

NATIONAL STUDY OF CAREGIVING (NSOC) IV
WEIGHTING GUIDE

Rounds 11 and 12

December 2023
Release 1.0

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NSOC Design and Need for Weights

The National Study of Caregiving (NSOC) is designed to represent family and unpaid caregivers to a representative sample of living and recently deceased Medicare beneficiaries.

- NSOC IV Round 11 included family and unpaid caregivers to a representative sample of living Medicare beneficiaries aged 65 or older as of October 1, 2014 and Medicare beneficiaries who died between Rounds 10 and 11.¹
- NSOC IV Round 12 included family and unpaid caregivers to a representative sample of living Medicare beneficiaries aged 65 or older as of October 1, 2021 and Medicare beneficiaries who died between Rounds 11 and 12.

In order to be able to make statements about estimates for those population groups, NSOC IV samples must be weighted to account for caregivers having different probabilities of selection and different probabilities of responding to NSOC. In order to make accurate statements about the variance of those estimates, design variables must also be used to account for NSOC’s complex sample design.

This technical paper describes the NSOC weights and design variables for NSOC IV. Separate technical papers describe weights and design variables for NSOC I-III (Freedman et al. 2019a; Freedman et al. 2019b).

Overview of Weight and Design Variables

NSOC IV contains a set of weights (full sample weight, replicate weights) adjusted for nonresponse and design variables (stratum, cluster) that allow for proper variance estimation.

NSOC IV	File	Full sample weight	Replicate weights	Stratum	Cluster
Round 11	Cross-sectional-living	w11cgfinwgt0	w11cgfinwgt1-w11cgfinwgt56	c11varstrat	c11varunit
Round 11	Cross-sectional-deceased	w11cglmlfinwgt0	w11cglmlfinwgt1-w11cglmlfinwgt56	c11varstrat	c11varunit
Round 12	Cross-sectional-living	w12cgfinwgt0	w12cgfinwgt1-w12cgfinwgt56	c12varstrat	c12varunit
Round 12	Cross-sectional-deceased	w12cglmlfinwgt0	w12cglmlfinwgt1-w12cglmlfinwgt56	c12varstrat	c12varunit

Analyses in which the caregiver is the unit of analysis should use the NSOC weight. (NHATS weights should be used when the unit of analysis is the care recipient (NHATS Sample person)). The design variables (stratum and cluster) should be specified when using software that uses

¹ All but 2 living and 3 deceased Sample Persons receiving assistance from NSOC participants were age 72 or older.

Taylor series linearization to estimate the variances of estimates from complex sample surveys.

Replicate weights are also provided and may be used with software that uses replication methods to estimate to variances of estimates from complex sample surveys. The replication approach that was used is the modified balanced repeated replication (BRR) method suggested by Fay (Judkins 1990). Fay's method perturbs the weights by $\pm 100(1-K)$ percent where K is referred to as "Fay's factor." The perturbation factor for standard BRR is 100 percent, or $K=0$. For NHATS and NSOC, $K = 0.3$ was used.

How to Use NSOC Sample Weights and Design Variables

Below we provide users with examples of how to use NSOC sample weights and design variables in Stata, SAS, and R. For each, we provide an example using full sample weights with design variables (Taylor Series Linearization) and using replicate weights.

Stata. In Stata, users should specify the following svyset command. Note that the svy prefix and subpop() option should be used when performing subpopulation estimation.

```
/* Full Sample Weights and Design Variables */
/*Caregivers to living sample persons*/
svyset c#varunit [pweight=w#cgfinwgt0], strata(c#varstrat)
svy, subpop(if fl#spdied==-1): [Stata procedures]

/*Caregivers to deceased sample persons*/
svyset c#varunit [pweight=w#cglmlfinwgt0], strata(c#varstrat)
svy, subpop(if fl#spdied==1): [Stata procedures]

/*Replicate Weights */
/*Caregivers to living sample persons*/
svyset [pweight=w#cgfinwgt0], brrweight(w#cgfinwgt1 - w#cgfinwgt56) fay(.3) vce(brr)
mse
svy, subpop(if fl#spdied==-1): [stata procedures]

/*Caregivers to deceased sample persons*/
svyset [pweight=w#cglmlfinwgt0], brrweight(w#cglmlfinwgt1 - w#cglmlfinwgt56)
fay(.3) vce(brr) mse
svy, subpop(if fl#spdied==1): [stata procedures]
```

SAS Commands. In SAS, users should specific domain, weight, cluster and strata statements.

```
/* Full Sample Weights and Design Variables */
/*Caregivers to living sample persons*/
[SAS procedure];
    domain fl#spdied;
    weight w#cgfinwgt0;
```

```

        cluster c#varunit;
        strata c#varstrat;
        [model or other statement];
run;

/*Caregivers to deceased sample persons*/
[SAS procedure];
    domain fl#spdied;
    weight w#cglmlfinwgt0;
    cluster c#varunit;
    strata c#varstrat;
    [model or other statement];
run;

```

```

/*Replicate Weights */
/*Caregivers to living sample persons*/
proc [SAS survey procedure] data = [data name] varmethod = brr (fay = 0.3);
    domain fl#spdied;
    weight w#cgfinwgt0;
    repweights w#cgfinwgt1- w#cgfinwgt56;
    [model or other statement];
run;

/*Caregivers to deceased sample persons*/
proc [SAS survey procedure] data = [data name] varmethod = brr (fay = 0.3);
    domain fl#spdied;
    weight w#cglmlfinwgt0;
    repweights w#cglmlfinwgt1- w#cglmlfinwgt56;
    [model or other statement];
run;

```

R Commands. In R, users can use the `svydesign:` commands with `id`, `strata` and `weights` options.

```

/* Full Sample Weights and Design Variables */
/*Caregivers to living sample persons*/
library(survey) #need this line only once per session
nsoc.dsgn.l <- svydesign(id=~c#varunit, strata=~c#varstrat, weights=~w#cgfinwgt0,
data= [data frame name], nest=TRUE)
nsoc.subsetdsgn.l <- subset(nsoc.dsgn.l, fl#spdied == -1)
[model or other statement]

/*Caregivers to deceased sample persons*/
library(survey) #need this line only once per session

```

```

nsoc.dsgn.d <- svydesign(id=~c#varunit, strata=~c#varstrat, weights=~w#cglmlfinwgt0,
data= [data frame name], nest=TRUE)
nsoc.subsetdsgn.d <- subset(nsoc.dsgn.d, fl#spdied == 1)
[model or other statement]

