Effectiveness of social prescribing:
An evidence synthesis
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Key findings

This evidence synthesis included 8 UK studies (1 cluster RCT, and 7 pre/post test studies, 1 with a control group) and examined the effectiveness of social prescribing on 2 outcomes:

1. Contact with primary health such as frequency of GP consultations.
2. Changes in physical and/or mental health including patient wellbeing scores.

The studies were mostly of low methodological quality (small sample sizes, mostly with no control groups, often no statistical analysis and considerable loss to follow up).

The only RCT included in the synthesis (rated medium quality) found no impact of referral to social prescribing upon GP consultations and no beneficial effect across a range of health and wellbeing measures at 9 month follow up, compared with controls. Four out of 7 studies reported that referral to social prescribing reduced contact with primary health, 1 study found no effects on self-reported lifestyle behaviours, while 5 out of 7 studies reported improvements in patient mental wellbeing.

Studies based on primary care outcomes were inhibited by low quality of the routine electronic monitoring data collected in surgeries, with inconsistent and incomplete recording, discrepancies in ‘read codes’ and often poor data transfer between manual and electronic systems.

The way social prescribing is delivered and to whom varied making comparisons across studies difficult, for example, from supporting lonely patients, those with long-term conditions or carers to helping patients needing housing advice. The level and type of link worker support also varied, ranging from purely signposting a patient towards an intervention/s to even attending activities with them.

A number of potential implementation factors related to the success of social prescribing were highlighted by authors in the included studies, including ensuring link workers have appropriate skills and resources, encouraging greater GP referrals and adapting meetings or services according to the needs of patients.

Despite widespread national support for social prescribing, this synthesis found no clear evidence for effectiveness, consistent with findings in an earlier systematic review on the same topic.

More high-quality research addressing effectiveness is needed given the planned national roll out of social prescribing, including high quality RCTs and studies that help understand the link worker role and a patient’s engagement with services. Here recently published best practice guidance (which includes a common outcomes framework for collection of evidence) is helpful for encouraging greater consistency in the collection and reporting of impact data.
Introduction

This report is part of a series of syntheses intended to support public health professionals, local authorities and clinical commissioning groups in local health needs assessment and commissioning of public health services. Each synthesis is based on a clearly defined research question and brings together the most relevant administrative data (where available for the particular topic area) and research literature. In the first year of operation, topics were proposed and selected via the Health Improvement Strategic Planning Group in PHE.

This evidence synthesis aims to determine the effectiveness of social prescribing in the UK. There is no set definition of social prescribing (1) but according to the UK’s ‘National Social Prescribing Network’ social prescribing “enables healthcare professionals to refer patients to a link worker, to co-design a non-clinical social prescription to improve their health and well-being” (2). People’s health is determined primarily by a range of social, economic or environmental factors and social prescribing seeks to address people’s needs in a holistic way, allowing them to take greater control of their own health. Schemes can involve a variety of activities, typically provided by the voluntary and community sector, for example arts activities, sport, befriending, volunteering or housing advice. Each social prescribing programme varies and while some schemes may refer a patient to existing services or groups in an area, others might receive funding to start up new activities. The final ‘social prescription’ produced between the link worker and patient can therefore vary considerably from one patient to another in different areas. Greater integration of primary care with the wider health and care systems through social prescribing can therefore help to reduce demand on stretched primary care services and contribute to reducing the wider determinants of health by improving a person’s confidence, skills, their community links and employability (3, 4).

In October 2018, the Government published ‘A Connected Society’, its strategy for tackling loneliness which highlighted the Department of Health and Social Care and NHS England’s commitment to improve and expand social prescribing services (5). As well as supporting lonely or socially isolated patients, social prescribing can benefit those with long-term conditions, the socially disadvantaged, individuals at high risk of mental health crisis or young carers (3). Social prescribing forms part of ‘The NHS Longer-Term Plan’ published in January 2019 as part of better joined-up and more personalised care. Plans include the recruitment of 1,000 trained social prescribing ‘link workers’ by 2020/21 and it is anticipated that these staff will handle over 900,000 patient appointments per year (6).

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(1) For more details see: www.socialprescribingnetwork.com/
In 2017, the Centre for Reviews and Dissemination (CRD) published a systematic review based upon 15 studies about the effectiveness of social prescribing in the UK (7). The review focused upon those occasions where a healthcare professional from primary care had referred a patient to a link worker or facilitator of social prescribing. The primary outcomes were any measures of health and wellbeing and/or usage of health services. The reviewers also explored any other outcomes reported in evaluations (for example, patient experience, referrer experiences, lessons learned and details of any costs). The study concluded that although social prescribing is being widely advocated and implemented, more robust evidence is needed to help reliably judge which, if any, social prescribing schemes are effective and value for money. Most of the evidence came from small scale studies that were limited by poor design and reporting, all of which were rated as a having a high risk of bias.
Data Context

Routine or systematically collected data about referral to social prescribing is lacking. Some experimental statistics are in development via NHS Digital (based upon data from Egton Medical Information Systems (EMIS) and The Phoenix Partnership (TPP) GP systems) on the number of appointments in general practice, but this is not available specifically for social prescribing. The most recent estimates for examples show there were 307 million general appointments in surgeries between 1 February 2018 and 31 January 2019 (6). According to research by Citizens Advice in early 2015, based upon interviews with 1,002 UK GPs, around a fifth (19%) of their time is spent on social issues that are not primarily about health (9). The top 3 non-health issues that GPs report during consultations with patients were: personal relationship problems (92%), housing issues (77%) and problems with work/unemployment (76%).

