

**Special Edition**

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 UCSF

Notes:

1. Unicode is supported; see [help unicode advice](#).
2. Maximum number of variables is set to 5000; see [help set_maxvar](#).

```
1 . use "/Users/thedatacooker/Documents/UCSF/Possin/careEcowithmodels9-13.dta"

2 . mixed ER_TIMES QDRS_imputedDEMENTIA_SEVERITY_BA group1 VISIT group1#VISIT|| dce:VIS:
note: 1.group1#1.VISIT omitted because of collinearity
note: 1.group1#3.VISIT omitted because of collinearity
```

Performing EM optimization:

Performing gradient-based optimization:

```
Iteration 0: log likelihood = -1451.9718
Iteration 1: log likelihood = -1436.4855
Iteration 2: log likelihood = -1433.8366
Iteration 3: log likelihood = -1433.8361
Iteration 4: log likelihood = -1433.8361
```

Computing standard errors:

Mixed-effects ML regression
 Group variable: **dce**

```
Number of obs      =      1,343
Number of groups   =       779
```

Obs per group:

```
min =      1
avg  =      1.7
max  =      2
```

Log likelihood = -1433.8361

```
Wald chi2(4)      =      15.85
Prob > chi2       =      0.0032
```

ER_TIMES	Coef.	Std. Err.	z	P> z	[95% Conf.]
QDRS_imputedDEMENTIA_SEVERITY_BA	.0081595	.0032073	2.54	0.011	.0018733
group1	.0075749	.0459866	0.16	0.869	-.0825572
VISIT	.0935315	.0321687	2.91	0.004	.0304821
group1#VISIT					
0 3	-.1503566	.0798905	-1.88	0.060	-.3069392
1 1	0	(omitted)			
1 3	0	(omitted)			
_cons	.2041313	.0577125	3.54	0.000	.0910168

Random-effects Parameters	Estimate	Std. Err.	[95% Conf. Interval]	
dce: Independent				
var(VISIT)	.0551376	.0053753	.0455475	.0667469
var(_cons)	1.40e-21	2.13e-21	7.07e-23	2.77e-20
var(Residual)	.3158309	.017234	.2837964	.3514815

LR test vs. linear model: $\chi^2(2) = 161.81$ Prob > $\chi^2 = 0.0000$

Note: LR test is conservative and provided only for reference.

```
3 . mixed ER_TIMES QDRS_imputedDEMENTIA_SEVERITY_BA GROUP VISIT group1#VISIT || dce:VISIT
note: 1.group1#1.VISIT omitted because of collinearity
note: 1.group1#3.VISIT omitted because of collinearity
```

Performing EM optimization:

Performing gradient-based optimization:

```
Iteration 0: log likelihood = -1451.9718
Iteration 1: log likelihood = -1436.495
Iteration 2: log likelihood = -1433.8391
Iteration 3: log likelihood = -1433.8361
Iteration 4: log likelihood = -1433.8361
```

Computing standard errors:

Mixed-effects ML regression
Group variable: **dce**

Number of obs = 1,343
Number of groups = 779

Obs per group:
min = 1

avg = 1.7
max = 2

Log likelihood = **-1433.8361** Wald chi2(4) = **15.85**
Prob > chi2 = **0.0032**

ER_TIMES	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
QDRS_imputedDEMENTIA_SEVERITY	.0081595	.0032073	2.54	0.011	.0018733
GROUP	-.0075749	.0459866	-0.16	0.869	-.097707
VISIT	.0935315	.0321687	2.91	0.004	.0304821
group1#VISIT					
0 3	-.1503566	.0798905	-1.88	0.060	-.3069392
1 1	0	(omitted)			
1 3	0	(omitted)			
_cons	.2117062	.0695572	3.04	0.002	.0753765

Random-effects Parameters	Estimate	Std. Err.	[95% Conf. Interval]	
dce: Independent				
var(VISIT)	.0551376	.0053708	.0455549	.0667361
var(_cons)	6.26e-25	9.25e-25	3.46e-26	1.13e-23
var(Residual)	.3158309	.0168133	.2845384	.3505649

LR test vs. linear model: chi2(2) = **161.81** Prob > chi2 = **0.0000**

Note: LR test is conservative and provided only for reference.

