

## Peer support telephone calls for improving health (Dale J et al. 2008)

### *focus of the review*

The aim of this Cochrane review was to:

- Evaluate the effects of peer support telephone calls on health (physical, psychological, behavioural and other) outcomes and quality of life for patients and their carers.

The review also aimed to:

- Identify those health areas in which peer support telephone calls have been most successful;
- Identify the factors contributing to success (and associated with improved health outcomes); and
- Use these to develop an intervention classification; and to explore the relationship between training and para-professionalism development among peer supporters.

### *key results of the review*

**What this review shows** about peer support telephone calls for improving health:

- Compared with usual care, peer support telephone calls may improve potential depressive symptoms among new mothers at risk for post-natal depression.
- Compared with usual care, peer support telephone calls may also encourage certain health behaviours, such as dietary changes in people with previous myocardial infarction; continuation of mammographic screening among women over 40; and improve continuation of, and satisfaction with, breastfeeding in new mothers.

**What this review does not show** about peer support telephone calls for improving health:

- The effects of peer support telephone calls on other measures of health behaviour, and health outcomes across a range of areas, compared with usual care.
- Those health areas in which peer support telephone calls are consistently effective for improving health and health behaviour outcomes; and the features of successful (effective) peer support telephone call interventions.

*This Evidence bulletin is produced by the Centre for Health Communication and Participation with funding from Statewide Quality Branch, Department of Human Services, Victoria.*

## EVIDENCE BULLETIN

1 DECEMBER 2008

### **Background to the review**

There is increasing interest in developing peer support interventions for disease-related, prevention, and health promotion issues. A range of approaches for peer support have been used including individual face-to-face sessions, support groups, online groups and telephone contact. The purpose of such interventions is to provide support and information to patients, to lighten the load of and to complement professional health services.

While there are many definitions that describe the multifaceted nature of peer support, a definition that is considered relevant to health care encompasses three categories: emotional support (including encouragement and attentive listening), appraisal support (including communication of information for self-evaluation; motivational encouragement; and reassurance), and informational support (including provision of information relevant to problem-solving). Peer support relies on the person providing the support sharing similar characteristics with the target population and having knowledge of a specific behaviour or stressor from personal experience, rather than from formal training.

Along with peer support, use of the telephone in health care is now more widespread for the delivery of interventions. Telephone contact has the advantage of being more accessible and available than face-to-face contact.

Peer telephone interventions are being used in a variety of health care contexts and for a variety of health conditions. They are used extensively in the voluntary sector. However, there has been little rigorous evaluation of their effectiveness.

There is growing awareness that people fulfilling the support role in peer support interventions may also benefit. There is evidence that volunteering may improve communication skills and improve feelings of self-worth, for example.

Non-verbal interventions, such as email/ internet-based interventions, that include a peer support element, are also on the rise.

Authors state that this review overlaps with other Cochrane and non-Cochrane reviews and that there may be shared included studies. However, this review differs from other reviews as it includes people with all types of, rather than specific, health problems; covers all settings, not just primary and community care; and focuses on telephone support provided by peers, rather than support using a variety of modes and a variety of care providers.

The scope of this review was broad. It aimed to ascertain which peer support telephone interventions were most effective, and their features, for improving health and other outcomes.

### **Consumer involvement**

INVOLVE (a national advisory group) in the UK, and Telephone Helpline Association (THA) in the UK and Ireland gave comments on the protocol and final draft of the review. Consumers also provided feedback during protocol and review stages as part of Cochrane Consumers and Communication Review Group standard editorial processes.

### **Studies included in the review**

Seven RCTs (randomised controlled trials) were included in the review, involving nearly 2,500 participants.

Three trials took place in the USA, two in Canada, one in Australia and one in the UK.

Participants' ages across the 7 included trials ranged from 16 to 74 years. Individual trials included: breast feeding women; people who had suffered a myocardial infarction; people with Type 2 diabetes; and women eligible for mammography screening.

### **Description of interventions**

Review authors included studies of peer support telephone calls based on verbal communication, and of any duration. In the 7 included trials interventions were directed to consumers, and delivered to participants in their own homes. There was wide variation in the features of interventions studied.

## EVIDENCE BULLETIN

1 DECEMBER 2008

Summary of  
the review  
continued...

Interventions in included trials were aimed at:

- Improving depressive symptoms in women after birth;
- Increasing self-efficacy in people with Type 2 diabetes;
- Increasing self-efficacy and improving diet in people recovering from myocardial infarction;
- Encouraging breast feeding in new mothers;
- Increasing mammography uptake and maintenance.

