

# The Next Step

Summary Report December 2019

## Background

Injuries from falls are a leading cause of morbidity and mortality in older people<sup>1</sup>. The best available evidence for falls prevention is for the protective effect of targeted physical activity<sup>2,3</sup>.

## The Next Step (TNS)

A 20 week leg strength and balance exercise program, developed by the Health Promotion Service (HPS) South Eastern Sydney Local Health District (SESLHD). TNS is based on evidence for falls prevention exercise programs and builds on the:

- Strengthening for over 60's program
- Otago Exercise Program

## Program Rationale

TNS was developed to support SESLHD Stepping On Program (SOP) graduates to:

- Transition to community based exercise classes
- Reduce the risk of falls
- Increase ongoing physical activity

## TNS Features

- ✓ Group based exercise classes in English and Chinese
- ✓ Lead by trained fitness leader
- ✓ Classes ran once a week for one hour
- ✓ Free of charge and close to transport
- ✓ Opportunity to socialise at tea time
- ✓ Included home based exercises

## Our Partners

SESLHD HPS partnered with the following organisations to support TNS delivery:

- Australian Chinese Community Association
- St George Community Housing
- Jubilee Community Services
- South Eastern Community Connect
- Calvary Health Care Kogarah

We acknowledge the contribution of SLHD Population Health Research & Evaluation Hub



## Outcomes of Key Delivery Components

**10** TNS programs were delivered in the community (6 English and 4 Chinese programs)

**4** TNS programs have continued beyond the funding period demonstrating the sustainability of TNS

**161** SOP graduates were recruited to TNS

**74** % of participants completed the program

**16** fitness leaders were trained in TNS to ensure program fidelity

**21** fitness leaders from community organisations were trained to deliver evidence based falls prevention exercises for the community and TNS participants

**3** TNS resources were developed

- TNS program manual
- Home exercise flipcharts (English and Traditional Chinese)

## Methods

A pre-post study design was used to evaluate TNS. Data was collected using several evaluation tools:

- Baseline and final leg strength and balance assessments using validated tools:
  - Short Physical Performance Battery (SPPB)<sup>a</sup>
  - Timed Up and Go Test (TUGT)<sup>b</sup>
- Participant satisfaction structured questionnaire
- Baseline and three month post intervention questionnaires

## Outcomes

### 1 Leg Strength and Balance

Participants improved their leg strength and balance between baseline and final assessment. This was statistically significant.

Participants reduced their TUGT mean time from 9.8s to 8.5s.

Participants with SPPB scores in the 'good performers' category increased by 10% (Figure 1).

### 2 Participants Who had a Fall (%)\*

Participants who reported having a fall within the last 3 months at baseline and at 3 months post intervention reduced by 10% (not statistically significant).

However when the focus is only on participants in English speaking classes, there was a statistically significant reduction of 20% ( $p = 0.03$ ).

Results for the Chinese speaking participants showed no statistically significant difference.

### 3 Participation in Physical Activity

Participants reported increasing participation in exercise classes (e.g. Tai Chi, strength and balance classes) by 18%. This result was statistically significant ( $p=0.02$ ).

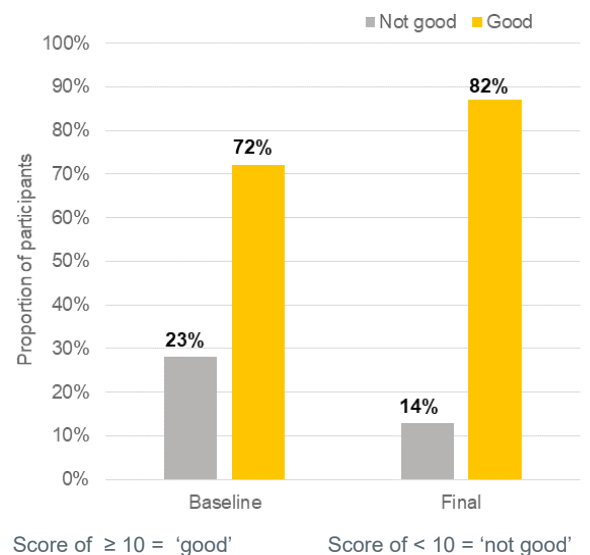
There was no significant increase in self-reported exercise (non-class based e.g. walking, swimming, gardening) at the three-month post-intervention questionnaire ( $p= 0.08$ ).

<sup>a</sup> SPPB is an accepted way of measuring lower extremity physical performance status<sup>4</sup> and is associated with the risk of falling<sup>5</sup>

<sup>b</sup> TUGT is a clinical measure of functional mobility<sup>6</sup>

\* Results should be interpreted with caution due to the smaller sample size of Chinese speaking participants compared to English speaking participants

Figure 1: Performance on SPPB by testing occasion



## Participant Satisfaction

Participants responded positively to the design of TNS program including:

- All exercise components of TNS
- Class duration
- Level of difficulty
- Resources and support available to assist correct exercise performance



## Conclusion

TNS has the potential to be a sustainable leg strength and balance community based exercise program for seniors.

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3. Sherrington CLS, Close JCT. Best-practice recommendations for physical activity to prevent falls in older adults: An Evidence Check rapid review brokered by the Sax Institute for the Centre for Health Advancement, NSW Department of Health; 2008.  
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6. Podsiadlo D, Richardson S. The timed "Up & Go" A test of basic functional mobility for frail elderly persons. J Am Geriatr Soc. 1991 Feb;39(2):142-8.