4 . mixed ER_TIMES DEMENTIA_SEVERITY group1 VISIT group1#VISIT || dce:VISIT
note: 1.group1#1.VISIT omitted because of collinearity
note: 1.group1#3.VISIT omitted because of collinearity

Performing EM optimization:

Performing gradient-based optimization:

Iteration 0: log likelihood = **-1422.3669**
Iteration 1: log likelihood = **-1407.3784**
Iteration 2: log likelihood = **-1404.618**
Iteration 3: log likelihood = **-1404.618**

Computing standard errors:

Mixed-effects ML regression
Group variable: **dce**

Number of obs = 1,319
Number of groups = 764

Obs per group:
min = 1
avg = 1.7
max = 2

Log likelihood = -1404.618
Wald chi2(4) = 17.15
Prob > chi2 = 0.0018

ER_TIMES	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
DEMENTIA_SEVERITY	.0086819	.0032176	2.70	0.007	.0023756	.0149883
group1	.0161431	.0461408	0.35	0.726	-.0742912	.1065775
VISIT	.0932807	.0323467	2.88	0.004	.0298822	.1566791
group1#VISIT						
0 3	-.1378927	.0803525	-1.72	0.086	-.2953808	.0195953
1 1	0	(omitted)				
1 3	0	(omitted)				
_cons	.1948341	.0579713	3.36	0.001	.0812125	.3084557

Random-effects Parameters	Estimate	Std. Err.	[95% Conf. Interval]	
dce: Independent				
var(VISIT)	.0570848	.0054818	.0472911	.0689066
var(_cons)	7.27e-15	1.01e-14	4.76e-16	1.11e-13
var(Residual)	.3086471	.0166322	.277711	.3430293

LR test vs. linear model: chi2(2) = 169.82 Prob > chi2 = 0.0000

Note: LR test is conservative and provided only for reference.

```
5 . mixed ER_TIMES DEMENTIA_SEVERITY GROUP VISIT GROUP#VISIT || dce:VISIT
note: 1.GROUP#1.VISIT omitted because of collinearity
note: 1.GROUP#3.VISIT omitted because of collinearity
```

Performing EM optimization:

Performing gradient-based optimization:

Iteration 0: log likelihood = -1422.3669
Iteration 1: log likelihood = -1407.5132

Iteration 2: log likelihood = **-1404.6194**
 Iteration 3: log likelihood = **-1404.618**
 Iteration 4: log likelihood = **-1404.618**

Computing standard errors:

Mixed-effects ML regression
 Group variable: **dce**

Number of obs = **1,319**
 Number of groups = **764**

Obs per group:

min = **1**
 avg = **1.7**
 max = **2**

Log likelihood = **-1404.618**

Wald chi2(4) = **17.15**
 Prob > chi2 = **0.0018**

ER_TIMES	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
DEMENTIA_SEVERITY	.0086819	.0032176	2.70	0.007	.0023756	.0149883
GROUP	-.0161431	.0461408	-0.35	0.726	-.1065775	.0742912
VISIT	.0243343	.023842	1.02	0.307	-.0223951	.0710637
GROUP#VISIT						
0 3	.1378927	.0803525	1.72	0.086	-.0195953	.2953808
1 1	0	(omitted)				
1 3	0	(omitted)				
_cons	.2799236	.0599487	4.67	0.000	.1624263	.397421

Random-effects Parameters	Estimate	Std. Err.	[95% Conf. Interval]	
dce: Independent				
var(VISIT)	.0570848	.0056544	.0470118	.069316
var(_cons)	1.13e-22	1.72e-22	5.80e-24	2.21e-21
var(Residual)	.3086471	.0167827	.2774458	.3433574