```

*/*Replicate Weights */*

```

/*Caregivers to living sample persons*/
library(survey) #need this line only once per session
nsoc.dsgn.l <-svrepdesign(weights=~w#cgfinwgt0, data=[data frame name], type="Fay",
rho = 0.3, repweights=" w#cgfinwgt[1-56]+")
nsoc.subsetdsgn.l <- subset(nsoc.dsgn.l, fl#spdied == -1)
[model or other statement]

```

```

/*Caregivers to deceased sample persons*/
library(survey) #need this line only once per session
nsoc.dsgn.d <-svrepdesign(weights=~w#cglmlfinwgt0, data=[data frame name],
type="Fay", rho = 0.3, repweights="w#cglmlfinwgt[1-56]+")
nsoc.subsetdsgn.d <- subset(nsoc.dsgn.d, fl#spdied == 1)
[model or other statement]

```

More details about how to account for complex survey design in NSOC can be found in the technical paper on Accounting for Sample Design in NHATS and NSOC Analyses: Frequently Asked Questions (Freedman et al. 2022).

Calculation of Weights

In each round, the calculation of the NSOC (cross-sectional file) weights began with the final NHATS analytic weight (see Montaquila, Freedman, Edwards and Kasper, 2012; DeMatteis, Freedman, and Kasper, 2016). For caregivers in networks with more than 5 eligible caregivers, the NHATS analytic weight was adjusted for caregiver subsampling (by multiplying by the number of eligible caregivers divided by 5). In NSOC IV, separate weights were constructed for caregivers to living and deceased SPs.²

For each weight, a 2-step weighting class adjustment for nonresponse was applied (Kalton and Flores-Cervantes 2003). A 2-step adjustment was used because there were two opportunities for NSOC interview nonresponse with potentially different mechanisms for nonresponse—refusal to provide contact information by the NHATS Sample Person) and other non-response at the caregiver level (for caregivers for whom the NHATS Sample Person did not refuse).

At each stage of adjustment, a set of variables were input into a classification tree analysis to determine which variables were associated with nonresponse. This approach uses SAS procedure HPSPLIT to identify variables associated with response propensities. At each step in the process,

² Caregivers of sample persons who died between NHATS and NSOC were treated as caregivers to living SPs for purposes of constructing NSOC IV cross-sectional sample weights. However, the value of their weight was assigned to w#cglmlfinwgt0.

chi-square tests were performed to determine the most significant predictor of response, given the set of conditions already specified in the particular “branch.” For the cross-sectional weights, in general we set a minimum cell size of 30 respondents.

Finally, a raking adjustment was imposed to align weighted totals with those computed from the NHATS OP file (using NHATS analytic weights). The raking adjustment consisted of two dimensions: (1) the number of caregivers in the NHATS sample person’s network and (2) the relationship of the caregiver to the sampled person.

NSOC IV Round 11 Nonresponse Adjustments

The input weight for the first nonresponse adjustment was the 2015 Cohort Round 11 NHATS analytic weight after being adjusted for the caregiver selection. Then the nonresponse adjusted weight became the input weight for the second nonresponse adjustment. Appendix Table 1 shows variables considered for the first and second adjustments in NSOC IV Round 11 for caregivers to living and deceased SPs, along with weighted response rates for each level of each variable. Final non-response cells included a total of 10 indicators for caregivers of living SPs and 3 indicators for caregivers of deceased SPs (indicated in Appendix Table 1 with “a” and “b” for the first and second nonresponse adjustments, respectively, for living SPs, and “c” and “d” for the first and second steps, respectively, for deceased SPs). Combinations of these variables created 25 unique nonresponse cells for the first adjustment and 7 nonresponse cells for the second adjustment for caregivers to living SPs (see Appendix Figures 1 and 2) and 6 unique nonresponse cells for the first adjustment and 5 nonresponse cells for the second adjustment for caregivers to deceased SPs (see Appendix Figures 3 and 4).

Overall, for both weights combined, the design effect due to variation in the NSOC IV Round 11 base weights (before nonresponse adjustment and raking) was 1.65. The design effect due to variation in the NSOC IV Round 11 analytic weights (after nonresponse adjustment and raking) was 1.68. The steps involved in creating the analytic weight did not introduce any influential outlier weights.

NSOC IV Round 12 Nonresponse Adjustments

Living and deceased SPs have separate input weights for the first nonresponse adjustment. For living SPs, the input weight is the Round 12 NHATS analytic weight after being adjusted for the caregiver selection; for deceased SPs the input weight is the 2015 NHATS analytic weight after being adjusted for the caregiver selection. Then the nonresponse adjusted weight became the input weight for the second nonresponse adjustment. Appendix Table 2 shows variables considered for the first and second adjustments in NSOC IV Round 12 for caregivers to living and deceased SPs, along with weighted response rates for each level of each variable. Final non-response cells included a total of 10 indicators for caregivers of living SPs and 4 indicators for caregivers of deceased SPs (indicated in Appendix Table 2 with “a” and “b” for the first and second nonresponse adjustments, respectively, for living SPs, and “c” and “d” for the first and second steps, respectively, for deceased SPs). Combinations of these variables created 24 unique nonresponse cells for the first adjustment and 12 nonresponse cells for the second adjustment for caregivers to living SPs (see Appendix Figures 5 and 6) and 3 unique nonresponse cells for the first adjustment

and 3 nonresponse cells for the second adjustment for caregivers to deceased SPs (see Appendix Figures 7 and 8).

Overall, for both weights combined, the design effect due to variation in the NSOC IV Round 12 base weights (before nonresponse adjustment and raking) was 2.29. The design effect due to variation in the NSOC IV Round 12 analytic weights (after nonresponse adjustment and raking) was 2.33. The steps involved in creating the analytic weight did not introduce any influential outlier weights.

References

DeMatteis, Jill, Freedman, Vicki A., and Kasper, Judith D. 2016. National Health and Aging Trends Study Round 5 Sample Design and Selection. NHATS Technical Paper #16. Baltimore: Johns Hopkins University School of Public Health. Available at www.NHATS.org.

Freedman, Vicki A., DeMatteis, Jill, Kasper, Judith D. 2019a. National Study of Caregiving (NSOC) I-III Weighting Guide. NHATS Technical Paper #24. Baltimore: Johns Hopkins University Bloomberg School of Public Health. Available at www.nhats.org.

