

# DIAFIT: a Swiss Physical Activity and Self Management Program Designed Specifically for Type II Diabetic Patients



Farnham S.\*, Aubert D.\*, Grand Ki.\*, Grand Ke.\*, De Almeida Gonçalves A.\*, Giordano F.\*, Bonny M.\*, Puder J.\*\*, Andrey M.\*\*, Roulet G.\*\*

\*CHUV, General Internal Medicine, Lausanne, Switzerland, \*\*CHUV, Lausanne, Switzerland

## Introduction

The number of people with diabetes, has risen from 108 million in 1980 to 422 million in 2014, of which type II diabetes represents the vast majority. Diabetes is largely associated with physical inactivity, increased obesity and dietary changes.

Diabetes has become a public health issue with rapidly increasing numbers in the morbidity and mortality of these patients. Cardio vascular training and resistance training are recommended for this population to gain general health benefits and to optimize glycemic control. The practice of physical activity and self education programs for these patients are currently insufficient and need to be further explored.

## Purpose

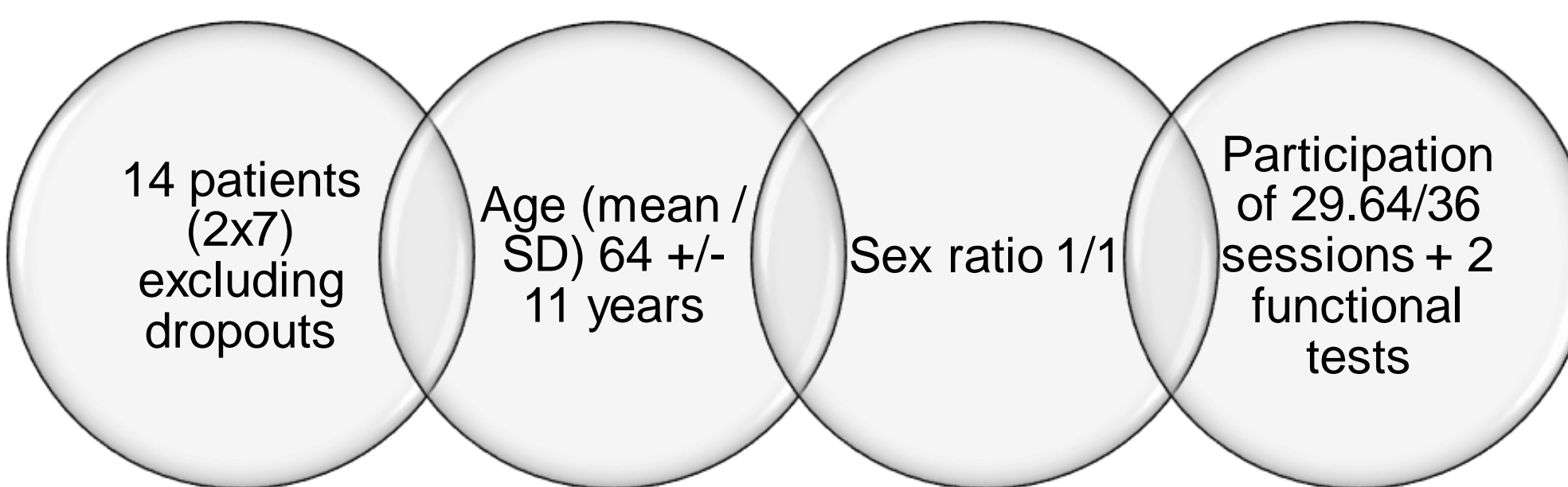
To present and evaluate the "DIAfit" program in 2018, offered for type II diabetic, adult outpatients, at the CHUV, Lausanne, Switzerland.

