPA11m=1; if popwithm<3 and popwithm>. and
N3CD2Q1E29=2 then pOPA11m=0; /*Prior-to-past-year*/
Label pOPA11m='Prior-to-past-year opioid withdrawal criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
LOPA11m=.; if opwithm=>3 or N3CD2Q1C29=1 or popwithm=>3 or N3CD2Q1E29=1 then LOPA11m=1;
if opwithm>3 and opwithm>. and N3CD2Q1C29=2 and popwithm<3 and popwithm>. and N3CD2Q1E29=2
then LOPA11m=0; /*Lifetime*/
Label LOPA11m='Lifetime opioid withdrawal criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
/*-Past-year (OPAlm-OPA11m) and prior-to-past-year (pOPAlm-pOPA11m) symptom counts
-Prior-to-past-year symptoms counts include N3CD2Q2A to
denote SOME OPUD symptoms occurred within same 12-month period

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-Lifetime symptom count takes the largest symptom count from either past-year or prior-to-
past-year*/

opsumm=sum(OPA1m, OPA2m, OPA3m, OPA4m, OPA5m, OPA6m, OPA7m, OPA8m, OPA9m, OPA10m, OPA11m);
/*Past-year*/
Label opsumm='Sum of past-year opioid criteria (Missing-Tolerant)';
if N3CD2Q2A=1 THEN popsumm=sum(pOPA1m, pOPA2m, pOPA3m, pOPA4m, pOPA5m, pOPA6m, pOPA7m, pOPA8m,
pOPA9m, pOPA10m, pOPA11m); /*Prior-to-past-year*/
Label popsumm='Sum of prior-to-past-year opioid criteria (Missing-Tolerant)';
lopsumm=max(opsumm, popsumm); /*Lifetime*/
Label lopsumm='Maximum sum of past-year or prior-to-past-year opioid criteria (Missing-
Tolerant)';

/*Number of missing criteria*/
opsumm_miss=nmiss(OPA1m, OPA2m, OPA3m, OPA4m, OPA5m, OPA6m, OPA7m, OPA8m, OPA9m, OPA10m,
OPA11m); /*Past-year*/
Label opsumm_miss='Sum of past-year missing opioid criteria (Missing-Tolerant)';
popsumm_miss=nmiss(pOPA1m, pOPA2m, pOPA3m, pOPA4m, pOPA5m, pOPA6m, pOPA7m, pOPA8m, pOPA9m,
pOPA10m, pOPA11m); /*Prior-to-past-year*/
Label popsumm_miss='Sum of prior-to-past-year opioid criteria (Missing-Tolerant)';

*OPUD diagnoses - Missing tolerant;
OPUDm=.; if opsumm=>2 then OPUDm=1; if opsumm<2 and opsumm>. then OPUDm=0; /*Past-year*/
Label OPUDm='Past-year OPUD diagnosis (missing-tolerant)-.=missing, 0=negative, 1=positive';
pOPUDm=.; if popsumm=>2 then pOPUDm=1; if popsumm<2 and popsumm>. then pOPUDm=0; /*Prior-to-
past-year*/
Label pOPUDm='Prior-to-past-year OPUD diagnosis (missing-tolerant)-.=missing, 0=negative,
1=positive';
lOPUDm=.; if lopsumm=>2 then lOPUDm=1; if lopsumm<2 and lopsumm>. then lOPUDm=0; /*Lifetime*/
Label lOPUDm='Lifetime OPUD diagnosis (missing-tolerant)-.=missing, 0=negative, 1=positive';

*OPUD severity - Missing tolerant;
if (opsumm=2 and opsumm_miss>=2) or (opsumm=3 and opsumm_miss>=1) or (opsumm=4 and
opsumm_miss>=2)
or (opsumm=5 and opsumm_miss>=1) then OPUDSEVm=.; /*Past-year - missing OPUD severity*/
if (opsumm=0 and opsumm_miss<2) or (opsumm=1 and opsumm_miss=0) then OPUDSEVm=0; /*Past-year -
no OPUD diagnosis*/
if (opsumm=2 and opsumm_miss<2) or (opsumm=3 and opsumm_miss=0) then OPUDSEVm=1; /*Past-year -
mild OPUD*/
if (opsumm=4 and opsumm_miss<2) or (opsumm=5 and opsumm_miss=0) then OPUDSEVm=2; /*Past-year -
moderate OPUD*/
if opsumm>=6 then OPUDSEVm=3; /*Past-year - severe OPUD*/
Label OPUDSEVm='Past-year OPUD severity grading (missing-tolerant)-.=missing, 0=no OPUD
diagnosis, 1=mild OPUD, 2=moderate OPUD and 3=severe OPUD';

if (popsumm=2 and popsumm_miss>=2) or (popsumm=3 and popsumm_miss>=1) or (popsumm=4 and
popsumm_miss>=2)
or (popsumm=5 and popsumm_miss>=1) then pOPUDSEVm=.; /*Prior-to-past-year - missing OPUD
severity*/
if (popsumm=0 and popsumm_miss<2) or (popsumm=1 and popsumm_miss=0) then pOPUDSEVm=0; /*Prior-
to-past-year - no OPUD diagnosis*/
if (popsumm=2 and popsumm_miss<2) or (popsumm=3 and popsumm_miss=0) then pOPUDSEVm=1; /*Prior-
to-past-year - mild OPUD*/
if (popsumm=4 and popsumm_miss<2) or (popsumm=5 and popsumm_miss=0) then pOPUDSEVm=2; /*Prior-
to-past-year - moderate OPUD*/
if popsumm>=6 then pOPUDSEVm=3; /*Prior-to-past-year - severe AUD*/
Label pOPUDSEVm='Prior-to-past-year OPUD severity grading (missing-tolerant)-.=missing, 0=no
OPUD diagnosis, 1=mild OPUD, 2=moderate OPUD and 3=severe OPUD';

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if OPUDSEVm=. or pOPUDSEVm=. then lOPUDSEVm=.; /*Lifetime - missing OPUD severity*/
if max(OPUDSEVm, pOPUDSEVm)=0 and (OPUDSEVm^=. and pOPUDSEVm^=.) then lOPUDSEVm=0; /*Lifetime
- no OPUD diagnosis*/
if max(OPUDSEVm, pOPUDSEVm)=1 then lOPUDSEVm=1; /*Lifetime - mild OPUD*/
if max(OPUDSEVm, pOPUDSEVm)=2 then lOPUDSEVm=2; /*Lifetime - moderate OPUD*/
if max(OPUDSEVm, pOPUDSEVm)=3 then lOPUDSEVm=3; /*Lifetime - severe OPUD*/
Label lOPUDSEVm='Lifetime OPUD severity grading (missing-tolerant)-.=missing, 0=no OPUD
diagnosis, 1=mild OPUD, 2=moderate OPUD and 3=severe OPUD';
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MAUD Criteria and Diagnoses Algorithms (Missing-Tolerant)

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/*Cannabis - Larger/longer - Missing-tolerant*/
MAA1m=.; if N3CD3Q1C32=1 then MAA1m=1; if N3CD3Q1C32=2 then MAA1m=0; /*Past-year*/
Label MAA1m='Past-year cannabis larger/longer criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pMAA1m=.; if N3CD3Q1E32=1 then pMAA1m=1; if N3CD3Q1E32=2 then pMAA1m=0; /*Prior-to-past-year*/
Label pMAA1m='Prior-to-past-year cannabis larger/longer criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lMAA1m=.; if N3CD3Q1C32=1 or N3CD3Q1E32=1 then lMAA1m=1; if N3CD3Q1C32=2 and N3CD3Q1E32=2 then
lMAA1m=0; /*Lifetime*/
Label lMAA1m='Lifetime cannabis larger/longer criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Cannabis - Quit or cut down - Missing-tolerant*/
MAA2m=.; if N3CD3Q1C30=1 or N3CD3Q1C31=1 then MAA2m=1; if N3CD3Q1C30=2 and N3CD3Q1C31=2 then
MAA2m=0; /*Past-year*/
Label MAA2m='Past-year cannabis quit or cut down criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pMAA2m=.; if N3CD3Q1E30=1 or N3CD3Q1E31=1 then pMAA2m=1; if N3CD3Q1E30=2 and N3CD3Q1E31=2 then
pMAA2m=0; /*Prior-to-past-year*/
Label pMAA2m='Prior-to-past-year cannabis quit or cut down criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lMAA2m=.; if N3CD3Q1C30=1 or N3CD3Q1E30=1 or N3CD3Q1C31=1 or N3CD3Q1E31=1 then lMAA2m=1;
if N3CD3Q1C30=2 and N3CD3Q1E30=2 and N3CD3Q1C31=2 and N3CD3Q1E31=2 then lMAA2m=0; /*Lifetime*/
Label lMAA2m='Lifetime cannabis quit or cut down criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Cannabis - Time spent - Missing-tolerant*/
MAA3m=.; if N3CD3Q1C33=1 or N3CD3Q1C34=1 then MAA3m=1; if N3CD3Q1C33=2 and N3CD3Q1C34=2 then
MAA3m=0; /*Past-year*/
Label MAA3m='Past-year cannabis time spent criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pMAA3m=.; if N3CD3Q1E33=1 or N3CD3Q1E34=1 then pMAA3m=1; if N3CD3Q1E33=2 and N3CD3Q1E34=2 then
pMAA3m=0; /*Prior-to-past-year*/
Label pMAA3m='Prior-to-past-year cannabis time spent criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
lMAA3m=.; if N3CD3Q1C33=1 or N3CD3Q1E33=1 or N3CD3Q1C34=1 or N3CD3Q1E34=1 then lMAA3m=1;
if N3CD3Q1C33=2 and N3CD3Q1E33=2 and N3CD3Q1C34=2 and N3CD3Q1E34=2 then lMAA3m=0; /*Lifetime*/
Label lMAA3m='Lifetime cannabis time spent criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';

/*Cannabis - Craving - Missing-tolerant*/
MAA4m=.; if N3CD3Q1C39=1 or N3CD3Q1C40=1 then MAA4m=1; if N3CD3Q1C39=2 and N3CD3Q1C40=2 then
MAA4m=0; /*Past-year*/
Label MAA4m='Past-year cannabis craving criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pMAA4m=.; if N3CD3Q1E39=1 or N3CD3Q1E40=1 then pMAA4m=1; if N3CD3Q1E39=2 and N3CD3Q1E40=2 then
pMAA4m=0; /*Prior-to-past-year*/
Label pMAA4m='Prior-to-past-year cannabis craving criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
lMAA4m=.; if N3CD3Q1C39=1 or N3CD3Q1E39=1 or N3CD3Q1C40=1 or N3CD3Q1E40=1 then lMAA4m=1;
if N3CD3Q1C39=2 and N3CD3Q1E39=2 and N3CD3Q1C40=2 and N3CD3Q1E40=2 then lMAA4m=0; /*Lifetime*/
Label lMAA4m='Lifetime cannabis craving criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';

/*Cannabis - Role interference - Missing-tolerant*/
MAA5m=.; if N3CD3Q1C44=1 or N3CD3Q1C45=1 or N3CD3Q1C46=1 then MAA5m=1; if N3CD3Q1C44=2 and
N3CD3Q1C45=2 and N3CD3Q1C46=2 then MAA5m=0; /*Past-year*/

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Label MAA5m='Past-year cannabis role interference criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pMAA5m=.; if N3CD3Q1E44=1 or N3CD3Q1E45=1 or N3CD3Q1E46=1 then pMAA5m=1; if N3CD3Q1E44=2 and
N3CD3Q1E45=2 and N3CD3Q1E46=2 then pMAA5m=0; /*Prior-to-past-year*/
Label pMAA5m='Prior-to-past-year cannabis role interference criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lMAA5m=.; if N3CD3Q1C44=1 or N3CD3Q1E44=1 or N3CD3Q1C45=1 or N3CD3Q1E45=1 or N3CD3Q1C46=1 or
N3CD3Q1E46=1 then lMAA5m=1;
if N3CD3Q1C44=2 and N3CD3Q1E44=2 and N3CD3Q1C45=2 and N3CD3Q1E45=2 and N3CD3Q1C46=2 and
N3CD3Q1E46=2 then lMAA5m=0; /*Lifetime*/
Label lMAA5m='Lifetime cannabis role interference criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Cannabis - Social problems - Missing-tolerant*/
MAA6m=.; if N3CD3Q1C41=1 or N3CD3Q1C42=1 or N3CD3Q1C43=1 then MAA6m=1; if N3CD3Q1C41=2 and
N3CD3Q1C42=2 and N3CD3Q1C43=2 then MAA6m=0; /*Past-year*/
Label MAA6m='Past-year cannabis social problems criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pMAA6m=.; if N3CD3Q1E41=1 or N3CD3Q1E42=1 or N3CD3Q1E43=1 then pMAA6m=1; if N3CD3Q1E41=2 and
N3CD3Q1E42=2 and N3CD3Q1E43=2 then pMAA6m=0; /*Prior-to-past-year*/
Label pMAA6m='Prior-to-past-year cannabis social problems criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lMAA6m=.; if N3CD3Q1C41=1 or N3CD3Q1E41=1 or N3CD3Q1C42=1 or N3CD3Q1E42=1 or N3CD3Q1C43=1 or
N3CD3Q1E43=1 then lMAA6m=1;
if N3CD3Q1C41=2 and N3CD3Q1E41=2 and N3CD3Q1C42=2 and N3CD3Q1E42=2 and N3CD3Q1C43=2 and
N3CD3Q1E43=2 then lMAA6m=0; /*Lifetime*/
Label lMAA6m='Lifetime cannabis social problems criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Cannabis - Give up - Missing-tolerant*/
MAA7m=.; if N3CD3Q1C35=1 or N3CD3Q1C36=1 then MAA7m=1; if N3CD3Q1C35=2 and N3CD3Q1C36=2 then
MAA7m=0; /*Past-year*/
Label MAA7m='Past-year cannabis give up criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pMAA7m=.; if N3CD3Q1E35=1 or N3CD3Q1E36=1 then pMAA7m=1; if N3CD3Q1E35=2 and N3CD3Q1E36=2 then
pMAA7m=0; /*Prior-to-past-year*/
Label pMAA7m='Prior-to-past-year cannabis give up criterion endorsement-0=negative
1=positive';
lMAA7m=.; if N3CD3Q1C35=1 or N3CD3Q1E35=1 or N3CD3Q1C36=1 or N3CD3Q1E36=1 then lMAA7m=1;
if N3CD3Q1C35=2 and N3CD3Q1E35=2 and N3CD3Q1C36=2 and N3CD3Q1E36=2 then lMAA7m=0; /*Lifetime*/
Label lMAA7m='Lifetime cannabis give up criterion endorsement-0=negative 1=positive';

/*Cannabis - Hazardous use - Missing-tolerant*/
MAA8m=.; if N3CD3Q1C47=1 or N3CD3Q1C48=1 then MAA8m=1; if N3CD3Q1C47=2 and N3CD3Q1C48=2 then
MAA8m=0; /*Past-year*/
Label MAA8m='Past-year cannabis hazardous use criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pMAA8m=.; if N3CD3Q1E47=1 or N3CD3Q1E48=1 then pMAA8m=1; if N3CD3Q1E47=2 and N3CD3Q1E48=2 then
pMAA8m=0; /*Prior-to-past-year*/
Label pMAA8m='Prior-to-past-year cannabis hazardous use criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lMAA8m=.; if N3CD3Q1C47=1 or N3CD3Q1E47=1 or N3CD3Q1C48=1 or N3CD3Q1E48=1 then lMAA8m=1;
if N3CD3Q1C47=2 and N3CD3Q1E47=2 and N3CD3Q1C48=2 and N3CD3Q1E48=2 then lMAA8m=0; /*Lifetime*/
Label lMAA8m='Lifetime cannabis hazardous use criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Cannabis - Continued use despite problems - Missing-tolerant*/
MAA9m=.; if N3CD3Q1C37=1 or N3CD3Q1C38=1 then MAA9m=1; if N3CD3Q1C37=2 and N3CD3Q1C38=2 then
MAA9m=0; /*Past-year*/

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Label MAA9m='Past-year cannabis continued use despite problems criterion endorsement (missing-tolerant)-.=missing, 0=negative, 1=positive';
pMAA9m=.; if N3CD3Q1E37=1 or N3CD3Q1E38=1 then pMAA9m=1; if N3CD3Q1E37=2 and N3CD3Q1E38=2 then
pMAA9m=0; /*Prior-to-past-year*/
Label pMAA9m='Prior-to-past-year cannabis continued use despite problems criterion endorsement
(missing-tolerant)-.=missing, 0=negative, 1=positive';
lMAA9m=.; if N3CD3Q1C37=1 or N3CD3Q1E37=1 or N3CD3Q1C38=1 or N3CD3Q1E38=1 then lMAA9m=1;
if N3CD3Q1C37=2 and N3CD3Q1E37=2 and N3CD3Q1C38=2 and N3CD3Q1E38=2 then lMAA9m=0; /*Lifetime*/
Label lMAA9m='Lifetime cannabis continued use despite problems criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';

/*Cannabis - Tolerance - Missing-tolerant*/
MAA10m=.; if N3CD3Q1C1=1 or N3CD3Q1C2=1 then MAA10m=1; if N3CD3Q1C1=2 and N3CD3Q1C2=2 then
MAA10m=0; /*Past-year*/
Label MAA10m='Past-year cannabis tolerance criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pMAA10m=.; if N3CD3Q1E1=1 or N3CD3Q1E2=1 then pMAA10m=1; if N3CD3Q1E1=2 and N3CD3Q1E2=2 then
pMAA10m=0; /*Prior-to-past-year*/
Label pMAA10m='Prior-to-past-year cannabis tolerance criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
lMAA10m=.; if N3CD3Q1C1=1 or N3CD3Q1E1=1 or N3CD3Q1C2=1 or N3CD3Q1E2=1 then lMAA10m=1;
if N3CD3Q1C1=2 and N3CD3Q1E1=2 and N3CD3Q1C2=2 and N3CD3Q1E2=2 then lMAA10m=0; /*Lifetime*/
Label lMAA10m='Lifetime cannabis tolerance criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';

/*Cannabis - Withdrawal - Missing-tolerant*/
*Cannabis - Withdrawal subalgorithm - sum of withdrawal symptoms;
maudwithm=.; maudwithm=sum((N3CD3Q1C22=1 or N3CD3Q1C24=1), N3CD3Q1C11=1, (N3CD3Q1C20=1 or
N3CD3Q1C17=1), N3CD3Q1C23=1, N3CD3Q1C14=1, N3CD3Q1C5=1, (N3CD3Q1C13=1 or N3CD3Q1C19=1 or
N3CD3Q1C25=1 or N3CD3Q1C26=1 or N3CD3Q1C27=1 or N3CD3Q1C28=1));
if N3CD3Q1C22=2 and N3CD3Q1C24=2 and N3CD3Q1C11=2 and N3CD3Q1C20=2 and N3CD3Q1C17=2 and
N3CD3Q1C23=2 and N3CD3Q1C14=2 and N3CD3Q1C5=2 and N3CD3Q1C13=2 and N3CD3Q1C19=2 and
N3CD3Q1C25=2 and N3CD3Q1C26=2 and N3CD3Q1C27=2 and N3CD3Q1C28=2 then maudwithm=0; /*past-year
withdrawal symptom count*/
Label maudwithm='Sum of past-year cannabis withdrawal symptoms (Missing-Tolerant)';
pmaudwithm=.; pmaudwithm=sum((N3CD3Q1E22=1 or N3CD3Q1E24=1), N3CD3Q1E11=1, (N3CD3Q1E20=1 or
N3CD3Q1E17=1), N3CD3Q1E23=1, N3CD3Q1E14=1, N3CD3Q1E5=1, (N3CD3Q1E13=1 or N3CD3Q1E19=1 or
N3CD3Q1E25=1 or N3CD3Q1E26=1 or N3CD3Q1E27=1 or N3CD3Q1E28=1));
if N3CD3Q1E22=2 and N3CD3Q1E24=2 and N3CD3Q1E11=2 and N3CD3Q1E20=2 and N3CD3Q1E17=2 and
N3CD3Q1E23=2 and N3CD3Q1E14=2 and N3CD3Q1E5=2 and N3CD3Q1E13=2 and N3CD3Q1E19=2 and
N3CD3Q1E25=2 and N3CD3Q1E26=2 and N3CD3Q1E27=2 and N3CD3Q1E28=2 then pmaudwithm=0; /*prior-to-
past-year withdrawal symptom count*/
Label pmaudwithm='Sum of prior-to-past-year cannabis withdrawal symptoms (Missing-Tolerant)';

*Cannabis - Withdrawal - using subalgorithm;
MAA11m=.; if maudwithm=>3 or N3CD3Q1C29=1 then MAA11m=1; if maudwithm<3 and maudwithm>. and
N3CD3Q1C29=2 then MAA11m=0; /*Past-year*/
Label MAA11m='Past-year cannabis withdrawal criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pMAA11m=.; if pmaudwithm=>3 or N3CD3Q1E29=1 then pMAA11m=1; if pmaudwithm<3 and pmaudwithm>.
and N3CD3Q1E29=2 then pMAA11m=0; /*Prior-to-past-year*/
Label pMAA11m='Prior-to-past-year cannabis withdrawal criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lMAA11m=.; if maudwithm=>3 or N3CD3Q1C29=1 or pmaudwithm=>3 or N3CD3Q1E29=1 then lMAA11m=1;
if maudwithm<3 and maudwithm>. and N3CD3Q1C29=2 and pmaudwithm>3 and pmaudwithm>. and
N3CD3Q1E29=2 then lMAA11m=0; /*Lifetime*/
Label lMAA11m='Lifetime cannabis withdrawal criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

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/*-Past-year (MAA1m-MAA11m) and prior-to-past-year (pMAA1m-pMAA11m) symptom counts
-Prior-to-past-year symptoms counts include N3CD3Q2A to
denote SOME MAUD symptoms occurred within same 12-month period
-Lifetime symptom count takes the largest symptom count from either past-year or prior-to-
past-year*/

masumm=sum(MAA1m, MAA2m, MAA3m, MAA4m, MAA5m, MAA6m, MAA7m, MAA8m, MAA9m, MAA10m, MAA11m);
/*Past-year*/
Label masumm='Sum of past-year cannabis criteria (Missing-Tolerant)';
if N3CD3Q2A=1 THEN pmasumm=sum(pMAA1m, pMAA2m, pMAA3m, pMAA4m, pMAA5m, pMAA6m, pMAA7m, pMAA8m,
pMAA9m, pMAA10m, pMAA11m); /*Prior-to-past-year*/
Label pmasumm='Sum of prior-to-past-year cannabis criteria (Missing-Tolerant)';
lmasumm=max(masumm, pmasumm); /*Lifetime*/
Label lmasumm='Maximum sum of past-year or prior-to-past-year cannabis criteria (Missing-
Tolerant)';

/*Number of missing criteria*/
masumm_miss=nmiss(MAA1m, MAA2m, MAA3m, MAA4m, MAA5m, MAA6m, MAA7m, MAA8m, MAA9m, MAA10m,
MAA11m); /*Past-year*/
Label masumm_miss='Sum of past-year missing cannabis criteria (Missing-Tolerant)';
pmasumm_miss=nmiss(pMAA1m, pMAA2m, pMAA3m, pMAA4m, pMAA5m, pMAA6m, pMAA7m, pMAA8m, pMAA9m,
pMAA10m, pMAA11m); /*Prior-to-past-year*/
Label pmasumm_miss='Sum of prior-to-past-year cannabis criteria (Missing-Tolerant)';

*MAUD diagnoses - Missing tolerant;
MAUDm=.; if masumm=>2 then MAUDm=1; if masumm<2 and masumm>. then MAUDm=0; /*Past-year*/
Label MAUDm='Past-year MAUD diagnosis (missing-tolerant)-.=missing, 0=negative, 1=positive';
pMAUDm=.; if pmasumm=>2 then pMAUDm=1; if pmasumm<2 and pmasumm>. then pMAUDm=0; /*Prior-to-
past-year*/
Label pMAUDm='Prior-to-past-year MAUD diagnosis (missing-tolerant)-.=missing, 0=negative,
1=positive';
lMAUDm=.; if lmasumm=>2 then lMAUDm=1; if lmasumm<2 and lmasumm>. then lMAUDm=0; /*Lifetime*/
Label lMAUDm='Lifetime MAUD diagnosis (missing-tolerant)-.=missing, 0=negative, 1=positive';

*MAUD severity - Missing tolerant;
if (masumm=2 and masumm_miss>=2) or (masumm=3 and masumm_miss>=1) or (masumm=4 and
masumm_miss>=2)
or (masumm=5 and masumm_miss>=1) then MAUDSEVm=.; /*Past-year - missing MAUD severity*/
if (masumm=0 and masumm_miss<2) or (masumm=1 and masumm_miss=0) then MAUDSEVm=0; /*Past-year -
no MAUD diagnosis*/
if (masumm=2 and masumm_miss<2) or (masumm=3 and masumm_miss=0) then MAUDSEVm=1; /*Past-year -
mild MAUD*/
if (masumm=4 and masumm_miss<2) or (masumm=5 and masumm_miss=0) then MAUDSEVm=2; /*Past-year -
moderate MAUD*/
if masumm>=6 then MAUDSEVm=3; /*Past-year - severe MAUD*/
Label MAUDSEVm='Past-year MAUD severity grading (missing-tolerant)-.=missing, 0=no MAUD
diagnosis, 1=mild MAUD, 2=moderate MAUD and 3=severe MAUD';

if (pmasumm=2 and pmasumm_miss>=2) or (pmasumm=3 and pmasumm_miss>=1) or (pmasumm=4 and
pmasumm_miss>=2)
or (pmasumm=5 and pmasumm_miss>=1) then pMAUDSEVm=.; /*Prior-to-past-year - missing MAUD
severity*/
if (pmasumm=0 and pmasumm_miss<2) or (pmasumm=1 and pmasumm_miss=0) then pMAUDSEVm=0; /*Prior-
to-past-year - no MAUD diagnosis*/
if (pmasumm=2 and pmasumm_miss<2) or (pmasumm=3 and pmasumm_miss=0) then pMAUDSEVm=1; /*Prior-
to-past-year - mild MAUD*/
if (pmasumm=4 and pmasumm_miss<2) or (pmasumm=5 and pmasumm_miss=0) then pMAUDSEVm=2; /*Prior-
to-past-year - moderate MAUD*/
if pmasumm>=6 then pMAUDSEVm=3; /*Prior-to-past-year - severe AUD*/

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Label pMAUDSEVm='Prior-to-past-year MAUD severity grading (missing-tolerant)-.=missing, 0=no
MAUD diagnosis, 1=mild MAUD, 2=moderate MAUD and 3=severe MAUD';

if MAUDSEVm=. or pMAUDSEVm=. then lMAUDSEVm=.; /*Lifetime - missing MAUD severity*/
if max(MAUDSEVm, pMAUDSEVm)=0 and (MAUDSEVm^=. and pMAUDSEVm^=.) then lMAUDSEVm=0; /*Lifetime
- no MAUD diagnosis*/
if max(MAUDSEVm, pMAUDSEVm)=1 then lMAUDSEVm=1; /*Lifetime - mild MAUD*/
if max(MAUDSEVm, pMAUDSEVm)=2 then lMAUDSEVm=2; /*Lifetime - moderate MAUD*/
if max(MAUDSEVm, pMAUDSEVm)=3 then lMAUDSEVm=3; /*Lifetime - severe MAUD*/
Label lMAUDSEVm='Lifetime MAUD severity grading (missing-tolerant)-.=missing, 0=no MAUD
diagnosis, 1=mild MAUD, 2=moderate MAUD and 3=severe MAUD';

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COCUD Criteria and Diagnoses Algorithms (Missing-Tolerant)

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/*Cocaine - Larger/longer - Missing-tolerant*/
COCA1m=.; if N3CD4Q1C32=1 then COCA1m=1; if N3CD4Q1C32=2 then COCA1m=0; /*Past-year*/
Label COCA1m='Past-year cocaine larger/longer criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pCOCA1m=.; if N3CD4Q1E32=1 then pCOCA1m=1; if N3CD4Q1E32=2 then pCOCA1m=0; /*Prior-to-past-
year*/
Label pCOCA1m='Prior-to-past-year cocaine larger/longer criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lCOCA1m=.; if N3CD4Q1C32=1 or N3CD4Q1E32=1 then lCOCA1m=1; if N3CD4Q1C32=2 and N3CD4Q1E32=2
then lCOCA1m=0; /*Lifetime*/
Label lCOCA1m='Lifetime cocaine larger/longer criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Cocaine - Quit or cut down - Missing-tolerant*/
COCA2m=.; if N3CD4Q1C30=1 or N3CD4Q1C31=1 then COCA2m=1; if N3CD4Q1C30=2 and N3CD4Q1C31=2 then
COCA2m=0; /*Past-year*/
Label COCA2m='Past-year cocaine quit or cut down criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pCOCA2m=.; if N3CD4Q1E30=1 or N3CD4Q1E31=1 then pCOCA2m=1; if N3CD4Q1E30=2 and N3CD4Q1E31=2
then pCOCA2m=0; /*Prior-to-past-year*/
Label pCOCA2m='Prior-to-past-year cocaine quit or cut down criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lCOCA2m=.; if N3CD4Q1C30=1 or N3CD4Q1E30=1 or N3CD4Q1C31=1 or N3CD4Q1E31=1 then lCOCA2m=1;
if N3CD4Q1C30=2 and N3CD4Q1E30=2 and N3CD4Q1C31=2 and N3CD4Q1E31=2 then lCOCA2m=0;
/*Lifetime*/
Label lCOCA2m='Lifetime cocaine quit or cut down criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Cocaine - Time spent - Missing-tolerant*/
COCA3m=.; if N3CD4Q1C33=1 or N3CD4Q1C34=1 then COCA3m=1; if N3CD4Q1C33=2 and N3CD4Q1C34=2 then
COCA3m=0; /*Past-year*/
Label COCA3m='Past-year cocaine time spent criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pCOCA3m=.; if N3CD4Q1E33=1 or N3CD4Q1E34=1 then pCOCA3m=1; if N3CD4Q1E33=2 and N3CD4Q1E34=2
then pCOCA3m=0; /*Prior-to-past-year*/
Label pCOCA3m='Prior-to-past-year cocaine time spent criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
lCOCA3m=.; if N3CD4Q1C33=1 or N3CD4Q1E33=1 or N3CD4Q1C34=1 or N3CD4Q1E34=1 then lCOCA3m=1;
if N3CD4Q1C33=2 and N3CD4Q1E33=2 and N3CD4Q1C34=2 and N3CD4Q1E34=2 then lCOCA3m=0;
/*Lifetime*/
Label lCOCA3m='Lifetime cocaine time spent criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';

