Multimedia Appendix 1 - Details on all parameters used to populate the standard-care model

Parameter	Base-Case Value	Calculation/ Assumption/ Source	Distribution	Alpha	Beta
Probabilities					
After Suspected Stroke mimic / TIA / Isch / Haem	0,22 / 0,05* / 0,66 / 0,07	UZ Brussel Stroke Registry *Sheppard et al. 2016[1] – TIA's in UZ Brussel Stroke Registry equaled 20% - excess TIA's were transitioned to Isch group.	Dirichlet	217 / 48 / 664 / 72	1 / 1 / 1 / 1
after Isch IVT / EVT / Cons	0,15 / 0,05* / 0,8	*According to Vanacker et al. 2016[2] 10% of Isch stroke patients are eligible for EVT. 20% IVT+ EVT (UZ Brussel Stroke Registry). Assume 50% of eligible patients is treated under standard care.	Dirichlet	98 / 35 / 530	1 / 1 / 1 / 1
after Isch & IVT 0-90 min / 91-180 min / 181-270 min	0,12 / 0,24 / 0,64	OTT distributions from Lees et al. 2010[3]	Dirichlet	10 / 19 / 50 / 34	1 / 1 / 1 / 1
after Isch & EVT 0-180 min / 181-270 min / 271-360 min / 361-480 min	0,16 / 0,21 / 0,41 / 0,23	Campbell et al. 2016[4] Time between start IVT and onset EVT equals 68 min. Equal distribution as after Isch & IVT + shift of 68 min. To apply time shift we assume patients are distributed equally in a time interval. A shift of 30 minutes in a time interval of 90 minutes, means that 1/3th (30min/90min) of patients within that time interval shift.	Dirichlet	3 / 4 / 7 / 4	1 / 1 / 1 / 1
after Mimic Fav / Unfav / Death	0,78 / 0,04 / 0,17	UZ Brussel Stroke Registry	Dirichlet	170 / 9 / 38	1 / 1 / 1 / 1
after TIA Fav / Unfav / Death	0,82 / 0,14 / 0,04	UZ Brussel Stroke Registry	Dirichlet	39 / 7 / 2	1 / 1 / 1 / 1
after Isch & Cons Fav / Unfav / Death	0,48 / 0,40 / 0,12	Wardlaw et al. 2012[5] – control group	Dirichlet	254 / 213 / 64	1 / 1 / 1 / 1
after Isch & IVT & 0-90 min 91-180 min 181-270 min Fav / Unfav / Death	0,7 / 0,18 / 0,12 0,59 / 0,29 / 0,12 0,55 / 0,33 / 0,12	Lees et al. 2010[3] Calculation of ARR for mRS 0-1 based on NNT (ARR=1/NTT) 0,22 / 0,11 / 0,07 / 0,04 Favourable outcome (mRS0-2) calculated based on probabilities in after Isch & Cons & Fav (0,48) + ARR. Assume that ARR for mRS0-1 equals ARR for mRS0-2.	Dirichlet Dirichlet Dirichlet	8 / 2 / 1 11 / 6 / 2 28 / 17 / 6	1 / 1 / 1 / 1 1 / 1 / 1 / 1 1 / 1 / 1 / 1
after Isch & EVT &	0,78 / 0,1 / 0,12	Fransen et al. 2016[6] Calculation of ARR for mRS 0-2 based on ARD	Dirichlet Dirichlet	2 / 0,3 / 0,4	1 / 1 / 1 / 1

Parameter	Value	Source/Description	Distribution		
0-181 min	0,70 / 0,18 / 0,12	ARR = ARD	Dirichlet	3 / 0,7 / 0,4	1 / 1 / 1 / 1
181-270 min	0,59 / 0,29 / 0,12	0,30 / 0,22 / 0,11 / 0,03	Dirichlet	4 / 2 / 0,9	1 / 1 / 1 / 1
271-360 min	0,51 / 0,29 / 0,12	Favourable outcome (mRS0-2) calculated based on probability		2 / 1,5 / 0,5	1 / 1 / 1 / 1
361-480 min		after Isch & Cons & Fav (0,48) + ARR			
Fav / Unfav / Death					
After Heam Fav / Unfav / Death		Anderson et al. 2013[7]			
	0,44 / 0,44 / 0,12	Control Group	Dirichlet	13 / 12 / 3	1 / 1 / 1 / 1
Utilities					
Utility in the favourable state (mRS0-2)	0,74	Dorman et al.1997[8]	Beta	103	36
Utility in the unfavourable state (mRS3-5)	0,38	Dorman et al.1997[8]	Beta	248	404
Utility in the death state	0				
Utility in the recurrent state	0,34	Morris et al.2011[9]	Beta	263	511,8
Markov transitions					
Mortality after stroke 70-74 years	0,05		Beta	294	812
Mortality after stroke 75-79 years	0,08	Based on Belgian mortality statistics	Beta	288	742
Mortality after stroke 80-84 years	0,14	multiplied with 2,5 (multiplier for age specific mortality among	Beta	277	630
Mortality after stroke 85-89 years	0,26	stroke patients)[10]	Beta	261	49
Mortality after stroke 90+ years	0,45		Beta	222	277

ARR= Absolute Risk Reduction, NNT = number needed to treat, ARD = Absolute Risk Difference, rpbl = rapid blood pressure lowering, Fav = favourable outcome (mRS 0-2), Unfav = unfavourable outcome (mRS 3-5), TIA = transient ischemic attack, Isch = ischemic stroke, Haem = haemorrhagic stroke, cons = conservative treatment, OTT = onset to treatment, IVT= intravenous administration of tissue Plasminogen Activator, EVT = endovascular treatment, min = minutes

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