

An Implementation Evaluation of the Australasian Peers for Progress Diabetes Program

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Background

- ▶ Type 2 Diabetes Mellitus is one of the major challenges confronting health systems and economies around the world.
- ▶ The expected increase in diabetes cases by 55% (642 million people) by 2040, will demand more health care resources.
- ▶ New effective ways are needed to improve diabetes self-management and control outcomes in people with diabetes.

Peer support for diabetes

- ▶ The complex nature of diabetes and an ongoing emotional, behavioural and social support.
- ▶ In recent years, peer support programs are seen as a promising approach in assisting people with diabetes on an ongoing basis.
- ▶ Peer support refers to the **provision of emotional and informational support, and practical assistance from people who have experiential knowledge** of a condition.
- ▶ Evidence supports the positive impact of peer support on improving self-management and control.
- ▶ WHO has endorsed it as a feasible, cost-effective and flexible intervention.

Peers for Progress Program

- ▶ Recognizing the need to build the evidence base for peer support, the American Academy of Family Physicians Foundation initiated Peers for Progress Program in 2006 <<http://peersforprogress.org>>
- ▶ In 2009, 14 grants were awarded in 9 countries to evaluate, demonstrate and promote peer support.
- ▶ The **Australasian Peers for Progress - Diabetes Project**, aimed to implement and evaluate a peer-led, group program to provide support to people with T2DM in Victoria, Australia.

Australasian Peers for Progress - Diabetes Project

- ▶ Community-based peer-led group-based support program directed towards four key peer support functions:
 - ▶ 1) assistance in **daily management**,
 - ▶ 2) providing **social and emotional support**,
 - ▶ 3) promoting and supporting **regular linkage to clinical care** and community resources, and
 - ▶ 4) provision of **ongoing and sustained support**.

Study design, setting and recruitment

- ▶ A **cluster randomised controlled trial** of a peer-led group-based support program for people with T2DM.
- ▶ **Victorian residents** aged between **25 and 75 years** with T2DM enrolled on the **NDSS database** for more than 12 months were invited to seek further information.
- ▶ **24 support groups** consisting of **273 participants** (10–11 group members and 1–2 peer leaders with diabetes per group) from 24 study locations were selected and randomly allocated to equal numbers of intervention (12) and usual care (12) groups.

Intervention program

- ▶ Intervention participants received monthly group meetings facilitated by a trained peer leader for 12 months.
- ▶ Opportunities for shared activities outside of the group meetings.
- ▶ Educational resources including diabetes education booklets and DVDs.
- ▶ Group members were supported and encouraged to improve their relationship with their clinical care provider.
- ▶ Ongoing social and emotional support provided by both peer leaders and group members.

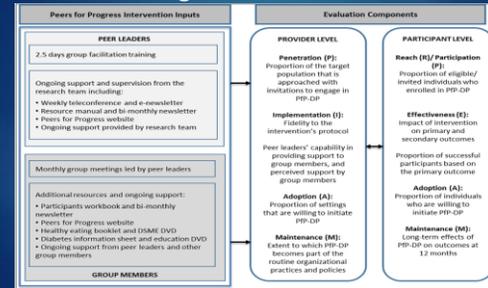
Primary and Secondary Outcomes

- ▶ **Primary Outcome:** The predicted 5 year cardiovascular disease risk using the United Kingdom Prospective Diabetes Study (UKPDS) Risk Equation at 12 months.
- ▶ **Secondary Outcomes:** Clinical measures, quality of life, measures of support, psychosocial functioning and lifestyle measures.
- ▶ **Result:** At the end of 12-months, a small reduction in 5 year UKPDS risk in both the usual care and the intervention arms were observed and the mean values for biochemical and anthropometric outcomes were close to target at 12-months.

Implementation Evaluation

- ▶ We evaluate the implementation including:
 - ▶ Program's reach, penetration and participation;
 - ▶ Intervention's fidelity;
 - ▶ Perceived support by the participants,
 - ▶ Participants' satisfaction, and willingness to continue to use the strategies learnt through this intervention; and
 - ▶ Barriers to participation in the program.
- ▶ Glasgow's RE-AIM framework, and Pronk's PIPE Impact Metric.

Evaluation Logic Model for PFP-DP



Provider-level measures - Penetration

- ▶ Out of the 9,580 NDSS registrants who were deemed eligible, 7,576 were sent letters of invitation and information pack through postal mail. The pack had information about the Australasian PFP-DP and a detachable address form with reply-paid envelope to contact the project team if the individual was interested in receiving further information about participating in the study.
- ▶ **Penetration Coefficient:** Penetration for this trial was calculated as $7,576 / 9,580 = 0.790$ (**79.0%**).

