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September 2020

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Outcome and economic evaluation of City and Hackney Social Prescribing scheme

Commissioned by the City and Hackney Clinical Commissioning
Group

Institute for Health and Human Development (University of East London)

The Institute for Health and Human Development is engaged in research and training into the social, economic and cultural productions of health and well-being. IHHD has attracted funding from UK research councils, charitable trusts, NHS, and the European Commission. We have major programmes of intervention innovation and development including the Well Communities programme, and an NIHR programme grant developing new models of antenatal care. We have also developed considerable expertise in the evaluation of social prescribing interventions and are key partners of the social prescribing network.

Disclaimer

The views expressed in this report are those of the authors and do not necessarily represent those of City and Hackney Clinical Commissioning Group

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1 Introduction

Social prescribing is now firmly at the forefront of UK health policy with the recent commitment from the Department of Health and Social Care to refer 900,000 people to social prescribing schemes by 2024. Alongside this, the NHS Long Term Plan also aims to train 1,000 Social Prescribing Link Workers (SPLWs) to work within primary care services by the end of 2020/21 (DHSC, 2019). Plans are in place to recruit more SPLWs between 2023-24 and have accelerated even further during the current pandemic.

The rationale for social prescribing can be presented as follows: (i) the growing pressure on GP practices, partly driven by the number of patients who frequently attend a GP with medically unexplained symptoms. About, 20% of patients consult their GPs for problems that are primarily social rather than medical (Torjesen, 2016); (ii) by 2035, two out of three adults (66%) are expected to be living with multiple health conditions and 17% will have four or more conditions. Multi-morbidities mean that people, often old, need to be supported by a range of health professionals. In GP practices, this leads to a shift from ‘treatment’ to ‘management’ of care (Baird et al., 2016) which leads to complexity and need for more coordinated care; (iii) growing health inequalities which result in long-term medical conditions disproportionately affecting people in deprived areas (Marmot, 2020). The recent Marmot review (10 years on) found that life expectancy between the most and least deprived areas is 12 years for males and 6 years for females, whilst the differences in terms of years of ‘healthy life’ is even starker (15 years for males, 13 years for females); (iv) Early mortality for social isolation is as high as established risk factors such as smoking and obesity (Holt Lunstad et al, 2015). Thus, tackling social isolation has become an important priority of health policy (DCMS, 2018).

In an attempt to seek solutions to these problems, the concept of social prescribing holds significant promise. 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’ (Uni of Westminster, 2016; p.19). In addition, social prescribing has the potential to help deliver other government priorities in the field of health such as: the merger of health and social care, developing and delivering health at the community level and delivering a patient centred approach which supports patients to access community activities thereby empowering the patient to decide what is right for them.

In this context, the Institute for Health and Human Development based (IHHD) at the University of East London (UEL) was commissioned by City and Hackney Clinical Commissioning Group (CCG) to conduct an evaluation of the social prescribing scheme in Hackney highlighting the key changes in different components of quality of life and mental well-being as well as a cost-benefit analysis. This report is also a continuation of the first evaluation of social prescribing conducted by IHHD (University of East London) and Queen Mary university in 2015 and funded by the Health Foundation under the Shine Programme (Bertotti et al., 2015). The survey from this earlier report found that general health and wellbeing remained stable over time, whilst qualitative interviews with service users revealed overall positive outcomes, with some respondents reporting ‘life changing’ experiences. That report did not look at the economic impact of social prescribing which is the main focus of this report. In collecting the data for the economic evaluation, we also decided to add an assessment of changes in health outcomes, specifically, mental well-being and quality of life.

2 Description of the Social Prescribing Service in City and Hackney

The social prescribing service in City and Hackney is based on a model which involves referrals from all 40 GP practices in Hackney and City (East London) to four Social Prescribing Link Workers (SPLWs) managed by Family Action, a voluntary sector organisation. During routine consultations, General Practitioner may find a patient suitable for social prescribing and refer them to a SPLW. Although the majority of referrals come through GP practices, the social prescribing scheme does now also receive referrals from other sources. Typically, patients are booked directly into appointments where they are assessed by SPLWs, may meet SPLWs up to 6 times, for an average session of 30-40 minutes. They provide time, empathy and crucially provide support to access non-clinical services offered by the VCSE (Voluntary, Community and Social Enterprise) sector in City and Hackney. Family Action currently refers to a total of 150 organisations in both voluntary and statutory sectors. The type of support offered by SPLWs is tailored made to each case and include not just support with managing health problems but, critically, support with social issues such as employment, housing or debt with the view of tackling health inequalities (Marmot et al., 2020). Following the publication of the NHS Long Term Plan in early 2019, Primary Care Networks (PCN) have been working with CCGs to recruit large number of link workers in order to widen the service nationally. However, the City and Hackney social prescribing scheme in this report is based specifically on the established CCG component of the service which predates the publication of the Long Term Plan.

3 Methods

3.1 Study design

This report assesses the health outcomes - mental well-being and quality of life - and evaluates the economic impact of social prescribing using two different approaches to economic analysis. In order to conduct this evaluation, we followed a cohort of social prescribing service users as part of the City and Hackney social prescribing intervention, over the period between February 2019 and March 2020 to establish a range of quality of life, mental well-being and social outcomes.

Overall, data from 166 social prescribing service users at baseline, 63 at three months follow up, and 41 at 6 months follow up were collected by Family Action and the Institute for Health and Human Development (IHHD), based at University of East London. It is important to note, however, that Family Action assisted a total of 2,000 service users over the period and this may have introduced a 'bias' in the sample selected which may be considered as unrepresentative of the total population of service users. Service users with a high level of vulnerability were excluded from the sample. So, for instance, people facing eviction or with complex mental health problems were not asked to participate as the focus of the session between Social Prescribing Link Worker (SPLW) and user was on addressing the immediate need for support rather than completing the questionnaire for the evaluation. The exclusion of more vulnerable service users may have led to an underestimation of the impact of social prescribing as more vulnerable service users would have been more likely to record lower initial scores and 'potentially' lead to a greater positive change following social prescribing support received.

IHHD provided training to four Family Action SPLWs explaining the aim and objectives of the evaluation and discussed data collection and measuring tools. A range of regular management meetings between SPLWs and IHHD were also held to monitor the progress of the project. Whilst baseline data were collected by the SPLWs face to face, almost all follow up data was collected by IHHD via an initial text message linked to an anonymised questionnaire. Ethics approval was obtained by University Research Ethics Committee (Ref num: EXP1819 15).

