```
1 . set linesize 78

2 . sem (cumdose1 -> cumdose2) (cumdose2 -> cumdose3) (whpsleep -> whpel) (gofer
  > w1 -> cumdose1) (goferw1 -> goferw2) (goferw1 -> crhrw2) (goferw2 -> goferw3
  > ) (goferw2 -> whppa) (fdferw1 -> whpsleep) (fdferw1 -> goferw1) (fdferw1 ->
  > goferw2) (crhrw1 -> goferw3) (crhrw1 -> crhrw2) (crhrw1 -> crhrw3) (crhrw2 -
  > > goferw2) (crhrw2 -> crhrw3) (crhrw3 -> whpsleep) (crhrw3 -> whppa) (whpel
  > -> whpsleep) (whpel -> whppa) (whppa -> whpel) (icdxcnt -> whpsleep) (icdxcn
  > t -> crhrw2) (icdxcnt -> whpel) if gender==1, cov( e.cumdose2*e.cumdose3) no
  > capslatent

  Endogenous variables

  Observed:  cumdose1 cumdose2 cumdose3 whpsleep whpel goferw1 goferw2 crhrw2
             goferw3 whppa crhrw3

  Exogenous variables

  Observed:  fdferw1 crhrw1 icdxcnt

  Fitting target model:

  Iteration 0:   log likelihood =  -12990.02  (not concave)
  Iteration 1:   log likelihood = -12868.757
  Iteration 2:   log likelihood = -12855.071
  Iteration 3:   log likelihood =  -12839.54
  Iteration 4:   log likelihood = -12836.887
  Iteration 5:   log likelihood =  -12836.66
  Iteration 6:   log likelihood = -12836.654
  Iteration 7:   log likelihood = -12836.654

  Structural equation model                       Number of obs      =       339
  Estimation method  = ml
  Log likelihood     = -12836.654
```

	OIM				
	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]
Structural					
cumdo~1 <-					
goferw1	.0054626	.0027209	2.01	0.045	.0001299 .0107954
_cons	.3160102	.1065226	2.97	0.003	.1072298 .5247905
cumdo~2 <-					
cumdose1	1.339597	.0366997	36.50	0.000	1.267667 1.411527
_cons	.3879549	.0632438	6.13	0.000	.2639992 .5119105

cumdo~3 <-						
cumdose2	1.054421	.0062729	168.09	0.000	1.042126	1.066716
_cons	.204808	.0152714	13.41	0.000	.1748766	.2347395
whpsl~p <-						
whpel	-.3227438	.1636219	-1.97	0.049	-.6434368	-.0020507
crhrw3	8.335343	1.914707	4.35	0.000	4.582586	12.0881
fdferw1	.1819313	.0464768	3.91	0.000	.0908384	.2730242
icdxcnt	3.049287	1.178615	2.59	0.010	.7392443	5.35933
_cons	13.99702	3.237866	4.32	0.000	7.650916	20.34312
whpel <-						
whpsleep	.8986316	.1751858	5.13	0.000	.5552738	1.241989
whppa	-.4104538	.2062155	-1.99	0.047	-.8146288	-.0062788
icdxcnt	3.62869	1.207472	3.01	0.003	1.262089	5.995291
_cons	3.753548	3.048373	1.23	0.218	-2.221152	9.728249
goferw1 <-						
fdferw1	.6033135	.032513	18.56	0.000	.5395893	.6670377
_cons	1.457905	1.643415	0.89	0.375	-1.763128	4.678939
goferw2 <-						
goferw1	.2049207	.0313369	6.54	0.000	.1435016	.2663399
crhrw2	2.70413	.8794741	3.07	0.002	.9803925	4.427868
fdferw1	.0648031	.0278273	2.33	0.020	.0102625	.1193437
_cons	1.452656	1.050367	1.38	0.167	-.606026	3.511339
crhrw2 <-						
goferw1	.0025293	.0008559	2.96	0.003	.0008518	.0042068
crhrw1	.7495949	.0302139	24.81	0.000	.6903768	.808813
icdxcnt	.1010899	.0166014	6.09	0.000	.0685518	.133628
_cons	-.3461971	.0462386	-7.49	0.000	-.4368232	-.255571
goferw3 <-						
goferw2	.7599253	.0335134	22.68	0.000	.6942403	.8256103
crhrw1	1.725182	.6043795	2.85	0.004	.5406196	2.909744
_cons	1.230034	.6062301	2.03	0.042	.0418445	2.418223
whppa <-						
whpel	.2737342	.0339799	8.06	0.000	.2071349	.3403335
goferw2	-.141059	.0415259	-3.40	0.001	-.2224483	-.0596698
crhrw3	3.79712	.8071495	4.70	0.000	2.215136	5.379104
_cons	4.897661	1.104212	4.44	0.000	2.733446	7.061876
crhrw3 <-						
crhrw2	1.055212	.0258798	40.77	0.000	1.004489	1.105936
crhrw1	-.1183935	.0256569	-4.61	0.000	-.1686801	-.0681068
_cons	-.0069225	.0140543	-0.49	0.622	-.0344684	.0206233