**Inclusion criteria**

- >18 years
- Diabete II > 3 months

**Exclusion criteria**

- Foot ulceration
- Ischemia during an exercise test or stage III peripheral vascular disease
- Untreated proliferative retinopathy and autonomic neuropathy with unstable blood pressure during the exercise stress test



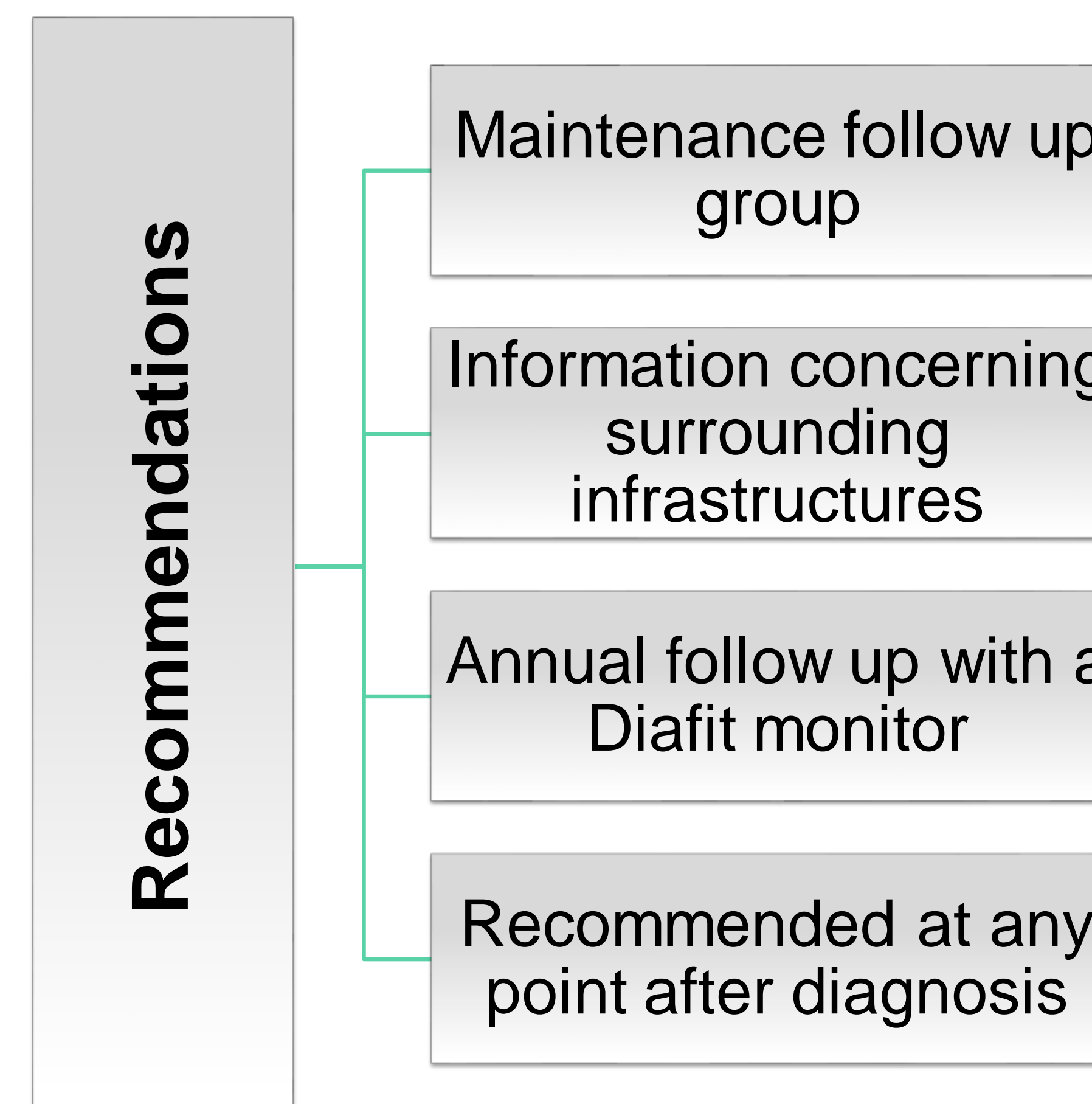
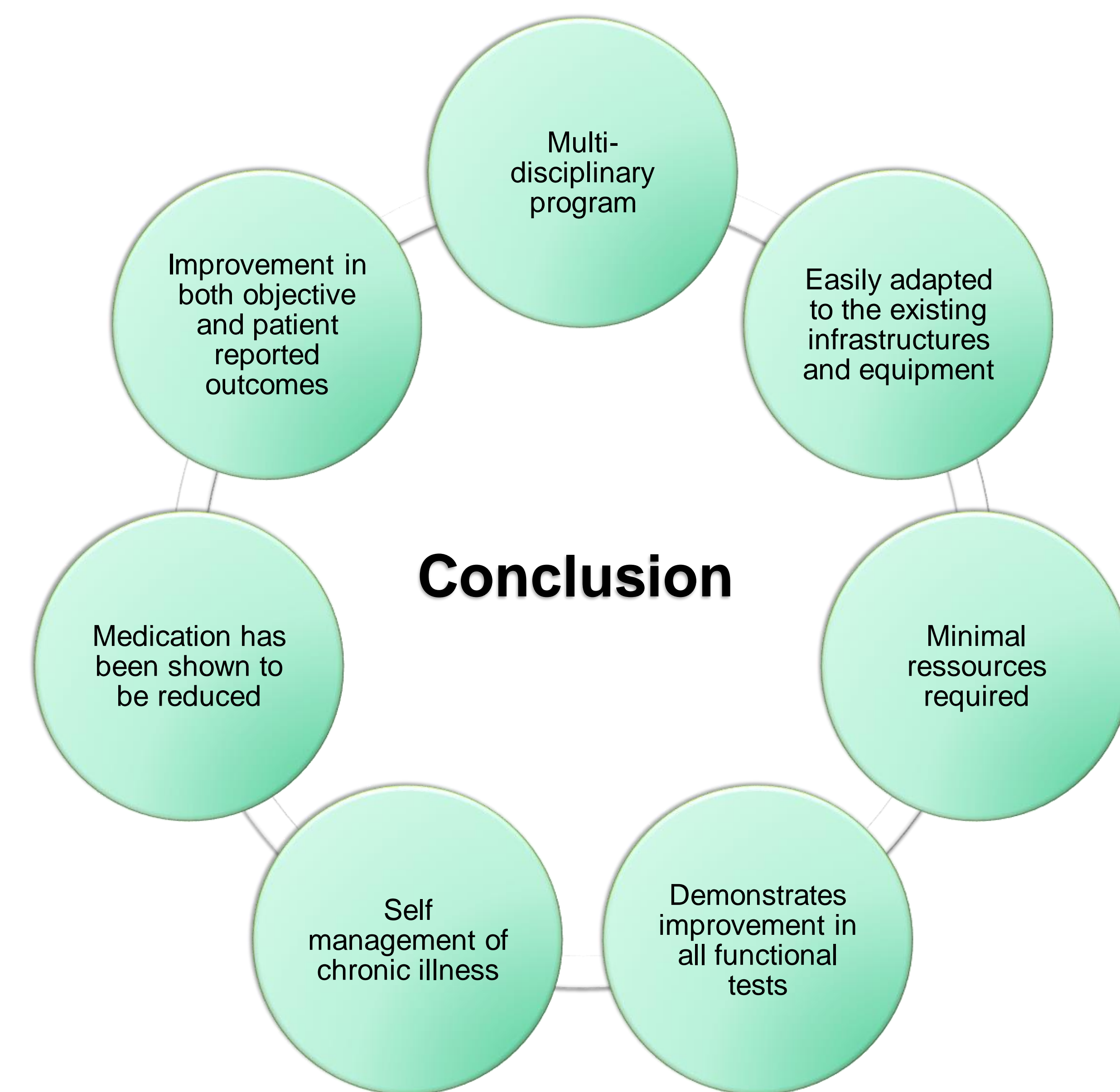
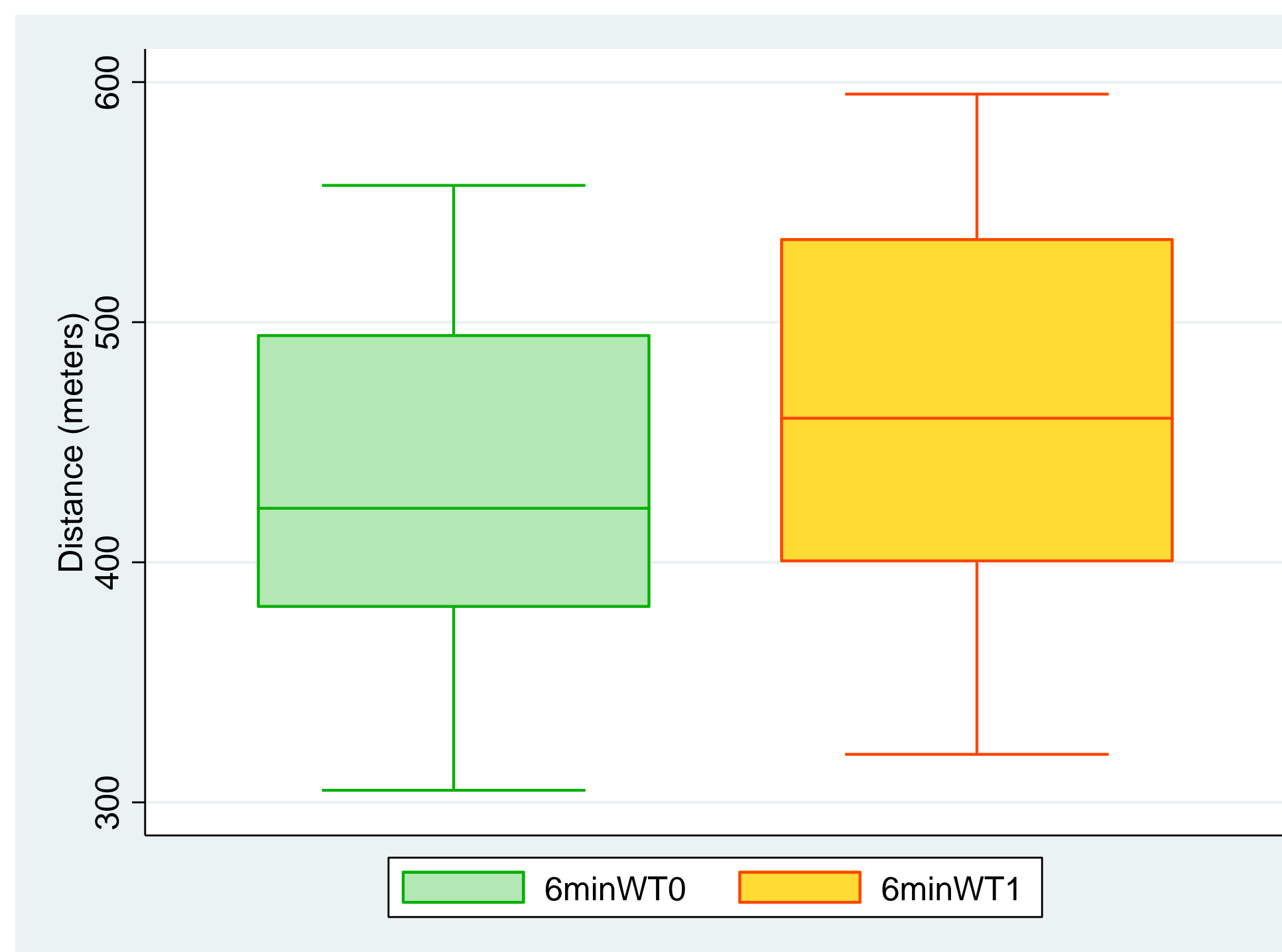
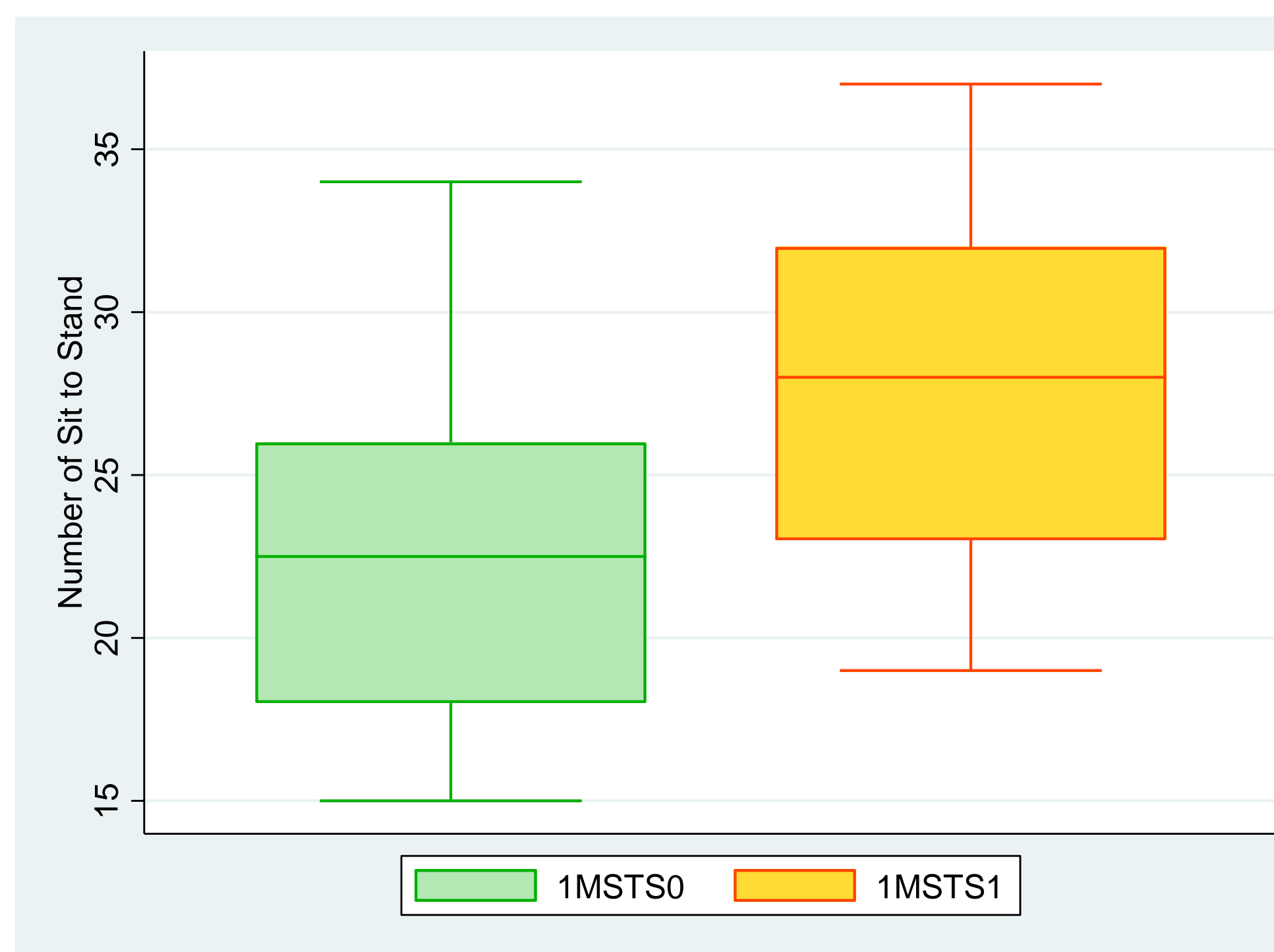
## Method