3.2 Cost-effectiveness analysis

The outcomes quality of life and mental well-being were chosen on the basis of their validity to provide a rigorous to economic analysis of quality of life, one based on cost-effectiveness through the quality of life measure called EuroQol (EQ-5D-5L), the other based on the well-being valuation approach (Trotter, Adams and M-K, 2017). The EQ-5D-5L quality of life tool has been extensively

validated (more than 1,000 peer reviewed journal articles). It includes five questions about different aspects of life and each question has five possible answers arranged on a Likert scale and representing different health states. It enables the calculation of Quality Adjusted Life Years (QALYs) which can be combined with cost information and provide a 'Cost per QALY'. If 'Cost per QALY' falls between £20,000 and £30,000 per QALY, NICE recommends that the intervention should be considered for funding as an NHS intervention (NICE, 2013).

3.3 Social Return on Investment

The other approach to economic analysis is the Social Return on Investment (SROI), a form of cost/benefit analysis. In turn, different techniques can be used to calculate SROI. One of these is the well-being valuation approach which has not yet been used in evaluations of social prescribing to date (Fujiwara, 2013). Yet, the well-being valuation approach has been supported by HM Treasury Green Book which includes a range of recommended approaches to economic analysis (HM Treasury, 2018). The well-being valuation approach is based on a different economic rationale involving the use of routine large-scale data (e.g. British Household Panel Survey; Understanding Society, Crime Survey for England and Wales). As Trotter et al. (2014) explain, large-scale data is used to identify the impact that the target activity (e.g. volunteering) has on self-reported life satisfaction, once adjusted for all the other factors that may impact on individuals' satisfaction levels. Using the same statistical techniques, Trotter et al. (2014) calculated the amount of money needed to induce the same change in life satisfaction and that constitutes the well-being value for that activity. The advantage of this approach is that it uses data from large scale routinely collected studies in order to produce financial proxies. It thus therefore represents the opinion of a large number of people.¹

In this report, we have been using the valuation approach in conjunction with the work by Trotter, Adams and M-K (2017) on mental well-being. They used the well-being valuation approach to produce financial proxies for the Short Warwick Edinburgh Mental Well-being Scale (SWEMWBS). Thus, for each change in the mental well-being scale, it is possible to derive a financial proxy to be used to calculate the return on investment from changes in mental well-being. Using the same well-

¹ For example, large-scale data is used to identify the impact that volunteering has on self-reported life satisfaction, once adjusted for all the other factors that may impact on individuals' satisfaction levels. This may show that volunteering leads to an average increase of 3% in people's satisfaction levels. Using the same statistical techniques, one can calculate the amount of money needed to induce the same change in life satisfaction of 3%, say for example (£5,000). This is the well-being value for that activity.

being valuation approach and the associated values from HACT (2018), we also added financial data from changes in volunteering, training and drug & alcohol use.

3.4 Data analysis

The Statistical Package for the Social Sciences (SPSS) was used to analyse data with primary focus on the demographic profile, sub-group analysis (i.e. to identify whether specific groups may benefit the most from social prescribing), and the economic evaluation which combines an examination of QALYs and a social return on investment using the valuation approach for economic analysis. In conjunction with SPSS, we have also used a calculator produced by Euroqol which helps with the calculation of different states and the creation of QALYs for each user².

4 Results

The cohort study followed social prescribing service users over a period of six months (pre-Covid) to identify the main changes in quality of life, mental well-being, and other measures needed to complete a cost-benefit analysis and cost per QALY (Quality Adjusted Life Years). Overall, data from 166 social prescribing service users at baseline, 63 at three months follow up, and 41 at 6 months follow up. The follow up response rates are significantly lower than baseline. This is due to different reasons: (i) social prescribing service users have a lower response rate; (ii) the follow up was collected through text messages which have lower response rates than initially expected; (iii) SPLWs did not have enough time to collect follow up data.

4.1 Descriptive analyses of participant characteristics

This section provides a descriptive analysis of demographic characteristics of the sample and the main changes in quality of life (EQ-5D-5L) and mental well-being (SWEMWBS) over 3 and 6 months. Table 1 shows the demographic profile of respondents including their age, gender, ethnicity, living arrangements, employment status and educational level.

The sample is considerably older and more female than Hackney and City areas overall (Table 1) and characterised by a much higher proportion of people of Black/Black British background than Hackney and City (31.3% versus 22.4%).

² <https://euroqol.org/eq-5d-instruments/eq-5d-5l-about/valuation-standard-value-sets/crosswalk-index-value-calculator/>

More than one out of three respondents live alone (35.2%). We do not know the total number of people living alone in Hackney but from the last Census, we have the proportion of people over 65 who live alone (42%) in Hackney. In the sample the proportion of people over 65 who live alone was 59%, so it is considerably higher than Hackney. A substantial proportion are also ‘unable to work due to long term sickness’ (37.9%) and ‘unemployed and looking for work’ (17.4%). These two last categories combined show that more than half of the sample (55.3%) are not in work and a considerable proportion of respondents (39.4%) have left full time education in their 20s or later, so are well educated.

Table 1: Demographic profile of respondents

Variable	Social Prescribing respondents		Hackney and City
Age (*)	N	%	%
min 20 - max 80	163	48 (Mean)	38 (Mean)
16-64	136	83.4	92.6
65+	27	16.6	7.4
Gender (**)			
Male	56	33.7	50.0
Female	110	66.3	50.0
Ethnicity (***)			
White British	36	22.1	51.2
White Other	26	16	
Black/Black British	51	31.3	22.4
Black African	8	4.9	
Asian/Asian British	15	9.2	11.4
Mixed	6	3.7	14.9
Chinese	1	0.6	
Any other ethnic background	16	9.8	
Living arrangements			
Alone	56	35.2	
With others (including family)	78	49.1	
Secure housing	17	10.7	
Temporary Accommodation	8	5	
Employment status			(**)
employed full time	16	9.9	71.8
employed part time	15	9.3	
self-employed	6	3.7	14.1
unemployed and looking for work	28	17.4	5.7
at school or in full time education	4	2.5	
unable to work due to long term sickness	61	37.9	
looking after home/family	6	3.8	

retired from paid work	19	11.8	
other	6	3.7	
Educational level (age when respondent left education)			
I did not receive a formal education	3	1.8	
age 12 or less	6	3.7	
age 13 to 16	47	28.5	
age 17 to 19	32	19.4	
age 20 or over	65	39.4	
I am still in full time education	4	2.4	
Other	8	4.8	

(* data from London borough atlas 2015 ; (**) Census estimates only for Hackney; (***) 2018 annual population survey; however, ethnic data about City of London are not available

4.2 Changes in quality of life

Quality of life was measured via a validated measuring instrument called EuroQol (EQ-5D-5L). This instrument is made up of five components including mobility (ability to walking about), self-care (ability to wash or dress oneself), usual activities, pain/discomfort, anxiety and/or depression. These are arranged along a Likert scale with different health states. Overall, mean quality of life over the period declines (Figure 1). This is consistent with the analysis of four out of five components of quality of life (mobility, self-care, usual activities, and pain/discomfort) as shown in Figure 2. However, it is noticeable that reported ‘anxiety/depression’ declines over the 6 months period. It is also important to notice that small changes in few respondents would make for significant changes in the overall quality of life score. Changes in the quality of life of just three respondents would turn quality of life into a positive score (see sect. 4.5.1).

