

```

1 . sem (cumdose1 -> cumdose2) (cumdose2 -> cumdose3) (whpsleep -> whpel) (whpsl
> eep -> whppa) (goferw1 -> cumdose1) (goferw1 -> goferw2) (goferw1 -> aborw3)
> (goferw1 -> crhrw2) (goferw2 -> cumdose3) (goferw2 -> aborw2) (fdferw1 -> g
> oferw1) (fdferw1 -> goferw2) (aborw1 -> crhrw3) (aborw2 -> whpsleep) (aborw3
> -> whppa) (crhrw1 -> aborw1) (crhrw1 -> crhrw2) (crhrw1 -> crhrw3) (crhrw2
> -> crhrw3) (crhrw3 -> whpsleep) (crhrw3 -> whpel) (crhrw3 -> whppa) (whpel ->
> whppa) (icdxcnt -> whpsleep) (icdxcnt -> aborw1) (icdxcnt -> aborw2) (icdx
> n

```

invalid something: unmatched open parenthesis or bracket

r(198).;

```

2 .
3 . sem (cumdose1 -> cumdose2) (cumdose2 -> cumdose3) (whpsleep -> whpel) (whpsl
> eep -> whppa) (goferw1 -> cumdose1) (goferw1 -> goferw2) (goferw1 -> aborw3)
> (goferw1 -> crhrw2) (goferw2 -> cumdose3) (goferw2 -> aborw2) (fdferw1 -> g
> oferw1) (fdferw1 -> goferw2) (aborw1 -> crhrw3) (aborw2 -> whpsleep) (aborw3
> -> whppa) (crhrw1 -> aborw1) (crhrw1 -> crhrw2) (crhrw1 -> crhrw3) (crhrw2
> -> crhrw3) (crhrw3 -> whpsleep) (crhrw3 -> whpel) (crhrw3 -> whppa) (whpel -
> > whppa) (icdxcnt -> whpsleep) (icdxcnt -> aborw1) (icdxcnt -> aborw2) (icdx
> cnt -> crhrw2) if gender==2, cov( e.cumdose2*e.cumdose3 e.goferw2*e.crhrw2 e
> .aborw2*e.aborw3 e.aborw3*e.crhrw3) nocapslatent
(2 observations with missing values excluded;
specify option 'method(mlmv)' to use all observations)

```

Endogenous variables

Observed: **cumdose1 cumdose2 cumdose3 whpsleep whpel whppa goferw1 goferw2
aborw3 crhrw2 aborw2 aborw1 crhrw3**

Exogenous variables

Observed: **fdferw1 crhrw1 icdxcnt**

Fitting target model:

```

Iteration 0: log likelihood = -13748.18 (not concave)
Iteration 1: log likelihood = -13540.825
Iteration 2: log likelihood = -13473.859
Iteration 3: log likelihood = -13440.135
Iteration 4: log likelihood = -13436.996
Iteration 5: log likelihood = -13436.967
Iteration 6: log likelihood = -13436.967

```

Structural equation model	Number of obs	=	361
Estimation method	=	ml	
Log likelihood	=	-13436.967	

		OIM				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interva	
> —						
> 1]						
> —						
Structural						
cumdose1 <-						
goferw1	.0032023	.0007829	4.09	0.000	.0016679	.00473
> 66						
_cons	.2413505	.0366004	6.59	0.000	.169615	.3130
> 86						
> —						
cumdose2 <-						
cumdose1	2.18886	.0650405	33.65	0.000	2.061383	2.3163
> 37						
_cons	.1616705	.0419252	3.86	0.000	.0794987	.24384
> 24						
> —						
cumdose3 <-						
cumdose2	1.228932	.0129503	94.90	0.000	1.20355	1.2543
> 14						
goferw2	.0024603	.0008766	2.81	0.005	.0007421	.00417
> 85						
_cons	.0812865	.0204274	3.98	0.000	.0412495	.12132
> 35						
> —						
whpsleep <-						
aborw2	-4.233705	2.130612	-1.99	0.047	-8.409629	-.05778
> 17						
crhrw3	8.759233	1.727193	5.07	0.000	5.373996	12.144
> 47						
icdxcnt	2.523497	.6661465	3.79	0.000	1.217874	3.829
> 12						
_cons	18.19965	2.631538	6.92	0.000	13.04193	23.357
> 37						
> —						
whpel <-						
whpsleep	.5418411	.0516632	10.49	0.000	.4405831	.64309
> 91						
crhrw3	4.486308	1.789785	2.51	0.012	.9783935	7.9942
> 22						
_cons	16.95847	2.018407	8.40	0.000	13.00247	20.914
> 48						

