

Inquiry into Diabetes Response to Questions on Notice and Supplementary Information

Health, Aged Care and Sport
Standing Committee
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RESPONSE TO QUESTIONS ON NOTICE AND SUPPLEMENTARY INFORMATION

1. NUMBER OF ESSA MEMBERS THAT IDENTIFY AS ABORIGINAL OR TORRES STRAIT ISLANDERS

There is a total of sixty-nine (69) of ESSA's members that identify as Aboriginal or Torres Strait Islander. Five-Four (54) are Accredited Exercise Physiologists (AEPs) and Fourteen (14) are Accredited Exercise Scientists (AES). This figure constitutes less than 0.007% of ESSA's membership. Disclosure of this status is optional for ESSA members.

Case study: Too Deadly for Diabetes Program

The Too Deadly for Diabetes Program is a research-based program that are run through local Aboriginal Medical Services in rural and remote New South Whales, and targets those with, or at risk of, type 2 diabetes. Too Deadly for Diabetes is an initiative by Ray Kelly, who is a proud Gomerioi man, an Accredited exercise Physiologists and and ESSA member. Ray engages with the local Indigenous community and health care providers to identify obstacles and design strategies that are delivering improvement in clinical health outcomes, via a holistic approach that includes exercise and education, and incorporates motivation and local contribution to achieve success.

Duration: 10 weeks.

Cost: The program is **free** for participants.

Assessment metrics: Pre and post individual assessments.

Delivery: The program runs for 10 weeks and incorporates codesign with community. This increases participation success because we work in with those who understand the local issues and these adjustments are made to the program. The goal is to have the individual and the community self-manage for the future so it is imperative that they have input into the program.

Funding: The program is usually funded directly by the Aboriginal Medical Service, or by the local Primary Health Network. However, funding has recently been provided directly by the NSW Health Minister.

Referrals: Through the NDSS, self-referred or GP.

Demonstrated results: Improvements s are reported in participants blood sugar and blood pressure typically within the first 14days. Improvements are demonstrated in cardiovascular fitness, strength, balance, and reduction in diabetes related comorbidity. Improvements are also demonstrated in weight loss of 5%-10% initial body weight, systolic blood pressure <140 and diastolic blood pressure <95, reduction in medication reliance and patients being educated and empowered to self-manage.

[A mixed-methods evaluation of an urban Aboriginal diabetes lifestyle program - Power - 2021 - Australian and New Zealand Journal of Public Health - Wiley Online Library](#)

2. POTENTIAL WORKFORCE AVAILABLE

The following is a table of graduates from ESSA accredited university courses. ESSA does not have oversight of the number of graduates from unaccredited exercise and sports science courses in Australia or a list of these courses.

Table 1: Graduates from ESSA Accredited University Courses

Graduate Year	Exercise Science Only	Combined ES + EP Courses	Exercise Physiology Only	Total EP
2017	1619	466	315	781
2018	1751	470	300	770
2019	1690	466	322	788
2020	1696	425	389	814
2021	1926	518	402	920
2022	1635	405	579	984
Average/year	1719	458	384	842

2.1. Exercise Science Workforce

Once students complete their study, they are eligible for accreditation with ESSA. In 2022 only 480 of the potential 1635 Exercise Science Only graduates (Table 1) who completed an ESSA Accredited Course **applied** for accreditation with ESSA. Out of this figure there were an additional 55 who applied for accreditation that didn't complete an ESSA Accredited Course. ESSA Accreditation is not mandatory for exercise scientists to work.

Our estimation of an available unaccredited exercise science workforce for the last 4 years has been calculated with the following limitations:

- Graduates from unaccredited courses have not been considered.
- Attrition is based on a diminishing figure of 30% per year loss to working in exercise science. This includes those that go on to further study to become an exercise physiologist or other health professions.
- Graduate numbers from Accredited exercise science courses are stable, using average from table 1, i.e. 1719 graduates per year
- Application for ESSA Accreditation is stable at about 480 applications per year

Using these data limitations, over the last 4 years ESSA estimates that there are an **additional 4435 exercise science graduates that are working in Australia but are not accredited with ESSA**. This number cannot be confirmed and does not account for an existing workforce still working in the sector from a period prior to 2019. **This is an underestimate of available workforce who work as exercise scientists.**

There is currently 1008 exercise scientists accredited with ESSA.