NHS England estimate that around 60% of clinical commissioning group (CCG) areas in England have social prescribing schemes and this number is growing (10). GP prescribing data is collected within a number of sources such as the Health Improvement Network (THIN) database or Clinical Practice Research Datalink (CPRD), both of which could be useful sources of data on social prescribing in future. THIN, for example, represents a collaboration between two companies, one that developed software to help UK GPs manage patient data and another who provide access to data for use in medical research. Data are collected as part of routine practice and contain anonymised longitudinal patient records for 11.1 million patients (3.7 million active patients) equivalent to 75.6 million patient years of data collected from 562 general practices in the UK (covering 6.2% of the UK population) (11). However, no relevant data on social prescribing was available for analysis or reporting here.

For more details see: https://www.the-health-improvement-network.co.uk and https://cprd.com/primary-care
Methodology

This evidence synthesis used a rapid evidence review methodology; a type of knowledge synthesis in which components of the systematic review process are simplified or omitted to produce information in a short period of time (12). Efforts are made to ensure shortcuts have minimal impact on the results. The review adopted a fairly broad search to retrieve as much relevant literature as possible (following the PRISMA(III) reporting standards) to answer the research question: What is the effectiveness of social prescribing in the UK?

Initial scoping work identified the systematic review published by the Centre for Reviews and Dissemination (CRD) (7). The project team therefore decided this synthesis report should provide an update but with some restrictions given the timescales available. For example, the synthesis focused on fewer outcomes and limited the study designs. The intention was to add value by synthesising findings from any new studies that specifically measured effectiveness, such as Randomised Control Trials (RCTs), released after the CRD search period ended.

A protocol for the review was developed with the help of an advisory team (see full list provided in acknowledgements) along with a Population, Intervention, Comparator and Outcome/s (PICO) framework to help structure the work.

Population:
Adults

Intervention:
Any form of social prescribing (social prescribing, community referral or wellbeing programme) which involved referral from healthcare professionals in primary care settings (for example, GP or other primary care professional) to a link worker or facilitator of social prescribing (as per the Social Prescribing Network definition used in the CRD review).

Comparator:
No intervention / routine care from GP (in the case of RCTs or non-randomised CTs)

(III) For more details see: http://prisma-statement.org
Outcomes:

Primary: contact with primary health including measures such as frequency of GP consultations (either face-to-face or telephone)
Secondary: changes in physical and/or mental health

Sources searched

The following databases were searched: Ovid MEDLINE, CINAHL, PsycInfo Social Care Online, Social Policy and Practice, Cochrane Central Register of Controlled Trials, National Institute for Health and Care Excellence (NICE) Evidence and Google Scholar. Review papers were hand searched and any primary papers which fulfilled the inclusion criteria were obtained.

Dates of search

1 January 2016 to 27 November 2018

Search strategies

As an example, the Ovid Medline search strategy developed by Knowledge and Library Services (KLS) is included in Appendix 1. Searches of other databases were similar. Examples of similar search strategies run in the other databases are available from the KLS on request.

Inclusion criteria

1. Language: English.
2. Study type: RCTs, non-randomised CTs, pre/post studies.
4. UK-based studies.
5. Grey literature (KLS aimed to ensure any relevant grey literature was retrieved by searching Google along with a number of other sources such as the Social Care

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IV The CRD systematic review included studies published between 2000 to January 2016 (the CRD authors noted that they ran an updated search on 5 February 2016 for certain databases). The current synthesis therefore only includes studies released after this and not featured in the CRD.
Online⁹ and NICE Evidence databases. Social Care Online, for example, covers papers published by academic institutions and government departments as well as local government and voluntary sector).

Screening

Knowledge and Library Services downloaded all titles and abstracts for possible inclusion in the review into an Endnote database and removed all duplicates to leave only unique articles. Screening was conducted by two reviewers. Each reviewer independently screened all titles and abstracts in accordance with the inclusion criteria, with any disagreements discussed and amended. Reviewers then located the full texts of relevant papers for possible inclusion. Two reviewers independently screened all full texts that looked relevant and any disagreements were discussed. Where disagreements occurred referral to a third person was possible to help decide upon the final set of papers for the review.