> —							
whppa <-							
whpsleep	.2177445	.0336108	6.48	0.000	.1518686	.28362	
> 04							
whpel	.2186883	.0298938	7.32	0.000	.1600975	.2772	
> 79							
aborw3	-4.971303	2.087643	-2.38	0.017	-9.063008	-.87959	
> 92							
crhrw3	2.707541	1.02623	2.64	0.008	.6961675	4.7189	
> 15							
_cons	5.980459	1.288088	4.64	0.000	3.455854	8.5050	
> 64							
> —							
goferw1 <-							
fdferw1	.6985567	.0343253	20.35	0.000	.6312805	.7658	
> 33							
_cons	3.436444	1.828957	1.88	0.060	-.1482459	7.0211	
> 33							
> —							
goferw2 <-							
goferw1	.1467846	.033438	4.39	0.000	.0812473	.21232	
> 18							
fdferw1	.0702821	.0318374	2.21	0.027	.007882	.13268	
> 22							
_cons	1.116902	1.171066	0.95	0.340	-1.178346	3.412	
> 15							
> —							
aborw3 <-							
goferw1	-.0016422	.0006038	-2.72	0.007	-.0028256	-.00045	
> 87							
_cons	.1733552	.0282858	6.13	0.000	.117916	.22879	
> 43							
> —							
crhrw2 <-							
goferw1	.0046191	.0008892	5.19	0.000	.0028764	.00636	
> 19							
crhrw1	.6194044	.0339626	18.24	0.000	.552839	.68596	
> 98							
icdxcnt	.0477625	.0137328	3.48	0.001	.0208466	.07467	
> 83							
_cons	-.1983836	.059535	-3.33	0.001	-.3150701	-.08169	
> 72							
> —							

```

    aborw2 <-
      goferw2 | -.0043521 .0021684 -2.01 0.045 -.0086019 -.00010
> 22
      icdxcnt | .0433149 .0162928 2.66 0.008 .0113816 .07524
> 83
      _cons | .2192323 .0649627 3.37 0.001 .0919077 .34655
> 68
-----
> —
    aborw1 <-
      crhrw1 | .1926739 .049221 3.91 0.000 .0962025 .28914
> 52
      icdxcnt | .0548145 .0200384 2.74 0.006 .0155399 .09408
> 91
      _cons | .0748925 .0794357 0.94 0.346 -.0807987 .23058
> 37
-----
> —
    crhrw3 <-
      crhrw2 | 1.043845 .0232374 44.92 0.000 .9983002 1.0893
> 89
      aborw1 | -.0414874 .0167388 -2.48 0.013 -.0742947 -.008
> 68
      crhrw1 | -.1068446 .0218238 -4.90 0.000 -.1496184 -.06407
> 08
      _cons | .0185662 .015747 1.18 0.238 -.0122972 .04942
> 97
-----
> —
Variance
      e.cumdose1 | .2890055 .0215113 .2497751 .33439
> 75
      e.cumdose2 | .4618044 .0343732 .3991179 .53433
> 67
      e.cumdose3 | .087367 .0065934 .0753546 .10129
> 44
      e.whpsleep | 843.9022 62.81357 729.3487 976.44
> 77
      e.whpel | 850.5979 63.31195 735.1356 984.19
> 51
      e.whppa | 274.2456 20.41273 237.0188 317.31
> 94
      e.goferw1 | 608.3375 45.27996 525.7602 703.88
> 47
      e.goferw2 | 247.6323 18.43204 214.0177 286.52
> 66
      e.aborw3 | .1730736 .0128913 .1495649 .20027
> 75
      e.crhrw2 | .3643757 .027125 .314908 .42161

```

```

> 39      e.aborw2 |      .5146966      .0383115                                .4448279      .59553
> 94      e.aborw1 |      .7700159      .057314                                .665492      .89095
> 67      e.crhrw3 |      .0793903      .0059099                                .0686125      .09186
> 11
+-----+
> —
Covariance
  e.cumdose2
  e.cumdose3 |      .042052      .0123439      3.41      0.001      .0178585      .06624
> 55
+-----+
> —
  e.goferw2
  e.crhrw2 |      1.235576      .5063493      2.44      0.015      .2431498      2.2280
> 03
+-----+
> —
  e.aborw3
  e.aborw2 |      .0314257      .0157095      2.00      0.045      .0006357      .06221
> 56      e.crhrw3 |      .0146636      .0062571      2.34      0.019      .0023998      .02692
> 74
+-----+
> —
LR test of model vs. saturated: chi2(86) =      99.21, Prob > chi2 = 0.1562
4 .
5 . estat stable

```

Stability analysis of simultaneous equation systems

Eigenvalue stability condition

Eigenvalue	Modulus
4.423e-09	4.4e-09
-4.423e-09	4.4e-09
3.206e-10	3.2e-10
-3.206e-10	3.2e-10
3.458e-17	3.5e-17
2.776e-17	2.8e-17
0	0
0	0
0	0
0	0
0	0
0	0

0	0
---	---

stability index = **4.42e-09**

All the eigenvalues lie inside the unit circle.

SEM satisfies stability condition.

6 . estat gof

Fit statistic	Value	Description
Likelihood ratio		
chi2_ms(86)	99.212	model vs. saturated
p > chi2	0.156	
chi2_bs(117)	3779.561	baseline vs. saturated
p > chi2	0.000	

7 . estat ic

Model	Obs	ll(null)	ll(model)	df	AIC	BIC
.	361	.	-13436.97	57	26987.93	27209.6

Note: N=Obs used in calculating BIC; see [\[R\] BIC note](#)

```
8 . sem (cumdose1 -> cumdose2) (cumdose2 -> cumdose3) (whpsleep -> whpel) (whpsl
> eep -> whppa) (goferw1 -> cumdose1) (goferw1 -> goferw2) (goferw1 -> aborw3)
> (goferw1 -> crhrw2) (goferw2 -> cumdose3) (goferw2 -> aborw2) (fdferw1 -> g
> oferw1) (fdferw1 -> goferw2) (aborw1 -> crhrw3) (aborw2 -> whpsleep) (aborw3
> -> whppa) (crhrw1 -> aborw1) (crhrw1 -> crhrw2) (crhrw1 -> crhrw3) (crhrw2
> -> crhrw3) (crhrw3 -> whpsleep) (crhrw3 -> whpel) (crhrw3 -> whppa) (whpel -
> > whppa) (icdxcnt -> whpsleep) (icdxcnt -> aborw1) (icdxcnt -> aborw2) (icdx
> cnt -> crhrw2) if gender==2, vce(cluster id) cov( e.cumdose2*e.cumdose3 e.go
> ferw2*e.crhrw2 e.aborw2*e.aborw3 e.aborw3*e.crhrw3) nocapslatent
(2 observations with missing values excluded;
specify option 'method(mlmv)' to use all observations)
```