LR test vs. linear model: chi2(2) = **169.82**

Prob > chi2 = **0.0000**

Note: LR test is conservative and provided only for reference.

```
6 . mixed ER_TIMES DEMENTIA_SEVERITY GROUP VISIT GROUP#VISIT || dce:VISIT
note: 1.GROUP#1.VISIT omitted because of collinearity
note: 1.GROUP#3.VISIT omitted because of collinearity
```

Performing EM optimization:

Performing gradient-based optimization:

Iteration 0: log likelihood = **-1422.3669**
 Iteration 1: log likelihood = **-1407.5132**
 Iteration 2: log likelihood = **-1404.6194**
 Iteration 3: log likelihood = **-1404.618**
 Iteration 4: log likelihood = **-1404.618**

Computing standard errors:

Mixed-effects ML regression
 Group variable: **dce**

Number of obs = **1,319**
 Number of groups = **764**

Obs per group:
 min = **1**
 avg = **1.7**
 max = **2**

Log likelihood = **-1404.618** Wald chi2(4) = **17.15**
 Prob > chi2 = **0.0018**

ER_TIMES	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
DEMENTIA_SEVERITY	.0086819	.0032176	2.70	0.007	.0023756	.0149883
GROUP	-.0161431	.0461408	-0.35	0.726	-.1065775	.0742912
VISIT	.0243343	.023842	1.02	0.307	-.0223951	.0710637
GROUP#VISIT						
0 3	.1378927	.0803525	1.72	0.086	-.0195953	.2953808
1 1	0	(omitted)				
1 3	0	(omitted)				
_cons	.2799236	.0599487	4.67	0.000	.1624263	.397421

Random-effects Parameters	Estimate	Std. Err.	[95% Conf. Interval]	
dce: Independent				
var(VISIT)	.0570848	.0056544	.0470118	.069316
var(_cons)	1.13e-22	1.72e-22	5.80e-24	2.21e-21
var(Residual)	.3086471	.0167827	.2774458	.3433574

LR test vs. linear model: chi2(2) = **169.82** Prob > chi2 = **0.0000**

Note: LR test is conservative and provided only for reference.

```
7 . mixed HOSP_TIMES DEMENTIA_SEVERITY GROUP VISIT GROUP#VISIT || dce:VISIT
note: 1.GROUP#1.VISIT omitted because of collinearity
note: 1.GROUP#3.VISIT omitted because of collinearity
```

Performing EM optimization:

Performing gradient-based optimization:

```
Iteration 0: log likelihood = -875.65284
Iteration 1: log likelihood = -861.45588
Iteration 2: log likelihood = -857.56907
Iteration 3: log likelihood = -856.78181
Iteration 4: log likelihood = -856.75231
Iteration 5: log likelihood = -856.7523
```

Computing standard errors:

```
Mixed-effects ML regression      Number of obs      =      1,321
Group variable: dce              Number of groups    =       765

Obs per group:
      min =           1
      avg =          1.7
      max =           2

Wald chi2(4)      =       5.84
Prob > chi2       =      0.2117

Log likelihood = -856.7523
```

HOSP_TIMES	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
DEMENTIA_SEVERITY	.0039333	.0021065	1.87	0.062	-.0001954	.0080619
GROUP	.0396373	.0314076	1.26	0.207	-.0219205	.1011952
VISIT	.0056102	.0156448	0.36	0.720	-.025053	.0362734
GROUP#VISIT						
0 3	.0377384	.0528147	0.71	0.475	-.0657765	.1412533
1 1	0	(omitted)				
1 3	0	(omitted)				
_cons	.1306043	.0399749	3.27	0.001	.0522549	.2089536

