Chronic
Illness
Alliance

Evaluating Peer Support for People with Chronic Conditions

A Scoping Literature Review

August 2015

Prepared by

Irene Blackberry, Christine Walker, Melissa Moore, John Furler

The Chronic Illness Alliance in collaboration with La Trobe University and University of Melbourne

EXECUTIVE SUMMARY

Peer support is a complex construct with four core functions, including providing

- (i) assistance with prevention and management of chronic conditions;
- (ii) social and emotional support;
- (iii) links with professional care and community resources; and
- (iv) ongoing support.

Peer support programs are a widely accepted adjunct to the self-management of chronic conditions, and there is a body of literature highlighting the benefit of peer support for improving patient's self-efficacy, treatment adherence, and wellbeing. Despite evidence supporting the value of peer support, the effectiveness of peer support programs has not been routinely evaluated or systematically adopted in many health care systems. Part of this problem is attributed to the lack of a general framework to guide such evaluations, which we attempt to address with this scoping literature review.

Specifically, this review was conducted to examine frameworks for evaluating peer support programs for people with chronic conditions. This review formed part of a larger project to develop an online evaluation tool to assess the quality of peer support groups for people with chronic conditions in community settings.

There were 162 relevant articles identified, and synthesized based on three levels:

(1) organisational level (governance structure and evaluation framework);

(2) program level (best practice to evaluate elements and delivery of peer support);

(3) participant level (outcomes of peer support programs).

This scoping review identified several examples of peer support programs with effective program evaluation, as well as evidence supporting the benefit of peer support for people with chronic conditions, particularly for improving psychological wellbeing. Yet there is a lack of an evaluation framework used by peer support leaders to ensure their program meets best-practice standards.

Outcomes from this review will inform the next phase of this larger program of research: development of an online evaluation tool for peer support groups to evaluate and to show evidence of their best practice.

1. INTRODUCTION

Peer support is a complex concept with no standardized definition widely accepted or used in literature (R. Boothroyd & E. Fisher, 2010; Doull, O'Connor, Welch, Tugwell, & Wells, 2005; Fisher et al., 2012; Repper & Carter, 2011; Walker, 2011). Often researchers do not clearly define peer support concepts are largely assumed to be understood (R. I. Boothroyd & E. B. Fisher, 2010). One example of a peer support definition comes from the Peers for Progress program (see Box 1) which loosely defines peer support as being *"practical, social, and emotional support between people who share similar experiences with a disease or health problem"* (Peer for Progress, 2015b). There is no 'one-size fits all' approach to peer support that applies to all groups or cultural contexts (Peers for Progress, 2013, p. 4) For example, different cultures influence health behaviours (e.g. diet and exercise) and perceptions of disease or health, and health care resources and systems also vary (Peers for Progress, 2013). Amidst such variation, a set of four core functions of peer support has been identified that can be used as a template for global standardization of peer support, while simultaneously allowing flexibility in implementing and tailoring peer support to meet local and regional needs, populations, health systems, and cultural contexts (R. I. Boothroyd & E. B. Fisher, 2010; Fisher et al., 2012; Peers for Progress, 2013). These core functions include: (i) assistance with prevention and management of chronic conditions (e.g. daily activities such as stress management, healthy eating and exercise, taking medication); (ii) social and emotional support to encourage patients with their management behavior, and help them cope with negative emotions such as stress; (iii) links with professional care and community resources, and encourage patient to seek additional assistance when appropriate; and (iv) ongoing support, since prevention and chronic disease management is a life-long pursuit (R. I. Boothroyd & E. B. Fisher, 2010; Fisher et al., 2012; Peers for Progress, 2013).

Peer support is now widely accepted as an adjunct to the self-management of chronic conditions (Peer for Progress, 2015a; Riddell et al., 2012), and its application can take many forms, including home visits, integration with health care teams, email support, phone calls, and groups activities (Cooper & Wilcock, 2013; Fisher et al., 2012; Peers for Progress, 2013). Peer support groups can also be delivered by health professionals or nonprofessionals (e.g. community health workers, lay health advisors, or lay people who experience the same chronic conditions)(Fisher et al., 2012). The value of peer support reportedly lies in its roles in improving self-efficacy, treatment adherence and wellbeing. However evaluations of the effectiveness of peer support regarding these claims are of diverse quality (Walker, 2011). Furthermore, despite the body literature in support of peer support, and widespread integration of such programs, they have not been routinely evaluated or systematically adopted in many health care systems (Fisher et al., 2012). Part of this problem is attributed to the lack of a general framework to guide such evaluations, which we attempt to address here.

This literature review formed the basis of a project to establish quality indicators for an evaluation framework to measure and report the outcomes and effectiveness of peer support for people with chronic conditions.

An evaluation framework is critical given the rising number of people in Australia with chronic conditions (Australian Institute of Health and Welfare, 2014), and people with chronic conditions come to rely on peer support as a means of maintaining their treatment regimes and self-management. Despite the reliance by people with chronic conditions on peer support, there is currently a lack of understanding on quality indicators of best practice, good outcomes and evaluation framework across groups. This significant research gap may contribute to the reported low referral rate and lack of credibility from health professionals to refer their patients to peer support (Hardiman, 2007).