Variance						
e.cumdose1	**2.751988**	**.2113789**			**2.36737**	**3.199094**
e.cumdose2	**1.271465**	**.0976606**			**1.093765**	**1.478035**
e.cumdose3	**.066661**	**.0051469**			**.0572995**	**.0775519**
e.whpsleep	**699.1699**	**156.1378**			**451.3292**	**1083.109**
e.whpel	**873.1006**	**130.0843**			**651.9927**	**1169.192**
e.goferw1	**544.0054**	**41.78481**			**467.9752**	**632.388**
e.goferw2	**180.7822**	**13.8858**			**155.5161**	**210.1532**
e.crhrw2	**.2437889**	**.0187253**			**.2097169**	**.2833964**
e.goferw3	**97.46582**	**7.486305**			**83.84399**	**113.3007**
e.whppa	**144.4763**	**11.46321**			**123.6687**	**168.785**
e.crhrw3	**.0643684**	**.0049441**			**.0553723**	**.0748261**
Covariance						
e.cumdose2						
e.cumdose3	**.0416992**	**.017854**	**2.34**	**0.020**	**.0067061**	**.0766923**

LR test of model vs. saturated: chi2(**63**) = **73.73**, Prob > chi2 = **0.1672**

```
3 .
4 . estat stable
```

Stability analysis of simultaneous equation systems

Eigenvalue stability condition

Eigenvalue	Modulus
-1.388e-17 + .6343367*i*	**.634337**
-1.388e-17 - .6343367*i*	**.634337**
-4.824e-19	**4.8e-19**
0	**0**
0	**0**
0	**0**
0	**0**
0	**0**
0	**0**
0	**0**
0	**0**

stability index = **.6343367**
All the eigenvalues lie inside the unit circle.
SEM satisfies stability condition.

```
5 . estat ic
```

Model	Obs	ll(null)	ll(model)	df	AIC	BIC
.	**339**	.	**-12836.65**	**47**	**25767.31**	**25947.13**

Note: N=Obs used in calculating BIC; see **[R] BIC note**

```
6 . sem (cumdose1 -> cumdose2) (cumdose2 -> cumdose3) (whpsleep -> whpel) (gofer
> w1 -> cumdose1) (goferw1 -> goferw2) (goferw1 -> crhrw2) (goferw2 -> goferw3
> ) (goferw2 -> whppa) (fdferw1 -> whpsleep) (fdferw1 -> goferw1) (fdferw1 ->
> goferw2) (crhrw1 -> goferw3) (crhrw1 -> crhrw2) (crhrw1 -> crhrw3) (crhrw2 -
> > goferw2) (crhrw2 -> crhrw3) (crhrw3 -> whpsleep) (crhrw3 -> whppa) (whpel
> -> whpsleep) (whpel -> whppa) (whppa -> whpel) (icdxcnt -> whpsleep) (icdxcn
> t -> crhrw2) (icdxcnt -> whpel) if gender==1, vce(cluster id) cov( e.cumdose
> 2*e.cumdose3) nocapslatent

  Endogenous variables

  Observed:  cumdose1 cumdose2 cumdose3 whpsleep whpel goferw1 goferw2 crhrw2
             goferw3 whppa crhrw3

  Exogenous variables

  Observed:  fdferw1 crhrw1 icdxcnt

  Fitting target model:

  Iteration 0:   log pseudolikelihood =  -12990.02  (not concave)
  Iteration 1:   log pseudolikelihood = -12868.757
  Iteration 2:   log pseudolikelihood = -12855.071
  Iteration 3:   log pseudolikelihood =  -12839.54
  Iteration 4:   log pseudolikelihood = -12836.887
  Iteration 5:   log pseudolikelihood =  -12836.66
  Iteration 6:   log pseudolikelihood = -12836.654
  Iteration 7:   log pseudolikelihood = -12836.654

  Structural equation model                       Number of obs      =       339
  Estimation method  = ml
  Log pseudolikelihood= -12836.654
```