Freedman, Vicki A. and Jennifer C. Cornman. 2019b. National Study of Caregiving III Time Diary User Guide (Final Release). Baltimore: Johns Hopkins Bloomberg School of Public Health. Available at www.nhats.org.

Freedman, Vicki A., Mengyao Hu, Jill DeMatteis, Judith D. Kasper. 2022. Accounting for Sample Design in NHATS and NSOC Analyses: Frequently Asked Questions. NHATS Technical Paper #23 v2. Johns Hopkins University School of Public Health. Available at www.NHATS.org.

Kalton, G., and Flores-Cervantes, I. (2003). Weighting methods. *Journal of official statistics*, 19(2), 81.

Montaquila, Jill, Freedman, Vicki A., Edwards, Brad, and Kasper, Judith D. 2012. National Health and Aging Trends Study Round 1 Sample Design and Selection. NHATS Technical Paper #1. Baltimore: Johns Hopkins University School of Public Health. Available at www.NHATS.org.

APPENDIX. Nonresponse Adjustments for NSOC IV Weights

Table 1. Weighted Responses Rates for Variables used in Nonresponse Adjustment for NSOC IV Round 11 Cross-sectional NSOC Weights

	Contact info not refused by SP (Weighted Response Rate)	Interview complete, given contact info not refused (Weighted Response Rate)
OVERALL	93.8	62.5
Hours of Help SP received last month ^{4a} – (HOURSMONTH)		
0: Not codeable (<1)	91.3	59.6
1:1-<10	90.2	57.3
2:10-<20	94.9	63.5
3:20-<30	99.4	63.1
4: 30-<40	96.1	81.4
5: 40-<60	98.3	71.2
6: 60-<120	98.8	67.8
7: 120-<180	100.0	66.6
8: 180-744 (24/7)	99.1	72.1
9:Missing / Inapplicable	88.5	51.7
Relationship to SP ^{a b c d} – (RELATION)		
1:Spouse/Partner	97.6	78.9
2:Son	96.4	52.8
3:Daughter	97.4	65.5
4:Sibling	91.4	58.8
5:In-law	87.1	59.4
6:Other relative	90.9	48.9
7:Nonrelative	80.5	59.0
Census Division^{1 a b c d} – (DIVISION)		
1:New England	95.9	59.2
2:Middle Atlantic	94.6	63.8
3:East North Central	96.7	67.3
4:West North Central	92.2	73.8
5:South Atlantic	95.0	57.0
6:East South Central	88.8	63.9
7:West South Central	92.6	54.3
8:Mountain	95.0	57.0
9:Pacific	92.6	67.2
SP Race/Ethnicity ^{a b} – (RL5DRACEHISP)		
1:White, non-Hispanic	92.5	66.2
2:Black, non-Hispanic	95.6	59.6
3:Other (Am Indian/Asian/Native Hawaiian /Pacific Islander/other specify), non-Hispanic	97.8	62.8
4:Hispanic	98.7	45.6
5:More than one	100.0	0
6:DK/RF	96.0	48.3
R11 SP Age at interview ^{4a} – (R11D2INTVRAGE)		
2:70-74	95.2	62.0
3:75-79	91.0	58.4
4:80-84	92.3	62.2
5:8-89	95.0	60.4
6:90 +	94.6	66.3

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	Contact info not refused by SP (Weighted Response Rate)	Interview complete, given contact info not refused (Weighted Response Rate)
Number of NSOC selected eligible helpers^{a c} – (SAMPLECG_CNT)		
1:1 Selected eligible helper	94.3	78.2
2:2 Selected eligible helpers	95.1	61.1
3:3 Selected eligible helpers	95.2	59.2
4:4 Selected eligible helpers	92.5	63.1
5: 5 Selected eligible helpers	88.3	46.2
SP Education^{a b} – (EL5DHIGSTSCHL)		
0:DK / RF	96.4	44.9
1:No schooling completed	100.0	47.2
2:1st - 8th grade	98.0	54.7
3: 9th - 12th grade	93.1	59.8
4:High school graduate	96.0	64.6
5:Vocational, technical, business, or trade school certificate or diploma	92.6	61.6
6: Some college but no degree	91.1	61.4
7:Associate's degree	92.4	72.1
8: Bachelor's degree	91.5	69.1
9: Master's, professional, or doctoral degree	92.1	63.0
SP gender – (R5DGENDER)		
1:Male	96.4	64.6
2:Female	92.6	61.5
Reason for Proxy is Dementia^{2 4 a} – (IS1REASNPRX)		
0-inapplicable	93.0	NA
1=Yes	94.3	NA
2=No	97.9	NA
NSOC Packet accepted by SP^{3,4} – (CC17)		
0:No	NA	66.7
1:Yes	NA	61.8
Helper Gender³ – (OP11DGENDER)		
1:Male	NA	57.7
2:Female	NA	65.3
Helper lives with SP^{3 b} – (OP11PRSNINHH)		
0:Inapplicable	NA	58.5
1:Yes	NA	68.7
2:No	NA	64.4
SP Residence^{4 b} – (R11DRESID)		
1:Community	93.4	60.9
2:Residential care resident, not nursing home (SP interview complete)	92.5	69.1
4: Nursing home (SP interview complete)	95.9	51.3
Census Metro/Micro Area Designation (2013)¹ – (S_METMICRO)		
1:Metropolitan area	93.3	61.9
2:Micro metropolitan area	96.8	64.6
3:Non-metro	95.4	66.3

¹Based on county-level information from the September 30, 2014 CMS 5% EDB extract linked to the beneficiary's EDB address.