2. OBJECTIVES

We conducted a scoping literature review to examine frameworks for evaluating peer support programs for people with chronic conditions. This review is part of a larger project to develop an online evaluation tool to assess the quality of peer support groups for people with chronic conditions. It is based on the delivery of peer support programs in community settings.

3. METHODS

3.1 Search strategy

Due to the exploratory nature of this review, we employed a scoping methodology to summarize the evidence (Armstrong, Hall, Doyle, & Waters, 2011). Two researchers (IB and MM) examined peer-review articles, review articles, grey literatures and online resources to identify quality indicators of best practice, good outcomes and framework to evaluate peer support groups for people with chronic conditions. Literature searches were undertaken between January 2015 and February 2015, using three alternate approaches: (i) a search of peer-reviewed journal articles and reviews located through online databases, inclusive of PubMed, Ovid Databases, CINAHL, and ProQuest Central; (ii) a search of Google (web and scholar) to identify peer-reviewed articles and reviews and grey literature; (and iii) a targeted Internet search to locate websites detailing examples of peer support programs and models of delivery or evaluation. To maximize generalization of research findings to any groups of people with chronic conditions, searches were not limited by geographic location, and no restriction was placed on the specific type of chronic conditions. Chronic conditions represented in literature included cancer, type 1 and type 2 diabetes, chronic non-cancer pain, chronic lung disease, chronic kidney disease, cardiac disease, inflammatory bowel disease, mental health, and chronic illness in general

3.2 Inclusion criteria

To meet inclusion criteria, the literature was required to outline or evaluate models of peer support programs, be administered in a community setting, and to people with a chronic condition. Literature not meeting these criteria were excluded. Chronic conditions represented in literature included cancer, type 1 and type 2 diabetes, chronic non-cancer pain, chronic lung disease, chronic kidney disease, cardiac disease, inflammatory bowel disease, mental health, and chronic illness in general. Key words used in our search included evaluation, models, quality/standards, peer support, groups/programs, chronic condition/disease/illness, online/evaluation/self-assessment/quality assessment tool, health/framework/indicators evaluation, program assessment, and/or quality assurance. The literature search was restricted to articles published in English and within the last 10-year period (2005-2010). However, seminal articles that fell outside of this period were considered.

4. RESULTS

Literature searches were undertaken and relevant articles reviewed independently, by two researchers. These articles comprised of empirical studies and review articles, as well as grey literature, and peer support websites. We synthesise review findings based on three levels: (1) organizational level (governance structure and evaluation framework); (2) program level (best practice to evaluate elements and delivery of peer support); (3) participant level (outcomes of peer support programs).

4.1 Organisational level: Evaluation framework of peer support groups

Apart from delivering quality programs that produce good outcomes, peer support groups require an evaluation framework that enables leaders to evaluate their program and benchmark with others. A comprehensive evaluation framework includes assessment of quality of the program, external perception, governance structure, strategic planning, source of continuing support, and referral pathways and processes. A scoring system may assist comparison with other groups (Boothroyd, 2010).

Examples of peer support programs with a framework from which to evaluate performance are illustrated in Box 1.

Box 1. Three examples of delivery models of peer support programs for people with chronic conditions in the community

International example: Peers for Progress (PFP)

Founded in 2006, PFP is a program of the American Academy of Family Physicians Foundation, and promotes peers support as a key part in health, prevention, and treatment for a variety of chronic diseases (e.g. diabetes, heart disease, mental health) around the world (Peer for Progress, 2015a).

PFP acknowledges there is no ‘one-size-fits-all’ approach to peers support around the world, for example, due to the influence culture has on health behaviours (e.g. diet, physical activity, perceptions about disease and health) and how we receive support, and variations in health care resources and systems. Thus, instead of promoting a set of specific criteria for peer support programs, PFP outlines a core set of four functions which provide an outcome for peer support, and allows program leaders the flexibility to tailor programs to suit their local and regional needs, populations, health systems, and cultures (Peers for Progress, 2013):

Function 1. Help to implement daily personal plans for preventing and managing diseases. Daily activities include healthy eating, physical activity, stress management, and taking medications.

Function 2. Social and emotional support- “being there” to promote use of skills, comfort, and help in dealing with stress.

Function 3. Encouragement to see a health professional when appropriate- regular and quality care and taking care of things before they become problems.

Function 4. Ongoing support- proactive, flexible, extended because prevention and disease management are “for the rest of your life”.

PFP promote and support peer support programs and leaders around the globe, in a variety of ways, including: Evaluation and Demonstration Grants (to build and apply the evidence base of peer support in diabetes); provision of clear and varied program models so people can adapt suitable programs to match their settings; compiling curricula, program planning guides, training manuals, and hand-outs for people receiving support, and other program development materials; facilitating sharing of program resources, plans, and evaluations among leading peer support programs around the world; hosting a global webpage to circulate program material and curricula; participating in social networking to enable communication and exchange among peer support programs around the world for open discussion of questions, challenges, and opportunities (Peer for Progress, 2015a).