(Std. Err. adjusted for **339** clusters in id)

	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
cumdo~1 <-						
goferw1	.0054626	.0058836	0.93	0.353	-.006069	.0169943
_cons	.3160102	.0652954	4.84	0.000	.1880335	.4439868
cumdo~2 <-						
cumdose1	1.339597	.2873117	4.66	0.000	.7764767	1.902718
_cons	.3879549	.0833225	4.66	0.000	.2246458	.5512639
cumdo~3 <-						
cumdose2	1.054421	.0247893	42.54	0.000	1.005835	1.103007
_cons	.204808	.016906	12.11	0.000	.1716729	.2379432
whpsl~p <-						
whpel	-.3227438	.1652876	-1.95	0.051	-.6467015	.0012139
crhrw3	8.335343	2.119461	3.93	0.000	4.181275	12.48941
fdferw1	.1819313	.0517988	3.51	0.000	.0804076	.283455
icdxcnt	3.049287	1.284999	2.37	0.018	.5307353	5.567839
_cons	13.99702	3.413887	4.10	0.000	7.30592	20.68811
whpel <-						
whpsleep	.8986316	.1838416	4.89	0.000	.5383087	1.258954
whppa	-.4104538	.2878747	-1.43	0.154	-.9746779	.1537703
icdxcnt	3.62869	1.267427	2.86	0.004	1.144578	6.112802
_cons	3.753548	2.541805	1.48	0.140	-1.228298	8.735395
goferw1 <-						
fdferw1	.6033135	.0460219	13.11	0.000	.5131123	.6935147
_cons	1.457905	.8144962	1.79	0.073	-.1384781	3.054288
goferw2 <-						
goferw1	.2049207	.0502389	4.08	0.000	.1064544	.3033871
crhrw2	2.70413	.8080246	3.35	0.001	1.120431	4.287829
fdferw1	.0648031	.0349872	1.85	0.064	-.0037706	.1333767
_cons	1.452656	.7107511	2.04	0.041	.0596098	2.845703
crhrw2 <-						
goferw1	.0025293	.000802	3.15	0.002	.0009575	.0041011
crhrw1	.7495949	.0354861	21.12	0.000	.6800434	.8191463
icdxcnt	.1010899	.0212446	4.76	0.000	.0594512	.1427286
_cons	-.3461971	.0446347	-7.76	0.000	-.4336796	-.2587146
goferw3 <-						
goferw2	.7599253	.0861227	8.82	0.000	.5911278	.9287228

crhrw1	1.725182	.7016068	2.46	0.014	.3500577	3.100306
_cons	1.230034	.470385	2.61	0.009	.308096	2.151971
whppa <-						
whpel	.2737342	.0423569	6.46	0.000	.1907161	.3567523
goferw2	-.141059	.0415084	-3.40	0.001	-.222414	-.0597041
crhrw3	3.79712	.8541422	4.45	0.000	2.123032	5.471208
_cons	4.897661	1.097331	4.46	0.000	2.746933	7.04839
crhrw3 <-						
crhrw2	1.055212	.0329604	32.01	0.000	.990611	1.119814
crhrw1	-.1183935	.0379136	-3.12	0.002	-.1927027	-.0440842
_cons	-.0069225	.0143437	-0.48	0.629	-.0350358	.0211907
Variance						
e.cumdose1	2.751988	2.189622			.5786117	13.08898
e.cumdose2	1.271465	.8062854			.3668804	4.406405
e.cumdose3	.066661	.0308023			.0269497	.1648883
e.whpsleep	699.1699	168.9748			435.3765	1122.795
e.whpel	873.1006	150.3233			623.0336	1223.537
e.goferw1	544.0054	52.17591			450.7793	656.5118
e.goferw2	180.7822	25.51782			137.0903	238.3991
e.crhrw2	.2437889	.0339501			.1855562	.3202966
e.goferw3	97.46582	22.19031			62.38166	152.2817
e.whppa	144.4763	15.7596			116.6667	178.9149
e.crhrw3	.0643684	.0182932			.0368779	.1123517
Covariance						
e.cumdose2						
e.cumdose3	.0416992	.0706295	0.59	0.555	-.096732	.1801304

```
7 .
8 . estat teffects, standardized
```

