IVO

min time to thrombolysis Lower quartile time to thrombolysis median time to thrombolysis Upper quartile time to thrombolysis max time to thrombolysis mean time to thrombolysis

nonl VO

min time to thrombolysis Lower quartile time to thrombolysis median time to thrombolysis Upper quartile time to thrombolysis max time to thrombolysis mean time to thrombolysis

ALL THROMBOLSYSIS PATIENTS min time to thrombolysis Lower quartile time to thrombolysis median time to thrombolysis Upper quartile time to thrombolysis max time to thrombolysis mean time to thrombolysis

LVO THROMBECTOMY Number of LVOs eligible for thromboylsis Number of nonLVOs eligible for thromboylsis Number of patients eligible for thromboylsis Number of patients eligible for thromboylsis min time to thrombectomy Lower quartile time to thrombectomy median time to thrombectomy Upper quartile time to thrombectomy max time to thrombectomy mean time to thrombectomy

CORRECT ALLOCATION

Number of LVO admissions going to HASU first and it's correct Number of LVO admissions going to CSC first and it's correct Number of LVO admissions going to right location first Number of nonLVO admissions going to HASU first and it's correct Number of nonLVO admissions going to CSC first and it's correct Number of nonLVO admissions going to right location first Number of mimic admissions going to HASU first and it's correct proportion_thrombectomy_requiring_onwards_transfer Number of mimic admissions going to CSC first and it's correct Number of mimic admissions going to right location first Number of haemorrage admissions going to CSC first and it's correct

Number of haemorrage admissions going to right location first

INCORRECT ALLOCATION

Number of LVO admissions going to HASU first and it's incorrect Number of LVO admissions going to CSC first and it's incorrect Number of LVO admissions going to wrong location first Number of nonLVO admissions going to HASU first and it's incorrect Number of nonLVO admissions going to CSC first and it's incorrect Number of nonLVO admissions going to wrong location first Number of mimic admissions going to HASU first and it's incorrect Number of mimic admissions going to CSC first and it's incorrect Number of mimic admissions going to wrong location first Number of haemorrage admissions going to HASU first and it's correct
Number of haemorrage admissions going to HASU first and it's incorrect Number of haemorrage admissions going to CSC first and it's incorrect Number of haemorrage admissions going to wrong location first

ADMISSION ALLOCATION AND ADDITIONAL TRAVEL CAUSED

Admissions going to HASU first that's correct Admissions going to HASU first that's incorrect Admissions going to CSC first that's correct Admissions going to CSC first that's incorrect admissions go to HASU first admissions_go_to_CSC_first admissions go to right first admissions_go_to_wrong_first admissions transferred CSC to HASU admissions_transferred_HASU_to_CSC admissions go to HASU final admissions_go_to_CSC_final

Total time travelling in perfect solution (all patients go to where they need to first)

Total time travelling in this solution (depending on the setup of the diagnostic test)

Total time travelling, drip n ship solution (no diagnostic test & all patients attend nearest centre based on the system as defined by the user: decision bias/repatriation etc) Number of admissions with an unnecessary_delay for thrombolysis (2 patient groups 1. LVO elig for thysis & not Ttomy 2. nonLVO elig Ttomy) [patient groups are reported below] Total unnecessary time for thrombolysis delay (send those 2 patient groups to nearer HASU, and compare the additional time taken with them all going to their nearest CSC) Mimic admissions going further to a CSC (these have no treatment in model, so no treatment delay, just extra travelling and now at a location further from home)

haemorrage admissions going further to a CSC (these have no treatment in model, so no treatment delay, just extra travelling and now at a location further from home) nonLVO admissions going further to a CSC (some have treatment so there's a treatment delay, for others no treatment so just extra travelling & at location further from home) nonLVO admissions elig for thrombolysis so delay in treatment

nonLVO admissions not elig for thrombolysis, no delay in treatment but travel further

LVO admissions going unecessarily further to a CSC (these are 2 patient groups, those that need thrombolysis, and those that don't)

LVO admisisons elig for thrombolysis but not thrombectomy going unnecessarily further to CSC

LVO not elig for any treatment going further to a CSC

INPUTS

LVO as proportion of ischaemic stroke

rate of mimics as a % of strokes

Rate of haemorragics as % of ischaemic strokes

Stroke symptom onset time known (used to select the patients to do the LVO diagnostic test on, else to HASU as will not be eligible for any treatment Decision bias: Any patient with a CSC less than this many minutes more (over a nearer HASU) will have their location determined by the diagnostic

Specificity for stroke patients (used on the nonLVO stroke patients and haemorrage patients, ie. stroke patients but not LVOs) Sensitivity for stroke patients (used on the LVO stroke patients)

Specificity for mimics (used on the mimics, assume less are likely to be misclassified as a LVO)

nonLVO patients that are suitable for thrombolysis

LVO patients that are suitable for thrombolysis

LVO patients that are suitable for thrombolysis

LVO patients that are suitable for thrombolysis

Of those LVO patients suitable for thrombolysis, proportion suitable for thrombectomy

Proportion patients had thrombolysis that are repatriated (from CSC to a nearer HASU)

Proportion patients not had thrombolysis that are repatriated (from CSC to a nearer HASU)

Proportion of all admissions that are mimics Proportion of all admissions that are strokes

Proportion of all admissions that are ischaemic

Proportion of all admissions that are haemorragics

Proportion of all admissions that are LVO Proportion of all admissions that are nonLVO

Proportion of all admissions that are eligible for thrombolysis

Proportion of all admissions that are eligible for thrombectomy