

Online adaptation of a lifestyle modification program effective for culturally diverse communities

Dr Emily You¹, Kristie Cocotis¹, Kim Hider¹

1. Diabetes Victoria

Prevention Health Conference, 11-13 May 2022

Acknowledgement of Country



*Artwork: Journey, Commitment & Respect
Artist: Emma Bamblett - Wemba Wemba*

Diabetes Victoria acknowledges the traditional custodians of our lands and pays respect to their Elders, past and present. We strive to reduce the impact of diabetes on Aboriginal and Torres Strait Islander people living in Victoria.

- ❑ **Evidence suggests the great potential of lifestyle programs to prevent or delay the development of type 2 diabetes and cardiovascular disease (CVD)**

- ❑ ***Life!* culturally and linguistically diverse (CALD) program, as a lifestyle modification program**
 - Piloted in CALD communities (Vietnamese (2013), Chinese (2015) and Arabic (2019), and commenced in simplified English language in 2014.
 - Offered to all Victorian adults at risk of type 2 diabetes and/or CVD with a CALD background and speaking these languages.

- ❑ **Key features of the *Life!* CALD program**
 - Victorian Government funded & managed by Diabetes Victoria
 - Free & facilitated in local communities by qualified health professionals
 - One Introductory Session & six Group Sessions over 12 months
 - Core session topics: healthy eating, physical activity, stress management, sleep and managing challenges.

CALD program design & adaptation due to the COVID-19 pandemic

Intervention Sessions		Session timeline	Pre pandemic (face-to-face delivery)	From Mar 2020 (Online delivery via Zoom/WeChat)
Introductory Session	Welcome & rapport building	Week 1	60 mins/participant (individual session)	45 mins/participant (individual session)
Session 1	Group interaction & knowledge of risk factors	Week 3	120 mins/group at each session	45 mins/group
Session 2	Healthy eating	Week 5		60 mins/group
Session 3	Physical activity	Week 7		60 mins/group
Session 4	Wellbeing (e.g., sleep, stress management)	Week 9		60 mins/group + 15 mins of data collection/individual discussion
Session 5	Progress (e.g., managing setback)	6 months		
12-month Session	Follow-up (e.g., tackling challenges)	12 months		

- ❑ **Study aim:** To evaluate the effectiveness of the CALD program delivered in online group format during the COVID-19 pandemic.

- ❑ **Methodology**
 - Single-group, pre-post study design.
 - Data collection period: 13 months (1 July 2020-1 August 2021)
 - Participants: Those enrolled into the program in the 2020/21 financial year.
 - Outcome measures: Program reach & retention, and 6-month outcomes (fat/fibre score, physical activity minutes/day, weight and waist circumference).
 - Data analysis: paired-t test, Wilcoxon Signed Ranks Test.

Key findings

CALD program	2019-2020 FY (Jun 2019-Feb 2020: face-to-face delivery; Mar-Jun 2020: online delivery)	2020-2021 FY (Online delivery)
Reach		
Number of participants reached/enrolled (n)	340	456 (increased by 34.1%)
Gender	Women: 217 (63.8%) Men: 123 (36.2%)	Women: 312 (68.4%) Men: 144 (31.6%) (decreased by 4.6%)
Age (mean (SD))	58.5 (15.1) years	58.0 (13.5) years
Priority populations from Victorian local government areas (LGAs)	<ul style="list-style-type: none"> • 190 (55.9%) from disadvantaged LGAs • 108 (31.8%) from low SES LGAs • 1 participant from rural/regional LGA. 	<ul style="list-style-type: none"> • 84 (18.4%) from disadvantaged LGAs (decreased by 37.5%) • 39 (8.6%) from low Socioeconomic Status (SES) LGAs (decreased by 23.2%) • 4 participants from rural/regional LGAs.
Retention		
Session 5 retention (n (%))	29 (8.5%)	192 (42.1%) (increased by 33.6%)

Key findings: Program effectiveness

192 participants in the 2020-21 cohort completing Session 5 online

- Mean age: 60 years old
- 68.8% women
- 25% Bachelor degree or above
- 86.5% low income
- 19.3% employed
- 81.3% married/de facto
- 13.5% from hotspot/disadvantaged LGAs
- 6.3% from low SES LGAs

