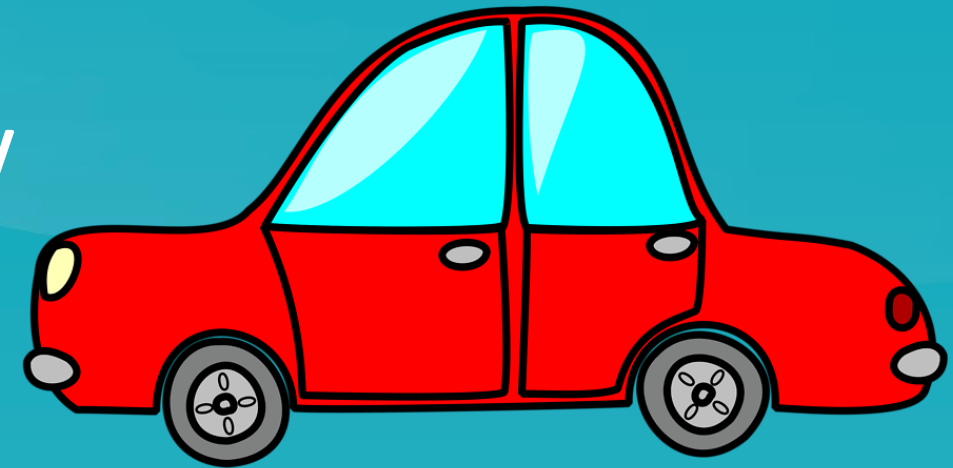


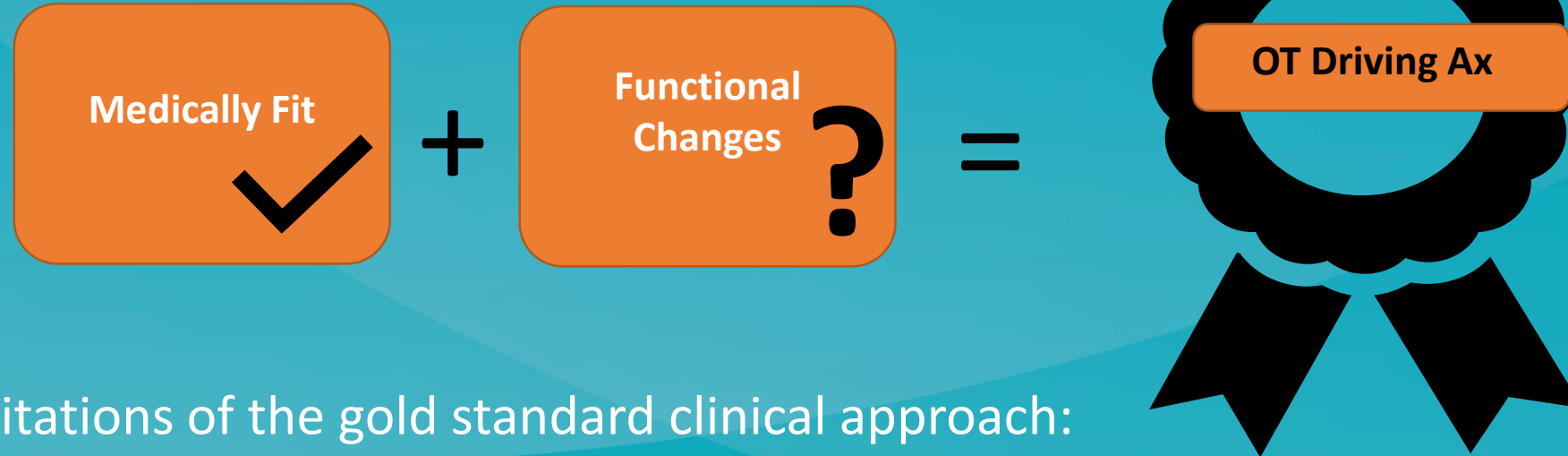
Return to Driving: What is the relationship with the Trails Making Test (TMT)?