Endogenous variables

Observed: **cumdose1 cumdose2 cumdose3 whpsleep whpel whppa goferw1 goferw2
aborw3 crhrw2 aborw2 aborw1 crhrw3**

Exogenous variables

Observed: **fdferw1 crhrw1 icdxcnt**

Fitting target model:

```
Iteration 0: log pseudolikelihood = -13748.18 (not concave)
Iteration 1: log pseudolikelihood = -13540.825
Iteration 2: log pseudolikelihood = -13473.859
Iteration 3: log pseudolikelihood = -13440.135
Iteration 4: log pseudolikelihood = -13436.996
Iteration 5: log pseudolikelihood = -13436.967
Iteration 6: log pseudolikelihood = -13436.967
```

```
Structural equation model                      Number of obs      =      361
Estimation method = ml
Log pseudolikelihood= -13436.967
```

(Std. Err. adjusted for 361 clusters in i

> d)

> —						
	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interva	
> 1]						
> —						
Structural						
cumdose1 <- goferw1	.0032023	.0011962	2.68	0.007	.0008578	.00554
> 67						
_cons	.2413505	.019026	12.69	0.000	.2040602	.27864
> 08						
> —						
cumdose2 <- cumdose1	2.18886	.083603	26.18	0.000	2.025001	2.3527
> 19						
_cons	.1616705	.0419462	3.85	0.000	.0794575	.24388
> 36						
> —						
cumdose3 <- cumdose2	1.228932	.0352197	34.89	0.000	1.159902	1.2979
> 61						
goferw2	.0024603	.0012627	1.95	0.051	-.0000146	.00493
> 52						
_cons	.0812865	.0294283	2.76	0.006	.0236081	.13896
> 49						
> —						
whpsleep <- aborw2	-4.233705	1.644764	-2.57	0.010	-7.457384	-1.0100

```

> 27      crhrw3 |      8.759233      1.749043      5.01      0.000      5.331171      12.187
> 29      icdxcnt |      2.523497      .7810614      3.23      0.001      .9926446      4.0543
> 49      _cons |      18.19965      2.678384      6.80      0.000      12.95012      23.449
> 19
+-----+
> —
whpel <-
whpsleep |      .5418411      .053608      10.11      0.000      .4367713      .64691
> 08      crhrw3 |      4.486308      1.788977      2.51      0.012      .9799771      7.9926
> 38      _cons |      16.95847      1.92508      8.81      0.000      13.18539      20.731
> 56
+-----+
> —
whppa <-
whpsleep |      .2177445      .0397755      5.47      0.000      .139786      .2957
> 03      whpel |      .2186883      .0347415      6.29      0.000      .1505961      .28678
> 04      aborw3 |     -4.971303      1.627593      -3.05      0.002     -8.161327     -1.781
> 28      crhrw3 |      2.707541      .9684807      2.80      0.005      .809354      4.6057
> 29      _cons |      5.980459      1.127836      5.30      0.000      3.769941      8.1909
> 78
+-----+
> —
goferw1 <-
fdferw1 |      .6985567      .0405626      17.22      0.000      .6190554      .7780
> 58      _cons |      3.436444      1.396699      2.46      0.014      .6989635      6.1739
> 24
+-----+
> —
goferw2 <-
goferw1 |      .1467846      .0374639      3.92      0.000      .0733566      .22021
> 25      fdferw1 |      .0702821      .02815      2.50      0.013      .0151091      .12545
> 52      _cons |      1.116902      .8204754      1.36      0.173     -.4912003      2.7250
> 04
+-----+
> —
aborw3 <-
goferw1 |     -.0016422      .0005981      -2.75      0.006     -.0028144      -.000

```

```

> 47      _cons |      .1733552      .0359345      4.82      0.000      .1029249      .24378
> 55
+-----+
> —
crhrw2 <-
goferw1 |      .0046191      .000923      5.00      0.000      .00281      .00642
> 83      crhrw1 |      .6194044      .0372516      16.63      0.000      .5463925      .69241
> 62      icdxcnt |      .0477625      .0151675      3.15      0.002      .0180348      .07749
> 02      _cons |     -.1983836      .0594983      -3.33      0.001     -.3149983     -.0817
> 69
+-----+
> —
aborw2 <-
goferw2 |     -.0043521      .0015136      -2.88      0.004     -.0073186     -.00138
> 55      icdxcnt |      .0433149      .0219053      1.98      0.048      .0003813      .08624
> 86      _cons |      .2192323      .0636457      3.44      0.001      .094489      .34397
> 56
+-----+
> —
aborw1 <-
crhrw1 |      .1926739      .0548624      3.51      0.000      .0851454      .30020
> 23      icdxcnt |      .0548145      .0225188      2.43      0.015      .0106784      .09895
> 06      _cons |      .0748925      .0682257      1.10      0.272     -.0588274      .20861
> 24
+-----+
> —
crhrw3 <-
crhrw2 |      1.043845      .0277145      37.66      0.000      .9895253      1.0981
> 64      aborw1 |     -.0414874      .0137175      -3.02      0.002     -.0683732     -.01460
> 16      crhrw1 |     -.1068446      .0314328      -3.40      0.001     -.1684517     -.04523
> 75      _cons |      .0185662      .0159832      1.16      0.245     -.0127603      .04989
> 28
+-----+
> —
Variance
e.cumdose1 |      .2890055      .1001246                        .1465586      .56990
> 29      e.cumdose2 |      .4618044      .2566491                        .1553819      1.3725