Figure 1: Overall change in quality of life at 3 and 6 months

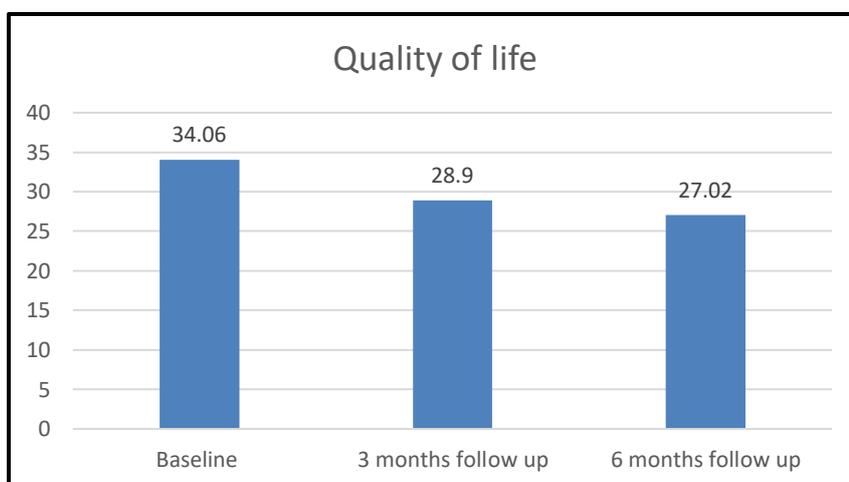
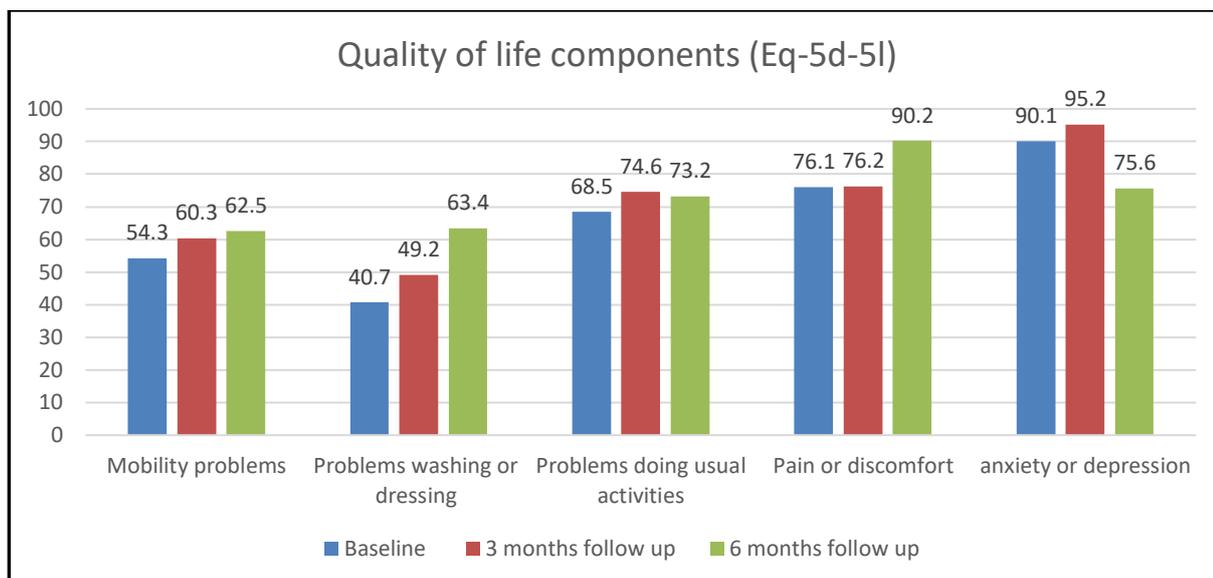


Figure 2: Quality of life problems reported by respondents



4.3 Changes in mental well-being

Mental well-being (Table 2) has been measured through the Short Warwick Edinburgh Mental Well-being Scale (SWEMWBS) which is a validated scale of seven items used for the measurement of mental well-being of any population aged 13 to 74. It comprises of seven positively worded statements and participants are asked to rank on a Likert Scale (from ‘None of the time’ to ‘All of the time’) each mental well-being statement in the previous two weeks. Mental well-being refers here to positive states of being, thinking, behaving and feeling and is a good indicator of how people and populations are able to function and thrive (Putz et al 2012)³.

Overall, the mean score shows a positive change which is nearly to be considered ‘meaningful’⁴ positive change over the six months period (almost three points change from 18 to 21 (see Table 2). This change is still below the national mean score of 23.6 (nationally representative sample of 7,196 people) based on the Health Survey for England (2011) which would represent the mean mental well-being score for England.

³ The SWEMWBS includes aspects of mental well-being such as optimism, usefulness, feeling relaxed, coping with problems, thinking clearly, closeness to other people, ability to choose

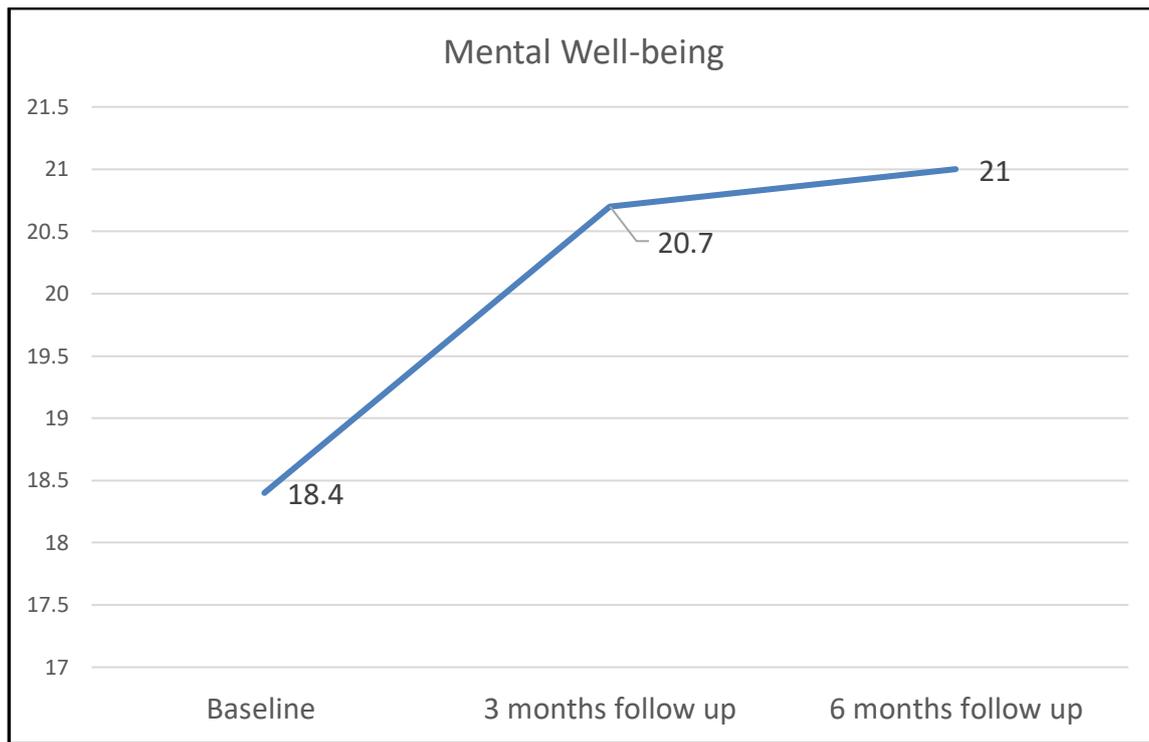
⁴ Guideline on mental well-being from (Putz et al., 2012) regards as ‘meaningful’, a change between 3 and 8 points in SWEMWBS score between baseline and follow up in both positive and negative directions.