Data extraction

Data extraction tables were set up and agreed by the project team. One reviewer independently extracted the data and a second reviewed this for accuracy. Any differences were discussed and amended.

Quality assessment

The Critical Appraisal Skills Programme (CASP) appraisal tool/checklist was used to assess the quality of the evidence (¹³). The 2 reviewers independently assessed all the final papers and each defined them as either low, medium or high quality. Although the CASP RCT checklist was used for consistency across studies, not all questions were applicable to the pre/post-test study designs in the reviews. Some papers were finally scored low/medium quality to help further distinguish between better quality papers. Any differences between reviewers were discussed and amended accordingly.

The review performed a narrative synthesis to summarise findings from the included studies. Meta-analysis was not possible due to likely heterogeneity of studies. The review was peer reviewed externally (see appendices for full details).

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⁹ For more details see: https://www.scie-socialcareonline.org.uk/About/faq
Results

Screening

The literature search retrieved just over 500 titles or abstracts for possible inclusion in the review (Figure one). All citations were downloaded into an Endnote database by KLS and any duplicates removed. Papers included 516 unique articles from a search of relevant health and social science databases and a further 8 from a Google and Google Scholar search. Following the screening in duplicate 8 papers remained.

*1 of these studies was a review paper
**2 of these studies were from the review paper assessed at full text stage

Figure one: PRISMA Flow Diagram for the effectiveness of social prescribing review
Effectiveness of social prescribing

Study characteristics

This synthesis included 8 studies: one cluster RCT (14), one controlled pre/post study (16) and 6 uncontrolled pre/post studies (16, 17, 18, 19, 20, 21). Most studies formed part of wider mixed-method evaluations that collected quantitative and qualitative data examining a range of issues, for example, third sector partner views or costs of social prescribing. Universities led most of the evaluations: University of Glasgow (14) (17), Sheffield Hallam University (16), University of London (15), Canterbury Christ Church University (19) and University of the West of England (18). All studies included in this synthesis involved referral to a link worker and this role could take a variety of different names: ‘Community Connector’, ‘Social Prescribing Co-ordinator’, ‘Community Links Practitioner’, ‘Hub Co-ordinator’ or ‘Service Advisor’. The patients referred to social prescribing varied widely across studies: frequent GP attenders, those with long term physical or mental health conditions, those needing benefits/housing advice, socially isolated patients or carers. The associated extraction tables that accompany this report give full study details (for example, study design, types of people referred and the sort of activities available to patients referred for social prescribing).

Of the 7 papers that examined primary care contact, 5 relied upon electronic data from GP registers and 2 upon patient self-reports to measure outcomes. All of the studies that examined mental wellbeing as an outcome used a validated measure, for example, the 14 item Warwick-Edinburgh Mental Well-being Scale (WEMWBS),vi the Hospital Anxiety and Depression Scale (HADS), the Health related quality of life (HRQL EQ-5D-5L) instrument or Wellbeing (ICECAP-A) scores. Timescales for follow up also varied considerably across studies; ranging from between 3 to 6 months (17,18,19,20,21), 8 months (15), 9 months (14) or as long 12 months in some cases (15).vii

Four studies were judged low quality overall due to for example small sample sizes, short follow up times, insufficient detail on the study methodology or considerable loss to follow up (16,17,18,19). A loss to follow up of >20% presents a threat to validity. A further 3 studies were rated low/medium quality: the London pre/post test that included a control group (15) along with 2 uncontrolled pre/post studies (a small scale Northern Ireland study (20) and a large Gloucestershire pre/post study (21)). One study (the cluster RCT) was rated medium quality (14). Further details of using the CASP checklist can be found in the online quality assurance tables that accompany this report.

vi WEMWBS is a validated 14 item scale with 5 response categories designed to measure wellbeing in the general population. For more details see: https://warwick.ac.uk/fac/sci/med/research/platform/wemwbs

vii This paper had different follow up times for the two outcome measures.
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Study outcomes

Primary outcome: Contact with primary health

Seven studies (including 6 pre/post studies and the cluster RCT) examined contact with primary health services (such as frequency of GP consultations) following referral to social prescribing. Results were mixed and are summarised in Table 1 (further details of outcomes and results are available in the associated data extraction tables that accompany this report).

