

The GLM Procedure

Class Level Information

Class	Levels	Values
clinic	6	1 2 3 4 5 6
drug	4	1 2 3 4
disease	3	1 2 3

Type III Estimable Functions

Effect	-----Coefficients-----		
	clinic	disease	drug
Intercept	0	0	0
clinic 1	L2	0	0
clinic 2	L3	0	0
clinic 3	L4	0	0
clinic 4	L5	0	0
clinic 5	L6	0	0
clinic 6	-L2-L3-L4-L5-L6	0	0
disease 1	0	L8	0
disease 2	0	L9	0
disease 3	0	-L8-L9	0
drug 1	0	0	L11
drug 2	0	0	L12
drug 3	0	0	L13
drug 4	0	0	-L11-L12-L13
drug*disease 1 1	0	0.25*L8	0.3333*L11
drug*disease 1 2	0	0.25*L9	0.3333*L11
drug*disease 1 3	0	-0.25*L8-0.25*L9	0.3333*L11
drug*disease 2 1	0	0.25*L8	0.3333*L12
drug*disease 2 2	0	0.25*L9	0.3333*L12
drug*disease 2 3	0	-0.25*L8-0.25*L9	0.3333*L12
drug*disease 3 1	0	0.25*L8	0.3333*L13
drug*disease 3 2	0	0.25*L9	0.3333*L13
drug*disease 3 3	0	-0.25*L8-0.25*L9	0.3333*L13
drug*disease 4 1	0	0.25*L8	-0.3333*L11-0.3333*L12-0.3333*L13
drug*disease 4 2	0	0.25*L9	-0.3333*L11-0.3333*L12-0.3333*L13
drug*disease 4 3	0	-0.25*L8-0.25*L9	-0.3333*L11-0.3333*L12-0.3333*L13

Type III Estimable Functions

Effect		-----Coefficients----- drug*disease
Intercept		0
clinic	1	0
clinic	2	0
clinic	3	0
clinic	4	0
clinic	5	0
clinic	6	0
disease	1	0
disease	2	0
disease	3	0
drug	1	0
drug	2	0
drug	3	0
drug	4	0
drug*disease	1 1	L15
drug*disease	1 2	L16
drug*disease	1 3	-L15-L16
drug*disease	2 1	L18
drug*disease	2 2	L19
drug*disease	2 3	-L18-L19
drug*disease	3 1	L21
drug*disease	3 2	L22
drug*disease	3 3	-L21-L22
drug*disease	4 1	-L15-L18-L21
drug*disease	4 2	-L16-L19-L22
drug*disease	4 3	L15+L16+L18+L19+L21+L22

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	16	8261.298304	516.331144	23.39	<.0001
Error	41	905.115489	22.075988		
Corrected Total	57	9166.413793			

Source	DF	Type I SS	Mean Square	F Value	Pr > F
clinic	5	4634.894601	926.978920	41.99	<.0001
disease	2	663.918326	331.959163	15.04	<.0001
drug	3	2445.204851	815.068284	36.92	<.0001
drug*disease	6	517.280527	86.213421	3.91	0.0036

Source	DF	Type III SS	Mean Square	F Value	Pr > F
clinic	5	4164.867844	832.973569	37.73	<.0001
disease	2	554.378429	277.189215	12.56	<.0001
drug	3	2405.711506	801.903835	36.32	<.0001
drug*disease	6	517.280527	86.213421	3.91	0.0036