Table 2: Changes in mental well-being at 3 and 6 months

Measure	Scale	Baseline (N=162)		3 months follow up (N=64)		6 months Follow up (N=41)	
		Mean Score	Min; Max	Mean Score	Min; Max	Mean Score	Min; Max
Mental Well-being	WEMWB 7-item metric score (on scale of 7 to 35)	18.4	7; 35	20.7	7; 33	21.0	7;31

It is also noticeable from Table 2 that the rate of increase between baseline and 3 months (2.7 points) is much higher than between 3 and 6 months (0.3) (Figure 3).

Figure 3: Changes in mental well-being score over time



4.4 Participation and health outcomes

As part of this evaluation, we monitored ‘actual’ attendance of social prescribing service users to community activities. We did this by asking respondents to list the three key activities (if any) they had attended as a direct result of social prescribing in the previous three months (Table 3).

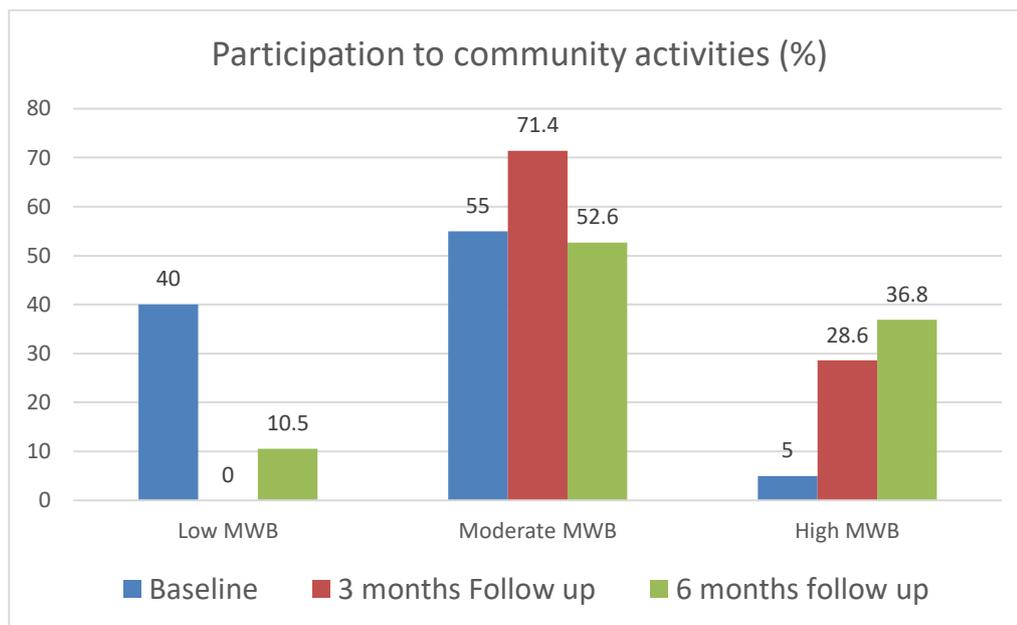
At three months follow up (n=63), about half (47.6%) of the sample of respondents had joined at least one activity, 17.5% were still waiting. Interestingly, at 6 months the picture is exactly the same (n=42). The main activities attended included physical activity (e.g. yoga, general fitness) (42.4%), mental well-being/mental health (e.g. Hackney Mind)(15.3%), and Arts/Music (15.3%).

Table 3: Types of community activities attended

Community activities attended	After 3 months		After 6 months	
	N	%	N	%
Social networking (e.g. lunch clubs)	3	5.1	6	16.7
Volunteering	5	8.5	0	0.0
Physical activity (e.g. yoga, netball, pilates)	25	42.4	14	38.9
Gardening groups	2	3.4	1	2.8
Healthy Eating	3	5.1	1	2.8
Mental well-being/mental health	9	15.3	7	19.4
Arts and music	9	15.3	4	11.1
Other	3	5.1	3	8.3
Total	59	100.0	36	100.0

We also analysed the association between participation to community activities and mental well-being outcomes. Figure 4 shows low, moderate and high mental well-being (SWEMWBS) for respondents who participated to community activities over the period of data collection. If social prescribing works and community participation is increased, we would expect the proportion of respondents on low MWB to decline and, at the same time, grow in the moderate and high MWB groups. This seems to be reflected in Figure 4 below.

Figure 4: Participation to community activities and mental well-being



The proportion of respondents with ‘low’ MWB declined from 40% to 10.5% over the 6 months period, whilst it increased from 5% to 36.8% in the ‘high’ MWB category. It is interesting to notice, however, that moderate MWB increased for the first 3 months (55% to 71.4%) but then declined to 52.6%. This is consistent with other results of this report which show an increase during the main part of the intervention and then a decline in mental well-being. However, this analysis does not include any statistical test and is only descriptive. As the sample was not large enough, we could not control for other variables such as gender, age, ethnicity in order to provide an accurate picture of the association between the two variables (participation and health outcomes) or a causal relationship.

In addition to community activities, social prescribing service users also received support with social issues such as employment and benefit advice, support with filling in forms (e.g. ESA), and help with accessing food vouchers. The vast majority of support in this area was around advice with benefits and support from SPLWs on how to access these.

4.5 Types of Economic evaluation for social prescribing

4.5.1 Calculating cost per QALY

Another approach to the economic evaluation of social prescribing is through the quality of life measure (EQ-5D-5L) an assessment tool that captures five dimensions of quality of life (mobility, self-care, usual activities, pain/discomfort, anxiety/depression).

EQ-5D-5L is important for a number of reasons:

1. It has been extensively validated. More than 1,000 peer reviewed journals
2. It can be combined with time to calculated QALYs (Quality of Life Adjusted Years). QALYs are important because they enable the comparison between the effectiveness of different interventions.
3. If we add the cost of the intervention, we can calculate a cost per QALYs which is used by NICE as benchmark for suggestions about investment in a particular intervention. So if the cost per QALY is between £20-30K, NICE recommends that the intervention is cost-effective and should be considered for funding (NICE, 2013).