Table 1: Contact with primary health – summary of outcomes following referral to social prescribing

<table>
<thead>
<tr>
<th>Author, year, location, study type</th>
<th>Population</th>
<th>Patient self-reports of GP appointments</th>
<th>GP electronic / practice records data</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RCT</strong></td>
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<td></td>
</tr>
<tr>
<td>Mercer et al/ NHS Scotland, 2017, Scotland, cluster (14)</td>
<td>N=288 intervention group at baseline and 214 follow up; N=612 control group at baseline and 561 follow up</td>
<td>No effect on number of GP or Practice Nurse consultations at 9 month follow up (p=0.621 and p=0.680 respectively).&lt;sup&gt;viii&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Carnes et al, 2017, London, with a control (15)</td>
<td>N=377 intervention group and N=7,540 control at baseline and follow up</td>
<td></td>
<td>Median GP consultation rate was significantly lower in the year after the intervention (8.3 pre and 7.3 post, p=0.001) while it was significantly higher for the control group (2.9 pre and 3.3 post, p=0.014).</td>
</tr>
<tr>
<td>Dayson et al, 2016, Yorkshire (17)</td>
<td>N=215 at baseline and follow up</td>
<td>68% self-reported a reduction in their number of GP appointments since referral, 15% reported an increase and 17% reported no change (3-6 months follow up).*</td>
<td></td>
</tr>
<tr>
<td>Dayson et al, 2018, Yorkshire (16)</td>
<td>N=179 at baseline and follow up</td>
<td>7% reduction in GP engagements after 3 months and 6% after 6 months.*</td>
<td></td>
</tr>
<tr>
<td>Kimberlee et al, 2016, Gloucestershire (21)</td>
<td>N=1,080 at baseline and follow up</td>
<td>GP appointments declined by 21% at 6 month follow up. GP home visits declined by 26% and GP telephone calls by 6%.*</td>
<td></td>
</tr>
<tr>
<td>Loftus et al, 2017, Northern Ireland (20)</td>
<td>N=68</td>
<td>No significant difference at 12 week follow up (p=0.021)</td>
<td></td>
</tr>
</tbody>
</table>

*No statistical comparisons were conducted.

<sup>viii</sup> Only the results from model 4 are included as statistically the best model and gives the best estimate of the true difference in outcomes between the two groups. Results are taken from their Intention To Treat (ITT) primary analysis, meaning all those referred to a CLP were included, irrespective of whether they saw one or not.
Four studies reported that referral to social prescribing had a positive effect upon frequency of contact with primary health. More information on attendance at the social prescribing appointment or uptake of prescribed activities is available in associated data extraction tables. The London pre/post study with a control group found that annual median GP consultation rates were significantly higher in the intervention group before referral to social prescribing compared with their matched controls (p<0.001). The rate among the intervention group dropped significantly in the year following referral. The Gloucestershire pre/post study found the mean number of GP appointments per patient declined by 21% at follow up compared to 6 months before. However, the study was limited by lack of details on the methodology or any evidence that statistical comparisons were conducted. There were also issues with the accuracy of the routine monitoring data collected by surgeries. The two Yorkshire based pre/post studies found a reduction in GP appointments between 3 and 6 months after referral based upon electronic data and a reduction in GP appointments from self-reports. However, interpretation of the findings is hindered by relatively poor reporting (for example, in a pre-post study how many of the same patients at baseline were included at follow up) and lack of statistical comparisons.

Two studies reported no effect of referral to social prescribing on levels of contact with primary care. The Glasgow cluster RCT (rated medium quality) found no impact upon consultations with a GP or with a practice nurse at 9 month follow up, compared with controls. Similarly, the small scale Northern Ireland pre/post study found no significant difference in GP use at 12 week follow up. However, the authors noted a low uptake in social prescribing and a long wait from referral to accessing the activities on offer which could have impacted on results.

One study reported a negative effect. Appointments at GP surgeries increased after 6 months in the Bexley pre/post study, although no statistical comparisons were conducted. These were elderly patients with long term chronic conditions that required regular consultations and here study authors noted that social prescribing might not reduce their need for contact with GP surgeries as such patients require a large number of ongoing appointments by default. One Bexley surgery (Bellegrove) that was able to split data by appointment type however found that appointments with a GP decreased, as did appointments with a practice nurse, while appointments with health care assistants increased after social prescribing referral.

**Secondary outcome: Changes in physical and/or mental health**

Seven studies examined changes in mental or physical health, reporting mixed levels of effectiveness (see Table 2). Five studies reported that referral to social prescribing was effective in improving mental health or wellbeing. The Gloucestershire pre/post study detected a statistically significant increase in the short version of the scale
Effectiveness of social prescribing

(SWEMWBS)$^\text{ix}$ mean scores at 12 week follow up and a large effect size, based upon the author's definition of an eta squared statistic of 0.39$^{(21)}$. However, as the author noted, results should be interpreted with caution as baseline wellbeing scores were compared with follow up scores from a matched sub sample who were dissimilar to the baseline profile of the overall sample. There were also differences in when the follow up questionnaire was completed which makes it difficult to attribute the result to the effect of referral to social prescribing. The Bristol pre/post study$^{(18)}$ found significant improvements in SWEMWBS scores after referral to social prescribing (p<0.001), with improvements sustained by 3 months, however results were based on small numbers.