/*Cocaine - Craving - Missing-tolerant*/
COCA4m=.; if N3CD4Q1C39=1 or N3CD4Q1C40=1 then COCA4m=1; if N3CD4Q1C39=2 and N3CD4Q1C40=2 then
COCA4m=0; /*Past-year*/
Label COCA4m='Past-year cocaine craving criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pCOCA4m=.; if N3CD4Q1E39=1 or N3CD4Q1E40=1 then pCOCA4m=1; if N3CD4Q1E39=2 and N3CD4Q1E40=2
then pCOCA4m=0; /*Prior-to-past-year*/
Label pCOCA4m='Prior-to-past-year cocaine craving criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
lCOCA4m=.; if N3CD4Q1C39=1 or N3CD4Q1E39=1 or N3CD4Q1C40=1 or N3CD4Q1E40=1 then lCOCA4m=1;
if N3CD4Q1C39=2 and N3CD4Q1E39=2 and N3CD4Q1C40=2 and N3CD4Q1E40=2 then lCOCA4m=0;
/*Lifetime*/
Label lCOCA4m='Lifetime cocaine craving criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';

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/*Cocaine - Role interference - Missing-tolerant*/
COCA5m=.; if N3CD4Q1C44=1 or N3CD4Q1C45=1 or N3CD4Q1C46=1 then COCA5m=1; if N3CD4Q1C44=2 and
N3CD4Q1C45=2 and N3CD4Q1C46=2 then COCA5m=0; /*Past-year*/
Label COCA5m='Past-year cocaine role interference criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pCOCA5m=.; if N3CD4Q1E44=1 or N3CD4Q1E45=1 or N3CD4Q1E46=1 then pCOCA5m=1; if N3CD4Q1E44=2 and
N3CD4Q1E45=2 and N3CD4Q1E46=2 then pCOCA5m=0; /*Prior-to-past-year*/
Label pCOCA5m='Prior-to-past-year cocaine role interference criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lCOCA5m=.; if N3CD4Q1C44=1 or N3CD4Q1E44=1 or N3CD4Q1C45=1 or N3CD4Q1E45=1 or N3CD4Q1C46=1 or
N3CD4Q1E46=1 then lCOCA5m=1;
if N3CD4Q1C44=2 and N3CD4Q1E44=2 and N3CD4Q1C45=2 and N3CD4Q1E45=2 and N3CD4Q1C46=2 and
N3CD4Q1E46=2 then lCOCA5m=0; /*Lifetime*/
Label lCOCA5m='Lifetime cocaine role interference criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Cocaine - Social problems - Missing-tolerant*/
COCA6m=.; if N3CD4Q1C41=1 or N3CD4Q1C42=1 or N3CD4Q1C43=1 then COCA6m=1; if N3CD4Q1C41=2 and
N3CD4Q1C42=2 and N3CD4Q1C43=2 then COCA6m=0; /*Past-year*/
Label COCA6m='Past-year cocaine social problems criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pCOCA6m=.; if N3CD4Q1E41=1 or N3CD4Q1E42=1 or N3CD4Q1E43=1 then pCOCA6m=1; if N3CD4Q1E41=2 and
N3CD4Q1E42=2 and N3CD4Q1E43=2 then pCOCA6m=0; /*Prior-to-past-year*/
Label pCOCA6m='Prior-to-past-year cocaine social problems criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lCOCA6m=.; if N3CD4Q1C41=1 or N3CD4Q1E41=1 or N3CD4Q1C42=1 or N3CD4Q1E42=1 or N3CD4Q1C43=1 or
N3CD4Q1E43=1 then lCOCA6m=1;
if N3CD4Q1C41=2 and N3CD4Q1E41=2 and N3CD4Q1C42=2 and N3CD4Q1E42=2 and N3CD4Q1C43=2 and
N3CD4Q1E43=2 then lCOCA6m=0; /*Lifetime*/
Label lCOCA6m='Lifetime cocaine social problems criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Cocaine - Give up - Missing-tolerant*/
COCA7m=.; if N3CD4Q1C35=1 or N3CD4Q1C36=1 then COCA7m=1; if N3CD4Q1C35=2 and N3CD4Q1C36=2 then
COCA7m=0; /*Past-year*/
Label COCA7m='Past-year cocaine give up criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pCOCA7m=.; if N3CD4Q1E35=1 or N3CD4Q1E36=1 then pCOCA7m=1; if N3CD4Q1E35=2 and N3CD4Q1E36=2
then pCOCA7m=0; /*Prior-to-past-year*/
Label pCOCA7m='Prior-to-past-year cocaine give up criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
lCOCA7m=.; if N3CD4Q1C35=1 or N3CD4Q1E35=1 or N3CD4Q1C36=1 or N3CD4Q1E36=1 then lCOCA7m=1;
if N3CD4Q1C35=2 and N3CD4Q1E35=2 and N3CD4Q1C36=2 and N3CD4Q1E36=2 then lCOCA7m=0;
/*Lifetime*/
Label lCOCA7m='Lifetime cocaine give up criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';

/*Cocaine - Hazardous use - Missing-tolerant*/
COCA8m=.; if N3CD4Q1C47=1 or N3CD4Q1C48=1 then COCA8m=1; if N3CD4Q1C47=2 and N3CD4Q1C48=2 then
COCA8m=0; /*Past-year*/
Label COCA8m='Past-year cocaine hazardous use criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pCOCA8m=.; if N3CD4Q1E47=1 or N3CD4Q1E48=1 then pCOCA8m=1; if N3CD4Q1E47=2 and N3CD4Q1E48=2
then pCOCA8m=0; /*Prior-to-past-year*/
Label pCOCA8m='Prior-to-past-year cocaine hazardous use criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lCOCA8m=.; if N3CD4Q1C47=1 or N3CD4Q1E47=1 or N3CD4Q1C48=1 or N3CD4Q1E48=1 then lCOCA8m=1;

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if N3CD4Q1C47=2 and N3CD4Q1E47=2 and N3CD4Q1C48=2 and N3CD4Q1E48=2 then lCOCA8m=0;
/*Lifetime*/
Label lCOCA8m='Lifetime cocaine hazardous use criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Cocaine - Continued use despite problems - Missing-tolerant*/
COCA9m=.; if N3CD4Q1C37=1 or N3CD4Q1C38=1 then COCA9m=1; if N3CD4Q1C37=2 and N3CD4Q1C38=2 then
COCA9m=0; /*Past-year*/
Label COCA9m='Past-year cocaine continued use despite problems criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
pCOCA9m=.; if N3CD4Q1E37=1 or N3CD4Q1E38=1 then pCOCA9m=1; if N3CD4Q1E37=2 and N3CD4Q1E38=2
then pCOCA9m=0; /*Prior-to-past-year*/
Label pCOCA9m='Prior-to-past-year cocaine continued use despite problems criterion endorsement
(missing-tolerant)-.=missing, 0=negative, 1=positive';
lCOCA9m=.; if N3CD4Q1C37=1 or N3CD4Q1E37=1 or N3CD4Q1C38=1 or N3CD4Q1E38=1 then lCOCA9m=1;
if N3CD4Q1C37=2 and N3CD4Q1E37=2 and N3CD4Q1C38=2 and N3CD4Q1E38=2 then lCOCA9m=0;
/*Lifetime*/
Label lCOCA9m='Lifetime cocaine continued use despite problems criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';

/*Cocaine - Tolerance - Missing-tolerant*/
COCA10m=.; if N3CD4Q1C1=1 or N3CD4Q1C2=1 then COCA10m=1; if N3CD4Q1C1=2 and N3CD4Q1C2=2 then
COCA10m=0; /*Past-year*/
Label COCA10m='Past-year cocaine tolerance criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pCOCA10m=.; if N3CD4Q1E1=1 or N3CD4Q1E2=1 then pCOCA10m=1; if N3CD4Q1E1=2 and N3CD4Q1E2=2 then
pCOCA10m=0; /*Prior-to-past-year*/
Label pCOCA10m='Prior-to-past-year cocaine tolerance criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
lCOCA10m=.; if N3CD4Q1C1=1 or N3CD4Q1E1=1 or N3CD4Q1C2=1 or N3CD4Q1E2=1 then lCOCA10m=1;
if N3CD4Q1C1=2 and N3CD4Q1E1=2 and N3CD4Q1C2=2 and N3CD4Q1E2=2 then lCOCA10m=0; /*Lifetime*/
Label lCOCA10m='Lifetime cocaine tolerance criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';

/*Cocaine - Withdrawal - Missing-tolerant*/
*Cocaine - Withdrawal subalgorithm - sum of withdrawal symptoms;
cocwithm=.; if N3CD4Q1C5=1 then cocwithm=sum(N3CD4Q1C4=1, N3CD4Q1C17=1, (N3CD4Q1C20=1 or
N3CD4Q1C3=1), N3CD4Q1C10=1, (N3CD4Q1C15=1 or N3CD4Q1C14=1));
if N3CD4Q1C5=2 and N3CD4Q1C4=2 and N3CD4Q1C17=2 and N3CD4Q1C20=2 and N3CD4Q1C3=2 and
N3CD4Q1C10=2 and N3CD4Q1C15=2 and N3CD4Q1C14=2 then cocwithm=0; /*past-year withdrawal symptom
count*/
Label cocwithm='Sum of past-year cocaine withdrawal symptoms (Missing-Tolerant)';
pcocwithm=.; if N3CD4Q1E5=1 then pcocwithm=sum(N3CD4Q1E4=1, N3CD4Q1E17=1, (N3CD4Q1E20=1 or
N3CD4Q1E3=1), N3CD4Q1E10=1, (N3CD4Q1E15=1 or N3CD4Q1E14=1));
if N3CD4Q1E5=2 and N3CD4Q1E4=2 and N3CD4Q1E17=2 and N3CD4Q1E20=2 and N3CD4Q1E3=2 and
N3CD4Q1E10=2 and N3CD4Q1E15=2 and N3CD4Q1E14=2 then pcocwithm=0; /*prior-to-past-year
withdrawal symptom count*/
Label pcocwithm='Sum of prior-to-past-year cocaine withdrawal symptoms (Missing-Tolerant)';

*Cocaine - Withdrawal - using subalgorithm;
COCA11m=.; if cocwithm=>2 or N3CD4Q1C29=1 then COCA11m=1; if cocwithm<2 and cocwithm>. and
N3CD4Q1C29=2 then COCA11m=0; /*Past-year*/
Label COCA11m='Past-year cocaine withdrawal criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pCOCA11m=.; if pcocwithm=>2 or N3CD4Q1E29=1 then pCOCA11m=1; if pcocwithm<2 and pcocwithm>.
and N3CD4Q1E29=2 then pCOCA11m=0; /*Prior-to-past-year*/
Label pCOCA11m='Prior-to-past-year cocaine withdrawal criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lCOCA11m=.; if cocwithm=>2 or N3CD4Q1C29=1 or pcocwithm=>2 or N3CD4Q1E29=1 then lCOCA11m=1;

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if cocwithm<2 and cocwithm>. and N3CD4Q1C29=2 and pcocwithm<2 and pcocwithm>. and N3CD4Q1E29=2
then lCOCA11m=0; /*Lifetime*/
Label lCOCA11m='Lifetime cocaine withdrawal criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*-Past-year (COCA1m-COCA11m) and prior-to-past-year (pCOCA1m-pCOCA11m) symptom counts
-Prior-to-past-year symptoms counts include N3CD4Q2A to
denote SOME COCUD symptoms occurred within same 12-month period
-Lifetime symptom count takes the largest symptom count from either past-year or prior-to-
past-year*/

cocsumm=sum(COCA1m, COCA2m, COCA3m, COCA4m, COCA5m, COCA6m, COCA7m, COCA8m, COCA9m, COCA10m,
COCA11m); /*Past-year*/
Label cocsumm='Sum of past-year cocaine criteria (Missing-Tolerant)';
if N3CD4Q2A=1 THEN pcocsumm=sum(pCOCA1m, pCOCA2m, pCOCA3m, pCOCA4m, pCOCA5m, pCOCA6m, pCOCA7m,
pCOCA8m, pCOCA9m, pCOCA10m, pCOCA11m); /*Prior-to-past-year*/
Label pcocsumm='Sum of prior-to-past-year cocaine criteria (Missing-Tolerant)';
lcocsumm=max(cocsumm, pcocsumm); /*Lifetime*/
Label lcocsumm='Maximum sum of past-year or prior-to-past-year cocaine criteria (Missing-
Tolerant)';

/*Number of missing criteria*/
cocsumm_miss=nmiss(COCA1m, COCA2m, COCA3m, COCA4m, COCA5m, COCA6m, COCA7m, COCA8m, COCA9m,
COCA10m, COCA11m); /*Past-year*/
Label cocsumm_miss='Sum of past-year missing cocaine criteria (Missing-Tolerant)';
pcocsumm_miss=nmiss(pCOCA1m, pCOCA2m, pCOCA3m, pCOCA4m, pCOCA5m, pCOCA6m, pCOCA7m, pCOCA8m,
pCOCA9m, pCOCA10m, pCOCA11m); /*Prior-to-past-year*/
Label pcocsumm_miss='Sum of prior-to-past-year cocaine criteria (Missing-Tolerant)';

*COCUD diagnoses - Missing tolerant;
COCUDm=.; if cocsumm=>2 then COCUDm=1; if cocsumm<2 and cocsumm>. then COCUDm=0; /*Past-year*/
Label COCUDm='Past-year COCUD diagnosis (missing-tolerant)-.=missing, 0=negative, 1=positive';
pCOCUDm=.; if pcocsumm=>2 then pCOCUDm=1; if pcocsumm<2 and pcocsumm>. then pCOCUDm=0;
/*Prior-to-past-year*/
Label pCOCUDm='Prior-to-past-year COCUD diagnosis (missing-tolerant)-.=missing, 0=negative,
1=positive';
lCOCUDm=.; if lcocsumm=>2 then lCOCUDm=1; if lcocsumm<2 and lcocsumm>. then lCOCUDm=0;
/*Lifetime*/
Label lCOCUDm='Lifetime COCUD diagnosis (missing-tolerant)-.=missing, 0=negative, 1=positive';

*COCUD severity - Missing tolerant;
if (cocsumm=2 and cocsumm_miss>=2) or (cocsumm=3 and cocsumm_miss>=1) or (cocsumm=4 and
cocsumm_miss>=2)
or (cocsumm=5 and cocsumm_miss>=1) then COCUDSEVm=.; /*Past-year - missing COCUD severity*/
if (cocsumm=0 and cocsumm_miss<2) or (cocsumm=1 and cocsumm_miss=0) then COCUDSEVm=0; /*Past-
year - no COCUD diagnosis*/
if (cocsumm=2 and cocsumm_miss<2) or (cocsumm=3 and cocsumm_miss=0) then COCUDSEVm=1; /*Past-
year - mild COCUD*/
if (cocsumm=4 and cocsumm_miss<2) or (cocsumm=5 and cocsumm_miss=0) then COCUDSEVm=2; /*Past-
year - moderate COCUD*/
if cocsumm>=6 then COCUDSEVm=3; /*Past-year - severe COCUD*/
Label COCUDSEVm='Past-year COCUD severity grading (missing-tolerant)-.=missing, 0=no COCUD
diagnosis, 1=mild COCUD, 2=moderate COCUD and 3=severe COCUD';

if (pcocsumm=2 and pcocsumm_miss>=2) or (pcocsumm=3 and pcocsumm_miss>=1) or (pcocsumm=4 and
pcocsumm_miss>=2)
or (pcocsumm=5 and pcocsumm_miss>=1) then pCOCUDSEVm=.; /*Prior-to-past-year - missing COCUD
severity*/

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if (pcocsumm=0 and pcocsumm_miss<2) or (pcocsumm=1 and pcocsumm_miss=0) then pCOCUDSEVm=0;
/*Prior-to-past-year - no COCUD diagnosis*/
if (pcocsumm=2 and pcocsumm_miss<2) or (pcocsumm=3 and pcocsumm_miss=0) then pCOCUDSEVm=1;
/*Prior-to-past-year - mild COCUD*/
if (pcocsumm=4 and pcocsumm_miss<2) or (pcocsumm=5 and pcocsumm_miss=0) then pCOCUDSEVm=2;
/*Prior-to-past-year - moderate COCUD*/
if pcocsumm>=6 then pCOCUDSEVm=3; /*Prior-to-past-year - severe AUD*/
Label pCOCUDSEVm='Prior-to-past-year COCUD severity grading (missing-tolerant)-.=missing, 0=no
COCUD diagnosis, 1=mild COCUD, 2=moderate COCUD and 3=severe COCUD';

if COCUDSEVm=. or pCOCUDSEVm=. then lCOCUDSEVm=.; /*Lifetime - missing COCUD severity*/
if max(COCUDSEVm, pCOCUDSEVm)=0 and (COCUDSEVm^=. and pCOCUDSEVm^=.) then lCOCUDSEVm=0;
/*Lifetime - no COCUD diagnosis*/
if max(COCUDSEVm, pCOCUDSEVm)=1 then lCOCUDSEVm=1; /*Lifetime - mild COCUD*/
if max(COCUDSEVm, pCOCUDSEVm)=2 then lCOCUDSEVm=2; /*Lifetime - moderate COCUD*/
if max(COCUDSEVm, pCOCUDSEVm)=3 then lCOCUDSEVm=3; /*Lifetime - severe COCUD*/
Label lCOCUDSEVm='Lifetime COCUD severity grading (missing-tolerant)-.=missing, 0=no COCUD
diagnosis, 1=mild COCUD, 2=moderate COCUD and 3=severe COCUD';

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STIUD Criteria and Diagnoses Algorithms (Missing-Tolerant)

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/*Stimulant - Larger/longer - Missing-tolerant*/
STIA1m=.; if N3CD5Q1C32=1 then STIA1m=1; if N3CD5Q1C32=2 then STIA1m=0; /*Past-year*/
Label STIA1m='Past-year stimulant larger/longer criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pSTIA1m=.; if N3CD5Q1E32=1 then pSTIA1m=1; if N3CD5Q1E32=2 then pSTIA1m=0; /*Prior-to-past-
year*/
Label pSTIA1m='Prior-to-past-year stimulant larger/longer criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lSTIA1m=.; if N3CD5Q1C32=1 or N3CD5Q1E32=1 then lSTIA1m=1; if N3CD5Q1C32=2 and N3CD5Q1E32=2
then lSTIA1m=0; /*Lifetime*/
Label lSTIA1m='Lifetime stimulant larger/longer criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Stimulant - Quit or cut down - Missing-tolerant*/
STIA2m=.; if N3CD5Q1C30=1 or N3CD5Q1C31=1 then STIA2m=1; if N3CD5Q1C30=2 and N3CD5Q1C31=2 then
STIA2m=0; /*Past-year*/
Label STIA2m='Past-year stimulant quit or cut down criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pSTIA2m=.; if N3CD5Q1E30=1 or N3CD5Q1E31=1 then pSTIA2m=1; if N3CD5Q1E30=2 and N3CD5Q1E31=2
then pSTIA2m=0; /*Prior-to-past-year*/
Label pSTIA2m='Prior-to-past-year stimulant quit or cut down criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lSTIA2m=.; if N3CD5Q1C30=1 or N3CD5Q1E30=1 or N3CD5Q1C31=1 or N3CD5Q1E31=1 then lSTIA2m=1;
if N3CD5Q1C30=2 and N3CD5Q1E30=2 and N3CD5Q1C31=2 and N3CD5Q1E31=2 then lSTIA2m=0;
/*Lifetime*/
Label lSTIA2m='Lifetime stimulant quit or cut down criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Stimulant - Time spent - Missing-tolerant*/
STIA3m=.; if N3CD5Q1C33=1 or N3CD5Q1C34=1 then STIA3m=1; if N3CD5Q1C33=2 and N3CD5Q1C34=2 then
STIA3m=0; /*Past-year*/
Label STIA3m='Past-year stimulant time spent criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pSTIA3m=.; if N3CD5Q1E33=1 or N3CD5Q1E34=1 then pSTIA3m=1; if N3CD5Q1E33=2 and N3CD5Q1E34=2
then pSTIA3m=0; /*Prior-to-past-year*/
Label pSTIA3m='Prior-to-past-year stimulant time spent criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lSTIA3m=.; if N3CD5Q1C33=1 or N3CD5Q1E33=1 or N3CD5Q1C34=1 or N3CD5Q1E34=1 then lSTIA3m=1;
if N3CD5Q1C33=2 and N3CD5Q1E33=2 and N3CD5Q1C34=2 and N3CD5Q1E34=2 then lSTIA3m=0;
/*Lifetime*/
Label lSTIA3m='Lifetime stimulant time spent criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Stimulant - Craving - Missing-tolerant*/
STIA4m=.; if N3CD5Q1C39=1 or N3CD5Q1C40=1 then STIA4m=1; if N3CD5Q1C39=2 and N3CD5Q1C40=2 then
STIA4m=0; /*Past-year*/
Label STIA4m='Past-year stimulant craving criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pSTIA4m=.; if N3CD5Q1E39=1 or N3CD5Q1E40=1 then pSTIA4m=1; if N3CD5Q1E39=2 and N3CD5Q1E40=2
then pSTIA4m=0; /*Prior-to-past-year*/
Label pSTIA4m='Prior-to-past-year stimulant craving criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
lSTIA4m=.; if N3CD5Q1C39=1 or N3CD5Q1E39=1 or N3CD5Q1C40=1 or N3CD5Q1E40=1 then lSTIA4m=1;
if N3CD5Q1C39=2 and N3CD5Q1E39=2 and N3CD5Q1C40=2 and N3CD5Q1E40=2 then lSTIA4m=0;
/*Lifetime*/
Label lSTIA4m='Lifetime stimulant craving criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';

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/*Stimulant - Role interference - Missing-tolerant*/
STIA5m=.; if N3CD5Q1C44=1 or N3CD5Q1C45=1 or N3CD5Q1C46=1 then STIA5m=1; if N3CD5Q1C44=2 and
N3CD5Q1C45=2 and N3CD5Q1C46=2 then STIA5m=0; /*Past-year*/
Label STIA5m='Past-year stimulant role interference criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pSTIA5m=.; if N3CD5Q1E44=1 or N3CD5Q1E45=1 or N3CD5Q1E46=1 then pSTIA5m=1; if N3CD5Q1E44=2 and
N3CD5Q1E45=2 and N3CD5Q1E46=2 then pSTIA5m=0; /*Prior-to-past-year*/
Label pSTIA5m='Prior-to-past-year stimulant role interference criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lSTIA5m=.; if N3CD5Q1C44=1 or N3CD5Q1E44=1 or N3CD5Q1C45=1 or N3CD5Q1E45=1 or N3CD5Q1C46=1 or
N3CD5Q1E46=1 then lSTIA5m=1;
if N3CD5Q1C44=2 and N3CD5Q1E44=2 and N3CD5Q1C45=2 and N3CD5Q1E45=2 and N3CD5Q1C46=2 and
N3CD5Q1E46=2 then lSTIA5m=0; /*Lifetime*/
Label lSTIA5m='Lifetime stimulant role interference criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Stimulant - Social problems - Missing-tolerant*/
STIA6m=.; if N3CD5Q1C41=1 or N3CD5Q1C42=1 or N3CD5Q1C43=1 then STIA6m=1; if N3CD5Q1C41=2 and
N3CD5Q1C42=2 and N3CD5Q1C43=2 then STIA6m=0; /*Past-year*/
Label STIA6m='Past-year stimulant social problems criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pSTIA6m=.; if N3CD5Q1E41=1 or N3CD5Q1E42=1 or N3CD5Q1E43=1 then pSTIA6m=1; if N3CD5Q1E41=2 and
N3CD5Q1E42=2 and N3CD5Q1E43=2 then pSTIA6m=0; /*Prior-to-past-year*/
Label pSTIA6m='Prior-to-past-year stimulant social problems criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lSTIA6m=.; if N3CD5Q1C41=1 or N3CD5Q1E41=1 or N3CD5Q1C42=1 or N3CD5Q1E42=1 or N3CD5Q1C43=1 or
N3CD5Q1E43=1 then lSTIA6m=1;
if N3CD5Q1C41=2 and N3CD5Q1E41=2 and N3CD5Q1C42=2 and N3CD5Q1E42=2 and N3CD5Q1C43=2 and
N3CD5Q1E43=2 then lSTIA6m=0; /*Lifetime*/
Label lSTIA6m='Lifetime stimulant social problems criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Stimulant - Give up - Missing-tolerant*/
STIA7m=.; if N3CD5Q1C35=1 or N3CD5Q1C36=1 then STIA7m=1; if N3CD5Q1C35=2 and N3CD5Q1C36=2 then
STIA7m=0; /*Past-year*/
Label STIA7m='Past-year stimulant give up criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pSTIA7m=.; if N3CD5Q1E35=1 or N3CD5Q1E36=1 then pSTIA7m=1; if N3CD5Q1E35=2 and N3CD5Q1E36=2
then pSTIA7m=0; /*Prior-to-past-year*/
Label pSTIA7m='Prior-to-past-year stimulant give up criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
lSTIA7m=.; if N3CD5Q1C35=1 or N3CD5Q1E35=1 or N3CD5Q1C36=1 or N3CD5Q1E36=1 then lSTIA7m=1;
if N3CD5Q1C35=2 and N3CD5Q1E35=2 and N3CD5Q1C36=2 and N3CD5Q1E36=2 then lSTIA7m=0;
/*Lifetime*/
Label lSTIA7m='Lifetime stimulant give up criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';

/*Stimulant - Hazardous use - Missing-tolerant*/
STIA8m=.; if N3CD5Q1C47=1 or N3CD5Q1C48=1 then STIA8m=1; if N3CD5Q1C47=2 and N3CD5Q1C48=2 then
STIA8m=0; /*Past-year*/
Label STIA8m='Past-year stimulant hazardous use criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pSTIA8m=.; if N3CD5Q1E47=1 or N3CD5Q1E48=1 then pSTIA8m=1; if N3CD5Q1E47=2 and N3CD5Q1E48=2
then pSTIA8m=0; /*Prior-to-past-year*/
Label pSTIA8m='Prior-to-past-year stimulant hazardous use criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lSTIA8m=.; if N3CD5Q1C47=1 or N3CD5Q1E47=1 or N3CD5Q1C48=1 or N3CD5Q1E48=1 then lSTIA8m=1;

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if N3CD5Q1C47=2 and N3CD5Q1E47=2 and N3CD5Q1C48=2 and N3CD5Q1E48=2 then lSTIA8m=0;
/*Lifetime*/
Label lSTIA8m='Lifetime stimulant hazardous use criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Stimulant - Continued use despite problems - Missing-tolerant*/
STIA9m=.; if N3CD5Q1C37=1 or N3CD5Q1C38=1 then STIA9m=1; if N3CD5Q1C37=2 and N3CD5Q1C38=2
then STIA9m=0; /*Past-year*/
Label STIA9m='Past-year stimulant continued use despite problems criterion endorsement
(missing-tolerant)-.=missing, 0=negative, 1=positive';
pSTIA9m=.; if N3CD5Q1E37=1 or N3CD5Q1E38=1 then pSTIA9m=1; if N3CD5Q1E37=2 and N3CD5Q1E38=2
then pSTIA9m=0; /*Prior-to-past-year*/
Label pSTIA9m='Prior-to-past-year stimulant continued use despite problems criterion
endorsement (missing-tolerant)-.=missing, 0=negative, 1=positive';
lSTIA9m=.; if (N3CD5Q1C37=1 or N3CD5Q1E37=1) or (N3CD5Q1C38=1 or N3CD5Q1E38=1) then lSTIA9m=1;
if N3CD5Q1C37=2 and N3CD5Q1E37=2 and N3CD5Q1C38=2 and N3CD5Q1E38=2 then lSTIA9m=0;
/*Lifetime*/
Label lSTIA9m='Lifetime stimulant continued use despite problems criterion endorsement
(missing-tolerant)-.=missing, 0=negative, 1=positive';