Random-effects Parameters	Estimate	Std. Err.	[95% Conf. Interval]
dce: Independent			

var(VISIT)	.01768	.0021885	.0138714	.0225344
var(_cons)	7.96e-16	1.51e-15	1.95e-17	3.25e-14
var(Residual)	.1521942	.0082877	.1367875	.1693363

LR test vs. linear model: $\chi^2(2) = 89.72$ Prob > $\chi^2 = 0.0000$

Note: LR test is conservative and provided only for reference.

```
8 . mixed AMB_TIMES DEMENTIA_SEVERITY GROUP VISIT GROUP#VISIT || dce:VISIT
note: 1.GROUP#1.VISIT omitted because of collinearity
note: 1.GROUP#3.VISIT omitted because of collinearity
```

Performing EM optimization:

Performing gradient-based optimization:

```
Iteration 0: log likelihood = -1051.6725
Iteration 1: log likelihood = -1033.3273
Iteration 2: log likelihood = -1028.0196
Iteration 3: log likelihood = -1028.01
Iteration 4: log likelihood = -1028.01
```

Computing standard errors:

```
Mixed-effects ML regression      Number of obs      =      1,319
Group variable: dce              Number of groups    =       765

Obs per group:
      min =           1
      avg =          1.7
      max =           2

Wald chi2(4)      =      28.97
Log likelihood = -1028.01      Prob > chi2      =      0.0000
```

AMB_TIMES	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
DEMENTIA_SEVERITY	.0095232	.002416	3.94	0.000	.0047879	.0142585
GROUP	.0231181	.0336367	0.69	0.492	-.0428088	.0890449
VISIT	.0359977	.0181013	1.99	0.047	.0005199	.0714756
GROUP#VISIT						
0 3	.0819229	.0609333	1.34	0.179	-.0375043	.20135
1 1	0	(omitted)				
1 3	0	(omitted)				
_cons	-.0055397	.0445339	-0.12	0.901	-.0928246	.0817452

Random-effects Parameters	Estimate	Std. Err.	[95% Conf. Interval]	
dce: Independent				
var(VISIT)	.0433978	.0035419	.0369826	.0509259
var(_cons)	1.51e-19	2.71e-19	4.48e-21	5.08e-18
var(Residual)	.1513142	.0083216	.1358524	.1685357

LR test vs. linear model: $\chi^2(2) = 278.51$ Prob > $\chi^2 = 0.0000$

Note: LR test is conservative and provided only for reference.

9 . by GROUP VISIT, sort : summarize HOSP_TIMES ER_TIMES AMB_TIMES

-> GROUP = 0.00, VISIT = 1.00

Variable	Obs	Mean	Std. Dev.	Min	Max
HOSP_TIMES	268	.1809701	.3869256	0	2.5
ER_TIMES	267	.406367	.6166828	0	3.5
AMB_TIMES	268	.1473881	.4124839	0	5

-> GROUP = 0.00, VISIT = 2.00

Variable	Obs	Mean	Std. Dev.	Min	Max
HOSP_TIMES	0				
ER_TIMES	0				
AMB_TIMES	0				

-> GROUP = 0.00, VISIT = 3.00

Variable	Obs	Mean	Std. Dev.	Min	Max
HOSP_TIMES	199	.2311558	.5382671	0	3
ER_TIMES	199	.5829146	1.050209	0	6
AMB_TIMES	199	.2964824	.9731432	0	10

-> GROUP = 1.00, VISIT = 1.00

Variable	Obs	Mean	Std. Dev.	Min	Max
----------	-----	------	-----------	-----	-----

HOSP_TIMES	512	.2246094	.417733	0	2.5
ER_TIMES	512	.3964844	.584392	0	3
AMB_TIMES	511	.1702544	.3749193	0	2.5

-> GROUP = 1.00, VISIT = 2.00

Variable	Obs	Mean	Std. Dev.	Min	Max
HOSP_TIMES	0				
ER_TIMES	0				
AMB_TIMES	0				

-> GROUP = 1.00, VISIT = 3.00

Variable	Obs	Mean	Std. Dev.	Min	Max
HOSP_TIMES	366	.2322404	.5763835	0	4
ER_TIMES	365	.4356164	.8447267	0	5
AMB_TIMES	365	.2328767	.6529844	0	5