National example: Blue Mountains Cancer Help (BMCH).

Established in May 2005, BMCH is a registered, non-profit, non-denominational charitable organisation that provides support for residents in the Blue Mountains and Penrith communities who have been diagnosed with cancer. The organisation is funded through the BMCH Op-Shops, fund raising, bequests, and donations(Blue Mountains Cancer Help Inc., 2011).

BMCH provides a range of services to local residences with cancer, including therapies which complement medical treatment, support groups (facilitated by a trained counsellor and registered nurse, gold coin donation requested), assistance with transport (e.g. for medical appointments as required, in conjunction with Great Community Transport), Op-shops, and a library (Blue Mountains Cancer Help Inc., 2011). Regarding the therapies, BMCH has over 42 fully trained and insured therapists who offer a range of services, including massage, lymphedema management, reflexology, reiki, art therapy, meditation, acupuncture, qigong, yoga, naturopathy, hypnotherapy, Bowen therapy, and counselling. The balance of therapist fees is contributed by BMCH with funds raised in our Op Shops and through various fund-raising enterprises.

BMCH has a few employed staff (e.g. Op Shop manager), however, the organisation is heavily reliant on volunteers to operate. Examples of the activities carried out by BMCH volunteers include: presenting BMCH in the community, volunteering at the Op Shop, furniture pick up & delivery, supporting clients/family in the BMCH ‘buddy system’, office reception duties, organising catering for groups, database and other IT systems input and management, manage the BMCH library, undertake individual ongoing responsibility for particular projects and tasks (e.g. event planning, library management), fund raining, community service, and cancer awareness events (Blue Mountains Cancer Help Inc., 2013).

Staff training and support is provided for both BMCH volunteers and therapists. For example, new volunteers undertake training, and ongoing steps are place to ensure compliance with the new Work Health are Safety 2012; regular therapist meetings are held, providing an opportunity for therapists and nurses to share information, discuss issues, and ideas etc., contributing to the united identity of BMCH; and clinical supervision is also available for therapists (Blue Mountains Cancer Help Inc., 2013).

Local example: Cancer Connect in Victoria (CCV)

CCV is part of an Australian and New Zealand wide telephone-based peer support program, Cancer Connect. The free program links people affected by cancer from all over Victoria- people with cancer, their parents and family care givers, and individuals with an inherited cancer gene- to a specially-trained volunteer who has been through a similar cancer experience (Cancer Council Victoria; Peers for Progress, 2012).

The program is hosted by CCV, and has over 160 trained volunteers across a variety of cancer experience (5). Peer-support volunteer recruitment and training is strategic and targeted toward addressing program areas of greatest demand and changing cancer treatments. For quality assurance, all Cancer Connect telephone peer-support volunteers are at least 2 years post-cancer experience, and must have successfully completed a 3-day training program. Training curriculum for volunteers covers their rights and responsibilities, the organisations policies and procedures, effective communication skills, active listening, and self-care. Volunteers are also required to attend 7 hours of ongoing training per year (Peers for Progress, 2012).

A key aspect of the program is networking with other cancer organisations, health professionals, and cancer treatment centres. A key referral point into CCV is through the Cancer Helpline.

Cancer Connect values opportunities to continually learn from, and exchange with other organisations. For example, since 2008, Cancer Connect has been an active member of the Chronic Illness Peer Support Network; in 2010, CCV presented at the Peers for Progress global conference, and is an active member of the Peers for Progress global network for peer support organisations (Peers for Progress, 2012).

Dedication and the provision of high quality peer support are key factors contributing to the program’s long-term sustainability (Peers for Progress, 2012).

Table 1. Evaluation framework

Domains	Quality indicators
Governance structure	Stakeholders (Alliance, 2012)
	Strategic planning (Alliance, 2012; Blue Mountains Cancer Help Inc., 2013)
	Structure of executive group (Alliance, 2012; Blue Mountains Cancer Help Inc., 2013)
	Staffing and roles (Alliance, 2012; Blue Mountains Cancer Help Inc., 2013; Cancer Council Victoria)
	Risk management (Alliance, 2012)
	Information management (Alliance, 2012; Peers for Progress, 2013)
Quality assurance	Recruitment (Blue Mountains Cancer Help Inc., 2011; Cancer Council Victoria; Tang, Ayala, Cherrington, & Rana, 2011)