/*Stimulant - Tolerance - Missing-tolerant*/
STIA10m=.; if N3CD5Q1C1=1 or N3CD5Q1C2=1 then STIA10m=1; if N3CD5Q1C1=2 and N3CD5Q1C2=2 then
STIA10m=0; /*Past-year*/
Label STIA10m='Past-year stimulant tolerance criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pSTIA10m=.; if N3CD5Q1E1=1 or N3CD5Q1E2=1 then pSTIA10m=1; if N3CD5Q1E1=2 and N3CD5Q1E2=2 then
pSTIA10m=0; /*Prior-to-past-year*/
Label pSTIA10m='Prior-to-past-year stimulant tolerance criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lSTIA10m=.; if N3CD5Q1C1=1 or N3CD5Q1E1=1 or N3CD5Q1C2=1 or N3CD5Q1E2=1 then lSTIA10m=1;
if N3CD5Q1C1=2 and N3CD5Q1E1=2 and N3CD5Q1C2=2 and N3CD5Q1E2=2 then lSTIA10m=0; /*Lifetime*/
Label lSTIA10m='Lifetime stimulant tolerance criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Stimulant - Withdrawal - Missing-tolerant*/
*Stimulant - Withdrawal subalgorithm - sum of withdrawal symptoms;
stiwithm=.; if N3CD5Q1C5=1 then stiwithm=sum(N3CD5Q1C4=1, N3CD5Q1C17=1, (N3CD5Q1C20=1 or
N3CD5Q1C3=1), N3CD5Q1C10=1, (N3CD5Q1C15=1 or N3CD5Q1C14=1));
if N3CD5Q1C5=2 and N3CD5Q1C4=2 and N3CD5Q1C17=2 and N3CD5Q1C20=2 and N3CD5Q1C3=2 and
N3CD5Q1C10=2 and N3CD5Q1C15=2 and N3CD5Q1C14=2 then stiwithm=0; /*past-year withdrawal symptom
count*/
Label stiwithm='Sum of past-year stimulant withdrawal symptoms (Missing-Tolerant)';
pstiwithm=.; if N3CD5Q1E5=1 then pstiwithm=sum(N3CD5Q1E4=1, N3CD5Q1E17=1, (N3CD5Q1E20=1 or
N3CD5Q1E3=1), N3CD5Q1E10=1, (N3CD5Q1E15=1 or N3CD5Q1E14=1));
if N3CD5Q1E5=2 and N3CD5Q1E4=2 and N3CD5Q1E17=2 and N3CD5Q1E20=2 and N3CD5Q1E3=2 and
N3CD5Q1E10=2 and N3CD5Q1E15=2 and N3CD5Q1E14=2 then pstiwithm=0; /*prior-to-past-year
withdrawal symptom count*/
Label pstiwithm='Sum of prior-to-past-year stimulant withdrawal symptoms (Missing-Tolerant)';

*Stimulant - Withdrawal - using subalgorithm;
STIA11m=.; if stiwithm=>2 or N3CD5Q1C29=1 then STIA11m=1; if stiwithm<2 and stiwithm>. and
N3CD5Q1C29=2 then STIA11m=0; /*Past-year*/
Label STIA11m='Past-year stimulant withdrawal criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pSTIA11m=.; if pstiwithm=>2 or N3CD5Q1E29=1 then pSTIA11m=1; if pstiwithm<2 and pstiwithm>.
and N3CD5Q1E29=2 then pSTIA11m=0; /*Prior-to-past-year*/
Label pSTIA11m='Prior-to-past-year stimulant withdrawal criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lSTIA11m=.; if stiwithm=>2 or N3CD5Q1C29=1 or pstiwithm=>2 or N3CD5Q1E29=1 then lSTIA11m=1;

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if stiwithm<2 and stiwithm>. and N3CD5Q1C29=2 and pstiwithm<2 and pstiwithm>. and
N3CD5Q1E29=2 then lSTIA11m=0; /*Lifetime*/
Label lSTIA11m='Lifetime stimulant withdrawal criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*-Past-year (STIA1m-STIA11m) and prior-to-past-year (pSTIA1m-pSTIA11m) symptom counts
-Prior-to-past-year symptoms counts include N3CD5Q2A to
denote SOME STIUD symptoms occurred within same 12-month period
-Lifetime symptom count takes the largest symptom count from either past-year or prior-to-
past-year*/

stisumm=sum(STIA1m, STIA2m, STIA3m, STIA4m, STIA5m, STIA6m, STIA7m, STIA8m, STIA9m, STIA10m,
STIA11m); /*Past-year*/
Label stisumm='Sum of past-year stimulant criteria (Missing-Tolerant)';
if N3CD5Q2A=1 THEN pstisumm=sum(pSTIA1m, pSTIA2m, pSTIA3m, pSTIA4m, pSTIA5m, pSTIA6m, pSTIA7m,
pSTIA8m, pSTIA9m, pSTIA10m, pSTIA11m); /*Prior-to-past-year*/
Label pstisumm='Sum of prior-to-past-year stimulant criteria (Missing-Tolerant)';
lstisumm=max(stisumm, pstisumm); /*Lifetime*/
Label lstisumm='Maximum sum of past-year or prior-to-past-year stimulant criteria (Missing-
Tolerant)';

/*Number of missing criteria*/
stisumm_miss=nmiss(STIA1m, STIA2m, STIA3m, STIA4m, STIA5m, STIA6m, STIA7m, STIA8m, STIA9m,
STIA10m, STIA11m); /*Past-year*/
Label stisumm_miss='Sum of past-year missing stimulant criteria (Missing-Tolerant)';
pstisumm_miss=nmiss(pSTIA1m, pSTIA2m, pSTIA3m, pSTIA4m, pSTIA5m, pSTIA6m, pSTIA7m, pSTIA8m,
pSTIA9m, pSTIA10m, pSTIA11m); /*Prior-to-past-year*/
Label pstisumm_miss='Sum of prior-to-past-year stimulant criteria (Missing-Tolerant)';

*STIUD diagnoses - Missing tolerant;
STIUDm=.; if stisumm=>2 then STIUDm=1; if stisumm<2 and stisumm>. then STIUDm=0; /*Past-year*/
Label STIUDm='Past-year STIUD diagnosis (missing-tolerant)-.=missing, 0=negative, 1=positive';
pSTIUDm=.; if pstisumm=>2 then pSTIUDm=1; if pstisumm<2 and pstisumm>. then pSTIUDm=0;
/*Prior-to-past-year*/
Label pSTIUDm='Prior-to-past-year STIUD diagnosis (missing-tolerant)-.=missing, 0=negative,
1=positive';
lstIUDm=.; if lstisumm=>2 then lstIUDm=1; if lstisumm<2 and lstisumm>. then lstIUDm=0;
/*Lifetime*/
Label lstIUDm='Lifetime STIUD diagnosis (missing-tolerant)-.=missing, 0=negative, 1=positive';

*STIUD severity - Missing tolerant;
if (stisumm=2 and stisumm_miss>=2) or (stisumm=3 and stisumm_miss>=1) or (stisumm=4 and
stisumm_miss>=2)
or (stisumm=5 and stisumm_miss>=1) then STIUDSEVm=.; /*Past-year - missing STIUD severity*/
if (stisumm=0 and stisumm_miss<2) or (stisumm=1 and stisumm_miss=0) then STIUDSEVm=0; /*Past-
year - no STIUD diagnosis*/
if (stisumm=2 and stisumm_miss<2) or (stisumm=3 and stisumm_miss=0) then STIUDSEVm=1; /*Past-
year - mild STIUD*/
if (stisumm=4 and stisumm_miss<2) or (stisumm=5 and stisumm_miss=0) then STIUDSEVm=2; /*Past-
year - moderate STIUD*/
if stisumm>=6 then STIUDSEVm=3; /*Past-year - severe STIUD*/
Label STIUDSEVm='Past-year STIUD severity grading (missing-tolerant)-.=missing, 0=no STIUD
diagnosis, 1=mild STIUD, 2=moderate STIUD and 3=severe STIUD';

if (pstisumm=2 and pstisumm_miss>=2) or (pstisumm=3 and pstisumm_miss>=1) or (pstisumm=4 and
pstisumm_miss>=2)
or (pstisumm=5 and pstisumm_miss>=1) then pSTIUDSEVm=.; /*Prior-to-past-year - missing STIUD
severity*/

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if (pstisumm=0 and pstisumm_miss<2) or (pstisumm=1 and pstisumm_miss=0) then pSTIUDSEVm=0;
/*Prior-to-past-year - no STIUD diagnosis*/
if (pstisumm=2 and pstisumm_miss<2) or (pstisumm=3 and pstisumm_miss=0) then pSTIUDSEVm=1;
/*Prior-to-past-year - mild STIUD*/
if (pstisumm=4 and pstisumm_miss<2) or (pstisumm=5 and pstisumm_miss=0) then pSTIUDSEVm=2;
/*Prior-to-past-year - moderate STIUD*/
if pstisumm>=6 then pSTIUDSEVm=3; /*Prior-to-past-year - severe AUD*/
Label pSTIUDSEVm='Prior-to-past-year STIUD severity grading (missing-tolerant)-.=missing, 0=no
STIUD diagnosis, 1=mild STIUD, 2=moderate STIUD and 3=severe STIUD';

if STIUDSEVm=. or pSTIUDSEVm=. then lSTIUDSEVm=.; /*Lifetime - missing STIUD severity*/
if max(STIUDSEVm, pSTIUDSEVm)=0 and (STIUDSEVm^=. and pSTIUDSEVm^=.) then lSTIUDSEVm=0;
/*Lifetime - no STIUD diagnosis*/
if max(STIUDSEVm, pSTIUDSEVm)=1 then lSTIUDSEVm=1; /*Lifetime - mild STIUD*/
if max(STIUDSEVm, pSTIUDSEVm)=2 then lSTIUDSEVm=2; /*Lifetime - moderate STIUD*/
if max(STIUDSEVm, pSTIUDSEVm)=3 then lSTIUDSEVm=3; /*Lifetime - severe STIUD*/
Label lSTIUDSEVm='Lifetime STIUD severity grading (missing-tolerant)-.=missing, 0=no STIUD
diagnosis, 1=mild STIUD, 2=moderate STIUD and 3=severe STIUD';

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CLBUD Criteria and Diagnoses Algorithms (Missing-Tolerant)

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/*Club drug - Larger/longer - Missing-tolerant*/
CLBA1m=.; if N3CD6Q1C32=1 then CLBA1m=1; if N3CD6Q1C32=2 then CLBA1m=0; /*Past-year*/
Label CLBA1m='Past-year club drug larger/longer criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pCLBA1m=.; if N3CD6Q1E32=1 then pCLBA1m=1; if N3CD6Q1E32=2 then pCLBA1m=0; /*Prior-to-past-
year*/
Label pCLBA1m='Prior-to-past-year club drug larger/longer criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lCLBA1m=.; if N3CD6Q1C32=1 or N3CD6Q1E32=1 then lCLBA1m=1; if N3CD6Q1C32=2 and N3CD6Q1E32=2
then lCLBA1m=0; /*Lifetime*/
Label lCLBA1m='Lifetime club drug larger/longer criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Club drug - Quit or cut down - Missing-tolerant*/
CLBA2m=.; if N3CD6Q1C30=1 or N3CD6Q1C31=1 then CLBA2m=1; if N3CD6Q1C30=2 and N3CD6Q1C31=2 then
CLBA2m=0; /*Past-year*/
Label CLBA2m='Past-year club drug quit or cut down criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pCLBA2m=.; if N3CD6Q1E30=1 or N3CD6Q1E31=1 then pCLBA2m=1; if N3CD6Q1E30=2 and N3CD6Q1E31=2
then pCLBA2m=0; /*Prior-to-past-year*/
Label pCLBA2m='Prior-to-past-year club drug quit or cut down criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lCLBA2m=.; if N3CD6Q1C30=1 or N3CD6Q1E30=1 or N3CD6Q1C31=1 or N3CD6Q1E31=1 then lCLBA2m=1;
if N3CD6Q1C30=2 and N3CD6Q1E30=2 and N3CD6Q1C31=2 and N3CD6Q1E31=2 then lCLBA2m=0;
/*Lifetime*/
Label lCLBA2m='Lifetime club drug quit or cut down criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Club drug - Time spent - Missing-tolerant*/
CLBA3m=.; if N3CD6Q1C33=1 or N3CD6Q1C34=1 then CLBA3m=1; if N3CD6Q1C33=2 and N3CD6Q1C34=2 then
CLBA3m=0; /*Past-year*/
Label CLBA3m='Past-year club drug time spent criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pCLBA3m=.; if N3CD6Q1E33=1 or N3CD6Q1E34=1 then pCLBA3m=1; if N3CD6Q1E33=2 and N3CD6Q1E34=2
then pCLBA3m=0; /*Prior-to-past-year*/
Label pCLBA3m='Prior-to-past-year club drug time spent criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lCLBA3m=.; if N3CD6Q1C33=1 or N3CD6Q1E33=1 or N3CD6Q1C34=1 or N3CD6Q1E34=1 then lCLBA3m=1;
if N3CD6Q1C33=2 and N3CD6Q1E33=2 and N3CD6Q1C34=2 and N3CD6Q1E34=2 then lCLBA3m=0;
/*Lifetime*/
Label lCLBA3m='Lifetime club drug time spent criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Club drug - Craving - Missing-tolerant*/
CLBA4m=.; if N3CD6Q1C39=1 or N3CD6Q1C40=1 then CLBA4m=1; if N3CD6Q1C39=2 and N3CD6Q1C40=2 then
CLBA4m=0; /*Past-year*/
Label CLBA4m='Past-year club drug craving criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pCLBA4m=.; if N3CD6Q1E39=1 or N3CD6Q1E40=1 then pCLBA4m=1; if N3CD6Q1E39=2 and N3CD6Q1E40=2
then pCLBA4m=0; /*Prior-to-past-year*/
Label pCLBA4m='Prior-to-past-year club drug craving criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
lCLBA4m=.; if N3CD6Q1C39=1 or N3CD6Q1E39=1 or N3CD6Q1C40=1 or N3CD6Q1E40=1 then lCLBA4m=1;
if N3CD6Q1C39=2 and N3CD6Q1E39=2 and N3CD6Q1C40=2 and N3CD6Q1E40=2 then lCLBA4m=0;
/*Lifetime*/
Label lCLBA4m='Lifetime club drug craving criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';

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/*Club drug - Role interference - Missing-tolerant*/
CLBA5m=.; if N3CD6Q1C44=1 or N3CD6Q1C45=1 or N3CD6Q1C46=1 then CLBA5m=1; if N3CD6Q1C44=2 and
N3CD6Q1C45=2 and N3CD6Q1C46=2 then CLBA5m=0; /*Past-year*/
Label CLBA5m='Past-year club drug role interference criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pCLBA5m=.; if N3CD6Q1E44=1 or N3CD6Q1E45=1 or N3CD6Q1E46=1 then pCLBA5m=1; if N3CD6Q1E44=2 and
N3CD6Q1E45=2 and N3CD6Q1E46=2 then pCLBA5m=0; /*Prior-to-past-year*/
Label pCLBA5m='Prior-to-past-year club drug role interference criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lCLBA5m=.; if N3CD6Q1C44=1 or N3CD6Q1E44=1 or N3CD6Q1C45=1 or N3CD6Q1E45=1 or N3CD6Q1C46=1 or
N3CD6Q1E46=1 then lCLBA5m=1;
if N3CD6Q1C44=2 and N3CD6Q1E44=2 and N3CD6Q1C45=2 and N3CD6Q1E45=2 and N3CD6Q1C46=2 and
N3CD6Q1E46=2 then lCLBA5m=0; /*Lifetime*/
Label lCLBA5m='Lifetime club drug role interference criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Club drug - Social problems - Missing-tolerant*/
CLBA6m=.; if N3CD6Q1C41=1 or N3CD6Q1C42=1 or N3CD6Q1C43=1 then CLBA6m=1; if N3CD6Q1C41=2 and
N3CD6Q1C42=2 and N3CD6Q1C43=2 then CLBA6m=0; /*Past-year*/
Label CLBA6m='Past-year club drug social problems criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pCLBA6m=.; if N3CD6Q1E41=1 or N3CD6Q1E42=1 or N3CD6Q1E43=1 then pCLBA6m=1; if N3CD6Q1E41=2 and
N3CD6Q1E42=2 and N3CD6Q1E43=2 then pCLBA6m=0; /*Prior-to-past-year*/
Label pCLBA6m='Prior-to-past-year club drug social problems criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lCLBA6m=.; if N3CD6Q1C41=1 or N3CD6Q1E41=1 or N3CD6Q1C42=1 or N3CD6Q1E42=1 or N3CD6Q1C43=1 or
N3CD6Q1E43=1 then lCLBA6m=1;
if N3CD6Q1C41=2 and N3CD6Q1E41=2 and N3CD6Q1C42=2 and N3CD6Q1E42=2 and N3CD6Q1C43=2 and
N3CD6Q1E43=2 then lCLBA6m=0; /*Lifetime*/
Label lCLBA6m='Lifetime club drug social problems criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Club drug - Give up - Missing-tolerant*/
CLBA7m=.; if N3CD6Q1C35=1 or N3CD6Q1C36=1 then CLBA7m=1; if N3CD6Q1C35=2 and N3CD6Q1C36=2 then
CLBA7m=0; /*Past-year*/
Label CLBA7m='Past-year club drug give up criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pCLBA7m=.; if N3CD6Q1E35=1 or N3CD6Q1E36=1 then pCLBA7m=1; if N3CD6Q1E35=2 and N3CD6Q1E36=2
then pCLBA7m=0; /*Prior-to-past-year*/
Label pCLBA7m='Prior-to-past-year club drug give up criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
lCLBA7m=.; if N3CD6Q1C35=1 or N3CD6Q1E35=1 or N3CD6Q1C36=1 or N3CD6Q1E36=1 then lCLBA7m=1;
if N3CD6Q1C35=2 and N3CD6Q1E35=2 and N3CD6Q1C36=2 and N3CD6Q1E36=2 then lCLBA7m=0;
/*Lifetime*/
Label lCLBA7m='Lifetime club drug give up criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';

/*Club drug - Hazardous use - Missing-tolerant*/
CLBA8m=.; if N3CD6Q1C47=1 or N3CD6Q1C48=1 then CLBA8m=1; if N3CD6Q1C47=2 and N3CD6Q1C48=2 then
CLBA8m=0; /*Past-year*/
Label CLBA8m='Past-year club drug hazardous use criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pCLBA8m=.; if N3CD6Q1E47=1 or N3CD6Q1E48=1 then pCLBA8m=1; if N3CD6Q1E47=2 and N3CD6Q1E48=2
then pCLBA8m=0; /*Prior-to-past-year*/
Label pCLBA8m='Prior-to-past-year club drug hazardous use criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lCLBA8m=.; if N3CD6Q1C47=1 or N3CD6Q1E47=1 or N3CD6Q1C48=1 or N3CD6Q1E48=1 then lCLBA8m=1;

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if N3CD6Q1C47=2 and N3CD6Q1E47=2 and N3CD6Q1C48=2 and N3CD6Q1E48=2 then lCLBA8m=0;
/*Lifetime*/
Label lCLBA8m='Lifetime club drug hazardous use criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Club drug - Continued use despite problems - Missing-tolerant*/
CLBA9m=.; if N3CD6Q1C37=1 or N3CD6Q1C38=1 then CLBA9m=1; if N3CD6Q1C37=2 and N3CD6Q1C38=2 then
CLBA9m=0; /*Past-year*/
Label CLBA9m='Past-year club drug continued use despite problems criterion endorsement
(missing-tolerant)-.=missing, 0=negative, 1=positive';
pCLBA9m=.; if N3CD6Q1E37=1 or N3CD6Q1E38=1 then pCLBA9m=1; if N3CD6Q1E37=2 and N3CD6Q1E38=2
then pCLBA9m=0; /*Prior-to-past-year*/
Label pCLBA9m='Prior-to-past-year club drug continued use despite problems criterion
endorsement (missing-tolerant)-.=missing, 0=negative, 1=positive';
lCLBA9m=.; if N3CD6Q1C37=1 or N3CD6Q1E37=1 or N3CD6Q1C38=1 or N3CD6Q1E38=1 then lCLBA9m=1;
if N3CD6Q1C37=2 and N3CD6Q1E37=2 and N3CD6Q1C38=2 and N3CD6Q1E38=2 then lCLBA9m=0;
/*Lifetime*/
Label lCLBA9m='Lifetime club drug continued use despite problems criterion endorsement
(missing-tolerant)-.=missing, 0=negative, 1=positive';

/*Club drug - Tolerance - Missing-tolerant*/
CLBA10m=.; if N3CD6Q1C1=1 or N3CD6Q1C2=1 then CLBA10m=1; if N3CD6Q1C1=2 and N3CD6Q1C2=2 then
CLBA10m=0; /*Past-year*/
Label CLBA10m='Past-year club drug tolerance criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pCLBA10m=.; if N3CD6Q1E1=1 or N3CD6Q1E2=1 then pCLBA10m=1; if N3CD6Q1E1=2 and N3CD6Q1E2=2 then
pCLBA10m=0; /*Prior-to-past-year*/
Label pCLBA10m='Prior-to-past-year club drug tolerance criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lCLBA10m=.; if N3CD6Q1C1=1 or N3CD6Q1E1=1 or N3CD6Q1C2=1 or N3CD6Q1E2=1 then lCLBA10m=1;
if N3CD6Q1C1=2 and N3CD6Q1E1=2 and N3CD6Q1C2=2 and N3CD6Q1E2=2 then lCLBA10m=0; /*Lifetime*/
Label lCLBA10m='Lifetime club drug tolerance criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*-Past-year (CLBA1m-CLBA10m) and prior-to-past-year (pCLBA1m-pCLBA10m) symptom counts
-Prior-to-past-year symptoms counts include N3CD6Q2A to
denote SOME CLBUD symptoms occurred within same 12-month period
-Lifetime symptom count takes the largest symptom count from either past-year or prior-to-
past-year*/

clbsumm=sum(CLBA1m, CLBA2m, CLBA3m, CLBA4m, CLBA5m, CLBA6m, CLBA7m, CLBA8m, CLBA9m, CLBA10m);
/*Past-year*/
Label clbsumm='Sum of past-year club drug criteria (Missing-Tolerant)';
if N3CD6Q2A =1 THEN pclbsumm=sum(pCLBA1m, pCLBA2m, pCLBA3m, pCLBA4m, pCLBA5m, pCLBA6m,
pCLBA7m, pCLBA8m, pCLBA9m, pCLBA10m); /*Prior-to-past-year*/
Label pclbsumm='Sum of prior-to-past-year club drug criteria (Missing-Tolerant)';
lclbsumm=max(clbsumm, pclbsumm); /*Lifetime*/
Label lclbsumm='Maximum sum of past-year or prior-to-past-year club drug criteria (Missing-
Tolerant)';

/*Number of missing criteria*/
clbsumm_miss=nmiss(CLBA1m, CLBA2m, CLBA3m, CLBA4m, CLBA5m, CLBA6m, CLBA7m, CLBA8m, CLBA9m,
CLBA10m); /*Past-year*/
Label clbsumm_miss='Sum of past-year missing club drug criteria (Missing-Tolerant)';
pclbsumm_miss=nmiss(pCLBA1m, pCLBA2m, pCLBA3m, pCLBA4m, pCLBA5m, pCLBA6m, pCLBA7m, pCLBA8m,
pCLBA9m, pCLBA10m); /*Prior-to-past-year*/
Label pclbsumm_miss='Sum of prior-to-past-year club drug criteria (Missing-Tolerant)';

*CLBUD diagnoses - Missing tolerant;

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CLBUDm=.; if clbsumm=>2 then CLBUDm=1; if clbsumm<2 and clbsumm>. then CLBUDm=0; /*Past-year*/
Label CLBUDm='Past-year CLBUD diagnosis (missing-tolerant)-.=missing, 0=negative, 1=positive';
pCLBUDm=.; if pclbsumm=>2 then pCLBUDm=1; if pclbsumm<2 and pclbsumm>. then pCLBUDm=0;
/*Prior-to-past-year*/
Label pCLBUDm='Prior-to-past-year CLBUD diagnosis (missing-tolerant)-.=missing, 0=negative,
1=positive';
lCLBUDm=.; if lclbsumm=>2 then lCLBUDm=1; if lclbsumm<2 and lclbsumm>. then lCLBUDm=0;
/*Lifetime*/
Label lCLBUDm='Lifetime CLBUD diagnosis (missing-tolerant)-.=missing, 0=negative, 1=positive';

*CLBUD severity - Missing tolerant;
if (clbsumm=2 and clbsumm_miss>=2) or (clbsumm=3 and clbsumm_miss>=1) or (clbsumm=4 and
clbsumm_miss>=2)
or (clbsumm=5 and clbsumm_miss>=1) then CLBUDSEVm=.; /*Past-year - missing CLBUD severity*/
if (clbsumm=0 and clbsumm_miss<2) or (clbsumm=1 and clbsumm_miss=0) then CLBUDSEVm=0; /*Past-
year - no CLBUD diagnosis*/
if (clbsumm=2 and clbsumm_miss<2) or (clbsumm=3 and clbsumm_miss=0) then CLBUDSEVm=1; /*Past-
year - mild CLBUD*/
if (clbsumm=4 and clbsumm_miss<2) or (clbsumm=5 and clbsumm_miss=0) then CLBUDSEVm=2; /*Past-
year - moderate CLBUD*/
if clbsumm>=6 then CLBUDSEVm=3; /*Past-year - severe CLBUD*/
Label CLBUDSEVm='Past-year CLBUD severity grading (missing-tolerant)-.=missing, 0=no CLBUD
diagnosis, 1=mild CLBUD, 2=moderate CLBUD and 3=severe CLBUD';

if (pclbsumm=2 and pclbsumm_miss>=2) or (pclbsumm=3 and pclbsumm_miss>=1) or (pclbsumm=4 and
pclbsumm_miss>=2)
or (pclbsumm=5 and pclbsumm_miss>=1) then pCLBUDSEVm=.; /*Prior-to-past-year - missing CLBUD
severity*/
if (pclbsumm=0 and pclbsumm_miss<2) or (pclbsumm=1 and pclbsumm_miss=0) then pCLBUDSEVm=0;
/*Prior-to-past-year - no CLBUD diagnosis*/
if (pclbsumm=2 and pclbsumm_miss<2) or (pclbsumm=3 and pclbsumm_miss=0) then pCLBUDSEVm=1;
/*Prior-to-past-year - mild CLBUD*/
if (pclbsumm=4 and pclbsumm_miss<2) or (pclbsumm=5 and pclbsumm_miss=0) then pCLBUDSEVm=2;
/*Prior-to-past-year - moderate CLBUD*/
if pclbsumm>=6 then pCLBUDSEVm=3; /*Prior-to-past-year - severe AUD*/
Label pCLBUDSEVm='Prior-to-past-year CLBUD severity grading (missing-tolerant)-.=missing, 0=no
CLBUD diagnosis, 1=mild CLBUD, 2=moderate CLBUD and 3=severe CLBUD';

if CLBUDSEVm=. or pCLBUDSEVm=. then lCLBUDSEVm=.; /*Lifetime - missing CLBUD severity*/
if max(CLBUDSEVm, pCLBUDSEVm)=0 and (CLBUDSEVm^=. and pCLBUDSEVm^=.) then lCLBUDSEVm=0;
/*Lifetime - no CLBUD diagnosis*/
if max(CLBUDSEVm, pCLBUDSEVm)=1 then lCLBUDSEVm=1; /*Lifetime - mild CLBUD*/
if max(CLBUDSEVm, pCLBUDSEVm)=2 then lCLBUDSEVm=2; /*Lifetime - moderate CLBUD*/
if max(CLBUDSEVm, pCLBUDSEVm)=3 then lCLBUDSEVm=3; /*Lifetime - severe CLBUD*/
Label lCLBUDSEVm='Lifetime CLBUD severity grading (missing-tolerant)-.=missing, 0=no CLBUD
diagnosis, 1=mild CLBUD, 2=moderate CLBUD and 3=severe CLBUD';

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HALUD Criteria and Diagnoses Algorithms (Missing-Tolerant)

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/*Hallucinogen - Larger/longer - Missing-tolerant*/
HALA1m=.; if N3CD7Q1C32=1 then HALA1m=1; if N3CD7Q1C32=2 then HALA1m=0; /*Past-year*/
Label HALA1m='Past-year hallucinogen larger/longer criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pHALA1m=.; if N3CD7Q1E32=1 then pHALA1m=1; if N3CD7Q1E32=2 then pHALA1m=0; /*Prior-to-past-
year*/
Label pHALA1m='Prior-to-past-year hallucinogen larger/longer criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lHALA1m=.; if N3CD7Q1C32=1 or N3CD7Q1E32=1 then lHALA1m=1; if N3CD7Q1C32=2 and N3CD7Q1E32=2
then lHALA1m=0; /*Lifetime*/
Label lHALA1m='Lifetime hallucinogen larger/longer criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Hallucinogen - Quit or cut down - Missing-tolerant*/
HALA2m=.; if N3CD7Q1C30=1 or N3CD7Q1C31=1 then HALA2m=1; if N3CD7Q1C30=2 and N3CD7Q1C31=2 then
HALA2m=0; /*Past-year*/
Label HALA2m='Past-year hallucinogen quit or cut down criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
pHALA2m=.; if N3CD7Q1E30=1 or N3CD7Q1E31=1 then pHALA2m=1; if N3CD7Q1E30=2 and N3CD7Q1E31=2
then pHALA2m=0; /*Prior-to-past-year*/
Label pHALA2m='Prior-to-past-year hallucinogen quit or cut down criterion endorsement
(missing-tolerant)-.=missing, 0=negative, 1=positive';
lHALA2m=.; if N3CD7Q1C30=1 or N3CD7Q1E30=1 or N3CD7Q1C31=1 or N3CD7Q1E31=1 then lHALA2m=1;
if N3CD7Q1C30=2 and N3CD7Q1E30=2 and N3CD7Q1C31=2 and N3CD7Q1E31=2 then lHALA2m=0;
/*Lifetime*/
Label lHALA2m='Lifetime hallucinogen quit or cut down criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';

