

Warfarin Cessation Data II

Varying intercepts with variable time

```
M1 <- lmer (INR ~ time + (1 | new.id), data=warfarin)
```

```
summary(M1)
```

```
   AIC   BIC logLik deviance REMLdev  
285.7 299.5 -138.9   265.8   277.7
```

```
Random effects:
```

Groups	Name	Variance	Std.Dev.
new.id	(Intercept)	0.049223	0.22186
	Residual	0.154351	0.39288

```
Number of obs: 228, groups: new.id, 59
```

```
Fixed effects:
```

	Estimate	Std. Error	t value
(Intercept)	2.08644	0.05568	37.47
time	-0.14222	0.01038	-13.70

```
Correlation of Fixed Effects:
```

```
  (Intr)  
time -0.710
```

Varying intercepts with variable time and cypcombo

```
M2 <- lmer (INR ~ time + cypcombo + (1 | new.id), data=warfarin)
```

```
summary (M2)
```

```
   AIC   BIC logLik deviance REMLdev
291.6 308.7 -140.8   264.8   281.6
```

```
Random effects:
```

Groups	Name	Variance	Std.Dev.
new.id	(Intercept)	0.049319	0.22208
	Residual	0.154319	0.39284

```
Number of obs: 228, groups: new.id, 59
```

```
Fixed effects:
```

	Estimate	Std. Error	t value
(Intercept)	2.05976	0.06188	33.28
time	-0.14280	0.01040	-13.73
cypcombo	0.03570	0.03607	0.99

Varying intercepts with variable time and cypcombo

Correlation of Fixed Effects:

(Intr) time

time -0.614

cypcombo -0.436 -0.055

```
M3 <- lmer (INR ~ time + cypcombo + baseline_inr +
            (1 | new.id), data=warfarin)
```

```
summary (M3)
  AIC   BIC logLik deviance REMLdev
 236.6 257.2 -112.3   201.3   224.6
```

Random effects:

Groups	Name	Variance	Std.Dev.
new.id	(Intercept)	0.00000	0.00000
	Residual	0.14408	0.37958

Number of obs: 228, groups: new.id, 59

Fixed effects:

	Estimate	Std. Error	t value
(Intercept)	1.220412	0.099024	12.324
time	-0.138530	0.009748	-14.211
cypcombo	0.042916	0.023089	1.859
baseline_inr	0.373008	0.039263	9.500

Correlation of Fixed Effects:

	(Intr)	time	cypcmb
time		-0.345	
cypcombo		-0.194	-0.080
baseline_nr		-0.873	-0.027
			0.036

```
M4 <- lmer (INR ~ time + cypcombo + baseline_inr +
           (1 + baseline_inr | new.id), data=warfarin)
```

```
summary (M4)
```

```
   AIC   BIC logLik deviance REMLdev
 240.6 268.1 -112.3   201.3   224.6
```

```
Random effects:
```

Groups	Name	Variance	Std.Dev.	Corr
new.id	(Intercept)	0.00000	0.00000	
	baseline_inr	0.00000	0.00000	NaN
Residual		0.14408	0.37958	

```
Number of obs: 228, groups: new.id, 59
```

```
Fixed effects:
```

	Estimate	Std. Error	t value
(Intercept)	1.220412	0.099024	12.324
time	-0.138530	0.009748	-14.211
cypcombo	0.042916	0.023089	1.859
baseline_inr	0.373008	0.039263	9.500

Correlation of Fixed Effects:

	(Intr)	time	cypcmb
time	-0.345		
cypcombo	-0.194	-0.080	
baseline_nr	-0.873	-0.027	0.036

Drop baseline INR

```
M5 <- lmer (INR ~ time + cypcombo +
           (1 + baseline_inr | new.id), data=warfarin)
```

```
summary (M5)
```

```
   AIC   BIC logLik deviance REMLdev
263.8 287.8 -124.9   231.8   249.8
```

```
Random effects:
```

Groups	Name	Variance	Std.Dev.	Corr
new.id	(Intercept)	0.60453	0.77751	
	baseline_inr	0.12824	0.35810	-1.000
Residual		0.14947	0.38662	

```
Number of obs: 228, groups: new.id, 59
```

```
Fixed effects:
```