```

```

> 11
    e.cumdose3 |      .087367   .0322766                      .0423528   .18022
> 41
    e.whpsleep |     843.9022    64.0204                      727.3073   979.18
> 84
    e.whpel    |     850.5979    59.92645                      740.8927   976.54
> 73
    e.whppa    |     274.2456    26.72383                      226.5659   331.95
> 93
    e.goferw1   |     608.3375    68.8233                      487.3548   759.35
> 34
    e.goferw2   |     247.6323    39.5962                      181.0093   338.77
> 69
    e.aborw3    |     .1730736    .0395079                      .1106434    .270
> 73
    e.crhrw2    |     .3643757    .0378495                      .2972561    .44665
> 06
    e.aborw2    |     .5146966    .0851243                      .3721973    .71175
> 29
    e.aborw1    |     .7700159    .3733713                      .2976888    1.991
> 76
    e.crhrw3    |     .0793903    .0122786                      .0586299    .10750
> 17
-----
> —
Covariance
    e.cumdose2
    e.cumdose3 |      .042052    .074167      0.57    0.571    -.1033126    .18741
> 66
-----
> —
    e.goferw2
    e.crhrw2    |     1.235576    .5105715      2.42    0.016    .2348745    2.2362
> 78
-----
> —
    e.aborw3
    e.aborw2    |     .0314257    .0305258      1.03    0.303    -.0284039    .09125
> 52
    e.crhrw3    |     .0146636    .0118402      1.24    0.216    -.0085427    .037
> 87
-----
> —

```

```

9 .
10 . sem (cumdose1 -> cumdose2) (cumdose2 -> cumdose3) (whpsleep -> whpel) (whpsl
> eep -> whppa) (goferw1 -> cumdose1) (goferw1 -> goferw2) (goferw1 -> aborw3)
> (goferw1 -> crhrw2) (goferw2 -> cumdose3) (goferw2 -> aborw2) (fdferw1 -> g
> oferw1) (fdferw1 -> goferw2) (aborw1 -> crhrw3) (aborw2 -> whpsleep) (aborw3
> -> whppa) (crhrw1 -> aborw1) (crhrw1 -> crhrw2) (crhrw1 -> crhrw3) (crhrw2
> -> crhrw3) (crhrw3 -> whpsleep) (crhrw3 -> whpel) (crhrw3 -> whppa) (whpel -
> > whppa) (icdxcnt -> whpsleep) (icdxcnt -> aborw1) (icdxcnt -> aborw2) (icdx
> cnt -> crhrw2) if gender==2, vce(cluster id) cov( e.cumdose2*e.cumdose3 e.go
> ferw2*e.crhrw2 e.aborw2*e.aborw3 e.aborw3*e.crhrw3) nocapslatent
(2 observations with missing values excluded;
specify option 'method(mlmv)' to use all observations)

```

Endogenous variables

Observed: **cumdose1 cumdose2 cumdose3 whpsleep whpel whppa goferw1 goferw2
aborw3 crhrw2 aborw2 aborw1 crhrw3**

Exogenous variables

Observed: **fdferw1 crhrw1 icdxcnt**

Fitting target model:

```

Iteration 0: log pseudolikelihood = -13748.18 (not concave)
Iteration 1: log pseudolikelihood = -13540.825
Iteration 2: log pseudolikelihood = -13473.859
Iteration 3: log pseudolikelihood = -13440.135
Iteration 4: log pseudolikelihood = -13436.996
Iteration 5: log pseudolikelihood = -13436.967
Iteration 6: log pseudolikelihood = -13436.967

```

```

Structural equation model                      Number of obs      =      361
Estimation method = ml
Log pseudolikelihood= -13436.967

```

(Std. Err. adjusted for 361 clusters in i

> d)

	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interva
Structural					
cumdose1 <-					
goferw1	.0032023	.0011962	2.68	0.007	.0008578 .00554

> 67

```

      _cons |      .2413505      .019026      12.69      0.000      .2040602      .27864
> 08
-----
      cumdose2 <-
      cumdose1 |      2.18886      .083603      26.18      0.000      2.025001      2.3527
> 19
      _cons |      .1616705      .0419462      3.85      0.000      .0794575      .24388
> 36
-----
      cumdose3 <-
      cumdose2 |      1.228932      .0352197      34.89      0.000      1.159902      1.2979
> 61
      goferw2 |      .0024603      .0012627      1.95      0.051      -.0000146      .00493
> 52
      _cons |      .0812865      .0294283      2.76      0.006      .0236081      .13896
> 49
-----
      whpsleep <-
      aborw2 |     -4.233705      1.644764      -2.57      0.010      -7.457384      -1.0100
> 27
      crhrw3 |      8.759233      1.749043      5.01      0.000      5.331171      12.187
> 29
      icdxcnt |      2.523497      .7810614      3.23      0.001      .9926446      4.0543
> 49
      _cons |      18.19965      2.678384      6.80      0.000      12.95012      23.449
> 19
-----
      whpel <-
      whpsleep |      .5418411      .053608      10.11      0.000      .4367713      .64691
> 08
      crhrw3 |      4.486308      1.788977      2.51      0.012      .9799771      7.9926
> 38
      _cons |      16.95847      1.92508      8.81      0.000      13.18539      20.731
> 56
-----
      whppa <-
      whpsleep |      .2177445      .0397755      5.47      0.000      .139786      .2957
> 03
      whpel |      .2186883      .0347415      6.29      0.000      .1505961      .28678
> 04
      aborw3 |     -4.971303      1.627593      -3.05      0.002      -8.161327      -1.781
> 28
      crhrw3 |      2.707541      .9684807      2.80      0.005      .809354      4.6057
> 29

