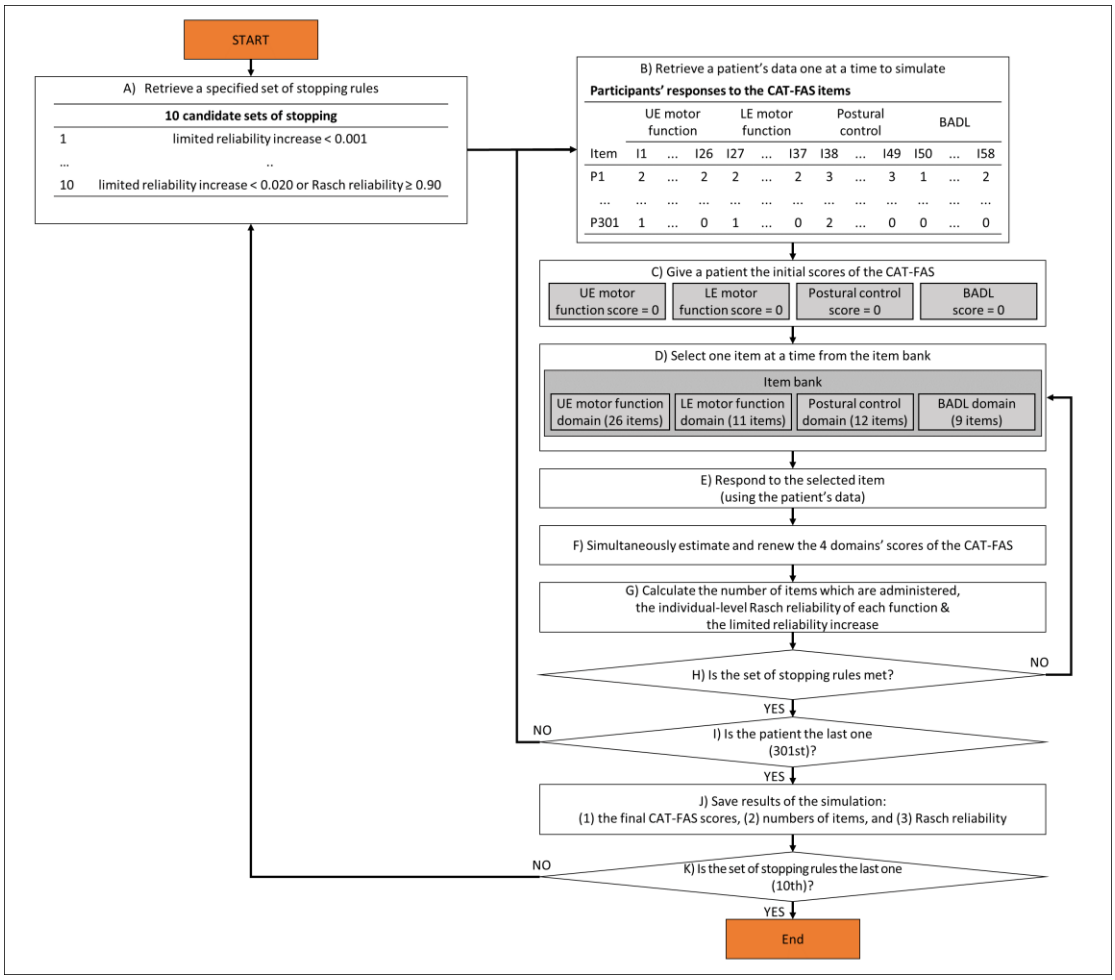
START
A) Retrieve a specified set of stopping rules
10 candidate sets of stopping
1 limited reliability increase < 0.001
... ..
10 limited reliability increase < 0.020 or Rasch reliability ≥ 0.90
B) Retrieve a patient's data one at a time to simulate
Participants' responses to the CAT-FAS items
Item I1 ... I26 I27 ... I37 I38 ... I49 I50 ... I58
P1 2 ... 2 2 ... 2 3 ... 3 1 ... 2
... ...
P301 1 ... 0 1 ... 0 2 ... 0 0 ... 0
UE motor function
LE motor function
Postural control
BADL
C) Give a patient the initial scores of the CAT-FAS
UE motor function score = 0
LE motor function score = 0
Postural control score = 0
BADL score = 0
D) Select one item at a time from the item bank
Item bank
UE motor function domain (26 items)
LE motor function domain (11 items)
Postural control domain (12 items)
BADL domain (9 items)
E) Respond to the selected item (using the patient's data)
F) Simultaneously estimate and renew the 4 domains' scores of the CAT-FAS
G) Calculate the number of items which are administered, the individual-level Rasch reliability of each function & the limited reliability increase
H) Is the set of stopping rules met?
NO
YES
I) Is the patient the last one (301st)?
NO
YES
J) Save results of the simulation: (1) the final CAT-FAS scores, (2) numbers of items, and (3) Rasch reliability
K) Is the set of stopping rules the last one (10th)?
NO
YES
End