The main objective of this type of economic analysis was to assess whether the cost/QALY for social prescribing could fit within the interval set by NHS (£20-30K) which could then be considered for funding. In conducting this analysis, we followed Euroqol EQ-5D-5L guidance (Van Reenen and Janssen, 2015). We analysed both three and six months data and derived a mean QALY by analyzing health states from the quality of life tool (EQ-5D-5L) and multiplying that for the average time of the intervention data collection. We then calculated a mean QALY and an incremental cost effectiveness ratio (ICER) which provides a cost per QALY. Typically, ICER is calculated by dividing the additional cost of the target intervention, compared to usual care by the change in QALY between the target intervention and the QALY of usual care. As we do not have data about the cost and the QALY of usual care, we used the additional cost per user of providing social prescribing and the difference between QALY at baseline and three months.

At both three and 6 months, we found that the 'QALY gained' was a negative values. This means that from baseline to the two time points QALY declined as a whole. Under these conditions, there is no much point in calculating a cost per QALY as this would not be appropriate with negative changes.

However, as the margin between negative and positive QALY gained was extremely tight - 49% of respondents recorded a positive value and 51% recorded an overall negative value – we

⁵ It is important to note that although quality of life as a whole may be negative, its sub-components may display some differences. So for instance, in our case, the sub-component anxiety/depression recorded a positive change overall.

considered a different scenario which is common practice for studies of this kind. We concentrated analysis on checking what would have happened if we had turned three respondents from negative change to no change in quality of life values (approx. 5% of the sample). This meant that 51% of respondents did record a positive change and 49% a negative change. Yet we were interested in analyzing what would happen if we had a slightly different scenario which is very close to the actual result.

This exercise resulted in a cost per QALY of £20,100, so following NHS guidance of cost-effectiveness, social prescribing could be considered for funding. However, it is important to note here the following limitations:

- (i) this is only one of the different potential scenarios that could be produced by such analysis
- (ii) this calculation is based on a small sample of 59 respondents at three months
- (iii) the cost per QALY calculation is based on the three months data (n=59) as it provided more data for the calculation than the QALY at six months (n=41)
- (iv) If calculations are taken over a period longer than one year, 3.5% discount needs to be applied to the calculation of QALYs.
- (v) the cost per user of delivering social prescribing has been provided by Family Action. It does provide an accurate estimate of the true cost. However, the cost per user has been derived by the cost of providing the service for 2,000 people. The cost to provide the service for 59 service users may be higher or potentially lower than that.
- (vi) The cost calculated here is the cost of delivering the social prescribing service. This does not include the cost of activities or services delivered by the voluntary sector or other statutory sector agencies.

4.5.2 Social Return on Investment

As mentioned in the methodology section, an alternative approach to economic analysis (cost/benefit analysis) is Social Return On Investment (SROI). There are many different approaches to calculate SROI (Fujiwara and Campbell, 2011). One of these is the well-being valuation method which enables to place a financial value to each point change in the Warwick Edinburgh Mental Well-being Scale (Trotter, Adams and M-K, 2017) and also to other changes in service users' situation such as volunteering, training, and use of drug & alcohol. The combination of these value offers a social return on investment ratio. The social return on investment ratio is calculated by the difference between the financial value of outcomes and the financial value of inputs (cost).

Inputs: during the period between 1st Feb 2019 and 30th March 2020, Family Action provided the cost for the delivery of social prescribing. These included staff salaries, travel and subsistence, volunteer staff time, admin, mobile phone use, postage, rent, and clinical supervision. The total cost of delivering the service was calculated at 219, 683.83. During the same period, the number of clients assisted was 2,000 which gives a cost per user of £109.84. The number of sessions provided to 2,000 service users was 3,947 sessions which makes for an average of 2 sessions per user.

Outcomes: changes in outcomes are calculated between baseline and three months and include mental well-being, volunteering, drug& alcohol, and general training which follow the valuation approach. We followed guidelines provided by Trotter (2014) which could be interpreted as strict but attempt to give a conservative value of SROI rather than potentially falling in the trap of providing an overestimation. Following these guidelines, we applied suggested deadweight values and restricted the effect of all outcomes to one year, although it is likely that many of these outcomes will last much longer than 12 months.

As mentioned above, the mental well-being scale Respondents were asked whether they volunteered at three points (baseline, three month and six months follow up). If they did not volunteer at baseline but they did volunteer at follow up, the response was recorded as positive, if they did volunteer at baseline but did not volunteer at three months follow up, the response was recorded as negative alongside the corresponding financial proxy.

The outcomes are calculated over a period of one and two years and include deadweight and drop-off. Deadweight accounts for attribution. How much of the changes that have recorded would have happened without social prescribing? The valuation approach methodology provides deadweight values for both changes in health and social circumstances. In our case, mental well-being is calculated with a 27% deadweight, whilst volunteering, drug and alcohol and general training are calculated at 19%.

Drop-off estimates the loss in the value of the outcomes in future years. We follow guidelines by Trotter (2014) which assumed that each outcome last for only one year. This is to account for the fact that most outcomes will have a value during or just after the evaluation, but such outcomes are likely to lose value over time. We have derived the percentage value of drop-off by analyzing changes in each outcome between three and six months outcomes.

The final SROI is calculated over a 12 months period and only on the population of respondents between baseline and three months follow up (mean 56 people). We used this data because has a larger sample than at six months. We adjusted the cost of delivering social prescribing to this population of respondents (£23,100).

Table 4 shows a summary of the net positive and negative changes in key outcomes, value of financial proxies used as part of the well-being valuation approach and HACT (Trotter 2014; HACT, 2018). The final ‘conservative’ Social Return On Investment ratio is £1: £3.51. It means that for £1 investment in social prescribing, the annual return for the first year alone is £3.51. This is slightly higher than the average of social prescribing schemes which is £1:£2.30 (Polley et al., 2017). As mentioned, this is a conservative estimate: if we were to include outcomes over a period longer than one year, say two years for example, the SROI ratio would increase to £1:£5.77.

Table 4: Outcomes and financial proxies for City and Hackney social prescribing

Outcome	Data source	Net change	Proxy and source	Value (£) (**)
Mental well-being	Cohort study: SWEMWBS	64 (26 net positive change)	Warwick-Edinburgh Mental Well-being Scale (Trotter et al 2014)	£61,973.06
Volunteering	Cohort Study	7(net positive change is 6)	Volunteering (£3,249)	£3,289.69
Drug and Alcohol	Cohort Study	3(net positive change is 2)	Drug and Alcohol (£26,124)	£15,870.05
General Training	Cohort Study	2(net benefit change is 0)	General Training (£1331.95)	0

(**) this value is over 12 months and accounts for deadweight

It is important to notice here that the number of people assisted by social prescribing over the period of assessment (n=2,000 people) is much larger than the number of respondents at three months (n=56). We can provide a SROI estimate extended to the all population of social prescribing service users over the period, specifically for mental well-being for which we have stronger data. Following baseline data collection, we know that 91% of people at baseline (n=150) reported some anxiety/depression. We can estimate that 91% of 2000 people presented with anxiety/depression (n=1,820). If these social prescribing service users followed a similar pattern to our actual respondents, the SROI would become £1:£8.56. This would only account for changes in mental well-being.