$^\text{ix}$A short version of the WEMWBS scale.
Effectiveness of social prescribing

### Table 2: Changes in physical and/or mental health – summary of outcomes following referral to social prescribing

<table>
<thead>
<tr>
<th>Author, year, location, study type</th>
<th>Population</th>
<th>General health or quality of life</th>
<th>Wellbeing</th>
<th>Loneliness</th>
<th>HADS* scores</th>
<th>Self-reported life-style behaviours</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RCT</strong></td>
<td>Mercer et al/NHS Scotland, 2017, Scotland, cluster (14)</td>
<td>N=288 intervention group at baseline and N=214 follow up; N=612 control group at baseline and N=561 at follow up</td>
<td>Health related quality of life (EQ-5D-5L) No statistically significant effects at 9 months (p=0.648 model 4 in the Intention to Treat (ITT) analysis).</td>
<td>Wellbeing (ICECAP-A) no statistically significant effects at 9 months (p=0.411 model 4 in ITT analysis).</td>
<td>No statistically significant effects at 9 months (p=0.172 model 4). ITT analysis. No statistically significant effects at 9 months (p=0.753 model 4 in ITT analysis).</td>
<td>No statistically significant effects at 9 months on alcohol and exercise (p=0.421, p=0.183, model 4). ITT analysis.</td>
</tr>
<tr>
<td><strong>Pre/Post</strong></td>
<td>Brown et al, 2018, Bristol (18)</td>
<td>N=129 at baseline; N=93 at point of service exit; N=41 at 3 month follow up</td>
<td>SWEMWBS scores increased significantly (p&lt;0.001) at point of service exit. Improvements sustained at 3 month follow up.*</td>
<td>De Jong Loneliness scale significant reduction (p&lt;0.001) at exit and UCLAS Loneliness scale scores significantly improved (p&lt;0.001) at point of service exit. All improvements sustained at 3 month follow up.*</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Carnes et al 2017, London, with a control (15)</td>
<td>N=184 intervention group at baseline and N=69 at follow up; N=302 control group at baseline and N=127 at follow up</td>
<td>Patient reported general health score (from very good to very bad). No statistically significant differences between intervention and control at 8 months follow up. No p value reported.</td>
<td>Patient self-reported wellbeing in past week (ranging from very bad to very good). No statistically significant differences between intervention and control at 8 months follow up. No p value reported.</td>
<td>No statistically significant differences in HADS Anxiety scores between intervention and control at 8 months follow up and in HADS Depression or Overall HADS score. No p values reported.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dayson et al, 2016, Yorkshire (17)</td>
<td>N=215 at baseline and follow up</td>
<td>Health related quality of life (EQ-5D-5L) 48% recorded an increase in overall HRQL compared to 34% in the reference group at 3-6 month follow up* (small improvements in the pain, mobility, self-care, usual activities components but large overall improvements in anxiety / depression component by follow up). No p value reported.</td>
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</tbody>
</table>

* Hospital Anxiety and Depression Scale (HADS) is a valid and reliable self-rating scale that measures anxiety and depression in both hospital and community settings.

** As in Table 1, only the results from model 4 are included as these are statistically the best estimate of the true difference in outcomes between groups.

*** Although no p values were reported, the author stated in the text that results were 'significant'.

16
<table>
<thead>
<tr>
<th>Author, year, location, study type</th>
<th>Population</th>
<th>General health or quality of life</th>
<th>Wellbeing</th>
<th>Loneliness</th>
<th>HADS* scores</th>
<th>Self-reported life-style behaviours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dayson et al, 2018, Yorkshire (16)</td>
<td>N=Unclear at baseline and follow up</td>
<td>Overall health (EQ-VAS) mean score improved at 3 month follow up.</td>
<td>SWEMWBS mean score increased at (approximately) 3 follow up.*</td>
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<tr>
<td>Kimberlee et al, 2016, Gloucestershire (21)</td>
<td>N=844 at baseline and 399 at follow up</td>
<td>SWEMWBS mean scores statistically increased at 12 week follow up. No p value reported.</td>
<td></td>
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</tr>
<tr>
<td>Palmer et al 2017, London (19)</td>
<td>N=81 at baseline and follow up</td>
<td>WEMWBS mean score increased at 6 month follow up.*</td>
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</tbody>
</table>

*No statistical comparisons were conducted.

The Hale (Bradford) pre/post study identified improved SWEMWBS mean scores at 3 months (16) and the Bexley pre/post study found mean WEMWBS scores increased at 6 month follow up (19). The Doncaster pre/post study noted improvements in HRQL and also ‘large’ overall improvements in anxiety/depression by 3 month follow up (17). Neither study conducted statistical comparisons of the results.