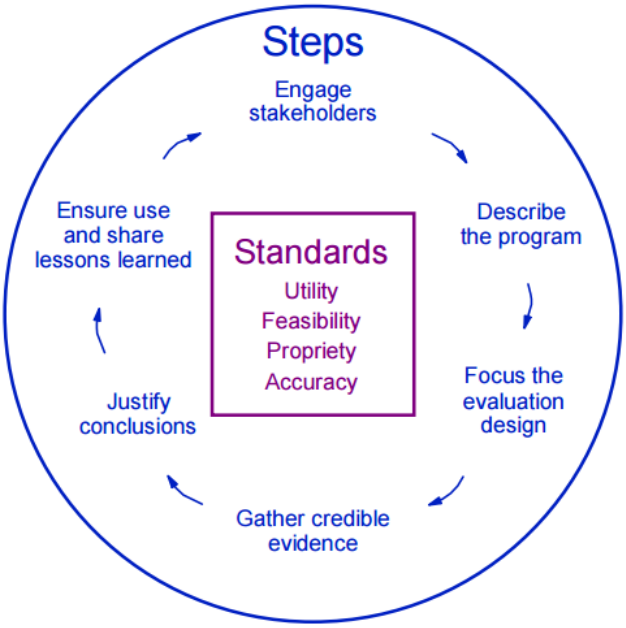
	Training (Blue Mountains Cancer Help Inc., 2011; Cancer Council Victoria; Tang et al., 2011)
	Mentoring (Chronic Illness Alliance, 2014)
	Feedback (Chronic Illness Alliance, 2014)
Financial support	Source of ongoing funding (Blue Mountains Cancer Help Inc., 2011)
	Sustainability (Blue Mountains Cancer Help Inc., 2011; Cancer Council Victoria; Tang et al., 2011)
	Marketing (Chronic Illness Alliance, 2014)
	Fundraising (Alliance, 2012; Blue Mountains Cancer Help Inc., 2013)
	Audited budget (Blue Mountains Cancer Help Inc., 2013)
Referral pathway	Referral process (Cancer Council Victoria; Peer for Progress, 2015a)
	Promotion to reach target population (Cancer Council Victoria)
Benchmarking	Heiq (Osborne, Elsworth, & Whitfield, 2007); Healthy ageing quiz (Cyarto, Dow, Vrantsidis, & Meyer, 2013)
Independent evaluation	Mixed qualitative and quantitative data (Chronic Illness Alliance, 2014)
	Performance against objective indicators (absenteeism, turnover, work performance, staff morale) (Chronic Illness Alliance, 2014)
	Program accreditation according to best practice (Chronic Illness Alliance, 2014)
	Integration with support or health services (Chronic Illness Alliance, 2014)

4.2 Program level: Quality indicators of best practice

Program evaluation is critical to ensure the peer support offered includes procedures that are useful, feasible, ethical and accurate (Centers for Disease Control and Prevention, 1999), meeting both patient and best practice standards.

The Centers for Disease Control and Prevention (CDC) has put forth a recommended framework to help guide health professionals in conducting a program evaluation (Centers for Disease Control and Prevention, 1999). The framework outlines six connected steps and standards for evaluating public health programs (Figure 1). Briefly, *engage stakeholders* includes engaging persons involved in or affected by the program and primary users of the evaluation; *describe the program* includes the need, expected effects, activities, resources, stage, context, and logic model; *focus the evaluation design* refers to the purposes, users, uses, questions, methods, and agreements; *gather credible evidence* including indicators, sources, quality, quantity, and logistics; *justify conclusions* in the form of standards, analysis/synthesis, interpretation, judgement, or recommendations; and *ensure use and share lessons learned,* including design, preparation, feedback, follow-up, and dissemination (Centers for Disease Control and Prevention, 1999).

Figure 1. CDC's framework for program evaluation



As highlighted by the CDC's framework, to evaluate a peer support program against best-practice, the program requires a clear target population, program description, process of program delivery, and quality assurance processes in place (Centers for Disease Control and Prevention, 2012). Table 2 outlines particular indicators that can be used to assess if each of these factors (domains) has been addressed. For example, prior to inception of a peer support program, the program developers should undertake an assessment of needs within the identified target population. Additionally, groundwork is needed to understand the characteristics of, and ways to reach, the target population.

Two other important elements of a peer support program are transparency, and identifying the program's theoretical underpinning. Specifically, a transparent program description is needed to clarify the programs rationale and aims, and to enable elements of the program to be evaluated and replicated. Regarding theoretical underpinning, despite its importance, there is a lack of literature regarding the theoretical foundations underlying peer support programs or interventions for people with chronic conditions (Burke, 2011; Repper & Carter, 2011; Tang et al., 2011; Tolley & Foroushani, 2014; Walker, 2011). Lloyd-Evans et al. (2014) noted that such programs may not be highly specified or theory driven following their review of peer support programs for mental illness. They concluded a need for researchers to develop and test theory interventions and to describe them clearly (Lloyd-Evans et al., 2014). Additionally, Cooper et al. (2014) found that while peer support interventions for community-dwelling adults with chronic non-cancer pain do refer to theory, generally there is no common theory used in this respective field, reducing homogeneity of programs and the ability for comparison (Cooper, Kirkpatrick, & Wilcock, 2014).

There is some literature which highlights certain theories underlying effective peer support programs. For example, outcomes from one review credits five key theories which *explain why* peer support programs for mental health issue work: social support theory, experiential knowledge theory, the helper-therapy principal, social learning theory, and social comparison theory (Pound, Judd, & Gough, 2011). Specifically, these theoretical frameworks propose that peer support can have positive outcomes on mental health because it helps participants to transcend their limitations of mental illness and become more accomplished, active, and socially connected with the broader community. Furthermore, taking part in peer support can provide people with new information, perspectives, and skills; exposure to inspiring role models, and enhanced problem-solving skills (Pound et al., 2011).

