Conditional Poisson models: a flexible alternative to conditional logisitic case cross-over analysis

Additional file 3. Large format table: Computational Issues in Conditional Poisson and Related Models.

			Model					
			Conditional Poisson Regression		Unconditional Poisson Regression		Conditional Logistic Regression	
Extensions	overdispersion		Y[1]		Y		N	
	autocorrelation		Y[2]		Y[2]		N	
	rate denominators		Y		Y		N	
Computing time (seconds) examples (10y data)		N of strata	Stata	R	Stata	R	Stata	R
Month strata	small city (1 event/day)	120	0.2	<0.1	0.5	0.5	3.0	1.6
	medium city (10 e/day)	120	0.2	<0.1	0.4	0.4	3.0	2.2
	large city (100 e/day)	120	0.2	<0.1	0.5	0.3	3.2	1.5
	10 medium cities 1-stage analysis	1200	1.0	0.5	NF	292	26.7	2605.0
	10 small areas (0.1 e/day) 1-stage a.	1200	1.0	0.5	NF	1180	6.6	39.0
	100 v. small areas (0.01 e/day) 1-stage a.	12000	5.9	7.1	NF	NF	57.3	>3000
Month X day of week strata	small city	480	0.3	<0.1	NF	16.6	0.5	2.7
	medium city	480	0.3	<0.1	NF	13.9	0.5	0.7
	large city	480	0.2	<0.1	NF	10.8	0.5	0.5
	10 medium cities 1-stage analysis	4800	2.3	0.4	NF	NF	5.0	452.0
	10 small areas (0.1 e/day) 1-stage a.	4800	1.8	0.6	NF	NF	1.4	44.0
	100 v. small areas (0.01 e/day) 1-stage a.	48000	12.6	8.9	NF	NF	8.3	>3000

NF = not feasible due to memory limitations
[1] Stata requires ad hoc added code – see additional file 2
[2] Stata and R require ad hoc added code – see additional file 2

All analyses undertaken on a Samsung Notebook NPU250U2B with Intel Core i3-2330M CPU @ 2.2 GHz with 4 Gb Ram and 64-bit OS running Windows 7 Home Premium