10 . regress AMB_TIMES GROUP VISIT

Source	SS	df	MS	Number of obs	=	1,343
Model	2.88244454	2	1.44122227	F(2, 1340)	=	4.19
Residual	460.384867	1,340	.343570797	Prob > F	=	0.0153
				R-squared	=	0.0062
				Adj R-squared	=	0.0047
Total	463.267312	1,342	.345206641	Root MSE	=	.58615

AMB_TIMES	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
GROUP	-.013696	.0335856	-0.41	0.683	-.0795821	.0521902
VISIT	.0464054	.0162041	2.86	0.004	.0146172	.0781937
_cons	.1249664	.0404542	3.09	0.002	.0456059	.2043269

11 . regress AMB_TIMES GROUP VISIT GROUP#VISIT

note: 1.GROUP#1b.VISIT omitted because of collinearity

note: 1.GROUP#3.VISIT omitted because of collinearity

Source	SS	df	MS	Number of obs	=	1,343
Model	3.43825628	3	1.14608543	F(3, 1339)	=	3.34
Residual	459.829056	1,339	.34341229	Prob > F	=	0.0187
				R-squared	=	0.0074
				Adj R-squared	=	0.0052

Total | 463.267312 1,342 .345206641 Root MSE = .58601

AMB_TIMES	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
GROUP	.0228663	.0441976	0.52	0.605	-.0638378	.1095704
VISIT	.0313112	.0200804	1.56	0.119	-.0080814	.0707037
GROUP#VISIT						
0 3	.086472	.0679704	1.27	0.204	-.046868	.2198121
1 1	0	(omitted)				
1 3	0	(omitted)				
_cons	.1160769	.041044	2.83	0.005	.0355593	.1965945

```
12 . mixed AMB_TIMES DEMENTIA_SEVERITY GROUP VISIT GROUP#VISIT || dce:VISIT
note: 1.GROUP#1.VISIT omitted because of collinearity
note: 1.GROUP#3.VISIT omitted because of collinearity
```

Performing EM optimization:

Performing gradient-based optimization:

```
Iteration 0:  log likelihood = -1051.6725
Iteration 1:  log likelihood = -1033.3273
Iteration 2:  log likelihood = -1028.0196
Iteration 3:  log likelihood =  -1028.01
Iteration 4:  log likelihood =  -1028.01
```

Computing standard errors:

Mixed-effects ML regression
Group variable: **dce**

Number of obs = 1,319
Number of groups = 765

Obs per group:

min =	1
avg =	1.7
max =	2

Log likelihood = -1028.01

Wald chi2(4)	=	28.97
Prob > chi2	=	0.0000

AMB_TIMES	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
DEMENTIA_SEVERITY	.0095232	.002416	3.94	0.000	.0047879	.0142585
GROUP	.0231181	.0336367	0.69	0.492	-.0428088	.0890449
VISIT	.0359977	.0181013	1.99	0.047	.0005199	.0714756

GROUP#VISIT						
0 3	.0819229	.0609333	1.34	0.179	-.0375043	.20135
1 1	0	(omitted)				
1 3	0	(omitted)				
_cons	-.0055397	.0445339	-0.12	0.901	-.0928246	.0817452

Random-effects Parameters	Estimate	Std. Err.	[95% Conf. Interval]	
dce: Independent				
var(VISIT)	.0433978	.0035419	.0369826	.0509259
var(_cons)	1.51e-19	2.71e-19	4.48e-21	5.08e-18
var(Residual)	.1513142	.0083216	.1358524	.1685357

LR test vs. linear model: $\chi^2(2) = 278.51$ Prob > $\chi^2 = 0.0000$

Note: LR test is conservative and provided only for reference.

