

# Peer support for discharge from inpatient to community mental health care: the ENRICH research programme

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## Scientific summary

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# Scientific summary

## Background

Risk of self-harm, suicide and readmission is high in the months immediately following discharge from psychiatric inpatient care. There is some evidence that transitional interventions incorporating peer support improve outcomes, including reduced readmission rates. Peer support is rapidly being introduced into mental health services internationally, typically delivered by peer workers (PWs) (people with their own experiences of mental health problems trained to support others with similar problems). Evidence for the effectiveness of peer support in mental health services remains equivocal, and the quality of randomised controlled trials to date is often poor, with trials at risk of bias because of unclear randomisation and masking procedures and incomplete reporting of outcomes. Peer support interventions are often poorly described, including the support provided for PWs, and the mechanisms of peer support unclear. Health economic evaluations are absent from the literature.

## Objectives

The aim of the programme is to manualise, pilot and trial a peer support intervention to enhance discharge from inpatient to community mental health care, significantly reducing readmissions and the associated cost of care. The detailed research objectives of the programme are:

1. to refine an empirically and theoretically grounded model that explains how peer support impacts on outcomes for service users post-discharge
2. to develop and manualise a peer support intervention to enhance discharge
3. to develop an index to assess the fidelity of peer support interventions
4. to conduct a high-quality randomised controlled trial of the intervention
5. to establish the effectiveness and cost-effectiveness of a peer support intervention to enhance discharge
6. to explore the impact on PWs of working in a peer support role.

## Methods

A training manual for PWs and intervention handbook were developed in work package 1 (months 1–15). We produced two systematic reviews of one-to-one peer support for adults in mental health services. The first, until April 2015, included studies of all designs and was used to identify components of peer support interventions; the second, until June 2019, was restricted to randomised controlled trials and pooled data from multiple studies to conduct meta-analyses of the effects of peer support. In both searches we searched MEDLINE, PsycINFO, Embase, CINAHL and Cochrane databases (as well as grey literature for the review of components), using 'peer', 'consumer', 'survivor' or 'prosumer' adjacent to 'support', 'supporter', 'provider', 'worker', 'specialist', 'consultant', 'tutor', 'educator', 'mentor', 'intervention', 'listener', 'mediator', 'counsellor', 'befriender' or 'therapist' as search terms for peer support. Paper selection at both title and abstract, and full text stage was undertaken independently by two researchers, with data extracted to spreadsheets relevant to each review. Results for the first review were combined with consensus workshops with stakeholder panels to develop and refine the peer support for discharge intervention. We also developed and tested the appropriateness, inter-rated reliability and internal consistency of a peer support fidelity index (work package 2, months 7–24). The index was first tested in 20 peer support projects not involved in the trial, before being retested and then implemented at three timepoints in each trial site.

We conducted an internal pilot of the intervention and trial procedures in two sites (work package 3, year 2 of the programme) before proceeding to full trial in seven sites (work package 4, years 3–5). Sites were inpatient and community mental health services in seven mental health National Health Service trusts in England. Participants were people admitted to psychiatric inpatient care who had at least one previous admission in the preceding 2 years (i.e. who were at increased risk of readmission), the PWs who were employed and trained at each site to deliver the intervention, and the PW co-ordinators (PWCs) who supervised PWs at each site. Participants randomised to peer support were offered a manualised peer support for discharge intervention and care as usual (CAU). Participants in the control group received CAU only (discharge summary sent to community or primary care mental health team who contacted participant within 1 week of discharge to plan ongoing care). The primary outcome for the trial was readmission (formal or informal) to psychiatric inpatient care (readmitted or not) within 1 year of discharge from the index admission. Secondary outcomes were number of voluntary admissions, involuntary admissions and total number of admissions, total number of days in hospital, time to first readmission, use of accident and emergency services for a psychiatric emergency (measured as number of episodes of liaison psychiatry contact) and number of contacts with crisis resolution and home treatment teams in the year post discharge, plus standardised measures of psychiatric symptom levels, subjective quality of life, social inclusion, hope for the future and strength of social network, measured at end of intervention (4 months post discharge). Analyses were conducted on an intention-to-treat (ITT) basis. We carried out a Complier Average Casual Effect (CACE) analysis of the primary outcome (where compliers were participants who had at least two PW meetings, at least one of which was in the community following discharge). The CACE was estimated with a two-stage estimation procedure. In the first stage, a logistic regression of treatment receipt regressed on randomisation was conducted. In the second stage, a Poisson regression of the outcome on treatment receipt was conducted. The analysis was adjusted for the same covariates as the ITT analysis. A bootstrap (1000 samples) was used to obtain bias corrected and accelerated confidence intervals (CIs). Subgroup analyses for the primary outcome were pre-specified: ethnicity (any black ethnicity, all other ethnicities); primary diagnosis at index admission (psychotic disorders, personality disorders, other eligible disorders); first language (English, other). Service use data were collected from electronic patient records (EPRs) at study site, standardised measures of outcome and qualitative data were collected by face-to-face interview by a member of the study team.