14 patients took part in this multidisciplinary program consisting of 36 sessions (aquatic, resistance and aerobic exercises), over a 3 month period. 3 sessions per week, no more than 2 consecutive days without exercise. 5 workshops were presented by different health professionals (dietician, specialist diabetes nurse, diabetes doctor, and physiotherapist) to help patients with their self management. Functional tests were carried out before and at the end of the 36 sessions (one minute sit to stand (1MSTS), 6 minute walking test (6minWT), 10 meters walking test (10MWT), finger to floor distance (FFD), and the one leg stance (OLS).

Blood glucose levels were taken before and after each exercise session.

## Results

In total 14 patients completed the program. The mean total of participation was 28 sessions. The results are presented as mean values. There were significant improvements in the **1MSTS** (+4.64 nbr; SD 2.82; CI 95% 3.01 to 6.27;  $p=0.0016$ ), in the **6minWT** (+28.86 m; SD 33.50; CI 95% 9.51 to 48.20;  $p=0.0011$ ), in the **10MWT** (-1.35 sec ; SD 0.93; CI 95% -1.90 to -0.82;  $p=0.001$ ) and **FFD** (-3.36 cm; SD 5; CI 95% -6.29 to -0.44;  $p=0.027$ ). There was also an improvement in the **OLS** (+3.73 sec; SD 9.30; CI 95% -1.6 to 9.10;  $p=0.09$ ).



## References

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