Changes in outcomes over 6 months

Baseline vs. Session 5

Increase in mean fat/fibre score (range 1-5) (n=192)

3.10 vs. 3.56 (p<0.001)

Decrease in physical activity (minutes/day) (n=192)

90.9 vs. 79.0 (p<0.001)

Decrease in sitting behaviours (hours/weekday) (n=192)

5.1 vs. 4.9 (p=0.116)

Decrease in weight (kg) (n=132)

66.3 vs. 65.2 (p<0.001)

Decrease in waist circumference (cm) (n=118)

86.2 vs. 84.8 (p<0.001)

Life! participant story



Participant profile: Hoa, in his 30s, born in Vietnam, joined the *Life!* program in October 2017 and completed the program in October 2018.

“Before starting the program, I didn’t spend enough time doing moderate or vigorous exercise and was often stressed out about work and family. The Life! program changed that.”

“I have learned how to cook my favorite meals in a healthier way. I have also changed the way I exercise... I have also learned how to better control my worries”

“What I liked most about the program is its holistic approach. I not only learned how to improve my eating habits, physical activity and stress management; the program also taught me how to measure my success and the importance of regularly reviewing my goals and commitments.”

□ Program reach and retention

- The program's transition to online delivery during the COVID-19 pandemic affected program reach and retention in 2019-2020, particularly in Mar-Jun 2020. The pandemic and the online delivery may also reduce the program's ability to reach some priority populations in 2020-2021.
- **An increase of 34.1%** of participants enrolled into the program and **an increase of 33.6%** completing Session 5 in 2020-2021 indicate the maturity and suitability of the online delivery approach used to engage CALD communities.

□ Program effectiveness

- In 2020-2021 statistically significant improvements were identified in participants' weight, waist circumference and fat/fibre intake over six months.
- These findings indicate the great potential of using an online delivery approach to achieving program effectiveness during the pandemic.

Study limitations

- Non-experimental study design (no comparison group).
- Self-reported data by participants via mail or email affecting the data quality.
- Missing values for the weight and waist outcome measures (not mandatory during the pandemic) affecting the reliability of the findings.
- Not comparing the program effectiveness between the 2020-2021 cohort and the 2019-2020 cohort (due to its inadequate sample size).

Key recommendations

- ❑ Improve program reach for some priority populations, such as individuals from rural/regional areas, hotspot/disadvantaged LGAs and low SES LGAs.
- ❑ Improve data quality including improving the accuracy of self-reported data and addressing missing data.
- ❑ Consider continuing to offer the online delivery option post the COVID-19 pandemic.

- ❑ Galaviz, K. I., Weber, M. B., Straus, A., Haw, J. S., Narayan, K. M. V., & Ali, M. K. (2018). Global Diabetes Prevention Interventions: A Systematic Review and Network Meta-analysis of the Real-World Impact on Incidence, Weight, and Glucose. *Diabetes Care*, 41(7), 1526-1534.
- ❑ Lindstrom, J., et al. (2003). The Finnish Diabetes Prevention Study (DPS): Lifestyle intervention and 3-year results on diet and physical activity. *Diabetes Care*, 26(12): 3230-3236.
- ❑ Uusitupa, M., et al.(2003). Long-Term Improvement in Insulin Sensitivity by Changing Lifestyles of People with Impaired Glucose Tolerance: 4-Year Results From the Finnish Diabetes Prevention Study. *Diabetes*, 52(10): 2532-2538.
- ❑ Lindström, J., et al. (2006). Sustained reduction in the incidence of type 2 diabetes by lifestyle intervention: follow-up of the Finnish Diabetes Prevention Study. *The Lancet*, 368(9548): 1673-1679.

Acknowledgement:

The authors would like to acknowledge the Victorian Department of Health for the funding support, and the support of the central *Life!* team, *Life!* program providers (external workforce) and *Life!* participants.

Contact:

Dr Emily You
Evaluation Coordinator
Prevention and Health Promotion, Diabetes Victoria
T 03 8648 1803
E eyou@diabetesvic.org.au
W www.lifeprogram.org.au



The *Life!* program is supported by the Victorian Government