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xiii Although no statistical comparisons were reported the authors noted that a change of between 3 to 8 in WEMWBS points was meaningful.
Two studies found that referral to social prescribing did not improve mental or physical health. For example, the cluster RCT in Glasgow showed no beneficial effect at 9 months compared with controls across a range of measures: HADS anxiety scores, HADS depression scores, HRQL EQ-5D-5L scores, Wellbeing ICECAP-A scores and self-reported lifestyle behaviours (14). The London study also failed to find statistically significant differences at 8 month follow up across a number of measures compared with controls:

- general health scores (from very good to very bad)
- HADS depression
- HADS anxiety
- overall HADS scores and wellbeing in the past week (ranging from very bad to very good (15)

The intervention group did show positive changes in anxiety (not depression), but the change was not significantly different to the change in the control group.
Discussion

Effectiveness of social prescribing

The CRD systematic review concluded overall that studies provided insufficient detail to judge the success of social prescribing and the evidence base was of ‘low quality’ with ‘high risk of bias’. This synthesis report considered studies released since then and overall the findings were consistent with the systematic review. There was no clear evidence for the effectiveness of referral to social prescribing across the outcomes under study. Some of the included studies reported reductions in primary care contact and improvements in physical or mental health outcomes, yet these were hindered by the low methodological quality of studies as described below. Many studies reported no beneficial effects of referral to social prescribing upon outcomes, including the cluster RCT of medium quality.

Study quality

The studies included in this review examining the effectiveness of social prescribing in the UK were mostly low quality (for example, 4 were low quality and a further 3 were low/medium quality), often with small sample sizes, no control groups and considerable loss to follow up. The significant reduction in median GP consultation rates in the London pre/post study with a control looked promising (15). However, those referred to social prescribing were the most frequent attenders at GP surgeries generally and so this reduction may not reflect the effect of referral to social prescribing, but the study authors suggested it may represent ‘regression to the mean’ (if a variable is extreme when first measured, it will be closer to the average the next time it is measured (22)). The study also had the highest drop-out rate of any in the review (only 69 of the 475 people approached to participate completed a questionnaire at follow up). This could result in selection bias, if those that participated in the follow up questionnaire were systematically different from those who dropped out.

The studies which found positive impacts upon physical or mental health outcomes after 3 months (16,18,21) were often based upon small numbers, lacked details on their methods and did not provide statistical assessment of any changes. Many studies also did not follow the standard reporting format of journal articles which hinders the interpretation of findings, as found in the previous review (7). In some studies, the agency or organisation responsible for the social prescribing programme conducted the evaluation itself (or in partnership with another organisation) and potential for bias is a consideration that some authors openly acknowledged.

Five (of the 7) studies which considered primary care contact used GP electronic data and the findings were mixed. Poor reporting often hindered full understanding of any
results and often low quality GP data emerged as a barrier to measuring outcomes from social prescribing. For example, one author noted electronic data was ‘messy’, complex and inconsistent (16). Others reported discrepancies in the ‘read codes’ used for social prescribing along with inconsistencies in the completeness of recording by co-ordinators (21) or poor transfer of data onto electronic systems (19). One author noted it would be useful to differentiate between types of primary care contact but that this was not currently possible (19). Some programmes lacked systems for collecting data on non-medical issues at all (18). The 2 studies which used self-reports to measure primary care contacts are also of concern since previous studies show there can be discrepancies between this and administrative records (23).

Problems with data quality were a theme across many studies and related to the wider issue of being able to accurately measure outcomes at particular timepoints compared to baseline. For example, some patients reported difficulties in understanding or completing WEMWBS questionnaires (14) and paper records were not always completed accurately by hub co-ordinators for inclusion in the evaluation (21). Some authors noted that greater time was needed to embed the social prescribing service and to fully assess the long-term impact (18, 21). Greater consistency in the collection and reporting of outcomes data, along with longer timescales for follow up would help strengthen the weak evidence base.

NHS England and NHS Digital recently established new electronic codes for social prescribing nationally to replace the old ‘read codes’ so that GP practices can better record number of referrals to social prescribing (24). The NHS guidance document only recommends recording the number of GP consultations and nothing is said about being able to distinguish between the different types of appointment, however this could be a useful addition. The guidance also states that schemes should continue using existing measures of mental wellbeing to examine the impact on individuals but that plans are underway to develop a new wellbeing tool specifically for use in social prescribing programmes

Better quality and independent studies would help clarify whether any changes in outcomes are specifically attributable to the intervention (25). However, evaluating social prescribing is challenging given its complexity. Some people have suggested social prescribing should therefore be conceptualised as a ‘system’ rather than an ‘intervention’. A recent editorial for example suggested that RCTs are best suited to assessing the ‘effectiveness’ of any ‘activities’ within social prescribing. Qualitative studies or realist evaluations would then be better for understanding elements of the pathways and implementation processes for social prescribing, such as the ‘link worker’ role or people’s engagement with and adherence to the programme (25).