Direct effects

(Std. Err. adjusted for **339** clusters in id)

	Coef.	Robust Std. Err.	z	P>|z|	Std. Coef.
Structural					
cumdo~1 <-					
goferw1	.0054626	.0058836	0.93	0.353	.1084001
fdferw1	0	(no path)			0
cumdo~2 <-					
cumdose1	1.339597	.2873117	4.66	0.000	.8928449
goferw1	0	(no path)			0

fdferw1	0	(no path)			0
cumdo~3 <-					
cumdose1	0	(no path)			0
cumdose2	1.054421	.0247893	42.54	0.000	.9890902
goferw1	0	(no path)			0
fdferw1	0	(no path)			0
whpsl~p <-					
whpsleep	0	(no path)			0
whpel	-.3227438	.1652876	-1.95	0.051	-.3904838
goferw1	0	(no path)			0
goferw2	0	(no path)			0
crhrw2	0	(no path)			0
whppa	0	(no path)			0
crhrw3	8.335343	2.119461	3.93	0.000	.3097122
fdferw1	.1819313	.0517988	3.51	0.000	.2860255
crhrw1	0	(no path)			0
icdxcnt	3.049287	1.284999	2.37	0.018	.2068133
whpel <-					
whpsleep	.8986316	.1838416	4.89	0.000	.7427396
whpel	0	(no path)			0
goferw1	0	(no path)			0
goferw2	0	(no path)			0
crhrw2	0	(no path)			0
whppa	-.4104538	.2878747	-1.43	0.154	-.1984179
crhrw3	0	(no path)			0
fdferw1	0	(no path)			0
crhrw1	0	(no path)			0
icdxcnt	3.62869	1.267427	2.86	0.004	.2034159
goferw1 <-					
fdferw1	.6033135	.0460219	13.11	0.000	.7098585
goferw2 <-					
goferw1	.2049207	.0502389	4.08	0.000	.404869
crhrw2	2.70413	.8080246	3.35	0.001	.1487349
fdferw1	.0648031	.0349872	1.85	0.064	.1506444
crhrw1	0	(no path)			0
icdxcnt	0	(no path)			0
crhrw2 <-					
goferw1	.0025293	.000802	3.15	0.002	.0908532
fdferw1	0	(no path)			0
crhrw1	.7495949	.0354861	21.12	0.000	.7549126
icdxcnt	.1010899	.0212446	4.76	0.000	.1843158
goferw3 <-					

goferw1	0	(no path)			0
goferw2	.7599253	.0861227	8.82	0.000	.7686353
crhrw2	0	(no path)			0
fdferw1	0	(no path)			0
crhrw1	1.725182	.7016068	2.46	0.014	.0966584
icdxcnt	0	(no path)			0
whppa <-					
whpsleep	0	(no path)			0
whpel	.2737342	.0423569	6.46	0.000	.5662555
goferw1	0	(no path)			0
goferw2	-.141059	.0415084	-3.40	0.001	-.1631094
crhrw2	0	(no path)			0
whppa	0	(no path)			0
crhrw3	3.79712	.8541422	4.45	0.000	.2412279
fdferw1	0	(no path)			0
crhrw1	0	(no path)			0
icdxcnt	0	(no path)			0
crhrw3 <-					
goferw1	0	(no path)			0
crhrw2	1.055212	.0329604	32.01	0.000	1.056405
fdferw1	0	(no path)			0
crhrw1	-.1183935	.0379136	-3.12	0.002	-.1193681
icdxcnt	0	(no path)			0

Indirect effects

(Std. Err. adjusted for **339** clusters in id)