/*Hallucinogen - Time spent - Missing-tolerant*/
HALA3m=.; if N3CD7Q1C33=1 or N3CD7Q1C34=1 then HALA3m=1; if N3CD7Q1C33=2 and N3CD7Q1C34=2 then
HALA3m=0; /*Past-year*/
Label HALA3m='Past-year hallucinogen time spent criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pHALA3m=.; if N3CD7Q1E33=1 or N3CD7Q1E34=1 then pHALA3m=1; if N3CD7Q1E33=2 and N3CD7Q1E34=2
then pHALA3m=0; /*Prior-to-past-year*/
Label pHALA3m='Prior-to-past-year hallucinogen time spent criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lHALA3m=.; if N3CD7Q1C33=1 or N3CD7Q1E33=1 or N3CD7Q1C34=1 or N3CD7Q1E34=1 then lHALA3m=1;
if N3CD7Q1C33=2 and N3CD7Q1E33=2 and N3CD7Q1C34=2 and N3CD7Q1E34=2 then lHALA3m=0;
/*Lifetime*/
Label lHALA3m='Lifetime hallucinogen time spent criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Hallucinogen - Craving - Missing-tolerant*/
HALA4m=.; if N3CD7Q1C39=1 or N3CD7Q1C40=1 then HALA4m=1; if N3CD7Q1C39=2 and N3CD7Q1C40=2 then
HALA4m=0; /*Past-year*/
Label HALA4m='Past-year hallucinogen craving criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pHALA4m=.; if N3CD7Q1E39=1 or N3CD7Q1E40=1 then pHALA4m=1; if N3CD7Q1E39=2 and N3CD7Q1E40=2
then pHALA4m=0; /*Prior-to-past-year*/
Label pHALA4m='Prior-to-past-year hallucinogen craving criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lHALA4m=.; if N3CD7Q1C39=1 or N3CD7Q1E39=1 or N3CD7Q1C40=1 or N3CD7Q1E40=1 then lHALA4m=1;
if N3CD7Q1C39=2 and N3CD7Q1E39=2 and N3CD7Q1C40=2 and N3CD7Q1E40=2 then lHALA4m=0;
/*Lifetime*/
Label lHALA4m='Lifetime hallucinogen craving criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

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/*Hallucinogen - Role interference - Missing-tolerant*/
HALA5m=.; if N3CD7Q1C44=1 or N3CD7Q1C45=1 or N3CD7Q1C46=1 then HALA5m=1; if N3CD7Q1C44=2 and
N3CD7Q1C45=2 and N3CD7Q1C46=2 then HALA5m=0; /*Past-year*/
Label HALA5m='Past-year hallucinogen role interference criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
pHALA5m=.; if N3CD7Q1E44=1 or N3CD7Q1E45=1 or N3CD7Q1E46=1 then pHALA5m=1; if N3CD7Q1E44=2 and
N3CD7Q1E45=2 and N3CD7Q1E46=2 then pHALA5m=0; /*Prior-to-past-year*/
Label pHALA5m='Prior-to-past-year hallucinogen role interference criterion endorsement
(missing-tolerant)-.=missing, 0=negative, 1=positive';
lHALA5m=.; if N3CD7Q1C44=1 or N3CD7Q1E44=1 or N3CD7Q1C45=1 or N3CD7Q1E45=1 or N3CD7Q1C46=1 or
N3CD7Q1E46=1 then lHALA5m=1;
if N3CD7Q1C44=2 and N3CD7Q1E44=2 and N3CD7Q1C45=2 and N3CD7Q1E45=2 and N3CD7Q1C46=2 or
N3CD7Q1E46=2 then lHALA5m=0; /*Lifetime*/
Label lHALA5m='Lifetime hallucinogen role interference criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';

/*Hallucinogen - Social problems - Missing-tolerant*/
HALA6m=.; if N3CD7Q1C41=1 or N3CD7Q1C42=1 or N3CD7Q1C43=1 then HALA6m=1; if N3CD7Q1C41=2 and
N3CD7Q1C42=2 and N3CD7Q1C43=2 then HALA6m=0; /*Past-year*/
Label HALA6m='Past-year hallucinogen social problems criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pHALA6m=.; if N3CD7Q1E41=1 or N3CD7Q1E42=1 or N3CD7Q1E43=1 then pHALA6m=1; if N3CD7Q1E41=2 and
N3CD7Q1E42=2 and N3CD7Q1E43=2 then pHALA6m=0; /*Prior-to-past-year*/
Label pHALA6m='Prior-to-past-year hallucinogen social problems criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lHALA6m=.; if N3CD7Q1C41=1 or N3CD7Q1E41=1 or N3CD7Q1C42=1 or N3CD7Q1E42=1 or N3CD7Q1C43=1 or
N3CD7Q1E43=1 then lHALA6m=1;
if N3CD7Q1C41=2 and N3CD7Q1E41=2 and N3CD7Q1C42=2 and N3CD7Q1E42=2 and N3CD7Q1C43=2 and
N3CD7Q1E43=2 then lHALA6m=0; /*Lifetime*/
Label lHALA6m='Lifetime hallucinogen social problems criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Hallucinogen - Give up - Missing-tolerant*/
HALA7m=.; if N3CD7Q1C35=1 or N3CD7Q1C36=1 then HALA7m=1; if N3CD7Q1C35=2 and N3CD7Q1C36=2 then
HALA7m=0; /*Past-year*/
Label HALA7m='Past-year hallucinogen give up criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pHALA7m=.; if N3CD7Q1E35=1 or N3CD7Q1E36=1 then pHALA7m=1; if N3CD7Q1E35=2 and N3CD7Q1E36=2
then pHALA7m=0; /*Prior-to-past-year*/
Label pHALA7m='Prior-to-past-year hallucinogen give up criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lHALA7m=.; if N3CD7Q1C35=1 or N3CD7Q1E35=1 or N3CD7Q1C36=1 or N3CD7Q1E36=1 then lHALA7m=1;
if N3CD7Q1C35=2 and N3CD7Q1E35=2 and N3CD7Q1C36=2 and N3CD7Q1E36=2 then lHALA7m=0;
/*Lifetime*/
Label lHALA7m='Lifetime hallucinogen give up criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Hallucinogen - Hazardous use - Missing-tolerant*/
HALA8m=.; if N3CD7Q1C47=1 or N3CD7Q1C48=1 then HALA8m=1; if N3CD7Q1C47=2 and N3CD7Q1C48=2 then
HALA8m=0; /*Past-year*/
Label HALA8m='Past-year hallucinogen hazardous use criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pHALA8m=.; if N3CD7Q1E47=1 or N3CD7Q1E48=1 then pHALA8m=1; if N3CD7Q1E47=2 and N3CD7Q1E48=2
then pHALA8m=0; /*Prior-to-past-year*/
Label pHALA8m='Prior-to-past-year hallucinogen hazardous use criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lHALA8m=.; if N3CD7Q1C47=1 or N3CD7Q1E47=1 or N3CD7Q1C48=1 or N3CD7Q1E48=1 then lHALA8m=1;

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if N3CD7Q1C47=2 and N3CD7Q1E47=2 and N3CD7Q1C48=2 and N3CD7Q1E48=2 then lHALA8m=0;
/*Lifetime*/
Label lHALA8m='Lifetime hallucinogen hazardous use criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Hallucinogen - Continued use despite problems - Missing-tolerant*/
HALA9m=.; if N3CD7Q1C37=1 or N3CD7Q1C38=1 then HALA9m=1; if N3CD7Q1C37=2 and N3CD7Q1C38=2 then
HALA9m=0; /*Past-year*/
Label HALA9m='Past-year hallucinogen continued use despite problems criterion endorsement
(missing-tolerant)-.=missing, 0=negative, 1=positive';
pHALA9m=.; if N3CD7Q1E37=1 or N3CD7Q1E38=1 then pHALA9m=1; if N3CD7Q1E37=2 and N3CD7Q1E38=2
then pHALA9m=0; /*Prior-to-past-year*/
Label pHALA9m='Prior-to-past-year hallucinogen continued use despite problems criterion
endorsement (missing-tolerant)-.=missing, 0=negative, 1=positive';
lHALA9m=.; if N3CD7Q1C37=1 or N3CD7Q1E37=1 or N3CD7Q1C38=1 or N3CD7Q1E38=1 then lHALA9m=1;
if N3CD7Q1C37=2 and N3CD7Q1E37=2 and N3CD7Q1C38=2 and N3CD7Q1E38=2 then lHALA9m=0;
/*Lifetime*/
Label lHALA9m='Lifetime hallucinogen continued use despite problems criterion endorsement
(missing-tolerant)-.=missing, 0=negative, 1=positive';

/*Hallucinogen - Tolerance - Missing-tolerant*/
HALA10m=.; if N3CD7Q1C1=1 or N3CD7Q1C2=1 then HALA10m=1; if N3CD7Q1C1=2 and N3CD7Q1C2=2 then
HALA10m=0; /*Past-year*/
Label HALA10m='Past-year hallucinogen tolerance criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pHALA10m=.; if N3CD7Q1E1=1 or N3CD7Q1E2=1 then pHALA10m=1; if N3CD7Q1E1=2 and N3CD7Q1E2=2
then pHALA10m=0; /*Prior-to-past-year*/
Label pHALA10m='Prior-to-past-year hallucinogen tolerance criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lHALA10m=.; if N3CD7Q1C1=1 or N3CD7Q1E1=1 or N3CD7Q1C2=1 or N3CD7Q1E2=1 then lHALA10m=1;
if N3CD7Q1C1=2 and N3CD7Q1E1=2 and N3CD7Q1C2=2 and N3CD7Q1E2=2 then lHALA10m=0; /*Lifetime*/
Label lHALA10m='Lifetime hallucinogen tolerance criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*-Past-year (HALA1m-HALA10m) and prior-to-past-year (pHALA1m-pHALA10m) symptom counts
-Prior-to-past-year symptoms counts include N3CD7Q2A to
denote SOME HALUD symptoms occurred within same 12-month period
-Lifetime symptom count takes the largest symptom count from either past-year or prior-to-
past-year*/

halsumm=sum(HALA1m, HALA2m, HALA3m, HALA4m, HALA5m, HALA6m, HALA7m, HALA8m, HALA9m, HALA10m);
/*Past-year*/
Label halsumm='Sum of past-year hallucinogen criteria (Missing-Tolerant)';
if N3CD7Q2A=1 THEN phalsumm=sum(pHALA1m, pHALA2m, pHALA3m, pHALA4m, pHALA5m, pHALA6m, pHALA7m,
pHALA8m, pHALA9m, pHALA10m); /*Prior-to-past-year*/
Label phalsumm='Sum of prior-to-past-year hallucinogen criteria (Missing-Tolerant)';
lhsumm=max(halsumm, phalsumm); /*Lifetime*/
Label lhsumm='Maximum sum of past-year or prior-to-past-year hallucinogen criteria (Missing-
Tolerant)';

/*Number of missing criteria*/
halsumm_miss=nmiss(HALA1m, HALA2m, HALA3m, HALA4m, HALA5m, HALA6m, HALA7m, HALA8m, HALA9m,
HALA10m); /*Past-year*/
Label halsumm_miss='Sum of past-year missing hallucinogen criteria (Missing-Tolerant)';
phalsumm_miss=nmiss(pHALA1m, pHALA2m, pHALA3m, pHALA4m, pHALA5m, pHALA6m, pHALA7m, pHALA8m,
pHALA9m, pHALA10m); /*Prior-to-past-year*/
Label phalsumm_miss='Sum of prior-to-past-year hallucinogen criteria (Missing-Tolerant)';

*HALUD diagnoses - Missing tolerant;

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HALUDm=.; if halsumm=>2 then HALUDm=1; if halsumm<2 and halsumm>. then HALUDm=0; /*Past-year*/
Label HALUDm='Past-year HALUD diagnosis (missing-tolerant)-.=missing, 0=negative, 1=positive';
pHALUDm=.; if phalsumm=>2 then pHALUDm=1; if phalsumm<2 and phalsumm>. then pHALUDm=0;
/*Prior-to-past-year*/
Label pHALUDm='Prior-to-past-year HALUD diagnosis (missing-tolerant)-.=missing, 0=negative,
1=positive';
lHALUDm=.; if lhalsumm=>2 then lHALUDm=1; if lhalsumm<2 and lhalsumm>. then lHALUDm=0;
/*Lifetime*/
Label lHALUDm='Lifetime HALUD diagnosis (missing-tolerant)-.=missing, 0=negative, 1=positive';

*HALUD severity - Missing tolerant;
if (halsumm=2 and halsumm_miss>=2) or (halsumm=3 and halsumm_miss>=1) or (halsumm=4 and
halsumm_miss>=2)
or (halsumm=5 and halsumm_miss>=1) then HALUDSEVm=.; /*Past-year - missing HALUD severity*/
if (halsumm=0 and halsumm_miss<2) or (halsumm=1 and halsumm_miss=0) then HALUDSEVm=0; /*Past-
year - no HALUD diagnosis*/
if (halsumm=2 and halsumm_miss<2) or (halsumm=3 and halsumm_miss=0) then HALUDSEVm=1; /*Past-
year - mild HALUD*/
if (halsumm=4 and halsumm_miss<2) or (halsumm=5 and halsumm_miss=0) then HALUDSEVm=2; /*Past-
year - moderate HALUD*/
if halsumm>=6 then HALUDSEVm=3; /*Past-year - severe HALUD*/
Label HALUDSEVm='Past-year HALUD severity grading (missing-tolerant)-.=missing, 0=no HALUD
diagnosis, 1=mild HALUD, 2=moderate HALUD and 3=severe HALUD';

if (phalsumm=2 and phalsumm_miss>=2) or (phalsumm=3 and phalsumm_miss>=1) or (phalsumm=4 and
phalsumm_miss>=2)
or (phalsumm=5 and phalsumm_miss>=1) then pHALUDSEVm=.; /*Prior-to-past-year - missing HALUD
severity*/
if (phalsumm=0 and phalsumm_miss<2) or (phalsumm=1 and phalsumm_miss=0) then pHALUDSEVm=0;
/*Prior-to-past-year - no HALUD diagnosis*/
if (phalsumm=2 and phalsumm_miss<2) or (phalsumm=3 and phalsumm_miss=0) then pHALUDSEVm=1;
/*Prior-to-past-year - mild HALUD*/
if (phalsumm=4 and phalsumm_miss<2) or (phalsumm=5 and phalsumm_miss=0) then pHALUDSEVm=2;
/*Prior-to-past-year - moderate HALUD*/
if phalsumm>=6 then pHALUDSEVm=3; /*Prior-to-past-year - severe AUD*/
Label pHALUDSEVm='Prior-to-past-year HALUD severity grading (missing-tolerant)-.=missing, 0=no
HALUD diagnosis, 1=mild HALUD, 2=moderate HALUD and 3=severe HALUD';

if HALUDSEVm=. or pHALUDSEVm=. then lHALUDSEVm=.; /*Lifetime - missing HALUD severity*/
if max(HALUDSEVm, pHALUDSEVm)=0 and (HALUDSEVm^=. and pHALUDSEVm^=.) then lHALUDSEVm=0;
/*Lifetime - no HALUD diagnosis*/
if max(HALUDSEVm, pHALUDSEVm)=1 then lHALUDSEVm=1; /*Lifetime - mild HALUD*/
if max(HALUDSEVm, pHALUDSEVm)=2 then lHALUDSEVm=2; /*Lifetime - moderate HALUD*/
if max(HALUDSEVm, pHALUDSEVm)=3 then lHALUDSEVm=3; /*Lifetime - severe HALUD*/
Label lHALUDSEVm='Lifetime HALUD severity grading (missing-tolerant)-.=missing, 0=no HALUD
diagnosis, 1=mild HALUD, 2=moderate HALUD and 3=severe HALUD';

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SOLUD Criteria and Diagnoses Algorithms (Missing-Tolerant)

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/*Solvent - Larger/longer - Missing-tolerant*/
SOLA1m=.; if N3CD8Q1C32=1 then SOLA1m=1; if N3CD8Q1C32=2 then SOLA1m=0; /*Past-year*/
Label SOLA1m='Past-year solvent larger/longer criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pSOLA1m=.; if N3CD8Q1E32=1 then pSOLA1m=1; if N3CD8Q1E32=2 then pSOLA1m=0; /*Prior-to-past-
year*/
Label pSOLA1m='Prior-to-past-year solvent larger/longer criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lSOLA1m=.; if N3CD8Q1C32=1 or N3CD8Q1E32=1 then lSOLA1m=1; if N3CD8Q1C32=2 and N3CD8Q1E32=2
then lSOLA1m=0; /*Lifetime*/
Label lSOLA1m='Lifetime solvent larger/longer criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Solvent - Quit or cut down - Missing-tolerant*/
SOLA2m=.; if N3CD8Q1C30=1 or N3CD8Q1C31=1 then SOLA2m=1; if N3CD8Q1C30=2 and N3CD8Q1C31=2 then
SOLA2m=0; /*Past-year*/
Label SOLA2m='Past-year solvent quit or cut down criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pSOLA2m=.; if N3CD8Q1E30=1 or N3CD8Q1E31=1 then pSOLA2m=1; if N3CD8Q1E30=2 and N3CD8Q1E31=2
then pSOLA2m=0; /*Prior-to-past-year*/
Label pSOLA2m='Prior-to-past-year solvent quit or cut down criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lSOLA2m=.; if N3CD8Q1C30=1 or N3CD8Q1E30=1 or N3CD8Q1C31=1 or N3CD8Q1E31=1 then lSOLA2m=1;
if N3CD8Q1C30=2 and N3CD8Q1E30=2 and N3CD8Q1C31=2 and N3CD8Q1E31=2 then lSOLA2m=0;
/*Lifetime*/
Label lSOLA2m='Lifetime solvent quit or cut down criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Solvent - Time spent - Missing-tolerant*/
SOLA3m=.; if N3CD8Q1C33=1 or N3CD8Q1C34=1 then SOLA3m=1; if N3CD8Q1C33=2 and N3CD8Q1C34=2 then
SOLA3m=0; /*Past-year*/
Label SOLA3m='Past-year solvent time spent criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pSOLA3m=.; if N3CD8Q1E33=1 or N3CD8Q1E34=1 then pSOLA3m=1; if N3CD8Q1E33=2 and N3CD8Q1E34=2
then pSOLA3m=0; /*Prior-to-past-year*/
Label pSOLA3m='Prior-to-past-year solvent time spent criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
lSOLA3m=.; if N3CD8Q1C33=1 or N3CD8Q1E33=1 or N3CD8Q1C34=1 or N3CD8Q1E34=1 then lSOLA3m=1;
if N3CD8Q1C33=2 and N3CD8Q1E33=2 and N3CD8Q1C34=2 and N3CD8Q1E34=2 then lSOLA3m=0;
/*Lifetime*/
Label lSOLA3m='Lifetime solvent time spent criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';

/*Solvent - Craving - Missing-tolerant*/
SOLA4m=.; if N3CD8Q1C39=1 or N3CD8Q1C40=1 then SOLA4m=1; if N3CD8Q1C39=2 and N3CD8Q1C40=2 then
SOLA4m=0; /*Past-year*/
Label SOLA4m='Past-year solvent craving criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pSOLA4m=.; if N3CD8Q1E39=1 or N3CD8Q1E40=1 then pSOLA4m=1; if N3CD8Q1E39=2 and N3CD8Q1E40=2
then pSOLA4m=0; /*Prior-to-past-year*/
Label pSOLA4m='Prior-to-past-year solvent craving criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
lSOLA4m=.; if N3CD8Q1C39=1 or N3CD8Q1E39=1 or N3CD8Q1C40=1 or N3CD8Q1E40=1 then lSOLA4m=1;
if N3CD8Q1C39=2 and N3CD8Q1E39=2 and N3CD8Q1C40=2 and N3CD8Q1E40=2 then lSOLA4m=0;
/*Lifetime*/
Label lSOLA4m='Lifetime solvent craving criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';

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/*Solvent - Role interference - Missing-tolerant*/
SOLA5m=.; if N3CD8Q1C44=1 or N3CD8Q1C45=1 or N3CD8Q1C46=1 then SOLA5m=1; if N3CD8Q1C44=2 and
N3CD8Q1C45=2 and N3CD8Q1C46=2 then SOLA5m=0; /*Past-year*/
Label SOLA5m='Past-year solvent role interference criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pSOLA5m=.; if N3CD8Q1E44=1 or N3CD8Q1E45=1 or N3CD8Q1E46=1 then pSOLA5m=1; if N3CD8Q1E44=2 and
N3CD8Q1E45=2 and N3CD8Q1E46=2 then pSOLA5m=0; /*Prior-to-past-year*/
Label pSOLA5m='Prior-to-past-year solvent role interference criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lSOLA5m=.; if N3CD8Q1C44=1 or N3CD8Q1E44=1 or N3CD8Q1C45=1 or N3CD8Q1E45=1 or N3CD8Q1C46=1 or
N3CD8Q1E46=1 then lSOLA5m=1;
if N3CD8Q1C44=2 and N3CD8Q1E44=2 and N3CD8Q1C45=2 and N3CD8Q1E45=2 and N3CD8Q1C46=2 and
N3CD8Q1E46=2 then lSOLA5m=0; /*Lifetime*/
Label lSOLA5m='Lifetime solvent role interference criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Solvent - Social problems - Missing-tolerant*/
SOLA6m=.; if N3CD8Q1C41=1 or N3CD8Q1C42=1 or N3CD8Q1C43=1 then SOLA6m=1; if N3CD8Q1C41=2 and
N3CD8Q1C42=2 and N3CD8Q1C43=1 then SOLA6m=0; /*Past-year*/
Label SOLA6m='Past-year solvent social problems criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pSOLA6m=.; if N3CD8Q1E41=1 or N3CD8Q1E42=1 or N3CD8Q1E43=1 then pSOLA6m=1; if N3CD8Q1E41=2 and
N3CD8Q1E42=2 and N3CD8Q1E43=1 then pSOLA6m=0; /*Prior-to-past-year*/
Label pSOLA6m='Prior-to-past-year solvent social problems criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lSOLA6m=.; if N3CD8Q1C41=1 or N3CD8Q1E41=1 or N3CD8Q1C42=1 or N3CD8Q1E42=1 or N3CD8Q1C43=1 or
N3CD8Q1E43=1 then lSOLA6m=1;
if N3CD8Q1C41=2 and N3CD8Q1E41=2 and N3CD8Q1C42=2 and N3CD8Q1E42=2 and N3CD8Q1C43=2 and
N3CD8Q1E43=2 then lSOLA6m=0; /*Lifetime*/
Label lSOLA6m='Lifetime solvent social problems criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Solvent - Give up - Missing-tolerant*/
SOLA7m=.; if N3CD8Q1C35=1 or N3CD8Q1C36=1 then SOLA7m=1; if N3CD8Q1C35=2 and N3CD8Q1C36=2 then
SOLA7m=0; /*Past-year*/
Label SOLA7m='Past-year solvent give up criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pSOLA7m=.; if N3CD8Q1E35=1 or N3CD8Q1E36=1 then pSOLA7m=1; if N3CD8Q1E35=2 and N3CD8Q1E36=2
then pSOLA7m=0; /*Prior-to-past-year*/
Label pSOLA7m='Prior-to-past-year solvent give up criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
lSOLA7m=.; if N3CD8Q1C35=1 or N3CD8Q1E35=1 or N3CD8Q1C36=1 or N3CD8Q1E36=1 then lSOLA7m=1;
if N3CD8Q1C35=2 and N3CD8Q1E35=2 and N3CD8Q1C36=2 and N3CD8Q1E36=2 then lSOLA7m=0;
/*Lifetime*/
Label lSOLA7m='Lifetime solvent give up criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';

/*Solvent - Hazardous use - Missing-tolerant*/
SOLA8m=.; if N3CD8Q1C47=1 or N3CD8Q1C48=1 then SOLA8m=1; if N3CD8Q1C47=2 and N3CD8Q1C48=2 then
SOLA8m=0; /*Past-year*/
Label SOLA8m='Past-year solvent hazardous use criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pSOLA8m=.; if N3CD8Q1E47=1 or N3CD8Q1E48=1 then pSOLA8m=1; if N3CD8Q1E47=2 and N3CD8Q1E48=2
then pSOLA8m=0; /*Prior-to-past-year*/
Label pSOLA8m='Prior-to-past-year solvent hazardous use criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lSOLA8m=.; if N3CD8Q1C47=1 or N3CD8Q1E47=1 or N3CD8Q1C48=1 or N3CD8Q1E48=1 then lSOLA8m=1;

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if N3CD8Q1C47=2 and N3CD8Q1E47=2 and N3CD8Q1C48=2 and N3CD8Q1E48=2 then 1SOLA8m=0;
/*Lifetime*/
Label 1SOLA8m='Lifetime solvent hazardous use criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Solvent - Continued use despite problems - Missing-tolerant*/
SOLA9m=.; if N3CD8Q1C37=1 or N3CD8Q1C38=1 then SOLA9m=1; if N3CD8Q1C37=2 and N3CD8Q1C38=2 then
SOLA9m=0; /*Past-year*/
Label SOLA9m='Past-year solvent continued use despite problems criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
pSOLA9m=.; if N3CD8Q1E37=1 or N3CD8Q1E38=1 then pSOLA9m=1; if N3CD8Q1E37=2 and N3CD8Q1E38=2
then pSOLA9m=0; /*Prior-to-past-year*/
Label pSOLA9m='Prior-to-past-year solvent continued use despite problems criterion endorsement
(missing-tolerant)-.=missing, 0=negative, 1=positive';
1SOLA9m=.; if N3CD8Q1C37=1 or N3CD8Q1E37=1 or N3CD8Q1C38=1 or N3CD8Q1E38=1 then 1SOLA9m=1;
if N3CD8Q1C37=2 and N3CD8Q1E37=2 and N3CD8Q1C38=2 and N3CD8Q1E38=2 then 1SOLA9m=0;
/*Lifetime*/
Label 1SOLA9m='Lifetime solvent continued use despite problems criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';

/*Solvent - Tolerance - Missing-tolerant*/
SOLA10m=.; if N3CD8Q1C1=1 or N3CD8Q1C2=1 then SOLA10m=1; if N3CD8Q1C1=2 and N3CD8Q1C2=2 then
SOLA10m=0; /*Past-year*/
Label SOLA10m='Past-year solvent tolerance criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pSOLA10m=.; if N3CD8Q1E1=1 or N3CD8Q1E2=1 then pSOLA10m=1; if N3CD8Q1E1=2 and N3CD8Q1E2=2 then
pSOLA10m=0; /*Prior-to-past-year*/
Label pSOLA10m='Prior-to-past-year solvent tolerance criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
1SOLA10m=.; if N3CD8Q1C1=1 or N3CD8Q1E1=1 or N3CD8Q1C2=1 or N3CD8Q1E2=1 then 1SOLA10m=1;
if N3CD8Q1C1=2 and N3CD8Q1E1=2 and N3CD8Q1C2=2 and N3CD8Q1E2=2 then 1SOLA10m=0; /*Lifetime*/
Label 1SOLA10m='Lifetime solvent tolerance criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';

/*-Past-year (SOLA1m-SOLA10m) and prior-to-past-year (pSOLA1m-pSOLA10m) symptom counts
-Prior-to-past-year symptoms counts include N3CD8Q2A to
denote SOME SOLUD symptoms occurred within same 12-month period
-Lifetime symptom count takes the largest symptom count from either past-year or prior-to-
past-year*/

solsumm=sum(SOLA1m, SOLA2m, SOLA3m, SOLA4m, SOLA5m, SOLA6m, SOLA7m, SOLA8m, SOLA9m, SOLA10m);
/*Past-year*/
Label solsumm='Sum of past-year solvent criteria (Missing-Tolerant)';
if N3CD8Q2A=1 THEN psolsumm=sum(pSOLA1m, pSOLA2m, pSOLA3m, solvent, pSOLA5m, pSOLA6m, pSOLA7m,
pSOLA8m, pSOLA9m, pSOLA10m); /*Prior-to-past-year*/
Label psolsumm='Sum of prior-to-past-year solvent criteria (Missing-Tolerant)';
lsolsumm=max(solsumm, psolsumm); /*Lifetime*/
Label lsolsumm='Maximum sum of past-year or prior-to-past-year solvent criteria (Missing-
Tolerant)';

/*Number of missing criteria*/
solsumm_miss=nmiss(SOLA1m, SOLA2m, SOLA3m, SOLA4m, SOLA5m, SOLA6m, SOLA7m, SOLA8m, SOLA9m,
SOLA10m); /*Past-year*/
Label solsumm_miss='Sum of past-year missing stimulant criteria (Missing-Tolerant)';
psolsumm_miss=nmiss(pSOLA1m, pSOLA2m, pSOLA3m, solvent, pSOLA5m, pSOLA6m, pSOLA7m, pSOLA8m,
pSOLA9m, pSOLA10m); /*Prior-to-past-year*/
Label psolsumm_miss='Sum of prior-to-past-year solvent criteria (Missing-Tolerant)';