There are some limitations to the creation of this SROI and the well-being valuation approach:

- The financial proxies were derived from large scale surveys of the UK population, rather than from the sample of social prescribing service users that completed the baseline and follow up questionnaires.
- The last scenario above is only a rough estimate of the potential SROI value for the overall population, not a true account measured through data collection from all 2,000 individuals. No statistical analysis has been undertaken to assess whether the profile of our sample matches the larger sample of service users.

5 Discussion

This section discusses the key findings from this evaluation and its policy implications for the further development of social prescribing in City and Hackney. Although the data collected pre-date the beginning of the pandemic, we discussed the implications of this work for the development of the service during the period of the pandemic as the latter has introduced a range of challenges but also opportunities for the future implementation of social prescribing.

5.1 Profile of residents is in line with the aims of social prescribing

More than half of the sample (55%) are not in work and a considerable number in long-term sickness (37.%), although a significant proportion are well educated (39.4%). Furthermore, a higher proportion of respondents over 65 live alone than Hackney (59% in the sample, 42% in Hackney). As a result, the target group faces a range of socio-economic issues which are consistent with the literature on health inequalities (Marmot et al., 2020) and is one of the key stated aims of social prescribing. Mental well-being at baseline (18) was also below the national average (23) which indicates that the sample would benefit for a mental well-being type of intervention such as social prescribing.

5.2 Quality of life declines but anxiety/depression improves

Overall, quality of life declines over the two period of data collection. However, when quality of life is examined in more detail, the component 'anxiety /depression' improves over the same period. Evidence from other studies using EQ-5D-5L as a quality of life measure appears to be broadly consistent with this report. Mercer et al. (2017) found no statistically significant effects

of quality of life at 9 months from their cluster RCT. A study on community mentoring for socially isolated people (Dickens et al., 2011) did find statistically significant improvement in quality of life, but these were lower at follow-up than control. Interestingly, Dayson et al. (2016) and also Moss (2015) found small improvements in overall quality of life, but much larger improvements in the anxiety/depression component of quality of life. Beyond quality of life, this report found a meaningful improvement in mental well-being in line with the anxiety/depression component. This evidence reinforces the point that social prescribing improves key aspects of service users' mental health (optimism, usefulness, coping, closeness to other people) considerably more than their ability to carry out daily physical tasks (being more mobile, fell less pain/discomfort, being able to wash and dress). This may be due to the orientation of the service which provides much stronger support with mental health during the sessions between SPLW and service user than other components of quality of life.

5.3 Meaningful improvements in mental well-being but not maintained over time

The rate of increase in mental well-being is faster in the first three months and then flattens (Table 2; Figure 3). This suggests that mental well-being improves when Social Prescribing Link Workers (SPLWs) sessions and referral to activity takes place, but then these changes may not be maintained over time. Evidence about the improvements in mental health outcomes is consistent with the wider literature which found statistically significant improvements in mental well-being using the Short version of the Warwick Edinburgh Mental Well-being Scale (Kimberlee, 2016; Brown et al, 2018; Bertotti et al., 2018) and noted by the most recent systematic review (Bickerdike et al 2018) and an evidence synthesis (Mason et al, 2019). A clear policy outcome here would be strengthening the relationship between SPLW and user post referral. Currently, social prescribing SPLWs have a policy of contacting all service users, post-referral. This policy is flexible in relation to the time of contact that could vary between two to eight weeks, depending on the specific needs of each user.

5.4 Participation and health outcomes

We analysed the data to see whether there is an association between participation to community activities as a direct result of social prescribing, and mental well-being outcomes. The expectation is that if community participation is sustained over time, mental well-being will improve and there is strong evidence that this is the case (e.g. Fancourt, Steptoe and Cadar, 2018). Evidence from this report would support this as over the six months period, respondents with high levels of participation moved from low to high mental well-being.

5.5 'Cost per QALY' calculation

As mentioned above mean quality of life over the period declined. However, we noticed that small changes in the quality of life score for just three respondents would change the overall quality of life to a positive value. We 'artificially' changed the three most negative scores into neutral (5% of the total sample). This enabled us to determine a Cost per QALY of £20,100 which would meet NICE guidance for a cost-effective intervention. However, it is important to consider that we just changed these data artificially, thus this is only an 'speculative' exercise and there are some other limitations to this finding which are discussed in sect. 4.5.1.

5.6 Above average Social Return on Investment (SROI)

Cost per user is considerably lower (£109 per user) than other social prescribing schemes such as Kimberlee (2016) it was £235 per user. The final 'conservative' SROI ratio for the sample of respondents is £1: £3.51. It means that for £1 investment in social prescribing, the annual return for the first year alone is £3.51. We purposefully maintained an extremely conservative approach (for more details see sect 4.5.2). Estimates for the overall population of service users (2,000 service users) indicate a potential SROI of £1:£8.56.

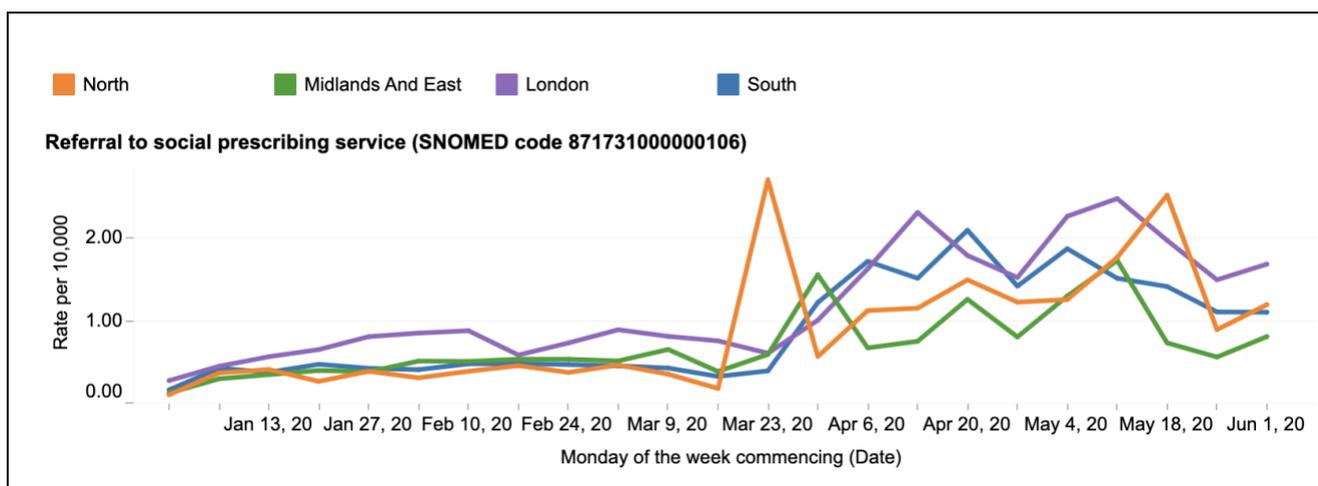
5.7 Changes in service delivery pre-Covid-19