	Coef.	Robust Std. Err.	z	P>|z|	Std. Coef.
Structural					
cumdo~1 <-					
goferw1	0	(no path)			0
fdferw1	.0032957	.0035647	0.92	0.355	.0769488
cumdo~2 <-					
cumdose1	0	(no path)			0
goferw1	.0073177	.0078817	0.93	0.353	.0967845
fdferw1	.0044149	.0039971	1.10	0.269	.0687033
cumdo~3 <-					
cumdose1	1.412499	.3029474	4.66	0.000	.8831041
cumdose2	0	(no path)			0
goferw1	.007716	.0083106	0.93	0.353	.0957286
fdferw1	.0046552	.0041394	1.12	0.261	.0679538

whpsl~p <-					
whpsleep	-.2068107	.0423092	-4.89	0.000	-.2068107
whpel	.0926042	.033735	2.75	0.006	.1120408
goferw1	.0157813	.0057598	2.74	0.006	.0210868
goferw2	-.0133247	.003921	-3.40	0.001	-.0090115
crhrw2	7.318996	.229562	31.88	0.000	.2722556
whppa	.0944617	.0662514	1.43	0.154	.0552481
crhrw3	-1.365156	.4423645	-3.09	0.002	-.0507244
fdferw1	-.0289677	.028192	-1.03	0.304	-.045542
crhrw1	4.661057	1.081146	4.31	0.000	.1746143
icdxcnt	-.7258537	.8030191	-0.90	0.366	-.0492299
whpel <-					
whpsleep	-.2578426	.0527493	-4.89	0.000	-.2131128
whpel	-.286928	.1045256	-2.75	0.006	-.286928
goferw1	.0200318	.0045937	4.36	0.000	.022123
goferw2	.0412856	.0121488	3.40	0.001	.0230777
crhrw2	4.575024	.144645	31.63	0.000	.140661
whppa	.1177707	.0825993	1.43	0.154	.0569317
crhrw3	4.229843	1.370637	3.09	0.002	.1299015
fdferw1	.1313405	.0352406	3.73	0.000	.1706675
crhrw1	2.928629	1.099842	2.66	0.008	.0906806
icdxcnt	1.375266	.9438743	1.46	0.145	.0770942
goferw1 <-					
fdferw1	0	(no path)			0
goferw2 <-					
goferw1	.0068395	.0021686	3.15	0.002	.013513
crhrw2	0	(no path)			0
fdferw1	.1277578	.031993	3.99	0.000	.296992
crhrw1	2.027002	.6208497	3.26	0.001	.1122818
icdxcnt	.2733603	.0975218	2.80	0.005	.0274142
crhrw2 <-					
goferw1	0	(no path)			0
fdferw1	.0015259	.0004894	3.12	0.002	.0644929
crhrw1	0	(no path)			0
icdxcnt	0	(no path)			0
goferw3 <-					
goferw1	.160922	.0385728	4.17	0.000	.3215832
goferw2	0	(no path)			0
crhrw2	2.054937	.6140383	3.35	0.001	.1143229
fdferw1	.1463319	.0227574	6.43	0.000	.3440691
crhrw1	1.54037	.5311824	2.90	0.004	.0863038
icdxcnt	.2077334	.0804094	2.58	0.010	.0210715

whppa <-					
whpsleep	.1754058	.0358844	4.89	0.000	.299904
whpel	-.078542	.0286122	-2.75	0.006	-.1624746
goferw1	-.0142531	.0068272	-2.09	0.037	-.0325623
goferw2	.0113013	.0033255	3.40	0.001	.0130679
crhrw2	4.877666	.1905148	25.60	0.000	.3102242
whppa	-.0801174	.0561909	-1.43	0.154	-.0801174
crhrw3	1.157853	.3751901	3.09	0.002	.0735574
fdferw1	.0149041	.0127836	1.17	0.244	.0400627
crhrw1	3.069637	.5912227	5.19	0.000	.1966168
icdxcnt	1.736238	.3350844	5.18	0.000	.2013388
crhrw3 <-					
goferw1	.0026689	.0008462	3.15	0.002	.0959778
crhrw2	0	(no path)			0
fdferw1	.0016102	.000521	3.09	0.002	.0681306
crhrw1	.7909817	.0508067	15.57	0.000	.7974931
icdxcnt	.1066713	.021805	4.89	0.000	.1947121

Total effects

(Std. Err. adjusted for **339** clusters in id)