Parameter		Estimate	Standard Error	t Value	Pr > |t|
Intercept		9.72923854 B	2.47606615	3.93	0.0003
clinic	1	12.11919656 B	2.16865539	5.59	<.0001
clinic	2	7.62956344 B	2.25742232	3.38	0.0016
clinic	3	6.62328170 B	2.06304151	3.21	0.0026
clinic	4	-14.89461071 B	2.16460246	-6.88	<.0001
clinic	5	-4.01823439 B	2.03193639	-1.98	0.0547
clinic	6	0.00000000 B	.	.	.
disease	1	3.90483483 B	3.00906647	1.30	0.2016
disease	2	1.86089536 B	2.86022614	0.65	0.5189
disease	3	0.00000000 B	.	.	.
drug	1	10.50357848 B	3.00481871	3.50	0.0012
drug	2	7.02756203 B	2.86022614	2.46	0.0183
drug	3	-1.43821726 B	3.20965760	-0.45	0.6564
drug	4	0.00000000 B	.	.	.
drug*disease	1 1	3.95248205 B	4.14970655	0.95	0.3464
drug*disease	1 2	2.47522665 B	4.32485259	0.57	0.5702
drug*disease	1 3	0.00000000 B	.	.	.
drug*disease	2 1	5.37243797 B	4.12447434	1.30	0.2000
drug*disease	2 2	12.32365138 B	4.21460331	2.92	0.0056
drug*disease	2 3	0.00000000 B	.	.	.
drug*disease	3 1	6.89458690 B	4.75019591	1.45	0.1543
drug*disease	3 2	-4.81991665 B	4.30460643	-1.12	0.2694
drug*disease	3 3	0.00000000 B	.	.	.
drug*disease	4 1	0.00000000 B	.	.	.
drug*disease	4 2	0.00000000 B	.	.	.
drug*disease	4 3	0.00000000 B	.	.	.

NOTE: The X'X matrix has been found to be singular, and a generalized inverse was used to solve the normal equations. Terms whose estimates are followed by the letter 'B' are not uniquely estimable.

Source Type I Expected Mean Square

clinic Var(Error) + 9.6414 Var(clinic) + Q(disease,drug,drug*disease)

disease Var(Error) + Q(disease,drug,drug*disease)

drug Var(Error) + Q(drug,drug*disease)

drug*disease Var(Error) + Q(drug*disease)

Source Type III Expected Mean Square

clinic Var(Error) + 9.2 Var(clinic)

disease Var(Error) + Q(disease,drug*disease)

drug Var(Error) + Q(drug,drug*disease)

drug*disease Var(Error) + Q(drug*disease)

The Mixed Procedure

Model Information

Data Set	WORK.SET1
Dependent Variable	Y
Covariance Structure	Variance Components
Estimation Method	REML
Residual Variance Method	Profile
Fixed Effects SE Method	Model-Based
Degrees of Freedom Method	Containment

Class Level Information

Class	Levels	Values
clinic	6	1 2 3 4 5 6
drug	4	1 2 3 4
disease	3	1 2 3

Covariance Parameter Estimates

Cov Parm	Estimate
clinic	92.8730
Residual	22.0791

Fit Statistics

-2 Res Log Likelihood	309.9
AIC (smaller is better)	313.9
AICC (smaller is better)	314.2
BIC (smaller is better)	313.5

Solution for Fixed Effects

Effect	drug	disease	Estimate	Standard Error	DF	t Value	Pr > |t|
Intercept			11.0619	4.4698	5	2.47	0.0562
disease		1	3.7778	3.0082	41	1.26	0.2163
disease		2	1.7714	2.8600	41	0.62	0.5391
disease		3	0	.	.	.	.
drug	1		10.3902	3.0042	41	3.46	0.0013
drug	2		6.9381	2.8600	41	2.43	0.0198
drug	3		-1.5492	3.2084	41	-0.48	0.6318
drug	4		0	.	.	.	.
drug*disease	1	1	4.1034	4.1490	41	0.99	0.3285
drug*disease	1	2	2.6536	4.3231	41	0.61	0.5427
drug*disease	1	3	0	.	.	.	.
drug*disease	2	1	5.4619	4.1245	41	1.32	0.1927
drug*disease	2	2	12.4541	4.2134	41	2.96	0.0052
drug*disease	2	3	0	.	.	.	.
drug*disease	3	1	6.9226	4.7483	41	1.46	0.1525
drug*disease	3	2	-4.7657	4.3034	41	-1.11	0.2746
drug*disease	3	3	0	.	.	.	.
drug*disease	4	1	0	.	.	.	.
drug*disease	4	2	0	.	.	.	.
drug*disease	4	3	0	.	.	.	.