Provider-level measures - Implementation

- ▶ 2 ½ days of group facilitation training was delivered as planned. Of the 20 peer leaders for the intervention arm, **19 (95%)** leaders completed the training.
- ▶ The research team organised a weekly one-hour teleconference for 43 out of 47 weeks (**91%**). **61%** of leaders attended at least 1 teleconference per month.
- ▶ **92%** of peer leaders rated 8 or more for the training, and **69%** stated that the training prepared them "extremely well" in delivering support to their groups.
- ▶ **85%** leaders stated that the weekly teleconferences, weekly e-newsletters, and Peers for Progress Website provided them "moderate" to "a lot of support".
- ▶ **77%** stated that they would like to continue to lead their peer support group after the completion of the formal intervention

Provider-level measures - Implementation

- ▶ Monthly group meetings were organised as scheduled for 11 of the planned 12 groups (**92%**) at a location convenient to the group members.
- ▶ Nine out of 11 groups recorded an average attendance of **59%** over the 12-month intervention. Two groups did not provide regular data on attendance.
- ▶ **Implementation Coefficient:** We calculated the implementation coefficient by assessing the three major components delivered during the intervention i.e. Peer leaders training (**95%**), Weekly teleconference (**91%**), and Monthly group meetings (**92%**). Hence, the implementation coefficient is determined to be 0.93 (**93%**).

Provider-level measures - Adoption

- ▶ 24 clusters within 20 locations in the state of Victoria were recruited for the study. Twelve clusters were randomised and allocated to each control and intervention arms, out of which 11 clusters received the intervention.
- ▶ **Adoption Coefficient:** Setting-level adoption was calculated as $11 / 12 = 0.916$ (**91.6%**).

Participant-level measures – Reach/Participation

- ▶ Out of 7,576 mailinvites, the EOI were received by 501 (**6.9%**) individuals. Of these, 441 (88.0%) persons were eligible to enter the study and were sent recruitment packs and consent forms. Of these, 290 (65.7%) provided informed consent, however, 17 (5.9%) withdrew their consent. Thus 273 individuals (94.1%) were available to participate in 24 groups.
- ▶ Of 273 individuals willing to participate, 33 volunteered and were deemed suitable for the role of peer leaders. Out of the remaining 240 participants, 120 (50%) were allocated into 12 groups in each of the intervention and control arm.
- ▶ **Reach Coefficient:** Out of a total of 441 eligible individuals, 273 were willing to participate. Hence, the reach coefficient is calculated to be $273 / 441$ i.e. 0.619 (**61.9%**).
- ▶ **Participation Coefficient:** Out of a total of 7282 individuals who were sent mail invites to participate in the trial, 273 (3.7%) were enrolled. Hence, the participation coefficient is $273 / 7282$ i.e. 0.037 (**3.7%**).

Participant-level measures – Effectiveness

- ▶ The proportion of participants who showed improvement in the primary outcome i.e. reduction in 5 years UKPDS risk score was 0.651 (**65.1%**) in the intervention arm and 0.448 (**44.8%**) in the usual care group. Hence, **Effectiveness Coefficient** = 0.651 (**65.1%**).
- ▶ The findings of the effectiveness of the intervention delivery according to four key peer support functions are published. At the end of 12-months, two-thirds (N = 81, 67.5%) of the intervention participants completed the evaluation questionnaire.

Participant-level measures – Adoption and Maintenance

- ▶ According to RE-AIM, participant-level 'adoption' refers to reach and participation which is reported above.
- ▶ Similarly, participant-level 'maintenance' refers to long-term effectiveness, which is already reported under effectiveness.

Barriers to participation in program

- ▶ Five peer leaders reported barriers to participation in the monthly sessions by group members including health issues and lack of time.
- ▶ One peer leader stated that the timings of the group meetings were not suitable for some participants.
- ▶ 44% of the group members reported one or more factors including health issues (37%), lack of time/work commitments (37%), location/timings (37%), and issues in family/family commitments (14%) as a barrier to participation.

Willingness to continue Behavioural change

- ▶ The majority of participants stated that they intended to continue to use strategies learnt in this program including healthy diet (91%), seeking timely clinical care (82%), regular exercise (77%), blood glucose monitoring (76%), and utilising social and emotional support (74%), beyond the intervention duration.