²The variable was only used in nonresponse modeling for nonresponse adjustment for SP refusal to provide contact information

³The variables were only used in nonresponse modeling for nonresponse adjustment for caregiver interview, given no SP refusal

⁴The variables were only used in nonresponse modeling for caregivers with a living SP

a=retained in classification tree analysis for nonresponse adjustment for SP refusal to provide contact information among caregivers with a living SP

b=retained in classification tree analysis for nonresponse adjustment for caregiver interview, given no SP refusal, among caregivers with a living SP

c=retained in classification tree analysis for nonresponse adjustment for SP refusal to provide contact information among caregivers with a deceased SP

d=retained in classification tree analysis for nonresponse adjustment for caregiver interview, given no SP refusal, among caregivers with a deceased SP

Variable names used in classification trees shown parenthetical

Table 2. Weighted Responses Rates for Variables used in Nonresponse Adjustment for NSOC IV Round 12 Cross-sectional NSOC Weights

	Contact info not refused by SP (Weighted Response Rate)	Interview complete, given contact info not refused (Weighted Response Rate)
OVERALL	91.5	56.1
Hours of Help SP received last month ^{4 a b} - (HOURSMONTH)		
0: Not codeable (<1)	87.3	59.8
1:1-<10	87.5	50.5
2:10-<20	90.5	60.3
3:20-<30	94.0	53.9
4: 30-<40	98.0	66.5
5: 40-<60	94.3	50.8
6: 60-<120	97.3	59.8
7: 120-<180	100.0	67.8
8: 180-744 (24/7)	99.7	69.6
9:Missing / Inapplicable	83.8	48.0
Relationship to SP ^{a b c} - (RELATION)		
1:Spouse/Partner	98.9	71.7
2:Son	91.0	44.9
3:Daughter	93.5	60.1
4:Sibling	74.0	57.4
5:In-law	90.9	48.8
6:Other relative	92.8	43.0
7:Nonrelative	79.1	50.3
Census Division^{1 a b c} - (DIVISION)		
1:New England	85.8	62.0
2:Middle Atlantic	93.0	57.0
3:East North Central	95.4	61.0
4:West North Central	92.2	60.6
5:South Atlantic	89.5	51.3
6:East South Central	88.3	56.2
7:West South Central	92.8	51.4
8:Mountain	95.1	58.6
9:Pacific	91.0	54.9
SP Race/Ethnicity ^{a b} - (RL12DRACEHISP)		
1:White, non-Hispanic	91.1	60.0
2:Black, non-Hispanic	89.8	55.4
3:Other (Am Indian/Asian/Native Hawaiian /Pacific Islander/other specify), non-Hispanic	94.0	43.0
4:Hispanic	94.0	37.8
5:More than one	100.0	54.4
6:DK/RF	100.0	59.3
R12 SP Age at interview ^{4 a} - (R12D2INTVRAGE)		
1: 65-69	88.0	51.1
2:70-74	92.3	50.8
3:75-79	90.2	57.8
4:80-84	88.4	57.2
5:85-89	92.0	60.1
6:90 +	95.3	64.7

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	Contact info not refused by SP (Weighted Response Rate)	Interview complete, given contact info not refused (Weighted Response Rate)
Number of NSOC selected eligible helpers^{a b d} – (SAMPLECG_CNT)		
1:1 Selected eligible helper	94.3	65.2
2:2 Selected eligible helpers	91.0	59.7
3:3 Selected eligible helpers	91.0	49.0
4:4 Selected eligible helpers	89.6	50.7
5: 5 Selected eligible helpers	90.8	49.9
SP Education^{a b} – (EL12DHIGSTSCHL)		
0:DK / RF	86.4	67.2
1:No schooling completed	95.8	43.6
2:1st - 8th grade	95.4	40.1
3: 9th - 12th grade	94.5	51.0
4:High school graduate	91.3	60.3
5:Vocational, technical, business, or trade school certificate or diploma	91.6	48.1
6: Some college but no degree	92.9	58.4
7:Associate’s degree	92.1	57.5
8: Bachelor’s degree	87.2	60.5
9: Master’s, professional, or doctoral degree	87.3	67.0
SP gender^{a d} – (R12DGENDER)		
1:Male	94.6	59.8
2:Female	89.9	54.2
Reason for Proxy is Dementia^{2 4} – (IS12REASNPRX)		
0-inapplicable	90.2	NA
1=Yes	99.3	NA
2=No	91.7	NA
NSOC Packet accepted by SP^{3,4} – (CC17)		
0:No	NA	52.9
1:Yes	NA	56.4
Helper Gender^{3 b} – (OP12DGENDER)		
1:Male	NA	49.2
2:Female	NA	60.4
Helper lives with SP⁴ – (OP12PRSNINHH)		
0:Inapplicable	NA	49.5
1:Yes	NA	64.7
2:No	NA	59.0
SP Residence⁴ – (R12DRESID)		
1:Community	91.2	56.2
2:Residential care resident, not nursing home (SP interview complete)	87.5	57.0
4: Nursing home (SP interview complete)6:	97.1	56.6
Census Metro/Micro Area Designation (2020)^{1 a} – (S_METMICRO)		
1:Metropolitan area	90.7	54.7
2:Micro metropolitan area	93.3	64.7
3:Non-metro	97.8	55.8

¹Based on county-level information from the September 30, 2021 CMS 5% EDB extract linked to the beneficiary’s EDB address.

²The variable was only used in nonresponse modeling for nonresponse adjustment for SP refusal to provide contact information

³The variables were only used in nonresponse modeling for nonresponse adjustment for caregiver interview, given no SP refusal

⁴The variables were only used in nonresponse modeling for caregivers with a living SP

a=retained in classification tree analysis for nonresponse adjustment for SP refusal to provide contact information among caregivers with a living SP

