

Supplementary Table 1: Overview of the stepwise model development process; models were developed separately by cause of admission.

Cause	Model	Model for zero-counts	Model for positive counts	AIC	dAIC	DF
Stroke	1	After + Sex + Age + (1 ID)	Temporal Distance * After + Sex + Age + (1 ID)	1,014,319	753	17
Stroke	2	After + Sex + Age + (1 ID)	Temporal Distance * After + Sex * After + Age + (1 ID)	1,013,961	395	18
Stroke	3	After + Sex + Age + (1 ID)	lin.spline(Temporal Distance) * After + Sex + Age + (1 ID)	1,013,925	359	19
Stroke	4	After + Sex + Age + (1 ID)	lin.spline(Temporal Distance) * After + Sex * After + Age + (1 ID)	1,013,566	0	20
Stroke	5	After * Sex + Age + (1 ID)	lin.spline(Temporal Distance) * After + Sex * After + Age + (1 ID)	1,013,567	1	21
MI	1	After + Sex + Age + (1 ID)	Temporal Distance * After + Sex + Age + (1 ID)	719,204	468	17
MI	2	After + Sex + Age + (1 ID)	Temporal Distance * After + Sex * After + Age + (1 ID)	718,932	195	18
MI	3	After + Sex + Age + (1 ID)	lin.spline(Temporal Distance) * After + Sex + Age + (1 ID)	719,012	275	19
MI	4	After + Sex + Age + (1 ID)	lin.spline(Temporal Distance) * After + Sex * After + Age + (1 ID)	718,739	2	20
MI	5	After * Sex + Age + (1 ID)	lin.spline(Temporal Distance) * After + Sex * After + Age + (1 ID)	718,737	0	21
COPD	1	After + Sex + Age + (1 ID)	Temporal Distance * After + Sex + Age + (1 ID)	447,466	176	17
COPD	2	After + Sex + Age + (1 ID)	Temporal Distance * After + Sex * After + Age + (1 ID)	447,368	79	18
COPD	3	After + Sex + Age + (1 ID)	lin.spline(Temporal Distance) * After + Sex + Age + (1 ID)	447,399	110	19
COPD	4	After + Sex + Age + (1 ID)	lin.spline(Temporal Distance) * After + Sex * After + Age + (1 ID)	447,302	12	20
COPD	5	After * Sex + Age + (1 ID)	lin.spline(Temporal Distance) * After + Sex * After + Age + (1 ID)	447,289	0	21
GIC	1	After + Sex + Age + (1 ID)	Temporal Distance * After + Sex + Age + (1 ID)	513,393	274	17
GIC	2	After + Sex + Age + (1 ID)	Temporal Distance * After + Sex * After + Age + (1 ID)	513,289	169	18
GIC	3	After + Sex + Age + (1 ID)	lin.spline(Temporal Distance) * After + Sex + Age + (1 ID)	513,228	109	19
GIC	4	After + Sex + Age + (1 ID)	lin.spline(Temporal Distance) * After + Sex * After + Age + (1 ID)	513,123	3	20
GIC	5	After * Sex + Age + (1 ID)	lin.spline(Temporal Distance) * After + Sex * After + Age + (1 ID)	513,119	0	21

Note: (1|D) stands for individual random effect