*SOLUD diagnoses - Missing tolerant;

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SOLUDm=.; if solsumm=>2 then SOLUDm=1; if solsumm<2 and solsumm>. then SOLUDm=0; /*Past-year*/
Label SOLUDm='Past-year SOLUD diagnosis (missing-tolerant)-.=missing, 0=negative, 1=positive';
pSOLUDm=.; if psolsumm=>2 then pSOLUDm=1; if psolsumm<2 and psolsumm>. then pSOLUDm=0;
/*Prior-to-past-year*/
Label pSOLUDm='Prior-to-past-year SOLUD diagnosis (missing-tolerant)-.=missing, 0=negative,
1=positive';
lSOLUDm=.; if lsolsumm=>2 then lSOLUDm=1; if lsolsumm<2 and lsolsumm>. then lSOLUDm=0;
/*Lifetime*/
Label lSOLUDm='Lifetime SOLUD diagnosis (missing-tolerant)-.=missing, 0=negative, 1=positive';

*SOLUD severity - Missing tolerant;
if (solsumm=2 and solsumm_miss>=2) or (solsumm=3 and solsumm_miss>=1) or (solsumm=4 and
solsumm_miss>=2)
or (solsumm=5 and solsumm_miss>=1) then SOLUDSEVm=.; /*Past-year - missing SOLUD severity*/
if (solsumm=0 and solsumm_miss<2) or (solsumm=1 and solsumm_miss=0) then SOLUDSEVm=0; /*Past-
year - no SOLUD diagnosis*/
if (solsumm=2 and solsumm_miss<2) or (solsumm=3 and solsumm_miss=0) then SOLUDSEVm=1; /*Past-
year - mild SOLUD*/
if (solsumm=4 and solsumm_miss<2) or (solsumm=5 and solsumm_miss=0) then SOLUDSEVm=2; /*Past-
year - moderate SOLUD*/
if solsumm>=6 then SOLUDSEVm=3; /*Past-year - severe SOLUD*/
Label SOLUDSEVm='Past-year SOLUD severity grading (missing-tolerant)-.=missing, 0=no SOLUD
diagnosis, 1=mild SOLUD, 2=moderate SOLUD and 3=severe SOLUD';

if (psolsumm=2 and psolsumm_miss>=2) or (psolsumm=3 and psolsumm_miss>=1) or (psolsumm=4 and
psolsumm_miss>=2)
or (psolsumm=5 and psolsumm_miss>=1) then pSOLUDSEVm=.; /*Prior-to-past-year - missing SOLUD
severity*/
if (psolsumm=0 and psolsumm_miss<2) or (psolsumm=1 and psolsumm_miss=0) then pSOLUDSEVm=0;
/*Prior-to-past-year - no SOLUD diagnosis*/
if (psolsumm=2 and psolsumm_miss<2) or (psolsumm=3 and psolsumm_miss=0) then pSOLUDSEVm=1;
/*Prior-to-past-year - mild SOLUD*/
if (psolsumm=4 and psolsumm_miss<2) or (psolsumm=5 and psolsumm_miss=0) then pSOLUDSEVm=2;
/*Prior-to-past-year - moderate SOLUD*/
if psolsumm>=6 then pSOLUDSEVm=3; /*Prior-to-past-year - severe AUD*/
Label pSOLUDSEVm='Prior-to-past-year SOLUD severity grading (missing-tolerant)-.=missing, 0=no
SOLUD diagnosis, 1=mild SOLUD, 2=moderate SOLUD and 3=severe SOLUD';

if SOLUDSEVm=. or pSOLUDSEVm=. then lSOLUDSEVm=.; /*Lifetime - missing SOLUD severity*/
if max(SOLUDSEVm, pSOLUDSEVm)=0 and (SOLUDSEVm^=. and pSOLUDSEVm^=.) then lSOLUDSEVm=0;
/*Lifetime - no SOLUD diagnosis*/
if max(SOLUDSEVm, pSOLUDSEVm)=1 then lSOLUDSEVm=1; /*Lifetime - mild SOLUD*/
if max(SOLUDSEVm, pSOLUDSEVm)=2 then lSOLUDSEVm=2; /*Lifetime - moderate SOLUD*/
if max(SOLUDSEVm, pSOLUDSEVm)=3 then lSOLUDSEVm=3; /*Lifetime - severe SOLUD*/
Label lSOLUDSEVm='Lifetime SOLUD severity grading (missing-tolerant)-.=missing, 0=no SOLUD
diagnosis, 1=mild SOLUD, 2=moderate SOLUD and 3=severe SOLUD';

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HERUD Criteria and Diagnoses Algorithms (Missing-Tolerant)

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/*Heroin - Larger/longer - Missing-tolerant*/
HERA1m=.; if N3CD9Q1C32=1 then HERA1m=1; if N3CD9Q1C32=2 then HERA1m=0; /*Past-year*/
Label HERA1m='Past-year heroin larger/longer criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pHERA1m=.; if N3CD9Q1E32=1 then pHERA1m=1; if N3CD9Q1E32=2 then pHERA1m=0; /*Prior-to-past-
year*/
Label pHERA1m='Prior-to-past-year heroin larger/longer criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lHERA1m=.; if N3CD9Q1C32=1 or N3CD9Q1E32=1 then lHERA1m=1; if N3CD9Q1C32=2 and N3CD9Q1E32=2
then lHERA1m=0; /*Lifetime*/
Label lHERA1m='Lifetime heroin larger/longer criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Heroin - Quit or cut down - Missing-tolerant*/
HERA2m=.; if N3CD9Q1C30=1 or N3CD9Q1C31=1 then HERA2m=1; if N3CD9Q1C30=2 and N3CD9Q1C31=2 then
HERA2m=0; /*Past-year*/
Label HERA2m='Past-year heroin quit or cut down criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pHERA2m=.; if N3CD9Q1E30=1 or N3CD9Q1E31=1 then pHERA2m=1; if N3CD9Q1E30=2 and N3CD9Q1E31=2
then pHERA2m=0; /*Prior-to-past-year*/
Label pHERA2m='Prior-to-past-year heroin quit or cut down criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lHERA2m=.; if N3CD9Q1C30=1 or N3CD9Q1E30=1 or N3CD9Q1C31=1 or N3CD9Q1E31=1 then lHERA2m=1;
if N3CD9Q1C30=2 and N3CD9Q1E30=2 and N3CD9Q1C31=2 and N3CD9Q1E31=2 then lHERA2m=0;
/*Lifetime*/
Label lHERA2m='Lifetime heroin quit or cut down criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Heroin - Time spent - Missing-tolerant*/
HERA3m=.; if N3CD9Q1C33=1 or N3CD9Q1C34=1 then HERA3m=1; if N3CD9Q1C33=2 and N3CD9Q1C34=2 then
HERA3m=0; /*Past-year*/
Label HERA3m='Past-year heroin time spent criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pHERA3m=.; if N3CD9Q1E33=1 or N3CD9Q1E34=1 then pHERA3m=1; if N3CD9Q1E33=2 and N3CD9Q1E34=2
then pHERA3m=0; /*Prior-to-past-year*/
Label pHERA3m='Prior-to-past-year heroin time spent criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
lHERA3m=.; if N3CD9Q1C33=1 or N3CD9Q1E33=1 or N3CD9Q1C34=1 or N3CD9Q1E34=1 then lHERA3m=1;
if N3CD9Q1C33=2 and N3CD9Q1E33=2 and N3CD9Q1C34=2 and N3CD9Q1E34=2 then lHERA3m=0;
/*Lifetime*/
Label lHERA3m='Lifetime heroin time spent criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';

/*Heroin - Craving - Missing-tolerant*/
HERA4m=.; if N3CD9Q1C39=1 or N3CD9Q1C40=1 then HERA4m=1; if N3CD9Q1C39=2 and N3CD9Q1C40=2 then
HERA4m=0; /*Past-year*/
Label HERA4m='Past-year heroin craving criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pHERA4m=.; if N3CD9Q1E39=1 or N3CD9Q1E40=1 then pHERA4m=1; if N3CD9Q1E39=2 and N3CD9Q1E40=2
then pHERA4m=0; /*Prior-to-past-year*/
Label pHERA4m='Prior-to-past-year heroin craving criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
lHERA4m=.; if N3CD9Q1C39=1 or N3CD9Q1E39=1 or N3CD9Q1C40=1 or N3CD9Q1E40=1 then lHERA4m=1;
if N3CD9Q1C39=1 and N3CD9Q1E39=1 and N3CD9Q1C40=1 and N3CD9Q1E40=1 then lHERA4m=0;
/*Lifetime*/
Label lHERA4m='Lifetime heroin craving criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';

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/*Heroin - Role interference - Missing-tolerant*/
HERA5m=.; if N3CD9Q1C44=1 or N3CD9Q1C45=1 or N3CD9Q1C46=1 then HERA5m=1; if N3CD9Q1C44=2 and
N3CD9Q1C45=2 and N3CD9Q1C46=2 then HERA5m=0; /*Past-year*/
Label HERA5m='Past-year heroin role interference criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pHERA5m=.; if N3CD9Q1E44=1 or N3CD9Q1E45=1 or N3CD9Q1E46=1 then pHERA5m=1; if N3CD9Q1E44=2 and
N3CD9Q1E45=2 and N3CD9Q1E46=2 then pHERA5m=0; /*Prior-to-past-year*/
Label pHERA5m='Prior-to-past-year heroin role interference criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lHERA5m=.; if N3CD9Q1C44=1 or N3CD9Q1E44=1 or N3CD9Q1C45=1 or N3CD9Q1E45=1 or N3CD9Q1C46=1 or
N3CD9Q1E46=1 then lHERA5m=1;
if N3CD9Q1C44=2 and N3CD9Q1E44=2 and N3CD9Q1C45=2 and N3CD9Q1E45=2 and N3CD9Q1C46=2 and
N3CD9Q1E46=2 then lHERA5m=0; /*Lifetime*/
Label lHERA5m='Lifetime heroin role interference criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Heroin - Social problems - Missing-tolerant*/
HERA6m=.; if N3CD9Q1C41=1 or N3CD9Q1C42=1 or N3CD9Q1C43=1 then HERA6m=1; if N3CD9Q1C41=2 and
N3CD9Q1C42=2 and N3CD9Q1C43=2 then HERA6m=0; /*Past-year*/
Label HERA6m='Past-year heroin social problems criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pHERA6m=.; if N3CD9Q1E41=1 or N3CD9Q1E42=1 or N3CD9Q1E43=1 then pHERA6m=1; if N3CD9Q1E41=2 and
N3CD9Q1E42=2 and N3CD9Q1E43=2 then pHERA6m=0; /*Prior-to-past-year*/
Label pHERA6m='Prior-to-past-year heroin social problems criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lHERA6m=.; if N3CD9Q1C41=1 or N3CD9Q1E41=1 or N3CD9Q1C42=1 or N3CD9Q1E42=1 or N3CD9Q1C43=1 or
N3CD9Q1E43=1 then lHERA6m=1;
if N3CD9Q1C41=2 and N3CD9Q1E41=2 and N3CD9Q1C42=2 and N3CD9Q1E42=2 and N3CD9Q1C43=2 and
N3CD9Q1E43=2 then lHERA6m=0; /*Lifetime*/
Label lHERA6m='Lifetime heroin social problems criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Heroin - Give up - Missing-tolerant*/
HERA7m=.; if N3CD9Q1C35=1 or N3CD9Q1C36=1 then HERA7m=1; if N3CD9Q1C35=2 and N3CD9Q1C36=2 then
HERA7m=0; /*Past-year*/
Label HERA7m='Past-year heroin give up criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pHERA7m=.; if N3CD9Q1E35=1 or N3CD9Q1E36=1 then pHERA7m=1; if N3CD9Q1E35=2 and N3CD9Q1E36=2
then pHERA7m=0; /*Prior-to-past-year*/
Label pHERA7m='Prior-to-past-year heroin give up criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
lHERA7m=.; if N3CD9Q1C35=1 or N3CD9Q1E35=1 or N3CD9Q1C36=1 or N3CD9Q1E36=1 then lHERA7m=1;
if N3CD9Q1C35=2 and N3CD9Q1E35=2 and N3CD9Q1C36=2 and N3CD9Q1E36=2 then lHERA7m=0;
/*Lifetime*/
Label lHERA7m='Lifetime heroin give up criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';

/*Heroin - Hazardous use - Missing-tolerant*/
HERA8m=.; if N3CD9Q1C47=1 or N3CD9Q1C48=1 then HERA8m=1; if N3CD9Q1C47=2 and N3CD9Q1C48=2 then
HERA8m=0; /*Past-year*/
Label HERA8m='Past-year heroin hazardous use criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
pHERA8m=.; if N3CD9Q1E47=1 or N3CD9Q1E48=1 then pHERA8m=1; if N3CD9Q1E47=2 and N3CD9Q1E48=2
then pHERA8m=0; /*Prior-to-past-year*/
Label pHERA8m='Prior-to-past-year heroin hazardous use criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
lHERA8m=.; if N3CD9Q1C47=1 or N3CD9Q1E47=1 or N3CD9Q1C48=1 or N3CD9Q1E48=1 then lHERA8m=1;

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if N3CD9Q1C47=2 and N3CD9Q1E47=2 and N3CD9Q1C48=2 and N3CD9Q1E48=2 then lHERA8m=0;
/*Lifetime*/
Label lHERA8m='Lifetime heroin hazardous use criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';

/*Heroin - Continued use despite problems - Missing-tolerant*/
HERA9m=.; if N3CD9Q1C37=1 or N3CD9Q1C38=1 then HERA9m=1; if N3CD9Q1C37=2 and N3CD9Q1C38=2 then
HERA9m=0; /*Past-year*/
Label HERA9m='Past-year heroin continued use despite problems criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';
pHERA9m=.; if N3CD9Q1E37=1 or N3CD9Q1E38=1 then pHERA9m=1; if N3CD9Q1E37=2 and N3CD9Q1E38=2
then pHERA9m=0; /*Prior-to-past-year*/
Label pHERA9m='Prior-to-past-year heroin continued use despite problems criterion endorsement
(missing-tolerant)-.=missing, 0=negative, 1=positive';
lHERA9m=.; if N3CD9Q1C37=1 or N3CD9Q1E37=1 or N3CD9Q1C38=1 or N3CD9Q1E38=1 then lHERA9m=1; if
N3CD9Q1C37=2 and N3CD9Q1E37=2 and N3CD9Q1C38=2 and N3CD9Q1E38=2 then lHERA9m=0; /*Lifetime*/
Label lHERA9m='Lifetime heroin continued use despite problems criterion endorsement (missing-
tolerant)-.=missing, 0=negative, 1=positive';

/*Heroin - Tolerance - Missing-tolerant*/
HERA10m=.; if N3CD9Q1C1=1 or N3CD9Q1C2=1 then HERA10m=1; if N3CD9Q1C1=2 and N3CD9Q1C2=2 then
HERA10m=0; /*Past-year*/
Label HERA10m='Past-year heroin tolerance criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pHERA10m=.; if N3CD9Q1E1=1 or N3CD9Q1E2=1 then pHERA10m=1; if N3CD9Q1E1=2 and N3CD9Q1E2=2 then
pHERA10m=0; /*Prior-to-past-year*/
Label pHERA10m='Prior-to-past-year heroin tolerance criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
lHERA10m=.; if N3CD9Q1C1=1 or N3CD9Q1E1=1 or N3CD9Q1C2=1 or N3CD9Q1E2=1 then lHERA10m=1;
if N3CD9Q1C1=2 and N3CD9Q1E1=2 and N3CD9Q1C2=2 and N3CD9Q1E2=2 then lHERA10m=0; /*Lifetime*/
Label lHERA10m='Lifetime heroin tolerance criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';

/*Heroin - Withdrawal - Missing-tolerant*/
*Heroin - Withdrawal subalgorithm - sum of withdrawal symptoms;
herwithm=.; herwithm=sum(N3CD9Q1C5=1, N3CD9Q1C7=1, N3CD9Q1C12=1, N3CD9Q1C9=1, (N3CD9Q1C16=1 or
N3CD9Q1C26=1), N3CD9Q1C28=1, N3CD9Q1C8=1, N3CD9Q1C13=1, N3CD9Q1C20=1);
if N3CD9Q1C5=2 and N3CD9Q1C7=2 and N3CD9Q1C12=2 and N3CD9Q1C9=2 and N3CD9Q1C16=2 and
N3CD9Q1C26=2 and N3CD9Q1C28=2 and N3CD9Q1C8=2 and N3CD9Q1C13=2 and N3CD9Q1C20=2 then
herwithm=0; /*past-year withdrawal symptom count*/
Label herwithm='Sum of past-year heroin withdrawal symptoms (Missing-Tolerant)';
pherwithm=.; pherwithm=sum(N3CD9Q1E5=1, N3CD9Q1E7=1, N3CD9Q1E12=1, N3CD9Q1E9=1, (N3CD9Q1E16=1
or N3CD9Q1E26=1), N3CD9Q1E28=1, N3CD9Q1E8=1, N3CD9Q1E13=1, N3CD9Q1E20=1);
if N3CD9Q1E5=2 and N3CD9Q1E7=2 and N3CD9Q1E12=2 and N3CD9Q1E9=2 and N3CD9Q1E16=2 and
N3CD9Q1E26=2 and N3CD9Q1E28=2 and N3CD9Q1E8=2 and N3CD9Q1E13=2 and N3CD9Q1E20=2 then
pherwithm=0; /*prior-to-past-year withdrawal symptom count*/
Label pherwithm='Sum of prior-to-past-year heroin withdrawal symptoms (Missing-Tolerant)';

*Heroin - Withdrawal - using subalgorithm;
HERA11m=.; if herwithm=>3 or N3CD9Q1C29=1 then HERA11m=1; if herwithm<3 and herwithm>. and
N3CD9Q1C29=2 then HERA11m=0; /*Past-year*/
Label HERA11m='Past-year heroin withdrawal criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';
pHERA11m=.; if pherwithm=>3 or N3CD9Q1E29=1 then pHERA11m=1; if pherwithm<3 and pherwithm>.
and N3CD9Q1E29=2 then pHERA11m=0; /*Prior-to-past-year*/
Label pHERA11m='Prior-to-past-year heroin withdrawal criterion endorsement (missing-tolerant)-
.=missing, 0=negative, 1=positive';
lHERA11m=.; if herwithm=>3 or N3CD9Q1C29=1 or pherwithm=>3 or N3CD9Q1E29=1 then lHERA11m=1;

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if herwithm<3 and herwithm>. and N3CD9Q1C29=2 and pherwithm<3 and pherwithm>. and N3CD9Q1E29=2
then lHERA11m=0; /*Lifetime*/
Label lHERA11m='Lifetime heroin withdrawal criterion endorsement (missing-tolerant)-.=missing,
0=negative, 1=positive';

/*-Past-year (HERA1m-HERA11m) and prior-to-past-year (pHERA1m-pHERA11m) symptom counts
-Prior-to-past-year symptoms counts include N3CD9Q2A to
denote SOME HERUD symptoms occurred within same 12-month period
-Lifetime symptom count takes the largest symptom count from either past-year or prior-to-
past-year*/

hersumm=sum(HERA1m, HERA2m, HERA3m, HERA4m, HERA5m, HERA6m, HERA7m, HERA8m, HERA9m, HERA10m,
HERA11m); /*Past-year*/
Label hersumm='Sum of past-year heroin criteria (Missing-Tolerant)';
if N3CD9Q2A=1 THEN phersumm=sum(pHERA1m, pHERA2m, pHERA3m, pHERA4m, pHERA5m, pHERA6m, pHERA7m,
pHERA8m, pHERA9m, pHERA10m, pHERA11m);
Label phersumm='Sum of prior-to-past-year heroin criteria (Missing-Tolerant)';
lhersumm=max(hersumm, phersumm);
Label lhersumm='Maximum sum of past-year or prior-to-past-year heroin criteria (Missing-
Tolerant)';

/*Number of missing criteria*/
hersumm_miss=nmiss(HERA1m, HERA2m, HERA3m, HERA4m, HERA5m, HERA6m, HERA7m, HERA8m, HERA9m,
HERA10m, HERA11m); /*Past-year*/
Label hersumm_miss='Sum of past-year missing heroin criteria (Missing-Tolerant)';
phersumm_miss=nmiss(pHERA1m, pHERA2m, pHERA3m, pHERA4m, pHERA5m, pHERA6m, pHERA7m, pHERA8m,
pHERA9m, pHERA10m, pHERA11m); /*Prior-to-past-year*/
Label phersumm_miss='Sum of prior-to-past-year heroin criteria (Missing-Tolerant)';

*HERUD diagnoses - Missing tolerant;
HERUDm=.; if hersumm=>2 then HERUDm=1; if hersumm<2 and hersumm>. then HERUDm=0; /*Past-year*/
Label HERUDm='Past-year HERUD diagnosis (missing-tolerant)-.=missing, 0=negative, 1=positive';
pHERUDm=.; if phersumm=>2 then pHERUDm=1; if phersumm<2 and phersumm>. then pHERUDm=0;
/*Prior-to-past-year*/
Label pHERUDm='Prior-to-past-year HERUD diagnosis (missing-tolerant)-.=missing, 0=negative,
1=positive';
lhersumm=.; if lhersumm=>2 then lhersumm=1; if lhersumm<2 and lhersumm>. then lhersumm=0;
/*Lifetime*/
Label lhersumm='Lifetime HERUD diagnosis (missing-tolerant)-.=missing, 0=negative, 1=positive';

*HERUD severity - Missing tolerant;
if (hersumm=2 and hersumm_miss>=2) or (hersumm=3 and hersumm_miss>=1) or (hersumm=4 and
hersumm_miss>=2)
or (hersumm=5 and hersumm_miss>=1) then HERUDSEVm=.; /*Past-year - missing HERUD severity*/
if (hersumm=0 and hersumm_miss<2) or (hersumm=1 and hersumm_miss=0) then HERUDSEVm=0; /*Past-
year - no HERUD diagnosis*/
if (hersumm=2 and hersumm_miss<2) or (hersumm=3 and hersumm_miss=0) then HERUDSEVm=1; /*Past-
year - mild HERUD*/
if (hersumm=4 and hersumm_miss<2) or (hersumm=5 and hersumm_miss=0) then HERUDSEVm=2; /*Past-
year - moderate HERUD*/
if hersumm>=6 then HERUDSEVm=3; /*Past-year - severe HERUD*/
Label HERUDSEVm='Past-year HERUD severity grading (missing-tolerant)-.=missing, 0=no HERUD
diagnosis, 1=mild HERUD, 2=moderate HERUD and 3=severe HERUD';

if (phersumm=2 and phersumm_miss>=2) or (phersumm=3 and phersumm_miss>=1) or (phersumm=4 and
phersumm_miss>=2)
or (phersumm=5 and phersumm_miss>=1) then pHERUDSEVm=.; /*Prior-to-past-year - missing HERUD
severity*/

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if (phersumm=0 and phersumm_miss<2) or (phersumm=1 and phersumm_miss=0) then pHERUDSEVm=0;
/*Prior-to-past-year - no HERUD diagnosis*/
if (phersumm=2 and phersumm_miss<2) or (phersumm=3 and phersumm_miss=0) then pHERUDSEVm=1;
/*Prior-to-past-year - mild HERUD*/
if (phersumm=4 and phersumm_miss<2) or (phersumm=5 and phersumm_miss=0) then pHERUDSEVm=2;
/*Prior-to-past-year - moderate HERUD*/
if phersumm>=6 then pHERUDSEVm=3; /*Prior-to-past-year - severe AUD*/
Label pHERUDSEVm='Prior-to-past-year HERUD severity grading (missing-tolerant)-.=missing, 0=no
HERUD diagnosis, 1=mild HERUD, 2=moderate HERUD and 3=severe HERUD';

if HERUDSEVm=. or pHERUDSEVm=. then lHERUDSEVm=.; /*Lifetime - missing HERUD severity*/
if max(HERUDSEVm, pHERUDSEVm)=0 and (HERUDSEVm^=. and pHERUDSEVm^=.) then lHERUDSEVm=0;
/*Lifetime - no HERUD diagnosis*/
if max(HERUDSEVm, pHERUDSEVm)=1 then lHERUDSEVm=1; /*Lifetime - mild HERUD*/
if max(HERUDSEVm, pHERUDSEVm)=2 then lHERUDSEVm=2; /*Lifetime - moderate HERUD*/
if max(HERUDSEVm, pHERUDSEVm)=3 then lHERUDSEVm=3; /*Lifetime - severe HERUD*/
Label lHERUDSEVm='Lifetime HERUD severity grading (missing-tolerant)-.=missing, 0=no HERUD
diagnosis, 1=mild HERUD, 2=moderate HERUD and 3=severe HERUD';

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OTHUD Criteria and Diagnoses Algorithms (Missing-Tolerant)

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/*Other/Unknown - Larger/longer - Missing-tolerant*/
OTHA1m=.; if N3CD10Q1C32=1 then OTHA1m=1; if N3CD10Q1C32=2 then OTHA1m=0; /*Past-year*/
Label OTHA1m='Past-year other/unknown larger/longer criterion endorsement (missing-tolerant)-
0=negative 1=positive';
pOTHA1m=.; if N3CD10Q1E32=1 then pOTHA1m=1; if N3CD10Q1E32=2 then pOTHA1m=0; /*Prior-to-past-
year*/
Label pOTHA1m='Prior-to-past-year other/unknown larger/longer criterion endorsement (missing-
tolerant)-0=negative 1=positive';
lOTHA1m=.; if N3CD10Q1C32=1 or N3CD10Q1E32=1 then lOTHA1m=1; if N3CD10Q1C32=2 and
N3CD10Q1E32=2 then lOTHA1m=0; /*Lifetime*/
Label lOTHA1m='Lifetime larger/longer other/unknown criterion endorsement (missing-tolerant)-
0=negative 1=positive';

/*Other/Unknown - Quit or cut down - Missing-tolerant*/
OTHA2m=.; if N3CD10Q1C30=1 or N3CD10Q1C31=1 then OTHA2m=1; if N3CD10Q1C30=2 and N3CD10Q1C31=2
then OTHA2m=0; /*Past-year*/
Label OTHA2m='Past-year other/unknown quit or cut down criterion endorsement (missing-
tolerant)-0=negative 1=positive';
pOTHA2m=.; if N3CD10Q1E30=1 or N3CD10Q1E31=1 then pOTHA2m=1; if N3CD10Q1E30=2 and
N3CD10Q1E31=2 then pOTHA2m=0; /*Prior-to-past-year*/
Label pOTHA2m='Prior-to-past-year other/unknown quit or cut down criterion endorsement
(missing-tolerant)-0=negative 1=positive';
lOTHA2m=.; if N3CD10Q1C30=1 or N3CD10Q1E30=1 or N3CD10Q1C31=1 or N3CD10Q1E31=1 then lOTHA2m=1;
if N3CD10Q1C30=2 and N3CD10Q1E30=2 and N3CD10Q1C31=2 and N3CD10Q1E31=2 then lOTHA2m=0;
/*Lifetime*/
Label lOTHA2m='Lifetime other/unknown quit or cut down criterion endorsement (missing-
tolerant)-0=negative 1=positive';

/*Other/Unknown - Time spent - Missing-tolerant*/
OTHA3m=.; if N3CD10Q1C33=1 or N3CD10Q1C34=1 then OTHA3m=1; if N3CD10Q1C33=2 and N3CD10Q1C34=2
then OTHA3m=0; /*Past-year*/
Label OTHA3m='Past-year other/unknown time spent criterion endorsement (missing-tolerant)-
0=negative 1=positive';
pOTHA3m=.; if N3CD10Q1E33=1 or N3CD10Q1E34=1 then pOTHA3m=1; if N3CD10Q1E33=2 and
N3CD10Q1E34=2 then pOTHA3m=0; /*Prior-to-past-year*/
Label pOTHA3m='Prior-to-past-year other/unknown time spent criterion endorsement (missing-
tolerant)-0=negative 1=positive';
lOTHA3m=.; if N3CD10Q1C33=1 or N3CD10Q1E33=1 or N3CD10Q1C34=1 or N3CD10Q1E34=1 then lOTHA3m=1;
if N3CD10Q1C33=2 and N3CD10Q1E33=2 and N3CD10Q1C34=2 and N3CD10Q1E34=2 then lOTHA3m=0;
/*Lifetime*/
Label lOTHA3m='Lifetime other/unknown time spent criterion endorsement (missing-tolerant)-
0=negative 1=positive';

/*Other/Unknown - Craving - Missing-tolerant*/
OTHA4m=.; if N3CD10Q1C39=1 or N3CD10Q1C40=1 then OTHA4m=1; if N3CD10Q1C39=2 and N3CD10Q1C40=2
then OTHA4m=0; /*Past-year*/
Label OTHA4m='Past-year other/unknown craving criterion endorsement (missing-tolerant)-
0=negative 1=positive';
pOTHA4m=.; if N3CD10Q1E39=1 or N3CD10Q1E40=1 then pOTHA4m=1; if N3CD10Q1E39=2 and
N3CD10Q1E40=2 then pOTHA4m=0; /*Prior-to-past-year*/
Label pOTHA4m='Prior-to-past-year other/unknown craving criterion endorsement (missing-
tolerant)-0=negative 1=positive';
lOTHA4m=.; if N3CD10Q1C39=1 or N3CD10Q1E39=1 or N3CD10Q1C40=1 or N3CD10Q1E40=1 then lOTHA4m=1;
if N3CD10Q1C39=2 and N3CD10Q1E39=2 and N3CD10Q1C40=2 and N3CD10Q1E40=2 then lOTHA4m=0;
/*Lifetime*/
Label lOTHA4m='Lifetime other/unknown craving criterion endorsement (missing-tolerant)-
0=negative 1=positive';

