Global Health Research Group
on Dementia Prevention &
Enhanced Care: DePEC

NHS
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Health Research

Investigation of dementia and MCI screening tools in an Indian setting: Sept 2018 update

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Priorities in Kerala

- MCI is important alongside dementia (opportunity for intervention). MCI screening tools useful and a priority.
- Education level higher than Kilimanjaro.
- A locally validated culturally appropriate IADL/functional assessment tool exists (EASI screen) - could be incorporated in app rather than adapt Tanzanian tools.
- MOCA is widely used (but not validated)
- IDEA screen needs careful translation and validation for comparison with MOCA

Initial objectives

- Community validation of the Montreal Cognitive Assessment (MoCA) in Kalliyoor, Kerala, India

- Clinic validation of MoCA in Kerala

- Adaptation, translation and clinic validation of the IDEA cognitive screen in Kerala

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Community validation of the MoCA

- Population of people aged 65 years and over of 4073 in Kalliyoor
- Quasi-random sampling of clusters of streets within each of the 21 ward, with everyone on those streets visited
- 1320 people screened across 21 wards using MoCA, EASI (for IADLs) and GDS (for depression)
- Screening by sessional primary health workers (similar to Tanzania)
- Demographic data also available allowing us to check the representativeness of the screened population of the background population.

Community validation of the MoCA

- Four wards randomly selected from the 21 wards
- Everyone who was screened in those wards seen for clinical diagnosis of dementia by physician
- All 366 should be seen by 20th September

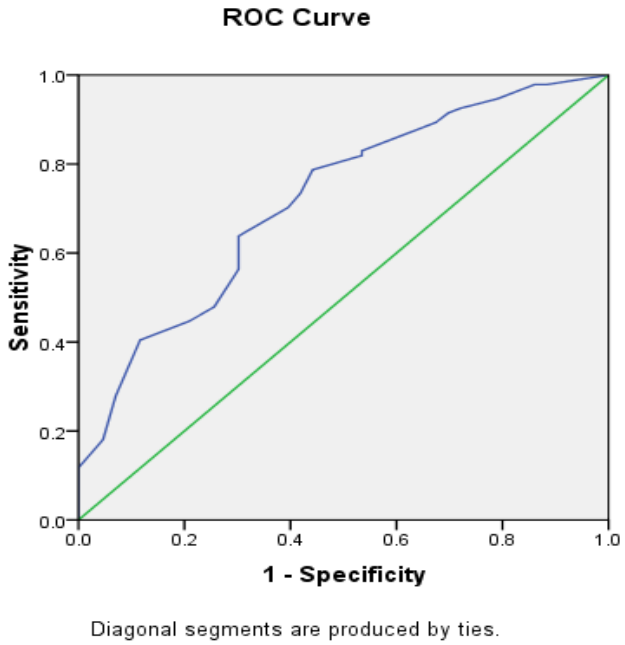
Preliminary results

- Analysis of data for 137 people
- AUROC: 71.8% (95% CI 62.7-80.9)

Sensitivity: 70.2%

Specificity: 60.5%

With 17 as a cut off



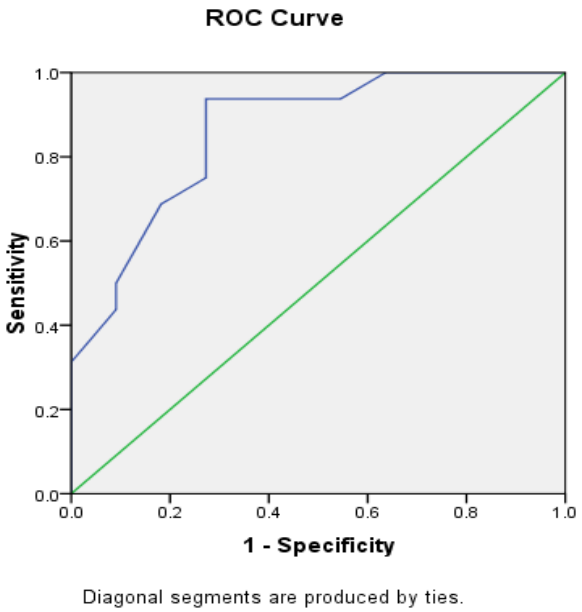
MoCA clinic validation

- 27 people seen in a Parkinson's disease clinic
- AUROC: 86.1% (95% CI 71.6-100)

Sensitivity: 93.7%

Specificity: 72.7%

With 17 as a cut off



Conclusions from work so far

- MoCA includes copying a cube, drawing a clock, subtracting serial sevens
- The lower optimal cut off (17 compared to 26 used in HICs) suggests some items may be poorly performed by people with lower educational levels
- Use of low cut off in low-literacy setting previously found to have reduced validity (work on MMSE in low-literacy settings) –fundamentally changes test
- Investigation of individual MoCA items may help to identify which items are most useful and which are redundant

IDEA cognitive screen

- Adaptation, translation and validation of the IDEA cognitive screen in Kerala – protocol developed and to be submitted to ethics committee shortly
- Cut offs will need to be adjusted to suit educational levels(higher than Tanzania)
- Run as case control design in clinic, with 30 dementia cases and 30 controls
- Screening using an App based on ODK software

Next steps

- Collect normative data for MoCA and IDEA screens to assess best cut-offs
- Further validation based on findings of current work
- Engagement with policy makers