*Examples of interventions in included trials:*

- Peer volunteers contacted new mothers within 48 hours after hospital discharge. Frequency and timing of calls were negotiated with recipient.
- Peer supporters were trained on motivational interviewing and active listening skills prior to telephoning participants. Number and timing of calls was subsequently negotiated with recipient.
- Intervention 1) Peer advisor, or intervention 2) Advanced Practice Nurse, made telephone calls to participants for 12 weeks during cardiac rehabilitation following discharge from hospital. Intervention 2) included additional patient information.
- Volunteers telephoned participants up to 3 times during a 6 month intervention period for mammography—to encourage, set a date and congratulate participants on uptake where necessary.
- One session of telephone counselling was conducted annually for two years, by trained peer counsellors, about breast cancer risk and prevalence.

### **Description of outcomes**

*Outcomes in included trials included:*

- Uptake of mammogram within 6 months (Calle 1994); continuation of uptake of mammogram (Duan 2000).
- Self-efficacy at 12 weeks post-myocardial infarction (Carroll 2006).
- Self-efficacy (diabetes); clinical outcomes (eg glycated haemoglobin, cholesterol) (Dale 2007).

- Breast feeding rates post partum (Dennis 2002a).
- Depressive symptoms in new mothers (Dennis 2003b).
- Cigarette smoking rates, change of diet (Heller 1995).

### **What the review shows: summary of key findings**

#### ***Some evidence from trials***

In relation to the following outcomes, there is some evidence from trials that a peer support telephone intervention:

- Increases **mammography uptake** within 6 months (1 trial, 594 participants), and **continuation of mammography** screening among those who had previously attended (1 trial, 532 participants);
- May lead to **changes in diet** (in people with previous myocardial infarction) (1 trial, 424 participants);
- Decreases probable **major depressive symptoms** for women at risk of post-natal depression, at both 4 weeks and 8 weeks follow-up (1 trial, 42 participants);
- Improves the **rate of exclusive breastfeeding** up to 3 months and decreases the rate of maternal **dissatisfaction** with breastfeeding (1 trial, 256 participants);
- Is associated with lower levels of **satisfaction**, when compared with a specialist diabetes nurse intervention (1 trial, 231 participants).

#### ***Harms and adverse effects***

Authors conducted qualitative analysis of possible harms and adverse effects of peer support telephone interventions, including effects for both recipients and advisors for peer support telephone interventions.

They identify three major themes:

- The need of advisors to feel they were of help to the recipient;
- The sharing of experience: the difficulties of severing relationships at the end of the intervention were noted; and
- Issues around advisors becoming aware of their own anxieties and vulnerabilities. This highlighted the need for adequate training and ongoing support for peer advisors over time. (See *evidence table p7* for more detail)

## EVIDENCE BULLETIN

1 DECEMBER 2008

### **What the review does not show**

#### **Insufficient evidence from trials**

In relation to the following outcomes, there is insufficient evidence from trials to decide between groups with respect to:

**Mammography uptake** among those who had not previously attended;

**Self-efficacy, health or recovery behaviours** (including cigarette smoking), **social outcomes** or **quality of life** for people recovering from myocardial infarction;

**Self-efficacy, clinical outcomes** (HbA1c, cholesterol, BMI) or diabetes distress for people with Type 2 diabetes;

Maternal **self-esteem**, childcare **stress** or maternal **loneliness** for women at risk of post-natal depression.

#### **Conclusions**

Authors concluded that although peer support telephone interventions are effective across some health and health behaviour outcomes this review found there is not enough evidence to warrant changes in current practice.

#### **Recommendations from authors**

Authors recommend that further high-quality research evaluating the effects of peer support telephone calls on health and health behaviours be conducted. Trials should be large, include diverse populations, and should routinely evaluate outcomes at long-term follow-up.

Future trials should take account of the impact of the recruitment approach and both the quality and quantity of training given to peer support telephone advisors. Future trials should also routinely evaluate the effects of interventions upon peer advisors delivering the intervention, and collect information on potential harms to both parties.

Trials should assess a range of relevant outcomes, including those relating to both clinical and cost effectiveness of peer support telephone interventions. Trials should also clearly assess and report on the sustainability of such interventions.

Future trials should attend in detail to the design of interventions, including exploration of relevant theoretical bases for interventions; as well as evaluating the effects of a range of different recruitment, training and support strategies on intervention effectiveness. Trials should also clearly report the details of the evaluated interventions.

Finally, authors recommend that trials assess intervention quality in order to maintain the fidelity of interventions delivered; and that content analysis of calls be conducted in order to identify the types and features of those interactions that most effectively improve health and health-related behaviours.

