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CORRIGENDUM TO: HOW LINKAGE ERROR AFFECTS HIDDEN MARKOV MODEL ESTIMATES: A SENSITIVITY ANALYSIS

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Upon initial publication, the last column in Table 1 was not consistently right-aligned. Also, the contents of the last column in Table 2 were misaligned and should not have included a % sign. This has now been corrected.

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Table 1. Simulation results- the biasing effects of all false-negative linkage error conditions (in %)

Error type	Condition: the probability of being excluded	Overall error (approx.)	High exclusion probability	Low exclusion probability	Temporary to permanent transition rate		
					Transition rate	Absolute bias	Relative bias
No error	Original HMM	0	–	–	6.9	–	–
False-negative	Depends on age	5	15	1	6.6	0.3	4.6
		10	30	1	6.7	0.2	3.2
		20	70	1	6.6	0.3	3.8
	Depends on transition	5	15	5	6.2	0.7	10.6
		10	34	9	5.2	1.7	25.0
		20	90	17	1.1	5.8	84.3

In the age-dependent conditions, high exclusion probability was set for young individuals and low for older ones; in the transition-dependent conditions, high exclusion probability was set for individuals who had a transition and low for those who did not. The transition rates are estimated based on the modal class memberships (i.e., at each time point individuals are assigned the contract type to which they have the highest posterior probability of belonging according to the model); as the entropy R2 is above 0.99 for all conditions, such an assignment is not expected to produce different results from an assignment that takes the uncertainty of class memberships into account.

Table 2. Simulation results- the biasing effects of all false-positive linkage error conditions (in %)

Error type	Condition: the probability of being mislinked	Overall error (approx.)	High exclusion probability	Low exclusion probability	Temporary to permanent transition rate		
					Transition rate	Absolute bias	Relative bias
No error	Original HMM	0	–	–	6.9	–	–
False-positive; mislinkage with random donor	Random	5	–	–	6.9	0.0	0.1
		10	–	–	6.9	0.0	0.3
		20	–	–	6.8	0.1	1.0
	Depends on age	5	15	1	6.9	0.0	0.3
		10	30	1	6.8	0.1	1.2
		20	70	1	6.7	0.2	2.6
	Depends on transition	5	15	5	6.4	0.5	7.8
		10	34	9	5.5	1.4	20.7
		20	90	17	2.4	4.5	64.6
False-positive; mislinkage with similar donor	Random	5	–	–	6.7	0.2	3.2
		10	–	–	6.7	0.2	3.2
		20	–	–	6.6	0.3	4.9
	Depends on transition	5	15	5	6.1	0.8	11.5
		10	34	9	5.1	1.8	26.6
		20	90	17	1.2	5.7	82.6

In the age-dependent conditions, high exclusion probability was set for young individuals and low for older ones; in the transition-dependent conditions, high exclusion probability was set for individuals who had a transition and low for those who did not. The results from the random and age-based mislinkage, when individuals are mislinked with random donors, were very similar, and therefore when individuals were mislinked with similar donors, the age-based set of conditions was omitted. The differences in the bias obtained when using random and similar donors might be due to the fact that the StatMatch R package used to match donors does not allow for missing values on the covariates and, thus, the analysis was run on a smaller sample. The transition rates are estimated based on the modal class memberships (i.e., at each time point individuals are assigned the contract type to which they have the highest posterior probability of belonging according to the model); as the entropy R2 is above 0.99 for all conditions, such an assignment is not expected to produce different results from an assignment that takes the uncertainty of class memberships into account.