Solution for Random Effects

Effect	clinic	Estimate	Std Err Pred	DF	t Value	Pr > |t|
clinic	1	10.5924	4.1903	41	2.53	0.0154
clinic	2	6.1986	4.2200	41	1.47	0.1495
clinic	3	5.2607	4.1708	41	1.26	0.2143
clinic	4	-15.6903	4.1928	41	-3.74	0.0006
clinic	5	-5.1518	4.1467	41	-1.24	0.2212
clinic	6	-1.2097	4.1494	41	-0.29	0.7721

Type 3 Coefficients for disease

Effect	drug	disease	Row1	Row2
Intercept				
disease		1	1	
disease		2		1
disease		3	-1	-1
drug	1			
drug	2			
drug	3			
drug	4			
drug*disease	1	1	0.25	
drug*disease	1	2		0.25
drug*disease	1	3	-0.25	-0.25
drug*disease	2	1	0.25	
drug*disease	2	2		0.25
drug*disease	2	3	-0.25	-0.25
drug*disease	3	1	0.25	
drug*disease	3	2		0.25
drug*disease	3	3	-0.25	-0.25
drug*disease	4	1	0.25	
drug*disease	4	2		0.25
drug*disease	4	3	-0.25	-0.25

Type 3 Coefficients for drug

Effect	drug	disease	Row1	Row2	Row3
Intercept					
disease		1			
disease		2			
disease		3			
drug	1		1		
drug	2			1	
drug	3				1
drug	4		-1	-1	-1
drug*disease	1	1	0.3333		
drug*disease	1	2	0.3333		
drug*disease	1	3	0.3333		
drug*disease	2	1		0.3333	
drug*disease	2	2		0.3333	
drug*disease	2	3		0.3333	
drug*disease	3	1			0.3333
drug*disease	3	2			0.3333
drug*disease	3	3			0.3333
drug*disease	4	1	-0.333	-0.333	-0.333
drug*disease	4	2	-0.333	-0.333	-0.333
drug*disease	4	3	-0.333	-0.333	-0.333

Type 3 Coefficients for drug*disease

Effect	drug	disease	Row1	Row2	Row3	Row4	Row5	Row6
Intercept								
disease		1						
disease		2						
disease		3						
drug	1							
drug	2							
drug	3							
drug	4							
drug*disease	1	1	1					
drug*disease	1	2		1				
drug*disease	1	3	-1	-1				
drug*disease	2	1			1			
drug*disease	2	2				1		
drug*disease	2	3			-1	-1		
drug*disease	3	1					1	
drug*disease	3	2						1
drug*disease	3	3					-1	-1
drug*disease	4	1	-1		-1		-1	
drug*disease	4	2		-1		-1		-1
drug*disease	4	3	1	1	1	1	1	1

Type 3 Tests of Fixed Effects

Effect	Num DF	Den DF	F Value	Pr > F
disease	2	41	12.40	<.0001
drug	3	41	36.48	<.0001
drug*disease	6	41	3.93	0.0034

The Mixed Procedure
 Tests of Effect Slices

Effect	drug	Num DF	Den DF	F Value	Pr > F
drug*disease	1	2	41	3.80	0.0306
drug*disease	2	2	41	11.79	<.0001
drug*disease	3	2	41	7.94	0.0012
drug*disease	4	2	41	0.79	0.4608