SmartStrokes - August 2019 - Hunter Valley

Andrea Hinckley (Occupational Therapist)



Introduction:



Clinical Guidelines for
Stroke Management
2017: Chapter 8

Limitations of the gold standard clinical approach:

- Limited resources available
- State differences
- Lengthy waitlists
- Costly and limited funding available

Introduction (cont):

- Increasing evidence into use of paper/computer based assessments to predict driving safety.
- Roy & Molnar Systematic Review Trails Making Test (TMT) – 2013: The “3 & 3 Rule”
- The current research into Trails Making Test (TMT) B and fitness to drive does not consistently use the OT on-road driving assessment as the primary outcome measure
- The right service at the right time for the right people



Aim:

To demonstrate if the TMT part B can be used to predict on-road driving performance for the stroke population.

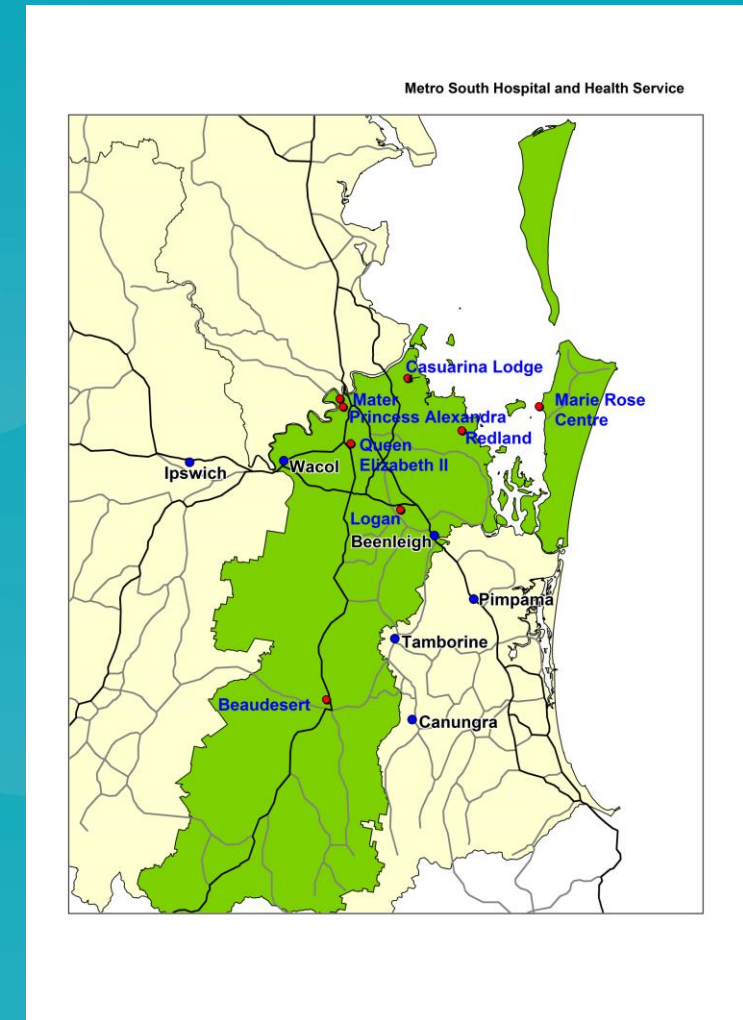
Driving Service Background:

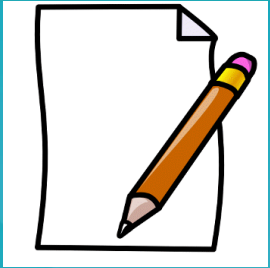
Public service

- Mixed model including stroke
- Funding for one assessment a week

Metro Brisbane service – Service based on

- OT Australia Competency Standards for OT driving Assessors – 2018
- QLD Health Driving Assessment Guidelines for OT Driving Assessors 2011