There is also a body of literature supporting peer support programs grounded in Bandura's Social Cognitive Theory (SCT), in particular, self-efficacy (a core construct of SCT), for assisting people with chronic conditions with modifying and/or maintaining their self-management (Krichbaum, Aarestad, & Buethe, 2003; Lorig, Sobel, Ritter, Laurent, & Hobbs, 2000; Marks & Allegrante, 2005; Shen, Edwards, Courtney, McDowell, & Wu, 2012; C.-J. Wu & Chang, 2012). Self-efficacy refers to a person's confidence in their ability to carry out a certain task such exercise, or changing a behavior (Bandura, 2006). Lorig et al. (2000) examined the potential of a 7-week chronic disease self-management grounded in self-efficacy theory, and delivered largely by peer instructors from a highly structured manual. Participants (N = 613) had various chronic diseases and were recruited from Kaiser Permanente hospitals and clinics. The program emphasized problem solving, decision making, and confidence building, and was delivered in a 'real world' health care setting. Based on the results at one-year program cessation, participants experienced statistically significant improvement in health behaviours (e.g., exercise, cognitive symptom management, communication with physicians), self-efficacy, and health status (e.g., fatigue, depression), and fewer visits to the emergency department (Lorig et al., 2000). Not all study outcomes however support the effectiveness peer-led chronic conditions self-management programs, at least for improvement self-efficacy. For example, Wu, Chang, Courtney, and Kostner (2012) used a RCT to develop and evaluate the effectiveness of the incorporation of patient peer supporters in a cardiac-diabetes self-management program (Peer-CDSMP) based on Bandura's theory of self-management. A total of 27 participants were randomized to either the control or intervention group (Peer-CDSMP) (C. Wu, Chang, Courtney, & Kostner, 2012). Results showed that participants receiving the Peer-CDSMP attained improvement in knowledge about their condition, however there was no significant improvement in self-efficacy or self-care behavior. Nevertheless, Wu et al. acknowledged the importance of self-efficacy in changing patients behavior for successful diabetes self-management, and the need for further research, with a larger sample, to determine the effectiveness of Peer-CDSMP for enhancing self-efficacy and self-management in cardiac patients with diabetes (C. Wu et al., 2012).

While it is unclear if there exists a theoretical framework relevant to all chronic conditions, it is clear that peer support programs underpinned by theory is critical for identifying fundamental elements for intervention development, selection of appropriate outcomes, and intervention replicability (C.-J. Wu & Chang, 2012).

Table 2. Quality indicators of peer support groups

Domains	Quality indicators
Target population	Evidence on needs assessment (Alliance, 2012; Centers for Disease Control and Prevention, 2012; Centre of Excellence in Peer Support, 2012)
	Assessment of participants' health literacy (Alliance, 2012; Centre of Excellence in Peer Support, 2012)

	Recruitment and promotion to reach target population (Alliance, 2012; Centers for Disease Control and Prevention, 2012)
	Characteristics of participants (Centers for Disease Control and Prevention, 2012)
Program description	Rationale and aims (Blue Mountains Cancer Help Inc., 2011)
	Governance structure (Alliance, 2012; Blue Mountains Cancer Help Inc., 2011; Centre of Excellence in Peer Support, 2012)
	Learning environment (Centre of Excellence in Peer Support, 2012)
	Recruitment of leaders (Blue Mountains Cancer Help Inc., 2011)
	Group facilitation training
	Program contents/components/elements (Blue Mountains Cancer Help Inc., 2011; Centers for Disease Control and Prevention, 2012)
	Self-care support strategies (Blue Mountains Cancer Help Inc., 2011; Cancer Council Victoria)
	Theoretical framework used (Centers for Disease Control and Prevention, 2012)
	Behavioural strategies used
Process	Structured of program delivery (Blue Mountains Cancer Help Inc., 2011)
	Interaction and engagement with peers and leaders
	Motivation and empowerment (Blue Mountains Cancer Help Inc., 2011, 2013)
	Type of activities and support services offered (Blue Mountains Cancer Help Inc., 2011, 2013)
	Emotional issues
	Strategies to address challenges or relationship change
	Linkages with clinical care team (Blue Mountains Cancer Help Inc., 2011; Cancer Council Victoria; Peer for Progress, 2015a)
	Access (Blue Mountains Cancer Help Inc., 2011, 2013; Cancer Council Victoria)
	Cost (Blue Mountains Cancer Help Inc., 2011)
Quality assurance	Monitoring (Blue Mountains Cancer Help Inc., 2011; Cancer Council Victoria)
	Sustainability (Blue Mountains Cancer Help Inc., 2011)
	Evaluation and validation of outcomes and target goals (Blue Mountains Cancer Help Inc., 2011)

4.3 Participant level: evidence on good outcomes and outcome measures of peer support programs

Outcomes of peer support programs at the participant level involved process evaluation of program delivery and measuring short and long term outcomes. The process evaluation can be assessed using number of sessions offered over a period of time, number of attendees, satisfaction rating and general feedback(Milstein, Wetterhall, & CDC Evaluation Working Group, 2000). Evaluation of short and long term outcomes involves various qualitative and quantitative data collection and analysis.

