

remlreg object m1: reml procedure

Response:

Number of observations: 408

Response Variables: trans1, trans2, trans3, trans4, trans5, trans6, trans7

Family: multistate

Predictor:

$$\begin{aligned}\eta_1 &= \gamma_{const}^{(1)}const + \gamma_{sex}^{(1)}sex + \gamma_{diab}^{(1)}diab + \gamma_{first}^{(1)}first + f_{end}^{(1)}(end) + f_{age}^{(1)}(age) \\ \eta_2 &= \gamma_{const}^{(2)}const + \gamma_{sex}^{(2)}sex + \gamma_{diab}^{(2)}diab + \gamma_{first}^{(2)}first + f_{end}^{(2)}(end) + f_{age}^{(2)}(age) \\ \eta_3 &= \gamma_{const}^{(3)}const + \gamma_{sex}^{(3)}sex + \gamma_{diab}^{(3)}diab + \gamma_{first}^{(3)}first + f_{end}^{(3)}(end) + f_{age}^{(3)}(age) \\ \eta_4 &= \gamma_{const}^{(4)}const + \gamma_{sex}^{(4)}sex + \gamma_{diab}^{(4)}diab + \gamma_{first}^{(4)}first + f_{end}^{(4)}(end) + f_{age}^{(4)}(age) \\ \eta_5 &= \gamma_{const}^{(5)}const + \gamma_{sex}^{(5)}sex + \gamma_{diab}^{(5)}diab + \gamma_{first}^{(5)}first + f_{end}^{(5)}(end) + f_{age}^{(5)}(age) \\ \eta_6 &= \gamma_{const}^{(6)}const + \gamma_{sex}^{(6)}sex + \gamma_{diab}^{(6)}diab + \gamma_{first}^{(6)}first + f_{end}^{(6)}(end) + f_{age}^{(6)}(age) \\ \eta_7 &= \gamma_{const}^{(7)}const + \gamma_{sex}^{(7)}sex + \gamma_{diab}^{(7)}diab + \gamma_{first}^{(7)}first + f_{end}^{(7)}(end) + f_{age}^{(7)}(age)\end{aligned}$$

Priors:

Transition 1:

Fixed effects:

diffuse priors

$f_{end}(end)$:

P-spline with second order random walk penalty

Number of knots: 20

Knot choice: equidistant

Degree of Splines: 3

Grid choice for numerical integration: quantiles

Number of quantiles: 60

Number of points between quantiles: 5

$f_{age}(age)$:

P-spline with second order random walk penalty

Number of knots: 20

Knot choice: equidistant
Degree of Splines: 3

Transition 2:

Fixed effects:
diffuse priors

$f_{end}(end)$:
P-spline with second order random walk penalty
Number of knots: 20
Knot choice: equidistant
Degree of Splines: 3
Grid choice for numerical integration: quantiles
Number of quantiles: 60
Number of points between quantiles: 5

$f_{age}(age)$:
P-spline with second order random walk penalty
Number of knots: 20
Knot choice: equidistant
Degree of Splines: 3

Transition 3:

Fixed effects:
diffuse priors

$f_{end}(end)$:
P-spline with second order random walk penalty
Number of knots: 20
Knot choice: equidistant
Degree of Splines: 3
Grid choice for numerical integration: quantiles
Number of quantiles: 60
Number of points between quantiles: 5

$f_{age}(age)$:
P-spline with second order random walk penalty

Number of knots: 20
Knot choice: equidistant
Degree of Splines: 3

Transition 4:

Fixed effects:
diffuse priors

$f_{end}(end)$:
P-spline with second order random walk penalty
Number of knots: 20
Knot choice: equidistant
Degree of Splines: 3
Grid choice for numerical integration: quantiles
Number of quantiles: 60
Number of points between quantiles: 5

$f_{age}(age)$:
P-spline with second order random walk penalty
Number of knots: 20
Knot choice: equidistant
Degree of Splines: 3

Transition 5:

Fixed effects:
diffuse priors

$f_{end}(end)$:
P-spline with second order random walk penalty
Number of knots: 20
Knot choice: equidistant
Degree of Splines: 3
Grid choice for numerical integration: quantiles
Number of quantiles: 60
Number of points between quantiles: 5

$f_{age}(age)$:

P-spline with second order random walk penalty
Number of knots: 20
Knot choice: equidistant
Degree of Splines: 3

Transition 6:

Fixed effects:
diffuse priors

$f_{end}(end)$:
P-spline with second order random walk penalty
Number of knots: 20
Knot choice: equidistant
Degree of Splines: 3
Grid choice for numerical integration: quantiles
Number of quantiles: 60
Number of points between quantiles: 5

$f_{age}(age)$:
P-spline with second order random walk penalty
Number of knots: 20
Knot choice: equidistant
Degree of Splines: 3

Transition 7:

Fixed effects:
diffuse priors

$f_{end}(end)$:
P-spline with second order random walk penalty
Number of knots: 20
Knot choice: equidistant
Degree of Splines: 3
Grid choice for numerical integration: quantiles
Number of quantiles: 60
Number of points between quantiles: 5

$f_{age}(age)$:

P-spline with second order random walk penalty

Number of knots: 20

Knot choice: equidistant

Degree of Splines: 3

General Options:

Levels for credible intervals:

Level 1: 95

Level 2: 80

Maximum number of iterations: 30000

Termination criterion: 0.0001

Stopping criterion for small variances: 0.001

Fixed Effects (Transition 1):

Variable	Post. Mode	Std. Dev.	p-value	95% confidence interval	
const	-3.2637	0.361935	2.49434e-009	-3.97324	-2.55416
sex	-0.0923817	0.180893	0.609101	-0.447003	0.26224
diab	-0.275685	0.22323	0.21717	-0.713304	0.161934
first	0.37778	0.17906	0.0346252	0.0267516	0.728809

Fixed Effects (Transition 2):

Variable	Post. Mode	Std. Dev.	p-value	95% confidence interval	
const	-13.0447	8.87793	0.141642	-30.4489	4.35955
sex	0.201367	0.570683	0.723918	-0.917397	1.32013
diab	0.704524	0.480719	0.142676	-0.237875	1.64692
first	1.53017	0.524502	0.00399428	0.501939	2.5584

Fixed Effects (Transition 3):

Variable	Post. Mode	Std. Dev.	p-value	95% confidence interval	
const	-3.8584	0.23643	2.44981e-013	-4.32189	-3.3949
sex	-0.0440505	0.266497	0.869081	-0.56649	0.478389
diab	-0.0865026	0.357598	0.80896	-0.787536	0.61453
first	-0.187692	0.254834	0.461359	-0.687269	0.311884

Fixed Effects (Transition 4):

Variable	Post. Mode	Std. Dev.	p-value	95% confidence interval	
const	-8.94564	2.4733	0.000534429	-13.7943	-4.097
sex	-0.711572	0.492092	0.148119	-1.67627	0.253121
diab	1.14134	0.591472	0.0532194	-0.0181805	2.30086
first	-0.473788	0.414687	0.253674	-1.28674	0.339161

Fixed Effects (Transition 5):

Variable	Post. Mode	Std. Dev.	p-value	95% confidence interval	
const	-4.76622	0.345828	3.50195e-012	-5.44418	-4.08826
sex	-0.121653	0.354028	0.730874	-0.815686	0.572381
diab	0.882334	0.357132	0.0137137	0.182215	1.58245
first	0.167982	0.369234	0.648693	-0.555863	0.891826

Fixed Effects (Transition 6):

Variable	Post. Mode	Std. Dev.	p-value	95% confidence interval	
const	-5.54154	0.373197	1.08529e-012	-6.27315	-4.80992
sex	-0.0322898	0.387197	0.933991	-0.79135	0.72677
diab	0.94619	0.370565	0.0109772	0.219736	1.67264
first	0.508138	0.373942	0.174305	-0.224936	1.24121

Fixed Effects (Transition 7):

Variable	Post. Mode	Std. Dev.	p-value	95% confidence interval	
const	-6.23705	1.96177	0.00188952	-10.0829	-2.39121
sex	0.655632	0.36484	0.0718646	-0.059598	1.37086
diab	-0.0197637	0.431528	0.963811	-0.86573	0.826202
first	0.402502	0.366979	0.273191	-0.316923	1.12193

Plots (Transition 1):

Figure 1: Non-linear Effect of 'end'. Shown are the posterior modes together with 95% and 80% pointwise credible intervals.

Figure 2: Non-linear Effect of 'age'. Shown are the posterior modes together with 95% and 80% pointwise credible intervals.

Plots (Transition 2):

Figure 3: Non-linear Effect of 'end'. Shown are the posterior modes together with 95% and 80% pointwise credible intervals.

Figure 4: Non-linear Effect of 'age'. Shown are the posterior modes together with 95% and 80% pointwise credible intervals.

Plots (Transition 3):

Figure 5: Non-linear Effect of 'end'. Shown are the posterior modes together with 95% and 80% pointwise credible intervals.

Figure 6: Non-linear Effect of 'age'. Shown are the posterior modes together with 95% and 80% pointwise credible intervals.

Plots (Transition 4):

Figure 7: Non-linear Effect of 'end'. Shown are the posterior modes together with 95% and 80% pointwise credible intervals.

Figure 8: Non-linear Effect of 'age'. Shown are the posterior modes together with 95% and 80% pointwise credible intervals.

Plots (Transition 5):

Figure 9: Non-linear Effect of 'end'. Shown are the posterior modes together with 95% and 80% pointwise credible intervals.

Figure 10: Non-linear Effect of 'age'. Shown are the posterior modes together with 95% and 80% pointwise credible intervals.

Plots (Transition 6):

Figure 11: Non-linear Effect of 'end'. Shown are the posterior modes together with 95% and 80% pointwise credible intervals.

Figure 12: Non-linear Effect of 'age'. Shown are the posterior modes together with 95% and 80% pointwise credible intervals.

Plots (Transition 7):

Figure 13: Non-linear Effect of 'end'. Shown are the posterior modes together with 95% and 80% pointwise credible intervals.

Figure 14: Non-linear Effect of 'age'. Shown are the posterior modes together with 95% and 80% pointwise credible intervals.