```

```

      _cons |    5.980459    1.127836    5.30    0.000    3.769941    8.1909
> 78 -----
> —
      goferw1 <-
      fdferw1 |    .6985567    .0405626   17.22    0.000    .6190554    .7780
> 58
      _cons |    3.436444    1.396699    2.46    0.014    .6989635    6.1739
> 24 -----
> —
      goferw2 <-
      goferw1 |    .1467846    .0374639    3.92    0.000    .0733566    .22021
> 25
      fdferw1 |    .0702821    .02815    2.50    0.013    .0151091    .12545
> 52
      _cons |    1.116902    .8204754    1.36    0.173   -.4912003    2.7250
> 04 -----
> —
      aborw3 <-
      goferw1 |   -.0016422    .0005981   -2.75    0.006   -.0028144   -.000
> 47
      _cons |    .1733552    .0359345    4.82    0.000    .1029249    .24378
> 55 -----
> —
      crhrw2 <-
      goferw1 |    .0046191    .000923    5.00    0.000    .00281    .00642
> 83
      crhrw1 |    .6194044    .0372516   16.63    0.000    .5463925    .69241
> 62
      icdxcnt |    .0477625    .0151675    3.15    0.002    .0180348    .07749
> 02
      _cons |   -.1983836    .0594983   -3.33    0.001   -.3149983   -.0817
> 69 -----
> —
      aborw2 <-
      goferw2 |   -.0043521    .0015136   -2.88    0.004   -.0073186   -.00138
> 55
      icdxcnt |    .0433149    .0219053    1.98    0.048    .0003813    .08624
> 86
      _cons |    .2192323    .0636457    3.44    0.001    .094489    .34397
> 56 -----
> —
      aborw1 <-
      crhrw1 |    .1926739    .0548624    3.51    0.000    .0851454    .30020

```

```

> 23      icdxcnt |      .0548145      .0225188      2.43      0.015      .0106784      .09895
> 06      _cons   |      .0748925      .0682257      1.10      0.272      -.0588274      .20861
> 24      -----
> —
      crhrw3 <-
      crhrw2 |      1.043845      .0277145      37.66      0.000      .9895253      1.0981
> 64      aborw1 |      -.0414874      .0137175      -3.02      0.002      -.0683732      -.01460
> 16      crhrw1 |      -.1068446      .0314328      -3.40      0.001      -.1684517      -.04523
> 75      _cons   |      .0185662      .0159832      1.16      0.245      -.0127603      .04989
> 28      -----
> —
Variance
      e.cumdose1 |      .2890055      .1001246                        .1465586      .56990
> 29      e.cumdose2 |      .4618044      .2566491                        .1553819      1.3725
> 11      e.cumdose3 |      .087367      .0322766                        .0423528      .18022
> 41      e.whpsleep |      843.9022      64.0204                        727.3073      979.18
> 84      e.whpel   |      850.5979      59.92645                        740.8927      976.54
> 73      e.whppa   |      274.2456      26.72383                        226.5659      331.95
> 93      e.goferw1 |      608.3375      68.8233                        487.3548      759.35
> 34      e.goferw2 |      247.6323      39.5962                        181.0093      338.77
> 69      e.aborw3  |      .1730736      .0395079                        .1106434      .270
> 73      e.crhrw2  |      .3643757      .0378495                        .2972561      .44665
> 06      e.aborw2  |      .5146966      .0851243                        .3721973      .71175
> 29      e.aborw1  |      .7700159      .3733713                        .2976888      1.991
> 76      e.crhrw3  |      .0793903      .0122786                        .0586299      .10750
> 17      -----
> —
Covariance
      e.cumdose2 |

```

```

      e.cumdose3 |      .042052      .074167      0.57      0.571      -.1033126      .18741
> 66
-----
> --
      e.goferw2
      e.crhrw2 |      1.235576      .5105715      2.42      0.016      .2348745      2.2362
> 78
-----
> --
      e.aborw3
      e.aborw2 |      .0314257      .0305258      1.03      0.303      -.0284039      .09125
> 52
      e.crhrw3 |      .0146636      .0118402      1.24      0.216      -.0085427      .037
> 87
-----
> --
11 .
12 . estat teffects, standardized

```

Direct effects

(Std. Err. adjusted for 361 clusters in id

```

> )
-----
> --
      Coef.      Robust
      Std. Err.      z      P>|z|      Std. Coef
-----
> .
-----
> --
Structural
      cumdose1 <-
      goferw1 |      .0032023      .0011962      2.68      0.007      .210465
> 7
      fdferw1 |           0 (no path)
> 0
-----
> --
      cumdose2 <-
      cumdose1 |      2.18886      .083603      26.18      0.000      .870803
> 3
      goferw1 |           0 (no path)
> 0
      fdferw1 |           0 (no path)
> 0
-----
> --
      cumdose3 <-
      cumdose1 |           0 (no path)

```

```

> 0      cumdose2 |      1.228932      .0352197      34.89      0.000                      .966474
> 5      goferw1  |              0 (no path)
> 0      goferw2  |      .0024603      .0012627      1.95      0.051                      .024384
> 1      fdferw1  |              0 (no path)
> 0
-----
> -
  whpsleep <-
    goferw1      |              0 (no path)
> 0      goferw2  |              0 (no path)
> 0      crhrw2   |              0 (no path)
> 0      aborw2   |     -4.233705      1.644764      -2.57      0.010                      -.099985
> 4      aborw1   |              0 (no path)
> 0      crhrw3   |      8.759233      1.749043      5.01      0.000                      .251539
> 1      fdferw1  |              0 (no path)
> 0      crhrw1   |              0 (no path)
> 0      icdxcnt  |      2.523497      .7810614      3.23      0.001                      .189939
> 5
-----
> -
  whpel <-
    whpsleep     |      .5418411      .053608      10.11      0.000                      .486079
> 5      goferw1  |              0 (no path)
> 0      goferw2  |              0 (no path)
> 0      crhrw2   |              0 (no path)
> 0      aborw2   |              0 (no path)
> 0      aborw1   |              0 (no path)
> 0      crhrw3   |      4.486308      1.788977      2.51      0.012                      .11557
> 5      fdferw1  |              0 (no path)
> 0