Least Squares Means

Effect	drug	disease	Estimate	Standard Error	DF	t Value	Pr > |t|
drug*disease	1	1	29.3333	4.3771	41	6.70	<.0001
drug*disease	1	2	25.8771	4.6057	41	5.62	<.0001
drug*disease	1	3	21.4521	4.4689	41	4.80	<.0001
drug*disease	2	1	27.2397	4.4708	41	6.09	<.0001
drug*disease	2	2	32.2255	4.6049	41	7.00	<.0001
drug*disease	2	3	18.0000	4.3771	41	4.11	0.0002
drug*disease	3	1	20.2131	4.8218	41	4.19	0.0001
drug*disease	3	2	6.5185	4.4697	41	1.46	0.1524
drug*disease	3	3	9.5128	4.6039	41	2.07	0.0452
drug*disease	4	1	14.8397	4.4708	41	3.32	0.0019
drug*disease	4	2	12.8333	4.3771	41	2.93	0.0055
drug*disease	4	3	11.0619	4.4698	41	2.47	0.0176
drug*disease	1	1	29.3333	4.3771	41	6.70	<.0001
drug*disease	1	2	25.8771	4.6057	41	5.62	<.0001
drug*disease	1	3	21.4521	4.4689	41	4.80	<.0001
drug*disease	2	1	27.2397	4.4708	41	6.09	<.0001
drug*disease	2	2	32.2255	4.6049	41	7.00	<.0001
drug*disease	2	3	18.0000	4.3771	41	4.11	0.0002
drug*disease	3	1	20.2131	4.8218	41	4.19	0.0001
drug*disease	3	2	6.5185	4.4697	41	1.46	0.1524
drug*disease	3	3	9.5128	4.6039	41	2.07	0.0452
drug*disease	4	1	14.8397	4.4708	41	3.32	0.0019
drug*disease	4	2	12.8333	4.3771	41	2.93	0.0055
drug*disease	4	3	11.0619	4.4698	41	2.47	0.0176
drug*disease	1	1	29.3333	4.3771	41	6.70	<.0001
drug*disease	1	2	25.8771	4.6057	41	5.62	<.0001
drug*disease	1	3	21.4521	4.4689	41	4.80	<.0001
drug*disease	2	1	27.2397	4.4708	41	6.09	<.0001
drug*disease	2	2	32.2255	4.6049	41	7.00	<.0001
drug*disease	2	3	18.0000	4.3771	41	4.11	0.0002
drug*disease	3	1	20.2131	4.8218	41	4.19	0.0001
drug*disease	3	2	6.5185	4.4697	41	1.46	0.1524
drug*disease	3	3	9.5128	4.6039	41	2.07	0.0452
drug*disease	4	1	14.8397	4.4708	41	3.32	0.0019
drug*disease	4	2	12.8333	4.3771	41	2.93	0.0055
drug*disease	4	3	11.0619	4.4698	41	2.47	0.0176