13 . mixed lqol DEMENTIA_SEVERITY GROUP VISIT GROUP#VISIT || dce:VISIT

note: 1.GROUP#1.VISIT omitted because of collinearity

note: 1.GROUP#3.VISIT omitted because of collinearity

Performing EM optimization:

Performing gradient-based optimization:

Iteration 0: log likelihood = -3923.3487
 Iteration 1: log likelihood = -3913.9726
 Iteration 2: log likelihood = -3906.9845
 Iteration 3: log likelihood = -3906.7206
 Iteration 4: log likelihood = -3906.7159
 Iteration 5: log likelihood = -3906.7159

Computing standard errors:

Mixed-effects ML regression
 Group variable: **dce**

Number of obs = 1,319
 Number of groups = 765

Obs per group:

min = 1
 avg = 1.7
 max = 2

Log likelihood = -3906.7159

Wald $\chi^2(4) = 342.44$
 Prob > $\chi^2 = 0.0000$

lQOL	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
DEMENTIA_SEVERITY	-.432726	.025947	-16.68	0.000	-.4835812	-.3818707
GROUP	-.8616493	.3873538	-2.22	0.026	-1.620849	-.1024498
VISIT	-.7229263	.1205727	-6.00	0.000	-.9592444	-.4866083
GROUP#VISIT						
0 3	-.5393075	.4071696	-1.32	0.185	-1.337345	.2587303
1 1	0	(omitted)				
1 3	0	(omitted)				
_cons	39.35599	.4681241	84.07	0.000	38.43848	40.27349

Random-effects Parameters	Estimate	Std. Err.	[95% Conf. Interval]	
dce: Independent				
var(VISIT)	8.48e-18	1.45e-17	2.97e-19	2.42e-16
var(_cons)	14.67705	1.181708	12.53444	17.1859
var(Residual)	11.11798	.6712226	9.877264	12.51455

LR test vs. linear model: $\chi^2(2) = 205.43$ Prob > $\chi^2 = 0.0000$

Note: LR test is conservative and provided only for reference.

```
14 . regress lQOL GROUP VISIT GROUP#VISIT
note: 1.GROUP#1b.VISIT omitted because of collinearity
note: 1.GROUP#3.VISIT omitted because of collinearity
```

Source	SS	df	MS	Number of obs	=	1,343
Model	579.403336	3	193.134445	F(3, 1339)	=	5.82
Residual	44436.6272	1,339	33.1864281	Prob > F	=	0.0006
Total	45016.0305	1,342	33.543987	R-squared	=	0.0129
				Adj R-squared	=	0.0107
				Root MSE	=	5.7608

lQOL	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
GROUP	-.705429	.4348689	-1.62	0.105	-1.558528	.1476696
VISIT	-.5550524	.1973189	-2.81	0.005	-.9421402	-.1679646
GROUP#VISIT						
0 3	-.2573082	.66843	-0.38	0.700	-1.568592	1.053976
1 1	0	(omitted)				

1 3	0 (omitted)					
_cons	33.80689	.4040154	83.68	0.000	33.01432	34.59946

15 . by GROUP VISIT, sort : summarize lQOL

-> GROUP = 0.00, VISIT = 1.00

Variable	Obs	Mean	Std. Dev.	Min	Max
lQOL	267	33.25184	5.736291	16	45

-> GROUP = 0.00, VISIT = 2.00

Variable	Obs	Mean	Std. Dev.	Min	Max
lQOL	0				

-> GROUP = 0.00, VISIT = 3.00

Variable	Obs	Mean	Std. Dev.	Min	Max
lQOL	199	31.88442	5.393828	18	46

-> GROUP = 1.00, VISIT = 1.00

Variable	Obs	Mean	Std. Dev.	Min	Max
lQOL	512	32.54641	5.966924	14	49

-> GROUP = 1.00, VISIT = 2.00

Variable	Obs	Mean	Std. Dev.	Min	Max
lQOL	0				

-> GROUP = 1.00, VISIT = 3.00

Variable	Obs	Mean	Std. Dev.	Min	Max
lQOL	365	31.4363	5.67665	0	48

```
16 . by VISIT, sort : ttest lQOL, by(GROUP)
```

```
-> VISIT = 1.00
```

```
Two-sample t test with equal variances
```

