Peer support in mental health care: is it good value for money?

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Executive Summary

Peer support workers - people with their own lived experience of mental illness - provide mutually supportive relationships in secondary mental health services. Increasing numbers are being employed, both in this country and elsewhere. But good quality evidence on the effectiveness of this form of service delivery is in short supply and even less is known about its cost-effectiveness.

This paper makes a first attempt at assessing whether peer support provides value for money, looking specifically at whether peer support workers can reduce psychiatric inpatient bed use, either by preventing admissions or by shortening lengths of stay. Because of the very high cost of inpatient care, the savings that result from even small changes in bed use may be sufficient to outweigh the costs of employing peer workers.

We identified six studies in the research literature which give some evidence on the relationship between peer support and inpatient bed use. Re-analysis and aggregation of the data in these studies support a positive conclusion: the financial benefits of employing peer support workers do indeed exceed the costs, in some cases by a substantial margin. It must be emphasised that the evidence for this finding is very limited in both quantity and quality, but nevertheless sufficient to justify continuing interest in the employment of properly trained and supported peer workers in mental health teams, alongside more research evaluating their effects.
Peer support in mental health care may be defined as “offering and receiving help, based on shared understanding, respect and mutual empowerment between people in similar situations” (Mead et al., 2001). It therefore occurs when people share common concerns and draw on their own experiences to offer emotional and practical support to help each other move forwards. For people who have experienced mental health problems, their shared experiences revolve around episodes of acute distress, the consequences of being labelled ‘mentally ill’ (stigma), and the experience of contact with mental health services.

As the value of such mutually supportive relationships has been recognised, so more formal peer roles have been created for people with lived experience of mental health problems to contribute directly to the delivery of care in mental health services. Peers may be employed either in addition to traditional staff, or instead of them in certain specific roles (e.g. case managers). Peer support workers have been deployed to some extent in most European, North American and Australasian countries, and in the United States peer support is now reimbursable in 27 states (as of 2007) under Medicaid (Minnesota Department of Human Services, 2013).

The conceptual background to peer support and practical guidelines for implementation are covered in more detail in two companion papers being published by the Implementing Recovery through Organisational Change (ImROC) programme (Repper, 2013a & 2013b).

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**Introduction**

Peer support offers many health and quality of life benefits. Both peer support workers and the service users they are supporting feel empowered in their own recovery journey, have greater confidence and self-esteem and a more positive sense of identity, they feel less self-stigmatisation, have more skills and feel more valued.

(From Repper, 2013a)
Research on effectiveness

There has been relatively little high quality research into the effectiveness of peer support. Several reviews have appeared which differ in the studies included, some taking a fairly broad, inclusive approach (Repper & Carter, 2011) and others being more selective while still considering evidence not derived from randomised controlled trials (RCT) (Warner, 2009). The most recent review, using the Cochrane methodology, was able to identify only 11 randomised controlled trials (Pitt et al., 2013). Because of the variable quality of the evidence and the use of different samples of studies, different reviewers come to slightly different conclusions. Nevertheless, a number of findings have emerged.

- In no study has the employment of peer support workers been found to result in worse health outcomes for those receiving the service.
- Most commonly the inclusion of peers in the workforce produces the same or better results in a range of outcomes when compared with services without peer staff (Davidson et al., 1999; Simpson & House, 2002; Doughty & Tse, 2005; Repper & Carter, 2011; Wright-Berryman et al., 2011; Davidson et al., 2012).
- Peer support workers tend to produce specific improvements in patients’ feelings of empowerment (Klein et al., 1998; Corrigan, 2006; Dumont & Jones, 2002; Resnick & Rosenheck, 2008) and in self-esteem and confidence (Davidson et al., 1999; Salzer & Shear, 2002; Davidson et al., 2012).
- In some studies they also seem to be associated with improvements in self-reported physical and emotional health and in clinician-assessed global functioning (Klein et al., 1998; Huxley et al., 2005)
- Improvements in satisfaction with services and quality of life are reported in a number of studies, although with regard to the latter the findings are mixed.
- In both cross-sectional and longitudinal studies, patients receiving peer support have shown improvements in community integration and social functioning (Klein et al., 1998; Chinman et al., 2001; Yanos et al., 2001; Forchuk et al., 2005; Nelson et al., 2006; Huxley et al., 2005; Lawn et al., 2008).
- The introduction of peer support workers has been associated with a reduction of alcohol and drug use among patients with co-occurring substance abuse problems (Klein et al., 1998; Davidson et al., 2012).
- When patients are in frequent contact with peer support workers, their stability in employment, education and training has been shown to increase (Ochocka et al., 2006; Repper & Carter, 2011).