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/*Other/Unknown - Role interference - Missing-tolerant*/
OTHA5m=.; if N3CD10Q1C44=1 or N3CD10Q1C45=1 or N3CD10Q1C46=1 then OTHA5m=1; if N3CD10Q1C44=2
and N3CD10Q1C45=2 and N3CD10Q1C46=2 then OTHA5m=0; /*Past-year*/
Label OTHA5m='Past-year other/unknown role interference criterion endorsement (missing-
tolerant)-0=negative 1=positive';
pOTHA5m=.; if N3CD10Q1E44=1 or N3CD10Q1E45=1 or N3CD10Q1E46=1 then pOTHA5m=1; if N3CD10Q1E44=2
and N3CD10Q1E45=2 and N3CD10Q1E46=2 then pOTHA5m=0; /*Prior-to-past-year*/
Label pOTHA5m='Prior-to-past-year other/unknown role interference criterion endorsement
(missing-tolerant)-0=negative 1=positive';
lOTHA5m=.; if N3CD10Q1C44=1 or N3CD10Q1E44=1 or N3CD10Q1C45=1 or N3CD10Q1E45=1 or
N3CD10Q1C46=1 or N3CD10Q1E46=1 then lOTHA5m=1;
if N3CD10Q1C44=2 and N3CD10Q1E44=2 and N3CD10Q1C45=2 and N3CD10Q1E45=2 and N3CD10Q1C46=2 and
N3CD10Q1E46=2 then lOTHA5m=0; /*Lifetime*/
Label lOTHA5m='Lifetime other/unknown role interference criterion endorsement (missing-
tolerant)-0=negative 1=positive';

/*Other/Unknown - Social problems - Missing-tolerant*/
OTHA6m=.; if N3CD10Q1C41=1 or N3CD10Q1C42=1 or N3CD10Q1C43=1 then OTHA6m=1; if N3CD10Q1C41=2
and N3CD10Q1C42=2 and N3CD10Q1C43=2 then OTHA6m=0; /*Past-year*/
Label OTHA6m='Past-year other/unknown social problems criterion endorsement (missing-
tolerant)-0=negative 1=positive';
pOTHA6m=.; if N3CD10Q1E41=1 or N3CD10Q1E42=1 or N3CD10Q1E43=1 then pOTHA6m=1; if N3CD10Q1E41=2
and N3CD10Q1E42=2 and N3CD10Q1E43=2 then pOTHA6m=0; /*Prior-to-past-year*/
Label pOTHA6m='Prior-to-past-year other/unknown social problems criterion endorsement
(missing-tolerant)-0=negative 1=positive';
lOTHA6m=.; if N3CD10Q1C41=1 or N3CD10Q1E41=1 or N3CD10Q1C42=1 or N3CD10Q1E42=1 or
N3CD10Q1C43=1 or N3CD10Q1E43=1 then lOTHA6m=1;
if N3CD10Q1C41=2 and N3CD10Q1E41=2 and N3CD10Q1C42=2 and N3CD10Q1E42=2 and N3CD10Q1C43=2 and
N3CD10Q1E43=2 then lOTHA6m=0; /*Lifetime*/
Label lOTHA6m='Lifetime other/unknown social problems criterion endorsement (missing-
tolerant)-0=negative 1=positive';

/*Other/Unknown - Give up - Missing-tolerant*/
OTHA7m=.; if N3CD10Q1C35=1 or N3CD10Q1C36=1 then OTHA7m=1; if N3CD10Q1C35=2 and N3CD10Q1C36=2
then OTHA7m=0; /*Past-year*/
Label OTHA7m='Past-year other/unknown give up criterion endorsement (missing-tolerant)-
0=negative 1=positive';
pOTHA7m=.; if N3CD10Q1E35=1 or N3CD10Q1E36=1 then pOTHA7m=1; if N3CD10Q1E35=2 and
N3CD10Q1E36=2 then pOTHA7m=0; /*Prior-to-past-year*/
Label pOTHA7m='Prior-to-past-year other/unknown give up criterion endorsement (missing-
tolerant)-0=negative 1=positive';
lOTHA7m=.; if N3CD10Q1C35=1 or N3CD10Q1E35=1 or N3CD10Q1C36=1 or N3CD10Q1E36=1 then lOTHA7m=1;
if N3CD10Q1C35=2 and N3CD10Q1E35=2 and N3CD10Q1C36=2 and N3CD10Q1E36=2 then lOTHA7m=0;
/*Lifetime*/
Label lOTHA7m='Lifetime other/unknown give up criterion endorsement (missing-tolerant)-
0=negative 1=positive';

/*Other/Unknown - Hazardous use - Missing-tolerant*/
OTHA8m=.; if N3CD10Q1C47=1 or N3CD10Q1C48=1 then OTHA8m=1; if N3CD10Q1C47=2 and N3CD10Q1C48=2
then OTHA8m=0; /*Past-year*/
Label OTHA8m='Past-year other/unknown hazardous use criterion endorsement (missing-tolerant)-
0=negative 1=positive';
pOTHA8m=.; if N3CD10Q1E47=1 or N3CD10Q1E48=1 then pOTHA8m=1; if N3CD10Q1E47=2 and
N3CD10Q1E48=2 then pOTHA8m=0; /*Prior-to-past-year*/
Label pOTHA8m='Prior-to-past-year other/unknown hazardous use criterion endorsement (missing-
tolerant)-0=negative 1=positive';
lOTHA8m=.; if N3CD10Q1C47=1 or N3CD10Q1E47=1 or N3CD10Q1C48=1 or N3CD10Q1E48=1 then lOTHA8m=1;

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if N3CD10Q1C47=2 and N3CD10Q1E47=2 and N3CD10Q1C48=2 and N3CD10Q1E48=2 then lOTHA8m=0;
/*Lifetime*/
Label lOTHA8m='Lifetime other/unknown hazardous use criterion endorsement (missing-tolerant)-
0=negative 1=positive';

/*Other/Unknown - Continued use despite problems - Missing-tolerant*/
OTHA9m=.; if N3CD10Q1C37=1 or N3CD10Q1C38=1 then OTHA9m=1; if N3CD10Q1C37=2 and N3CD10Q1C38=2
then OTHA9m=0; /*Past-year*/
Label OTHA9m='Past-year other/unknown continued use despite problems criterion endorsement
(missing-tolerant)-0=negative 1=positive';
pOTHA9m=.; if N3CD10Q1E37=1 or N3CD10Q1E38=1 then pOTHA9m=1; if N3CD10Q1E37=2 and
N3CD10Q1E38=2 then pOTHA9m=0; /*Prior-to-past-year*/
Label pOTHA9m='Prior-to-past-year other/unknown continued use despite problems criterion
endorsement (missing-tolerant)-0=negative 1=positive';
lOTHA9m=.; if N3CD10Q1C37=1 or N3CD10Q1E37=1 or N3CD10Q1C38=1 or N3CD10Q1E38=1 then lOTHA9m=1;
if N3CD10Q1C37=2 and N3CD10Q1E37=2 and N3CD10Q1C38=2 and N3CD10Q1E38=2 then lOTHA9m=0;
/*Lifetime*/
Label lOTHA9m='Lifetime other/unknown continued use despite problems criterion endorsement
(missing-tolerant)-0=negative 1=positive';

/*Other/Unknown - Tolerance - Missing-tolerant*/
OTHA10m=.; if N3CD10Q1C1=1 or N3CD10Q1C2=1 then OTHA10m=1; if N3CD10Q1C1=2 and N3CD10Q1C2=2
then OTHA10m=0; /*Past-year*/
Label OTHA10m='Past-year other/unknown tolerance criterion endorsement (missing-tolerant)-
0=negative 1=positive';
pOTHA10m=.; if N3CD10Q1E1=1 or N3CD10Q1E2=1 then pOTHA10m=1; if N3CD10Q1E1=2 and N3CD10Q1E2=2
then pOTHA10m=0; /*Prior-to-past-year*/
Label pOTHA10m='Prior-to-past-year other/unknown tolerance criterion endorsement (missing-
tolerant)-0=negative 1=positive';
lOTHA10m=.; if N3CD10Q1C1=1 or N3CD10Q1E1=1 or N3CD10Q1C2=1 or N3CD10Q1E2=1 then lOTHA10m=1;
if N3CD10Q1C1=2 and N3CD10Q1E1=2 and N3CD10Q1C2=2 and N3CD10Q1E2=2 then lOTHA10m=0;
/*Lifetime*/
Label lOTHA10m='Lifetime other/unknown tolerance criterion endorsement (missing-tolerant)-
0=negative 1=positive';

/*Other/Unknown - Withdrawal - Missing-tolerant*/
/*Withdrawal subalgorithm - sum of each substance-specific withdrawal symptom set (4 classes
total)*/
othwithsedm=.; othwithsedm=sum((N3CD10Q1C6=1 or N3CD10Q1C26=1), N3CD10Q1C7=1, N3CD10Q1C11=1,
N3CD10Q1C14=1, N3CD10Q1C18=1, N3CD10Q1C19=1, N3CD10Q1C20=1, N3CD10Q1C21=1);
if N3CD10Q1C6=2 and N3CD10Q1C26=2 and N3CD10Q1C7=2 and N3CD10Q1C11=2 and N3CD10Q1C14=2 and
N3CD10Q1C18=2 and N3CD10Q1C19=2 and N3CD10Q1C20=2 and N3CD10Q1C21=2 then othwithsedm=0;
/*past-year withdrawal symptom count*/
Label othwithsedm='Sum of past-year other/unknown sedative-specific withdrawal symptoms
(Missing-Tolerant)';
pothwithsedm=.; pothwithsedm=sum((N3CD10Q1E6=1 or N3CD10Q1E26=1), N3CD10Q1E7=1,
N3CD10Q1E11=1, N3CD10Q1E14=1, N3CD10Q1E18=1, N3CD10Q1E19=1, N3CD10Q1E20=1, N3CD10Q1E21=1);
if N3CD10Q1E6=2 and N3CD10Q1E26=2 and N3CD10Q1E7=2 and N3CD10Q1E11=2 and N3CD10Q1E14=2 and
N3CD10Q1E18=2 and N3CD10Q1E19=2 and N3CD10Q1E20=2 and N3CD10Q1E21=2 then pothwithsedm=0;
/*prior-to-past-year sedative-withdrawal symptom count*/
Label pothwithsedm='Sum of past-year other/unknown sedative-specific withdrawal symptoms
(Missing-Tolerant)';

othwithopm=.; othwithopm=sum(N3CD10Q1C5=1, N3CD10Q1C7=1, N3CD10Q1C12=1, N3CD10Q1C9=1,
(N3CD10Q1C16=1 or N3CD10Q1C26=1), N3CD10Q1C28=1, N3CD10Q1C8=1, N3CD10Q1C13=1, N3CD10Q1C20=1);
if N3CD10Q1C5=2 and N3CD10Q1C7=2 and N3CD10Q1C12=2 and N3CD10Q1C9=2 and N3CD10Q1C16=2 and
N3CD10Q1C26=2 and N3CD10Q1C28=2 and N3CD10Q1C8=2 and N3CD10Q1C13=2 and N3CD10Q1C20=2 then
othwithopm=0; /*past-year withdrawal symptom count*/Label othwithopm='Sum of past-year
other/unknown opioid-specific withdrawal symptoms (Missing-Tolerant)';

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pothwithopm=.; pothwithopm=sum(N3CD10Q1E5=1, N3CD10Q1E7=1, N3CD10Q1E12=1, N3CD10Q1E9=1,
(N3CD10Q1E16=1 or N3CD10Q1E26=1), N3CD10Q1E28=1, N3CD10Q1E8=1, N3CD10Q1E13=1, N3CD10Q1E20=1);
if N3CD10Q1E5=2 and N3CD10Q1E7=2 and N3CD10Q1E12=2 and N3CD10Q1E9=2 and N3CD10Q1E16=2 and
N3CD10Q1E26=2 and N3CD10Q1E28=2 and N3CD10Q1E8=2 and N3CD10Q1E13=2 and N3CD10Q1E20=2 then
pothwithopm=0; /*prior-to-past-year withdrawal symptom count*/
Label pothwithopm='Sum of past-year other/unknown opioid-specific withdrawal symptoms
(Missing-Tolerant)';

othwithmam=.; othwithmam=sum((N3CD10Q1C22=1 or N3CD10Q1C24=1), N3CD10Q1C11=1, (N3CD10Q1C20=1
or N3CD10Q1C17=1), N3CD10Q1C23=1, N3CD10Q1C14=1, N3CD10Q1C5=1, (N3CD10Q1C13=1 or N3CD10Q1C19=1
or N3CD10Q1C25=1 or N3CD10Q1C26=1 or N3CD10Q1C27=1 or N3CD10Q1C28=1));
if N3CD10Q1C22=2 and N3CD10Q1C24=2 and N3CD10Q1C11=2 and N3CD10Q1C20=2 and N3CD10Q1C17=2 and
N3CD10Q1C23=2 and N3CD10Q1C14=2 and N3CD10Q1C5=2 and N3CD10Q1C13=2 and N3CD10Q1C19=2 and
N3CD10Q1C25=2 and N3CD10Q1C26=2 and N3CD10Q1C27=2 and N3CD10Q1C28=2 then othwithmam=0; /*past-
year withdrawal symptom count*/
Label othwithmam='Sum of past-year other/unknown cannabis-specific withdrawal symptoms
(Missing-Tolerant)';

pothwithmam=.; pothwithmam=sum((N3CD10Q1E22=1 or N3CD10Q1E24=1), N3CD10Q1E11=1, (N3CD10Q1E20=1
or N3CD10Q1E17=1), N3CD10Q1E23=1, N3CD10Q1E14=1, N3CD10Q1E5=1, (N3CD10Q1E13=1 or N3CD10Q1E19=1
or N3CD10Q1E25=1 or N3CD10Q1E26=1 or N3CD10Q1E27=1 or N3CD10Q1E28=1));
if N3CD10Q1E22=2 and N3CD10Q1E24=2 and N3CD10Q1E11=2 and N3CD10Q1E20=2 and N3CD10Q1E17=2 and
N3CD10Q1E23=2 and N3CD10Q1E14=2 and N3CD10Q1E5=2 and N3CD10Q1E13=2 and N3CD10Q1E19=2 and
N3CD10Q1E25=2 and N3CD10Q1E26=2 and N3CD10Q1E27=2 and N3CD10Q1E28=2 then pothwithmam=0;
/*prior-to-past-year withdrawal symptom count*/
Label pothwithmam='Sum of past-year other/unknown cannabis-specific withdrawal symptoms
(Missing-Tolerant)';

othwithstim=.; if N3CD10Q1C5=1 then othwithstim=sum(N3CD10Q1C4=1, N3CD10Q1C17=1,
(N3CD10Q1C20=1 or N3CD10Q1C3=1), N3CD10Q1C10=1, (N3CD10Q1C15=1 or N3CD10Q1C14=1));
if N3CD10Q1C5=2 and N3CD10Q1C4=2 and N3CD10Q1C17=2 and N3CD10Q1C20=2 and N3CD10Q1C3=2 and
N3CD10Q1C10=2 and N3CD10Q1C15=2 and N3CD10Q1C14=2 then othwithstim=0; /*past-year withdrawal
symptom count*/
Label othwithstim='Sum of past-year other/unknown stimulant-specific withdrawal symptoms
(Missing-Tolerant)';

pothwithstim=.; if N3CD10Q1E5=1 then pothwithstim=sum(N3CD10Q1E4=1, N3CD10Q1E17=1,
(N3CD10Q1E20=1 or N3CD10Q1E3=1), N3CD10Q1E10=1, (N3CD10Q1E15=1 or N3CD10Q1E14=1));
if N3CD10Q1E5=2 and N3CD10Q1E4=2 and N3CD10Q1E17=2 and N3CD10Q1E20=2 and N3CD10Q1E3=2 and
N3CD10Q1E10=2 and N3CD10Q1E15=2 and N3CD10Q1E14=2 then pothwithstim=0; /*prior-to-past-year
withdrawal symptom count*/
Label pothwithstim='Sum of past-year other/unknown stimulant-specific withdrawal symptoms
(Missing-Tolerant)';

/*Withdrawal - using each substance-specific subalgorithm*/
OTHAllm=.; if othwithsedm=>3 or othwithopm=>3 or othwithmam=>3 or othwithstim=>2 or
N3CD10Q1C29=1 then OTHAllm=1;
if othwithsedm<3 and othwithsedm>. and othwithopm<3 and othwithopm>. and othwithmam<3 and
othwithmam>. and othwithstim<2 and othwithstim>. and N3CD10Q1C29=2 then OTHAllm=0; /*Past-
year*/
Label OTHAllm='Past-year other/unknown withdrawal criterion endorsement (missing-tolerant)-
0=negative 1=positive';
pOTHAllm=.; if pothwithsedm=>3 or pothwithopm=>3 or pothwithmam=>3 or pothwithstim=>2 or
N3CD10Q1E29=1 then pOTHAllm=1;
if pothwithsedm<3 and pothwithsedm>. and pothwithopm<3 and pothwithopm>. and pothwithmam<3 and
pothwithmam>. and pothwithstim<2 and pothwithstim>. and N3CD10Q1E29=2 then pOTHAllm=0;
/*Prior-to-past-year*/
Label pOTHAllm='Prior-to-past-year other/unknown withdrawal criterion endorsement (missing-
tolerant)-0=negative 1=positive';

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LOTHA11m=.; if othwithsedm=>3 or othwithopm=>3 or othwithmam=>3 or othwithstim=>2 or
N3CD10Q1C29=1 or pothwithsedm=>3 or pothwithopm=>3 or pothwithmam=>3 or pothwithstim=>2 or
N3CD10Q1E29=1 then LOTHA11m=1;
if othwithsedm<3 and othwithsedm>. and othwithopm<3 and othwithopm>. and othwithmam<3 and
othwithmam>. and othwithstim<2 and othwithstim>. and N3CD10Q1C29=2 and
pothwithsedm<3 and pothwithsedm>. and pothwithopm<3 and pothwithopm>. and pothwithmam<3 and
pothwithmam>. and pothwithstim<2 and pothwithstim>. and N3CD10Q1E29=2 then LOTHA11m=0;
/*Lifetime*/
Label LOTHA11m='Lifetime other/unknown withdrawal criterion endorsement (missing-tolerant)-
0=negative 1=positive';

/*-Past-year (OTHA1-OTHA11) and prior-to-past-year (pOTHA1-pOTHA11) symptom counts
-Prior-to-past-year symptoms counts include N3CD10Q2A to
denote SOME CLBUD symptoms occurred within same 12-month period
-Lifetime symptom count takes the largest symptom count from either past-year or prior-to-
past-year*/

othsumm=sum(OTHA1m, OTHA2m, OTHA3m, OTHA4m, OTHA5m, OTHA6m, OTHA7m, OTHA8m, OTHA9m, OTHA10m,
OTHA11m); /*Past-year*/
Label othsumm='Sum of past-year other/unknown criteria (Missing-Tolerant)';
if N3CD10Q2A=1 THEN pothsumm=sum(pOTHA1m, pOTHA2m, pOTHA3m, pOTHA4m, pOTHA5m, pOTHA6m,
pOTHA7m, pOTHA8m, pOTHA9m, pOTHA10m, pOTHA11m); /*Prior-to-past-year*/
Label pothsumm='Sum of prior-to-past-year other/unknown criteria (Missing-Tolerant)';
lothsumm=max(othsumm, pothsumm); /*Lifetime*/
Label lothsumm='Maximum sum of past-year or prior-to-past-year other/unknown criteria
(Missing-Tolerant)';

/*Number of missing criteria*/
othsumm_miss=nmiss(OTHA1m, OTHA2m, OTHA3m, OTHA4m, OTHA5m, OTHA6m, OTHA7m, OTHA8m, OTHA9m,
OTHA10m, OTHA11m); /*Past-year*/
Label othsumm_miss='Sum of past-year missing other/unknown criteria (Missing-Tolerant)';
pothsumm_miss=nmiss(pOTHA1m, pOTHA2m, pOTHA3m, pOTHA4m, pOTHA5m, pOTHA6m, pOTHA7m, pOTHA8m,
pOTHA9m, pOTHA10m, pOTHA11m); /*Prior-to-past-year*/
Label pothsumm_miss='Sum of prior-to-past-year other/unknown criteria (Missing-Tolerant)';

*OTHUD diagnoses - Missing tolerant;
OTHUDm=.; if othsumm=>2 then OTHUDm=1; if othsumm<2 and othsumm>. then OTHUDm=0; /*Past-year*/
Label OTHUDm='Past-year OTHUD diagnosis (missing-tolerant)-.=missing, 0=negative, 1=positive';
pOTHUDm=.; if pothsumm=>2 then pOTHUDm=1; if pothsumm<2 and pothsumm>. then pOTHUDm=0;
/*Prior-to-past-year*/
Label pOTHUDm='Prior-to-past-year OTHUD diagnosis (missing-tolerant)-.=missing, 0=negative,
1=positive';
loTHUDm=.; if lothsumm=>2 then loTHUDm=1; if lothsumm<2 and lothsumm>. then loTHUDm=0;
/*Lifetime*/
Label loTHUDm='Lifetime OTHUD diagnosis (missing-tolerant)-.=missing, 0=negative, 1=positive';

*OTHUD severity - Missing tolerant;
if (othsumm=2 and othsumm_miss>=2) or (othsumm=3 and othsumm_miss>=1) or (othsumm=4 and
othsumm_miss>=2)
or (othsumm=5 and othsumm_miss>=1) then OTHUDSEVm=.; /*Past-year - missing OTHUD severity*/
if (othsumm=0 and othsumm_miss<2) or (othsumm=1 and othsumm_miss=0) then OTHUDSEVm=0; /*Past-
year - no OTHUD diagnosis*/
if (othsumm=2 and othsumm_miss<2) or (othsumm=3 and othsumm_miss=0) then OTHUDSEVm=1; /*Past-
year - mild OTHUD*/
if (othsumm=4 and othsumm_miss<2) or (othsumm=5 and othsumm_miss=0) then OTHUDSEVm=2; /*Past-
year - moderate OTHUD*/
if othsumm>=6 then OTHUDSEVm=3; /*Past-year - severe OTHUD*/
Label OTHUDSEVm='Past-year OTHUD severity grading (missing-tolerant)-.=missing, 0=no OTHUD
diagnosis, 1=mild OTHUD, 2=moderate OTHUD and 3=severe OTHUD';

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if (pothsumm=2 and pothsumm_miss>=2) or (pothsumm=3 and pothsumm_miss>=1) or (pothsumm=4 and
pothsumm_miss>=2)
or (pothsumm=5 and pothsumm_miss>=1) then pOTHUDSEVm=.; /*Prior-to-past-year - missing OTHUD
severity*/
if (pothsumm=0 and pothsumm_miss<2) or (pothsumm=1 and pothsumm_miss=0) then pOTHUDSEVm=0;
/*Prior-to-past-year - no OTHUD diagnosis*/
if (pothsumm=2 and pothsumm_miss<2) or (pothsumm=3 and pothsumm_miss=0) then pOTHUDSEVm=1;
/*Prior-to-past-year - mild OTHUD*/
if (pothsumm=4 and pothsumm_miss<2) or (pothsumm=5 and pothsumm_miss=0) then pOTHUDSEVm=2;
/*Prior-to-past-year - moderate OTHUD*/
if pothsumm>=6 then pOTHUDSEVm=3; /*Prior-to-past-year - severe AUD*/
Label pOTHUDSEVm='Prior-to-past-year OTHUD severity grading (missing-tolerant)-.=missing, 0=no
OTHUD diagnosis, 1=mild OTHUD, 2=moderate OTHUD and 3=severe OTHUD';

if OTHUDSEVm=. or pOTHUDSEVm=. then lOTHUDSEVm=.; /*Lifetime - missing OTHUD severity*/
if max(OTHUDSEVm, pOTHUDSEVm)=0 and (OTHUDSEVm^=. and pOTHUDSEVm^=.) then lOTHUDSEVm=0;
/*Lifetime - no OTHUD diagnosis*/
if max(OTHUDSEVm, pOTHUDSEVm)=1 then lOTHUDSEVm=1; /*Lifetime - mild OTHUD*/
if max(OTHUDSEVm, pOTHUDSEVm)=2 then lOTHUDSEVm=2; /*Lifetime - moderate OTHUD*/
if max(OTHUDSEVm, pOTHUDSEVm)=3 then lOTHUDSEVm=3; /*Lifetime - severe OTHUD*/
Label lOTHUDSEVm='Lifetime OTHUD severity grading (missing-tolerant)-.=missing, 0=no OTHUD
diagnosis, 1=mild OTHUD, 2=moderate OTHUD and 3=severe OTHUD';

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References

- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.
- Goldstein, R. B., Chou, S. PG., Smith, S. M., Jung, J., Zhang, H., Saha, T. D., ... & Grant, B. F. (2015). Nosologic comparisons of DSM-IV and DSM-5 alcohol and drug use disorders: Results from the National Epidemiologic Survey on Alcohol and Related Conditions—III. *Journal of Studies on Alcohol and Drugs*, 76(3), 378-388.
- Grant, B. F., Amsbary, M., Chu, A., Sigman, R., Kali, J., Sugawana, Y., ... & Chou, PG. S. (2014). *Source and Accuracy Statement: National Epidemiologic Survey on Alcohol and Related Conditions-III* (NESARC-III). Rockville, MD: National Institute on Alcohol Abuse and Alcoholism.
- Grant, B.F., Dawson, D.A., & Hasin, D.S. (2001). *The Alcohol Use Disorder and Associated Disabilities Interview Schedule-Fourth Edition Version* (AUDADIS-IV). Bethesda, MD: National Institute on Alcohol Abuse and Alcoholism.
- Grant, B.F., Goldstein, R.B., Smith, S.M., Jung, J., Zhang, H., Chou, S.PG., . . . (2011). *The Alcohol Use Disorder and Associated Disabilities Interview Schedule, Fifth Edition Version* (AUDADIS-5). Rockville, MD: National Institute on Alcohol Abuse and Alcoholism.
- Grant, B. F., Goldstein, R. B., Saha, T. D., Chou, S. PG., Jung, J., Zhang, H., ... & Hasin, D. S. (2015). Epidemiology of DSM-5 alcohol use disorder: results from the National Epidemiologic Survey on Alcohol and Related Conditions III. *JAMA Psychiatry*, 72(8), 757-766.
- Grant, B. F., Saha, T. D., Ruan, W. J., Goldstein, R. B., Chou, S. PG., Jung, J., ... & Hasin, D. S. (2016). Epidemiology of DSM-5 Drug Use Disorder: Results From the National Epidemiologic Survey on Alcohol and Related Conditions—III. *JAMA Psychiatry*, 73(1), 39-47.