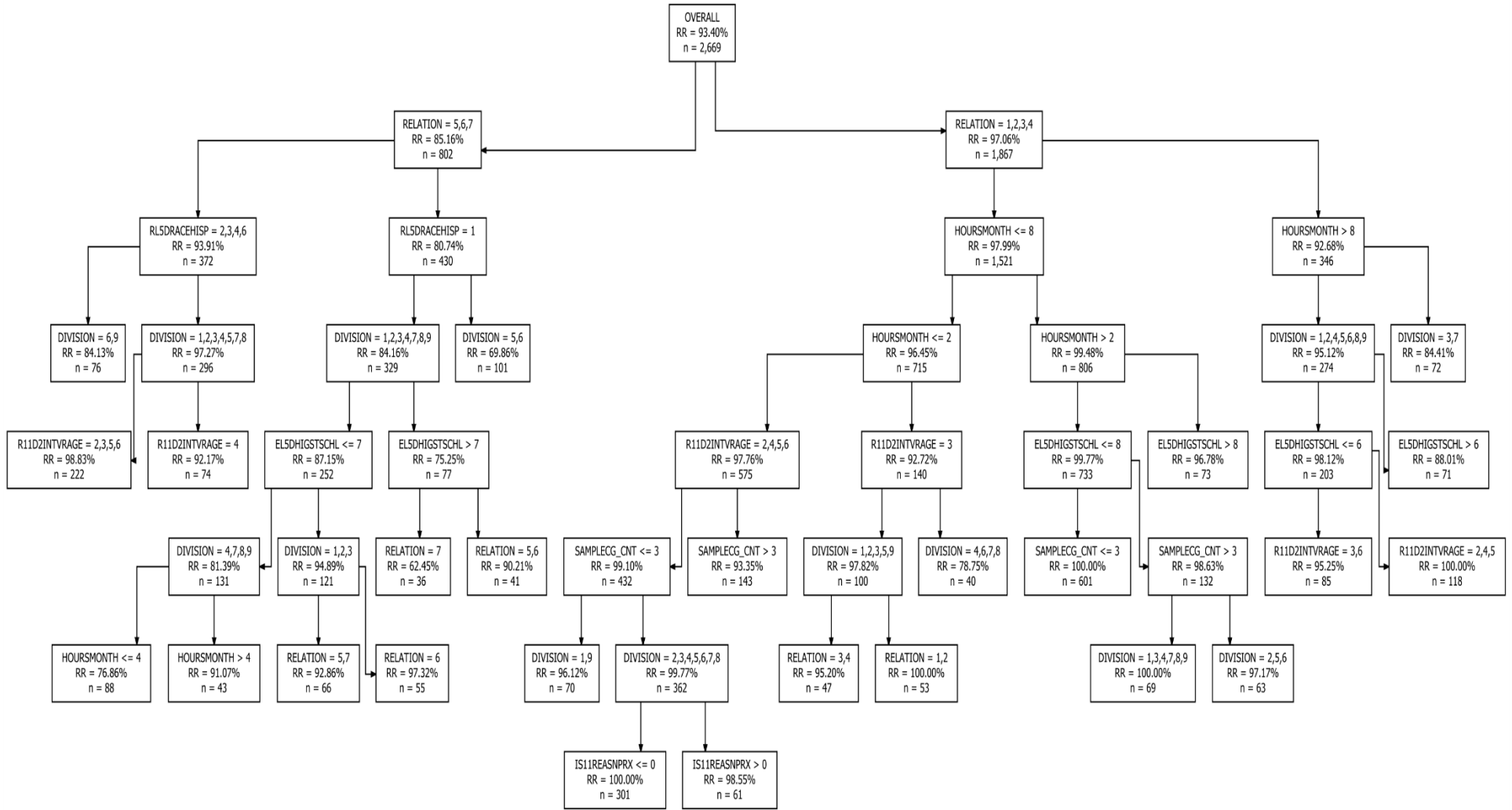
b=retained in classification tree analysis for nonresponse adjustment for caregiver interview, given no SP refusal, among caregivers with a living SP

c=retained in classification tree analysis for nonresponse adjustment for SP refusal to provide contact information among caregivers with a deceased SP

d=retained in classification tree analysis for nonresponse adjustment for caregiver interview, given no SP refusal, among caregivers with a deceased SP

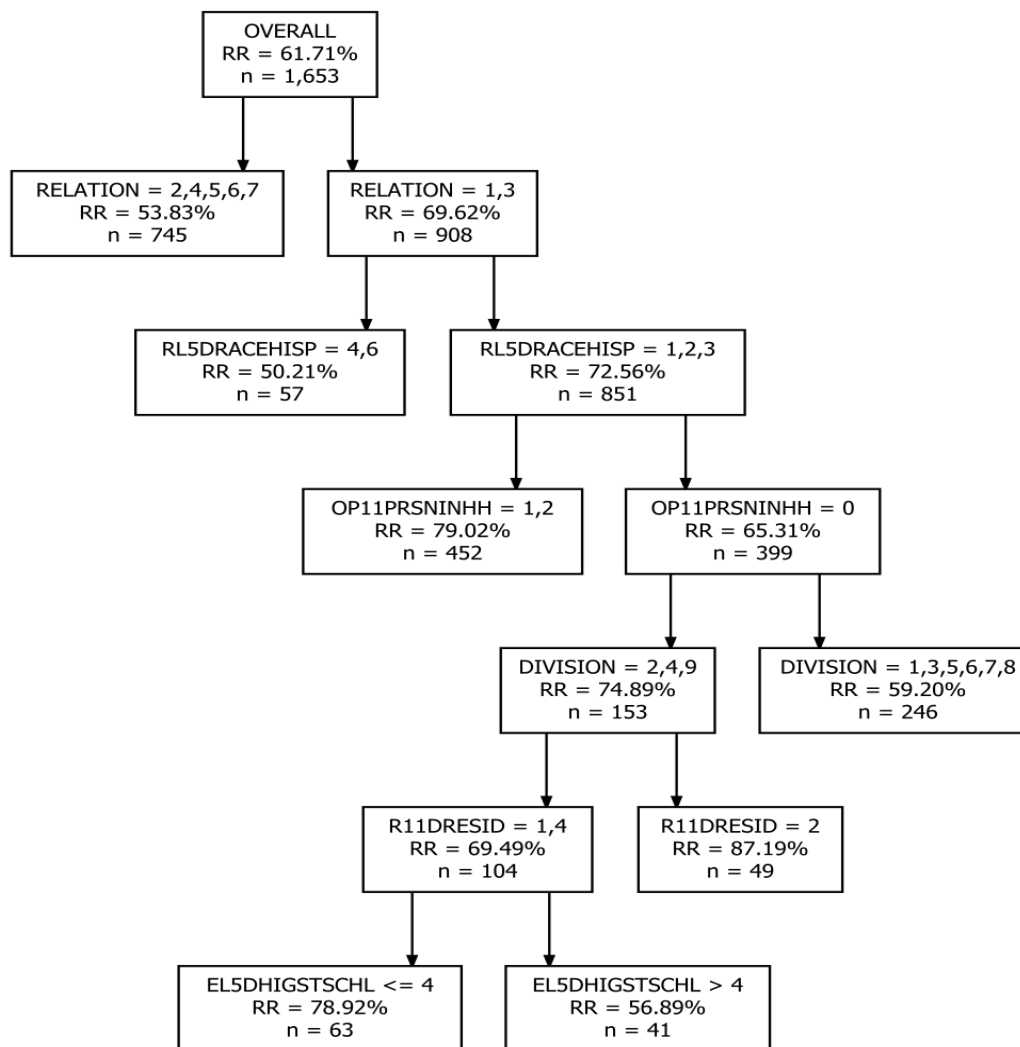
Variable names used in classification trees shown parenthetic

Figure 1: Stage 1 NSOC IV Round 11 cross-sectional weight nonresponse adjustment cells – SP Refusal (living SP)