The service in Hackney has changed since its inception. The average number of sessions per user has declined to an average of about two sessions per user (2,000 service users for 3,947 sessions with SPLWs) and the service provides support for a higher number of users. At the same time, reports from stakeholders involved in service delivery reported that the complexity of cases had increased pre-Covid-19 and it is clearly an issue during the pandemic. It is difficult to provide accurate statistical data on the increased complexity, as it would require an analysis of the overall population of users rather than the current sub-sample and such analysis would need to exclude social prescribing users who were referred to the service at the end of February 2020.

5.8 Challenges and opportunities for social prescribing during Covid-19:

It is clear that the current pandemic has led to a range of radical changes in social prescribing. The social prescribing observatory⁶ which provides a routine data on the development of social prescribing referrals shows that since the end of March, the number of social prescribing referrals in London have increased substantially with peaks of four times pre-Covid level (Figure 5).

Figure 5: Rate of referrals to Social Prescribing



Source: Social Prescribing observatory (26th June 2020)

Although data on the development of social prescribing during the pandemic has only started to emerge, some of the **key challenges** include the following:

1. **From face-to-face to online and telephone delivery:** It has transformed the delivery of social prescribing from face-to-face primarily to a telephone based service. This meant that SPLWs need to re-adjust the way they deliver conversation and support users as lack of communication through body language has somewhat impaired and weakened the building of trust between SPLW and service user. This is an area where further training and research is needed by for example learning from the experience of other social prescribing services which have traditionally delivered the service over the phone (e.g. Waltham Forest social prescribing).
2. **Adjusting service offer:** In some areas, the target service user has changed to readily meet the crisis ensued by the pandemic including delivering food and medicine, and providing a brief mental health intervention over the phone. This has meant building new contacts within the VCSE sector to meet the needs of service users during the pandemic. There has also been a decline of community activities on offer as face to face contacts is the basis for most

⁶ The Social Prescribing Observatory is managed by the University of Oxford, Royal College of General Practice, and also supported by NHS England. More details can be found to the following link (please note that the site takes time to load): <https://clininf.eu/index.php/social-prescribing-observatory-prod/>

community activities. In some areas, Redbridge, link workers have adjusted by seeking new services, particularly in relation to bereavement and befriending which experienced a much higher demand from local service users.

3. Broadened profile of service users: the profile of service users has broadened to include more people facing immediate and urgent issues such as domestic violence and extreme social isolation. This led to an increase of SPLWs' time spent to address these urgent cases and the increased need to development risk assessment processes and training to deal specifically with these new cases.
4. Additional pressure on SPLWs: home working and the need to face additional family pressures have increased the need to provide support for SPLWs in terms of more frequent clinical supervision and the setting up of peer support SPLW groups.

It is also important to consider some **significant opportunities** which may provide a route map for a more effective delivery of social prescribing in the future:

1. Engagement of previously dis-engaged GP practices: Many GP practices that have traditionally found it difficult to refer patients to social prescribing have started doing so as the pandemic crisis pushed them to consider alternatives to their current care. This opened up social prescribing to a much source of referrals.
2. Widened and broadened access: As GP practices needed to provide timely support to vulnerable groups, they started asking SPLWs to use GP practices databases to contact vulnerable patients. This led to an opening up of the social prescribing service to new people whom were not known to the service previously. It is also important to remember that this may help to reduce GP consultation rates by offering SPLWs direct access to EMIS databases and provide an opportunity for further targeting social prescribing on specific areas of need. Alongside this, SPLWs in City and Hackney are now receiving referrals from 'council helpline' which broadens further the access to social prescribing to a wider group of people who may have not visited their GP and may also have different needs.
3. Changes in service offer: In City and Hackney, the social prescribing service supported a greater number of people facing problems with accessing benefit and at risk of housing eviction. Emergency grants (up to £200) have been made available to support people with immediate needs and other projects to support 'people with no recourse to public fund' (e.g. people with unclear immigration status) have been set up. Beyond City and Hackney, there are also some examples that the lack of face-to-face contact pushed the emergence of online peer support groups and other online support activities (e.g. choirs) and the deeper reach into people who are housebound and could not access the service prior to Covid-19 as it was not designed to be delivered at home.

4. Changes in the wider policy landscape: the NHS has set up recruitment of health coaches and care coordinators. Provided that a sense of coordination and coherence will accompany these changes, the capacity of the system to support people should improve further in the coming months. A big question mark remains the ability of the VCSE sector to adapt to a non-face-to-face delivery of activities. Although support from the government in the form of furlough schemes, grants and loans are likely to soften the impact of the pandemic, the medium to long-term future of the VCSE sector is fragile.

6 Key Recommendations

6.1 Strengthening longer term support to service users

Consistently with the wider literature, this report confirmed that social prescribing is an intervention that leads to ‘meaningful’ improvements in mental well-being (i.e. optimism, usefulness, ability to cope, closeness to other people, ability to choose). Greater participation led to important gains in mental well-being. However, mental well-being gains appear to be much stronger in the first three months and then flatten out over the six months period. City and Hackney social prescribing has an established follow up procedure which includes contacting the user flexibly within two to eight weeks post-referral.

We suggest that post-referral follow up is strengthened to ensure a longer-term contact between Social Prescribing Link Worker and service user. One option may be to increase follow up from one to two contacts over two periods (e.g. three months and six months).

This suggestion is likely to be beneficial for the service user but also improve the overall outcomes of the service and, crucially, preventing a potential loss of the gains made by SPLWs and service users over the initial period.

6.2 Consolidating the current opportunities offered by Covid-19

Whilst the pandemic has created a new set of challenges, the opportunities offered are very important for the future of social prescribing. In particular, the shift from a service based on GP referrals to a service based on accessing existing databases (e.g. EMIS, council) may provide an

extremely important opportunity to extend social prescribing to a much larger population and potentially uncovering additional areas of need that were previously unexplored.

We suggest that in the future a ‘hybrid’ model could be considered where GP referrals are used alongside selecting specific target populations (e.g. low/moderate mental health problems, living alone, co-morbidities) from GP practice database systems. The inclusion of council databases and integration with GP practice data could also be considered as part of the wider social prescribing offer across City and Hackney.