#### **Forwarding bulletins**

Please remember you can forward bulletins on to any other interested people in your organisation or to other networks.

#### **Funding**

Bulletins are produced by Health Knowledge Network, the Centre for Health Communication and Participation, La Trobe University, with funding from Statewide Quality Branch, Department of Human Services, Victoria.

#### **Contacting us**

Helen Dilkes, Research Officer,  
Health Knowledge Network  
La Trobe University, VIC 3086.

[hkn@latrobe.edu.au](mailto:hkn@latrobe.edu.au)

03 9479 5730

**Bulletins are housed on Health Knowledge Network website:**

[www.latrobe.edu.au/cochrane/HKN/HKNBulletins.html](http://www.latrobe.edu.au/cochrane/HKN/HKNBulletins.html)

Summary of the review continued...

See the evidence table and key to results on pages 5-8 for more detail

Forwarding bulletins to others

Funding

#### **Full citation for the review:**

Dale J, Caramlau IO, Lindenmeyer A, Williams SM. Peer support telephone calls for improving health. *Cochrane Database of Systematic Reviews* 2008, Issue 4. Art. No.: CD006903. DOI: 10.1002/14651858.CD006903.pub2. Full text is available in The Cochrane Library at: [www.mrw.interscience.wiley.com/cochrane/clsysrev/articles/CD006903/frame.html](http://www.mrw.interscience.wiley.com/cochrane/clsysrev/articles/CD006903/frame.html)



*This table is part of an overview of the review created by Dr Rebecca Ryan, at The Consumers & Communication Review Group. It contains detailed data extracted from the review. The summary on the previous pages of this EVIDENCE bulletin draws on content from both this table and the review. This table uses standardised wording developed by the Review Group. A key to this wording follows the table and should be used to interpret the data.*

**Review title:** Peer support telephone calls for improving health

**Authors:** Dale J, Caramlau IO, Lindenmeyer A, Williams SM

**Description of main features**

**Aim:** To evaluate the effects of peer support telephone calls on health (physical, psychological, behavioural and other) outcomes and quality of life for patients and their carers.

The review also aimed to identify those health areas in which peer support telephone calls have been most successful; to identify the factors contributing to success (and associated with improved health outcomes) and to use these to develop an intervention classification; and to explore the relationship between training and para-professionalism development among peer supporters.

Study design:

RCT (randomised controlled trial).

Participants:

**Included:** Any person or their carers (including parents) living with an acute or long-term illness; people with psychological symptoms; and people requiring screening or who had any other types of concerns about their health or their well-being. Included trials included the following groups of people: people who had experienced a myocardial infarction (2 trials); women over 40 years and eligible for mammography (2 trials); people with type 2 diabetes (1 trial); women breastfeeding their first baby (1 trial); and new mothers with an assessed risk for post-natal depression (1 trial).

**Excluded:** None stated.

Interventions:

**Included:** Peer support telephone calls based on verbal communication, and of any duration.

**Excluded:** Studies in which the peer support component was not delivered via telephone; or in which peers did not deliver the intervention or the intervention was facilitated by non-peer deliverers (such as health professionals mediating group calls). Studies in which data could not be extracted from the peer telephone component were also excluded.

Comparison arms:

- Peer support telephone interventions versus usual care and/or another intervention type.
- One model of peer support telephone intervention versus another and/or with usual care.

Outcomes:

**Included:** Physical health outcomes; psychological health outcomes, include self-efficacy (ability to manage health-related problems); behavioural health outcomes; social outcomes; and impact on the peer supporter. Adverse effects of the intervention were also explicitly sought, including those for both the peer supporter and the recipient of the support.

**Number of studies included:** 7

**Types of studies included:** RCT

**Number of participants included:** 2,492

**Meta-analysis performed:** No; outcomes were heterogeneous across included studies therefore narrative synthesis was performed.

**Review methods:** Standard Cochrane Collaboration review methods were used, including the following: *a priori* research design provided; extensive searching, including searching for unpublished studies (grey literature); selection criteria were specified in advance and applied; list of included and excluded studies provided; quality criteria for assessment of included studies were reported and applied; methods of analysis were reported; conflict of interest stated.

**Quality:**

**Included studies:** Rated against eight distinct criteria, as follows: adequacy of sequence generation; adequacy of allocation concealment; blinding (participants; providers; outcome assessors; data analysts); incomplete outcome data assessed; and freedom from selective reporting. Authors note that overall the quality of the included studies was relatively poor. None of the included studies met all quality criteria; all were rated as unclear or not meeting at least 2/8 criteria. Sequence generation for randomisation was clear in 4 trials; and allocation concealment was adequate in 3 trials. Blinding of participants and providers was not done in each of 2 trials; blinding of outcome assessors was done in 4 trials and not done in 1; blinding of analysts was done in 3 trials and not done in 1. In all other cases blinding was unclear. Outcome data assessed was complete in 4 trials, and not done in 1, with the remainder of trials unclear on this item. All included trials were rated as free from selective reporting.