Variations in social prescribing delivery Attendance at link worker appointments varied considerably across the studies. Five studies stated whether patients met with the link worker at all and none achieved full attendance (14, 15, 17, 18, 21). The number of link worker sessions among the studies synthesised also varied considerably; from having only 1 session (15) to 6 sessions (18). Some studies specified there was a maximum number of
link worker sessions that a patient could attend. In addition, while the link worker played only a signposting role in some studies, in others they provided coaching or befriending type support. It is likely that contact with a link worker can have a direct impact on outcomes for patients. For example, the Glasgow cluster RCT found that anxiety symptoms, depressive symptoms and self-reported exercise levels were all significantly better among those who saw a link worker twice or more compared to controls. \(^{14}\) Other reviews have suggested future research could explore the intensity and focus of the link worker role itself upon outcomes. \(^{26}\) Only 4 studies stated whether patients actually attended a prescribed activity or not following their meeting with a link worker (attendance at a link worker appointment, if reported, ranged from around 65% to over 80%) and no study reported that all participants engaged with prescribed activities. \(^{14,17,18,21}\)

In a recent social prescribing evidence mapping report, based on 62 sources overall, considerable numbers of patients referred to social prescribing did not take up the interventions offered. \(^{26}\) The types of activities available across and within studies in this synthesis varied considerably from counselling, housing support or debt advice to befriending, exercise classes or mental health support. The time period for follow up measurement varied considerably too. The cluster RCT in Glasgow also found differences in outcomes by attendance across different subgroups. It is of note that the study was not powered to conduct such analyses of activity attendance and the numbers were only small; nonetheless anxiety symptoms and exercise levels were significantly better among those who attended a prescribed activity. Attendance at link worker appointments and uptake of activities once referred to social prescribing should be important considerations when determining intervention effectiveness.

**Implementation factors associated with success**

A number of the studies in this evidence synthesis also collected different types of data (often using more qualitative methods) as part of wider evaluations of social prescribing processes and service user experiences. This information is useful in highlighting potential factors that could hinder or facilitate engagement with social prescribing and help understand some of the findings here. The authors of this evidence synthesis did not undertake a systematic analysis of such information but provide examples presented by authors in the included studies to stimulate discussion. Further research would be necessary to confirm whether or not these did affect engagement with social prescribing as their effectiveness was not measured as part of this review. This information should also be considered alongside the 'Common Outcomes Framework for Social Prescribing' \(^{27}\) and subsequent guidance, published by NHS England and

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\(^{14}\) There were no differences in the primary outcome of health-related quality of life from sub group analysis (using their best regression model). Please note sub groups data are not reported in extraction tables as this was not the focus of the synthesis.
referred to in this discussion, around what good social prescribing looks like and how it can work (24).

**Link worker capacity/resources**

A number of authors in this synthesis highlighted the importance of link worker capacity (18), along with the need for strong interpersonal and motivational skills to enable them to help patients become more involved in their community (15). As such, it was suggested that link workers should be provided with appropriate non-clinical training (15) including specific areas such as benefit entitlements (21) as well as regular supervision from a project co-ordinator (18) and the opportunity for link workers to meet up to exchange good practice and knowledge (21). This mirrors the new NHS guidance which says that link workers are pivotal in any social prescribing scheme and require a broad range of abilities (3), stating that they need regular ‘clinical supervision’ and access to accredited training or qualifications as well as having core personal qualifications or skills. NHS guidance also states these should be a paid post and provides a sample job description and person specification for use. Access to a trusted database of services/sources of information that are up to date, clear and easy to use was also recommended by some study authors (18) as was established processes to use current information systems about resources available locally (14).

There are already examples of areas that have developed electronic mapping tools to enable better signposting to local community based services and related information such as local travel or ‘best routes’. There was also some indication that patients benefited if the link worker was able to offer more tailored and personal services (going beyond signposting to really understand the needs of the patient) (15,17,21). The development of a simple plan or summary of personalised care co-produced with the patient is also noted as an important feature of good social prescribing in the NHS England guidance document.

**Referrals and GP engagement**

A few authors noted that for GPs, the buy-in to social prescribing was mixed, with some referring patients much more than others (18,19). It was recommended that regular feedback about patient outcomes should be provided to GP surgeries to encourage referrals (19) as well as training to ensure that GP practices fully understand the objective of social prescribing schemes and the referring criteria, to help encourage commitment (17,18). Furthermore, it was noted elsewhere, that referral routes to social prescribing do not need to be limited to GPs and the NHS England guidance suggests

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Further details available from: https://www.clahrcprojects.co.uk/impact/bites/community-resources-electronic-map
Effectiveness of social prescribing

there may be benefits from referring people through a number of different channels, such as the fire service, job centres or the police amongst others with self-referral also being useful (24).

Patient access and engagement

One author highlighted the importance of understanding which groups might not be accessing the social prescribing service, for example people with learning disabilities (19). Another pointed to a lower take up by black, Asian and minority ethnic groups than their white counterparts, which may have been a consequence of barriers to access or the design of the service (18). In those studies which had broader age ranges, younger people were perceived as having higher levels of declining or disengaging contact with social prescribing services (19,21). One author suggested that this may relate to programmes originally being set up for older generations and their carers making adapting it for younger people challenging (16). Only 1 study included in this synthesis measured the impact of social prescribing upon loneliness and the schemes targeted (although did not always reach) a wide range of marginalised groups (such as carers, frequent GP attenders or those managing long term health conditions).