As indicated above, some of these findings are not replicated across all studies and the overall methodological quality of the evidence is poor. There is also significant variability in the nature of the intervention evaluated, the amount of training peers receive prior to placement (which varies from a few days to several weeks) and the nature and frequency of the interaction between peers and the service users they are supporting. In effect, a range of potentially different interventions are being evaluated which makes inconsistent findings not surprising.
In addition to the benefits for those receiving the service, there is evidence of benefits for the peer workers themselves. They feel more empowered in their own recovery journey, have greater confidence and self-esteem, feel more valued and less stigmatised, and have a more positive sense of identity (Mowbray et al., 1998; Salzer & Shear, 2002; Repper & Carter, 2011).

Finally, recent experience with the ImROC programme is that the introduction of peer workers is a powerful way of driving a more recovery-focused approach within organisations. Just as peer workers provide hope and inspiration for service users, so they can challenge negative attitudes of staff and provide an inspiration for all members of the team. Their example demonstrates to everyone that people with mental health problems can make a valued contribution to their own and others’ recovery if they are given the opportunity. This particular impact on organisational change has been repeatedly commented upon by those close to the process but, to our knowledge, it has not been formally investigated.
Value for money

The evidence summarised above indicates that the employment of peer support workers may be associated with a wide range of potential benefits. Some of these are difficult to quantify, let alone value in monetary terms. Nevertheless, at a time when NHS resources are severely constrained, the question of whether the overall benefits of peer support outweigh the costs needs to be addressed. Commissioners and managers will reasonably request information not just on the effectiveness of new services, but also on their cost-effectiveness, as a guide to decision making and prioritisation.

In order to begin to provide an answer to this question whilst allowing for the variability in the studies, we chose to examine just one area of evidence, namely whether peer support workers are able to reduce the use of psychiatric hospital beds among mental health service users, either by preventing or delaying admissions to hospital, or by shortening the length of inpatient stays. We chose to look at the impact on inpatient bed use not only because of the high cost of hospital care but also because this has been an area where service users’ experience of care has consistently been reported to be rather poor (Care Quality Commission, 2009) and thus it seemed an area where the effectiveness of peer support workers in improving care might be particularly strong. If peer support workers can improve patients’ feelings of empowerment, self-esteem and confidence, it also seemed possible that this will help them to manage their lives in the community better, with a correspondingly reduced need for inpatient care.

Inpatient bed use is the single most costly component of the mental health care system. For example, in 2011-12, one day of acute inpatient care cost around £330 on average in English psychiatric hospitals (Department of Health, 2013). Any reduction in bed use that can be achieved by peer support workers will therefore be of considerable financial benefit and will serve to offset the cost of employing these workers. Indeed, if achieved on a sufficient scale, such reductions in bed use may even mean that the employment of peers leads to an overall net saving, i.e. the financial benefit of employing peer support workers actually exceeds the total cost.

Such an outcome would provide a clear answer to the value for money question. The fundamental objective of any health service intervention is to improve the health and quality of life of service users and it is generally to be expected that the achievement of such outcomes will require the use of more resources. In these circumstances the role of decision makers in the NHS is to strike an appropriate balance between the health gain and the additional resource use.

In the case of peer support workers, it has already been seen that there is growing evidence to suggest that the employment of these workers leads to better health and quality of life. Taking into account the impact on hospital bed use raises the further possibility that the costs of mental health care may be reduced rather than increased. In short, better health at lower cost. If this combination of outcomes can indeed be achieved, the use of peer support workers may be unambiguously judged as good value for money and also very attractive from a resource allocation point of view. It not only improves the health and quality of life of service users but also releases resources which can be deployed in other ways.
Review methods

We searched the literature on peer support workers for studies with quantitative data on the relationship between the employment of peers and psychiatric hospital bed use. We used the Cochrane guidelines to assess these studies for risk of bias and to determine their overall quality, although not all of the studies considered were randomised controlled trials.