Several reviews have been published in recent years examining the effectiveness of peer support programs for improving physiological and psychological parameters various populations, including people with diabetes (Burke, 2011; Tang et al., 2011); adults with chronic non-cancer pain (Cooper et al., 2014; Cooper & Wilcock, 2013); adults with a burn-injury (Tolley & Foroushani, 2014); and people with mental health problems (Lloyd-Evans et al., 2014; Repper & Carter, 2011). Despite different population, peer support programs, and measures used to evaluate program success, a common theme among existing literature is evidence for improvement in psychological outcomes following participation in peer support programs (Burke, 2011; Lloyd-Evans et al., 2014; Repper & Carter, 2011; Tang et al., 2011; Tolley & Foroushani, 2014). For example, in their review, Burke (2011) examined the effectiveness of group medical visits on type 2 diabetes specific outcomes in adults. Outcomes included clinical markers (e.g. HbA1c, blood pressure, and cholesterol measurements), and subjective/psychological indicators (e.g. diabetic knowledge, health behaviours, and QoL). Based on review findings, such programs can have a clear benefit on people's HbA1c levels, and potentially systolic blood pressure. Their review also showed improvement in diabetic knowledge, health behaviours, and QoL following participation in group medical visits over time (Burke, 2011). Similarly, Tang et al. (2011) reviewed volunteer-based peer support intervention studies to examine the impact of such interventions on diabetes related health. Results showed inconsistent findings regarding diabetes-related health outcomes. Specifically, there was little evidence that peer support programs improve metabolic and cardiovascular outcomes, with the exception some studies showing a lowered HbA1c following peer- and professionally-led interventions. Findings suggest however that peer support interventions can lead to improved psychosocial outcomes, including greater self-efficacy, higher diabetes specific QoL, and fewer depressive symptoms (Tang et al., 2011).

Additionally, Cooper, Kilpatrick, and Wilcock's (2014) review outcomes revealed some evidence that peer support interventions can have a beneficial impact on self-efficacy, emotional function, and pain QoL in adults with chronic non-cancer pain (Cooper et al., 2014).

Tolley and Foroushani's (2014) conducted a review to determine the impact of peer support for adults with burn injury. While their findings highlighted research in this area is still in its infancy, evidence from the small number of studies suggest that peer support can be useful in instilling hope, reducing isolation, and helping burn injury patients to embrace a sense of belonging and community. However, there is evidence that shows peer support can have a negative impact on wellbeing, and thus the need for a structured and standardized model to peer support for this sub-population is consistently report (Tolley & Foroushani, 2014).

Repper and Carter (2011) examined literature to identify the effectiveness of peer support workers (PSW) in mental health services. Based on their outcomes, the employment of PSWs can lead to a variety of psychological and economic benefits for consumers, including increased empowerment, improved self-esteem, and confidence, improved social skills and functioning, and enhanced community integration, and a greater sense of acceptance. Additionally, people engaging in peer support tend to show reduced hospital admission rates and longer community tenure (Repper & Carter, 2011). In contrast however, results from Lloyd-Evans et al. (2014) systematic review and meta-analysis suggest little or no evidence that peer support for people with severe mental illness (e.g. schizophrenia spectrum or bipolar disorder) is associated with positive effects on overall symptoms, satisfaction with services, or hospitalization. There was some evidence however that engaging in peer support can lead to positive effects on measures of hope, recovery, and empowerment. Echoing other authors reviewing the benefit of peer support for different subpopulations, Lloyd-Evans et al. (2014) concluded the need for more rigorous studies to fully evaluate the impact of peer support (Lloyd-Evans et al., 2014).

Thus, evidence to date suggests that engaging in peer support programs can have a positive impact on psychological parameters (e.g. self-efficacy, QoL), and may also lead to small improvement in clinical markers relevant to the chronic conditions, such as HbA1c for people with diabetes.

Table 3 Good outcome measures

Domains	Quality Indicators	Outcome measure
Process evaluation	**Program reach**	Characteristics of participants against target population (Boothroyd, 2010)
	Dose delivered	Number of sessions delivered in the past 12 months (Chronic Illness Alliance, 2014)
	High uptake	Number of attendees per session (Chronic Illness Alliance, 2014; Community Tool Box, 2014)
	Fidelity	Program delivered as intended
	Positive evaluation	Satisfaction rating and feedback
Evidence on impact	**Short term outcomes (<6 months)**	Photographic or video documentation
		Direct observation of participants to assess self-efficacy or skill or knowledge gains (Community Tool Box, 2014)
		Collecting feedback using survey forms, testimonials, or anecdotes (Chronic Illness Alliance, 2014; Community Tool Box, 2014)
		Self-reported feedback via interviews or focus group discussions on self-efficacy or skill or knowledge gains (Chronic Illness Alliance, 2014; Community Tool Box, 2014)
		Logs, diaries or journals completed by participants to capture learning, questions, comments (Community Tool Box, 2014)
		Simulations in which participants demonstrate knowledge and skill acquisition (Community Tool Box, 2014)
		Knowledge, self-efficacy or skill tests to assess immediate gains (Community Tool Box, 2014)
Evidence on effectiveness	**Longer term outcome monitoring using validated tools against**	Participants to set their own goals and reported outcomes