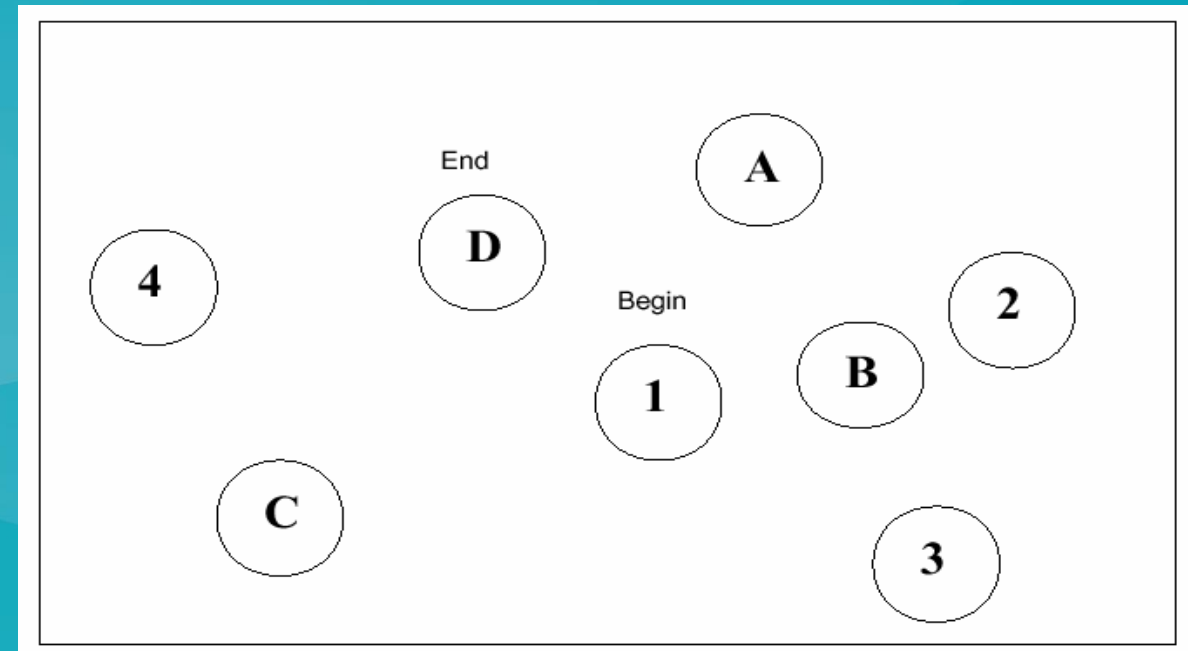
Trails Making Test (TMT)

- History & development of TMT
- TMT B – draw a line connecting 24 encircled numbers and letters in alternating order as quickly as possible
- Roy & Molnar systematic review 2013

Test of :

- Processing speed
- Sequencing & shifting attention
- Mental flexibility
- Visual motor skills
- Modify plan of action

(Salthouse 2011 39 (4))

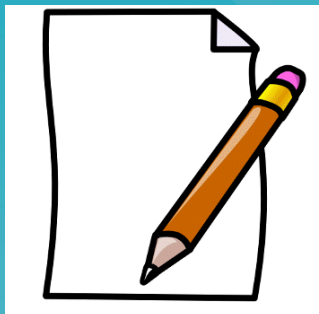


Administration of the TMT is as per the instructions set out by Bowie & Harvey, 2006

Research Method:

Final Outcome

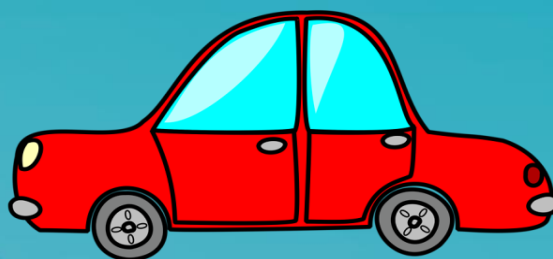
Off road



TMT B

Score recorded = in seconds,
errors not recorded

On road



Dual controlled
vehicle with OT &
Driving Instructor

1st pass

2nd pass

Remediation, then passed

Fail

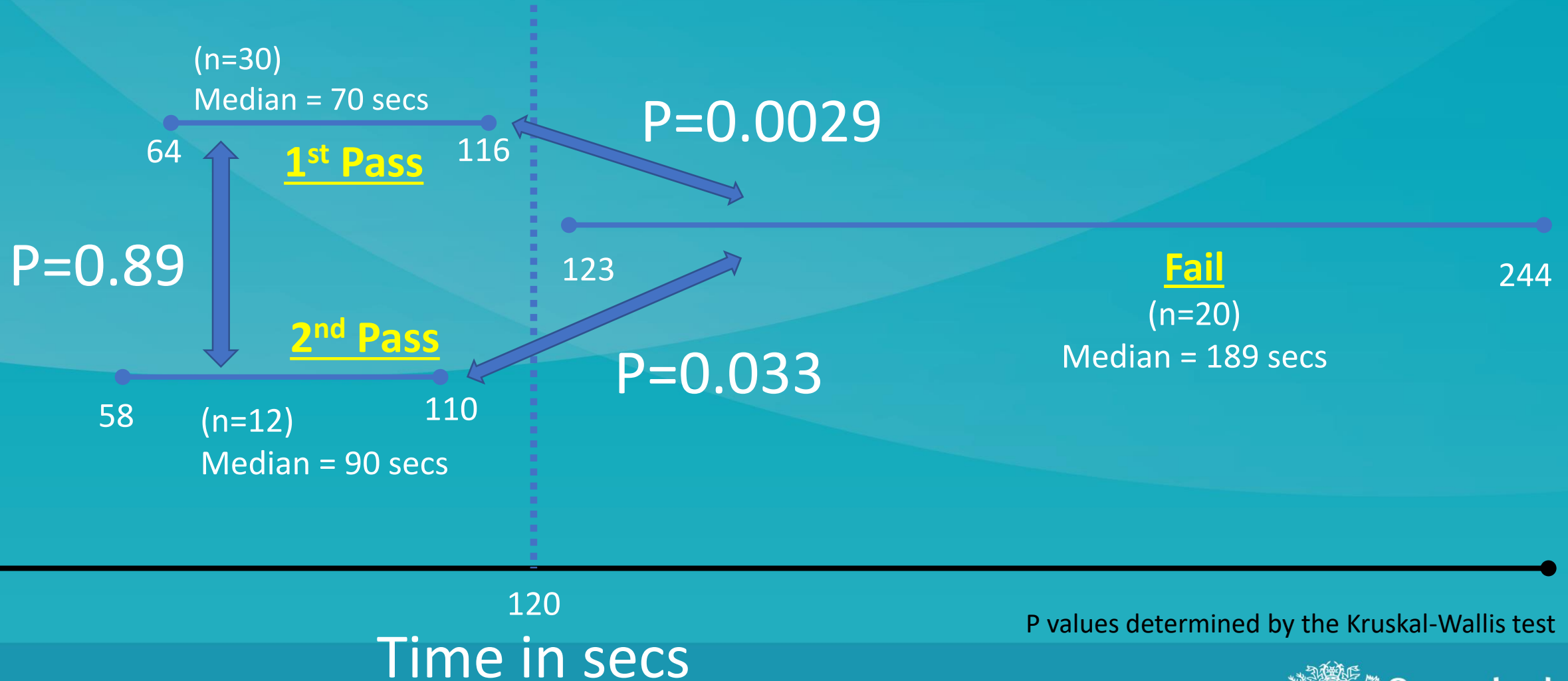
Data collection period 2012-2018



Demographics:

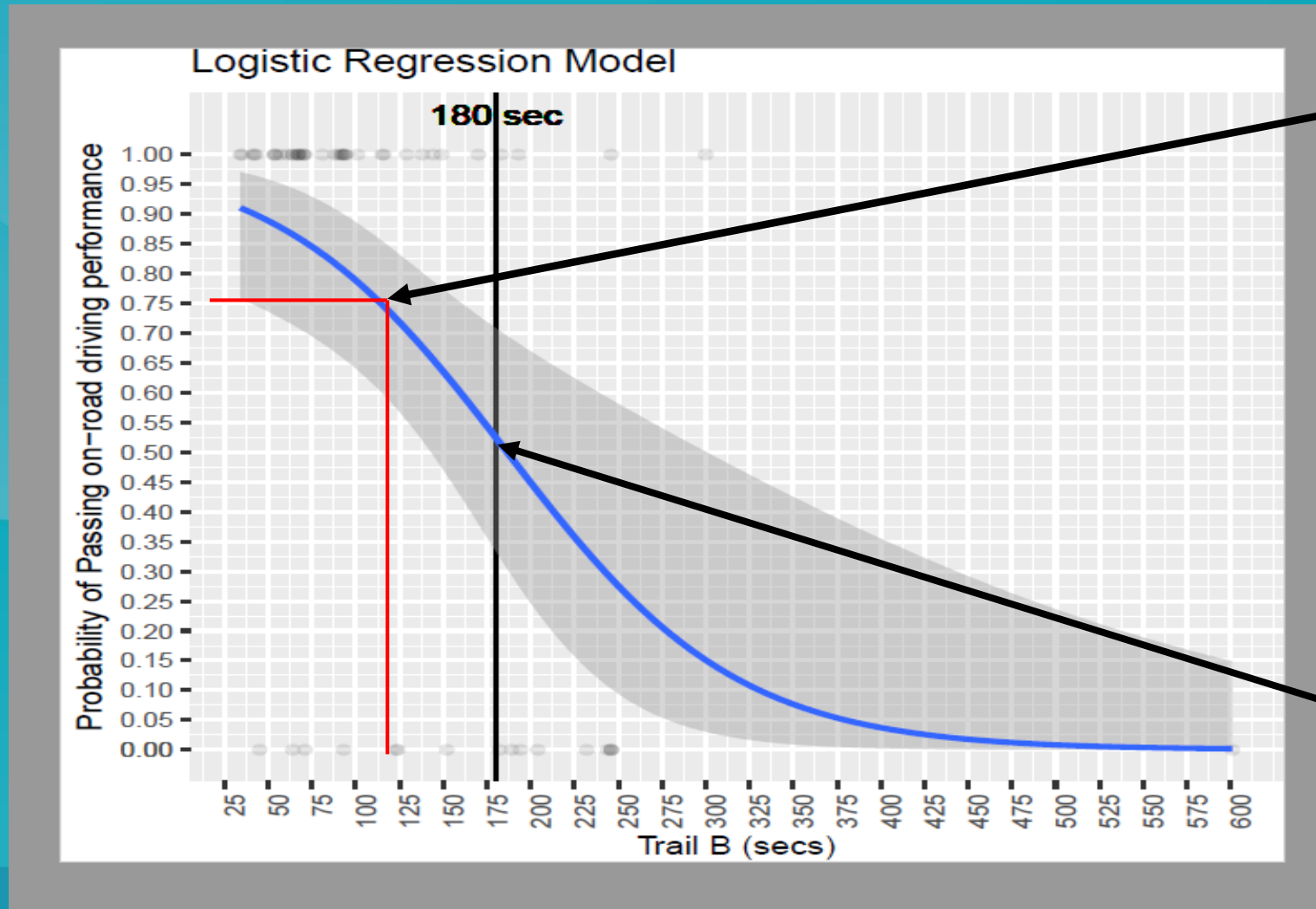
N= 62 (13 excluded)	Gender	Age Range
1st Pass (30)	Female – 7 Male – 23	19-85 years
2nd Pass (12)	Female – 5 Male – 7	49-90 years
Fail (20)	Female – 3 Male – 17	59-93 years

Results: Visual representation of median time range TMT B



P values determined by the Kruskal-Wallis test

Results: Probability of Passing



120 secs = 75% confident of passing an on-road OT driving Ax

Roy & Molnar systematic review 2013: 53% confidence of passing

Conclusion:

- There appears to be a strong correlation between the TMT B and Driving On-Road success.
- Previous research indicated 180 sec cut off but this research indicates 120 seconds with a 75% confidence.

***Therefore TMT B is useful for the stroke population
for predicting on-road performance***

Recommendations:

- TMT B should be used routinely with the stroke population prior to the assessment to determine readiness for on-road OT driving assessment.
- Consideration may need to be given to cut off scores times to be used for efficient service delivery practices & timely referral for on-road assessment of the stroke population.



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Questions

andrea.hinckley@health.qld.gov.au

Andrea Hinckley

Occupational Therapist – Community Adult Rehab Service (CARS)

Eight Mile Plains Community Health

Affiliations

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