Based on this process, we identified eight studies for analysis, including one which is as yet unpublished. Other studies which included some information on hospitalisation were rejected, either because of shortcomings in methodology or because they lacked key elements of data required for our analysis. Those rejected for the latter reason included a number of studies with large sample sizes, appropriate comparison groups and other features of good quality research design (e.g. Landers & Zhou, 2011). It is worth noting that most of the studies we discarded reported positive results on hospitalisation outcomes, i.e. the employment of peer support workers was generally associated with lower bed use.

The eight retained studies fell into two groups, depending on the role played by the peer support workers. The first group comprised studies where the trained peer took over as a care coordinator from a traditional mental health worker within a mental health team (‘substitution’). The second group was less well-defined, but consisted of studies where the peer support worker provided new or additional services - such as befriending, mentoring or advocacy - for patients currently receiving care from traditional teams in community or hospital settings (‘additional’).

The first ‘substitution’ group consisted of only two well-designed studies (Solomon & Draine, 1995; Clarke et al., 2000), both of which found that peer support workers could, indeed, function at least as well as traditional workers in the care coordinator role (see also the recent review by Pitt et al., 2013). However, both these studies focussed on patient populations with very low rates of hospitalisation (on average, only about one inpatient day per patient per year) and this makes it more difficult to draw clear conclusions about the impact of peer support workers on bed use.

It is important to add that the use of peer workers as care coordinators may still represent good value for money, even in the absence of any savings in inpatient costs. Thus, if peer support workers are being used in place of traditional mental health workers, then assuming broadly similar rates of pay, their employment does not increase service costs. In these circumstances, any improvement in the health or quality of life of service users is sufficient to justify the use of peers, as this is in effect a costless improvement: better health for the same, or indeed lower, cost. Currently, peer support workers pay is generally lower than that of traditional mental health workers.

We identified six studies on the use of peer support workers to provide ‘additional’ services (Chinman et al., 2001; Klein et al., 1998; Lawn, 2007; Rivera et al., 2007; Salzer et al., undated; Sledge et al., 2011). The remainder of the paper concentrates on the analysis of the data given in these studies. Details on their key features are in the Appendix, which shows that there was considerable variation between the studies in research design, sample sizes, the settings in which the peer support workers operated and the services they provided. The implications of these variations will be discussed later.
Data from the six studies listed above were analysed in order to produce estimates of the number of hospital bed-days saved per full-time equivalent peer support worker in each study. These figures on bed-days saved and peer worker input were then converted to £s using unit costs for England in 2011-12, resulting in a benefit:cost ratio in the following form, which we use as our key financial outcome measure: value of hospital bed-days saved per peer support worker divided by cost per peer support worker.

A ratio of, say, 3:1 indicates that every £1 spent on peer workers is associated with savings in hospital bed use of £3. This in turn implies a net saving of £2 per £1 invested (i.e. gross savings of £3, less £1 spent on the peer support worker).

As already noted, the unit cost of psychiatric hospital bed use is £330 per bed-day (Department of Health, 2013). We have then assumed that most peer support workers fall into Band 3 of the NHS pay scale, for which the mean basic salary per full-time equivalent employee is £18,100 a year (Curtis, 2012). Allowance also needed to be made for on-costs and overheads and these increase the overall cost of employing a full-time equivalent peer support worker to £33,485 a year.

Several of the studies used in our analysis report the numbers of contact hours spent by peer workers with patients, but because of time spent on travel, administration etc., not all hours worked are contact hours. To allow for this, we assumed that the ratio of contact hours to total hours worked is 0.59, in line with the ratio given in Curtis (2012) for a similar staff group (Family Support Workers). We also assumed, again in line with the figure for Family Support Workers, that a full-time equivalent peer support worker works 1563 hours a year, based on a 37.5 hour week and taking into account time spent on annual leave, training etc.

So, if the cost of a hospital bed-day is £330 and the cost of employing a full-time equivalent worker is £33,485 a year, to cover her/his own cost a peer support worker working full-time needs to bring about an overall reduction in hospital bed use of about 100 bed-days a year. For a caseload of say 20 patients per peer support worker, this in turn implies a required average annual reduction of 5 bed-days per patient.

