SUPPLEMENTARY MATERIAL

Supplementary Table 1: Detailed case scenarios with levels of evidence.

Scenario ID	Evidence level*	Case description
51	2B	An 88-year-old, right-handed man has arrived at your hospital at 10 AM with right hemiparesis and aphasia. Symptom onset was 3 hours ago. His stroke severity as measured by NIHSS is 14. ASPECTS on non-contrast CT is 7. Baseline CTA reveals a proximal left M2 MCA segment occlusion.
52	2B	A 76-year-old, right-handed woman has arrived at your hospital at 2 PM with mild hemiparesis and aphasia. Symptom onset was 3 hours ago. Her stroke severity as measured by NIHSS is 2. ASPECTS on non-contrast CT is 10. Baseline CTA reveals a proximal M1 MCA segment occlusion.
53	2B	A 45-year-old, left-handed man has arrived at your hospital at 1 PM with left hemiparesis and visual field defect. He was last seen normal 12 hours ago. His stroke severity as measured by NIHSS is 15. ASPECTS on non-contrast CT is 8. Baseline CTA shows a proximal right M2 MCA segment occlusion.
54	2B	A 94-year-old, left-handed woman has arrived at your hospital at 2 AM with right hemiparesis and aphasia. Symptom onset was 3.5 hours ago. Her stroke severity as measured by NIHSS is 12. ASPECTS on non-contrast CT is 7. Baseline CTA shows a proximal left M2 MCA segment occlusion.
55	ND	An 85-year-old, right-handed man has arrived at your hospital at 1 AM with left hemiparesis and dysarthria. Symptom onset was 3 hours ago. His stroke severity as measured by NIHSS is 10. ASPECTS on non-contrast CT is 7. Baseline CTA shows a proximal right M1 MCA segment occlusion. He has Stage IV prostate cancer with metastatic disease.
56	2B	A 72-year-old, right-handed woman has arrived at your hospital at 9 AM with left hemiparesis and global aphasia. Symptom onset was 2 hours ago. Her stroke severity as measured by NIHSS is 16. ASPECTS on non-contrast CT is 3. Baseline CTA shows a proximal right M1 MCA segment occlusion.
57	2B	A 33-year-old, right-handed woman has arrived at your hospital at 8 AM with right hemiparesis and aphasia. Symptoms are 2.5 hours from onset. Her stroke severity as measured by NIHSS is 16. ASPECTS on non-contrast CT is 2. Baseline CTA shows a proximal left M1 MCA segment occlusion. She is postpartum.
58	1A	A 67-year-old, right-handed man has arrived at your hospital at 10 AM with left hemiparesis. Symptoms are 2 hours from onset. His stroke severity as measured by NIHSS is 18. ASPECTS on non-contrast CT is 7. Baseline CTA shows a proximal right M1 MCA segment occlusion. He has a history of heart failure, COPD, and renal insufficiency. He is on dialysis.
59	2B	An 85-year-old, right-handed woman has arrived at your hospital at 11 PM with left hemiparesis. Symptoms are 3 hours from onset. Her stroke severity as measured by NIHSS is 9. ASPECTS on non-contrast CT is 6. Baseline CTA