	normative data from similar population (≥6 months)	Adherence to self-care strategies (Boothroyd, 2010)
		Improvement or achievement of target in self-reported health-related behaviour (smoking, diet, alcohol, physical activity) or medication adherence (Boothroyd, 2010; Chronic Illness Alliance, 2014)
		Improvement in relevant biochemical and clinical indicators
		Improvement in self-reported well-being (Chronic Illness Alliance, 2014)
		Improvement in self-reported QoL (Boothroyd, 2010)
		Regular use of health services including GP visits, Chronic Disease Management Plan/ Care Plan, other health professional visits, ED visits, diagnostic tests (Chronic Illness Alliance, 2014)

5. Conclusions

Evidence to date suggests that engaging in peer support programs can have a positive impact on psychological parameters (e.g. self-efficacy, QoL), and may also lead to small improvement in clinical markers relevant to the chronic conditions, such as HbA1c for people with diabetes.

We highlighted evidence, evaluation models and learnings from few successful community-based peer support groups in delivering care for people with chronic conditions. Findings from this review will inform consultation with health professionals in the second phase on essential indicators that will increase their confidence in referring their patients to support group. Both the review and consultation findings will be used to develop an online evaluation tool for peer support groups to evaluate and to show evidence of their best practice.

References

Alliance, C. I. (2012). Peer Support Network. from http://www.chronicillness.org.au/index.php/peer-support-network

Armstrong, R., Hall, B. J., Doyle, J., & Waters, E. (2011). 'Scoping the scope' of a cochrane review. *Journal of Public Health, 33*(1), 147-150. doi: 10.1093/pubmed/fdr015

Australian Institute of Health and Welfare. (2014). *4.2 Chronic disease- Australia's biggest health challenge*. Canberra: AIHW Retrieved from http://www.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=60129547726.

Bandura, A. (2006). Toward a Psychology of Human Agency. *Perspectives on Psychological Science, 1*(2), 164-180. doi: 10.1111/j.1745-6916.2006.00011.x

Blue Mountains Cancer Help Inc. (2011). Blue Mountains Cancer Help. from http://www.cancerhelp.net.au/

Blue Mountains Cancer Help Inc. (2013). *Annual Report 2012-2013*.

Boothroyd, R., & Fisher, E. (2010). Peers for progress: promoting peer support for health around the world. *Family practice, 27*(suppl 1), i62-i68.

Boothroyd, R. I. (2010). Identification of reliable measures of outcomes: Consensus measures of outcomes and key mediators of benefits of peer support in diabetes management.

Boothroyd, R. I., & Fisher, E. B. (2010). Peers for Progress: promoting peer support for health around the world. *Family practice, 27*(suppl 1), i62-i68. doi: 10.1093/fampra/cmq017

Burke, R. E. (2011). The effectiveness of group medical visits on diabetes mellitus type 2 (dm2) specific outcomes in adults: a systematic review. http://0-ovidsp.ovid.com.alpha2.latrobe.edu.au/ovidweb.cgi?T=JS&CSC=Y&NEWS=N&PAGE=fulltext&D=jbi&AN=JBI5105

Cancer Council Victoria. Cancer Connect. from http://www.cancervic.org.au/how-we-can-help/cancer_council_helpline/cancer_connect

Centers for Disease Control and Prevention. (1999). Framework for program evaluation in public health. . *Morbidity and Mortality Weekly Report, 48*(RR-11), 1-40.

Centers for Disease Control and Prevention. (2012). A framework for program evaluation. from http://www.cdc.gov/eval/framework/

Centre of Excellence in Peer Support. (2012). *The Charter of Peer Support*. Centre of Excellence in Peer Support. Victoria. Retrieved from http://www.peersupportvic.org/

Chronic Illness Alliance. (2014). Peer Support Network. from http://www.chronicillness.org.au/index.php/peer-support-network

Community Tool Box. (2014). Section 1. A framework for program evaluation: A gateway to tools. University of Kansas: Work Group for Community Health and Development.

Cooper, K., Kirkpatrick, P., & Wilcock, S. (2014). The effectiveness of peer support interventions for community-dwelling adults with chronic non-cancer pain: a systematic review. *JBI Database of Systematic Reviews & Implementation Report, 12*(5), 319-348. doi: 10.11124/jbisrir-2014-1590

Cooper, K., & Wilcock, S. (2013). The effectiveness of peer support interventions for community-dwelling adults with chronic non-cancer pain: a systematic review protocol. http://0-ovidsp.ovid.com.alpha2.latrobe.edu.au/ovidweb.cgi?T=JS&CSC=Y&NEWS=N&PAGE=fulltext&D=jbi&AN=JBI8789

Cyarto, E. V., Dow, B., Vrantsidis, F., & Meyer, C. (2013). Promoting healthy ageing: Development of the Healthy Ageing Quiz. *Australasian Journal on Ageing, 32*(1), 15-20. doi: 10.1111/j.1741-6612.2011.00585.x

Doull, M., O'Connor, A. M., Welch, V., Tugwell, P., & Wells, G. A. (2005). Peer support strategies for improving the health and well-being of individuals with chronic diseases. *The Cochrane Library*.