6.3 Training for SPLWs

In order to respond to the challenges of Covid-19 and the changing nature of social prescribing - with a wider focus on different levels of need (whole population offer) – SPLWs need to continuously widen their skill base. Training in how to maximise interaction with service users through telephone conversations, the ability to deal with people who face domestic violence, the increase use of technology to deliver social prescribing online are some of the examples which require addressing in order to sustain an effective workforce. Similarly, good practice from other social prescribing interventions may be available. What are the key good practice models that could be applied to maximise the support through telephone or video conversations? The experience of Waltham Forest social prescribing may be useful here which has traditionally delivered the service over the phone.

We suggest that appropriate consideration is given to specialised Social Prescribing Link Worker training and intelligence gathering from social prescribing nationally or internationally.

6.4 Commissioning further research that captures the impact of COVID-19

As discussed above (sec. 5.8), it is clear that social prescribing has experienced substantial changes during Covid-19. Data from this report refer to a pre-Covid period so they cannot tell us anything about changes in the profile of service users, their health outcomes, and the challenges as well as opportunities of delivering social prescribing in the borough. In addition, this evaluation could only analyse a small sample of respondents, whilst the total number of service users was much larger. Finally, this evaluation only measured quantitative changes in health outcomes and their economic

impact. In order to provide a complete picture of the impact of social prescribing, a series of qualitative case studies should be considered as these offer additional insights about the experience of service users and their journey of recovery through the social prescribing pathway.

We recommend that an evaluation of the impact of Covid-19 is undertaken by examining Family Action database of service users, conducting a range of retrospective case study interviews of service users, and focus groups with other stakeholders involved in the delivery of social prescribing.

7 References

- Baird, B, Charles, A, Honeyman, M, Maguire D and DP. Understanding pressure in general practice. 2016
- Bertotti M, Frostick C, Findlay G, Netuveli G, Tong J, Harden A, Renton A (UEL); Carnes D, Sohanpal R, Hull S (Queen Mary) (2015) ‘Social Prescribing: integrating GP and Community Assets for Health’, report commissioned by Health Foundation (shine award)
- Bickerdike L, Booth A, Wilson PM, Farley K, Wright K. Social prescribing: Less rhetoric and more reality. A systematic review of the evidence. *BMJ Open*. 2017;7(4)
- Brown C, et a. Community Webs: final evaluation report. Bristol: Bristol Ageing Better; 2018. 104 p
- Dayson C. Evaluation of Doncaster Social Prescribing Service: understanding outcomes and impact. Sheffield Hallam University Centre for Regional Economic and Social Research. 2016.
- Department of Culture, Media and Sport, 2018. A connected society A strategy for tackling loneliness – laying the foundations for change.
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/750909/6.4_882_DCMS_Loneliness_Strategy_web_Update.pdf
- Department of Health and Social Care. NHS Long Term Plan (2019). www.longtermplan.nhs.uk
- Fancourt D, Steptoe A and Cadar D (2018) ‘Cultural engagement and cognitive reserve: museum attendance and dementia incidence over a 10- year period’, *The British Journal of Psychiatry*, doi:10.1192/bjp.2018.129
- Fujiwara and Campbell (2011) ‘Valuation techniques for social cost-benefit analysis: stated preferences, revealed preferences and subjective well-being approaches, a discussion of the current issues’, HM Treasury and Department for Work and Pensions (DWP)
- Fujiwara, D (2013) “A General Method for valuing non-market goods using well-being data: three-stage well-being valuation”, discussion paper no1233, London School of Economics
- HACT (2018) ‘UK Social Value Bank Calculator 4.0’, <https://www.hact.org.uk/value-calculator>
- Health Survey for England (2011) ‘SWEMWBS Population Norms in Health Survey for England data 2011’, National Statistics
- HM Treasury (2018) ‘The Green Book. Central Government Guidance on appraisal and evaluation’, Her Majesty Treasury
- Holt-Lunstad et al (2015) ‘Loneliness and social isolation as Risk Factors for Mortality: a meta-analytic review’, *Perspectives in Psychological Science*, 10(2), 227-237
- Johnson (2015) ‘NHS Leeds West Clinical Commissioning Group Patient Empowerment Project (PEP). Final Year One Report’, NHS Yorkshire and Humber Commissioning Support
- Kimberlee R. Gloucestershire Clinical Commissioning Group Social Prescribing Service: Evaluation Report. 2016.
- Marmot, M., Allen, J., Boyce, T., Goldblatt, P., Morrison, J. (2020) ‘Health Equity in England: the Marmot review 10 years on’, Institute of Health Equity
- Mason J, Gatineau, M, Beynon C, Gledhill R, Clark R, and Baker A (2019) ‘Effectiveness of social prescribing: an evidence synthesis’, *Public Health England*

Mercer SW, Fitzpatrick B, Grant L, Chng NR, O'Donnell CA, Mackenzie M, et al. The Glasgow 'Deep End' Links Worker Study Protocol: a quasi-experimental evaluation of a social prescribing intervention for patients with complex needs in areas of high socioeconomic deprivation. *Journal of comorbidity*. 2017;7(1):1-10.

Moss B (2015) 'An evaluation of SOAR Social Prescribing in North East Sheffield', Sheffield Hallam University

National Institute for Clinical Excellence (2013) 'How NICE measures value for money in relation to public health interventions'. Local government briefing, September 2013

Polley M, Bertotti M, Kimberlee R, Pilkington K, Refsum C. A review of the evidence assessing impact of social prescribing on healthcare demand and cost implications. *Univ Westminster*. 2017;(June):8.

Putz R, O'Hara K, Taggart F, Sewart-Brown S (2012) 'Using WEMWBS to measure the impact of your work on mental well-being: a practice-based user guide'. *Feeling good and doing well in Coventry Well-being Project*, Coventry City Council, Warwick Medical School, NHS Coventry

Sholten P, Nicholls J, Olsen S, and Galimidi B (2010) *A guide to Social Return on Investment*, Cabinet Office

Torjesen, I., 2016. Social Prescribing could help alleviate pressure on GPs. *BMJ*, <http://dx.doi.org/10.1136/bmj.i1436>)

Trotter L, Vine J, Leach M, and Fujiwara D (2014) 'Measuring the Social Impact of Community Investment: a guide to using the Well-being valuation approach'. HACT, Housing Associations' Charitable Trust

Trotter, L., Rallings Adams, M-K. 2017. Valuing improvements in mental health: Applying the well-being valuation method to WEMWBS. HACT. London, UK.

University of Westminster. Report of the inaugural Social Prescribing Network Conference, January 2016. 2016;(January). Available from: <https://www.westminster.ac.uk/file/57446/download>

Van Reenen M and Janssen B (2015) 'EQ-5D-5L User Guide. Basic information on how to use the EQ-5D-5L instrument', EuroQol Research Foundation