NHS guidance states that social prescribing presents an opportunity to implement ‘a sustained structural change to how a person moves between professional sectors and into their community’ and when ‘done well, it allows people to self-manage their personal situation whilst experiencing physical, emotional and social challenges’ (3). For example, stakeholders interviewed by the Social Prescribing Network described a wide range of outcomes achieved by the social prescribing schemes in their area. These schemes range from those outcomes that centred around physical or emotional health (such as improving a person’s self-confidence or self-esteem), to outcomes that the network categorised as ‘tackling the social determinants of health’ (for instance, improving a patient’s skills or employability (3)). However, the ability of social prescribing to have such widespread impact among those who access and engage with schemes was not determined through this synthesis report.

The location and format of meetings with link workers were viewed as particularly key, although opinions and reasons varied across studies. For example, 1 author noted meetings based in GP practices meant limited space was available to link workers (18) and another suggested that a non-health setting (such as the mental health charity, MIND) lead to more flexible referral procedures (19). Two authors recommended home visits by the link worker helped to gain a better understanding of the patient’s housing or social situation (17) or to overcome issues with poor mobility (19). Other authors suggested that patients with low confidence benefited from having link worker support to

xvi This was based on responses from 180 stakeholders but with no clear indication of whom was contacted, how the outcomes were measured or the possibility of bias etc.
attend a service or an activity until their confidence improved (16,21). In some studies volunteers supported the link worker to deliver social prescribing by helping a patient attend a group or access transport (15). In other studies some of the volunteers were recruited from among previous social prescribing patients themselves (17,19). Such factors are identified as features of good social prescribing in the recent NHS guidance.

In terms of referrals and access to activities, one author suggested that activities needed to be local and affordable in order for patients to access them (18). Also delays between the referral date and beginning the social prescribing programme activities (18) or long waiting lists and lack of availability (19) were seen to result in potential loss of engagement by some patients. Some patients were too overwhelmed by other health needs and logistics to engage with the service (15). One author highlighted the particular challenges with patients with more severe or complex mental health needs who may need multiple referrals (17).

Funding

Some programmes noted the importance of additional funding to support the delivery and embedding of a social prescribing service. For example, 1 scheme included a £35,000 Practice Development Fund that was used to purchase a wide variety of equipment and activities (including training) to enhance the smooth integration of the programme (14). Another scheme received a £6,200 Big Lottery Grant as the social prescribing programme allowed leverage of funds from other sources and this was spent on computers and other IT equipment (17). Further research on social prescribing could look at the wider, general costs of running such schemes and the potential return on investment. Although evaluating cost-effectiveness was not the focus of this evidence synthesis, this is an important consideration for any programme and is also identified in the recent NHS England guidance as one of the measures to include when evaluating social prescribing.

Conclusions

Social prescribing is designed to help GPs and other primary care professionals support their patients through referral to social and community based programmes (24). As per the inclusion criteria, all studies in this synthesis involved referral to a link worker. The government has pledged to roll out social prescribing across England over the next 5 years with plans for more than 1,000 trained link workers to be recruited by the end of 2020/21 (6). Despite this support for social prescribing, the existing evidence base does not demonstrate its effectiveness in terms of reducing primary care contact or improving a patient’s physical and/or mental health. Consistent with the previous systematic review on the same topic by the CRD there is a lack of clear evidence on the effectiveness of social prescribing in primary care (5). An assessment of effectiveness is hindered by poor quality evidence, wide heterogeneity in how social prescribing is
delivered, to whom and the outcomes measured. Better quality, robust evaluation plans are needed alongside the national roll out of social prescribing.

Limitations

The aim of this synthesis was to provide an update on a previous review of the evidence on effectiveness of social prescribing. The original review included studies published from 2000 until 5 February 2016 and this review included studies published from 1 January 2016 until November 2018. There can be a time lag between a study being published and it appearing on publication databases. There is a possibility that this lag resulted in studies being missed from both reviews.

The rapid review methodology means that only the main databases were searched and only UK interventions were included. It is therefore possible that key papers were not included in the synthesis report.
Appendix

Example Ovid Medline search

Database: Ovid MEDLINE(R) and Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Daily and Versions(R) <1946 to November 26, 2018> via Ovid 27th November 2018

Search Strategy:

1 social prescrib$.ti,ab. (48)
2 social prescrip$.ti,ab. (16)
3 community referral$.ti,ab. (130)
4 non-medical referral$.ti,ab. (4)
5 well being program$.ti,ab. (59)
6 well-being program$.ti,ab. (59)
7 wellbeing program$.ti,ab. (30)
8 1 or 2 or 3 or 4 or 5 or 6 or 7 (281)
9 limit 8 to yr="2016 -Current" (110)
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References