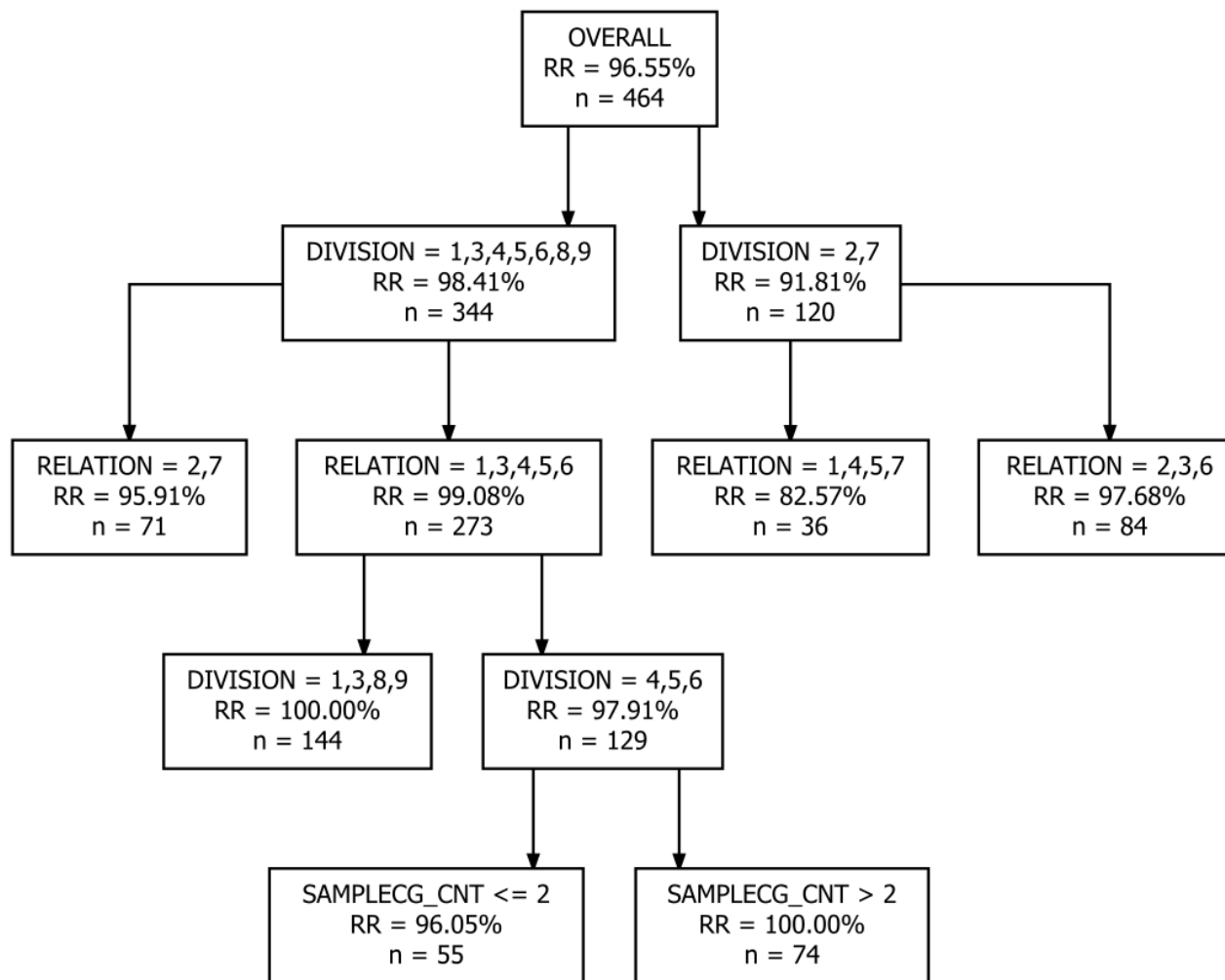
NOTE: “RR” is the weighted response rate for the particular cell, and “n” is the number of respondents in the cell.

Figure 2: Stage 2 NSOC IV Round 11 cross-sectional weight nonresponse adjustment cells – Caregiver to living SP



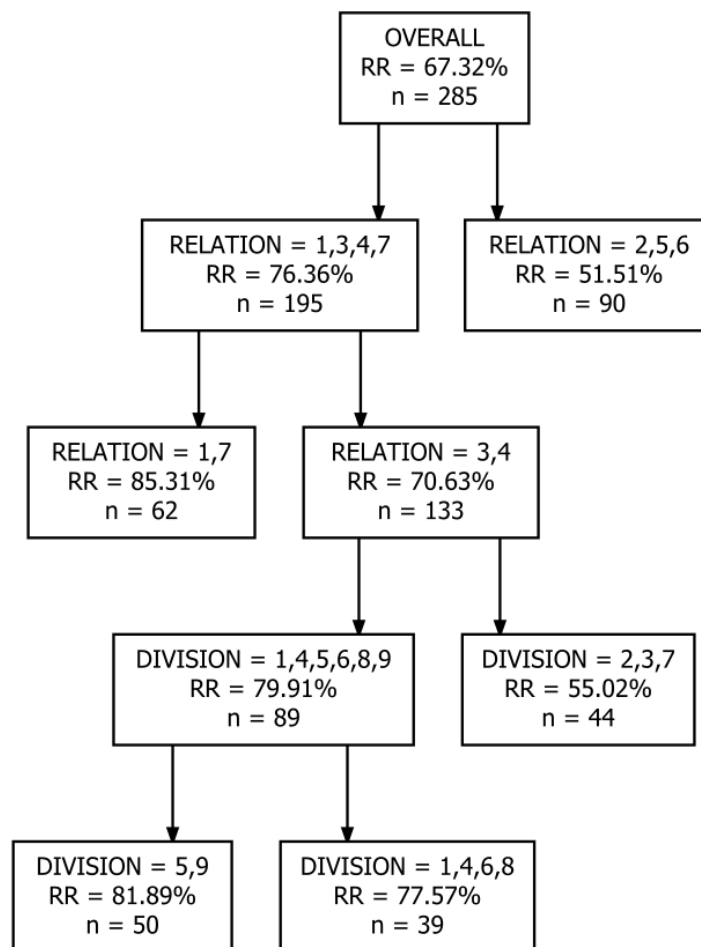
NOTE: “RR” is the weighted response rate for the particular cell, and “n” is the number of respondents in the cell.

