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## Falls and inactivity with ageing

- Every year 1 in 3 older people falls at least once with 15% of falls resulting in serious injury. This leads to an annual health care cost of 1 billion.
- Despite known health benefits of regular exercise, still over half of older people report that they do not follow the WHO recommendations for physical activity.
- With a growing world population of people aged 65+, active and healthy ageing is a key focus of our research.

## Our research

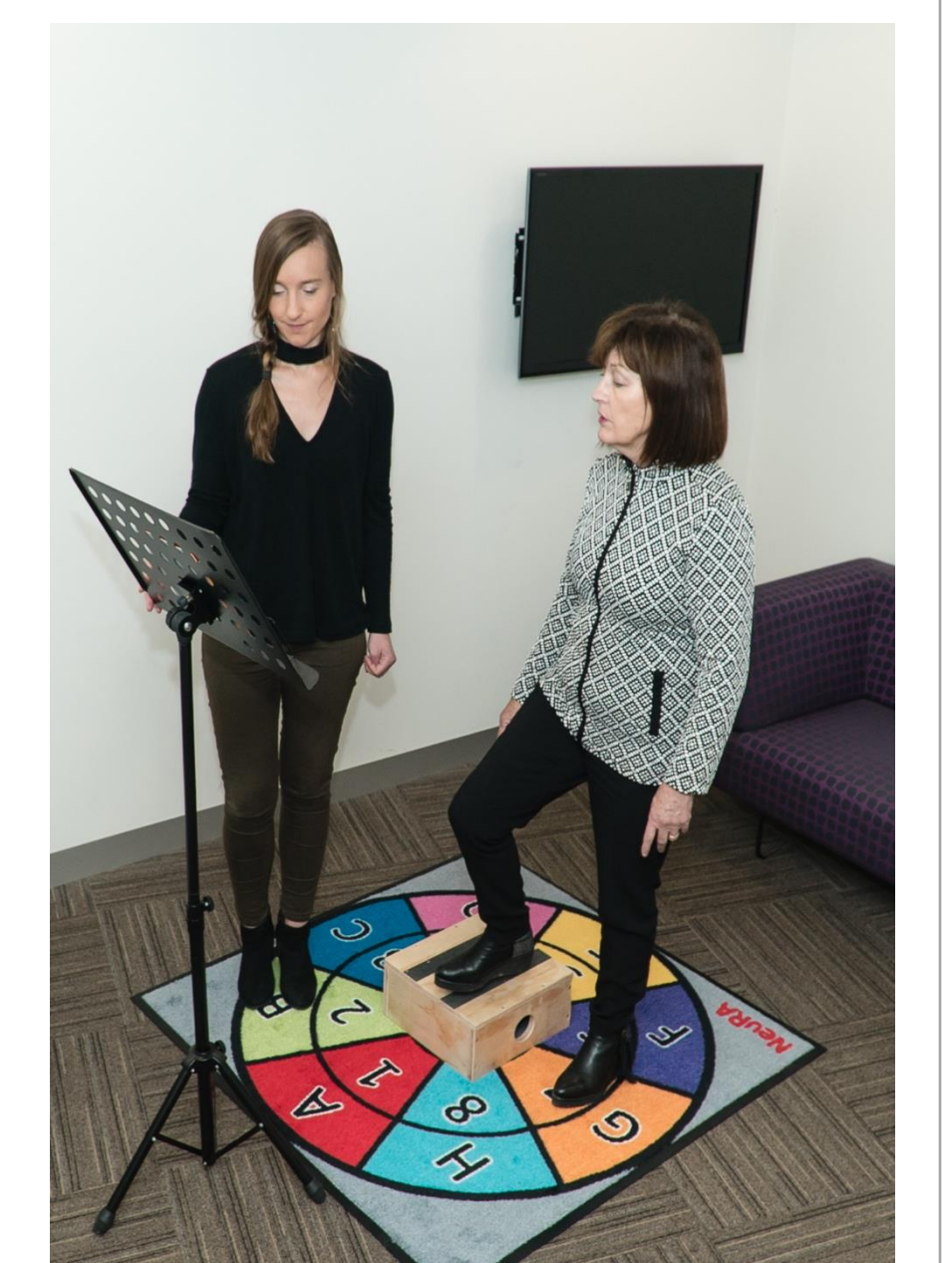
We develop innovative approaches to support active and healthy ageing. We focus on understanding physical, cognitive and psychological contributors to fall risk, dementia and inactivity. To address these contributors, we use eHealth interventions to improve balance, cognitive function and well-being, and to promote higher levels of physical activity.



## Interventions to prevent falls

- Balance exercise is the most effective intervention to prevent falls, however older people struggle to commit to the required dose of 2 hours per week.
- Over 500 people aged 65+ participated in clinical trials to evaluate the efficacy of a home-based balance exercise program, delivered on a tablet computer.
- A trial just started combining balance with brain training and cognitive behavioural therapy.