	Estimate	Std. Error	t value
(Intercept)	2.01125	0.05234	38.43
time	-0.13908	0.01003	-13.87
cypcombo	0.04576	0.02760	1.66

Correlation of Fixed Effects:

(Intr) time

time -0.717

cypcombo -0.370 -0.066

```
M6 <- lmer (INR ~ 1 + time + cypcombo + (1 + baseline_inr +
  cypcombo| new.id), data=warfarin)
```

```
summary (M6)
```

```
  AIC BIC logLik deviance REMLdev
267.7 302 -123.9   230.2   247.7
```

```
Random effects:
```

Groups	Name	Variance	Std.Dev.	Corr	
new.id	(Intercept)	0.459021	0.67751		
	baseline_inr	0.086860	0.29472	-1.000	
	cypcombo	0.011220	0.10592	-1.000	1.000
Residual		0.145417	0.38134		

```
Number of obs: 228, groups: new.id, 59
```

```
Fixed effects:
```

	Estimate	Std. Error	t value
(Intercept)	2.040988	0.052221	39.08
time	-0.139981	0.009928	-14.10
cypcombo	-0.013218	0.034339	-0.38

Correlation of Fixed Effects:

(Intr) time

time -0.713

cypcombo -0.379 -0.048

```
M7 <- lmer (INR ~ 1 + time + cypcombo + (baseline_inr | new.id) +
           (cypcombo - 1 | new.id), data=warfarin)
```

```
summary (M7)
```

```
   AIC   BIC logLik deviance REMLdev
264.6 292.1 -124.3     231    248.6
```

```
Random effects:
```

Groups	Name	Variance	Std.Dev.	Corr
new.id	(Intercept)	0.4366340	0.660783	
	baseline_inr	0.0922292	0.303693	-1.000
new.id	cypcombo	0.0038423	0.061986	
Residual		0.1471017	0.383538	

```
Number of obs: 228, groups: new.id, 59
```

```
Fixed effects:
```

	Estimate	Std. Error	t value
(Intercept)	2.020890	0.051928	38.92
time	-0.139804	0.009981	-14.01
cypcombo	0.033168	0.032371	1.02

Correlation of Fixed Effects:

(Intr) time

time -0.718

cypcombo -0.352 -0.056

```
M8 <- lmer (INR ~ 1 + time + (1 + baseline_inr + cypcombo | new.id)
           , data=warfarin)
```

```
summary (M8)
```

```
   AIC   BIC logLik deviance REMLdev
 260.9 291.7 -121.4   230.3   242.9
```

```
Random effects:
```

Groups	Name	Variance	Std.Dev.	Corr	
new.id	(Intercept)	0.4370488	0.661097		
	baseline_inr	0.0847070	0.291045	-1.000	
	cypcombo	0.0080977	0.089987	-0.946	0.946
Residual		0.1459897	0.382086		

```
Number of obs: 228, groups: new.id, 59
```

```
Fixed effects:
```

	Estimate	Std. Error	t value
(Intercept)	2.032279	0.048241	42.13
time	-0.139702	0.009925	-14.08

```
Correlation of Fixed Effects:  
  (Intr)  
time -0.793
```

```
M9 <- lmer (INR ~ 1 + time + (1 + baseline_inr | new.id) +
           (cypcombo - 1 | new.id), data=warfarin)
```

```
summary (M9)
```

```
   AIC   BIC logLik deviance REMLdev
 258.6 282.6 -122.3     232    244.6
```

```
Random effects:
```

Groups	Name	Variance	Std.Dev.	Corr
new.id	(Intercept)	0.4221824	0.649756	
	baseline_inr	0.0894126	0.299019	-1.000
new.id	cypcombo	0.0048425	0.069588	
Residual		0.1463996	0.382622	

```
Number of obs: 228, groups: new.id, 59
```

```
Fixed effects:
```

	Estimate	Std. Error	t value
(Intercept)	2.039157	0.048603	41.96
time	-0.139454	0.009949	-14.02

```
Correlation of Fixed Effects:  
  (Intr)  
time -0.787
```