Our primary economic analysis of total costs over 12 months (using EPR of mental health service use), allowing for cost of peer support, and the secondary cost-effectiveness analysis at 4 months [using self-reported quality of life to derive quality-adjusted life-years (QALYs)] were carried out from an NHS mental health service perspective. A wider 'societal' perspective was taken when analysing non-NHS mental health care costs over 4 months (using self-reported service use outside of mental health NHS care). All analyses were conducted on an ITT basis using generalised linear modelling (GLM) with a logarithmic link function.

We conducted a mixed methods process evaluation as part of work package 4, alongside the trial. Quantitative analyses used regression models to explore pre- and post-randomisation predictors of engagement with the peer support intervention. In-depth qualitative interviews with a subsample of 39 trial participants and all 32 PWs who were involved in delivering the intervention explored their experiences of peer support and sought to elucidate and refine the change model underpinning the intervention. Interviews were undertaken by service user researchers and data analysed using a 'co-production' approach to integrate the full range of perspectives on the research team – clinical, academic and experiential – in interpretive workshops, producing an analytical framework that was then used to code the full set of qualitative interviews.

Work package 5 was a mixed method, longitudinal cohort study which explored the impact of providing peer support on PWs (from month 31 until the end of year 5). PWs completed standardised measures of well-being and employment outcomes, and in-depth interviews at three timepoints.

All data were collected by service user researchers, who played a key role in developing interview schedules, refining rating procedures for the fidelity index, and analysis and interpretation of qualitative interview data. Development of the intervention and all research procedures were informed by a Lived Experience Advisory Panel (LEAP), as well as the experiential knowledge brought by service user researchers and PWs on the research team.

## Results

In the first (2015) systematic review we identified 97 studies (including 12 from grey literature) that contributed 44 potential components to the intervention development process. A total of 66 potential components were identified when combined with outputs of our stakeholder workshops. Through iterative rounds of consensus building and testing we developed and refined our peer support intervention, comprising a bespoke PW training programme and a detailed handbook guiding implementation.

In the second (2019) review we identified 23 studies reporting 19 trials. We found that one-to-one peer support in mental health services has a small but statistically significant benefit for individual recovery [standardised mean difference (SMD) 0.22, 95% CI 0.01 to 0.42;  $p = 0.042$ ] and empowerment (SMD 0.23, 95% CI 0.04 to 0.42;  $p = 0.020$ ). There was no effect on clinical outcomes such as symptoms or hospitalisation; the risk of being hospitalised was reduced by 14% for those receiving peer support but was non-significant [risk ratio (RR) 0.86, 95% CI 0.66 to 1.13].

We developed a principles-based fidelity index that had good acceptability and psychometric properties. The index measures set-up, delivery and overall fidelity of peer support against four domains (principles): building trusting relationships based on shared lived experience; reciprocity and mutuality; leadership, choice and control; building strengths and making connections to community. In the trial, fidelity was good at set-up in all sites, while fidelity of delivery of peer support was lower in sites where PWs were employed in voluntary sector organisations outside of the NHS.

The pilot trial indicated that progression criteria were met subject to a small number of actions to improve the rate of recruitment of participants.