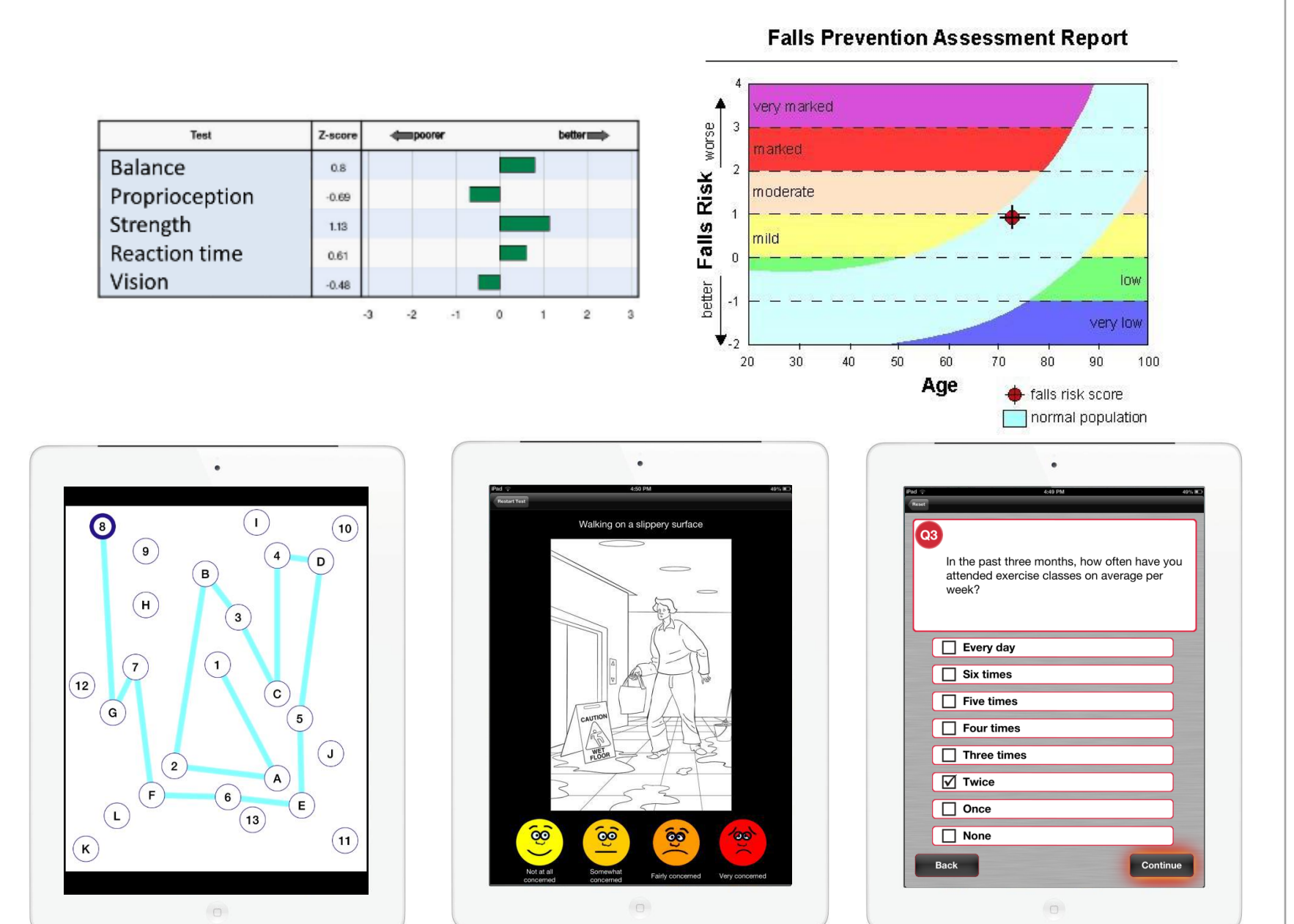
*Key reference: Delbaere et al. BMJ Open 2015;5(10)*



## Fall risk assessment to support intervention

- Identification of people at high risk for falls allows for timely and targeted interventions.
- We aim to advance and validate tools to identify people at high risk for falls based on clinical tests and wearable sensors worn during daily life.
- Several studies are underway to test and validate these tools as part of our longitudinal and clinical trials.

*Key references: Delbaere et al. JAGS 2010;58(9) & van Schooten et al. JGMS 2015;70(5)*



## Examples of projects

- The influence of concern about falling on balance recovery during slips and trips
- Daily-life mobility in older people and its relationship with fall risk
- Understanding the relation between cognitive decline and physical health
- The effect of a self-managed psychological intervention programs on fear of falling
- Validation of novel technologies to detect fall risk in daily life

## Interested?

- Contact Kim van Schooten to discuss projects: [k.vanschooten@neura.edu.au](mailto:k.vanschooten@neura.edu.au)