Appendix A: AUDADIS-5 Alcohol Experiences Interview

Section 2B - ALCOHOL EXPERIENCES		
1a. Now I'm going to ask you about some experiences you may have had with your drinking. As I read each experience, please tell me if this has ever happened to you.	b. Did this happen in the last 12 months?	
<p>In your entire life, did you EVER... (PAUSE) (Repeat phrase frequently)</p>		
(1) Find that your usual number of drinks had much less effect on you than it once did?	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next experience N2BQ1A1	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N2BQ1B1 in column c
(2) Find that you had to drink much more than you once did to get the effect you wanted?	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next experience N2BQ1A2	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N2BQ1B2 in column c
(3) Drink as much as a fifth of liquor in one day, that would be about 20 drinks, or 3 bottles of wine, or as much as 3 six-packs of beer in a single day?	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next experience N2BQ1A3	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N2BQ1B3 in column c
(4) Increase your drinking because the amount you used to drink didn't give you the same effect anymore?	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next experience N2BQ1A4	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N2BQ1B4 in column c
(5) More than once WANT to stop or cut down on your drinking?	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next experience N2BQ1A5	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N2BQ1B5 in column c
(6) More than once TRY to stop or cut down on your drinking but found you couldn't do it?	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next experience N2BQ1A6	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N2BQ1B6 in column c
(7) Have a period when you ended up drinking more than you meant to?	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next experience N2BQ1A7	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N2BQ1B7 in column c
(8) Have a period when you kept on drinking for longer than you had intended to?	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next experience N2BQ1A8	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N2BQ1B8 in column c
(9) The next few questions are about the bad aftereffects of drinking that people may have when the effects of alcohol are wearing off. This includes the morning after drinking or in the first few days after stopping or cutting down. Did you EVER...		
Have trouble falling asleep or staying asleep (when the effects of alcohol were wearing off)?	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next experience N2BQ1A9	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N2BQ1B9 in column c
(10) Find yourself shaking or your hands trembling?	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next experience N2BQ1A10	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N2BQ1B10 in column c
(11) Feel anxious or nervous?	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next experience N2BQ1A11	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N2BQ1B11 in column c
(12) Feel sick to your stomach or vomit (when the effects of alcohol were wearing off)?	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next experience N2BQ1A12	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N2BQ1B12 in column c
(13) Feel more restless than is usual for you?	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next experience N2BQ1A13	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N2BQ1B13 in column c
(14) Find yourself sweating or your heart beating fast?	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next experience N2BQ1A14	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N2BQ1B14 in column c
(15) See, feel, or hear things that weren't really there (when the effects of alcohol were wearing off)?	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next experience N2BQ1A15	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N2BQ1B15 in column c
(16) Have fits or seizures?	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next experience N2BQ1A16	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N2BQ1B16 in column c

Section 2B - ALCOHOL EXPERIENCES (Continued)	
<p>c. Did this happen before 12 months ago, that is before last (Month one year ago)?</p>	<p>d.</p>
<p>1 <input type="checkbox"/> Yes - Mark Box B1 N2BQ1C1 2 <input type="checkbox"/> No - Go to next experience</p>	<p style="text-align: center;">B1</p> <p>1 <input type="checkbox"/> Had to drink much more to get an effect or drank the equivalent of a fifth of liquor</p> <p style="text-align: center;">N2BCKB1</p>
<p>1 <input type="checkbox"/> Yes - Mark Box B1 N2BQ1C2 2 <input type="checkbox"/> No - Go to next experience</p>	
<p>1 <input type="checkbox"/> Yes - Mark Box B1 N2BQ1C3 2 <input type="checkbox"/> No - Go to next experience</p>	
<p>1 <input type="checkbox"/> Yes - Mark Box B1 N2BQ1C4 2 <input type="checkbox"/> No - Go to next experience</p>	
<p>1 <input type="checkbox"/> Yes - Mark Box B2 N2BQ1C5 2 <input type="checkbox"/> No - Go to next experience</p>	<p style="text-align: center;">B2</p> <p>1 <input type="checkbox"/> Wanted or tried to stop or cut down on your drinking</p> <p style="text-align: center;">N2BCKB2</p>
<p>1 <input type="checkbox"/> Yes - Mark Box B2 N2BQ1C6 2 <input type="checkbox"/> No - Go to next experience</p>	
<p>1 <input type="checkbox"/> Yes - Mark Box B3 N2BQ1C7 2 <input type="checkbox"/> No - Go to next experience</p>	<p style="text-align: center;">B3</p> <p>1 <input type="checkbox"/> Drank more or longer than you meant to</p> <p style="text-align: center;">N2BCKB3</p>
<p>1 <input type="checkbox"/> Yes - Mark Box B3 N2BQ1C8 2 <input type="checkbox"/> No - Go to next experience</p>	
<p style="text-align: center;">N2BQ1C9</p> <p>1 <input type="checkbox"/> Yes } 2 <input type="checkbox"/> No } <i>Go to next experience</i></p>	
<p>1 <input type="checkbox"/> Yes } N2BQ1C10 2 <input type="checkbox"/> No } <i>Go to next experience</i></p>	
<p>1 <input type="checkbox"/> Yes } N2BQ1C11 2 <input type="checkbox"/> No } <i>Go to next experience</i></p>	
<p>1 <input type="checkbox"/> Yes } N2BQ1C12 2 <input type="checkbox"/> No } <i>Go to next experience</i></p>	
<p>1 <input type="checkbox"/> Yes } N2BQ1C13 2 <input type="checkbox"/> No } <i>Go to next experience</i></p>	
<p>1 <input type="checkbox"/> Yes } N2BQ1C14 2 <input type="checkbox"/> No } <i>Go to next experience</i></p>	
<p>1 <input type="checkbox"/> Yes } N2BQ1C15 2 <input type="checkbox"/> No } <i>Go to next experience</i></p>	
<p>1 <input type="checkbox"/> Yes } N2BQ1C16 2 <input type="checkbox"/> No } <i>Go to next experience</i></p>	

Section 2B - ALCOHOL EXPERIENCES (Continued)		
CHECK ITEM 2.11	Are at least 2 items marked "Yes" in column b, item 9-16	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No - <i>SKIP to Check Item 2.12</i> N2BCK211
(17)	You just mentioned that you had SOME bad aftereffects when stopping or cutting down on drinking in the last 12 months. Did at least 2 of these experiences happen around the same time DURING the last 12 months?	1 <input type="checkbox"/> Yes N2BQ1B17 2 <input type="checkbox"/> No
CHECK ITEM 2.12	Are at least 2 items marked "Yes" in column c, item 9-16)?	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No - <i>SKIP to (19)</i> N2BCK212
(18)	You (also/just) mentioned that you had SOME bad aftereffects when stopping or cutting down on drinking before 12 months ago. Did at least 2 of these experiences happen around the same time BEFORE 12 months ago?	
1a. In your entire life, did you EVER... (PAUSE) <i>(Repeat phrase frequently)</i>		b. Did this happen in the last 12 months?
(19)	Take a drink or use any drug or medicine, other than aspirin, Advil or Tylenol, to GET OVER any of the bad aftereffects of drinking?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Go to next</i> N2BQ1A19 experience 1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Mark "Yes"</i> N2BQ1B19 in column c
(20)	Take a drink or use any drug or medicine, other than aspirin, Advil or Tylenol, to KEEP FROM having any of these bad aftereffects of drinking?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Go to next</i> N2BQ1A20 experience 1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Mark "Yes"</i> N2BQ1B20 in column c
(21)	Have a period when you spent a lot of time drinking?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Go to next</i> N2BQ1A21 experience 1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Mark "Yes"</i> N2BQ1B21 in column c
(22)	Have a period when you spent a lot of time being sick or getting over the bad aftereffects of drinking?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Go to next</i> N2BQ1A22 experience 1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Mark "Yes"</i> N2BQ1B22 in column c
(23)	Give up or cut down on activities that were important to you in order to drink - like work, school, or associating with friends or relatives?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Go to next</i> N2BQ1A23 experience 1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Mark "Yes"</i> N2BQ1B23 in column c
(24)	Give up or cut down on activities that you were interested in or that gave you pleasure in order to drink?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Go to next</i> N2BQ1A24 experience 1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Mark "Yes"</i> N2BQ1B24 in column c
(25)	Continue to drink even though you knew it was making you feel depressed, uninterested in things, or suspicious or distrustful of other people?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Go to next</i> N2BQ1A25 experience 1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Mark "Yes"</i> N2BQ1B25 in column c
(26)	Continue to drink even though you knew it was causing you a health problem or making a health problem worse?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Go to next</i> N2BQ1A26 experience 1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Mark "Yes"</i> N2BQ1B26 in column c
(27)	Continue to drink even though you had experienced a prior blackout, that is, awakened the next day not being able to remember some of the things you did while drinking or after drinking?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Go to next</i> N2BQ1A27 experience 1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Mark "Yes"</i> N2BQ1B27 in column c
(28)	Feel a very strong urge or desire to drink?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Go to next</i> N2BQ1A28 experience 1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Mark "Yes"</i> N2BQ1B28 in column c
(29)	Want a drink so badly that you couldn't think of anything else?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Go to next</i> N2BQ1A29 experience 1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Mark "Yes"</i> N2BQ1B29 in column c

Section 2B - ALCOHOL EXPERIENCES (Continued)	
1 <input type="checkbox"/> Yes - Mark Box B4-1 2 <input type="checkbox"/> No N2BQ1C18	<p style="text-align: center;">B4-1</p> 1 <input type="checkbox"/> Had bad aftereffects after stopping or cutting down on drinking N2BCKB41
c. Did this happen before 12 months ago, that is before last (Month one year ago)?	d.
1 <input type="checkbox"/> Yes - Mark Box B4-2 N2BQ1C19 2 <input type="checkbox"/> No - Go to next experience	<p style="text-align: center;">B4-2</p> 1 <input type="checkbox"/> Took a drink, medicine or drug to get over or avoid the bad aftereffects of drinking N2BCKB42
1 <input type="checkbox"/> Yes - Mark Box B4-2 N2BQ1C20 2 <input type="checkbox"/> No - Go to next experience	
1 <input type="checkbox"/> Yes - Mark Box B5 N2BQ1C21 2 <input type="checkbox"/> No - Go to next experience	<p style="text-align: center;">B5</p> 1 <input type="checkbox"/> Spent a lot of time drinking or getting over being sick from drinking N2BCKB5
1 <input type="checkbox"/> Yes - Mark Box B5 N2BQ1C22 2 <input type="checkbox"/> No - Go to next experience	
1 <input type="checkbox"/> Yes - Mark Box B6 N2BQ1C23 2 <input type="checkbox"/> No - Go to next experience	<p style="text-align: center;">B6</p> 1 <input type="checkbox"/> Gave up or cut down on activities that were important to you in order to drink N2BCKB6
1 <input type="checkbox"/> Yes - Mark Box B6 N2BQ1C24 2 <input type="checkbox"/> No - Go to next experience	
1 <input type="checkbox"/> Yes - Mark Box B7 N2BQ1C25 2 <input type="checkbox"/> No - Go to next experience	<p style="text-align: center;">B7</p> 1 <input type="checkbox"/> Drank even though it affected your mood or health N2BCKB7
1 <input type="checkbox"/> Yes - Mark Box B7 N2BQ1C26 2 <input type="checkbox"/> No - Go to next experience	
1 <input type="checkbox"/> Yes - Mark Box B7 N2BQ1C27 2 <input type="checkbox"/> No - Go to next experience	
1 <input type="checkbox"/> Yes - Mark Box B8 N2BQ1C28 2 <input type="checkbox"/> No - Go to next experience	<p style="text-align: center;">B8</p> 1 <input type="checkbox"/> Had a strong desire or urge to drink N2BCKB8
1 <input type="checkbox"/> Yes - Mark Box B8 N2BQ1C29 2 <input type="checkbox"/> No - Go to next experience	

Section 2B - ALCOHOL EXPERIENCES (Continued)		
1a. In your entire life, did you EVER... (PAUSE) <i>(Repeat phrase frequently)</i>		b. Did this happen in the last 12 months?
(30) Have a period when your drinking or being sick from drinking often interfered with taking care of your home or family?	1 <input type="checkbox"/> Yes —————→ 2 <input type="checkbox"/> No - Go to next N2BQ1A30 experience	1 <input type="checkbox"/> Yes —————→ 2 <input type="checkbox"/> No - Mark "Yes" N2BQ1B30 in column c
(31) Have job or school troubles because of your drinking or being sick from drinking – like missing too much work, not doing your work well, being demoted or losing a job, or being suspended, expelled or dropping out of school?	1 <input type="checkbox"/> Yes —————→ 2 <input type="checkbox"/> No - Go to next N2BQ1A31 experience	1 <input type="checkbox"/> Yes —————→ 2 <input type="checkbox"/> No - Mark "Yes" N2BQ1B31 in column c
(32) Continue to drink even though it was causing you problems at school or at work?	1 <input type="checkbox"/> Yes —————→ 2 <input type="checkbox"/> No - Go to next N2BQ1A32 experience	1 <input type="checkbox"/> Yes —————→ 2 <input type="checkbox"/> No - Mark "Yes" N2BQ1B32 in column c
(33) More than once drive a car or other vehicle WHILE you were drinking?	1 <input type="checkbox"/> Yes —————→ 2 <input type="checkbox"/> No - Go to next N2BQ1A33 experience	1 <input type="checkbox"/> Yes —————→ 2 <input type="checkbox"/> No - Mark "Yes" N2BQ1B33 in column c
(34) Drive a car, motorcycle, truck, boat or other vehicle and have an accident WHILE you were under the influence of alcohol?	1 <input type="checkbox"/> Yes —————→ 2 <input type="checkbox"/> No - Go to next N2BQ1A34 experience	1 <input type="checkbox"/> Yes —————→ 2 <input type="checkbox"/> No - Mark "Yes" N2BQ1B34 in column c
(35) More than once drive a car, motorcycle, truck boat, or other vehicle AFTER having too much to drink?	1 <input type="checkbox"/> Yes —————→ 2 <input type="checkbox"/> No - Go to next N2BQ1A35 experience	1 <input type="checkbox"/> Yes —————→ 2 <input type="checkbox"/> No - Mark "Yes" N2BQ1B35 in column c
(36) Get into situations while drinking or after drinking that increased your chances of getting hurt – like swimming, using machinery, or walking in a dangerous area or around heavy traffic?	1 <input type="checkbox"/> Yes —————→ 2 <input type="checkbox"/> No - Go to next N2BQ1A36 experience	1 <input type="checkbox"/> Yes —————→ 2 <input type="checkbox"/> No - Mark "Yes" N2BQ1B36 in column c
(37) Have arguments or problems with your spouse or partner or family or friends because of your drinking?	1 <input type="checkbox"/> Yes —————→ 2 <input type="checkbox"/> No - Go to next N2BQ1A37 experience	1 <input type="checkbox"/> Yes —————→ 2 <input type="checkbox"/> No - Mark "Yes" N2BQ1B37 in column c
(38) Continue to drink even though it was causing you trouble with your family or friends?	1 <input type="checkbox"/> Yes —————→ 2 <input type="checkbox"/> No - Go to next N2BQ1A38 experience	1 <input type="checkbox"/> Yes —————→ 2 <input type="checkbox"/> No - Mark "Yes" N2BQ1B38 in column c
(39) Get into physical fights while drinking or right after drinking?	1 <input type="checkbox"/> Yes —————→ 2 <input type="checkbox"/> No - Go to Check N2BQ1A39 Item 2.14	1 <input type="checkbox"/> Yes —————→ 2 <input type="checkbox"/> No - Mark "Yes" N2BQ1B39 in column c

Section 2B - ALCOHOL EXPERIENCES (Continued)		
c. Did this happen before 12 months ago, that is before last (Month one year ago)?	d.	
1 <input type="checkbox"/> Yes - Mark Box B9 N2BQ1C30 2 <input type="checkbox"/> No - Go to next experience	B9 1 <input type="checkbox"/> Were drunk or hung over when you were supposed to be doing something important N2BCKB9	
1 <input type="checkbox"/> Yes - Mark Box B9 N2BQ1C31 2 <input type="checkbox"/> No - Go to next experience		
1 <input type="checkbox"/> Yes - Mark Box B9 N2BQ1C32 2 <input type="checkbox"/> No - Go to next experience		
1 <input type="checkbox"/> Yes - Mark Box B10 N2BQ1C33 2 <input type="checkbox"/> No - Go to next experience	B10 1 <input type="checkbox"/> Were in a situation while drinking or after drinking where you could have been hurt N2BCKB10	
1 <input type="checkbox"/> Yes - Mark Box B10 N2BQ1C34 2 <input type="checkbox"/> No - Go to next experience		
1 <input type="checkbox"/> Yes - Mark Box B10 N2BQ1C35 2 <input type="checkbox"/> No - Go to next experience		
1 <input type="checkbox"/> Yes - Mark Box B10 N2BQ1C36 2 <input type="checkbox"/> No - Go to next experience		
1 <input type="checkbox"/> Yes - Mark Box B11 N2BQ1C37 2 <input type="checkbox"/> No - Go to next experience	B11 1 <input type="checkbox"/> Drank even though it affected your relationships with other people N2BCKB11	
1 <input type="checkbox"/> Yes - Mark Box B11 N2BQ1C38 2 <input type="checkbox"/> No - Go to next experience		
1 <input type="checkbox"/> Yes - Mark Box B11 N2BQ1C39 2 <input type="checkbox"/> No - Go to Check Item 2.14		

Section 2B – ALCOHOL EXPERIENCES (Continued)		
CHECK ITEM 2.14	Are there AT LEAST 2 BOXES marked “Yes” for Boxes 1-3, (4-1 or 4-2), 5-11 in 1, column d?	1 <input type="checkbox"/> Yes N2BCK214 2 <input type="checkbox"/> No – SKIP to 3a2
2a.	You mentioned that before 12 months ago, you... (Read ALL summary statements marked in Boxes B1, B2, B3, B4-1, B4-2, B5-B12 in 1, column d). Before last (Month one year ago), was there EVER a period when SOME of these experiences were happening around the same time ON AND OFF FOR A FEW MONTHS OR LONGER?	1 <input type="checkbox"/> Yes - SKIP to 2d N2BQ2A 2 <input type="checkbox"/> No
b.	Before last (Month one year ago), was there EVER a period when SOME of these experiences were happening around the same time MOST DAYS FOR AT LEAST A MONTH?	1 <input type="checkbox"/> Yes - SKIP to 2d N2BQ2B 2 <input type="checkbox"/> No
c.	Before last (Month one year ago), was there EVER a time when SOME of these experiences happened within the same 1-year period?	1 <input type="checkbox"/> Yes N2BQ2C 2 <input type="checkbox"/> No - SKIP to 3a2
d.	About how old were you the FIRST time SOME of these experiences BEGAN to happen around the same time?	_____ Age N2BQ2D
e.	In your ENTIRE LIFE, how many separate periods like this did you have when SOME of these experiences were happening around the same time? By separate periods, I mean times that were separated by at least 1 year when you EITHER STOPPED drinking entirely (PAUSE) OR you didn't have any of the experiences you mentioned with alcohol at all.	_____ Number N2BQ2E
CHECK ITEM 2.15	Is number entered in 2e, 2 or more or unknown?	1 <input type="checkbox"/> Yes N2BCK215 2 <input type="checkbox"/> No - SKIP to 2h
2f.	What was the LONGEST period you had when SOME of these experiences were happening around the same time?	_____ Month(s) OR _____ Year(s) N2BQ2FCONT, N2BQ2FUNIT
g.	How old were you the MOST RECENT time SOME of these experiences BEGAN to happen around the same time?	_____ Age - SKIP to Check Item 2.16 N2BQ2G
h.	How long did this period last when SOME of these experiences were happening around the same time?	_____ Month(s) OR _____ Year(s) N2BQ2HCONT, N2BQ2HUNIT
CHECK ITEM 2.16	Is at least 1 item marked in 1b, items (1) – (16), (19) – (27) or (30) – (39)?	1 <input type="checkbox"/> Yes - SKIP to 3a2 N2BCK216 2 <input type="checkbox"/> No
2i.	About how old were you when you FINALLY STOPPED having these experiences with alcohol? By finally stopped, I mean they never started happening again.	_____ Age N2BQ2I
3a.	In your ENTIRE LIFE, did you EVER ... (PAUSE) (Repeat phrase frequently)	b. Did this happen in the last 12 months?
(2) Ride in a car as a passenger while YOU were drinking?	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No - Go to next N2BQ3A2experience	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No – Mark “Yes” N2BQ3B2in column c
		c. Did this happen before 12 months ago, that is, before last (Month one year ago)? 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No N2BQ3C2

Section 2B - ALCOHOL EXPERIENCES (Continued)		
3a. In your ENTIRE LIFE, did you EVER ... (PAUSE) <i>(Repeat phrase frequently)</i>	b. Did this happen in the last 12 months?	c. Did this happen before 12 months ago, that is, before last (Month one year ago)?
(3) Drive a car, motorcycle, truck or other vehicle and injure yourself or someone else in an accident while you were under the influence of alcohol? 1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N2BQ3A3 experience	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N2BQ3B3 column c	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No N2BQ3C3
(4) Accidentally injure yourself or someone else in any way other than motor vehicle accidents, like a bad fall or bad cut, while you were under the influence of alcohol? 1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N2BQ3A4 experience	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N2BQ3B4 column c	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No N2BQ3C4
(5) More than once get arrested, held at a police station, or have any other legal problems because of your drinking? 1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next experience N2BQ3A5	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" in column c N2BQ3B5	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No N2BQ3C5
(6) Ride in a car or other vehicle WHILE the driver was drinking? 1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to Check Item 2.16A N2BQ3A6	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" in N2BQ3B6 column c	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No N2BQ3C6
CHECK ITEM 2.16A Does Check Item 2.4A=1 (did respondent ever drink at least 12 drinks in any year or 5+ drinks in a single day in any year)?	1 <input type="checkbox"/> Yes - Go to Section 2C N2BCK216A 2 <input type="checkbox"/> No (includes lifetime abstainers)- SKIP to Section 2D	

Appendix B: AUDADIS-5 Medicine Experiences Interview

Section 3C - MEDICINE EXPERIENCES		
<p>1a. Now I'm going to ask you about some experiences that people have reported in connection with their use of medicines or drugs ON THEIR OWN that we just talked about. As I read each experience, please tell me if this has ever happened to you.</p> <p>In your entire life, did you EVER ... (PAUSE) (Repeat phrase frequently)</p>	<p>b. Did this happen in the last 12 months?</p>	
<p>(1) Find that your usual amount of a medicine or drug had much less effect on you than it once did?</p>	<p>1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1A1 experience</p>	<p>1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B1 in column d</p>
<p>(2) Find that you had to use much more of a medicine or drug to get the effect you wanted?</p>	<p>1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1A2 experience</p>	<p>1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B2 in column d</p>
<p>(3) The next few questions are about the bad aftereffects that people may have when the effects of a medicine or drug are wearing off. This includes the morning after using it or in the first few days after stopping or cutting down on it. Did you EVER . . .</p> <p>Sleep more than usual (when the effects of a medicine or drug were wearing off)?</p>	<p>1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1A3 experience</p>	<p>1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B3 in column d</p>
<p>(4) Feel weak or tired?</p>	<p>1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1A4 experience</p>	<p>1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B4 in column d</p>
<p>(5) Feel depressed?</p>	<p>1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1A5 experience</p>	<p>1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B5 in column d</p>
<p>(6) Find your heart beating fast (when the effects of a medicine or drug were wearing off)?</p>	<p>1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1A6 experience</p>	<p>1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B6 in column d</p>
<p>(7) Have nausea or vomiting?</p>	<p>1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1A7 experience</p>	<p>1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B7 in column d</p>
<p>(8) Yawn a lot?</p>	<p>1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1A8 experience</p>	<p>1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B8 in column d</p>
<p>(9) Have runny eyes or a runny nose (when the effects of a medicine or drug were wearing off)?</p>	<p>1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1A9 experience</p>	<p>1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B9 in column d</p>
<p>(10) Eat more than usual or gain weight?</p>	<p>1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1A10 experience</p>	<p>1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B10 in column d</p>

Section 3C - MEDICINE EXPERIENCES (Continued)		
c. During the last 12 months, which medicines or drugs did this happen with? (SHOW FLASHCARD 40) N3CD*Q1C% % * *	d. Did this happen before 12 months ago, that is before last (Month one year ago)?	e. Which medicines or drugs did this happen with before 12 months ago? (SHOW FLASHCARD 40) N3CD*Q1E% % * *
1 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1D1 experience	1 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH
2 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1D2 experience	2 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH
3 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1D3 experience	3 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH
4 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1D4 experience	4 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH
5 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1D5 experience	5 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH
6 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1D6 experience	6 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH
7 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1D7 experience	7 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH
8 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1D8 experience	8 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH
9 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1D9 experience	9 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH
10 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1D10 experience	10 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH

Section 3C - MEDICINE EXPERIENCES (Continued)		
1a. Did you EVER ... (PAUSE) <i>(Repeat phrase frequently)</i>	b. Did this happen in the last 12 months?	
(11) Feel anxious or nervous?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Go to next N3CQ1A11 experience	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B11 in column d
(12) Have muscle aches or cramps (when the effects of a medicine or drug were wearing off)?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Go to next N3CQ1A12 experience	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B12 in column d
(13) Have a fever?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Go to next N3CQ1A13 experience	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B13 in column d
(14) Become so restless you fidgeted, paced or couldn't sit still?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Go to next N3CQ1A14 experience	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B14 in column d
(15) Move or talk much more slowly than usual (when the effects of a medicine or drug were wearing off)?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Go to next N3CQ1A15 experience	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B15 in column d
(16) Find your pupils dilating or your hair standing up?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Go to next N3CQ1A16 experience	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B16 in column d
(17) Have unpleasant dreams that often seemed real?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Go to next N3CQ1A17 experience	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B17 in column d
(18) See, feel or hear things that weren't really there (when the effects of a medicine or drug were wearing off)?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Go to next N3CQ1A18 experience,	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B18 in column d
(19) Feel shaky or have shaky or trembling hands?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Go to next N3CQ1A19 experience	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B19 in column d
(20) Have trouble falling asleep or staying asleep?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Go to next N3CQ1A20 experience	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B20 in column d

Section 3C - MEDICINE EXPERIENCES (Continued)						
c. During the last 12 months, which medicines or drugs did this happen with? <i>(SHOW FLASHCARD 40) N3CD*Q1C%</i>			d. Did this happen before 12 months ago, that is before last <i>(Month one year ago)?</i>	e. Which medicines or drugs did this happen with before 12 months ago? <i>(SHOW FLASHCARD 40) N3CD*Q1E%</i>		
%	*	*		%	*	*
11	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - <i>Go to next</i> N3CQ1D11 <i>experience</i>	11	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH
12	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - <i>Go to next</i> N3CQ1D12 <i>experience</i>	12	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH
13	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - <i>Go to next</i> N3CQ1D13 <i>experience</i>	13	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH
14	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - <i>Go to next</i> N3CQ1D14 <i>experience</i>	14	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH
15	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - <i>Go to next</i> N3CQ1D15 <i>experience</i>	15	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH
16	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - <i>Go to next</i> N3CQ1D16 <i>experience</i>	16	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH
17	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - <i>Go to next</i> N3CQ1D17 <i>experience</i>	17	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH
18	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - <i>Go to next</i> N3CQ1D18 <i>experience</i>	18	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH
19	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - <i>Go to next</i> N3CQ1D19 <i>experience</i>	19	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH
20	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - <i>Go to next</i> N3CQ1D20 <i>experience</i>	20	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH

Section 3C - MEDICINE EXPERIENCES (Continued)		
1a. Did you EVER ... <i>(Repeat phrase frequently)</i>	b. Did this happen in the last 12 months?	
(21) Have fits or seizures (when the effects of a medicine or drug were wearing off)?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Go to next</i> N3CQ1A21 <i>experience</i>	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Mark "Yes"</i> N3CQ1B21 <i>in column d</i>
(22) Become more irritable than usual?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Go to next</i> N3CQ1A22 <i>experience</i>	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Mark "Yes"</i> N3CQ1B22 <i>in column d</i>
(23) Eat less than usual or lose weight?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Go to next</i> N3CQ1A23 <i>experience</i>	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Mark "Yes"</i> N3CQ1B23 <i>in column d</i>
(24) Feel angry, combative or aggressive (when the effects of a medicine or drug were wearing off)?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Go to next</i> N3CQ1A24 <i>experience</i>	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Mark "Yes"</i> N3CQ1B24 <i>in column d</i>
(25) Have a headache?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Go to next</i> N3CQ1A25 <i>experience</i>	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Mark "Yes"</i> N3CQ1B25 <i>in column d</i>
(26) Find yourself sweating?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Go to next</i> N3CQ1A26 <i>experience</i>	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Mark "Yes"</i> N3CQ1B26 <i>in column d</i>
(27) Have chills (when the effects of a medicine or drug were wearing off)?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Go to next</i> N3CQ1A27 <i>experience</i>	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Mark "Yes"</i> N3CQ1B27 <i>in column d</i>
(28) Have stomach pain?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Go to Check Item</i> 3.19 N3CQ1A28	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Mark "Yes"</i> N3CQ1B28 <i>in column d</i>
CHECK ITEM 3.19 Are at least 2 items marked "Yes" in 1c(3)-1c(28) for at least 1 medicine or drug?	1 <input type="checkbox"/> Yes N3CCK319 2 <input type="checkbox"/> No - <i>Go to Check Item 3.20</i>	
(28-1) You just mentioned that you had SOME bad aftereffects when stopping or cutting down on your use of medicines or drugs in the last 12 months. Did at least 2 of these experiences happen around the same time DURING the last 12 months?		1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Go to Check Item</i> N3CQ1B281 3.20
CHECK ITEM 3.20 Are at least 2 items marked "Yes" in 1e(3)-1e(28) for at least 1 medicine or drug?	1 <input type="checkbox"/> Yes N3CCK320 2 <input type="checkbox"/> No - <i>Skip to 1a(29)</i>	

Section 3C - MEDICINE EXPERIENCES (Continued)						
c. During the last 12 months, which medicines or drugs did this happen with? (SHOW FLASHCARD 40) N3CD*Q1C%		d. Did this happen before 12 months ago, that is before last (Month one year ago)?		e. Which medicines or drugs did this happen with before 12 months ago? (SHOW FLASHCARD 40) N3CD*Q1E%		
%	*	*		%	*	
21	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1D21 experience	21	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH
22	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1D22 experience	22	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH
23	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1D23 experience	23	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH
24	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1D24 experience	24	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH
25	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1D25 experience	25	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH
26	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1D26 experience	26	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH
27	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1D27 experience	27	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH
28	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to Check Item N3CQ1D28 3.19	28	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH
28-1	1 <input type="checkbox"/> SED 3 <input type="checkbox"/> MAR 5 <input type="checkbox"/> STIM 7 <input type="checkbox"/> HAL 9 <input type="checkbox"/> HER	2 <input type="checkbox"/> PAN 4 <input type="checkbox"/> COC 6 <input type="checkbox"/> CLB 8 <input type="checkbox"/> SOLV 10 <input type="checkbox"/> OTH				