	Coef.	Robust Std. Err.	z	P>|z|	Std. Coef.
Structural					
cumdo~1 <-					
goferw1	.0054626	.0058836	0.93	0.353	.1084001
fdferw1	.0032957	.0035647	0.92	0.355	.0769488
cumdo~2 <-					
cumdose1	1.339597	.2873117	4.66	0.000	.8928449
goferw1	.0073177	.0078817	0.93	0.353	.0967845
fdferw1	.0044149	.0039971	1.10	0.269	.0687033
cumdo~3 <-					
cumdose1	1.412499	.3029474	4.66	0.000	.8831041
cumdose2	1.054421	.0247893	42.54	0.000	.9890902
goferw1	.007716	.0083106	0.93	0.353	.0957286
fdferw1	.0046552	.0041394	1.12	0.261	.0679538
whpsl~p <-					
whpsleep	-.2068107	.0423092	-4.89	0.000	-.2068107
whpel	-.2301396	.1318428	-1.75	0.081	-.278443
goferw1	.0157813	.0057598	2.74	0.006	.0210868
goferw2	-.0133247	.003921	-3.40	0.001	-.0090115
crhrw2	7.318996	.229562	31.88	0.000	.2722556

whppa	.0944617	.0662514	1.43	0.154	.0552481
crhrw3	6.970188	1.686432	4.13	0.000	.2589878
fdferw1	.1529636	.0370174	4.13	0.000	.2404835
crhrw1	4.661057	1.081146	4.31	0.000	.1746143
icdxcnt	2.323434	.8014263	2.90	0.004	.1575834
whpel <-					
whpsleep	.640789	.1310923	4.89	0.000	.5296268
whpel	-.286928	.1045256	-2.75	0.006	-.286928
goferw1	.0200318	.0045937	4.36	0.000	.022123
goferw2	.0412856	.0121488	3.40	0.001	.0230777
crhrw2	4.575024	.144645	31.63	0.000	.140661
whppa	-.2926831	.2052754	-1.43	0.154	-.1414863
crhrw3	4.229843	1.370637	3.09	0.002	.1299015
fdferw1	.1313405	.0352406	3.73	0.000	.1706675
crhrw1	2.928629	1.099842	2.66	0.008	.0906806
icdxcnt	5.003956	.908859	5.51	0.000	.2805101
goferw1 <-					
fdferw1	.6033135	.0460219	13.11	0.000	.7098585
goferw2 <-					
goferw1	.2117602	.0507587	4.17	0.000	.418382
crhrw2	2.70413	.8080246	3.35	0.001	.1487349
fdferw1	.1925609	.0263807	7.30	0.000	.4476364
crhrw1	2.027002	.6208497	3.26	0.001	.1122818
icdxcnt	.2733603	.0975218	2.80	0.005	.0274142
crhrw2 <-					
goferw1	.0025293	.000802	3.15	0.002	.0908532
fdferw1	.0015259	.0004894	3.12	0.002	.0644929
crhrw1	.7495949	.0354861	21.12	0.000	.7549126
icdxcnt	.1010899	.0212446	4.76	0.000	.1843158
goferw3 <-					
goferw1	.160922	.0385728	4.17	0.000	.3215832
goferw2	.7599253	.0861227	8.82	0.000	.7686353
crhrw2	2.054937	.6140383	3.35	0.001	.1143229
fdferw1	.1463319	.0227574	6.43	0.000	.3440691
crhrw1	3.265552	.8434507	3.87	0.000	.1829622
icdxcnt	.2077334	.0804094	2.58	0.010	.0210715
whppa <-					
whpsleep	.1754058	.0358844	4.89	0.000	.299904
whpel	.1951922	.0523677	3.73	0.000	.4037809
goferw1	-.0142531	.0068272	-2.09	0.037	-.0325623
goferw2	-.1297577	.0381829	-3.40	0.001	-.1500415
crhrw2	4.877666	.1905148	25.60	0.000	.3102242
whppa	-.0801174	.0561909	-1.43	0.154	-.0801174

crhrw3	4.954973	.8831487	5.61	0.000	.3147853
fdferw1	.0149041	.0127836	1.17	0.244	.0400627
crhrw1	3.069637	.5912227	5.19	0.000	.1966168
icdxcnt	1.736238	.3350844	5.18	0.000	.2013388
crhrw3 <-					
goferw1	.0026689	.0008462	3.15	0.002	.0959778
crhrw2	1.055212	.0329604	32.01	0.000	1.056405
fdferw1	.0016102	.000521	3.09	0.002	.0681306
crhrw1	.6725882	.0403976	16.65	0.000	.678125
icdxcnt	.1066713	.021805	4.89	0.000	.1947121

```
9 . estat framework
(model contains no latent variables)
```