Of the six studies in this analysis, five used follow-up time periods of 6-12 months for the collection of data on hospital bed-use, while one used 36 months. In principle the benefit:cost ratio used as our financial outcome measure is not tied to any particular period of time, but to avoid possible confusion the study using a follow-up period of 36 months was treated as an outlier and the data relating to hospital bed-use during the first 12 months of follow-up were kindly provided by the study authors. No other changes were made in order to equalise the time periods used in the remaining studies. Of the six benefit:cost ratios shown below, two relate to a follow-up period of six months, one to a period of nine months and three to a period of 12 months. Without further information, it is not possible to say whether this use of different time periods reduces the comparability of the results.

A final point to note on costing is that reductions in hospital bed use do not necessarily lead to an immediate cash saving of £330 for each bed-day saved. This is because the figure of £330 is calculated on a full cost basis, including fixed as well as variable costs, and by definition fixed costs cannot be reduced in the very short term. The full value of the saving will therefore be realised only after appropriate adjustments have been made to hospital capacity and staffing levels, and the release of cash savings will depend on the speed at which adjustments such as ward closures can be made. The measurement of savings in terms of full cost is, nonetheless, undoubtedly appropriate as a general basis for evaluating the economic benefits of employing peer support workers and, more generally, for determining all important health service planning decisions.
The results

Findings based on the methods described above are set out in the following table for each of the six studies used in our analysis.

<table>
<thead>
<tr>
<th>Study</th>
<th>time period</th>
<th>cost per peer support worker</th>
<th>value of bed-days saved per peer support worker</th>
<th>benefit:cost ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
</tr>
<tr>
<td>Chinman</td>
<td>6 months</td>
<td>£16,742.50</td>
<td>£142,989</td>
<td>8.54:1</td>
</tr>
<tr>
<td>Klein</td>
<td>6 months</td>
<td>£16,742.50</td>
<td>£41,679</td>
<td>2.49:1</td>
</tr>
<tr>
<td>Lawn</td>
<td>12 months</td>
<td>£33,485.00</td>
<td>£239,910</td>
<td>7.16:1</td>
</tr>
<tr>
<td>Rivera</td>
<td>12 months</td>
<td>£33,485.00</td>
<td>- £43,560</td>
<td>- 1.30:1</td>
</tr>
<tr>
<td>Salzer</td>
<td>12 months</td>
<td>£33,485.00</td>
<td>£23,826</td>
<td>0.71:1</td>
</tr>
<tr>
<td>Sledge</td>
<td>9 months</td>
<td>£25,113.75</td>
<td>£130,018</td>
<td>5.18:1</td>
</tr>
</tbody>
</table>

It can be seen that four of the six studies (Chinman, Klein, Lawn and Sledge) show a benefit:cost ratio substantially in excess of one. In other words, in all these cases the estimated value of the reduction in hospital bed use achieved by peer support workers exceeds the cost of employing these workers. In one study (Salzer), the benefit:cost ratio is positive (+0.71), but less than one. This means that peer support workers bring about some reduction in bed use, but not enough to fully offset the costs of their employment. One study (Rivera) showed a negative benefit:cost ratio, i.e. the use of peer support workers led to a small rise in bed use, so service costs increased both for this reason and because of the costs of employing the peer workers.

To summarise these figures across the studies, the benefit:cost ratio may be averaged. This can be done in two different ways: first, on an unweighted basis, giving the same relative importance to each individual study; and second, on a weighted basis, with the weight attached to each study determined by the size of its patient sample. The latter approach may be preferred to the extent that large sample sizes are likely to lead to more reliable results. Using these methods, the benefit:cost ratio was 3.81:1 measured as an unweighted average and 4.76:1 measured as a weighted average. Both averages thus show a strongly positive result, with relatively little difference between them.

The overall conclusion suggested by these figures is that peer support workers bring about significant reductions in hospital bed-use among the patients they support, leading to financial savings which are well in excess of additional pay costs. On the basis of this evidence, the use of peer support workers is justified on value for money grounds. This conclusion stands even without taking into account the evidence for a positive impact on outcomes relating to the mental health and quality of life of service users.
Limitations of this analysis

We must acknowledge a number of limitations of this analysis.

1. The evidence base is modest, both in scale and in quality. Only six studies have been used and all of these are subject to methodological shortcomings. For example, only two of the studies used properly randomised control groups against which to compare outcomes. Sample sizes were also generally small, particularly in the case of Klein et al., (1998) which is best described as a pilot study, and the services provided by peer support workers were not always fully described. Likewise, ‘standard care’, i.e. the services received by the comparison group, was also very variable and often not well described.

