**Supplementary Material**

**Table S1: Sample search strategy: Pubmed.**

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| --- | --- |
| #1 |  "Markov Chains"[Mesh] OR "Cost-Benefit Analysis"[Mesh]ORdecision model\*[Title/Abstract] OR decision-analytic model\*[Title/Abstract] OR decision analysis\*[Title/Abstract] OR epidemiological model\*[Title/Abstract] OR economic model\*[Title/Abstract] OR state-transition[Title/Abstract] OR cohort model[Title/Abstract]OR decision tree[Title/Abstract] OR agent-based model\*[Title/Abstract] OR microsimulation[Title/Abstract] OR micro-simulation[Title/Abstract] OR discrete event simulation[Title/Abstract] OR discrete-event simulation[Title/Abstract] OR markov[Title/Abstract]) |
| #2 | Stroke [Title/Abstract] OR cerebrovascular[Title/Abstract] OR poststroke[Title/Abstract] OR cerebral ischaemia [Title/Abstract] OR brain ischaemia[Title/Abstract] OR cerebral ischemia[Title/Abstract] OR brain ischemia [Title/Abstract] OR ischemic attack[Title/Abstract] OR ischemic event[Title/Abstract] OR ischaemic attack[Title/Abstract] OR ischaemic event[Title/Abstract] OR cerebral infarct\*[Title/Abstract] OR brain infarct\*[Title/Abstract] OR cerebral vascular accident[Title/Abstract] |
| #3 | Cerebrovascular Disorders [MeSH Terms] |
| #4 | #2 OR #3 |
| #5 | #1 AND #4 |
| #6 | English[Language] AND "2008/01/01"[Date - Publication] : "3000"[Date - Publication] |
| #7 | #6 AND #7 |

**Table S2: Standard template for data extraction**

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| Data Item | Description |
| Model purpose | Problem that the model is designed to address, e.g. an empirical exploration of disease progression, or an economic evaluation of alternative treatment or diagnostic strategies |
| Model Type | Individual (e.g. Discrete Event Simulation); Cohort (e.g. Markov or Decision Tree), Hybrid type, Other type [based on ISPOR guidelines) |
| Model structure  | Health states, events and other variables included in the model; including relationships between them, and definitions and measures used |
| Model inputs | Sources of data for model parameters such as transition probabilities and baseline distributions |
| Target population | Patient characteristics, geography, disease stage |
| Health outcomes | e.g. life years, quality-adjusted life years (QALYs) or disability-adjusted life years (DALYs) |
| Time horizon and cycle length | The time span that the model covers (e.g. 10 years, lifetime) and the length of a model cycle – i.e., the period of time during which an event or transition can occur (e.g. 3 months, one year).  |
| Handling of uncertainty | Sensitivity analyses including one-way, two-way, probabilistic and scenario analyses |
| Validation and transparency | Availability of documentation; process to establish face validity; comparisons with other published models; external validation (e.g. comparisons of results against published observed data). |
| Context | Relevant country or health system context for the model.  |

Full Reference List

**Group 1 – Markov Disability and Recurrence (k=29)**

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**Group 2 – Markov Disability and Cognition (k=2)**

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**Group 3: Discrete Event Simulation (DES) (k=4)**

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**Group 4 –** Other (k=5)

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