The university qualified exercise science workforce suffers from a professional identity issue as the depth of their knowledge and skills is not fully understood in the community nor by policy and decision makers. This lack of professional recognition, results in limited employment opportunities. One clear area of work opportunity exists under the ESSA Task Delegation Framework. Using this framework, exercise scientists can work under the supervision of an Accredited Exercise Physiologist in a clinical setting [1]. They also find employment in environments where health and fitness services are delivered but are often competing with personal trainers with a Certificate qualification.

A review is currently underway by the Australian Bureau of Statistics for the [Australian and New Zealand Standard Classification of Occupations \(ANZSCO\)](#). A proposal has been put forward to include a code for Exercise and Sports Scientists. If successful and over time, this will provide a more accurate figure of the exercise science workforce.

2.2. Exercise Physiology Workforce

Compared to exercise science, ESSA can provide accurate information on the number of people working as an Exercise Physiologist in Australia. ESSA adheres to the regulation standards set out by the [National Alliance of Self-Regulating Health Professions \(NASRHP\)](#). All exercise physiologists must be accredited with ESSA to be registered as a provider with Medicare along with other compensable schemes such as Department of Veteran Affairs (DVA), National Disability Insurance Scheme (NDIS), Workers' Compensation Schemes and Private Health Insurers.

Table 2: Growth of Accredited Exercise Physiologist in the last 4 years

Date	AEP	% annual growth
30/11/2020	6240	
30/11/2021	6968	11.67%
30/11/2022	7680	10.22%
30/11/2023	8366	8.93%

Note: 488 exercise physiologists work in the Public System

Based on the average in Table 1, ESSA anticipates that almost 850 graduates from exercise physiology courses will apply for accreditation from now an into early in the New Year. Combined with figures in table 2 the available workforce for exercise physiology is expected to continue to grow and will exceed 9,000 in 2024.

The growth of the exercise physiology workforce and the underutilisation of the current exercise science workforce demonstrates that there is an available and growing workforce that could support additional funding provided by government for exercise services for people with diabetes.

3. LITERATURE AND REPORTS

During the hearing ESSA agreed to supply details of additional literature and reports. These are noted below.

3.1. Supervised and Unsupervised Exercise Training

The title of the article highlighted at the public hearing is titled, *Comparing the Efficacy of Supervised and Unsupervised Exercise Training on Glycaemic Control in Type 2 Diabetes: A Systematic Review* [2]. Link to abstract [here](#). ESSA received advice through the secretariat office of the House Standing Committee on Health, Aged Care and Sport that the full article could be accessed through the parliamentary library.

Authors of this published literature that are members of ESSA - Professor Jeff Coombes, Dr. Shelley Keating.

Direct quotes from this systematic review [2]:

..... supervised exercise training was associated with a decline in HbA1c, physical activity advice alone did not have the same effect.

Unsupervised training is different from physical activity advice alone in that participants receive formal instructions on exercise and where progression is individualised and possibly monitored regularly. Therefore, while physical activity advice alone may not be sufficient for motivating people with T2D to do the exercise required for improving blood glucose control, in contrast, where participants receive formal instructions to exercise, individualised programs, a log book, and regular phone calls, there appears to be the potential to improve physical activity levels which may lead to improved blood glucose control away from a supervised setting.