Figure 3: Stage 1 NSOC IV Round 11 cross-sectional weight nonresponse adjustment cells – SP Refusal (deceased SP)



NOTE: “RR” is the weighted response rate for the particular cell, and “n” is the number of respondents in the cell.

Figure 4: Stage 2 NSOC IV Round 11 cross-sectional weight nonresponse adjustment cells – Caregiver to deceased SP



NOTE: “RR” is the weighted response rate for the particular cell, and “n” is the number of respondents in the cell.

Figure 5: Stage 1 NSOC IV Round 12 cross-sectional weight nonresponse adjustment cells – SP Refusal (living SP)

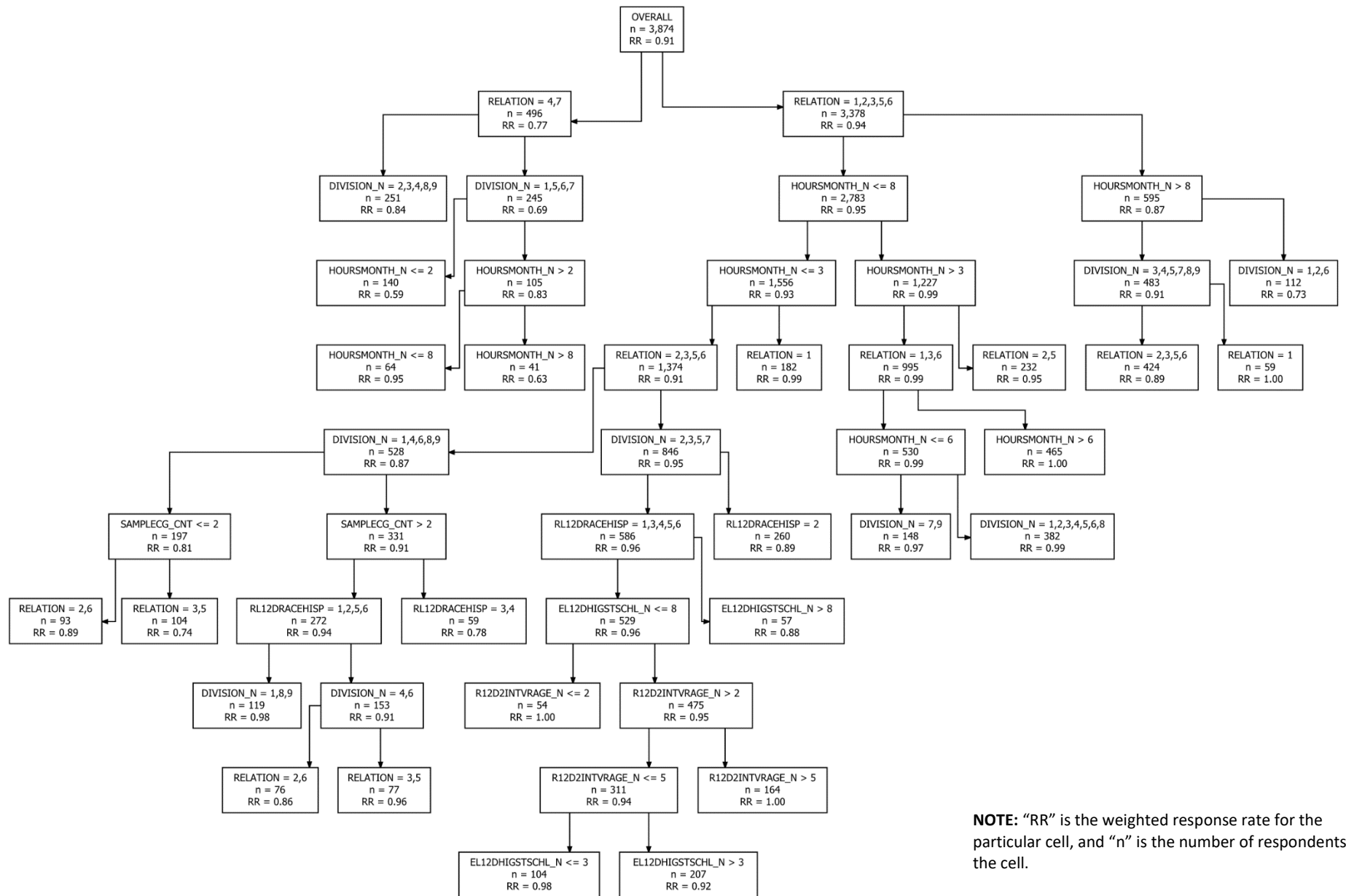
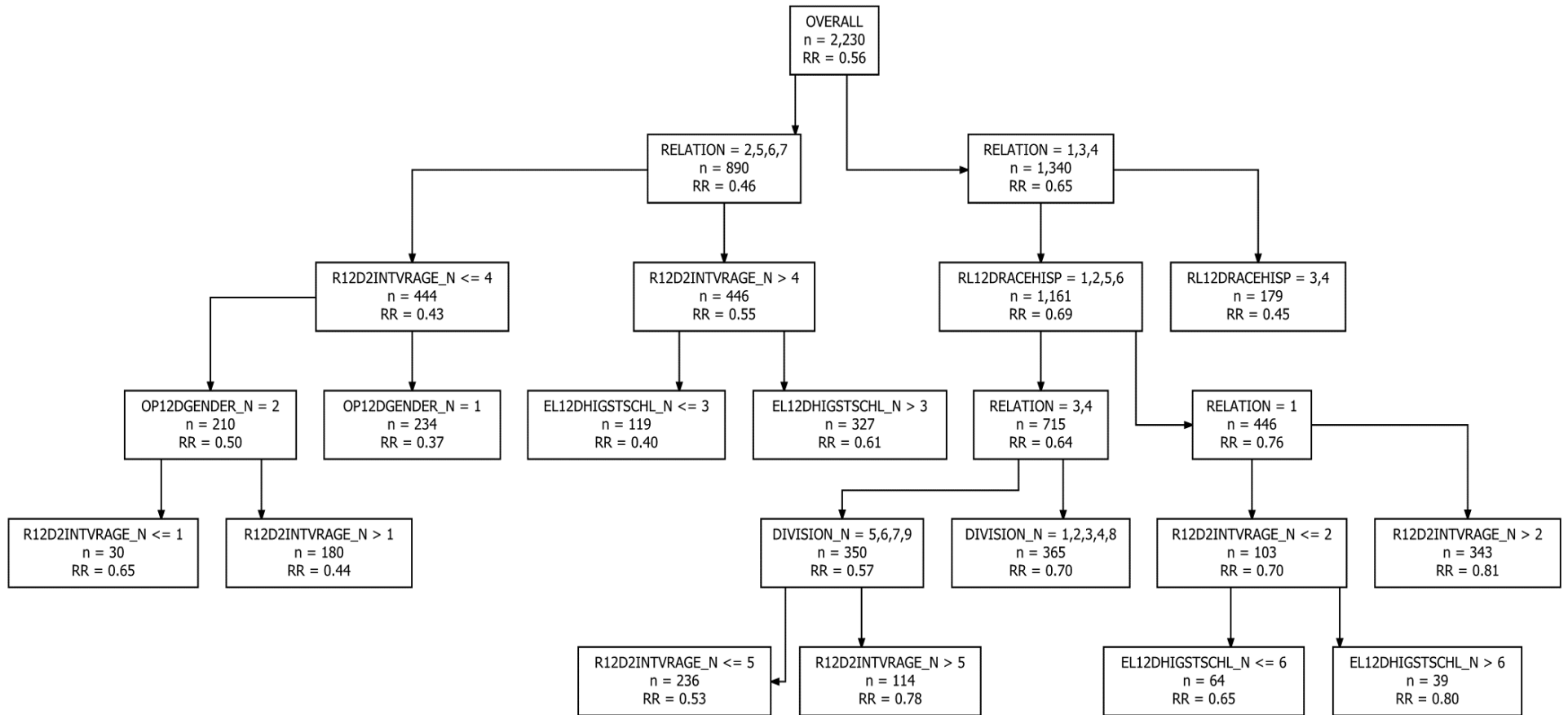
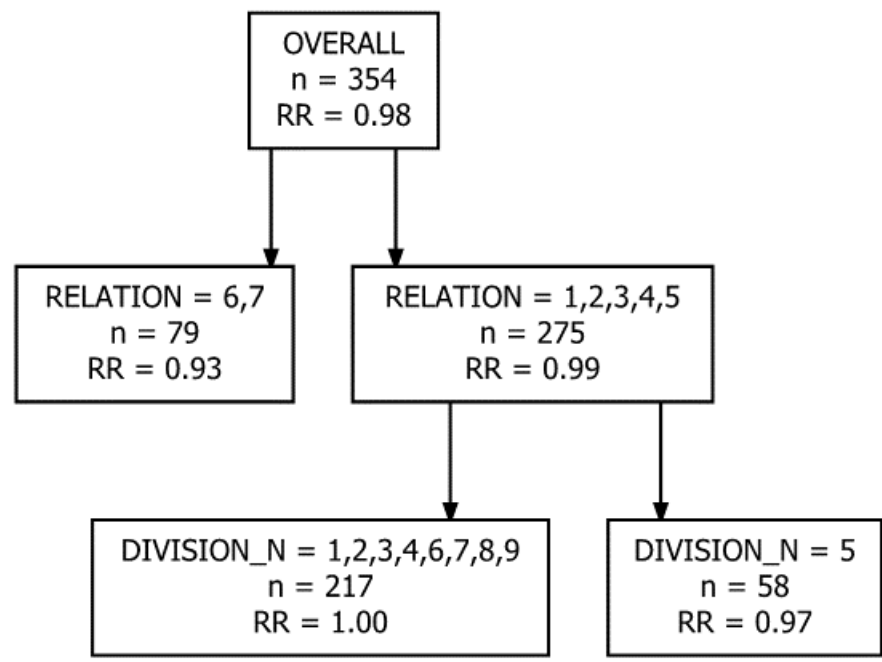