**Review AMSTAR rating (out of possible 11):** 10 - high quality review.

**Comments:** The review methods adequately met all items of the AMSTAR checklist with the exception of the item evaluating assessment of publication bias: the likelihood of publication bias was not explicitly addressed by the review.

**Setting:** *Country:* USA (3 trials), Canada (2), Australia (1) and UK (1). *Intervention:* In all trials the intervention was delivered to participants in their homes.

**Recipient:** Interventions directed to the consumer.

**Provider:** Peer advisors were recruited using a range of methods, including by volunteer coordinators with local support and user groups; through flyers, words of mouth and advertisements in local newspapers; through an email support group; and via participating churches. Six included trials reported peer training but the type of training varied and included both part and multiple day sessions. Three included trials provided additional support materials (fact sheets, resource guides, handbooks), 3 providing follow-up support (monthly meetings or supervision, or both).

**Format:** Interventions were classified according to the type of support provided, as emotional, informational or appraisal types of support (or combinations thereof). Interventions in trials included either informational support alone (3 trials); emotional support alone (1 trial); emotional and appraisal support (1 trial); or a combination of all three types (2 trials).

Training for emotional support interventions was based on the idea that the intervention used the peer advisor's ability to identify with those they were helping, and the advisor was encouraged to share personal experiences (but not health information or advice) with participants (trials aimed to improve self-efficacy and diet in people recovering from a myocardial infarction).

Interventions using informational support involved peer advisors providing low level advice (included trials aimed to increase self-efficacy and diet in people recovering from a myocardial infarction; and for increasing mammography screening in women over 40 years).

Interventions including emotional and appraisal support trained advisors in empowerment, motivational interviewing and active listening skills, with the aim of reinforcing advice provided by the patient's health care professional to manage diabetes (with the aim of improving people's self-efficacy to manage diabetes).

For trials of interventions including emotional, informational and appraisal elements (2 trials), advisors were provided with additional materials (handbook, information materials) and instruction on how to develop a relationship, skills for effective telephone support, and the role of telephone support (trials aimed to encourage breastfeeding; and to improve depressive symptoms in women at high risk of post-natal depression).

Interventions varied in terms of the number and types of calls made by peer supporters: this ranged from 1 call in 6 months to 12 calls over a period of 12 weeks. Documentation and/or recording of telephone calls also varied: only 1 trial recorded calls; another 3 used tracking sheets to document calls; and one used a range of approaches (interviews, focus group and advisor logs) to provide information about the peer advisor's experience.

\*Full text of paper about AMSTAR: [http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=ShowDetailView&TermToSearch=17302989&ordinalpos=2&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed\\_ResultsPanel.Pubmed\\_RVDocSum](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=ShowDetailView&TermToSearch=17302989&ordinalpos=2&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVDocSum)