3.2. Position statement on Diabetes

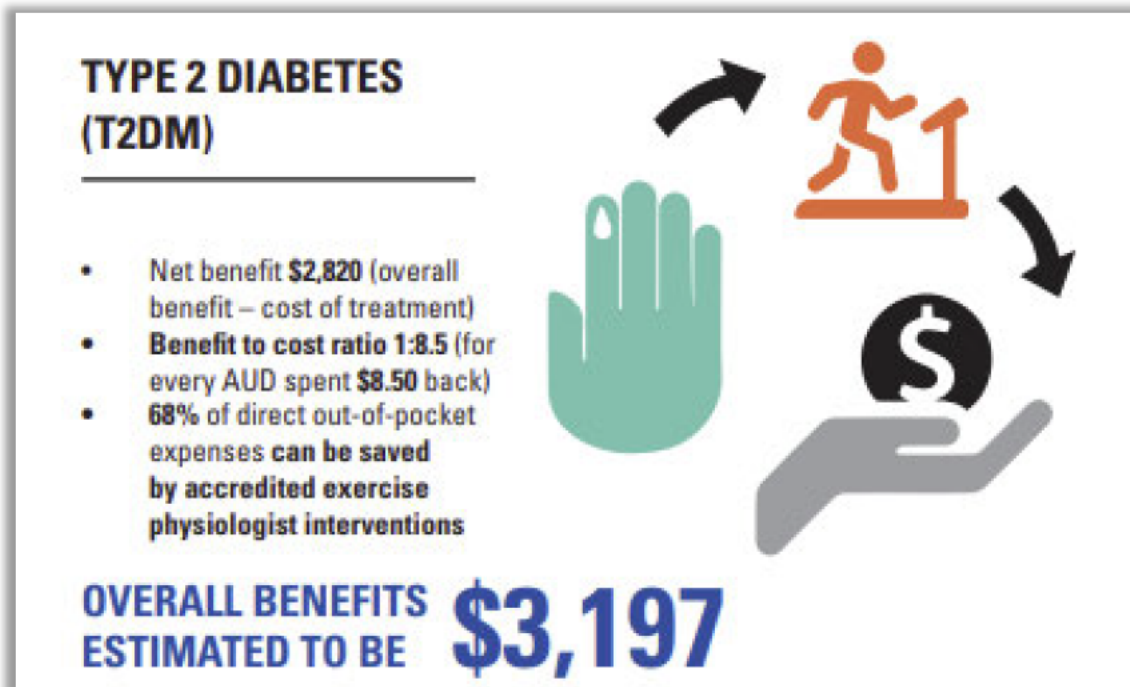
Exercise prescription for patients with type 2 diabetes and pre-diabetes: A position statement from Exercise and Sport Science Australia [3]. Link to abstract [here](#). The full article can be downloaded from [ESSA Position & Consensus Statement page](#) under the heading Chronic Disease and Conditions. A group of authors are currently updating this position statement and it is anticipated for release in late 2024.

Authors of this published literature that are members of ESSA - Professor Jeff Coombes, Professor David Dunstan and Professor Maria Fiatarone Singh.

3.3. Value of Exercise Physiology

In 2015, Deloitte release a report on The value of accredited exercise physiologists in Australia [4]. The full report can be downloaded from [ESSA Industry Reports page](#) under the heading Deloitte Reports.

An entire chapter is devoted to pre-diabetes and type 2 diabetes in the report. At the time of writing this report the benefit to cost ratio for every \$1 AUD spent was \$8.50 AUD saved, see image below.



4. FURTHER INFORMATION

This can be obtained by contacting policy@essa.org.au

Yours sincerely

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5. REFERENCES

1. Exercise & Sports Science Australia, *Task Delegation Framework*. 2023, Exercise & Sports Science Australia.
2. Gajanand, T., et al., *Comparing the efficacy of supervised and unsupervised exercise training on glycaemic control in type 2 diabetes: a systematic review*. *Current diabetes reviews*, 2020. **16**(6): p. 570-579.
3. Hordern, M.D., et al., *Exercise prescription for patients with type 2 diabetes and pre-diabetes: a position statement from Exercise and Sport Science Australia*. *Journal of Science and Medicine in Sport*, 2012. **15**(1): p. 25-31.
4. Deloitte Access Economics, *Value of Accredited Exercise Physiologists in Australia*,. 2015.