```

```

      crhrw1 |           0 (no path)
> 0
      icdxcnt |           0 (no path)
> 0
-----
> -
      whppa <-
      whpsleep |      .2177445   .0397755   5.47   0.000           .314334
> 4
      whpel |      .2186883   .0347415   6.29   0.000           .351912
> 6
      goferw1 |           0 (no path)
> 0
      goferw2 |           0 (no path)
> 0
      aborw3 |     -4.971303   1.627593   -3.05   0.002           -.097835
> 5
      crhrw2 |           0 (no path)
> 0
      aborw2 |           0 (no path)
> 0
      aborw1 |           0 (no path)
> 0
      crhrw3 |      2.707541   .9684807   2.80   0.005           .11224
> 3
      fdferw1 |           0 (no path)
> 0
      crhrw1 |           0 (no path)
> 0
      icdxcnt |           0 (no path)
> 0
-----
> -
      goferw1 <-
      fdferw1 |      .6985567   .0405626   17.22   0.000           .730954
> 3
-----
> -
      goferw2 <-
      goferw1 |      .1467846   .0374639   3.92   0.000           .304543
> 3
      fdferw1 |      .0702821   .02815   2.50   0.013           .152581
> 6
-----
> -
      aborw3 <-
      goferw1 |     -.0016422   .0005981   -2.75   0.006           -.141236
> 6
      fdferw1 |           0 (no path)

```

```

> 0
|-----|
> -
crhrw2 <-
  goferw1 | .0046191 .000923 5.00 0.000 .191746
> 8
  fdferw1 | 0 (no path)
> 0
  crhrw1 | .6194044 .0372516 16.63 0.000 .671986
> 5
  icdxcnt | .0477625 .0151675 3.15 0.002 .127279
> 9
|-----|
> -
aborw2 <-
  goferw1 | 0 (no path)
> 0
  goferw2 | -.0043521 .0015136 -2.88 0.004 -.104139
> 8
  fdferw1 | 0 (no path)
> 0
  icdxcnt | .0433149 .0219053 1.98 0.048 .138049
> 3
|-----|
> -
aborw1 <-
  crhrw1 | .1926739 .0548624 3.51 0.000 .201719
> 9
  icdxcnt | .0548145 .0225188 2.43 0.015 .14096
> 4
|-----|
> -
crhrw3 <-
  goferw1 | 0 (no path)
> 0
  crhrw2 | 1.043845 .0277145 37.66 0.000 1.02668
> 3
  aborw1 | -.0414874 .0137175 -3.02 0.002 -.042284
> 1
  fdferw1 | 0 (no path)
> 0
  crhrw1 | -.1068446 .0314328 -3.40 0.001 -.11400
> 9
  icdxcnt | 0 (no path)
> 0
|-----|
> -

```

Indirect effects

(Std. Err. adjusted for 361 clusters in id

>)

		Coef.	Robust Std. Err.	z	P> z	Std. Coef
> -						
> .						
> -						
Structural						
cumdose1 <-						
goferw1		0	(no path)			
> 0						
fdferw1		.002237	.0008441	2.65	0.008	.153840
> 8						
> -						
cumdose2 <-						
cumdose1		0	(no path)			
> 0						
goferw1		.0070093	.0026183	2.68	0.007	.183274
> 2						
fdferw1		.0048964	.001862	2.63	0.009	.133965
> 1						
> -						
cumdose3 <-						
cumdose1		2.689959	.1027424	26.18	0.000	.841609
> 1						
cumdose2		0	(no path)			
> 0						
goferw1		.0089751	.0032081	2.80	0.005	.184555
> 9						
goferw2		0	(no path)			
> 0						
fdferw1		.0064425	.0023457	2.75	0.006	.138622
> 5						
> -						
whpsleep <-						
goferw1		.0449386	.0085784	5.24	0.000	.052689
> 8						
goferw2		.0184253	.006408	2.88	0.004	.010412
> 5						
crhrw2		9.143278	.2427575	37.66	0.000	.258250
> 8						
aborw2		0	(no path)			
> 0						

```

    aborw1 | -.3633976 .1201547 -3.02 0.002 -.010636
> 1
    crhrw3 |          0 (no path)
> 0
    fdferw1 | .0326872 .009439 3.46 0.001 .040102
> 6
    crhrw1 | 4.657493 .9949073 4.68 0.000 .142717
> 8
    icdxcnt | .2334035 .1996673 1.17 0.242 .017567
> 9
-----
> -
    whpel <-
    whpsleep |          0 (no path)
> 0
    goferw1 | .0459811 .0089637 5.13 0.000 .048363
> 9
    goferw2 | .0099836 .0034721 2.88 0.004 .005061
> 3
    crhrw2 | 9.637212 .2558717 37.66 0.000 .244189
> 3
    aborw2 | -2.293995 .8912008 -2.57 0.010 -.048600
> 9
    aborw1 | -.3830289 .1266456 -3.02 0.002 -.01005
> 7
    crhrw3 | 4.746112 .9477034 5.01 0.000 .12226
> 8
    fdferw1 | .032822 .0101012 3.25 0.001 .036124
> 1
    crhrw1 | 4.909098 1.068272 4.60 0.000 .13494
> 7
    icdxcnt | 1.707272 .4837175 3.53 0.000 .115279
> 1
-----
> -
    whppa <-
    whpsleep | .1184943 .0117234 10.11 0.000 .171057
> 5
    whpel |          0 (no path)
> 0
    goferw1 | .0410593 .0072001 5.70 0.000 .069496
> 5
    goferw2 | .0061953 .0021546 2.88 0.004 .005054
> 1
    aborw3 |          0 (no path)
> 0
    crhrw2 | 6.924696 .1838533 37.66 0.000 .282348
> 3
    aborw2 | -1.423536 .5530335 -2.57 0.010 -.048532