Differences of Least Squares Means

Effect	drug	disease	_drug	_disease	Estimate	Standard Error	DF	t Value	Pr > |t|
drug*disease	1	1	1	2	3.4562	3.0681	41	1.13	0.2665
drug*disease	1	1	1	3	7.8812	2.8587	41	2.76	0.0087
drug*disease	1	1	2	1	2.0936	2.8616	41	0.73	0.4686
drug*disease	1	1	2	2	-2.8922	3.0670	41	-0.94	0.3512
drug*disease	1	1	2	3	11.3333	2.7129	41	4.18	0.0002
drug*disease	1	1	3	1	9.1202	3.3839	41	2.70	0.0102
drug*disease	1	1	3	2	22.8148	2.8599	41	7.98	<.0001
drug*disease	1	1	3	3	19.8206	3.0654	41	6.47	<.0001
drug*disease	1	1	4	1	14.4936	2.8616	41	5.06	<.0001
drug*disease	1	1	4	2	16.5000	2.7129	41	6.08	<.0001
drug*disease	1	1	4	3	18.2714	2.8600	41	6.39	<.0001
drug*disease	1	2	1	3	4.4249	3.2120	41	1.38	0.1758
drug*disease	1	2	2	1	-1.3626	3.1718	41	-0.43	0.6697
drug*disease	1	2	2	2	-6.3485	3.3731	41	-1.88	0.0669
drug*disease	1	2	2	3	7.8771	3.0681	41	2.57	0.0140
drug*disease	1	2	3	1	5.6640	3.6722	41	1.54	0.1307
drug*disease	1	2	3	2	19.3586	3.2135	41	6.02	<.0001
drug*disease	1	2	3	3	16.3643	3.4154	41	4.79	<.0001
drug*disease	1	2	4	1	11.0374	3.1718	41	3.48	0.0012
drug*disease	1	2	4	2	13.0438	3.0681	41	4.25	0.0001
drug*disease	1	2	4	3	14.8151	3.1739	41	4.67	<.0001
drug*disease	1	3	2	1	-5.7876	3.0069	41	-1.92	0.0612
drug*disease	1	3	2	2	-10.7734	3.2098	41	-3.36	0.0017
drug*disease	1	3	2	3	3.4521	2.8587	41	1.21	0.2341
drug*disease	1	3	3	1	1.2391	3.5258	41	0.35	0.7271
drug*disease	1	3	3	2	14.9337	3.0043	41	4.97	<.0001
drug*disease	1	3	3	3	11.9394	3.1690	41	3.77	0.0005
drug*disease	1	3	4	1	6.6124	3.0069	41	2.20	0.0336
drug*disease	1	3	4	2	8.6188	2.8587	41	3.01	0.0044
drug*disease	1	3	4	3	10.3902	3.0042	41	3.46	0.0013
drug*disease	2	1	2	2	-4.9858	3.2150	41	-1.55	0.1286
drug*disease	2	1	2	3	9.2397	2.8616	41	3.23	0.0024
drug*disease	2	1	3	1	7.0266	3.4767	41	2.02	0.0498
drug*disease	2	1	3	2	20.7212	3.0080	41	6.89	<.0001
drug*disease	2	1	3	3	17.7270	3.2125	41	5.52	<.0001
drug*disease	2	1	4	1	12.4000	2.9718	41	4.17	0.0002
drug*disease	2	1	4	2	14.4064	2.8616	41	5.03	<.0001
drug*disease	2	1	4	3	16.1778	3.0082	41	5.38	<.0001
drug*disease	2	2	2	3	14.2255	3.0670	41	4.64	<.0001
drug*disease	2	2	3	1	12.0124	3.6757	41	3.27	0.0022
drug*disease	2	2	3	2	25.7071	3.1719	41	8.10	<.0001
drug*disease	2	2	3	3	22.7128	3.4120	41	6.66	<.0001
drug*disease	2	2	4	1	17.3858	3.2150	41	5.41	<.0001
drug*disease	2	2	4	2	19.3922	3.0670	41	6.32	<.0001
drug*disease	2	2	4	3	21.1636	3.1717	41	6.67	<.0001
drug*disease	2	3	3	1	-2.2131	3.3839	41	-0.65	0.5168
drug*disease	2	3	3	2	11.4815	2.8599	41	4.01	0.0002
drug*disease	2	3	3	3	8.4872	3.0654	41	2.77	0.0084
drug*disease	2	3	4	1	3.1603	2.8616	41	1.10	0.2759
drug*disease	2	3	4	2	5.1667	2.7129	41	1.90	0.0639
drug*disease	2	3	4	3	6.9381	2.8600	41	2.43	0.0198
drug*disease	3	1	3	2	13.6946	3.4790	41	3.94	0.0003
drug*disease	3	1	3	3	10.7003	3.7261	41	2.87	0.0064
drug*disease	3	1	4	1	5.3734	3.4767	41	1.55	0.1299
drug*disease	3	1	4	2	7.3798	3.3839	41	2.18	0.0350
drug*disease	3	1	4	3	9.1511	3.5282	41	2.59	0.0131
drug*disease	3	2	3	3	-2.9943	3.2089	41	-0.93	0.3562
drug*disease	3	2	4	1	-8.3212	3.0080	41	-2.77	0.0085
drug*disease	3	2	4	2	-6.3148	2.8599	41	-2.21	0.0329
drug*disease	3	2	4	3	-4.5435	3.0056	41	-1.51	0.1383
drug*disease	3	3	4	1	-5.3270	3.2125	41	-1.66	0.1049
drug*disease	3	3	4	2	-3.3206	3.0654	41	-1.08	0.2850
drug*disease	3	3	4	3	-1.5492	3.2084	41	-0.48	0.6318
drug*disease	4	1	4	2	2.0064	2.8616	41	0.70	0.4872
drug*disease	4	1	4	3	3.7778	3.0082	41	1.26	0.2163
drug*disease	4	2	4	3	1.7714	2.8600	41	0.62	0.5391