Figure 6: Stage 2 NSOC IV Round 12 cross-sectional weight nonresponse adjustment cells – Caregiver to living SP



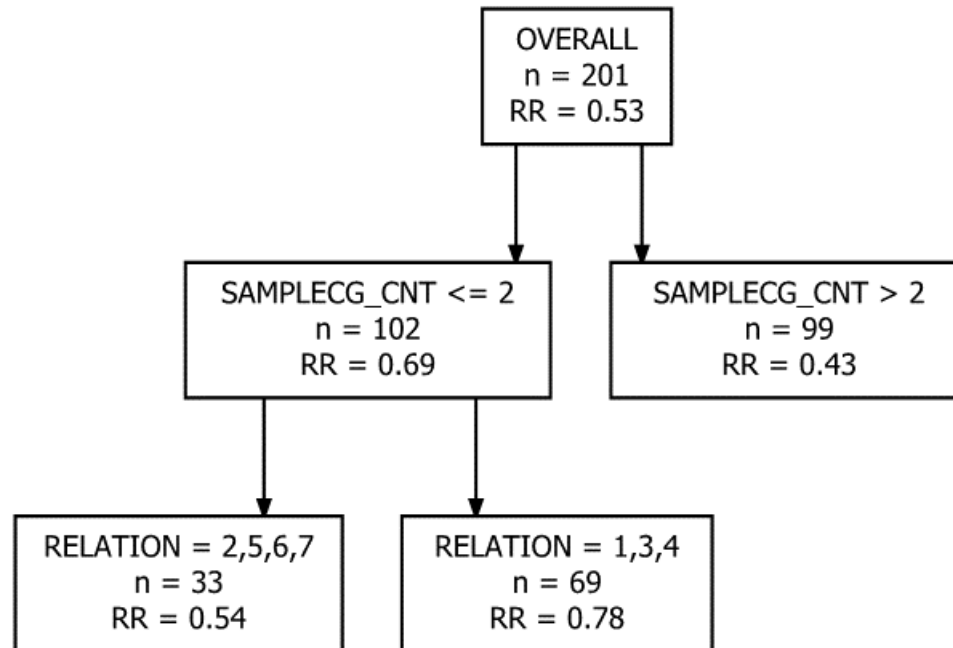
NOTE: “RR” is the weighted response rate for the particular cell, and “n” is the number of respondents in the cell.

Figure 7: Stage 1 NSOC IV Round 12 cross-sectional weight nonresponse adjustment cells – SP Refusal (deceased SP)



NOTE: "RR" is the weighted response rate for the particular cell, and "n" is the number of respondents in the cell.

Figure 8: Stage 2 NSOC IV Round 12 cross-sectional weight nonresponse adjustment cells – Caregiver to deceased SP



NOTE: “RR” is the weighted response rate for the particular cell, and “n” is the number of respondents in the cell.