```

```

> 1      aborw1 |  -.2752206   .0909996   -3.02   0.002               -.011628
> 6      crhrw3 |   3.926296   .7174697    5.47   0.000               .162767
> 3      fdferw1 |   .0291177   .0076295    3.82   0.000               .0515
> 7      crhrw1 |   3.52737    .7230356    4.88   0.000               .156034
> 9      icdxcnt |   1.102492   .321185    3.43   0.001               .119793
> 3
-----
> -
goferw1 <-
  fdferw1 |           0   (no path)
> 0
-----
> -
goferw2 <-
  goferw1 |           0   (no path)
> 0
  fdferw1 |   .1025373   .0266365    3.85   0.000               .222607
> 2
-----
> -
aborw3 <-
  goferw1 |           0   (no path)
> 0
  fdferw1 |  -.0011472   .0004262   -2.69   0.007               -.103237
> 5
-----
> -
crhrw2 <-
  goferw1 |           0   (no path)
> 0
  fdferw1 |   .0032267   .0006904    4.67   0.000               .140158
> 2
  crhrw1 |           0   (no path)
> 0
  icdxcnt |           0   (no path)
> 0
-----
> -
aborw2 <-
  goferw1 |  -.0006388   .000163   -3.92   0.000               -.031715
> 1
  goferw2 |           0   (no path)
> 0
  fdferw1 |  -.0007521   .000271   -2.78   0.006               -.039072

```

```

> 1      icdxcnt |              0 (no path)
> 0
-----
> -
      aborw1 <-
      crhrw1 |              0 (no path)
> 0      icdxcnt |              0 (no path)
> 0
-----
> -
      crhrw3 <-
      goferw1 |      .0048217      .0009635      5.00      0.000      .196863
> 2      crhrw2 |              0 (no path)
> 0      aborw1 |              0 (no path)
> 0      fdferw1 |      .0033682      .0007413      4.54      0.000      .14389
> 8      crhrw1 |      .6385684      .0473287      13.49      0.000      .681387
> 4      icdxcnt |      .0475825      .0160382      2.97      0.003      .124715
> 5
-----
> -

```

Total effects

(Std. Err. adjusted for 361 clusters in id

```

> )
-----
> -
      Coef.      Robust      z      P>|z|      Std. Coef
      Std. Err.
-----
> .
-----
> -
Structural
      cumdose1 <-
      goferw1 |      .0032023      .0011962      2.68      0.007      .210465
> 7      fdferw1 |      .002237      .0008441      2.65      0.008      .153840
> 8
-----
> -
      cumdose2 <-
      cumdose1 |      2.18886      .083603      26.18      0.000      .870803

```

```

> 3      goferw1 |      .0070093      .0026183      2.68      0.007      .183274
> 2      fdferw1 |      .0048964      .001862      2.63      0.009      .133965
> 1
-----
> -
  cumdose3 <-
    cumdose1 |      2.689959      .1027424      26.18      0.000      .841609
> 1      cumdose2 |      1.228932      .0352197      34.89      0.000      .966474
> 5      goferw1 |      .0089751      .0032081      2.80      0.005      .184555
> 9      goferw2 |      .0024603      .0012627      1.95      0.051      .024384
> 1      fdferw1 |      .0064425      .0023457      2.75      0.006      .138622
> 5
-----
> -
  whpsleep <-
    goferw1 |      .0449386      .0085784      5.24      0.000      .052689
> 8      goferw2 |      .0184253      .006408      2.88      0.004      .010412
> 5      crhrw2 |      9.143278      .2427575      37.66      0.000      .258250
> 8      aborw2 |     -4.233705      1.644764      -2.57      0.010      -.099985
> 4      aborw1 |     -.3633976      .1201547      -3.02      0.002      -.010636
> 1      crhrw3 |      8.759233      1.749043      5.01      0.000      .251539
> 1      fdferw1 |      .0326872      .009439      3.46      0.001      .040102
> 6      crhrw1 |      4.657493      .9949073      4.68      0.000      .142717
> 8      icdxcnt |       2.7569      .7809316      3.53      0.000      .207507
> 4
-----
> -
  whpel <-
    whpsleep |      .5418411      .053608      10.11      0.000      .486079
> 5      goferw1 |      .0459811      .0089637      5.13      0.000      .048363
> 9      goferw2 |      .0099836      .0034721      2.88      0.004      .005061
> 3      crhrw2 |      9.637212      .2558717      37.66      0.000      .244189

```

```

> 3      aborw2 | -2.293995   .8912008   -2.57   0.010           -.048600
> 9      aborw1 | -.3830289   .1266456   -3.02   0.002           -.01005
> 7      crhrw3 |  9.23242    2.053131    4.50   0.000           .23784
> 3      fdferw1 |  .032822    .0101012    3.25   0.001           .036124
> 1      crhrw1 |  4.909098    1.068272    4.60   0.000           .13494
> 7      icdxcnt |  1.707272    .4837175    3.53   0.000           .115279
> 1
-----
> -
whppa <-
whpsleep |  .3362388    .0421143    7.98   0.000           .485391
> 9      whpel  |  .2186883    .0347415    6.29   0.000           .351912
> 6      goferw1 |  .0410593    .0072001    5.70   0.000           .069496
> 5      goferw2 |  .0061953    .0021546    2.88   0.004           .005054
> 1      aborw3 | -4.971303    1.627593    -3.05   0.002           -.097835
> 5      crhrw2 |  6.924696    .1838533    37.66   0.000           .282348
> 3      aborw2 | -1.423536    .5530335    -2.57   0.010           -.048532
> 1      aborw1 | -.2752206    .0909996    -3.02   0.002           -.011628
> 6      crhrw3 |  6.633838    1.264709    5.25   0.000           .275010
> 3      fdferw1 |  .0291177    .0076295    3.82   0.000           .0515
> 7      crhrw1 |  3.52737     .7230356    4.88   0.000           .156034
> 9      icdxcnt |  1.102492     .321185     3.43   0.001           .119793
> 3
-----
> -
goferw1 <-
fdferw1 |  .6985567    .0405626    17.22   0.000           .730954
> 3
-----
> -
goferw2 <-
goferw1 |  .1467846    .0374639     3.92   0.000           .304543