		shows a proximal right M2 MCA segment occlusion. She has a history of mild cognitive impairment.
60	ND	A 14-year-old, left-handed boy has arrived at your hospital at 11 AM with right hemiparesis and aphasia. Symptoms are 3 hours from onset. His stroke severity as measured by NIHSS is 18. ASPECTS on non-contrast CT is 7. Baseline CTA shows a proximal left ICA dissection with an ICA/M1 MCA segment occlusion.
61	2B	A 40-year-old, right-handed man has arrived at your hospital at 3 AM with right hemiparesis and left gaze deviation. Symptoms are 3 hours from onset. His stroke severity as measured by NIHSS is 18. ASPECTS on non-contrast CT is 4. Baseline CTA shows a left ICA/T occlusion.
62	ND	A 68-year-old, right-handed man who is already admitted in the hospital has developed a new left-MCA syndrome at 10 AM. This is revealed to be due to a left-MCA occlusion. His stroke severity as measured by NIHSS is 18. The previous week, he had suffered a left-MCA occlusion (NIHSS of 6, 50 cc of infarction). The current non contrast CT reveals no changes to suggest an extension of the previous infarction.
63	1A	A 99-year-old, right-handed woman has arrived at your hospital at 1 PM with left hemiparesis and dysarthria. Symptoms are 1 hour from onset. Her stroke severity as measured by NIHSS is 18. ASPECTS on non-contrast CT is 7. Baseline CTA reveals a proximal right M1 MCA segment occlusion. She lives independently.
64	2B	A 79-year-old, right-handed man has arrived at your hospital at 4 PM with right hemiparesis and global aphasia. Symptoms are 2 hours from onset. His stroke severity as measured by NIHSS is 12. ASPECTS on non-contrast CT is 9. Baseline CTA reveals a left ICA occlusion in the neck with crossflow to the left M1 MCA segment via small posterior and anterior communicating arteries. He has a history of prostate cancer, and is on hormonal therapy.
65	2B	An 80-year-old, right-handed woman has arrived at your hospital at 5 AM with right hemiparesis and dysarthria. Symptoms are 3 hours from onset. Her stroke severity as measured by NIHSS is 11. ASPECTS on non-contrast CT is 8. Baseline CTA shows a proximal left M1 MCA segment occlusion. She lives in a nursing home due to rheumatoid arthritis and has no cognitive impairment.
66	1A	A 69-year-old, right-handed man has arrived at your hospital at 9 AM with left hemiparesis, hemisensory loss, and hemineglect. Symptoms are 2 hours from onset. His stroke severity as measured by NIHSS is 18. ASPECTS on non-contrast CT is 6. Baseline CTA shows a proximal right M1 MCA segment occlusion. His family tells you that he has a living will in place stipulating that he does not wish to live disabled.
67	1A	A 69-year-old, left-handed woman has arrived at your hospital at 10 AM with left hemiparesis, hemisensory loss, and hemineglect. Symptoms are 2 hours from onset. Her stroke severity as measured by NIHSS is 18. ASPECTS on non-contrast CT is 9. Baseline CTA shows a proximal right M1 MCA segment occlusion. Her family tells you that she has a living will in place stipulating that she does not wish to live disabled.

68	2B	A 56-year-old, right-handed man has arrived at your hospital at 3 PM with global aphasia. Symptoms are 3 hours from onset. His stroke severity as measured by NIHSS is 8. ASPECTS on non-contrast CT is 9. Baseline CTA reveals a small branch left M2 MCA segment occlusion.
69	1A	A 71-year-old, right-handed man has arrived at your hospital at 2 PM with mild right hemiparesis. Symptoms are 3 hours from onset. His stroke severity as measured by NIHSS is 6. ASPECTS on non-contrast CT is 8. Baseline CTA shows an isolated left intracranial segment internal carotid artery occlusion. The ipsi-lesional M1 MCA segment is open with good blood flow through the ACOM ACA willisian collaterals.
70	1A	A 72-year-old, right-handed woman has arrived at your hospital at 11 AM with left hemiparesis and dysarthria. Symptoms are 3 hours from onset. Her stroke severity as measured by NIHSS is 12. ASPECTS on non-contrast CT is 7. Baseline CTA shows a right M1 MCA segment occlusion. She has an INR of 2.8 due to anticoagulation for atrial fibrillation.
71	1A	A 55-year-old, right-handed man has arrived at your hospital at 8 AM with right hemiparesis and aphasia. Symptoms are 3 hours from onset. His stroke severity as measured by NIHSS is 20. ASPECTS on non-contrast CT is 7. Baseline CTA shows a left M1 MCA segment occlusion. The patient is agitated; however, anaesthesia is not immediately available.
72	1A	A 72-year-old, right-handed woman has arrived at your hospital at 9:30 AM with left hemiparesis and dysarthria. Symptoms are 2 hours from onset. Her stroke severity as measured by NIHSS is 24. ASPECTS on non-contrast CT is 9. Baseline CTA shows a cervical carotid - right M1 MCA segment occlusion. She cannot provide consent and there is no family available.

* According to current AHA/ASA guidelines [1].
Note: ND = not determined

Supplementary table 2: Number of responses, current and ideal EVT rates per state/province/country.