2. As previously noted, there was a good deal of variation between the six studies in terms of the nature of the intervention being evaluated. Such differences are not surprising, as peer support is still far from being a simple, well-defined intervention, to be studied in tightly controlled settings. The high degree of variation between the studies does, however, limit the extent to which general conclusions can be drawn. Overall, the evidence reviewed in this paper supports the proposition that peer support workers can reduce hospital bed use, but it is not possible to say anything about the superiority of one model of peer support over another.

3. A specific limitation relating to the financial analysis is that the impact of peer support workers on mental health service costs has been assessed solely in relation to hospital inpatient bed use. Other services may (or may not) also be affected. In particular, it is possible that savings from the reduced use of hospital care will be partially offset by increased costs in the use of community mental health services. Given the very high costs of hospital care, this is unlikely to have a material effect on the overall conclusions of this paper, but it does imply that the detailed estimates of cost savings given above should perhaps be regarded as upper limits.

4. Finally, of these six studies, five come from the US and one from Australia. This raises the question of the extent to which contextual factors may limit the application of the results to the UK. This is clearly a valid concern, but the general conclusion still looks robust. For example, even if the average saving from lower bed use in our six studies is halved, the financial benefits would still exceed the costs.
Conclusions

These results provide preliminary support for the proposition that adding peer support workers to existing mental health teams may result in cost savings as well as a range of other health and social benefits.

There are methodological problems with the specification of the intervention provided by peer support workers, the quality of the experimental designs used and the cost:benefit analysis undertaken. Despite all these qualifications, the results are still of considerable interest. Of course, more - and better – research is needed.

In the meantime, we believe that enough evidence exists to begin cautiously to employ properly trained and supported peer workers in mental health teams and to carefully evaluate their effects, including their impact on high-cost interventions like inpatient care. This is justified not only on financial grounds, but also because of the consistent body of evidence highlighting problems with the quality of inpatient care.
## Appendix:
Summary of studies giving data on peer support and hospital bed use

<table>
<thead>
<tr>
<th>Author</th>
<th>Design</th>
<th>Sample size</th>
<th>Study period</th>
<th>Nature of intervention</th>
<th>Estimated number of bed-days saved per full-time equivalent peer support worker</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinman et al., 2001</td>
<td>Non-randomised design; matched comparison group</td>
<td>Intervention group = 79; comparison group = 79</td>
<td>6 months</td>
<td>Peer support provided after discharge from hospital, in order to prevent/reduce re-admissions</td>
<td>433 over 6 months</td>
</tr>
<tr>
<td>Lawn, 2007</td>
<td>‘Before and after’ study; no comparison group</td>
<td>Intervention group = 230</td>
<td>12 months</td>
<td>Peer support service providing hospital avoidance and early discharge support to patients at risk of needing admission or re-admission</td>
<td>727 over 12 months</td>
</tr>
<tr>
<td>Sledge et al., 2011</td>
<td>Randomised controlled trial</td>
<td>Intervention group = 38; control group = 36</td>
<td>9 months</td>
<td>Peer support provided after discharge to patients who had been hospitalised three or more times in the previous 18 months, in order to prevent or reduce re-admissions</td>
<td>394 over 9 months</td>
</tr>
<tr>
<td>Klein et al., 1998</td>
<td>Described in Pitt et al. (2013) as ‘quasi-randomised’</td>
<td>Intervention group = 10; control group = 51</td>
<td>6 months</td>
<td>Peer support combined with intensive case management for dual diagnosis patients living in the community</td>
<td>126 over 6 months</td>
</tr>
<tr>
<td>Salzer et al., undated</td>
<td>Non-randomised design; matched comparison group</td>
<td>Intervention group = 106; comparison group = 378</td>
<td>36 months in study; data for first 12 months provided on request</td>
<td>Peer support combined with intensive case management for dual diagnosis patients living in the community who had been hospitalised at least once in the previous two years</td>
<td>72 over 12 months</td>
</tr>
<tr>
<td>Rivera et al., 2007</td>
<td>Randomised controlled trial</td>
<td>Intervention group = 70; control group = 66</td>
<td>12 months</td>
<td>Peer support combined with intensive case management for patients with severe mental illness living in the community</td>
<td>Increase of 132 days over 12 months</td>
</tr>
</tbody>
</table>
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Peer support workers in mental health care

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£5 (where sold)

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