```

```

> 3      fdferw1 |      .1728195      .0264222      6.54      0.000      .375188
> 8
-----
> -
  aborw3 <-
    goferw1 |     -.0016422      .0005981     -2.75      0.006     -.141236
> 6      fdferw1 |     -.0011472      .0004262     -2.69      0.007     -.103237
> 5
-----
> -
  crhrw2 <-
    goferw1 |      .0046191      .000923      5.00      0.000      .191746
> 8      fdferw1 |      .0032267      .0006904      4.67      0.000      .140158
> 2      crhrw1 |      .6194044      .0372516     16.63      0.000      .671986
> 5      icdxcnt |      .0477625      .0151675      3.15      0.002      .127279
> 9
-----
> -
  aborw2 <-
    goferw1 |     -.0006388      .000163     -3.92      0.000     -.031715
> 1      goferw2 |     -.0043521      .0015136     -2.88      0.004     -.104139
> 8      fdferw1 |     -.0007521      .000271     -2.78      0.006     -.039072
> 1      icdxcnt |      .0433149      .0219053      1.98      0.048      .138049
> 3
-----
> -
  aborw1 <-
    crhrw1 |      .1926739      .0548624      3.51      0.000      .201719
> 9      icdxcnt |      .0548145      .0225188      2.43      0.015      .14096
> 4
-----
> -
  crhrw3 <-
    goferw1 |      .0048217      .0009635      5.00      0.000      .196863
> 2      crhrw2 |      1.043845      .0277145     37.66      0.000      1.02668
> 3      aborw1 |     -.0414874      .0137175     -3.02      0.002     -.042284
> 1      fdferw1 |      .0033682      .0007413      4.54      0.000      .14389

```


Beta	observed		
	aborw2	aborw1	crhrw3
observed			
cumdose1	0	0	0
cumdose2	0	0	0
cumdose3	0	0	0
whpsleep	-4.233705	0	8.759233
whpel	0	0	4.486308
whppa	0	0	2.707541
goferw1	0	0	0
goferw2	0	0	0
aborw3	0	0	0
crhrw2	0	0	0
aborw2	0	0	0
aborw1	0	0	0
crhrw3	0	-.0414874	0

Exogenous variables on endogenous variables

Gamma	observed		
	fdferw1	crhrw1	icdxcnt
observed			
cumdose1	0	0	0
cumdose2	0	0	0
cumdose3	0	0	0
whpsleep	0	0	2.523497
whpel	0	0	0
whppa	0	0	0
goferw1	.6985567	0	0
goferw2	.0702821	0	0
aborw3	0	0	0
crhrw2	0	.6194044	.0477625
aborw2	0	0	.0433149
aborw1	0	.1926739	.0548145
crhrw3	0	-.1068446	0

Covariances of error variables

```

> | observed
> Psi | e.cumdo~1 e.cumdo~2 e.cumdo~3 e.whpsl~p e.whpel e.
> whppa e.goferw1 e.goferw2 e.aborw3 e.crhrw2
+-----+
> |
> | observed |
> | e.cumdose1 | .2890055
> | e.cumdose2 | 0 .4618044
> | e.cumdose3 | 0 .042052 .087367
> | e.whpsleep | 0 0 0 843.9022
> | e.whpel | 0 0 0 0 850.5979
> | e.whppa | 0 0 0 0 0 274
> | .2456
> | e.goferw1 | 0 0 0 0 0
> | 0 608.3375
> | e.goferw2 | 0 0 0 0 0
> | 0 0 247.6323
> | e.aborw3 | 0 0 0 0 0
> | 0 0 0 .1730736
> | e.crhrw2 | 0 0 0 0 0
> | 0 0 1.235576 0 .3643757
> | e.aborw2 | 0 0 0 0 0
> | 0 0 0 .0314257 0
> | e.aborw1 | 0 0 0 0 0
> | 0 0 0 0 0
> | e.crhrw3 | 0 0 0 0 0
> | 0 0 0 .0146636 0
+-----+
> +-----+

```

	observed
Psi	e.aborw2 e.aborw1 e.crhrw3
observed	
e.aborw2	.5146966
e.aborw1	0 .7700159
e.crhrw3	0 0 .0793903

Intercepts of endogenous variables

```

> | observed
>
> alpha | cumdose1 cumdose2 cumdose3 whpsleep whpel
> whppa goferw1 goferw2 aborw3 crhrw2
> -----
> |
> _cons | .2413505 .1616705 .0812865 18.19965 16.95847 5.9
> 80459 3.436444 1.116902 .1733552 -.1983836
> -----
> |

```

	alpha	observed		
		aborw2	aborw1	crhrw3
	_cons	.2192323	.0748925	.0185662

Covariances of exogenous variables

	Phi	observed		
		fdferw1	crhrw1	icdxcnt
observed				
	fdferw1	1430.243		
	crhrw1	5.855767	.8922183	
	icdxcnt	8.811228	-.2519818	5.383246

Means of exogenous variables

	kappa	observed		
		fdferw1	crhrw1	icdxcnt
	mean	37.53463	.1322862	3.171745