Endogenous variables on endogenous variables

	observed				
Beta	cumdose1	cumdose2	cumdose3	whpsleep	whpel
observed					
cumdose1	0	0	0	0	0
cumdose2	1.339597	0	0	0	0
cumdose3	0	1.054421	0	0	0
whpsleep	0	0	0	0	-.3227438
whpel	0	0	0	.8986316	0
goferw1	0	0	0	0	0
goferw2	0	0	0	0	0
crhrw2	0	0	0	0	0
goferw3	0	0	0	0	0
whppa	0	0	0	0	.2737342
crhrw3	0	0	0	0	0

	observed				
Beta	goferw1	goferw2	crhrw2	goferw3	whppa
observed					
cumdose1	.0054626	0	0	0	0
cumdose2	0	0	0	0	0
cumdose3	0	0	0	0	0
whpsleep	0	0	0	0	0
whpel	0	0	0	0	-.4104538
goferw1	0	0	0	0	0
goferw2	.2049207	0	2.70413	0	0
crhrw2	.0025293	0	0	0	0
goferw3	0	.7599253	0	0	0
whppa	0	-.141059	0	0	0

crhrw3	**0**	**0**	**1.055212**	**0**	**0**

Beta	observed crhrw3
observed	
cumdose1	**0**
cumdose2	**0**
cumdose3	**0**
whpsleep	**8.335343**
whpel	**0**
goferw1	**0**
goferw2	**0**
crhrw2	**0**
goferw3	**0**
whppa	**3.79712**
crhrw3	**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	**.1819313**	**0**	**3.049287**
whpel	**0**	**0**	**3.62869**
goferw1	**.6033135**	**0**	**0**
goferw2	**.0648031**	**0**	**0**
crhrw2	**0**	**.7495949**	**.1010899**
goferw3	**0**	**1.725182**	**0**
whppa	**0**	**0**	**0**
crhrw3	**0**	**-.1183935**	**0**

Covariances of error variables

Psi	observed e.cumdo~1	e.cumdo~2	e.cumdo~3	e.whpsl~p	e.whpel
observed					
e.cumdose1	**2.751988**				
e.cumdose2	**0**	**1.271465**			
e.cumdose3	**0**	**.0416992**	**.066661**		
e.whpsleep	**0**	**0**	**0**	**699.1699**	
e.whpel	**0**	**0**	**0**	**0**	**873.1006**
e.goferw1	**0**	**0**	**0**	**0**	**0**
e.goferw2	**0**	**0**	**0**	**0**	**0**
e.crhrw2	**0**	**0**	**0**	**0**	**0**
e.goferw3	**0**	**0**	**0**	**0**	**0**
e.whppa	**0**	**0**	**0**	**0**	**0**
e.crhrw3	**0**	**0**	**0**	**0**	**0**

Psi	observed e.goferw1	e.goferw2	e.crhrw2	e.goferw3	e.whppa
observed					
e.goferw1	**544.0054**				
e.goferw2	**0**	**180.7822**			
e.crhrw2	**0**	**0**	**.2437889**		
e.goferw3	**0**	**0**	**0**	**97.46582**	
e.whppa	**0**	**0**	**0**	**0**	**144.4763**
e.crhrw3	**0**	**0**	**0**	**0**	**0**

Psi	observed e.crhrw3
observed	
e.crhrw3	**.0643684**

Intercepts of endogenous variables

alpha	observed cumdose1	cumdose2	cumdose3	whpsleep	whpel
_cons	**.3160102**	**.3879549**	**.204808**	**13.99702**	**3.753548**

	observed				
alpha	goferw1	goferw2	crhrw2	goferw3	whppa
_cons	**1.457905**	**1.452656**	**-.3461971**	**1.230034**	**4.897661**

	observed
alpha	crhrw3
_cons	**-.0069225**

Covariances of exogenous variables

	observed		
Phi	fdferw1	crhrw1	icdxcnt
observed			
fdferw1	**1518.066**		
crhrw1	**14.91383**	**.861959**	
icdxcnt	**18.37986**	**.3039582**	**2.825245**

Means of exogenous variables

	observed		
kappa	fdferw1	crhrw1	icdxcnt
mean	**32.20059**	**-.1421184**	**2.135693**