Fisher, E. B., Boothroyd, R. I., Coufal, M. M., Baumann, L. C., Mbanya, J. C., Rotheram-Borus, M. J., . . . Tanasugarn, C. (2012). Peer support for self-management of diabetes improved outcomes in international settings. *Health Affairs, 31*(1), 130-139.

Hardiman, E. (2007). Referral to Consumer-run Programs by Mental Health Providers: A National Survey. *Community Mental Health Journal, 43*(3), 197-210. doi: 10.1007/s10597-006-9079-y

Krichbaum, K., Aarestad, V., & Buethe, M. (2003). Exploring the Connection Between Self-Efficacy and Effective Diabetes Self-f Management. *The Diabetes Educator, 29*(4), 653-662. doi: 10.1177/014572170302900411

Lloyd-Evans, B., Mayo-Wilson, E., Harrison, B., Istead, H., Brown, E., Pilling, S., . . . Kendall, T. (2014). A systematic review and meta-analysis of randomised controlled trials of peer support for people with severe mental illness. *BMC psychiatry, 14*, 39. doi: 10.1186/1471-244X-14-39

Lorig, K. R., Sobel, D. S., Ritter, P. L., Laurent, D., & Hobbs, M. (2000). Effect of a self-management program on patients with chronic disease. *Effective clinical practice: ECP, 4*(6), 256-262.

Marks, R., & Allegrante, J. P. (2005). A Review and Synthesis of Research Evidence for Self-Efficacy-Enhancing Interventions for Reducing Chronic Disability: Implications for Health Education Practice (Part II). *Health Promotion Practice, 6*(2), 148-156. doi: 10.1177/1524839904266792

Milstein, B., Wetterhall, S., & CDC Evaluation Working Group. (2000). A framework featuring steps and standards for program evaluation. *Health Promotion Practice, 1*(3), 221-228.

Osborne, R. H., Elsworth, G. R., & Whitfield, K. (2007). The Health Education Impact Questionnaire (heiQ): An outcomes and evaluation measure for patient education and self-management interventions for people with chronic conditions. *Patient Education and Counseling, 66*(2), 192-201. doi: http://dx.doi.org/10.1016/j.pec.2006.12.002

Peer for Progress. (2015a). Accelerating best bractices in peer support around the world. from http://peersforprogress.org/

Peer for Progress. (2015b). Troubleshooting. Retrieved 7 September, 2015, from http://peersforprogress.org/promote-peer-support/troubleshooting/

Peers for Progress. (2012). Project spotlight: Serving people affected by Cancer in Victoria, Australia- Cancer Connect in Victoria. from http://peersforprogress.org/wp-content/uploads/2012/06/20120606_peer_support_for_cancer_cancer_connect_in_australia.pdf

Peers for Progress. (2013). Accelerating the availability of best practices in peer support around the world: Peers for Progress.

Pound, L., Judd, K., & Gough, J. (2011). Peer support for women living with mental health issues.

Repper, J., & Carter, T. (2011). A review of the literature on peer support in mental health services. *Journal of Mental Health, 20*(4), 392-411. doi: 10.3109/09638237.2011.583947

Riddell, M. A., Renwick, C., Wolfe, R., Colgan, S., Dunbar, J., Hagger, V., . . . Australasian Peers Progress, D. (2012). Cluster randomized controlled trial of a peer support program for people with diabetes: study protocol for the Australasian Peers for Progress study. *BMC public health, 12*(1), 843-843. doi: 10.1186/1471-2458-12-843

Shen, H., Edwards, H., Courtney, M., McDowell, J., & Wu, M. (2012). Peer-led diabetes self-management programme for community-dwelling older people in China: study protocol for a quasi-experimental design. *Journal of Advanced Nursing, 68*(12), 2766-2777. doi: 10.1111/j.1365-2648.2012.06059.x

Tang, T. S., Ayala, G. X., Cherrington, A., & Rana, G. (2011). A Review of Volunteer-Based Peer Support Interventions in Diabetes. *Diabetes Spectrum, 24*(2), 85-98. doi: 10.2337/diaspect.24.2.85

Tolley, J. S., & Foroushani, P. S. (2014). What Do We Know About One-to-One Peer Support for Adults With a Burn Injury? A Scoping Review. *Journal of Burn Care & Research, 35*(3), 233-242. doi: 10.1097/BCR.0b013e3182957749

Walker, C. (2011). Peer Support for Chronic and Complex Conditions: Chronic Illness Alliance.

Wu, C.-J., & Chang, A. M. (2012). Application of theory in developing a peer-support based intervention to improve self-management for cardiac patients with diabetes. *Abstracts from the ICBM 2012 Meeting, International Journal of Behavioral Medicine, 19*(1), S84. doi: 10.1007/s12529-012-9247-0

Wu, C., Chang, A., Courtney, M., & Kostner, K. (2012). Peer supporters for cardiac patients with diabetes: a randomized controlled trial. *International nursing review, 59*(3), 345-352.