Intervention	Results of review
Peer support telephone calls versus usual care and/or another intervention type	<p><u>Outcomes:</u></p> <p><b>Some evidence from trials:</b> that a peer support telephone intervention increases mammography uptake within 6 months (1 trial, 594 participants) (RR = 1.4, 95% CI 1.2, 1.7), and continuation of mammography screening among those who had previously attended (1 trial, 532 participants).</p> <p><b>Insufficient evidence from trials:</b> to decide between groups with respect to mammography uptake among those who had not previously attended.</p> <p><b>Some evidence from trials:</b> that a peer support telephone intervention may lead to changes in diet (people with previous myocardial infarction) (1 trial, 424 participants).</p> <p><b>Insufficient evidence from trials:</b> to decide between groups with respect to self-efficacy, health or recovery behaviours (including cigarette smoking), social outcomes or quality of life for people recovering from myocardial infarction.</p> <p><b>Insufficient evidence from trials:</b> to decide between groups with respect to self-efficacy, clinical outcomes (HbA1c, cholesterol, BMI) or diabetes distress for people with type 2 diabetes.</p> <p><b>Some evidence from trials:</b> that a peer support telephone intervention decreases probable major depressive symptoms for women at risk of post-natal depression, at both 4 weeks and 8 weeks follow-up (1 trial, 42 participants).</p> <p><b>Insufficient evidence from trials:</b> to decide between groups with respect to maternal self-esteem, childcare stress or maternal loneliness for women at risk of post-natal depression.</p> <p><b>Some evidence from trials:</b> that a peer support telephone intervention improves the rate of exclusive breastfeeding up to 3 months (RR = 1.21, 95% CI 1.04, 1.41) and decreases the rate of maternal dissatisfaction with breastfeeding (1 trial, 256 participants).</p> <p><b>Some evidence from trials:</b> that a peer support telephone intervention is associated with lower levels of satisfaction, when compared with a specialist diabetes nurse intervention (1 trial, 231 participants).</p> <p><u>Harms and adverse effects:</u> Authors conducted qualitative analysis of possible harms and adverse effects of peer support telephone interventions, including effects for both recipients and advisors for peer support telephone interventions.</p> <p>They identify three major themes:</p> <ul style="list-style-type: none"> <li>• The need of advisors to feel they were of help to the recipient: where this was not apparent the advisor's role was found to be more difficult, and advisors also noted at times they felt uncomfortable;</li> <li>• The sharing of experience: was valued, but the difficulties of severing relationships at the end of the intervention were noted; and</li> <li>• Issues around advisors becoming aware of their own anxieties and vulnerabilities: for example, advisors facing difficulties when recollecting or expressing their own problems. This theme also identified the potential problem of intervention recipients who were resistant to change; and highlighted the need for adequate training and ongoing support for peer advisors over time, in order to ensure advisor retention as well as the integrity of the intervention.</li> </ul>



## KEY TO RESULTS

The table on this page presents the standardised wording that should be used to interpret the data in the results section of the EVIDENCE table on the previous two pages.

SUMMARY STATEMENT	TRANSLATION
<i>Sufficient evidence from trials</i>	<p>Evidence to support conclusions about the effect of the intervention(s) in relation to a specific outcome(s). This includes evidence of an effect in terms of:</p> <ul style="list-style-type: none"> <li>• benefit or</li> <li>• harm.</li> </ul> <p>Statistically significant results are considered to represent sufficient evidence to support conclusions, but a judgement of ‘sufficient evidence’ is also based on the number of trials/ participants included in the analysis for a particular outcome.</p> <p>A grading of ‘sufficient evidence’ is often based on meta-analysis producing a statistically significant pooled result that is based on a large number of included trials/ participants.</p> <p>This judgement may also be made based on the number of trials and/or trial participants showing a statistically significant result - for example (in a narrative synthesis) a result where 12 trials of a total of 14 for a specific outcome showed a statistically significant effect of an intervention would be considered to represent ‘sufficient evidence.’</p>
<i>Some evidence from trials</i>	<p>Less conclusive evidence to make a decision about the effects of a particular intervention(s) in relation to a specific outcome(s).</p> <p>This may be based on narrative syntheses of review results. In this case, the result is qualified according to the findings of the review - for example, ‘some evidence (5 trials of 9) reported a positive effect of ....’</p> <p>{This would be based on a more equivocal set of results than those obtained for ‘sufficient evidence’ above. For example, while 12/14 statistically significant trials would be classed as ‘sufficient evidence’, 5/9 statistically significant trials is more equivocal and would be classed as ‘some evidence.’}</p> <p>This may also be based on a statistically significant result obtained in a small number of trials; or a statistically significant result obtained from trials with a small number of participants.</p>
<i>Insufficient evidence from trials</i>	<p>Not enough evidence to support conclusions about the effects of the intervention(s) on the basis of the included trials. This should be interpreted as ‘no evidence of effect’, rather than ‘evidence of no effect’.</p> <p>Statistically non-significant results are considered to represent insufficient evidence.</p> <p>Where the number of trials is small, and/or the number of participants included in the trials is small, ‘insufficient evidence’ might reflect underpowering of the included trials to be able to detect an effect of the intervention.</p> <p>Where the number of trials is large, and/or the number of participants included in these trials is large, ‘insufficient evidence’ may reflect underlying ineffectiveness of the intervention to affect the outcomes being examined.</p>
<i>Insufficient evidence in relation to measurement</i>	<p>Not enough evidence to support conclusions about the effects of the intervention due to a lack of reporting on the specified outcomes.</p> <p>This can be the result of :</p> <ol style="list-style-type: none"> <li>(i) the review electing not to report on a particular outcome, or set of outcomes, despite being reported by the included trials; or</li> <li>(ii) the review was not able to report on the outcome, as data for the outcome was not reported by the included trials. Note: used for reporting against outcomes only.</li> </ol>
<i>N/A</i>	Not applicable to the outcome category of interest. Note: used for reporting against outcomes only.