In the main trial we successfully recruited our target of 590 participants, and participant characteristics were well-balanced between groups. In the PW group, 136 (47.4%) participants were readmitted to psychiatric inpatient care within 12 months post-index admission, and 146 (50.2%) in the CAU group. The adjusted relative risk of readmission in the ITT analysis was 0.97 (95% CI 0.82 to 1.14;  $p = 0.6777$ ), and the adjusted odds ratio (OR) was 0.93 (95% CI 0.66 to 1.30). In the CACE analysis, the relative risk of readmission according to the natural indirect effect (RR 0.88, 95% CI 0.76 to 0.99) was lower than from the ITT analysis and was significant. In subgroup analyses (see [Table 6](#)), for patients of any black ethnicity the adjusted OR of readmission was 0.40 (95% CI 0.17 to 0.94), while for any other ethnicity the OR was 1.12 (95% CI 0.77 to 1.63; interaction  $p = 0.0305$ ). There were no statistically significant differences between the groups in any of the secondary outcomes assessed at 4 or 12 months. Adherence to the intervention was assessable in 268 (91.2%) participants with a mean of 1.8 [standard deviation (SD) = 2.9] face-to-face contacts with a PW in hospital, 4.4 (SD = 4.6) post discharge. There was a total of 67 serious adverse events (SAE) reported in the trial (34 in the peer support group, 33 in the CAU group) from 51 participants (26 in the peer support group, 25 in the CAU group). One SAE in the peer support group, an incident of self-harm, was reported as related to the intervention. Number and type of SAE included 12 deaths, none of which were reported as related to the study.

A cost analysis of mental health service contacts over a 12-month period following discharge from inpatient care showed that, adjusting for baseline covariates, exposure to peer support was associated with a reduction in mean total costs of £2631 (95% CI -£21,546 to £3845): this amounted to a 10%

reduction in mean total costs over 12-month post hospital discharge compared to usual care (95% CI -31% to 15%). Given sampling uncertainty there was an estimated 82% probability that peer support was associated with lower total costs over 12 months (or a 18% chance that usual care was the lower cost alternative). Most of the cost advantage over follow-up was due to reductions in the cost of bed day utilisation. Over 4 months, and considering patient quality of life outcomes as well as cost, peer support was also found to be cost-effective from an NHS mental health service perspective. The expected QALY gains associated with peer support were marginal: a 0.002 QALY improvement per participant, equivalent to less than a single day in full health.

Participants who were heterosexual were less likely to engage with peer support than gay, lesbian or bisexual participants, OR 0.3 (95% CI 0.08 to 0.87;  $p = 0.029$ ). We found that length of first contact (in minutes) was positively associated with engaging with peer support, OR 1.02 (95% CI 1.00 to 1.04;  $p = 0.010$ ), and participants who went on to engage with peer support experienced more relationship building activity in that first contact. A shorter period between allocation to peer support and discharge (in days) was also associated with engagement in the intervention, OR 0.99 (95% CI 0.98 to 1.00;  $p = 0.002$ ).

Our qualitative process evaluation largely supports our original change model, further elucidating the distinctive nature of the peer-to-peer relationship while indicating the role that PWs played in enabling people to build relationships and make connection to community. Choice and control over how people engaged with peer support was identified as an important mediator of good experience and outcomes of peer support.

Peer worker well-being, job satisfaction, team working and burn out scores were close to or better than scores for appropriate norm populations throughout the study. There were small but significant drops in well-being, personal satisfaction and satisfaction with workload after 4 months in post, and a similar small increase in burn out, but these changes were not maintained at 12 months. Satisfaction with training and job prospects were lower at 12 months. Qualitative data largely confirmed these findings with PWs indicating that they found that peer support work could be emotionally and practically challenging for the first few months but was rewarding and offered opportunities for personal growth.

## Conclusions

We conclude that peer support for discharge, offered to participants at risk of readmission, was not superior to CAU. Peer support should not be commissioned with the expectation that it reduces readmissions for this group, although some cost-saving based on fewer days in hospital is likely. Our trial findings reflect those of our systematic review, suggesting that one-to-one peer support in mental health services is unlikely to improve clinical outcomes or reduce hospitalisation. Further research is needed to:

1. improve implementation in order to optimise engagement with peer support
2. establish the impact of peer support on psychosocial outcomes
3. understand and evaluate the impacts of peer support for people from different ethnic communities (and especially to optimise benefits for black people using mental health services)
4. understand and evaluate the impacts of peer support for people from different clinical populations
5. establish the construct validity of our fidelity index through use with larger samples
6. better understand the ongoing training and support needs, and career development pathway for PWs.

## Study registration

The systematic review is registered as PROSPERO CRD42015025621. The trial is registered with the ISRCTN clinical trial register, number ISRCTN 10043328.

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