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
0	267	33.25184	.3510553	5.736291	32.56063	33.94304
1	512	32.54641	.2637033	5.966924	32.02833	33.06448
combined	779	32.78819	.2112005	5.894728	32.3736	33.20278
diff		.705429	.4445479		-.1672283	1.578086

```
diff = mean(0) - mean(1)                                t = 1.5868
Ho: diff = 0                                             degrees of freedom = 777
```

```
Ha: diff < 0                                Ha: diff != 0                                Ha: diff > 0
Pr(T < t) = 0.9435                        Pr(|T| > |t|) = 0.1130                        Pr(T > t) = 0.0565
```

```
-> VISIT = 2.00
no observations
```

```
-> VISIT = 3.00
```

```
Two-sample t test with equal variances
```

Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
0	199	31.88442	.3823583	5.393828	31.1304	32.63844
1	365	31.4363	.2971294	5.67665	30.852	32.02061
combined	564	31.59441	.234868	5.577807	31.13309	32.05574
diff		.4481207	.4915812		-.5174401	1.413682

```
diff = mean(0) - mean(1)                                t = 0.9116
Ho: diff = 0                                             degrees of freedom = 562
```

```
Ha: diff < 0                                Ha: diff != 0                                Ha: diff > 0
Pr(T < t) = 0.8188                        Pr(|T| > |t|) = 0.3624                        Pr(T > t) = 0.1812
```

```
17 . mixed lQOL DEMENTIA_SEVERITY group1 VISIT group1#VISIT || dce:VISIT
note: 1.group1#1.VISIT omitted because of collinearity
```

note: 1.group1#3.VISIT omitted because of collinearity

Performing EM optimization:

Performing gradient-based optimization:

Iteration 0: log likelihood = **-3923.3487**
 Iteration 1: log likelihood = **-3914.0674**
 Iteration 2: log likelihood = **-3907.0164**
 Iteration 3: log likelihood = **-3906.72**
 Iteration 4: log likelihood = **-3906.7159**
 Iteration 5: log likelihood = **-3906.7159**

Computing standard errors:

Mixed-effects ML regression
 Group variable: **dce**

Number of obs = **1,319**
 Number of groups = **765**

Obs per group:

min = **1**
 avg = **1.7**
 max = **2**

Log likelihood = **-3906.7159**

Wald chi2(4) = **342.44**
 Prob > chi2 = **0.0000**

lqol	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
DEMENTIA_SEVERITY	-.432726	.025947	-16.68	0.000	-.4835812	-.3818707
group1	.8616493	.3873538	2.22	0.026	.1024498	1.620849
VISIT	-.9925801	.1641282	-6.05	0.000	-1.314266	-.6708947
group1#VISIT						
0 3	.5393075	.4071696	1.32	0.185	-.2587303	1.337345
1 1	0	(omitted)				
1 3	0	(omitted)				
_cons	38.76399	.4252439	91.16	0.000	37.93053	39.59746

Random-effects Parameters	Estimate	Std. Err.	[95% Conf. Interval]	
dce: Independent				
var(VISIT)	2.87e-19	4.33e-19	1.49e-20	5.52e-18
var(_cons)	14.67705	1.181741	12.53439	17.18598
var(Residual)	11.11798	.6712234	9.877263	12.51455

LR test vs. linear model: $\chi^2(2) = 205.43$ Prob > $\chi^2 = 0.0000$

Note: LR test is conservative and provided only for reference.

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