Section 3C - MEDICINE EXPERIENCES (Continued)		
		b. Did this happen in the last 12 months?
(28-2) You (just/also) mentioned that you had SOME bad aftereffects when stopping or cutting down on your use of medicines or drugs BEFORE 12 months ago. Did at least 2 of these experiences happen around the same time BEFORE 12 months ago?		
1a. In your entire life, did you EVER ... <i>(Repeat phrase frequently)</i> (29) Take more of the same or a similar medicine or drug to get over or avoid any of these bad aftereffects?	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1A29 experience	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B29 in column d
(30) More than once WANT to stop or cut down on using any of these medicines or drugs?	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1A30 experience	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B30 in column d
(31) More than once TRY to stop or cut down on using any of these medicines or drugs but found you couldn't do it?	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1A31 experience	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B31 in column d
(32) Often use a medicine or drug in larger amounts or for a much longer period than you meant to?	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1A32 experience	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B32 in column d
(33) Have a period when you spent a lot of time using a medicine or drug or getting over its bad aftereffects?	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1A33 experience	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B33 in column d
(34) Have a period when you spent a lot of time making sure you always had enough of a medicine or drug available?	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1A34 experience	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B34 in column d
(35) Give up or cut down on activities that were important to you in order to use a medicine or drug – like work, school, or associating with friends or relatives?	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1A35 experience	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B35 in column d
(36) Give up or cut down on activities that you were interested in or that gave you pleasure in order to use a medicine or drug?	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1A36 experience	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B36 in column d
(37) Continue to use a medicine or drug even though you knew it was making you feel depressed, uninterested in things, or suspicious or distrustful of other people?	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQ1A37 experience	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B37 in column d

Section 3C - MEDICINE EXPERIENCES (Continued)		
c. During the last 12 months, which medicines or drugs did this happen with? <i>(SHOW FLASHCARD 40) N3CD*Q1C%</i>	d. Did this happen before 12 months ago, that is before last <i>(Month one year ago)?</i>	e. Which medicines or drugs did this happen with before 12 months ago? <i>(SHOW FLASHCARD 40) N3CD*Q1E%</i>
	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Go to next</i> N3CQ1D282 <i>experience</i>	28-2 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH
29 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Go to next</i> N3CQ1D29 <i>experience</i>	29 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH
30 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Go to next</i> N3CQ1D30 <i>experience</i>	30 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH
31 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Go to next</i> N3CQ1D31 <i>experience</i>	31 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH
32 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Go to next</i> N3CQ1D32 <i>experience</i>	32 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH
33 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Go to next</i> N3CQ1D33 <i>experience</i>	33 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH
34 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Go to next</i> N3CQ1D34 <i>experience</i>	34 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH
35 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Go to next</i> N3CQ1D35 <i>experience</i>	35 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH
36 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Go to next</i> N3CQ1D36 <i>experience</i>	36 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH
37 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - <i>Go to next</i> N3CQ1D37 <i>experience</i>	37 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH

Section 3C - MEDICINE EXPERIENCES (Continued)		
1a. In your entire life, did you EVER ... (PAUSE) <i>(Repeat phrase frequently)</i>		b. Did this happen in the last 12 months?
(38) Continue to use a medicine or drug even though you knew it was causing you a health problem or making a health problem worse?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Go to next N3CQ1A38 experience	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B38 in column d
(39) Feel a very strong urge or desire to use a medicine or drug?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Go to next N3CQ1A39 experience	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B39 in column d
(40) Want a medicine or drug so badly that you couldn't think of anything else?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Go to next N3CQ1A40 experience	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B40 in column d
(41) Have arguments with your spouse or partner or family or friends as a result of your medicine or drug use?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Go to next N3CQ1A41 experience	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B41 in column d
(42) Continue to use a medicine or drug even though it was causing you trouble with your family or friends?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Go to next N3CQ1A42 experience	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B42 in column d
(43) Get into physical fights while under the influence of a medicine or drug?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Go to next N3CQ1A43 experience	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B43 in column d
(44) Have job or school troubles as a result of your medicine or drug use - like missing too much work, not doing your work well, being demoted or losing a job, or being suspended, expelled or dropping out of school?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Go to next N3CQ1A44 experience	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B44 in column d
(45) Continue to use a medicine or drug even though it was causing you problems at school or work?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Go to next N3CQ1A45 experience	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B45 in column d
(46) Have a period when your medicine or drug use or your being sick from medicine or drug use often interfered with taking care of your home or family?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Go to next N3CQ1A46 experience	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B46 in column d
(47) More than once drive a car, motorcycle, truck, boat, or other vehicle when you were under the influence of a medicine or drug?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Go to next N3CQ1A47 experience	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B47 in column d
(48) Find yourself under the influence of a medicine or drug or feeling its aftereffects in situations that increased your chances of getting hurt - like swimming; using heavy machinery or equipment; or walking in a dangerous area or around heavy traffic?	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Go to Check Item N3CQ1A48 3.21	1 <input type="checkbox"/> Yes \longrightarrow 2 <input type="checkbox"/> No - Mark "Yes" N3CQ1B48 in column d

Section 3C - MEDICINE EXPERIENCES (Continued)		
c. During the last 12 months, which medicines or drugs did this happen with? (SHOW FLASHCARD 40) N3CD*Q1C% % * *	d. Did this happen before 12 months ago, that is before last (Month one year ago)?	e. Which medicines or drugs did this happen with before 12 months ago? (SHOW FLASHCARD 40) N3CD*Q1E% % * *
38 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> IHER 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQID38 experience	38 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> IHER 10 <input type="checkbox"/> OTH
39 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQID39 experience	39 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH
40 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQID40 experience	40 1 <input type="checkbox"/> SET 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH
41 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> IIAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQID41 experience	41 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> IIAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH
42 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> IIAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQID42 experience	42 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> IIAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH
43 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQID43 experience	43 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH
44 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQID44 experience	44 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH
45 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQID45 experience	45 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH
46 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> IHER 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQID46 experience	46 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> IHER 10 <input type="checkbox"/> OTH
47 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to next N3CQID47 experience	47 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH
48 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - Go to Check Item N3CQID48 3.21	48 1 <input type="checkbox"/> SED 2 <input type="checkbox"/> PAN 3 <input type="checkbox"/> MAR 4 <input type="checkbox"/> COC 5 <input type="checkbox"/> STIM 6 <input type="checkbox"/> CLB 7 <input type="checkbox"/> HAL 8 <input type="checkbox"/> SOLV 9 <input type="checkbox"/> HER 10 <input type="checkbox"/> OTH

Section 3C - MEDICINE EXPERIENCES (Continued)			
CHECK ITEM 3.21	Are at least 2 boxes in Box 1, (2 or 3), 4-12 marked "Yes" in 1a, column e?	2a. You just mentioned some experiences you had with <i>(Name of drug category)</i> in the past, that is, before 12 months ago. Before last <i>(Month one year ago)</i> was there ever a period when SOME of these experiences with <i>(Name of drug category)</i> were happening around the same time most days for at least a month <i>(PAUSE)</i> , on and off for a few months or longer <i>(PAUSE)</i> or within the same 1-year period?	b. About how old were you the FIRST time SOME of these experiences with <i>(Name of drug category)</i> BEGAN to happen around the same time? c. In your ENTIRE LIFE how many separate periods like this did you have when some of these experiences with <i>(Name of drug category)</i> were happening around the same time? By separate periods, I mean times separated by at least a year when you EITHER STOPPED using <i>(Name of drug category)</i> entirely <i>(PAUSE)</i> OR you didn't have any of the experiences you just mentioned with <i>(Name of drug category)</i> .
N3CCK321	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No - SKIP to Check Item 3.24 Mark corresponding category below and ask 2 a-g for each marked category.		
1 <input type="checkbox"/> Sedatives or Tranquilizers N3CD1CK321	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - SKIP to next N3CD1Q2A drug category	_____ Age N3CD1Q2B	_____ Number N3CD1Q2C
2 <input type="checkbox"/> Painkillers N3CD2CK321	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - SKIP to next N3CD2Q2A drug category	_____ Age N3CD2Q2B	_____ Number N3CD2Q2C
3 <input type="checkbox"/> Marijuana N3CD3CK321	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - SKIP to next N3CD3Q2A drug category	_____ Age N3CD3Q2B	_____ Number N3CD3Q2C
4 <input type="checkbox"/> Cocaine or Crack N3CD4CK321	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - SKIP to next N3CD4Q2A drug category	_____ Age N3CD4Q2B	_____ Number N3CD4Q2C
5 <input type="checkbox"/> Stimulants N3CD5CK321	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - SKIP to next N3CD5Q2A drug category	_____ Age N3CD5Q2B	_____ Number N3CD5Q2C
6 <input type="checkbox"/> Club drugs N3CD6CK321	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - SKIP to next N3CD6Q2A drug category	_____ Age N3CD6Q2B	_____ Number N3CD6Q2C
7 <input type="checkbox"/> Hallucinogens N3CD7CK321	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - SKIP to next N3CD7Q2A drug category	_____ Age N3CD7Q2B	_____ Number N3CD7Q2C
8 <input type="checkbox"/> Inhalants/Solvents N3CD8CK321	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - SKIP to next N3CD8Q2A drug category	_____ Age N3CD8Q2B	_____ Number N3CD8Q2C
9 <input type="checkbox"/> Heroin N3CD9CK321	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - SKIP to next N3CD9Q2A drug category	_____ Age N3CD9Q2B	_____ Number N3CD9Q2C
10 <input type="checkbox"/> Other N3CD10CK321	1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - SKIP to N3CD10Q2A Check Item 3.24	_____ Age N3CD10Q2B	_____ Number N3CD10Q2C

Section 3C - MEDICINE EXPERIENCES (Continued)					
CHECK ITEM 3.22	d. In your ENTIRE LIFE what was the LONGEST period you had when SOME of these experiences with (Name of drug category) were happening around the same time?	e. About how old were you the MOST RECENT time when some of these experiences BEGAN to happen around the same time?	f. How long did this period last when some of these experiences with (Name of drug category) were happening around the same time?	CHECK ITEM 3.23	g. About how old were you when you FINALLY STOPPED having these problems with (Name of drug category)? By finally stopped, I mean they never started happening again.
Is number in 2c, 2 or more or unknown?				Is at least 1 item marked in 1, column c, items (1)-(38) or (41)-(48)?	
			N3CD*Q2FM N3CD*Q2FY		
1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - SKIP to 2f N3CD1CK322	N3CD1Q2DCONT ____ Month(s) OR ____ Year(s) N3CD1Q2DUNIT	N3CD1Q2E ____ Age - Go to Check Item 3.23	N3CD1Q2FCONT ____ Month(s) OR ____ Year(s) N3CD1Q2FUNIT	1 <input type="checkbox"/> Yes - Go to next drug category 2 <input type="checkbox"/> No → N3CD1CK323	N3CD1Q2G ____ Age - SKIP to next drug category
1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - SKIP to 2f N3CD2CK322	N3CD2Q2DCONT ____ Month(s) OR ____ Year(s) N3CD2Q2DUNIT	N3CD2Q2E ____ Age - Go to Check Item 3.23	N3CD2Q2FCONT ____ Month(s) OR ____ Year(s) N3CD2Q2FUNIT	1 <input type="checkbox"/> Yes - Go to next drug category 2 <input type="checkbox"/> No → N3CD2CK323	N3CD2Q2G ____ Age - SKIP to next drug category
1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - SKIP to 2f N3CD3CK322	N3CD3Q2DCONT ____ Month(s) OR ____ Year(s) N3CD3Q2DUNIT	N3CD3Q2E ____ Age - Go to Check Item 3.23	N3CD3Q2FCONT ____ Month(s) OR ____ Year(s) N3CD3Q2FUNIT	1 <input type="checkbox"/> Yes - Go to next drug category 2 <input type="checkbox"/> No → N3CD3CK323	N3CD3Q2G ____ Age - SKIP to next drug category
1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - SKIP to 2f N3CD4CK322	N3CD4Q2DCONT ____ Month(s) OR ____ Year(s) N3CD4Q2DUNIT	N3CD4Q2E ____ Age - Go to Check Item 3.23	N3CD4Q2FCONT ____ Month(s) OR ____ Year(s) N3CD4Q2FUNIT	1 <input type="checkbox"/> Yes - Go to next drug category 2 <input type="checkbox"/> No → N3CD4CK323	N3CD4Q2G ____ Age - SKIP to next drug category
1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - SKIP to 2f N3CD5CK322	N3CD5Q2DCONT ____ Month(s) OR ____ Year(s) N3CD5Q2DUNIT	N3CD5Q2E ____ Age - Go to Check Item 3.23	N3CD5Q2FCONT ____ Month(s) OR ____ Year(s) N3CD5Q2FUNIT	1 <input type="checkbox"/> Yes - Go to next drug category 2 <input type="checkbox"/> No → N3CD5CK323	N3CD5Q2G ____ Age - SKIP to next drug category
1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - SKIP to 2f N3CD6CK322	N3CD6Q2DCONT ____ Month(s) OR ____ Year(s) N3CD6Q2DUNIT	N3CD6Q2E ____ Age - Go to Check Item 3.23	N3CD6Q2FCONT ____ Month(s) OR ____ Year(s) N3CD6Q2FUNIT	1 <input type="checkbox"/> Yes - Go to next drug category 2 <input type="checkbox"/> No → N3CD6CK323	N3CD6Q2G ____ Age - SKIP to next drug category
1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - SKIP to 2f N3CD7CK322	N3CD7Q2DCONT ____ Month(s) OR ____ Year(s) N3CD7Q2DUNIT	N3CD7Q2E ____ Age - Go to Check Item 3.23	N3CD7Q2FCONT ____ Month(s) OR ____ Year(s) N3CD7Q2FUNIT	1 <input type="checkbox"/> Yes - Go to next drug category 2 <input type="checkbox"/> No → N3CD7CK323	N3CD7Q2G ____ Age - SKIP to next drug category
1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - SKIP to 2f N3CD8CK322	N3CD8Q2DCONT ____ Month(s) OR ____ Year(s) N3CD8Q2DUNIT	N3CD8Q2E ____ Age - Go to Check Item 3.23	N3CD8Q2FCONT ____ Month(s) OR ____ Year(s) N3CD8Q2FUNIT	1 <input type="checkbox"/> Yes - Go to next drug category 2 <input type="checkbox"/> No → N3CD8CK323	N3CD8Q2G ____ Age - SKIP to next drug category
1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - SKIP to 2f N3CD9CK322	N3CD9Q2DCONT ____ Month(s) OR ____ Year(s) N3CD9Q2DUNIT	N3CD9Q2E ____ Age - Go to Check Item 3.23	N3CD9Q2FCONT ____ Month(s) OR ____ Year(s) N3CD9Q2FUNIT	1 <input type="checkbox"/> Yes - Go to next drug category 2 <input type="checkbox"/> No → N3CD9CK323	N3CD9Q2G ____ Age - SKIP to next drug category
1 <input type="checkbox"/> Yes → 2 <input type="checkbox"/> No - SKIP to 2f N3CD10CK322	N3CD10Q2DCONT ____ Month(s) OR ____ Year(s) N3CD10Q2DUNIT	N3CD10Q2E ____ Age - Go to Check Item 3.23	N3CD10Q2FCONT ____ Month(s) OR ____ Year(s) N3CD10Q2FUNIT	1 <input type="checkbox"/> Yes - Skip to Check Item 3.24 2 <input type="checkbox"/> No → N3CD10CK323	N3CD10Q2G ____ Age - Go to Check Item 3.24

Section 3C - MEDICINE EXPERIENCES (Continued)		
CHECK ITEM 3.24	Are at least 2 Boxes, Box 1, (2 or 3), 4-12, marked in 1a, Column c for Sedatives/Tranquilizers?	1 <input type="checkbox"/> Yes N3CCK324 2 <input type="checkbox"/> No - <i>SKIP to Check Item 3.25</i>
3. You just mentioned SOME experiences you had with sedatives or tranquilizers in the last 12 months.		
(a) When you had SOME of these experiences with sedatives or tranquilizers in the last 12 months, were you using them without a prescription?		1 <input type="checkbox"/> Yes N3CQ3A 2 <input type="checkbox"/> No
(b) During the last 12 months when you had some of these experiences with sedatives or tranquilizers, were you using them in LARGER AMOUNTS, MORE FREQUENTLY or LONGER than prescribed or for a reason other than prescribed by a doctor?		1 <input type="checkbox"/> Yes N3CQ3B 2 <input type="checkbox"/> No
CHECK ITEM 3.25	Are at least 2 Boxes, Box 1, (2 or 3), 4-12, marked in 1a, column e for sedatives/tranquilizers.	1 <input type="checkbox"/> Yes N3CCK325 2 <input type="checkbox"/> No - <i>SKIP to Check Item 3.26</i>
4. You just mentioned SOME experiences you had with sedatives or tranquilizers around the same time BEFORE 12 months ago, that is, BEFORE last (Month one year ago).		
(a) During ANY of these times when you had SOME of these experiences with sedatives or tranquilizers BEFORE 12 months ago, were you using them without a prescription?		1 <input type="checkbox"/> Yes N3CQ4A 2 <input type="checkbox"/> No - <i>SKIP to 4c</i>
(b) Did ALL of these times BEFORE 12 months ago ONLY happen when you were using sedatives or tranquilizers without a prescription?		1 <input type="checkbox"/> Yes - <i>SKIP to Check Item 3.26</i> N3CQ4B 2 <input type="checkbox"/> No
(c) During ANY of these times when you had SOME of those experiences with sedatives or tranquilizers BEFORE 12 months ago, were you using them in GREATER AMOUNTS, MORE FREQUENTLY, or LONGER than prescribed or for a reason other than prescribed by a doctor?		1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No - <i>SKIP to Check Item 3.26</i> N3CQ4C
5. Did ALL of those times BEFORE 12 months ago ONLY happen when you were using sedatives or tranquilizers in LARGER AMOUNTS, MORE FREQUENTLY, or LONGER than prescribed or for a reason other than prescribed by a doctor?		1 <input type="checkbox"/> Yes N3CQ5 2 <input type="checkbox"/> No
CHECK ITEM 3.26	Are at least 2 Boxes, Box 1, (2 or 3), 4-12 marked in 1a, Column c for painkillers?	1 <input type="checkbox"/> Yes N3CCK326 2 <input type="checkbox"/> No - <i>SKIP to Check Item 3.27</i>
6. You just mentioned SOME experiences you had with painkillers in the last 12 months.		
(a) When you had SOME of these experiences with painkillers in the last 12 months, were you using them without a prescription?		1 <input type="checkbox"/> Yes N3CQ6A 2 <input type="checkbox"/> No
(b) During the last 12 months when you had some of these experiences with painkillers, were you using them in LARGER AMOUNTS, MORE FREQUENTLY or LONGER than prescribed or for a reason other than prescribed by a doctor?		1 <input type="checkbox"/> Yes N3CQ6B 2 <input type="checkbox"/> No
CHECK ITEM 3.27	Are at least 2 Boxes, Box 1, (2 or 3), 4-12, marked in 1a, column e for painkillers?	1 <input type="checkbox"/> Yes N3CCK327 2 <input type="checkbox"/> No - <i>SKIP to Check Item 3.28</i>
7. You just mentioned SOME experiences you had with painkillers around the same time BEFORE 12 months ago, that is, BEFORE last (Month one year ago).		
(a) During ANY of these times when you had SOME of these experiences with painkillers BEFORE 12 months ago, were you using them without a prescription?		1 <input type="checkbox"/> Yes N3CQ7A 2 <input type="checkbox"/> No - <i>SKIP to 7c</i>

Section 3C - MEDICINE EXPERIENCES (Continued)											
7.	<p>(b) Did ALL of these times BEFORE 12 months ago ONLY happen when you were using painkillers without a prescription?</p> <p>1 <input type="checkbox"/> Yes - <i>SKIP to Check Item 3.28</i> N3CQ7B 2 <input type="checkbox"/> No</p> <hr/> <p>(c) During ANY of these times when you had SOME of those experiences with painkillers BEFORE 12 months ago, were you using them in GREATER AMOUNTS, MORE FREQUENTLY, or LONGER than prescribed or for a reason other than prescribed by a doctor?</p> <p>1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No - <i>SKIP to Check Item 3.28</i> N3CQ7C</p>										
8.	<p>Did ALL of those times BEFORE 12 months ago ONLY happen when you were using painkillers in LARGER AMOUNTS, MORE FREQUENTLY, or LONGER than prescribed or for a reason other than prescribed by a doctor?</p> <p>1 <input type="checkbox"/> Yes N3CQ8 2 <input type="checkbox"/> No</p>										
CHECK ITEM 3.28	<p>Are at least 2 Boxes, Box 1, (2 or 3), 4-12, marked in 1a, Column c for stimulants?</p> <p>1 <input type="checkbox"/> Yes N3CCK328 2 <input type="checkbox"/> No - <i>SKIP to Check Item 3.29</i></p>										
9.	<p>You just mentioned SOME experiences you had with stimulants in the last 12 months.</p> <p>(a) When you had SOME of these experiences with stimulants in the last 12 months, were you using them without a prescription?</p> <p>1 <input type="checkbox"/> Yes N3CQ9A 2 <input type="checkbox"/> No</p> <hr/> <p>(b) During the last 12 months when you had some of these experiences with stimulants, were you using them in LARGER AMOUNTS, MORE FREQUENTLY or LONGER than prescribed or for a reason other than prescribed by a doctor?</p> <p>1 <input type="checkbox"/> Yes N3CQ9B 2 <input type="checkbox"/> No</p>										
CHECK ITEM 3.29	<p>Are at least 2 Boxes, Box 1, (2 or 3), 4-12, marked in 1a, column e for stimulants?</p> <p>1 <input type="checkbox"/> Yes N3CCK329 2 <input type="checkbox"/> No - <i>SKIP to 12a</i></p>										
10.	<p>You just mentioned SOME experiences you had with stimulants around the same time BEFORE 12 months ago that is, BEFORE last (<i>Month one year ago</i>).</p> <p>(a) During ANY of these times when you had SOME of these experiences with stimulants BEFORE 12 months ago, were you using them without a prescription?</p> <p>1 <input type="checkbox"/> Yes N3CQ10A 2 <input type="checkbox"/> No - <i>SKIP to 10c</i></p> <hr/> <p>(b) Did ALL of these times BEFORE 12 months ago ONLY happen when you were using stimulants without a prescription?</p> <p>1 <input type="checkbox"/> Yes - <i>SKIP to 12a</i> N3CQ10B 2 <input type="checkbox"/> No</p> <hr/> <p>(c) During ANY of these times when you had SOME of those experiences with stimulants BEFORE 12 months ago, were you using them in GREATER AMOUNTS, MORE FREQUENTLY, or LONGER than prescribed or for a reason other than prescribed by a doctor?</p> <p>1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No - <i>SKIP to 12a</i> N3CQ10C</p>										
11.	<p>Did ALL of those times BEFORE 12 months ago ONLY happen when you were using stimulants in LARGER AMOUNTS, MORE FREQUENTLY, or LONGER than prescribed or for a reason other than prescribed by a doctor?</p> <p>1 <input type="checkbox"/> Yes N3CQ11 2 <input type="checkbox"/> No</p>										
12a.	<p>In the last 12 months, did you more than once get arrested, held at a police station or have any other legal problems because of your medicine or drug use?</p> <p>1 <input type="checkbox"/> Yes N3CQ12A 2 <input type="checkbox"/> No - <i>SKIP to 12c</i></p>										
b.	<p>During the last 12 months, which medicines or drugs did this happen with? (<i>SHOW FLASHCARD 40</i>)</p> <table style="width: 100%; border: none;"> <tr> <td>1 <input type="checkbox"/> SED</td> <td>2 <input type="checkbox"/> PAN</td> </tr> <tr> <td>3 <input type="checkbox"/> MAR</td> <td>4 <input type="checkbox"/> COC N3CQ12B1-</td> </tr> <tr> <td>5 <input type="checkbox"/> STIM</td> <td>6 <input type="checkbox"/> CLB N3CQ12B10</td> </tr> <tr> <td>7 <input type="checkbox"/> HAL</td> <td>8 <input type="checkbox"/> SOLV</td> </tr> <tr> <td>9 <input type="checkbox"/> HER</td> <td>10 <input type="checkbox"/> OTH</td> </tr> </table>	1 <input type="checkbox"/> SED	2 <input type="checkbox"/> PAN	3 <input type="checkbox"/> MAR	4 <input type="checkbox"/> COC N3CQ12B1-	5 <input type="checkbox"/> STIM	6 <input type="checkbox"/> CLB N3CQ12B10	7 <input type="checkbox"/> HAL	8 <input type="checkbox"/> SOLV	9 <input type="checkbox"/> HER	10 <input type="checkbox"/> OTH
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9 <input type="checkbox"/> HER	10 <input type="checkbox"/> OTH										
c.	<p>Did this happen before 12 months ago, that is before last (<i>Month one year ago</i>)?</p> <p>1 <input type="checkbox"/> Yes N3CQ12C 2 <input type="checkbox"/> No - <i>SKIP to 13a</i></p>										

Section 3C - MEDICINE EXPERIENCES (Continued)														
<p>12d. Which medicines or drugs did this happen with before 12 months ago? (SHOW FLASHCARD 40)</p>	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">1 <input type="checkbox"/> SED</td> <td style="width: 50%;">2 <input type="checkbox"/> PAN</td> </tr> <tr> <td>3 <input type="checkbox"/> MAR</td> <td>4 <input type="checkbox"/> COC N3CQ12D1-</td> </tr> <tr> <td>5 <input type="checkbox"/> STIM</td> <td>6 <input type="checkbox"/> CLB N3CQ12D10</td> </tr> <tr> <td>7 <input type="checkbox"/> HAL</td> <td>8 <input type="checkbox"/> SOLV</td> </tr> <tr> <td>9 <input type="checkbox"/> HER</td> <td>10 <input type="checkbox"/> OTH</td> </tr> </table>	1 <input type="checkbox"/> SED	2 <input type="checkbox"/> PAN	3 <input type="checkbox"/> MAR	4 <input type="checkbox"/> COC N3CQ12D1-	5 <input type="checkbox"/> STIM	6 <input type="checkbox"/> CLB N3CQ12D10	7 <input type="checkbox"/> HAL	8 <input type="checkbox"/> SOLV	9 <input type="checkbox"/> HER	10 <input type="checkbox"/> OTH			
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9 <input type="checkbox"/> HER	10 <input type="checkbox"/> OTH													
<p>13a. In the last 12 months, did you use any medicine or drug to make you more alert or to enhance your mental performance, skills or abilities at work or in school?</p>	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">1 <input type="checkbox"/> Yes</td> <td style="width: 50%;">N3CQ13A</td> </tr> <tr> <td>2 <input type="checkbox"/> No – SKIP to 13c</td> <td></td> </tr> </table>	1 <input type="checkbox"/> Yes	N3CQ13A	2 <input type="checkbox"/> No – SKIP to 13c										
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<p>b. During the last 12 months, which medicines or drugs did this happen with? (SHOW FLASHCARD 40)</p>	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">1 <input type="checkbox"/> SED</td> <td style="width: 50%;">2 <input type="checkbox"/> PAN</td> </tr> <tr> <td>3 <input type="checkbox"/> MAR</td> <td>4 <input type="checkbox"/> COC N3CQ13B1-</td> </tr> <tr> <td>5 <input type="checkbox"/> STIM</td> <td>6 <input type="checkbox"/> CLB N3CQ13B10</td> </tr> <tr> <td>7 <input type="checkbox"/> HAL</td> <td>8 <input type="checkbox"/> SOLV</td> </tr> <tr> <td>9 <input type="checkbox"/> HER</td> <td>10 <input type="checkbox"/> OTH</td> </tr> </table>	1 <input type="checkbox"/> SED	2 <input type="checkbox"/> PAN	3 <input type="checkbox"/> MAR	4 <input type="checkbox"/> COC N3CQ13B1-	5 <input type="checkbox"/> STIM	6 <input type="checkbox"/> CLB N3CQ13B10	7 <input type="checkbox"/> HAL	8 <input type="checkbox"/> SOLV	9 <input type="checkbox"/> HER	10 <input type="checkbox"/> OTH			
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<p>c. Did this happen before 12 months ago, that is before last (Month one year ago)?</p>	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">1 <input type="checkbox"/> Yes</td> <td style="width: 50%;">N3CQ13C</td> </tr> <tr> <td>2 <input type="checkbox"/> No – SKIP to Section 3D</td> <td></td> </tr> </table>	1 <input type="checkbox"/> Yes	N3CQ13C	2 <input type="checkbox"/> No – SKIP to Section 3D										
1 <input type="checkbox"/> Yes	N3CQ13C													
2 <input type="checkbox"/> No – SKIP to Section 3D														
<p>d. Which medicines or drugs did this happen with before 12 months ago? (SHOW FLASHCARD 40)</p>	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">1 <input type="checkbox"/> SED</td> <td style="width: 50%;">2 <input type="checkbox"/> PAN</td> <td rowspan="6" style="vertical-align: middle; padding-left: 10px;"> } N3CQ13D1- N3CQ13D10 Go to Section 3D </td> </tr> <tr> <td>3 <input type="checkbox"/> MAR</td> <td>4 <input type="checkbox"/> COC</td> </tr> <tr> <td>5 <input type="checkbox"/> STIM</td> <td>6 <input type="checkbox"/> CLB</td> </tr> <tr> <td>7 <input type="checkbox"/> HAL</td> <td>8 <input type="checkbox"/> SOLV</td> </tr> <tr> <td>9 <input type="checkbox"/> HER</td> <td>10 <input type="checkbox"/> OTH</td> </tr> <tr> <td></td> <td></td> </tr> </table>	1 <input type="checkbox"/> SED	2 <input type="checkbox"/> PAN	} N3CQ13D1- N3CQ13D10 Go to Section 3D	3 <input type="checkbox"/> MAR	4 <input type="checkbox"/> COC	5 <input type="checkbox"/> STIM	6 <input type="checkbox"/> CLB	7 <input type="checkbox"/> HAL	8 <input type="checkbox"/> SOLV	9 <input type="checkbox"/> HER	10 <input type="checkbox"/> OTH		
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