KF 1: Assistance in daily management of diabetes

- ▶ 94% participants reported that the PfP-DP helped them manage their diabetes on a day to day basis 'all the time' (18%) and 'to some extent' (76%).
- ▶ Only 6% group members stated that the PfP-DP did not help them at all in managing their diabetes.
- ▶ More than 90% of the group members stated that they were supported by their peer leaders in setting specific goals to improve their eating or exercise, in learning skills and behaviours to take care of their diabetes, and in solving problems that came up in taking care of their diabetes.

KF 2: Provision of promotion and social and emotional support

- ▶ 78% and 72% group members indicated that their peer leaders and other group members respectively supported them in dealing with stress.
- ▶ About one-third (28%) felt that they could not call upon their peer leaders or other group members when they were feeling low or needed help from them.
- ▶ 68% of participants when asked if they had received any ongoing social and emotional support in relation to their diabetes, besides participating in this program, responded that they had received additional support, mainly from their GPs and family members.

KF 3: Assistance in creating linkage with clinical care services

- ▶ Group members reported that the peer leaders reminded them to see their health care providers, very often (40%) to some of the time (38%), even when they were not sick.
- ▶ Group members reported that peer leaders made referrals to community resources to help participants with clinical care from 'very often' (31%) to 'some of the time' (39%).
- ▶ 78% of participants stated that their peer leaders asked them about problems with their medicines or their effects.
- ▶ 68% and 59% participants felt that their peer leaders and other group members respectively have helped them build better communication skills to use during their health care visits.

KF 4: Provision of ongoing support to assist with diabetes self-management

- ▶ 75% and 63% of participants stated that they were able to contact and reach their peer leaders and other group members respectively, outside the monthly group meetings.
- ▶ 75% of the participants felt that their peer leaders maintained contact with them, and worked with them over time to help them manage their diabetes.
- ▶ 95% of the participants stated that peer leaders and other group members were able to contact them outside of the monthly group meetings.
- ▶ Diabetes Information Sheets, Healthy Eating Booklet, Diabetes Education and Manual, and Support Share Learn Live Newsletter provided a lot of support to 59%, 55%, 48% and 41% of participants respectively.
- ▶ Overall, attending monthly group meetings provided 'a lot of support' to 57% and 'moderate' support to 34% of the participants.

Public health impact / Program net impact

- ▶ Coefficients from four elements of the PIPE framework were used, to calculate the net program impact as the product of all four PIPE Impact Metric elements, i.e.
Penetration (0.790) X Implementation (0.927) X Participation (0.037) X Effectiveness (0.651) = 0.0176 (1.76%).
- ▶ Despite the very high rate of penetration (79%) and implementation (92.7%), and moderate effectiveness (65%), the net program impact (1.76%) of the PfP-DP intervention remains very low, a likely reflection of the low participation rate (3.7%).

Key Learnings

- ▶ While the penetration into target population was quite high (79%), it did not translate into high participation rate.
- ▶ Interestingly, our calculation of reach (61.9%) and participation (3.7%) shows an enormous difference between these two concepts.
- ▶ We utilised a low-intense, low-cost and common method of recruitment which would be amenable to scale up. However, future program planners should review the design and marketing strategies of the program.

Key Learnings

- ▶ Our current calculation of PIPE Impact Metric shows a small overall impact of **1.76%**, which, although low, should be placed in the context of what may be a 'theoretically' realistic impact in the real-world settings.
- ▶ The PIP-DP has been moderately effective with an individual success rate of 65% in the intervention arm, but the effectiveness of the overall program is dramatically diminished due to the very low participation rate.
- ▶ PIPE Impact Metric: **Penetration (0.790) X Implementation (0.927) X Participation (0.037) X Effectiveness (0.651) = 0.0176 (1.76%)**.
- ▶ In a hypothetical scenario for a similar program, keeping all the PIPE coefficients the same as PIP-DP except inputting a participation rate of 20% instead of 3.7%, the overall program impact could increase to almost 10%, while similar increase in effectiveness would only give a 2% impact.

Key Learnings

- ▶ The assessment of the overall public health impact of an intervention could be invaluable in guiding and informing future translation and dissemination of the results into policy and practice. Hence, program planners should focus on employing thorough evaluation methods in public health programs.
- ▶ Finally, our findings show that a group-based, peer support program to assist people in improving diabetes control, is feasible and acceptable as measured by provider- and participants-level factors. However, further refinements are needed for improving the participation rates in future programs

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Thank You