Country/ State/Province	Resources gap (%)	Overall number of responses	Number of responses favoring EVT under current local resources	Number of responses favoring EVT under assumed ideal conditions
U.S. states/Canadian provinces				
Alabama	5	20	16	17
Alberta	4.4	180	126	134
Arizona	0	20	15	15
British Columbia	-7	100	77	70
California	4	100	68	72
Colorado	10	10	0	10
Connecticut	-1.7	60	44	43
Delaware	0	10	7	7
Florida	-1.7	120	85	83
Georgia	3.3	30	20	21
Hawaii	0	10	5	5
Illinois	2.9	70	55	57
Indiana	5	20	16	17
Iowa	-10	20	15	13
Kansas	2.5	40	36	37
Kentucky	0	10	9	9
Louisiana	5	20	18	19
Manitoba	-20	20	16	12
Maryland	0	20	15	15
Massachusetts	1.7	120	98	100
Michigan	0	20	19	19
Minnesota	-3	100	76	73
Missouri	-20	10	7	5
New Brunswick	-10	10	10	9
New Jersey	0	10	7	7
New York	1.2	170	137	139
North Carolina	-2	50	41	40
Nova Scotia	5	20	9	10
Ohio	4.3	70	50	53
Ontario	-2.3	260	206	200
Oregon	-15	20	16	13
Pennsylvania	1.4	70	56	57
Quebec	-5	120	88	82
Saskatchewan	20	20	14	18
South Carolina	0	10	10	10
Tennessee	4	50	37	39
Texas	7.5	80	61	67
Vermont	5	20	16	17
Virginia	0	10	9	9
Washington	3.3	30	21	22
West Virginia	0	10	7	7
Wisconsin	0	10	7	7

Wyoming	10	10	6	7
European Countries				
Austria	5	20	15	16
Belgium	2.5	40	30	31
Czechia	10	20	12	14
Denmark	0	50	39	39
Estonia	10	10	7	8
Finland	0	30	23	23
France	-4.4	90	80	76
Germany	-1.3	240	217	214
Greece	0	10	8	8
Hungary	-10	20	15	13
Italy	2	100	78	80
Latvia	0	10	5	5
Netherlands	4.4	90	80	84
Norway	14	50	36	43
Poland	30	30	11	20
Portugal	4	50	42	44
Romania	10	10	5	6
Russia	-25	20	14	9
Serbia	0	10	8	8
Slovakia	0	10	9	9
Spain	-2.5	120	91	88
Sweden	0	30	26	26
Switzerland	1.1	187	166	168
United Kingdom	30	90	54	81

Supplementary table 3: Country-specific economic and healthcare key metrics [2*]

Country	GDP per capita (USD)	Employment in the health and social services sector (%)	CT scanners/mio. Residents (n)	Hospitals/mio. Residents (n)	Population covered by private or public health insurance (%)
Austria	53952	10.4	28.6	30.8	99.9
Belgium	50336	13.1	-	15.4	98.7
Czech Rep.	38037	6.4	15.8	24.2	100
Denmark	54263	17.5	39.7	-	100
Estonia	33721	6.0	18.2	22.8	94.1
Finland	46735	15.6	24.5	44.8	100
France	44125	-	17.4	45.6	99.9
Germany	52055	13.3	35.1	37.3	100
Greece	28579	5.4	34.2	25.8	100
Hungary	29159	6.6	9.2	16.9	94
Italy	41200	7.8	34.7	17.6	100
Latvia	28131	5.5	39.1	32.4	100
Netherlands	54504	15.4	13.5	31.8	99.9
Norway	62012	-	-	-	100
Poland	29583	6	16.9	27.9	92.6
Portugal	32777	8.2	-	21.8	100
Romania	-	-	-	-	-
Russia	25775	-	13	-	99.7
Serbia	-	-	-	-	-
Slovakia	36153	5.8	17.3	24.1	94.6
Spain	38939	7.2	18.6	16.7	99.9
Sweden	51879	17.3	-	-	100
Switzerland	66396	13.6	39.3	33.3	100
UK	45392	12.3	-	29.1	100
USA	59984	-	44	17.11	-
Canada	44700	-	16	19.7	-

*Data from 2017.

- indicates non-OECD country/that no data were available.

For complementary information on country-specific stroke treatment metrics and resources, see Aguiar de Sousa et al, 2019[3].

References

1. Powers WJ, Rabinstein AA, Ackerson T, et al. 2018 Guidelines for the Early Management of Patients With Acute Ischemic Stroke: A Guideline for Healthcare Professionals From the American Heart Association/American Stroke Association. *Stroke* 2018;49(3):e46-e110. doi: 10.1161/STR.0000000000000158 [published Online First: 2018/01/26]
2. OECD iLibrary [Available from: https://www.oecd-ilibrary.org/statistics accessed 07-16 2019.
3. Aguiar de Sousa D, von Martial R, Abilleira S, et al. Access to and delivery of acute ischaemic stroke treatments: A survey of national scientific societies and stroke experts in 44 European countries. *Eur Stroke J* 2019;4(1):13-28. doi: 10.1177/2396987318786023 [published Online First: 2019/06/06]